Environmental Assessment
for the proposed
FREDERICK P. WHIDDON COLLEGE OF MEDICINE BUILDING

UNIVERSITY OF SOUTH ALABAMA

New College of Medicine Building & Campus Infrastructure Grant
Federal Award No. 60NANB23D014

In Coordination With

NIST NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE

December 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

ADEM	Alabama Department of Environmental Management
AHC	Alabama Historical Commission
APE	Area of Potential Effect
ATSDR	Agency for Toxic Substances and Disease Registry
CAA	Clean Air Act
CFR	Code of Federal Regulations
CBMPP	Construction Best Management Practices Plan
CDC	U.S. Centers for Disease Control and Prevention
CEQ	Council on Environmental Quality
CO	Carbon Monoxide
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DOC	U.S. Department of Commerce
DOD	U.S. Department of Defense
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EAIP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EJI	Environmental Justice Index
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FONSI	Finding of No Significant Impact
HVAC	Heating, Ventilation, and Airconditioning
MAWSS	Mobile Area Water and Sewer System
MOA	Memorandum of Agreement
MSB	Medical Sciences Building
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NIH	National Institute of Health
NIST	National Institute of Standards and Technology
NCRR	National Center for Research Resources
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSF	National Science Foundation
PCB	Polychlorinated biphenyls
PM	Particulate Matter
PM 2.5	Particulate Matter of a diameter of less than 2.5 micrometers
PM 10	Particulate Matter of a diameter of less than 10 micrometers
QCP	Qualified Credentialed Professional
RCRA	Resource Conservation and Recovery Act
SOP	Standard Operating Procedures
USA	University of South Alabama
USEPA	U.S. Environmental Protection Agency

USFWS	U.S. Fish and Wildlife Service
USFWS IPaC	U.S. Fish and Wildlife Service - Information for Planning and Consultation
USACE	U.S. Army Corps of Engineers
WOTUS	Waters of the U.S.

1.0 PURPOSE AND NEED FOR PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) evaluates a proposal by the University of South Alabama (USA) (the University) to construct the Frederick P. Whiddon College of Medicine Building. The EA analyzes the potential of environmental impacts associated with the Proposed Action and Alternatives, including the No Action Alternative. The environmental documentation process associated with preparing the EA is carried out in compliance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's (CEQ's) Regulations Implementing NEPA (Title 40 Code of Federal Regulations [CFR] § 1500–1508). The environmental analysis contained within the EA will determine if a Finding of No Significant Impact (FONSI) can be issued or if there would be significant impacts that would require the preparation of an Environmental Impact Statement (EIS).

1.2 Background

The University was founded by a Legislative Act passed by the Alabama Legislature in May 1963. Since its inception, the USA main campus has undergone significant growth in terms of the number of students it serves and the number of buildings. The Campus Master Plan 2010 chronicles the early history of the campus founding and development:

- The institution was initially housed in a single building on St. Louis Street in Downtown Mobile. With an eye to the future expansion of enrollment and programs, the Mobile County Higher Education Foundation, with the support of the City of Mobile and the County of Mobile, purchased a large tract of "sixteenth section" land in the western suburban area of the city, and construction began on the first building – the present Frederick Palmer Whiddon Administration Building. This structure housed all of the fledgling institution's functions when the first 276 students were admitted in the summer of 1964. During the subsequent four years, construction was completed on the Instructional Laboratory Building (1966), a cafeteria and faculty office buildings (1966), the four-building Alpha Residence Hall Complex (1967), the Engineering Building (1968), the Health and Physical Education Facility (1968), and the University Library (1968). In 1968, the University received its initial accreditation by, and was admitted to membership in, the Southern Association of Colleges and Schools.

In 1969, the University was directed by the Alabama Legislature to start a medical school in Mobile to address the growing need for physicians in rural and underserved areas. The charter class was admitted to the USA College of Medicine in 1973. In April of 1974, the Medical Sciences Building (MSB) was completed, allowing not only implementation of the medical education program, but also recruitment of research faculty and development of the College of Medicine faculty research portfolio. At that time, the College of Medicine also initiated the University's first doctoral program to provide research training for graduate students. Shortly thereafter, the College initiated a Summer Research Program for medical students, a research training opportunity which continues to this day. Since then, the USA College of Medicine has developed a lasting reputation for providing students with a high-quality medical education and producing nationally recognized, federally funded research.

The University hosts a wide variety of vegetation across its main campus that spreads across 1,200-acres, with a landscape that includes cultivated flower gardens, walking paths and groves

of pine trees, miles of bike trails, indoor and outdoor pools and a disc golf course. The Glenn Sebastian Nature Trail contains more than three miles of trails that wind through 95-acres of native pine and oak woodlands.

The USA main campus is home to dozens of works of public art, many of them part of the Gwin Sculpture Collection, which includes “Gridiron” at the football field house, “Einstein” at Shelby Hall, “SouthPaw” in front of Alumni Hall, and “Old Man and the Sea” beside the Humanities Building. More than 50 sculptures comprise Geri Moulton Children’s Park, located in a wooded setting along the entrance drive to USA Health Children’s & Women’s Hospital. In addition, there are three historic houses which were moved to campus and saved from destruction. The Theophilus Toulmin Creole House, circa 1828, is one of the oldest structures in Mobile County. The University Honors College is housed in the Seamen’s Bethel, built in the 1860s. The Marx House is considered among Mobile’s finest examples of mid-19th century townhouse design.

Today, the 1,200-acre main campus includes new buildings and facilities, including the most recent addition of Hancock Whitney Stadium, which opened in 2020 as the home of the South Alabama football program. The University currently employs approximately 9,000 people and an attendance of nearly 14,000 students with expectations of increased growth of both faculty and student admissions going forward. USA academics offers more than 100 undergraduate, graduate and doctoral programs through its 11 colleges and schools. One of these academic colleges and schools, the College of Medicine, has become an economic driver for the region in education, research, and healthcare as it is the only academic medical provider in the region and one of only two medical schools in the State of Alabama.

The College of Medicine, specifically the MSB, completed in 1974, houses research programs and shared research core facilities for most of the College's faculty, research trainees and staff. Faculty numbers in the College of Medicine are only at the 13th percentile compared to other allopathic medical schools nationally, yet faculty efforts yielded extramural research funding ranked at the 23rd percentile. College of Medicine extramural funding has nearly doubled in the past three fiscal years. The USA College of Medicine meets its mandate by 1) producing high quality physicians that practice in Alabama and care for its citizens, 2) producing new doctorally-trained research scientists, and 3) maintaining a strong research funding portfolio. Unfortunately, the student learning environment does not match the quality of the educational experience, taking place in a building that was built before the age of computers and technology that is standard today. Further, the status of the building has not only hampered on-going research but limited the College's ability to recruit new research faculty. Costly renovations throughout the years have enabled the school to remain within accreditation standards and support limited growth in student population and faculty activities. The University attempts to utilize all existing structures for the proposed needs however, the Alpha Hall Complex, due to their aged infrastructure and inability to be efficiently converted to new age technology, has not been able to be updated for future growth. The other issues facing the upkeep of the existing buildings are mold, asbestos abatement, a failing HVAC system and failing exterior brick skin of the building. Further, while renovations have minimally maintained the structures, they have not been sufficient to modernize the educational and research environment in any substantive way. Thus, the need for the project is to provide medical instructional facilities that will meet growth and demand increases, with necessary and modernized infrastructure and amenities by constructing a new building.

After a review of alternatives that would enable the school to meet growing accreditation demands and to accommodate future growth in the educational and research activities of the school, USA proposed to construct a new medical education building in the footprint of the aging Alpha Hall Complex, specifically Alpha Hall South and Alpha Hall East. A new medical education building would provide MD trainees with a contemporary learning environment suited to support not only didactic learning, but small group and clinical skills learning as well. This revitalization would improve the University's ability to recruit and retain more competitive basic science faculty who will help grow the College's extramural funding portfolio, particularly through federal agencies such as the National Institute of Health (NIH), the Department of Defense (DOD) and the National Science Foundation (NSF). Expansion of the University's research faculty will support additional research training for doctoral students, medical students, and research fellows.

1.3 Project Location and Description

The Proposed Action is a project tract that includes the Alpha Hall East and the Alpha Hall South Buildings (Alpha Hall Complex) and immediate surrounding area measuring approximately 1.5 hectares (3.7-acres). The location of the project tract is shown in Section 16, Township 4 South, Range 2 West on the USGS 7.5' Springhill quadrangle (Figure 2). Specifically, the Alpha Hall Complex is on the eastern edge of the main USA campus (Figure 3), which is located in the western portion of the City of Mobile in Mobile County. The project tract is situated on a slight rise at approximately 170 feet above mean sea level south of Three Mile Creek, which lies approximately 0.4 km (0.25-miles) to the northwest. It is within an urban locale, surrounded by several parking lots, University Boulevard, and other university buildings, such as the Charles M. Baugh Biomedical Library, the Central Services Admin building, the Visual Arts building, and the Medical Sciences Building. A large portion of the project tract lies between the Alpha Complex and University Boulevard amidst several cultivated pine trees and concrete seating areas. The landform slopes slightly down toward the northwest, except for the area immediately surrounding the Alpha Complex, which was cut and leveled as part of the original building construction.

The proposed action specifically focuses on the construction of a new contemporary academic building to house the College of Medicine's research and education programs on the USA campus. This effort will: 1) Bring research and education together in a ~290,000 gross sq ft., five-storied building where collision spaces allow for impromptu encounters that lead to exchanges of ideas and new collaborations, 2) Provide state-of-the-art laboratory and laboratory support spaces that provide flexibility and efficiency for research today and in the future, expand research capacity and improve recruitment and retention for researchers, 3) Expand capacity for students and provide state-of-the-art education spaces for medical and doctoral education, improving student recruitment and retention, and 4) provide a multi-purpose conference space and forum for the USA community as a premier space on campus for large gatherings.

The new College of Medicine building will have two wings. The west wing will house the Gross Anatomy lab, research laboratories and a new Vivarium, while the east wing will house education spaces and offices. The building design will connect these wings with a light-filled collaboration zone occupied by meeting space, lounge areas, and other amenities to invite all users to come together over the course of the day. At this location in the expanded Medical/Health Sciences campus, medical students will have easy access to the Biomedical Library and the Health Sciences

Simulation Building, for study and clinical skills training, respectively. Researchers will have close access to the Laboratory for Infectious Diseases - a free-standing specialized high containment facility built according to NIH standards for Biosafety Level-3 research - which lies just to the north across Three Mile Creek.

The project has the potential to utilize up to 500 employees during the construction phase and retain 50 post construction.

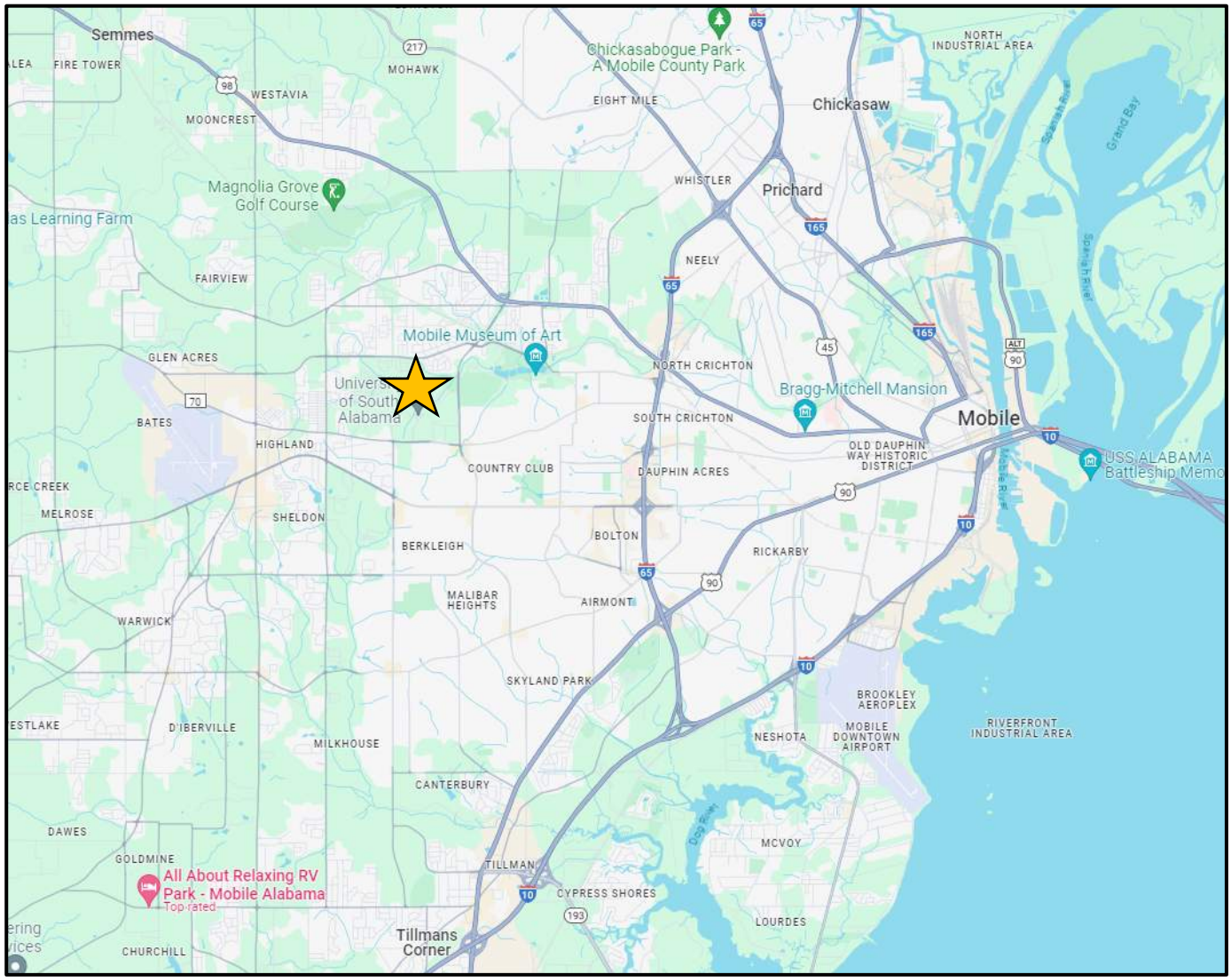

Figure 1. Location of the University of South Alabama Campus.

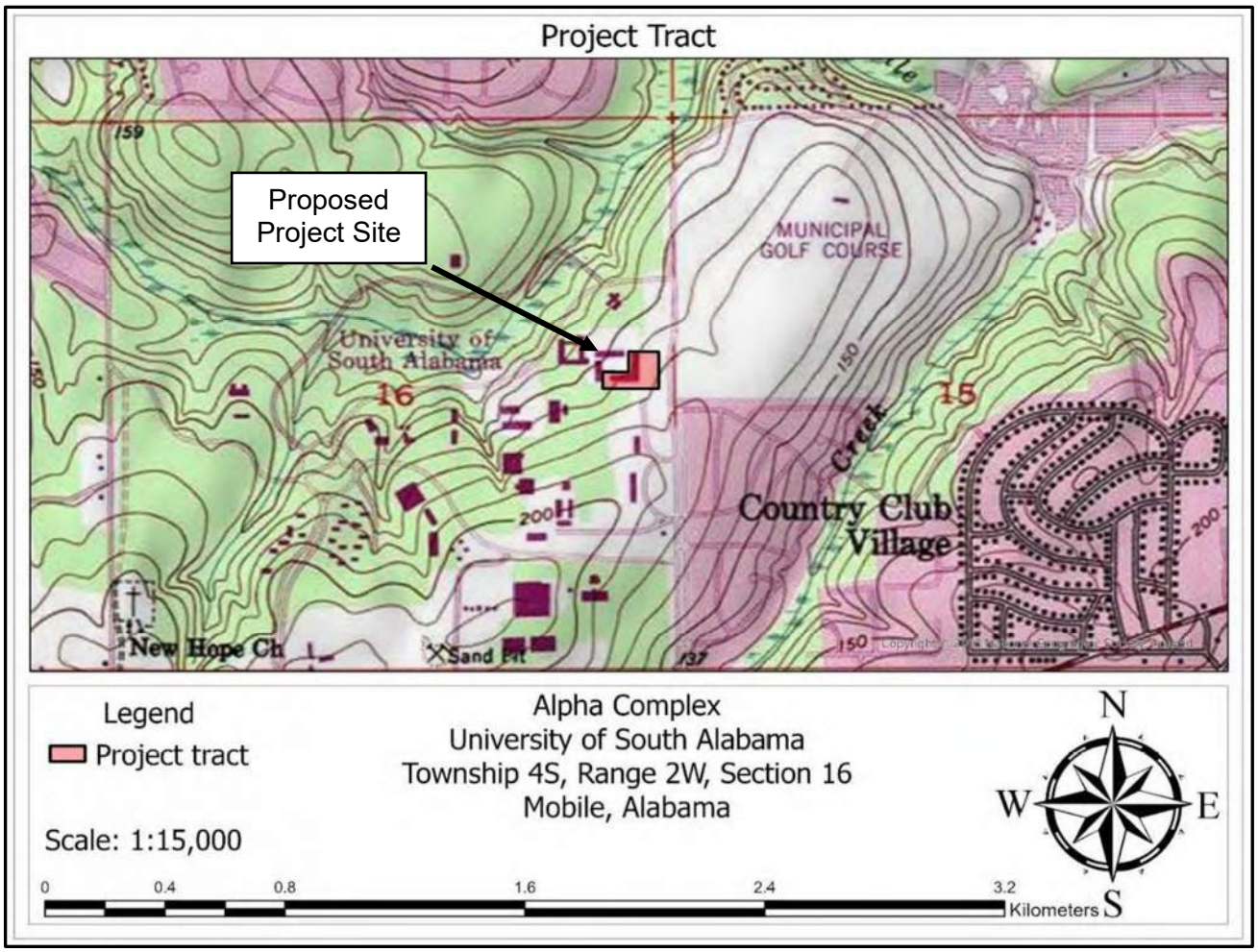

Figure 2. Location of Proposed Action.

Figure 3. Campus Vicinity Map.

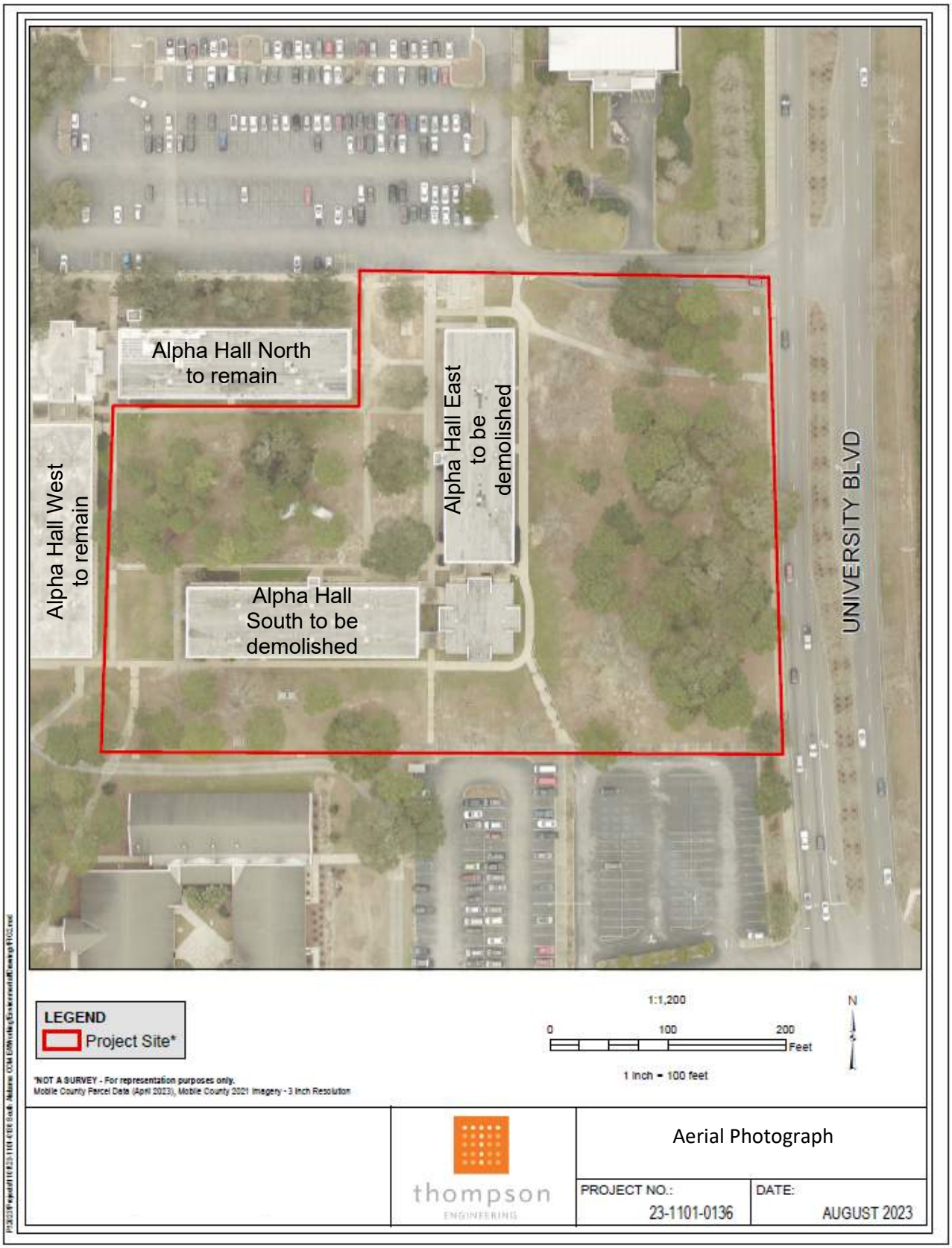

Figure 4. Aerial photo showing the 3.7-acre study area.

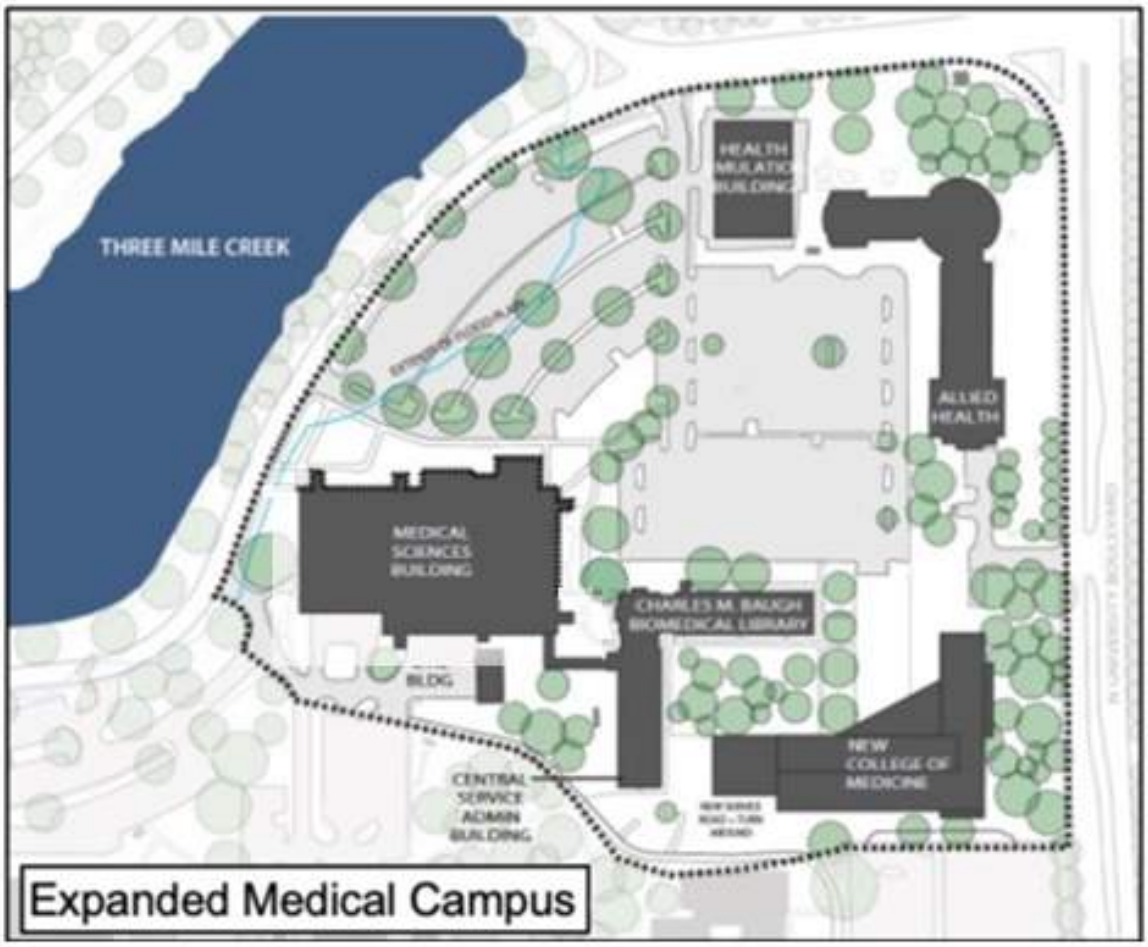

Figure 5. Future Medical Campus depiction.

1.4 Purpose and Need of the Proposed Action

The purpose of the Proposed Action is to provide medical instructional facilities that will meet growth and demand increases, with necessary and modernized infrastructure and amenities.

The proposed action specifically focuses on the construction of a new contemporary academic building to house the College of Medicine's research and education programs on the USA campus. This effort will: 1) Bring research and education together in a ~290,000 gross sq ft., five-storied building where collision spaces allow for impromptu encounters that lead to exchanges of ideas and new collaborations, 2) Provide state-of-the-art laboratory and laboratory support spaces that provide flexibility and efficiency for research today and in the future, expand research capacity and improve recruitment and retention for researchers, 3) Expand capacity for students and provide state-of-the-art education spaces for medical and doctoral education, improving student recruitment and retention, and 4) provide a multi-purpose conference space and forum for the USA community as a premier space on campus for large gatherings. Utilizing two wings, the west wing will house the Gross Anatomy lab, research laboratories and a new Vivarium, while the east wing will house education spaces and offices. The building design will connect these wings with a light-filled collaboration zone occupied by meeting space, lounge areas, and other amenities to invite all users to come together over the course of the day. At this

location in the expanded Medical/Health Sciences campus, medical students will have easy access to the Biomedical Library and the Health Sciences Simulation Building, for study and clinical skills training, respectively. Researchers will have close access to the Laboratory for Infectious Diseases - a free-standing specialized high containment facility built according to NIH standards for Biosafety Level-3 research - which lies just to the north across Three Mile Creek (Figure 5).

1.5 NEPA and Other Compliance Requirements

NEPA is a federal statute requiring the identification and analysis of potential environmental impacts associated with proposed federal actions before those actions are taken. NEPA helps decision makers make well-informed decisions based on an understanding of the potential environmental consequences. NEPA established the CEQ, which was charged with the developing of implementing regulations and ensuring federal agency compliance with NEPA. The process for implementing NEPA is outlined in 40 CFR § 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*.

CEQ regulations specify that an EA be prepared to provide evidence and analysis for determining whether to prepare a FONSI or an EIS. The EA aids in an agency's compliance with NEPA when an EIS is unnecessary and facilitates preparation of an EIS when one is required.

The EA will determine whether the Proposed Action would result in significant impacts. If significant impacts are predicted, a decision would be made to provide mitigation to reduce impacts below the level of significance, undertake the preparation of an EIS, or abandon the Proposed Action. The EA would also be used to guide NIST and the University in implementing the Proposed Action in a manner consistent with standards for environmental stewardship should the Proposed Action be approved for implementation.

NIST and the University are required to manage impacts on protected species and their habitats, floodplains, and wetlands in accordance with Section 7 of the Endangered Species Act and Section 404 of the Clean Water Act (CWA), specifically utilizing the Executive Order 11988 (EO 11988)(Floodplain Management) and Executive Order 11990 (EO 11990) (Protection of Wetlands); the Endangered Species Act (16 U.S.C. §§ 1531 et seq.); the Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.) and the Wild and Scenic Rivers Act (16 U.S.C. §§ 1271 et seq.).

NEPA requires consideration of impacts to cultural resources (40 CFR § 1508.8). Federal agencies' responsibility for protecting historic properties is defined primarily by Section 106 of the National Historic Preservation Act (NHPA). Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties in accordance with 36 CFR § 800. Cultural resources also may be covered by state, local, and territorial laws. The NIST manages impacts on cultural and historical resources in accordance with Section 106 of the NHPA as amended (54 U.S.C. 306108). Pursuant to these regulatory and NIST policy requirements, the University is coordinating with the Alabama State Historic Preservation Office.

1.6 Intergovernmental and Stakeholder Coordination

NEPA requirements help ensure environmental information is made available to the public during the decision-making process and prior to actions being taken. CEQ NEPA regulations state, "There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a Proposed Action. This process shall be termed scoping." EO 12372, as amended to EO 12416, Intergovernmental Review of Federal Programs, requires federal agencies to provide opportunities for consultation by elected officials of state and local governments that would be directly affected by a federal proposal.

In compliance with NEPA, the University notifies relevant agencies, stakeholders, and federally recognized tribes about the Proposed Action and alternatives (see Appendix A for stakeholder and public involvement notification list). The notification process offers these relevant agencies and groups the opportunity to provide comments on the Proposed Action and potential impacts that could occur. Upon completion of a Draft EA, a Notice of Availability will be published in *the Lagniappe*. Public and agency comments on the Draft EA will be considered prior to a decision being made on how to proceed.

2.0 PROPOSED ACTIONS AND ALTERNATIVES

2.1 Description of the Proposed Action and Alternatives

This section describes the Proposed Action and the alternatives considered for implementation, including the No Action Alternative. The NEPA process evaluates potential environmental consequences associated with a Proposed Action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a Proposed Action, as defined in Section 1.5. NEPA regulations also specify the inclusion of a No Action Alternative against which potential impacts can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in accordance with CEQ and NEPA regulations.

2.2 Proposed Action

The University proposes constructing a new building for the College of Medicine. The consideration to utilize the 3.7-acres where the Alpha Hall East and Alpha Hall South are located was due to its location within the vicinity of the existing Medical College buildings (Figure 4). While the two buildings will need to be removed for the new medical school complex, two of the Alpha Hall Complex buildings, Alpha Hall North and Alpha Hall West, will remain and be incorporated into the design for campus reminiscing. Utilizing the two remaining Alpha Hall Buildings to create the Charles M. Baugh Biomedical Library, creating an easily accessed School of Medicine campus for students, teachers, and researchers.

According to the USA College of Medicine Strategic Plan 2018-2021, the goal is to promote student success and access, growing and promoting research by increasing resources and infrastructure needed to support growth in faculty research and scholarly activity, global engagement, excellence in health care by expanding the learning experience, and providing a diverse medical education by engaging the community.

The overall goal of this project is to provide a contemporary academic building to house the College of Medicine's research and education programs: the new Frederick P. Whiddon College of Medicine Building. Specifically, objectives of the new construction are to:

- Bring research and education together in one building, where collision spaces are designed to encourage collaboration between students, faculty, and researchers.
- Provide state-of-the-art laboratory and laboratory support spaces that provide flexibility and efficiency for research today and in the future, expand research capacity and improve recruitment and retention for researchers.
- Expand capacity for students and provide state-of-the-art education spaces for medical and doctoral education, improving student recruitment and retention.
- Provide a multi-purpose contemporary conference space and forum to serve the entire USA community as a premier space on campus for large gatherings.

2.3 Selection of Alternatives

Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be suitable for decision making, capable of implementation, and sufficiently satisfactory with respect to meeting the

purpose of and need for the action. CEQ NEPA regulations define reasonable alternatives as those that are economically and technically feasible, and that show evidence of common sense. Certain requirements must be present or reasonably attainable to meet the purpose of and need for the Proposed Action.

The University has unique considerations that must be met for alternatives to be considered reasonable and sufficient to adequately support a Proposed Action. For this EA, the proximity to the Medical/Health Sciences campus (the USA Simulation Building, the Health Sciences and Nursing building, the Baugh Biomedical Library and the Central Services and Administration Building) as stated in Section 1.3, was paramount as well as the ability to house the growing number of students interested in the school of medicine. The University has attempted to utilize all existing structures on campus to allow for student capacity and current trends in teaching and technological advances. As the original purpose of the Alpha Hall Complex constructed in the 1960s was to serve as residential student dormitories, the building has been minimally utilized in recent decades due to its aged infrastructure and inability to be efficiently converted.

To determine whether an alternative is viable the following must be considered:

A. **Must be located proximally to the College of Medicine**. The Alpha Hall Complex Buildings lie within the College of Medicine, the Pat Capps Covey College of Allied Health Professions, the College of Nursing, and the Life Science Buildings (Figure 5).

B. **Must be able to house the classroom capacity for the growth of medical education**. The University attempts to utilize all existing structures for the proposed needs however, the Alpha Hall Complex, due to their aged infrastructure and inability to be efficiently converted to new age technology, has not been able to be updated for future growth. The other issues facing the upkeep of the existing buildings are mold, asbestos abatement, a failing HVAC system and failing exterior brick skin of the building. Further, while renovations have minimally maintained the structures, they have not been sufficient to modernize the educational and research environment in any substantive way. Thus, the need for the project is to provide medical instructional facilities that will meet growth and demand increases, with necessary and modernized infrastructure and amenities by constructing a new building.

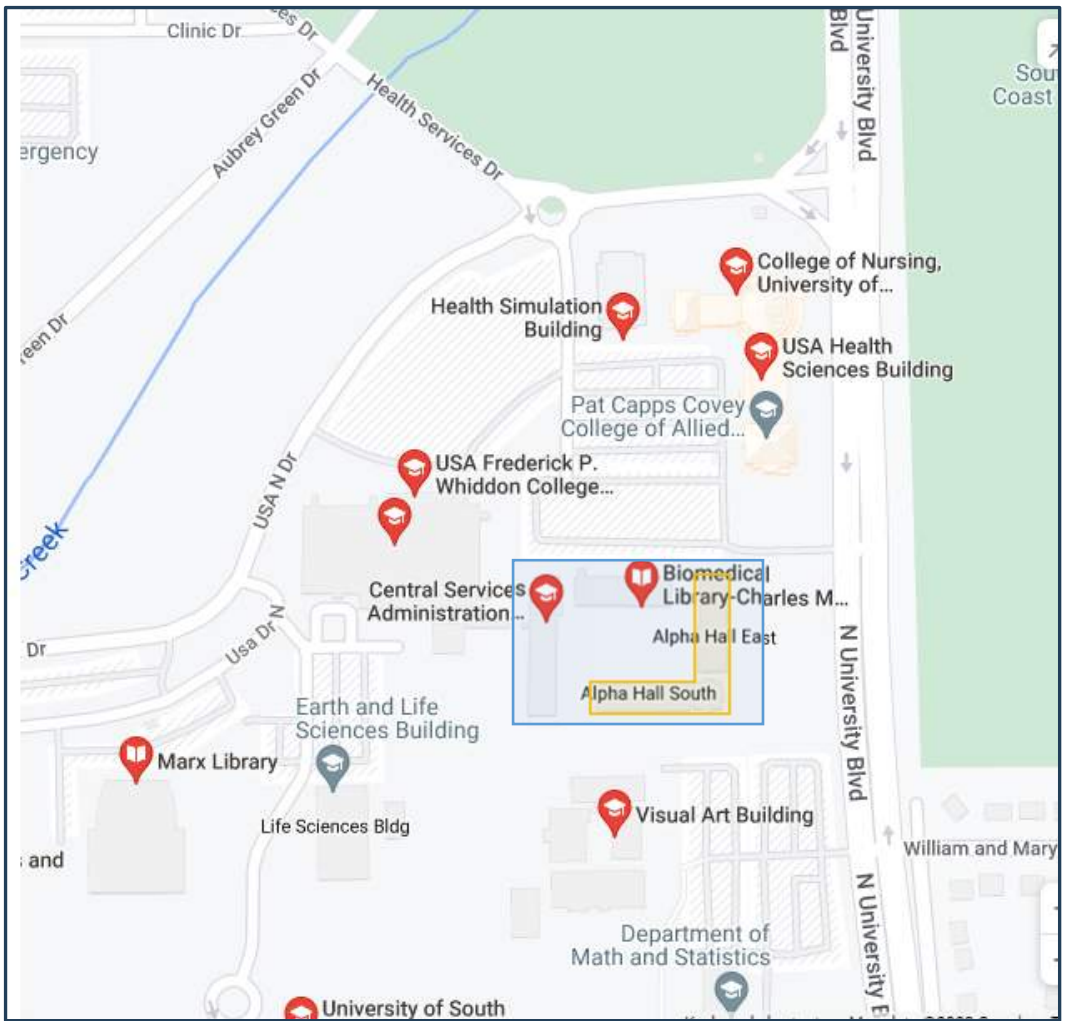

Figure 6. Alpha Hall Complex (in blue highlight) located within the College of Medicine, College of Nursing, and the Pat Capps Covey College of Allied Health Professions Quadrant. The yellow highlight indicates the two Alpha Hall Buildings to be demolished.

2.4 Alternative Carried Forward for Analysis

USA Engineering, Design, and Construction conducted an internal study of possible tracts for the Frederick P. Whiddon College of Medicine Building, and the current project tract was identified as the best location that met the required engineering, logistical, and economic considerations (personal communication, Trent Davis, USA Assistant Director, Engineering, Design, and Construction; see letter in Appendix D).

The new Frederick P. Whiddon College of Medicine Building will be sited at the northeast corner of the University campus, just east of the existing Biomedical Library (see Figure 6). The new building will replace two aging Alpha Hall buildings not affiliated with the College of Medicine-Alpha East and Alpha South. Academic units housed in those two buildings will be relocated elsewhere on campus. This site has the advantage of placing the new College of Medicine building in close proximity to other key buildings in the Medical/Health Sciences campus (the USA Simulation Building, the Health Sciences and Nursing building, the Baugh Biomedical Library and the Central Services and Administration Building) and placing it well away from the existing

flood plain along northwest aspect of the Medical/Health Sciences campus.

2.5 No Action Alternative

The USA College of Medicine meets its mandate by 1) producing high quality physicians that practice in Alabama and care for its citizens, 2) producing new doctorally-trained research scientists, and 3) maintaining a strong research funding portfolio. Unfortunately, the student learning environment does not match the quality of the educational experience, taking place in a building that was built before the age of computers and technology that is standard today. Further, the status of the building has not only hampered on-going research but limited the College's ability to recruit new research faculty. Costly renovations throughout the years have enabled the school to remain within accreditation standards and support limited growth in student population and faculty activities. The University attempts to utilize all existing structures for the proposed needs however, the Alpha Hall Complex, due to their aged infrastructure and inability to be efficiently converted to new age technology, has not been able to be updated for future growth. The other issues facing the upkeep of the existing buildings are mold, asbestos abatement, a failing HVAC system and failing exterior brick skin of the building. Further, while renovations have minimally maintained the structures, they have not been sufficient to modernize the educational and research environment in any substantive way. Thus, anticipated future requirements and growth cannot be met in the existing facility. The No Action Alternative results in no environmental or historic/cultural impacts, it also does not allow for student and faculty growth and therefore hampers the growth of the College of Medicine.

2.6 Alternatives Considered but Dismissed

USA reviewed several alternatives that would enable the school to meet growing accreditation demands and to accommodate future growth in the educational and research activities of the school. It was initially concluded that the fiscally responsible avenue was to construct a new medical education building and to drastically renovate the current research space in the MSB. This approach (new medical education building and renovation of the MSB) was developed extensively, but several unsurmountable hurdles developed, including growing lack of support for a medical education unit separate from the main University campus. We next considered a new addition to the MSB for medical education accompanied by renovation of MSB research space. However, this approach presented two major hurdles: 1) construction or renovation of an off-site temporary medical education facility and 2) renovation of the MSB research space occupied by active researchers. Temporary medical education space was identified but was accompanied by significant renovation costs. USA further found that any renovation to provide a contemporary research facility was limited by the outdated footprint of the building. USA lacked functional research space to temporarily house active researchers, either in the MSB or in other campus facilities, yet allow extensive renovation and replacement of the entire MSB environmental control system. Further, deteriorating environmental controls and decaying building infrastructure became greater concerns, limiting the function and safety of the building for medical students, research trainees, faculty and staff in the future.

2.7 Identification of the Proposed Alternative

USA concluded that construction of a new College of Medicine building within the Medical/Health Sciences campus at the University was the ideal Proposed Action and determined that the building design should accommodate both education and research programs for the College. An ongoing trend in medical schools throughout the country is to

combine research and medical education, often housed in separate facilities, into one building so that medical students engage more with research. At USA, researchers, educators, and students have always shared a building, but the building has not always brought them together. A primary goal for this new building project is to create a building that encourages “collisions”, impromptu encounters that lead to exchanges of ideas and new collaborations. Addressing this goal will allow the University of South Alabama College of Medicine to expand and improve upon its current capacity for scientific research, research training and medical education.

3.0 EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

In each of the following sections, a specific resource area is addressed with both qualitative and, where applicable, quantitative information to concisely describe the nature and characteristics of the resource that may be affected by the proposed Project, as well as the potential direct and indirect impacts on that resource from the Project given proposed Project controls. A conclusion regarding the magnitude of impacts is provided for each resource area.

Section 3.10 provides a review of the present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Proposed Action. The impacts of past actions were reviewed and are included as part of the affected environment to establish the current condition of the resource (the baseline condition) that may be affected by the Proposed Action.

3.1 Aesthetics and Visual Resources

The University of South Alabama is located at 555 North University Boulevard, Mobile, AL, and spreads across 1,200 acres. The campus consists of facilities and resources for teaching, housing and recreation, health sciences, the arts, engineering, computer science, and athletics. Also included on the campus are paved parking areas, access roads, maintained lawn areas, and a three-mile hiking trail that winds through 95 acres of native pine and oak woodlands. The proposed project site consists of 3.7 acres (Figure 4). The project site currently has two main buildings, Alpha Hall East and Alpha Hall South. Both buildings were built in 1967 and are planned to be demolished (Figure 8), all work is confined within the existing footprint of the previous buildings, the ROTC outdoor exercise yard (Figure 9) and wooden bleacher set (Figure 10), and above ground utilities (Figure 11) associated with the Alpha Hall Complex. The current use of the buildings in this area includes offices, classrooms and lecture halls, computer labs, and research laboratories.

The new building will be constructed in a manner which ties into to the aesthetic of the remaining historic Alpha Hall North and Alpha Hall West (Figure 7).

Figure 7. Artist rendering of the new School of Medicine Building

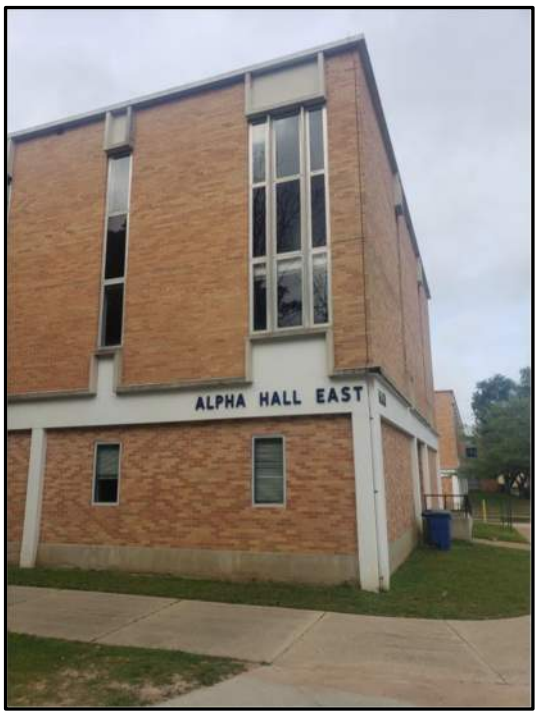

Figure 8. Alpha Hall East, to be demolished.

Figure 9. ROTC exercise equipment in inner courtyard.

Figure 10. ROTC bleachers in inner courtyard.

Figure 11. Above ground utilities, marked utilities, and a potential shovel test location from the Cultural Resource Assessment along Transect 3 facing east, Alpha Hall South shown in upper left.

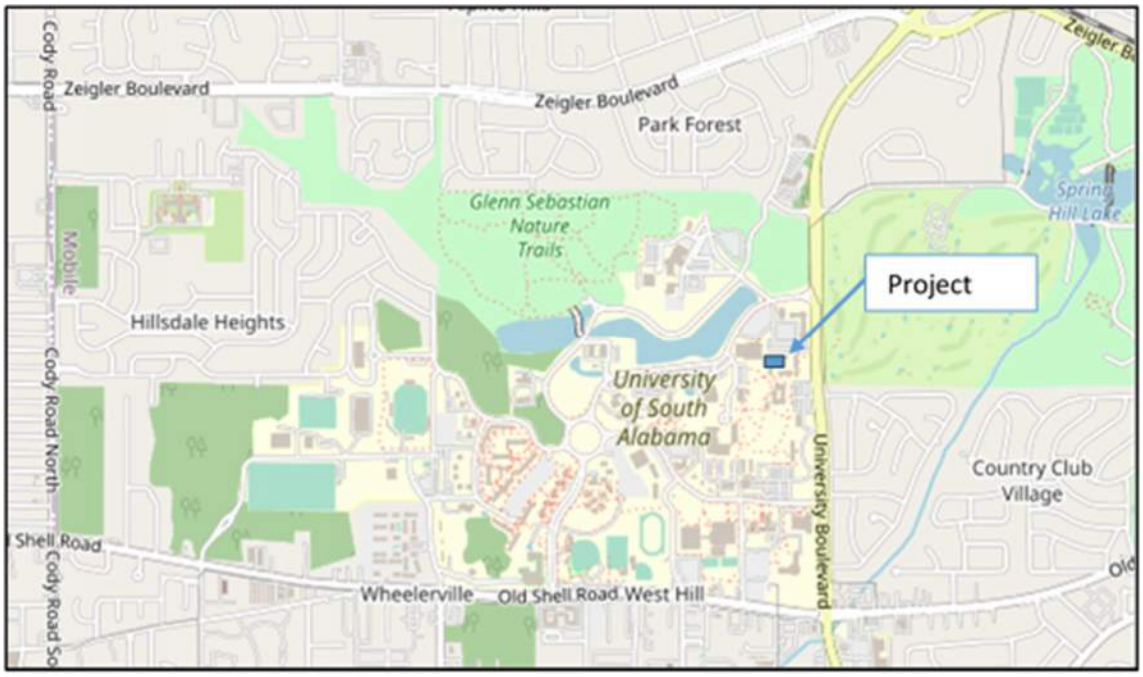

Figure 12. The University of South Alabama Campus and general location of the Proposed Frederick P. Whiddon Medical Building.

3.2 Environmental Site Assessment

An environmental site assessment (ESA) and associated database search was conducted in August 2023 as part of this environmental assessment. The purpose of the ESA is to determine if the existing property has been impaired in any way in the past (e.g. environmental contamination), or if there are any existing features of the property (e.g. natural areas, wetlands) that may be impacted by the proposed project. The ESA is included in Appendix B. Thompson Engineering performed a Phase I Environmental Site Assessment of the property in general conformance with the scope and limitations of ASTM Practice E1527-21. The assessment revealed no evidence of any Recognized Environmental Conditions (RECs) in connection with the subject property.

3.3 Air Quality

Pursuant to the Clean Air Act (CAA), EPA established National Ambient Air Quality Standards (NAAQS) to control a limited number of widely occurring Criteria Pollutants, including carbon monoxide (CO), nitrogen dioxide, ozone, PM of a diameter of less than 2.5 micrometers (PM2.5), PM of a diameter of less than 10 micrometers (PM10), and sulfur dioxide. Primary air quality standards were developed for these pollutants to protect public health—including sensitive populations such as children, elderly, and asthmatics. Secondary standards were also developed to protect the nation's welfare, including protection against decreased visibility and damage to animals, crops, and vegetation. EPA has concluded that the current NAAQS protect the public health, including the at-risk populations of older adults, children, and people with asthma, with an adequate margin of safety. The airshed that contains the project site in Mobile County is not in attainment for NAAQS, meaning none of the ambient concentrations of criteria pollutants exceed the air quality standards. Mobile County, AL is not listed in the Alabama

Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants list (Agency, 2023). Impacts to air quality during construction are expected to be minimal and occur only during the times of construction, these operations shall only be conducted during daylight hours of 7AM to 5PM, primarily on weekdays and possibly a few Saturdays. No impacts to air quality are anticipated post construction.

Minor and short-term impacts will result from equipment and fugitive dust emissions during construction. However, air emissions resulting from construction would be temporary and minimized through the use of BMPs. As discussed, Mobile County is not listed in the Alabama Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants list (Agency, 2023).

The existing Medical Science Building is more than 50 years old and is approximately 300,000 square feet. The proposed building is similar size at 290,000 square feet but is expected to use less energy and ultimately produce less source emissions than the existing due to significant increases and improvements in energy code requirements over the past 50 years, as well as many energy saving design features that go beyond current code requirements.

The new medical building will be heated and cooled via the campus central chilled water and hot water systems. This project involves no modifications to these existing systems. However, many innovative features are incorporated into the design of the project to reduce energy consumption and air emissions, such as the heating, ventilation, and air conditioning system (HVAC). For this facility type, with laboratories, a gross anatomy space and a vivarium, the HVAC systems provide the largest opportunity for energy savings. These energy savings can come from reducing the amount of outdoor air, reducing fan energy, energy recovery, and airside economizers. Airside economizers are provided on classroom and office air handling units to use outside air for “free cooling” when the enthalpy of the outside air is less than the enthalpy of the return air and setbacks. These control systems are designed to relax temperature requirements when spaces are unoccupied.

Another innovative feature of the new HVAC system is energy recovery. Several ways energy will be recovered are from energy recovery wheels, run-around energy recovery systems, and an advanced run-around recovery system. Energy recovery wheels are provided to precondition outside air in non-laboratory air handling units. Run around energy recovery systems consisting of coils, piping, and pumps, transfer heat from laboratory and vivarium exhaust systems to precondition outside air in these handling units. An advanced run-around recovery system, similar to the system that will be used in the laboratory and vivarium systems, will be used to serve the gross anatomy area. This system includes a third heat recovery coil in the air handling unit reheat position to provide free reheat and increases the effectiveness of the outside air precooling heat recovery.

The HVAC system is not the only energy saver for the new medical building. Energy-saving aspects will also be incorporated into the architecture and electrical work. Electrochromic glazing is included on the south façade of the building. This glazing can vary its tint and solar heat gain coefficient to greatly reduce the amount of solar radiation entering the building and thus the cooling load and associated energy usage. The laboratories will be designed to reduce the amount of air required to cool, ventilate, and make up laboratory exhaust; this reduces the

required cooling load and fan energy. Specifically, the laboratory spaces are located on the interior of the building, eliminating heat in the laboratory from solar loads. Instead, offices are located on the exterior, where recirculated, rather than 100% outside air, can be used to meet these loads. The laboratory fume hoods are located in large open labs, rather than in small fume hood rooms, where the air required to provide the required laboratory ventilation air change rate can also provide fume hood make up air, rather than having extra air required to fume hood make up in a small room. This reduction in airflow reduces the cooling load. Occupancy sensors, switched receptacles, and daylight harvesting are all included in the design to reduce the building electrical usage. Therefore, the cumulative impacts on air quality associated with the operation of the Project and the other projects in the region would not be significant.

3.3.1 Greenhouse Gas Emissions and Climate Change

According to the EPA's website on State and Regional Climate Impacts (Agency E. -U., 2023), climate change impacts happen at varying scales, including globally, regionally, and locally. Alabama is located at subtropical latitudes between the Gulf of Mexico and the southern end of the vast, relatively flat plains of central North America, which extend from the Arctic Circle to the Gulf of Mexico. The state is therefore exposed to the influences of diverse air masses, including the warm, moist air from the Gulf of Mexico and dry continental air masses, which are cold in the winter and warm in the summer. Clockwise circulation of air around a semipermanent high-pressure system in the North Atlantic (known as the Bermuda High) causes a persistent southerly flow of air off the gulf during the warmer half of the year. Thus, relatively mild winters, hot summers, and year-round precipitation characterize Alabama's climate. In addition to serving as a predominant source of moisture, the Gulf of Mexico helps moderate temperatures along the coast. Alabama's mild climate is an important economic driver for agricultural production and tourism. According to the Alabama State Climate Summary for 2022 (Appendix H), temperatures in Alabama have not risen since the beginning of the 20th century, one of the few areas globally to experience no net warming. Annual precipitation is highly variable from year to year, the number of 3-inch extreme precipitation events has been near or above average since 1995 but shows no statistically significant long-term trend.

Emissions of several important greenhouse gases that result from human activity have increased substantially since large-scale industrialization began in the mid-1800s. Most of these human-caused (anthropogenic) greenhouse gas emissions were carbon dioxide (CO2) from burning fossil fuels. Under a higher emissions pathway, historically unprecedented warming is projected during this century for Alabama (Figure 13). Even under a lower emissions pathway, annual average temperatures are projected to most likely exceed historical record levels by the middle of the century. However, a large range of temperature increases is projected under both pathways, and under the lower pathway, a few projections are only slightly warmer than historical records. Warming is projected despite the lack of a long-term temperature trend because the increased warming influence of greenhouse gases will become greater than the natural variations that have dominated Alabama's temperature climate.

Climate change is projected to occur despite temperature or precipitation trends. The new Medical Building will be a state-of the-art facility designed with current building and environmental codes, replacing the existing, aged facility and mechanical operations from the 1960s. Due to the energy saving measures described above, no cumulative impacts to greenhouse emissions or climate change are anticipated due to the construction of this building.

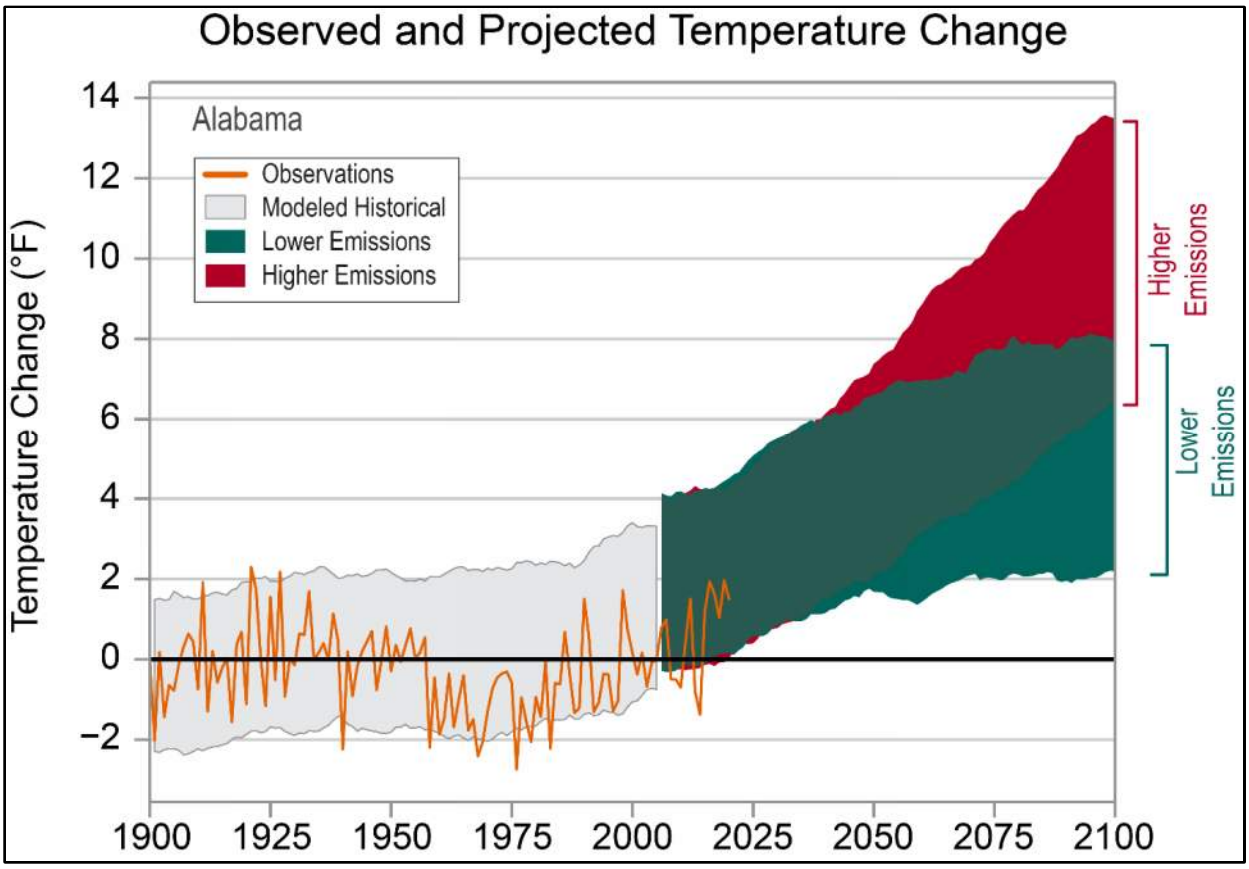

Figure 13. Observed and Projected Temperature Change for Alabama.

3.4 Biological Resources

For construction of the Frederick P. Whiddon College of Medicine Building, approximately 3.7-acres will be required. The project site is within an urban locale, surrounded by several parking lots, University Boulevard, and other university buildings, such as the Charles M. Baugh Biomedical Library, the Central Services Admin building, the Visual Arts building, and the Medical Sciences Building. A large portion of the project tract lies between the Alpha Complex and University Boulevard amidst several cultivated pine trees and concrete seating areas.

The University, however, hosts a wide variety of vegetation across its main campus that spreads across 1,200-acres, with a landscape that includes cultivated flower gardens, walking paths and groves of pine trees, miles of bike trails, indoor and outdoor pools and a disc golf course. The Glenn Sebastian Nature Trail contains more than three miles of trails that wind through 95-acres of native pine and oak woodlands.

Thompson Engineering (Thompson) was contracted to perform necessary environmental field surveys (Appendix C) on the proposed site of the new College of Medicine building on the main campus of the University of South Alabama (USA); all surveys and mapping for this project are located within the Biological Assessment Report in Appendix C. The existing habitat on the 3.7-acre site for the new College of Medicine building consists of older (constructed in mid-1960's)

University of South Alabama buildings, sidewalks, parking lots, utilities, and other associated campus facilities. Areas not covered by the impervious surfaces of the buildings, sidewalks, parking lots, etc. consist predominantly of mowed lawn grasses, landscaping shrubs, and a few mature pines and oaks. Based on the highly developed nature of the site since they were constructed in the mid-1960's, the habitat quality would be described as low for the building site and the surrounding area. During the demolition and construction of the new building it is anticipated that 74 trees will need to be removed, however 64 trees are planned for the new landscaping design.

The project area is located within the Three Mile Creek watershed. The Thompson environmental survey, located within the Biological Assessment Report, provides baseline data in the form of distribution and extent of all wetlands and other waters of the United States (WOTUS) regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) (Appendix C). The survey also includes a field survey of federally protected endangered and threatened species, as well as proposed and candidate species.

Thompson compiled the U.S. Department of Agriculture (USDA), NRCS soil map data, USGS Topographic Quadrangle, USGS NHD, USFWS NWI, topographic data, and aerial photography, to evaluate the site. This information was studied prior to initiation of field activities. Based on our desktop review, no wetlands or streams were identified within the project site. The field survey was performed on August 15, 2023. The field review of the site was based on topographic features, hydrologic indicators, soil types, and the presence of wetland characteristics as previously mentioned. In addition, the Thompson employee performing the survey (Michael Eubanks) is very familiar with the site since he lived in the Alpha South Hall dormitory during his four years of undergraduate study in biology from 1968-1972.

The site was additionally inspected by a thorough pedestrian survey for presence of the federally protected, proposed, and candidate species and potential habitat for those species. The list of potential threatened and endangered species that may occur on the site was obtained on the USFWS Information for Planning and Consultation (IPaC) website. The field survey evaluated the proposed site for the potential presence of seven federally-listed threatened, endangered, proposed, and candidate species based on the USFWS Endangered Species Program: 1) alligator snapping turtle (Macrochelys temminckii), proposed threatened, 2) black pine snake (Pituophis melanoleucus lodingi), threatened, 3) eastern indigo snake (Drymarchon corais couperi), threatened, 4) gopher tortoise (Gopherus polyphemus) threatened, 5) Gulf sturgeon (Acipenser oxyrinchus [=oxyrhynchus] desotoi) threatened, 6) monarch butterfly (Danaus plexippus), candidate, and tricolored bat (Perimyotis subflavus), proposed endangered. No critical habitat for any of these federally protected, proposed, or candidate species exists within the project area. The field survey methods for these species and their habitat consisted of a pedestrian survey across the entire project area looking for these seven species and assessing the existing habitat conditions on the site.

Based on the field survey, the Thompson biologist did not find any of the seven USFWS-listed, proposed, or candidate species. Based on the numerous busy transportation corridors in the area and the urban surroundings (university buildings, offices, sidewalks, parking lots, utilities, and the manicured landscaping on the campus), none of these seven species were found and no suitable habitat for those species was observed on the site.

No wetlands or streams were found on the project site based on the field survey, as well as online sources.

The USFWS provided a clearance to proceed with Federally-Insured Loan and Grant Project Requests for projects that meet certain conditions related to construction within a previously highly impacted site with no designated critical habitat (Appendix C). This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above. There are no additional applicable exclusions or restrictions, signed by William J. Pearson, Alabama Field Supervisor (Appendix C).

The impacts to wildlife in the 3.7-acres of constructed facilities and parking lots is not expected to be significant due to the amount of natural landscapes that will remain in the surrounding area.

3.5 Cultural Resources

A *historic property*, as defined by the NHPA (54 United States Code § 300101 *et seq.*), as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties. Regulations implementing the NHPA (36 CFR Part 800) provide clear steps for agencies to follow regarding consultation with state, local, or tribal government officials in the identification of historic properties potentially affected by their undertaking, assessment of impacts on historic properties, and resolution of adverse effects through avoidance, minimization, or mitigation.

Section 106 consultation was initiated with the Alabama Historical Commission (AHC) and indicated that the proposed project could have the potential to affect historic properties eligible for listing on the NRHP within the proposed area of potential effect (APE). The architectural APE for this project was defined as the existing Alpha Hall Complex consisting of four similar buildings referred to as Alpha Halls, East, West, South and North its setting (Appendix D). The archaeological APE was defined as all the new land requirements proposed for ground disturbance, totaling 3.7 acres.

Invitations to comment on the project and engage in government-to-government consultation with NIST regarding the NEPA and Section 106 processes were sent to the Alabama Coushatta Tribe of Texas, Coushatta Indian Tribe, Jena Band of Choctaw Indians, Choctaw Nation of Oklahoma, Kialegee Tribal Town, Seminole Nation of Oklahoma, Seminole Tribe of Florida, Miccosukee Tribe of Indians, Tunica-Biloxi Indians of Louisiana, Muscogee Creek Nation, Poarch Band of Creek Indians, Alabama Quassarte Tribal Town, United Keetoowah Band of Cherokee Indians, Thlopthlocco Tribal Town, and the Mississippi Band of Choctaw Indians (Appendix A).

Additionally, invitations to be Section 106 consulting parties were sent to the City of Mobile Permitting and Predevelopment Office and the Mobile Historic Development Commission (Appendix A).

A Phase 1 archaeological survey was completed on the Alpha Complex, which includes Alabama Historical Commission Building Survey Forms (Appendix D) that were conducted for USA. In the

absence of any significant archaeological recovery or intact middens or features from the project tract, no further archaeological investigation or mitigation was recommended.

The four-building Alpha Hall Complex is recommended as eligible for listing to the National Register of Historic Places (State and/or Local) because, as noted in Chapter 3, the structures all demonstrate a high level of architectural integrity as a singly conceived three story residential complex interconnected by extant flat roofed auxiliary buildings. The complex's significance under Criterion A derives from signifying USA's initial phase of development and rapid growth into a residential University. They are also significant under Criterion C for the work of a recognized Master Architect 20th Century Alabama, John Platt Roberts in conjunction with A. B. Benson, one of his protégés. Platt is recognized today in Mobile, AL as one of the very few active and influential architects espousing a decidedly Modern aesthetic in the deep south of the late 20th century.

To resolve the adverse effects of demolishing Alpha Hall South and Alpha Hall East for the purpose of this project, NIST prepared a Memorandum of Agreement (MOA) and submitted it to the AHC (see Appendix E). The impacts will be mitigated by the following stipulations set forth by the MOA between the Alabama Historic Preservation Officer, NIST, and the USA, pursuant to 36 CFR Part 800 implementing Section 106 of the National Historic Preservation Act (16 U.S.C. Part 470t).

- Prior to the completion of the demolition, USA will make arrangements for archival photographic documentation of the Alpha Hall Complex with emphasis upon the visual recordation of the Alpha East and Alpha South on the campus of the University of South Alabama, Mobile, AL.
- USA will make arrangements for the research and writing of a historic narrative regarding the early period of architectural and campus development on the grounds of the University of South Alabama.
- USA will create a historic interpretive weather resistant sign panel that is to be located within the context of the demolition area and near the remaining Alpha Hall West and Alpha Hall North.

The MOA will be signed by the executing signatories (AHC, NIST, and USA) by December 31, 2023 (Appendix E).

Should unexpected archeological resources be discovered during construction, activities would be halted in the immediate area of the discovery until the resources have been evaluated for NRHP eligibility criteria (36 CFR 60.4) in consultation with AHC and Tribal consulting parties in accordance with 36 CFR 800.13. Appropriate mitigation would be determined during AHC and Tribal consultation. However, due to the absence of any archaeological resources being found at this time, the MOA addressing adverse impacts on historic architectural properties, and the controls that are in place in the event of an unanticipated discovery of such materials, impacts on cultural resources as a result of the proposed project are anticipated to be mitigated.

3.6 Noise

The traditional definition of noise is "unwanted or disturbing sound". Sound becomes unwanted when it either interferes with normal activities such as sleeping, conversation, or disrupts or diminishes one's quality of life. Sound is typically measured on a logarithmic decibel (dB) scale.

The threshold of human hearing is approximately 3 dB. Long-term exposures of over 85 dB may cause hearing loss and sounds of 120 dB or greater are generally considered painful to the human ear. A-weighted measurements or the A-weighted decibel (dBA) are commonly used to determine noise levels that can cause harm to the human ear. Environmental and industrial noise is most commonly expressed in dBA.

Noise levels occurring at night generally produce a greater annoyance than do the same levels occurring during the day. The day-night average sound level (DNL) is the community noise metric recommended by the U. S. Environmental Protection Agency and has been adopted by most Federal agencies (USEPA 1974). The noise level most commonly used for noise planning purposes is a DNL of 65 dBA.

In regard to the new Medical Building, the closest residential home is approximately 850 feet west of the western edge of the proposed project site. Noise levels for various types of construction equipment along with attenuation of noise levels at specified distances from the equipment are provided in Table 1 (Federal Highway Administration [FHWA] 2017). Noise levels at greater than 800 feet from the Proposed Action area range from 52-60 dBA. Noise level attenuation rates are based on the inverse square law, which states that sound level attenuates or drops off at a rate of 6 dBA for each doubling of the distance (6 dBA/DD) from the point source as a result of the geometric spreading of the energy over an ever-increasing area (ICF Jones & Stokes 2009).

Table 1. Noise Levels (dBA) of Construction Equipment and Attenuation[1]

Source	50 feet	100 feet	200 feet	400 feet	800 feet
Backhoe	78	72	66	60	54
Bulldozer	84	78	72	66	60
Concrete Truck	79	73	67	61	55
Crane	81	75	69	63	57
Dump Truck	76	70	64	58	52
Excavator	81	75	69	63	57
Front-end loader	82	76	70	63	57

Source: *FHWA 2007*
dBA- A-weighted decibel.
[1] The dBA at 50 feet is from FHWA 2007. The 100- to 800-foot results are estimates using the inverse square law.

Noise produced by the proposed project will be solely during the construction period. Construction is expected to last approximately 20 months. During this time, demolition of two buildings will occur, truck traffic will increase, grading and earth moving will be conducted and general construction of the new Medical Building will occur.

Construction noise will be mitigated somewhat by the terrain, trees, and roads and buildings surrounding the project site. To further mitigate the construction noise, these operations shall only be conducted during daylight hours of 7AM to 5PM, primarily on weekdays and possibly a few Saturdays. The University of South Alabama will comply with City of Mobile noise ordnances.

3.7 Public and Occupational Health and Safety

USA's Department of Safety and Environmental Compliance has issued a mission statement that says, "to encourage a safe environment for faculty, staff, students and others by setting standards, monitoring for compliance, providing technical or support service and offering safety education." The policy set forth by the president of USA and this Department is instituted and based on the University of South Alabama's commitment to a comprehensive Safety and Environmental Compliance program. The University strives to assure a safe environment for its faculty, staff, students and others who may work at any of the University's properties. In support of this policy the University will give high priority, appropriate support, and take proactive actions to eliminate hazards where possible, or to reduce to acceptable limits, environmental and occupational hazards.

The primary responsibility for the University's safety and environmental compliance rests with the President. The President has delegated to each vice president, dean, director, chairperson, and supervisor the responsibility for safety within their respective areas. Every employee will be expected to take initiatives so that safe conditions are maintained, and to request the assistance of the Department of Safety and Environmental Compliance to expedite corrective action when necessary. Each supervisor must take the initiative to train the employees and students under his/her supervision in safe work practices. In particular, supervisors should ensure that employees and students know (a) all potentially hazardous conditions associated with the operation and the method established to control them and (b) all safety regulations for the area of operation. In addition, supervisors are expected to promote a safety attitude and awareness that will lead employees and students to take a safe course when confronted with situations which are not clearly established by regulations and practices.

Faculty, staff and students have an obligation to take all reasonable precautions to prevent injury to themselves or to their fellow employees, visitors, patients and/or students. They are expected to learn and to follow approved policy and procedures which apply to their activities, and to check with their supervisors when they have any concerns regarding potential hazards.

The President has delegated to the Director of Safety and Environmental Compliance the responsibility and authority for assuring overall compliance with applicable safety and environmental standards university wide. The Director shall adopt as guides applicable safety and environmental standards promulgated by Federal and State agencies in establishing University regulations and policy. Published standards of nationally recognized professional safety and environmental compliance groups may serve as guidelines in the absence of appropriate statutes and governmental regulations.

3.8 Socioeconomics and Environmental Justice

The University currently employs approximately 9,000 people and an attendance of nearly 14,000 students with expectations of increased growth of both faculty and student admissions going forward. USA academics offers more than 100 undergraduate, graduate, and doctoral programs through its 11 colleges and schools. During the demolition and construction phase of this project, the University anticipates an additional 500 jobs being created and filled. Post construction, the University anticipates requiring an additional 50 staff for the new medical building.

The construction and operation of the Project would result in an increase in temporary construction workers and long-term employment. The increase in short-term and long-term jobs in the region would result in a beneficial socioeconomic impact.

3.8.1 Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, to develop, implement, and enforce environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys the same degree of protection from environmental and health hazards, and equal access to the decision-making process to live, learn, and work in a healthy environment.

The Environmental Justice Index uses data from the U.S. Census Bureau, the USEPA, the U.S. Mine Safety and Health Administration, and the U.S. Centers for Disease Control and Prevention (CDC) to rank the cumulative impacts of environmental injustice on health for every census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The EJI ranks each tract on 36 environmental, social, and health factors and groups them into three overarching modules and ten different domains. USA's main campus is located in the Census Tract 36.05, Mobile County, Alabama (Appendix G). In Appendix G, the table covers many indicators intended to provide only a screening-level overview of the cumulative impacts of environmental burden facing a community relative to other communities in the US. Due to the nature of a university, there is very little data reported within the table. The University is not a family style or long-range lifestyle tract therefore data is not comparable to the region or state it is located in. The immediate surrounding area is comprised of USA properties, a golf course, and some residences (Figure 14). Nearby residential neighborhoods include Hillsdale Heights located 1.59 miles to the west northwest, Park Forest located 0.5 miles to the north, and Country Club Village located adjoining to the southeast, across University Boulevard. Hillsdale Heights, according to City-Data.com, is comprised of approximately 70% minority races with a median household income of $43,000 and a median rent value below the City of Mobile average. Park Forest/Alpine Hills, according to City-Data.com, is comprised of approximately 78% minority races with a median household income of $46,000 and a median house value of $104,000. Country Club Village is comprised of approximately 72% white, with a median household income of $60,000 and a median house value of $119,000.

The construction of the new medical building is not anticipated to impact any underserved, minority, or low-income neighborhoods nearby.

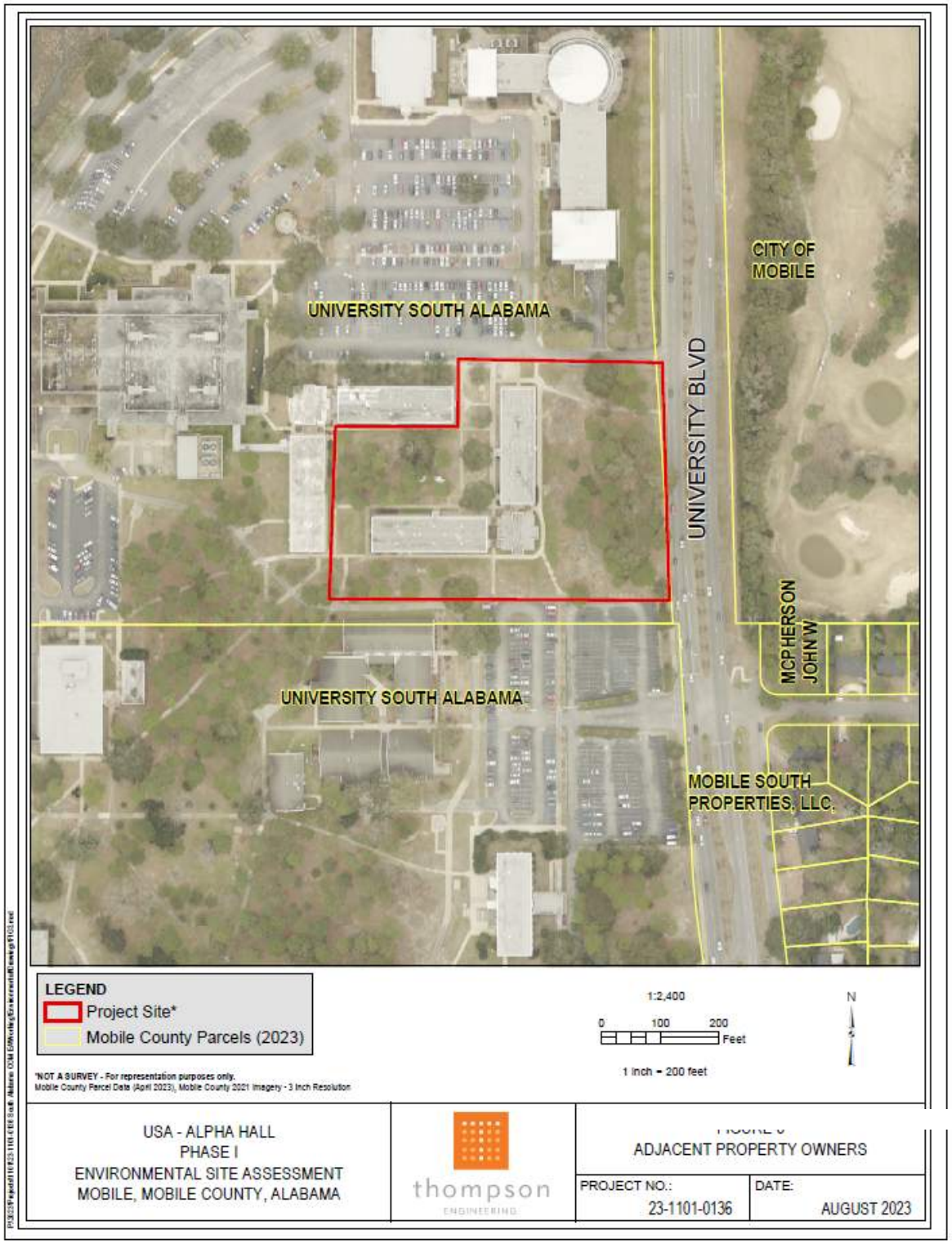

Figure 14. Adjacent Property Owners to Project Site.

3.9 Traffic and Transportation

The proposed project area is bordered by USA Drive North and North University Boulevard. The Medical School is largely comprised of one area on the northeastern edge of the main campus of USA. The Medical School has two parking lots that are accessed by either USA Drive North or North University Boulevard. The remainder of the main campus can be navigated by using USA Drive North; while an exit from the Medical Campus can be made by using North University Boulevard via one of two parking lots. See Figure 15.

Figure 15. Parking Lots and Access Roads around the Frederick P. Whiddon College of Medicine.

There would be some small impact to traffic and transportation during the construction of the proposed College of Medicine. Since the demolition and construction at the proposed site and adjacent buildings is confined to a small area within the College of Medicine Campus, only this immediate area would be measurably impacted. Any impacts should subside once construction is complete. There would be no significant increase in traffic as a result of the operation of the proposed new building.

USA anticipates no impact to the availability of parking spaces during the demolition and construction of the new medical building. The surface parking lots were constructed to accommodate additional vehicles due to the uses of buildings within the Medical School Campus such as libraries, labs, and pop in and pop out visitors to such amenities.

In case of travel or parking disruptions, USA has implemented a public transit system for the University called the 'Jag Tran.' The Jag Tran is free to all students and visitors on campus. The schedule runs from 7:10 a.m. to 8 p.m. every day. The parking areas on campus are coded and regulated. All students, faculty, staff, and visitors must have appropriate

identification/permission to park on campus in the coded spaces.

Cumulative impacts on traffic would be minimal as a result of new developments and would likely be confined to the duration of the construction. There is some slight traffic increase anticipated by the growth of the University. The infrastructure would be modified as necessary to handle the University's growth into the future.

The larger, more frequented roads bordering the University are capable of handling traffic increases that result from the University's growth.

3.10 Hazardous Materials

Samples of suspect asbestos containing materials were collected in the Alpha South and Alpha East buildings. Asbestos fibers were not detected in samples collected in the Alpha South building. Multiple samples (9) of suspect asbestos containing materials in the Alpha East building resulted in greater than 1% chrysotile asbestos, and one sample was assumed to contain greater than 1% asbestos. Any asbestos present in the buildings to be demolished will be removed in accordance with all state and federal regulations. An ADEM Form 496, Notice of Asbestos Abatement and/or Demolition will be submitted to the ADEM a minimum of 10 weekdays prior to any abatement or demolition activities.

Due to the absence of a lead-based paint survey, the contractor will assume that all painted surfaces are painted with paint or primer containing some detectable amount of lead or other heavy metals. The Contractor will demolish the buildings with the coatings and paint containing lead or other heavy metals in place. The contractor will be required to comply with all the requirements of Occupational Health and Safety Administration (OSHA) Regulation 29 CFR 1926.62 during the demolition of the building.

The contractor will determine the Resource Conservation and Recovery Act (RCRA) waste classification for all waste streams generated by the demolition and will dispose of all wastes at an appropriate disposal facility based on the waste classification. Additionally, the contractor will be required to comply with all requirements of the ADEM waste regulations during the handling of the demolition debris.

The contractor will handle any existing hazardous materials such as polychlorinated biphenyls (PCB) containing ballasts, fluorescent bulbs, or radioactive smoke detectors by removing the items from the building prior to demolition and properly disposing of the items as universal waste in accordance with state and federal requirements.

Under circumstances requiring the shipment of hazardous and biohazardous materials, the appropriate precautions would be taken in order to comply with all state and federal regulations. USA procedures require that all transfers of infectious materials on campus and shipping off-campus be conducted by certified personnel and in accordance with the standard operating procedures (SOP) for shipping and receiving.

3.11 Water Resources

3.11.1 Wetlands and Streams

The U.S. Fish and Wildlife Service (USFWS), an agency within the Department of the Interior, has responsibilities to identify, inventory, and map the nation's wetlands. A search of the National Wetland Inventory Maps produced by USFWS identified one wetland area within a one-mile radius of the center of the project site. No wetlands are located on the proposed site.

3.11.2 Surface Water, Floodplains, and Groundwater

The project site is located within the Three Mile Creek watershed – Hydrologic Unit Code (HUC) 031602040504. Three Mile Creek stretches approximately 14 miles from west of USA east to its confluence with the Mobile River, which then drains to Mobile Bay (MBNEP, TMC WMP 2014). No surface water resources are located on or near the proposed project site.

The CWA and Federal regulations require construction site operators to obtain a National Pollutant Discharge Elimination System (NPDES) permit coverage for regulated land disturbances and associated discharges of stormwater runoff to State waters. Effective April 1, 2011, Alabama Department of Environmental Management (ADEM) established General NPDES Permit No. ALR100000 for discharges associated with regulated construction activity that will result in land disturbance equal to or greater than one acre or from construction activities involving less than one acre and which are part of a common plan of development or sale equal to or greater than one acre. Construction site operators / owners seeking coverage under this general permit must submit a Notice of Intent (NOI) in accordance with the permit requirements. Operators / owners of all regulated construction sites must implement and maintain effective erosion and sediment controls in accordance a Construction Best Management Practices Plan (CBMPP) prepared and certified by a Qualified Credentialed Professional (QCP). For priority construction sites, which include any site that discharges to (1) a waterbody which is listed on the most recently EPA approved 303(d) list of impaired waters for turbidity, siltation, or sedimentation, (2) any waterbody for which a TMDL has been finalized or approved by EPA for turbidity, siltation, or sedimentation, (3) any waterbody assigned the Outstanding Alabama Water use classification in accordance with ADEM Admin. Code r. 335-6-10-.09, and (4) any waterbody assigned a special designation in accordance with ADEM Admin. Code r. 335-6-10-.10, the CBMPP must be submitted to ADEM for review along with the NOI (ADEM website).

The Mobile County Flood Insurance Rate Map 01097C0533L (effective June 5, 2020), published by the Federal Emergency Management Agency, shows the flood plain for Three Mile Creek, bordering the northwest aspect of the Medical/Health Sciences campus, encroaches upon the northwest parking lot in this campus site. However, the construction site for the new College of Medicine building lies at a higher elevation well to the southeast of this flood plain zone. No impacts are anticipated.

Based on the national flood hazard map, the flood plain for Three Mile Creek is located northwest of the Medical/Health Sciences campus. The 100-year flood zone (Zone AE) associated with the Three Mile Creek flood plain encroaches upon the parking lot in the northwest portion of the campus. The 500-year flood plain (Zone X), also associated with the Three Mile Creek flood plain exists approximately 200' north of the northernmost boundary of the Medical/Health Sciences campus. The construction site for the new College of Medicine building lies in the southeast

portion of the Medical/Health Sciences campus, more than 500' from Zone AE and approximately 1,000' from Zone X. Therefore, since the new building is not located in a flood zone, impacts due to flood risks are not anticipated. The National Flood Hazard Layer FIRMette, obtained from the Federal Emergency Management Agency (FEMA) website, is included in Appendix F.

During operations, the Project would obtain its drinking water from the Mobile Area Water and Sewer System (MAWSS). Water supply comes from the J.B. Converse Reservoir (Big Creek Lake) and has adequate capacity to serve the Project's anticipated potable water needs. The Project would not use groundwater or include any discharges that could adversely affect groundwater. Based on the current plans for municipal water use, the absence of identified floodplains, and anticipated stormwater control and treatment during construction and operation, the impacts from the Project on surface water, floodplains, and groundwater would not be significant.

3.12 Cumulative Impacts

Cumulative impacts are potential effects on the environment from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1 (g). Based on a review of active project lists and planning documents from the University of South Alabama, the City of Mobile, and the Alabama Department of Transportation, no projects are anticipated in or around the Proposed Project Site.

4.0 CONCLUSIONS

The construction the new Frederick P. Whiddon College of Medicine building will have an adverse effect on portions of the academic campus, which are potentially eligible for listing in the National Register of Historic Places. These impacts will be mitigated by the following stipulations set forth by the MOA between the Alabama Historic Preservation Officer, NIST, and USA, pursuant to 36 CFR Part 800 implementing Section 106 of the NHPA (16 U.S.C. Part 470t).

- Prior to the completion of the demolition, USA will make arrangements for archival photographic documentation of the Alpha Hall Complex with emphasis upon the visual recordation of the Alpha East and Alpha South on the campus of the University of South Alabama, Mobile, AL.
- USA will make arrangements for the research and writing of a historic narrative regarding the early period of architectural and campus development on the grounds of the University of South Alabama.
- USA will create a historic interpretive weather resistant sign panel that is to be located within the context of the demolition area and near the remaining Alpha Hall West and Alpha Hall North.

The project area is confined to a 3.7 acres site that currently hosts buildings, parking lots, and grassed areas. There are no anticipated impacts to biological resources within the 3.7 acres of constructed facilities and parking lots due to the amount and proximity of natural landscapes that will remain in the surrounding area. No floodplains or wetlands will be impacted due to the construction of the College of Medicine building. There are no anticipated impacts to water quality during construction, plans include the implementation of BMPs in order to mitigate any temporary incidents of silt and debris.

Air quality and greenhouse gas impacts are anticipated due to the additional heating and cooling required for the new building and will be mitigated by numerous energy saving improvements as discussed in Section 3.3 and 3.3.1. During the demolition of the existing buildings, any hazardous building materials will be removed, abated, and properly disposed of by the contractor.

By improving the technical learning environment, the University of South Alabama College of Medicine can expand and improve upon its current capacity for scientific research, research training and medical education. The long-term effect of constructing the new medical building is expected to result in significant positive impacts to University's growth of medical professionals for years to come.

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APPENDIX A

STAKEHOLDER AND PUBLIC INVOLVEMENT NOTIFICATION LIST

EA Consultation List

U.S. Army Corps of Engineers
109 St Joseph Street
Mobile AL 36602

U.S. Department of Agriculture, Natural Resource Conservation Service
1070 Schillinger Road
Mobile AL 36608-5200
christine.cooley@usda.gov

Alabama Department of Environmental Management
Mobile Central Field Office
2204 Perimeter Road
Mobile AL 36615

City of Mobile
Permitting and Predevelopment
205 Government Street
3rd Floor, South Tower
Mobile AL 36602

Advisory Council on Historic Preservation
401 F Street NW
Suite 308
Washington D.C. 20001

Mobile Historic Development Commission
P O Box 1827
Mobile AL 36633

Tribal Consultation Contact List

Alabama Coushatta Tribe of Texas
571 State Park Road 56
Livingston, TX 77351
celestine.bryant@actribe.org

Coushatta Indian Tribe
PO Box 10
Elton, LA 70532
llangley@coushatta.org

Jena Band of Choctaw Indians
PO Box 14
Jena, LA 71342
jflynn@jenachoctaw.org

Choctaw Nation of Oklahoma
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Durant, OK 74701
lbilyeu@choctawnation.com

Kialegee Tribal Town
PO Box 332
Wetumpka, OK 74883
kialegeettcpo@gmail.com

Seminole Nation of Oklahoma
PO Box 1498
Wewoka, OK 74884
marshall.e@sno-nsn.gov

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30290 Josie Billie Highway
PMB 1004
Clewiston FL 33440
tinaosceola@semtribe.com

Tunica-Biloxi Indians of Louisiana
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Marksville, LA 71351
earlii@tunica.org

Muscogee Creek Nation
PO Box 580
Okmulgee, OK 74447
section106@mcn-nsn.gov

Poarch Band of Creek Indians
5811 Jack Springs Road
Atmore, AL 36502
lhaikey@pci-nsn.gov

Alabama Quassarte Tribal Town
PO Box 187
Wetumpka, OK 74883
molly.moore@alabama-quassarte.org

United Keetoowah Band of Cherokee Indians
18300 W. Keetoowah Circle
Tahlequah, OK 74464
awatt@ukb-nsn.gov / wwarrior@ukb-nsn.gov

Thlopthlocco Tribal Town
109009 North 3830 Road
Okemah, OK 74859
thpo@tttown.org

Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw, MS 39350
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Miccosukee Tribe of Indians
Tamiami Station
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Miami FL 33144
marlap@miccosukeetribe.com

APPENDIX B
PHASE I ENVIRONMENTAL SITE ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Prepared for:

UNIVERSITY OF SOUTH ALABAMA

Alpha Hall Phase I

555 North University Boulevard

Mobile, Alabama 36688

Project No: 23-1101-0136

August 2023

Jordan Leech, P.G., MSCE
Staff Scientist

Suzanne Sweetser, M.S., CPESC
Senior Scientist

thompson
ENGINEERING

Table of Contents

1. EXECUTIVE SUMMARY

Thompson Engineering, Inc. (Thompson Engineering) was retained by the University of South Alabama (USA) to conduct a Phase I Environmental Site Assessment for the Alpha Hall East and South building located on USA's Main Campus at 555 University Boulevard North in Mobile, Alabama. The purpose of this assessment was to identify recognized environmental conditions (RECs) in connection with the property by means of interviews, review of record information, and site reconnaissance. This report was prepared for the sole use by USA and is considered Proprietary Information. The conclusions of this assessment are summarized below:

Thompson Engineering has performed a Phase I Environmental Site Assessment of the property in general conformance with the scope and limitations of ASTM Practice E1527-21. Any exceptions to, or deletions from, this practice are described in Section 2.0 of this report.

This assessment has revealed no evidence of any RECs in connection with the subject property.

2. INTRODUCTION

2.1 Scope and Purpose

This report provides a professional evaluation of recognized environmental conditions concerning the property, as related to the presence or likely presence of hazardous substances and petroleum products. These conditions, if any, may be due to present or prior activities at the property and/or nearby properties. This Phase I Environmental Site Assessment (ESA) was performed in general conformance with ASTM Practice E 1527-21, with the limitations and exceptions listed in Section 2.3. The ASTM E1527-21 standard is consistent and compliant with the U. S. Environmental Protection Agency (EPA) Final Rule, 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries (AAI).

The purpose of this Phase I ESA was to identify recognized environmental conditions in connection with the property by means of interviews, review of record information, and site reconnaissance. As such, it is intended that the Phase I ESA permit the user to satisfy one of the requirements to qualify for the landowner liability protections (LLPs) to CERCLA liability; that is, the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice."

2.2 Special Terms and Conditions

This report has been prepared for the exclusive use and benefit of the addressee of this report. Others who use the report do so at their own peril. Thompson Engineering consents that its information and reports may be furnished to and used by others participating in the financing and/or development of the project (and for reports involving real property transactions, other parties of the transaction), but only in the same manner and extent as if such others were the addressees and the Client. The terms, conditions, and limitations of liability contained in the Thompson Engineering/Client Agreement shall apply to others to whom the Client furnishes such information and reports. The contents of this report shall not be relied upon by any other party without the express written consent of Thompson Engineering.

In performing this assessment, Thompson Engineering strives to conform to generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area. Thompson Engineering has attempted to observe a degree of skill and care generally exercised by the technical community under similar circumstances and conditions. No other representation, either expressed or implied, is intended and no warranty or guarantee is included.

2.3 Limitations and Exceptions of Assessment

The following clarifications to the scope of services are given:

Site History

Thompson Engineering evaluated the past use of the property through review of the standard historical sources and to some extent from interviews with knowledgeable persons such as owners, occupants, and government officials. In accordance with the scope-of-services, Thompson Engineering only reviews chain of land title records if they are made available through the user, owner, or key site manager. This Phase I Environmental Site Assessment did not include procuring recorded land title records.

General

This assessment was performed in accordance with generally accepted methods and practices of the profession. All conclusions are based on available and reasonably ascertainable information, and are not to be considered scientific certainties. The intent of this assessment was to identify recognized environmental conditions which would be obvious to a professional exercising due diligence. This assessment is not intended to represent an exhaustive research of all potential concerns which may exist.

This report does not purport to be representative of future site conditions or events. Situations or activities which may transpire subsequent to this report which result in adverse environmental impacts are not to be construed as relevant to this study.

This investigation did not include soil borings, installation of groundwater monitoring wells, or collection of samples for chemical analyses. The findings have been based on observations of site conditions, our interpretation of site history, and site usage information. However, it is recognized that no environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the property. Therefore, the lack of identification of such concerns should not be construed as a guaranteed absence of such conditions.

Non-scope issues excluded by Section 13.5.1 of ASTM Practice E 1527-21 were not addressed by this assessment. Such non-scope issues include, but are not necessarily limited to: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, PCB building materials, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, and mold.

2.4 Limiting Conditions and Methodology Used

During site reconnaissance, Thompson Engineering visually and physically observed the property and any structures on the property to the extent not obstructed by bodies of water, adjacent buildings, or other obstacles and in general conformance with Section 9.2.4 and 9.2.6 of ASTM Practice E 1527-21. There were no other inaccessible areas or limiting conditions encountered at the subject property.

2.5 Information Reported by User Regarding Environmental Liens or AULs and Specialized Knowledge or Experience

The user of this report was contacted to determine whether he had any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property, or any actual knowledge of environmental liens or activity and use limitations (AULs) encumbering the property (see completed ESA User Questionnaire, Appendix C.)

2.6 Project Information Data

I. Project Information

Property Name: Alpha Hall (East and South)

II. Client Information

Client Name: University of South Alabama

Client Contact: Chris West, Project Manager

Client Address: Administration Building
307 University Blvd. North
Mobile, AL 36688

III. Investigation Data

Environmental professional: Jordan Leech, P.G., MSCE

Site reconnaissance performed by: Jordan Leech, P.G., MSCE

Date of site visit: August 8, 2023

Interviews performed by: Jordan Leech, P.G., MSCE

Lists of Interviews Conducted:

Table 1: Interviewee List.

	NAME	TITLE	AFFILIATION
1.	Chris West	Project Manager	University of South Alabama
2.	Bill Guess	Safety and Env. Director	University of South Alabama
3.	Frances (Anne) Foster	Assistant Director	University of South Alabama
4.	Savannah Wallace	Industrial Hygienist	University of South Alabama

3. SITE DESCRIPTION

3.1 Location and Legal Description

Section: 16, **Township:** 4S, **Range:** 2W

Street Address: 555 North University Blvd

County: Mobile

City, State, Zip Code: Mobile, Alabama 36688

Legal Description:

Parcel No.	
2805161000001XXX	NE 1/4 OF SEC 16 T4S R2W LE SS & EXC R/W FOR THAT PART OF UNIVERSITY BLVD RUNG N/S ALG E/S OF NE 1/4 OF SEC 16 T4S R2W #SEC 16 T4S R2W #MP28 05 16 1 000

Subject site is located within the parcel described above. The legal description was derived from data obtained from the Mobile County Property Tax website based on parcel information provided.

3.2 Site and Vicinity Characteristics

General Area Use

Land use in the study area is currently characterized as commercial.

A Vicinity Map is provided in Appendix A, Figure 1. Also provided as Figure 2 is an aerial photograph depicting the site and adjacent properties. Adjoining properties are discussed in Section 3.7.

Description of Site

The subject property is approximately 4.4 acres located off North University Boulevard in Mobile, Alabama. The subject property was first developed in the 1967 as part of a four-building residential hall complex. The subject property consisted of the two of these four building including a smaller extension building, Alpha Hall East (1967), Alpha Hall East Extension (1968), and Alpha Hall South (1967) with a parking lot adjacent to the north. The topography of the site slopes gently to moderate in a northwest direction.

A Parcel Map of the property is presented in Appendix A, Figure 3. Site Photographs are presented in Appendix B.

3.3 Descriptions of Structures, Roads, and Other Improvements on the Site

Description of Structures

The subject property consists of three main buildings, Alpha Hall East, Alpha Hall South, and Alpha Hall East Extension. Both Alpha Hall East and Alpha Hall South are three-story building while Alpha Hall East Extension is only one story. The occupants and use of the facilities has changed numerous times over the years from student dormitories to classrooms and offices. The interior of the building currently consists of offices, classrooms/lecture halls, computer labs, and research laboratories.

An Aerial Map is presented in Appendix A, Figure 2.

Source of Potable Water

Potable drinking water is provided by Mobile Area Water and Sewer System (MAWSS).

Method of Sewage Disposal

Domestic Sewage is provided by MAWSS.

Storm Water Run-Off

Storm water run-off from the subject property is expected percolate onsite or flow into the stormwater drainage system.

Description of On-site Roads/Parking Areas

There are no parking areas or roads within the subject property. However, an asphalt parking lot is located just to the north, adjacent to Alpha Hall East, which is accessible via University Boulevard.

3.4 Current Uses of the Property

The use of the subject property and its amenities has changed numerous times over the years from student dormitories to classrooms and offices. However, in recent years, the facility has housed the various academic disciplines (Continuing Education & Special Programs, International Studies, Counseling Services, etc.) in Alpha Hall East and the ROTC in Alpha Hall South.

The current uses of the subject property does not appear to indicate any recognized environmental conditions or concerns.

3.5 Past Uses of the Property

Past usage of the subject property was documented based upon historical maps, aerial photography review and interview remarks. The earliest standard historical source reviewed, an aerial photograph dated 1938 shows the site as undeveloped. The property remained undeveloped until the mid-1960s. The first known use of the facility was for student residential dormitories. As the main campus of USA grew in the following decades, the use of Alpha Hall (East and South) changed from student residential dormitories. In the early 1990s, Alpha East was converted from student dorms to offices and classrooms. Alpha South was converted from student dorms to offices and classrooms, with the first floor renovated for ROTC. There are no records indicating the storage or use of hazardous materials.

The past uses of the subject property does not appear to indicate any recognized environmental conditions or concerns.

3.6 Current and Past Uses of Adjoining Properties

Current Uses of Adjoining Properties:

Table 2: Adjoining Properties.

	NAME	ADDRESS	CURRENT USE	DIRECTION
1.	University of South Alabama	307 N. University Blvd. Admin 250	Public University	North/ South/West
2.	City of Mobile	1 Joe Barbato Dr.	Commercial	East
3.	McPherson John W	5666 William & Mary St	Residential	Southeast
4.	Mobile South Properties, LLC	412 University Blvd. N	Residential	Southeast

Visual observations of the adjoining operations during the site visit did not reveal any obvious environmental concerns. The current uses of the adjoining properties do not appear to indicate a recognized environmental condition.

3.7 Current or Past Uses in Surrounding Area

Based on the review of historical documents and aerial photographs dating back to 1938, the surrounding area remained undeveloped until the mid-1960s. The property surrounding the subject property and west of University Boulevard, owned and operated by the University of South Alabama, was developed into a campus for higher education. The property to the east and southeast was constructed into a golf course and residential neighborhood, respectively. Over the following decades, the areas steadily grew with additional educations facilities constructed on the USA main campus. The golf course and residential structure originally constructed in the 1960s are still present to date.

The current or past uses of the property in the surrounding area do not appear to indicate any recognized environmental conditions or concerns.

4. RECORDS REVIEW

4.1 Standard Environmental Record Sources

Thompson Engineering reviewed Federal and State databases within the ASTM-specified search distances. This database was provided by Environmental Data Resources, Inc. (EDR), whose complete report can be found in Appendix C. The results of the database search are summarized in the table below and discussed in following sections.

Table 3: EDR Database Search Results.

	DATABASE LIST	SOURCE	SOURCE DATE	ASTM MINIMUM SEARCH DISTANCE	SITES WITHIN SEARCH DISTANCE
1.	Federal National Priorities List (NPL)	EPA	06/23	1 Mile	None
2.	Federal Delisted NPL	EPA	06/23	0.5 Mile	None
3.	Federal CERCLIS List (SEMS List)	EPA	06/23	0.5 Mile	None
4.	**Federal CERCLIS NFRAP List**	**EPA**	**06/23**	**0.5 Mile**	**One**
5.	**Federal RCRA CORRACTS List**	**EPA**	**03/23**	**1 Mile**	**One**
6.	**Federal RCRA non-CORRACTS TSD List**	**EPA**	**03/23**	**0.5 Mile**	**One**
7.	**Federal RCRA Generators List**	**EPA**	**03/23**	**Subject Property and Adjoining Properties**	**One**
8.	Federal Institutional / Engineering Control Registries	EPA	05/23	Subject Property Only	None
9.	Federal Emergency Response Notification System (ERNS)	EPA	03/23	Subject Property Only	None
10.	State/Tribal Equivalent NPL	NA	NA	1 Mile	None
11.	State/Tribal Equivalent CERCLIS List (State Hazardous Waste Sites)	ADEM	01/23	0.5 Mile	None
12.	State/Tribal Landfill / Solid Waste Sites	ADEM	11/21	0.5 Mile	None
13.	State/Tribal Leaking Underground Storage Tanks (LUST) List	ADEM	03/23	0.5 Mile	None
14.	**State/Tribal Registered Storage Tanks**	**ADEM (UST)** ADEM (AST)	**07/22 (UST)** 07/22 (AST)	**Subject Property and Adjoining Properties**	**Six** None
15.	State/Tribal Institutional / Engineering Control Registries	ADEM	03/23	Subject Property Only	None
16.	State/Tribal Voluntary Cleanup Sites	ADEM	10/22	0.5 Mile	None
17.	State/Tribal Brownfield Sites	ADEM	10/22	0.5 Mile	None

Acronyms used in above database table:

EPA: United States Environmental Protection Agency
ADEM: Alabama Department of Environmental Management
CERCLIS: Comprehensive Environmental Response, Compensation and Liability Information System (a list of potential and confirmed hazardous waste sites)
NFRA: No Further Remedial Action
RCRA: Resource Conservation and Recovery Act (a list of facilities that generate, transport, treat, store, or dispose of hazardous wastes)
TSD: Treatment / Storage / Disposal
CORRACTS: RCRA Corrective Action Facilities

Thompson Engineering reviewed the sites identified by the EDR Report relative to the property; however, since the property is a part of the main campus, records for the main campus of the University of South Alabama were reviewed as a surrounding property. After reviewing the EDR Report, Thompson identified one (1) Federal CERCLIS NFRAP List, one (1) Federal RCRA CORRACTS List, one (1) Federal RCRA non-CORRACTS TSD List, one (1)Federal RCRA Generators List, and six (6) UST/AST site within the ASTM minimum search area. Thompson reviewed the sites identified and determined some of the sites identified are located on the main campus surrounding the subject property.

ITEM 4 – FEDERAL CERCLIS NFRAP LIST

Sites that have been removed from the Comprehensive Environmental, Response, Compensation and Liability Information System (CERCLIS) because it has been determined that no further action is warranted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) are archived on the No Further Remedial Action Planned (CERCLIS NFRAP) list. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site. One (1) CERCLIS NFRAP site was identified.

University of Southern Alabama, 307 University Blvd., Mobile AL is the main campus surrounding the site. Based on the records reviewed, the discovery date for the site was November 1980. In January 1989, the site was archived, as it did not qualify as a NPL based on existing information. Based on the information reviewed, it is Thompson's opinion that a formal file review of this facility is not warranted.

ITEM 5 – FEDERAL RCRA CORRACTS LIST

The Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) list identifies hazardous waste handlers with RCRA corrective action activity. The EPA has set ambitious goals for the RCRA CORRACTS program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations. One (1) CORRACTS facility was identified.

University of Southern Alabama, 307 University Blvd., Mobile AL is the main campus surrounding the site. Based on the documents reviewed, the site identified in the records search is described as the "Entire Facility." In addition, no information reviewed identified any environmental impacted site or contamination within reasonable area of concern surrounding the subject property. Based on the information reviewed, it is Thompson's opinion that a formal file review of this facility is not warranted.

ITEM 6 - FEDERAL RCRA non-CORRACTS TSD List

The Resource Conservation and Recovery Act (RCRA) non-Corrective Action Treatment, Storage and Disposal (TSD) database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. One (1) RCRA TSD facility was identified.

University of Southern Alabama, 307 University Blvd., Mobile AL is the main campus surrounding the site. Based on the records reviewed, the information includes various chemicals and hazardous waste generated, transported, and disposed of used on the campus. Of this, only small amounts of hazardous material were ever stored on used within or surrounding the projects site. Based on the information reviewed, it is Thompson's opinion that a formal file review of this facility is not warranted.

ITEM 7 – FEDERAL RCRA GENERATOR LIST

The Resource Conservation and Recovery Act (RCRA) generator database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. While ASTM only requires reviewing the RCRA generator database for the subject property and adjoining properties, the database search looked at a wider radius to cover mapping errors. One (1) generator facilities were identified. Thompson reviewed the sites identified and determined that the identified site is an adjoining property.

University of Southern Alabama, 307 University Blvd., Mobile AL is the main campus surrounding the site. Thompson accessed the USEPA EnviroFacts website for additional information. The website confirmed the active Large Quantity Generator (LQG) status for the facility. Several violations were identified to have occurred within the last 5 years from both the EPA and the State of Alabama. In addition, several warning letters from the State of Alabama and informal warning from the EPA were issued. However, upon further review of the violation, it is Thompson's opinion that a formal file review of this facility is not warranted.

ITEM 14 – STATE/TRIBAL REGISTERED STORAGE TANKS

While ASTM only requires reviewing the registered storage tank database for the Property and adjoining properties, the database search looked at a wider radius to cover mapping errors. Six (6) registered UST sites were identified within approximately 0.25 miles of the project site.

University of Southern Alabama, 307 University Blvd., Mobile AL is the main campus surrounding the site. Over the lifetime of the University, the main campus has utilized numerous USTs to store diesel or gasoline throughout the main campus. Review of available records indicate the USTs were installed between 1970 and 1984. Starting in 1997 and continuing into 1998, nearly all the USTs were either closed or replaced and the number of active USTs was reduce to eight (8). Review of the available information and closure report revealed no evidence of contamination or currently active investigations.

In July 2023, two (2) additional USTs were removed and currently finalizing the closure process. Six (6) active USTs containing diesel were identified on the main campus. The USTs range in size from approximately 550 to 10,000-gallons. Further review of the location of the active USTs indicated that only two (2) are within 1,320 ft. (1/4 mile) of the site, USA-7 and USA- 8. USA-7 is a 5,000-gallon double-walled, steel tank used to store diesel. It is located approximately 400 ft. west of the project site at the Medical Science Building. It was installed in November 1997 as a replacement to the former UST, which was originally installed in 1973. USA-8 is a 550-gallon double-walled, steel tank used to store diesel. It is located approximately 500 ft. southwest of the project site at the Life Sciences Building. It was installed in December 1997 as a replacement to the former UST, which was originally installed in 1970.

Based on review of all related available documents, it is Thompson's opinion that none of sites identified are considered a REC in regards to the project site.

4.2 Physical Setting Sources

Physical Setting Sources Reviewed:

Table 4: Physical Setting Sources.

	TITLE	SOURCE	DATE
1.	Soil Survey of Mobile County, Alabama	USDA	1980
2.	Topographic Map, Springhill, AL 7.5-minute quad.	USGS	2020
3.	Street Map	Tom Tom	2015
4.	Geocheck® Physical Setting Source Addendum	EDR® Environmental Data Resources, Inc. [included in Appendix C]	2023

4.3 Historical Use Information

Historical Information Sources Reviewed:

Table 5: Historical Information Sources.

	TITLE	LOCATION/SOURCE	DATE
1.	Aerial photographs	EDR® Environmental Data Resources, Inc.	1938, 1950, 1952, 1960, 1966, 1974, 1979, 1985, 1988, 1992, 1997, 2006, 2011, 2015, 2019
2.	Aerial photograph	ESRI, Earthstar Geophysics, and the GIS User Community	2021

4.4 Additional Record Sources

Additional Record Sources Reviewed:

Table 6: Additional Record Sources.

	TITLE	SOURCE	DATE
1.	EDR Radius Map	EDR® Environmental Data Resources, Inc. [included in Appendix C]	2023
2.	Mobile County Parcel Data	BIS Consultants	2023

The above-referenced EDR report includes information from databases additional to the standard record sources discussed in Section 4.1, above. Review of the additional database information did not indicate potential environmental concerns that are considered to represent RECs to the subject property.

5. INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS

5.1 Evaluation of Potential Environmental Concerns

A checklist of potential environmental concerns is presented below. Evaluation of such concerns is based primarily on visual observations during site reconnaissance, supplemented by information obtained by interviews and contained in the previously referenced database records review. Identified potential concerns (i.e., those checked "yes") are discussed following the checklist, if applicable. See Appendix B for photographs of site reconnaissance.

Table 7: Potential Environmental Concerns Checklist.

Item	Identified		Description
	Yes	No	
1.	☒	☐	**Hazardous Substances In Connection With Identified Uses (Including Storage, Treatment, Disposal)**
2.	☒	☐	**Petroleum Products In Connection With Identified Uses (Including Storage, Treatment, Disposal)**
3.	☐	☒	Underground And Aboveground Storage Tanks (USTs/ASTs)
4.	☐	☒	Leaking Underground Storage Tanks
5.	☐	☒	Hazardous Substance or Petroleum Product NOT In Connection With Identified Uses
6.	☐	☒	Electrical Equipment That Could Contain PCBs
7.	☐	☒	Interior Stains or Corrosion
8.	☐	☒	Interior Drains or Sumps
9.	☐	☒	Pits, Ponds, or, Lagoons
10.	☐	☒	Pools of Liquid
11.	☐	☒	Stained Soil or Pavement
12.	☐	☒	Odors
13.	☐	☒	Stressed Vegetation
14.	☐	☒	Indications of Solid Waste Disposal
15.	☐	☒	Wastewater
16.	☐	☒	Groundwater Wells
17.	☐	☒	Septic Systems/Cesspools
18.	☐	☒	Heating/Cooling
19.	☐	☒	Drums, Totes, and Intermediate Bulk Containers
20.	☐	☒	Unidentified Substance Containers
21.	☐	☒	Other Conditions of Potential Concern

ITEM 1 – During the site reconnaissance of the subject properties, several hazardous chemicals with identified uses were discovered. These include common cleaning products such as bleaches, floor polish, degreasers, etc. and office related chemical such as shredder oil, all of which were in quantities of less than 5-gallons.

It should be noted that Alpha Hall East and Alpha Hall East Extension had already been vacated.

ITEM 2 – According to personnel interviewed, other chemical such as hydraulic oils were present in small amounts in the building and used in research based equipment. No staining or signs of spills were observed during the site reconnaissance and personnel indicated they were relocated or disposed properly.

It should be noted that Alpha Hall East and Alpha Hall East Extension had already been vacated.

5.2 Physical Setting Analysis

The site topography is characterized by a ground surface elevation of approximately 180 feet NGVD (National Geodetic Vertical Datum). The first encountered groundwater in the vicinity of the property is expected to be situated less than 25 feet below ground surface on most of the site. Based on regional topography, groundwater could be expected to flow to the north-northwest.

Additional physical setting information is contained within the EDR report presented in Appendix C.

5.3 Any Other Conditions of Concern

There were no other conditions of concern identified during this assessment.

6. FINDINGS AND CONCLUSIONS

6.1 Findings

The overall findings of this Phase I Environmental Site Assessment have been discussed throughout the preceding report sections. Suspect environmental concerns, identified by records review, interviews, and/or site reconnaissance observations, have been evaluated with respect to the potential impact on the subject property. Discussion of these findings has included our opinion on whether the potential environmental concerns constitute a recognized environmental condition to the subject property. The conclusions of this assessment are summarized below.

6.2 Conclusions

Thompson Engineering has performed a Phase I Environmental Site Assessment of the property in general conformance with the scope and limitations of ASTM Practice E1527-21. Any exceptions to, or deletions from, this practice are described in Section 2.0 of this report.

This assessment has revealed no evidence of any RECs in connection with the subject property.

6.3 Data Gaps

In accordance with the scope-of-services, Thompson Engineering only reviews chain of land title records if they are made available through the user, owner, or key site manager. No such records were made available to Thompson Engineering. Due to this lack of information, a definitive determination has not been possible as to the presence or absence of possible environmental liens, or activity or use limitations (AULs), placed on the property deed. Furthermore, no environmental liens or AULs were identified by the user of this report (see questionnaire, Appendix C), nor were any identified in respective Federal or State databases reviewed.

Based on the information available for the subject property, we do not find these data gaps to be a significant hindrance affecting our ability to identify recognized environmental conditions through the Phase I Environmental Site Assessment process of ASTM Practice E1527-21.

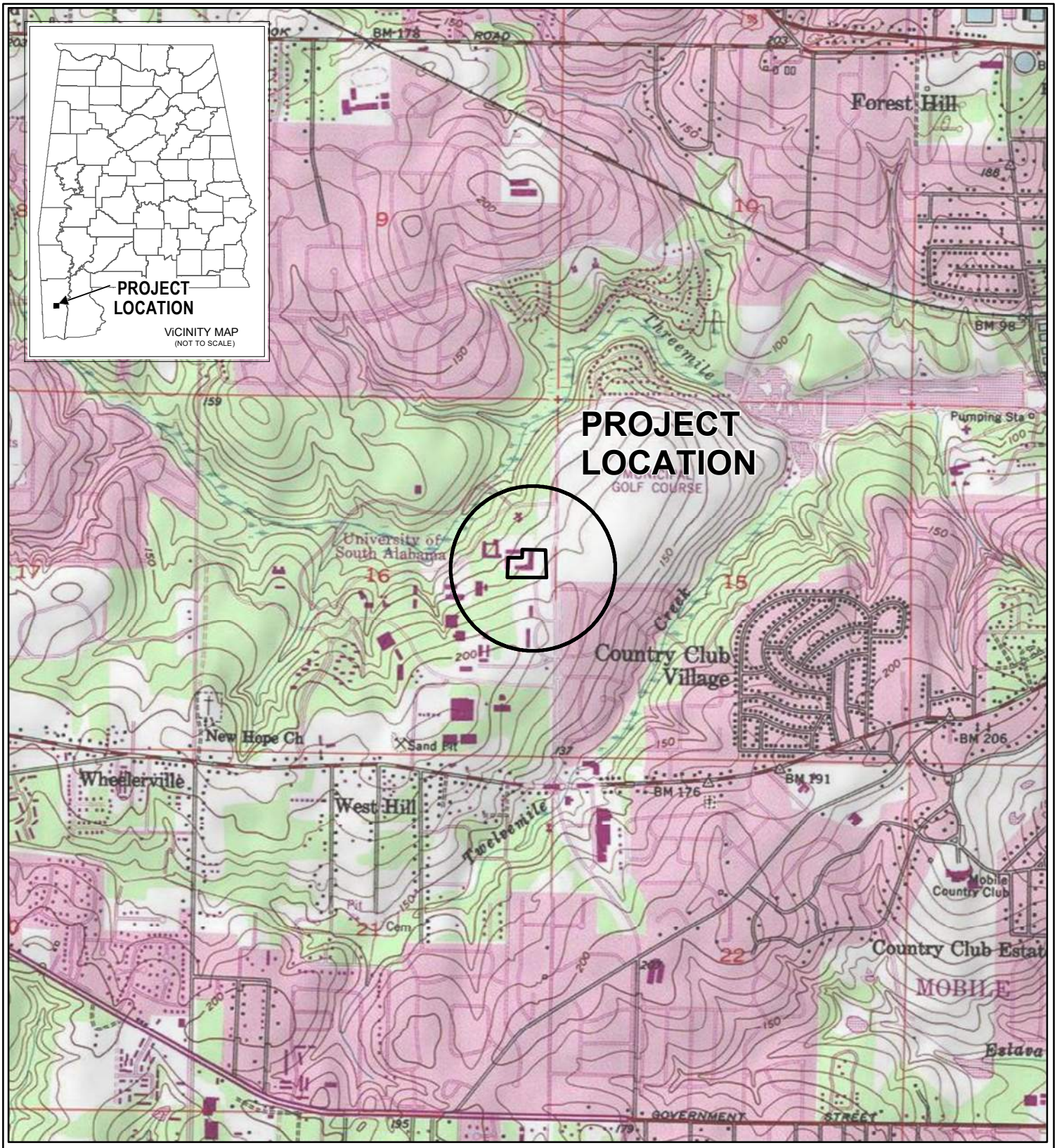
7. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professionals as defined in §312.10 of 40 CFR 312. Furthermore, we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

A summary of the qualifications and experience of the environmental professionals who performed this assessment can be found in Appendix D.

APPENDIX A

FIGURES



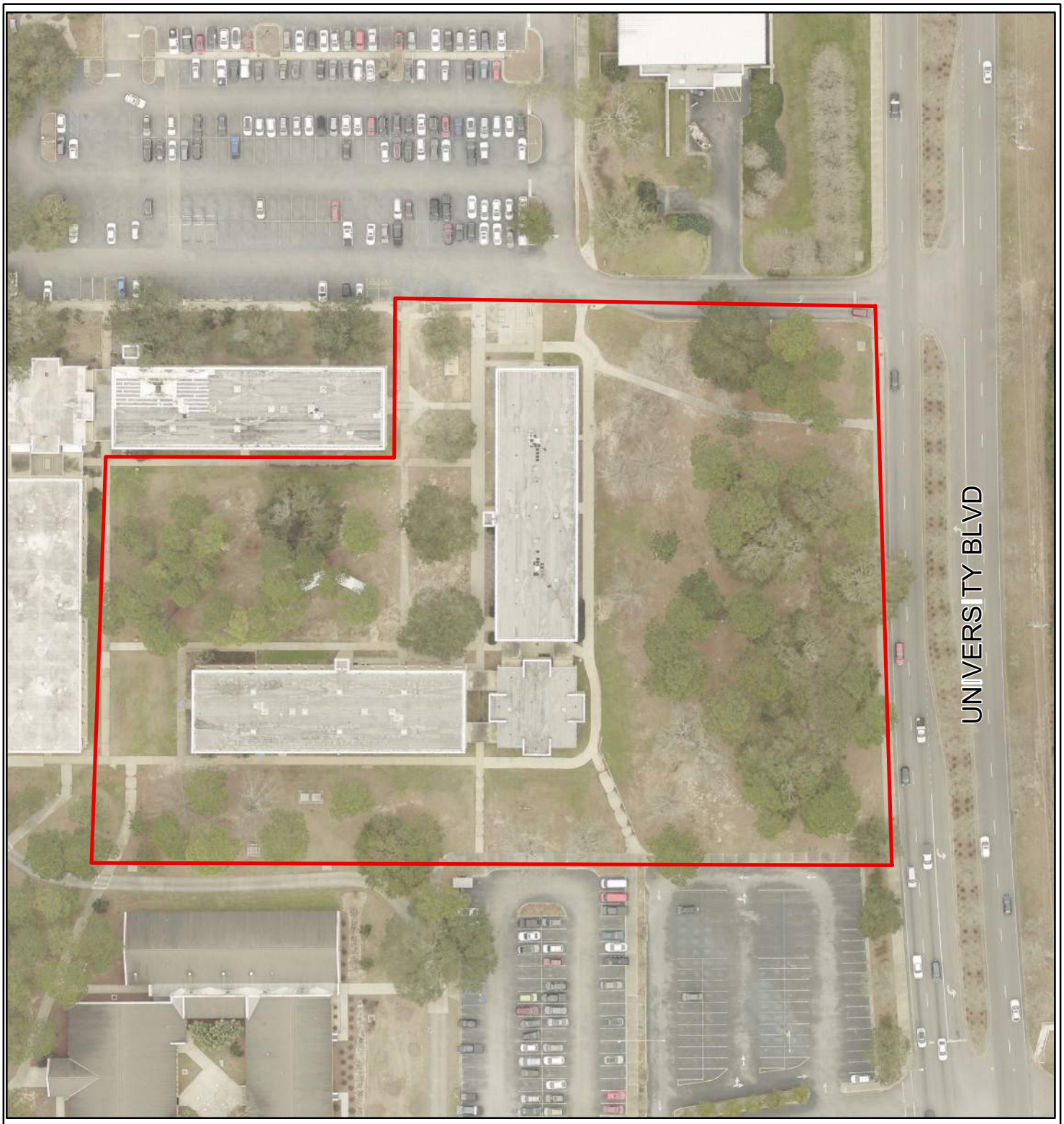
P:\2023\Projects\11\01\23-1101-0136 South Alabama COM EA\Working\Environmental\Drawings\FIG1.mxd

USA - ALPHA HALL
PHASE I
ENVIRONMENTAL SITE ASSESSMENT
MOBILE, MOBILE COUNTY, ALABAMA

thompson ENGINEERING

FIGURE 1
TOPOGRAPHIC MAP

PROJECT NO.:	DATE:
23-1101-0136	AUGUST 2023



LEGEND
Project Site*

1:1,200

0 100 200 Feet

1 inch = 100 feet

N

***NOT A SURVEY - For representation purposes only.**
Mobile County Parcel Data (April 2023), Mobile County 2021 Imagery - 3 Inch Resolution

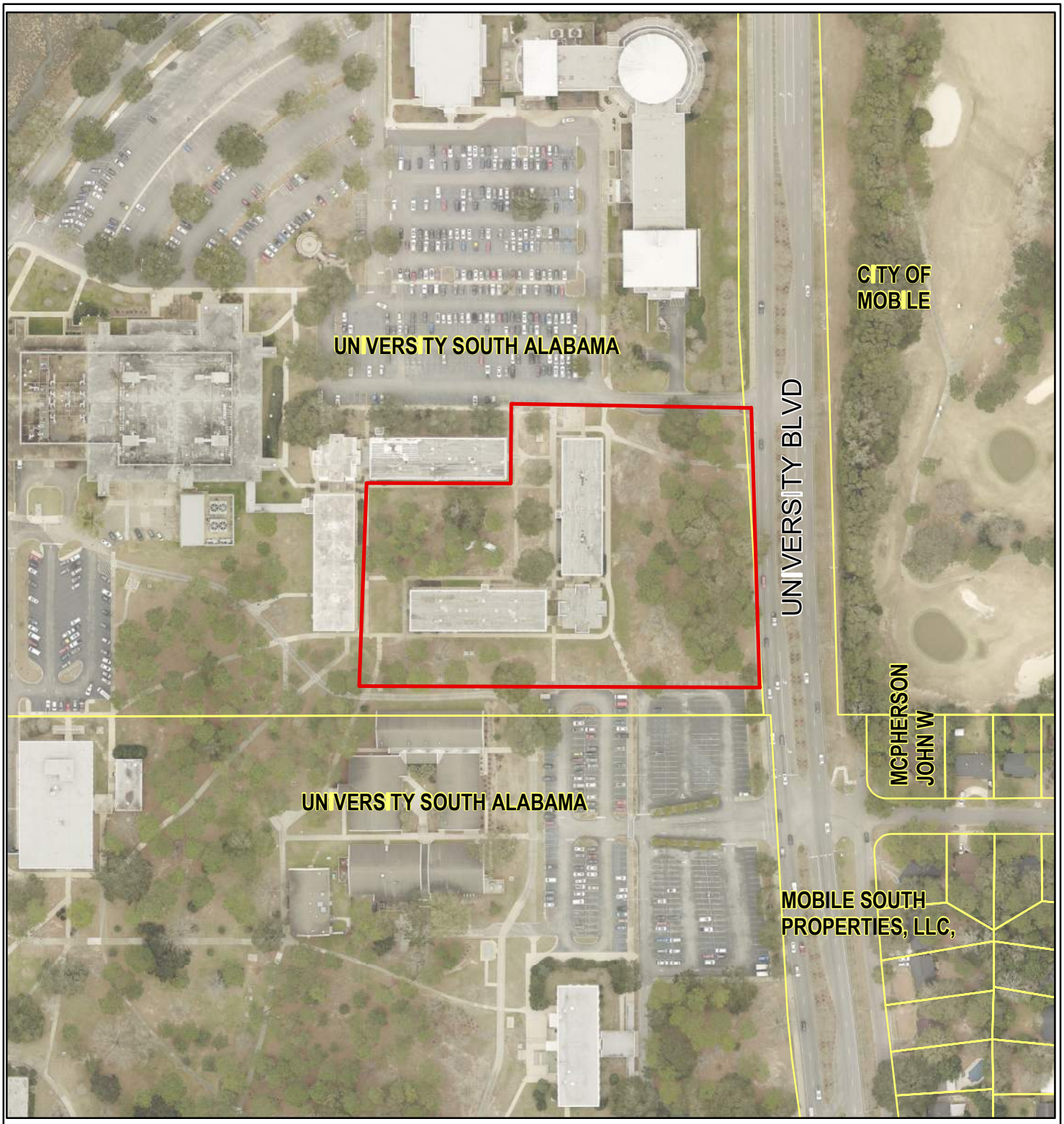
USA - ALPHA HALL
PHASE I
ENVIRONMENTAL SITE ASSESSMENT
MOBILE, MOBILE COUNTY, ALABAMA

thompson ENGINEERING

FIGURE 2
AERIAL PHOTOGRAPH

PROJECT NO.:	DATE:
23-1101-0136	AUGUST 2023

P:\2023\Projects\1101\23-1101-0136 South Alabama COM EA\Working\Environmental\Drawings\FIG2.mxd



LEGEND

- Project Site*
- Mobile County Parcels (2023)

1:2,400

0 100 200 Feet

1 inch = 200 feet

N

***NOT A SURVEY - For representation purposes only.**
Mobile County Parcel Data (April 2023), Mobile County 2021 Imagery - 3 Inch Resolution

USA - ALPHA HALL
PHASE I
ENVIRONMENTAL SITE ASSESSMENT
MOBILE, MOBILE COUNTY, ALABAMA

thompson ENGINEERING

FIGURE 3
ADJACENT PROPERTY OWNERS

PROJECT NO.:	DATE:
23-1101-0136	AUGUST 2023

P:\2023\Projects\1101\23-1101-0136 South Alabama COM EA\Working\Environmental\Drawings\FIG3.mxd

APPENDIX B

PHOTOGRAPHS

PHOTOGRAPH LOG

Photograph 1 – Alpha East.

Photograph 2 – Alpha South.

Photograph 3 – Alpha North

Photograph 4 – Alpha West.

Photograph 5 – Alpha East – 1st Floor Interior.

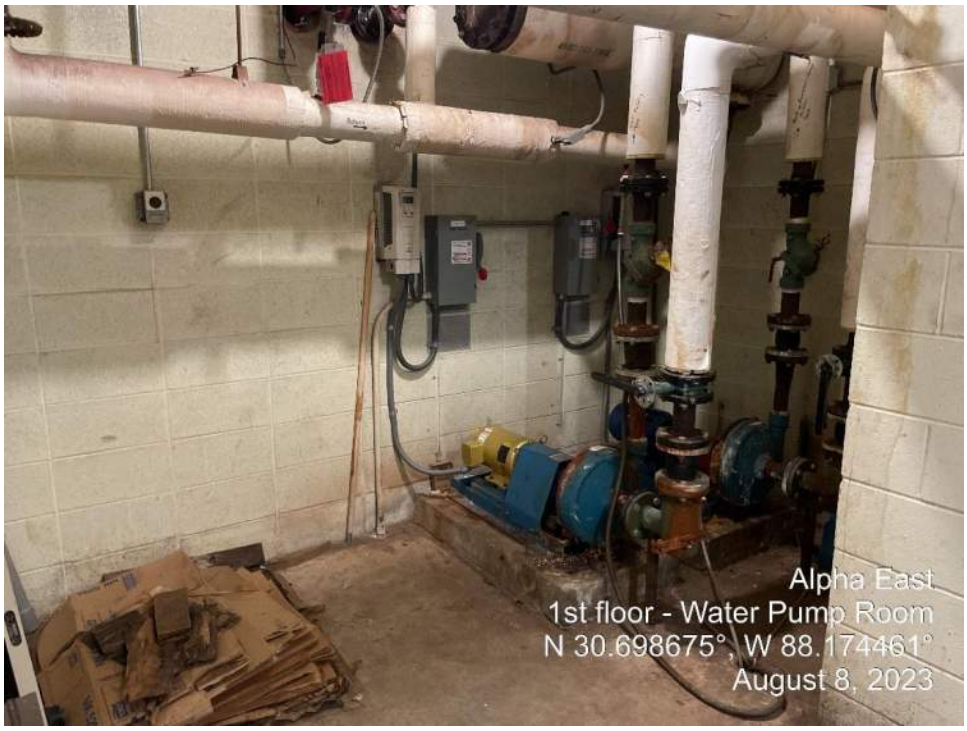
Photograph 6 – Alpha East – 1st Floor Classroom.

Photograph 7 – Alpha East – 2nd Floor Classroom.

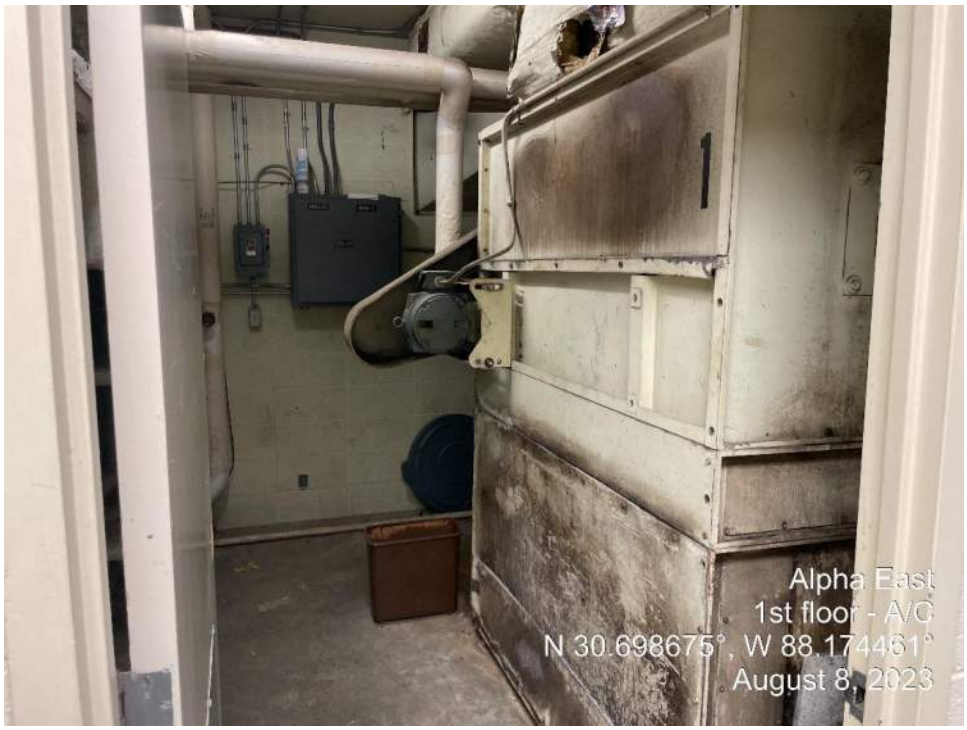
Photograph 8 – Alpha East – 3rd Floor Classroom.

Photograph 9 – Alpha East – 1st Floor Office.

Photograph 10 – Alpha East – 2nd Floor Office.



Photograph 11 – Alpha East – Water Pump Room.



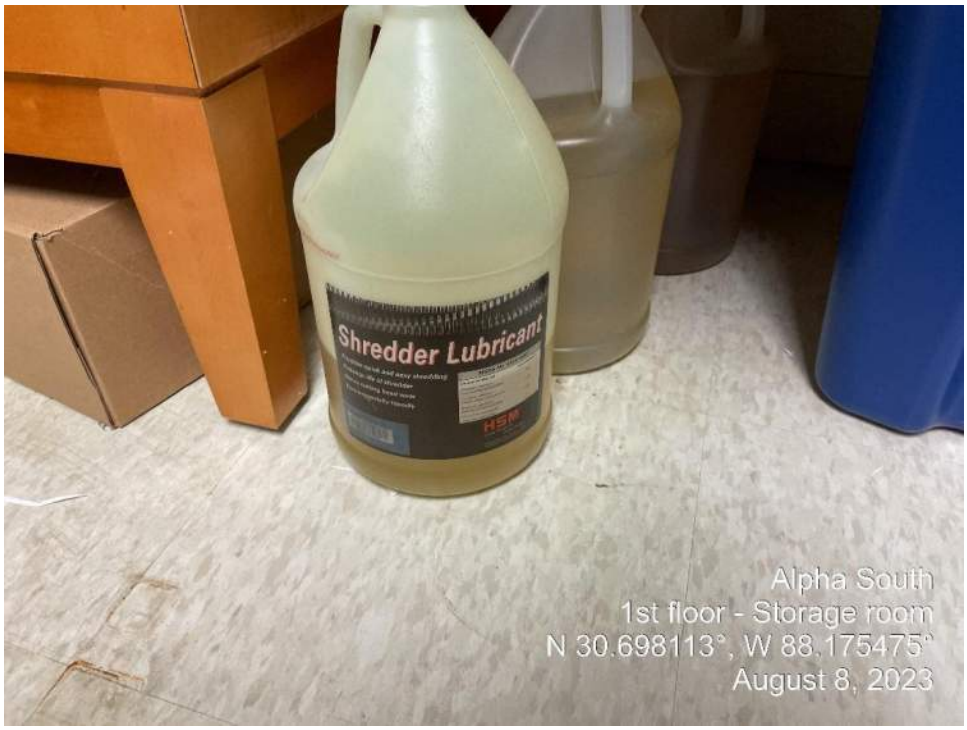
Photograph 12 – Alpha East – Mechanical Room.

Photograph 13 – Alpha East Extension – Interior.

Photograph 14 – Alpha South – Interior.

Photograph 15 – Alpha South – 3rd Floor Hallway.

Photograph 16 – Alpha South – Janitorial Storage Room.



Photograph 17 – Alpha South – Shedder Lubricant.

Photograph 18 – Alpha South – 1st Floor Mechanical Room.

Photograph 19 – Alpha South – Electrical Equipment Room.

Photograph 20 – Adjacent properties to the north.

Photograph 21 – Adjacent Properties to the east.

Photograph 22 – Adjacent properties to the south.

Photograph 23 – Adjacent properties to the west.

APPENDIX C

KEY EXHIBITS

EDR Radius Map with GeoCheck

USA College of Medicine - Alpha Hall
555 University Blvd
Mobile, AL 36688

Inquiry Number: 7410351.2s
August 07, 2023

EDR Summary Radius Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

555 UNIVERSITY BLVD
MOBILE, AL 36688

COORDINATES

Latitude (North):	30.6983990 - 30° 41' 54.23''
Longitude (West):	88.1748000 - 88° 10' 29.28''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	387488.9
UTM Y (Meters):	3396584.0
Elevation:	180 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	U.S. Geological Survey

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20191115
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
555 UNIVERSITY BLVD
MOBILE, AL 36688

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	USA MAIN CAMPUS	307 UNIVERSITY BLVD	UST, Financial Assurance	Higher	519, 0.098, SSE
A2	UNIVERSITY OF SOUTH	307 UNIVERSITY BOULE	CORRACTS, RCRA-TSDF, RCRA-LQG, EPA WATCH LIST,...	Higher	536, 0.102, SSE
A3	UNIVERSITY OF SOUTHE	307 UNIVERSITY BLVD	SEMS-ARCHIVE, EPA WATCH LIST, RAATS	Higher	536, 0.102, SSE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 06/22/2023 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF SOUTHE	***307 UNIVERSITY BLVD***	***SSE 0 - 1/8 (0.102 mi.)***	***A3***	***8***
Site ID: 0400278				
EPA Id: ALD079474037				

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: A review of the CORRACTS list, as provided by EDR, and dated 03/06/2023 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF SOUTH	***307 UNIVERSITY BOULE***	***SSE 0 - 1/8 (0.102 mi.)***	***A2***	***8***
EPA ID:: ALD079474037				

Lists of Federal RCRA TSD facilities

RCRA-TSDF: A review of the RCRA-TSDF list, as provided by EDR, and dated 03/06/2023 has revealed that

there is 1 RCRA-TSDF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF SOUTH EPA ID:: ALD079474037	***307 UNIVERSITY BOULE***	***SSE 0 - 1/8 (0.102 mi.)***	***A2***	***8***

Lists of Federal RCRA generators

RCRA-LQG: A review of the RCRA-LQG list, as provided by EDR, and dated 03/06/2023 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF SOUTH EPA ID:: ALD079474037	***307 UNIVERSITY BOULE***	***SSE 0 - 1/8 (0.102 mi.)***	***A2***	***8***

Lists of state and tribal registered storage tanks

UST: A review of the UST list, as provided by EDR, and dated 07/25/2022 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USA MAIN CAMPUS Facility ID: 17123 97 15270	***307 UNIVERSITY BLVD***	***SSE 0 - 1/8 (0.098 mi.)***	***A1***	***8***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

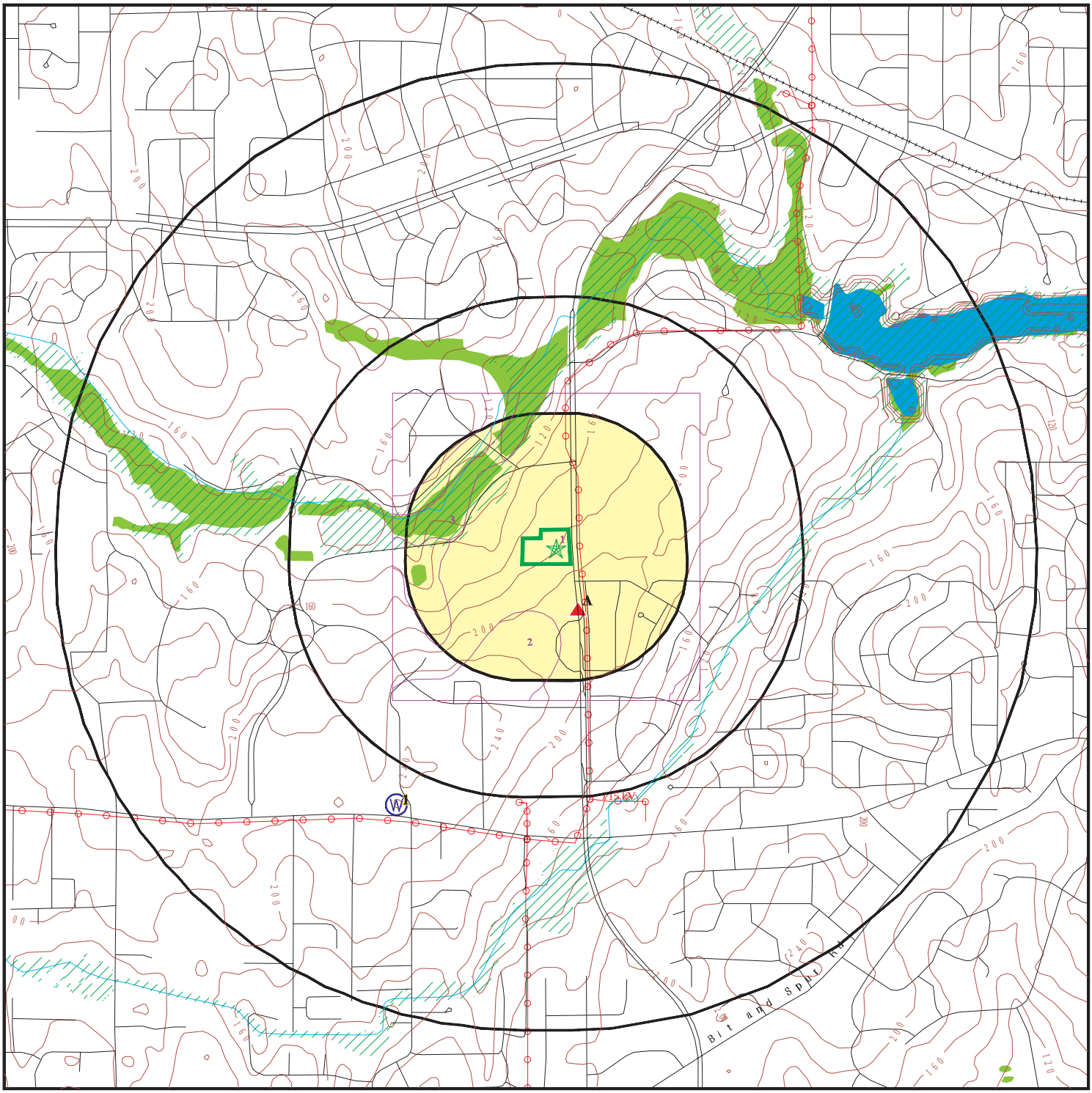
2020 COR ACTION: A review of the 2020 COR ACTION list, as provided by EDR, and dated 09/30/2017 has revealed that there is 1 2020 COR ACTION site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF SOUTH EPA ID:: ALD079474037	***307 UNIVERSITY BOULE***	***SSE 0 - 1/8 (0.102 mi.)***	***A2***	***8***

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

OVERVIEW MAP - 7410351.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA
Power transmission lines
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory

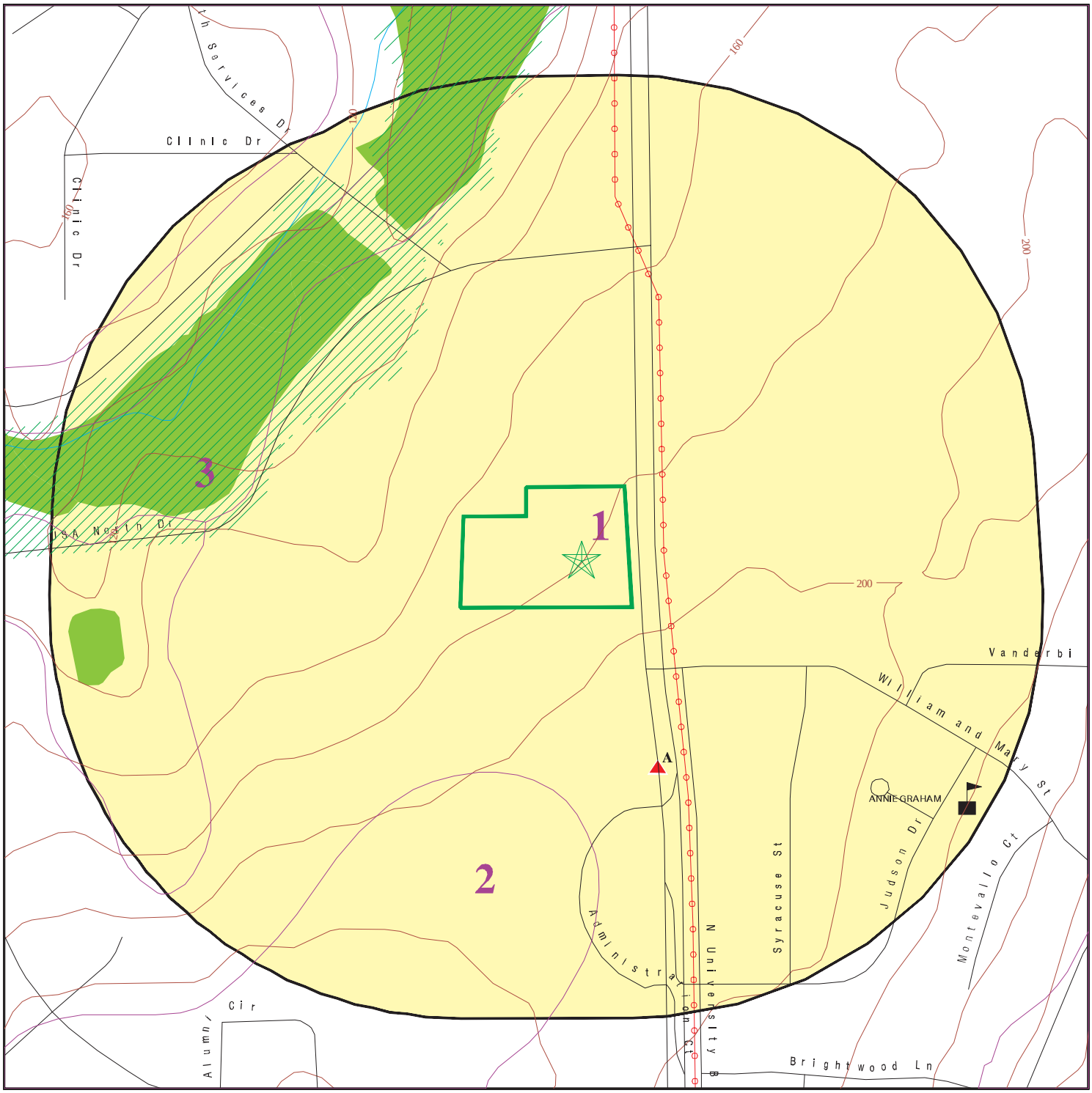
Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	USA College of Medicine - Alpha Hall	CLIENT:	Thompson Engineering
ADDRESS:	555 University Blvd Mobile AL 36688	CONTACT:	Jordan Leech
LAT/LONG:	30.698399 / 88.1748	INQUIRY #:	7410351.2s
		DATE:	August 07, 2023 1:57 pm

DETAIL MAP - 7410351.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- Areas of Concern

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	USA College of Medicine - Alpha Hall	CLIENT:	Thompson Engineering
ADDRESS:	555 University Blvd Mobile AL 36688	CONTACT:	Jordan Leech
LAT/LONG:	30.698399 / 88.1748	INQUIRY #:	7410351.2s
		DATE:	August 07, 2023 1:58 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		1	0	0	NR	NR	1
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		1	0	0	0	NR	1
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		1	0	0	NR	NR	1
Lists of Federal RCRA generators								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LAST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	0	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
AUL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
AOCONCERN	1.000		0	0	0	0	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		1	0	NR	NR	NR	1
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	6	0	0	0	0	6

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SSE
< 1/8
0.098 mi.
519 ft.

Relative:
Higher

USA MAIN CAMPUS
307 UNIVERSITY BLVD
MOBILE, AL 36688

UST **U003207093**
Financial Assurance **N/A**

Click here for full text details

UST
Facility ID 17123 97 15270

Financial Assurance
Site ID Number 15270

A2
SSE
< 1/8
0.102 mi.
536 ft.

Relative:
Higher

UNIVERSITY OF SOUTH ALABAMA
307 UNIVERSITY BOULEVARD NORTH
MOBILE, AL 36688

CORRACTS **1014934498**
RCRA-TSDF **ALD079474037**
RCRA-LQG
EPA WATCH LIST
2020 COR ACTION

Click here for full text details

CORRACTS
EPA ID: ALD079474037

RCRA-TSDF
EPA Id ALD079474037

RCRA-LQG
EPA Id ALD079474037

EPA WATCH LIST
Facility ID ALD079474037

2020 COR ACTION
EPA ID: ALD079474037

A3
SSE
< 1/8
0.102 mi.
536 ft.

Relative:
Higher

UNIVERSITY OF SOUTHERN ALABAMA
307 UNIVERSITY BLVD
MOBILE, AL 36609

SEMS-ARCHIVE **1000431222**
EPA WATCH LIST **ALD079474037**
RAATS

Click here for full text details

SEMS-ARCHIVE
Site ID 0400278
EPA Id ALD079474037

EPA WATCH LIST
Facility ID ALD079474037

RAATS
Status 02

UNIVERSITY OF SOUTHERN ALABAMA (Continued) **1000431222**

Facility ID ALD079474037

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
AL	AOCONCERN	Area of Concern	Department of the Army	09/01/2008	09/24/2008	10/23/2009
AL	AQUEOUS FOAM	Aqueous Film Forming Foam Release Investigations	Department of Environmental Management	03/13/2023	03/14/2023	05/31/2023
AL	AST	Aboveground Storage Tank Sites	Department of Environmental Management	07/25/2022	09/19/2022	10/11/2022
AL	AUL	Environmental Covenants	Department of Environmental Management	03/07/2023	03/08/2023	05/24/2023
AL	BROWNFIELDS	Land Division Brownfields 128(a) Program Site Listing	Department of Environmental Management	10/06/2022	12/02/2022	02/17/2023
AL	BROWNFIELDS 2	Directory of Brownfields Sites	Department of Environmental Management	04/01/2011	06/16/2011	07/26/2011
AL	CDL	Clandestine Methamphetamine Lab Sites	Department of Environmental Management.	12/09/2010	02/08/2011	02/28/2011
AL	COAL ASH	Coal Ash Disposal Sites	Department of Environmental Management	02/02/2009	06/25/2009	07/17/2009
AL	DRYCLEANERS	Drycleaner Facility Listing	Department of Environmental Management	02/22/2023	05/11/2023	08/02/2023
AL	ENG CONTROLS	Engineering Controls Site Listing	Department of Environmental Management	08/24/2009	08/26/2009	09/11/2009
AL	Financial Assurance	Financial Assurance Information Listing	Department of Environmental Management	07/25/2022	09/19/2022	10/11/2022
AL	HIST UST	Underground Storage Tank Information	Department of Environmental Management	07/25/2022	09/19/2022	10/11/2022
AL	HWS DETAIL	Alabama Hazardous Substance Cleanup Fund Annual Report	Department of Environmental Management	12/31/2022	03/09/2023	05/24/2023
AL	INST CONTROL	Land Division Brownfields 128(a) Program Site Listing	Department of Environmental Management	08/24/2009	08/26/2009	09/11/2009
AL	LAST	List of AST Release Incidents	Department of Environmental Management	03/17/2023	03/23/2023	04/19/2023
AL	LUST	Leaking Underground Storage Tank Listing	Department of Environmental Management	03/09/2023	03/21/2023	06/06/2023
AL	NPDES	NPDES Permit Listing	Department of Environmental Management	04/05/2012	04/06/2012	04/25/2012
AL	PFAS	PFAS Contamination Site Listing	Department of Environmental Management	03/13/2023	03/14/2023	05/31/2023
AL	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Management		07/01/2013	12/26/2013
AL	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Management		07/01/2013	12/26/2013
AL	SHWS	Hazardous Substance Cleanup Fund	Department of Environmental Management	01/10/2023	01/12/2023	03/29/2023
AL	SPILLS	Emergency Response Data	Department of Environmental Management	03/15/2023	03/21/2023	06/06/2023
AL	SWF/LF	Permitted Landfills	Department of Environmental Management	11/24/2021	01/05/2022	03/18/2022
AL	SWRCY	Recycling/Recovered Materials Processors Directory	Department of Economic & Community Affairs	09/01/2009	01/22/2010	02/05/2010
AL	TIER 2	Tier 2 Data Listing	Department of Environmental Management	12/31/2013	06/20/2014	07/24/2014
AL	UIC	UIC Listing	Geological Survey of Alabama	05/01/2023	05/02/2023	07/24/2023
AL	UST	Underground Storage Tank Information	Department of Environmental Management	07/25/2022	09/19/2022	10/11/2022
AL	VCP	Cleanup Program Inventory	Department of Environmental Management	10/06/2022	12/02/2022	02/17/2023
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/17/2023	03/17/2023	05/30/2023
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	04/27/2023	04/27/2023	05/02/2023
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2021	03/09/2023	03/20/2023
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2021	04/14/2023	07/10/2023
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	03/31/2023	04/20/2023	07/10/2023
US	CORRACTS	Corrective Action Report	EPA	03/06/2023	03/09/2023	03/20/2023
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	06/22/2023	07/06/2023	07/24/2023
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	03/25/2023	03/31/2023	06/09/2023
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	03/20/2023	03/21/2023	05/30/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	03/26/2023	03/28/2023	05/30/2023
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	03/08/2023	03/09/2023	05/30/2023
US	FINDS	Facility Index System/Facility Registry System	EPA	05/04/2023	05/25/2023	07/24/2023
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	05/08/2023	05/16/2023	07/10/2023
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	05/15/2023	05/17/2023	07/10/2023
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/19/2023	03/21/2023	05/30/2023
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/14/2023	05/09/2023	07/14/2023
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/26/2023	05/09/2023	07/14/2023
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/25/2023	05/09/2023	07/14/2023
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/19/2023	05/09/2023	07/14/2023
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/19/2023	05/09/2023	07/14/2023
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/14/2023	05/09/2023	07/14/2023
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/26/2023	05/09/2023	07/14/2023
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/25/2023	05/09/2023	07/14/2023
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/19/2023	05/09/2023	07/14/2023
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	06/22/2023	07/06/2023	07/24/2023
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	06/22/2023	07/06/2023	07/24/2023
US	LUCIS	Land Use Control Information System	Department of the Navy	05/25/2023	05/31/2023	07/24/2023
US	MINES MRDS	Mineral Resources Data System	USGS	08/23/2022	11/22/2022	02/28/2023
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	04/03/2023	04/04/2023	06/09/2023
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/15/2023	03/21/2023	05/30/2023
US	NPL	National Priority List	EPA	06/22/2023	07/06/2023	07/24/2023
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	03/20/2023	04/04/2023	06/09/2023
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	03/30/2023	03/30/2023	04/07/2023
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	03/30/2023	03/30/2023	04/07/2023
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	06/07/2023	06/08/2023	06/09/2023
US	PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	03/30/2023	03/30/2023	05/02/2023
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	06/07/2023	06/08/2023	06/09/2023
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	03/30/2023	03/30/2023	06/09/2023
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	03/30/2023	03/30/2023	05/02/2023
US	PRP	Potentially Responsible Parties	EPA	06/22/2023	07/06/2023	07/24/2023
US	Proposed NPL	Proposed National Priority List Sites	EPA	06/22/2023	07/06/2023	07/24/2023
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RMP	Risk Management Plans	Environmental Protection Agency	04/27/2022	05/04/2022	05/10/2022
US	ROD	Records Of Decision	EPA	06/22/2023	07/06/2023	07/24/2023
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	SEMS	Superfund Enterprise Management System	EPA	06/22/2023	07/06/2023	07/24/2023
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	06/22/2023	07/06/2023	07/24/2023
US	SSTS	Section 7 Tracking Systems	EPA	04/17/2023	04/18/2023	07/10/2023
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2021	02/16/2023	05/02/2023
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	04/06/2023	04/13/2023	04/19/2023
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	05/22/2023	05/23/2023	07/10/2023
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	05/22/2023	05/23/2023	07/24/2023
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/13/2023	03/21/2023	05/30/2023
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	05/22/2023	05/23/2023	07/10/2023
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	05/22/2023	05/23/2023	07/24/2023
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	05/01/2023	05/24/2023	07/24/2023
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	01/07/2022	02/24/2023	05/17/2023
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	11/09/2021	10/20/2022	01/10/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	11/16/2022	11/16/2022	02/06/2023
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
AL	Daycare Centers	Sensitive Receptor: Licensed Centers	Department of Human Resources			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
AL	State Wetlands	Wetlands Data	Alabama State Water Program			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

USA COLLEGE OF MEDICINE - ALPHA HALL
555 UNIVERSITY BLVD
MOBILE, AL 36688

TARGET PROPERTY COORDINATES

Latitude (North):	30.698399 - 30° 41' 54.24''
Longitude (West):	88.1748 - 88° 10' 29.28''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	387488.9
UTM Y (Meters):	3396584.0
Elevation:	180 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	16646123 SPRING HILL, AL
Version Date:	2020

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

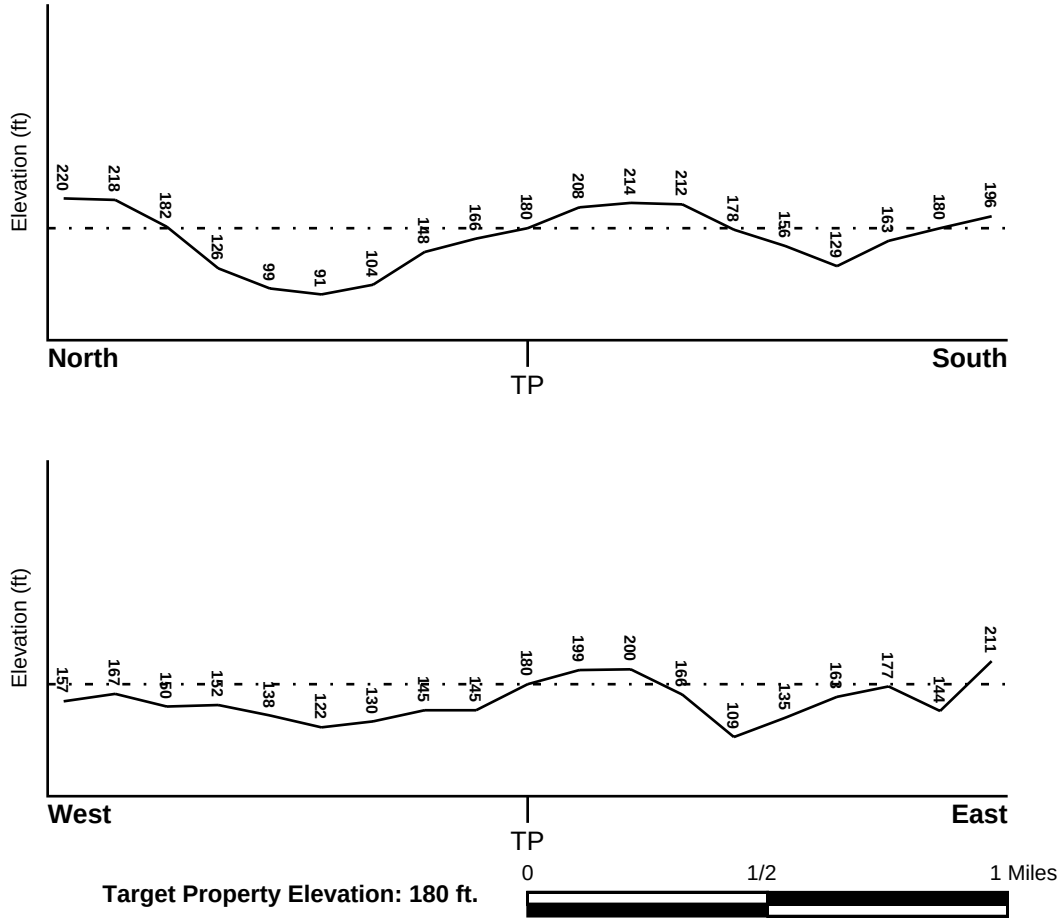
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
01097C0533K	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
01097C0529K	FEMA FIRM Flood data
01097C0541K	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
SPRING HILL	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

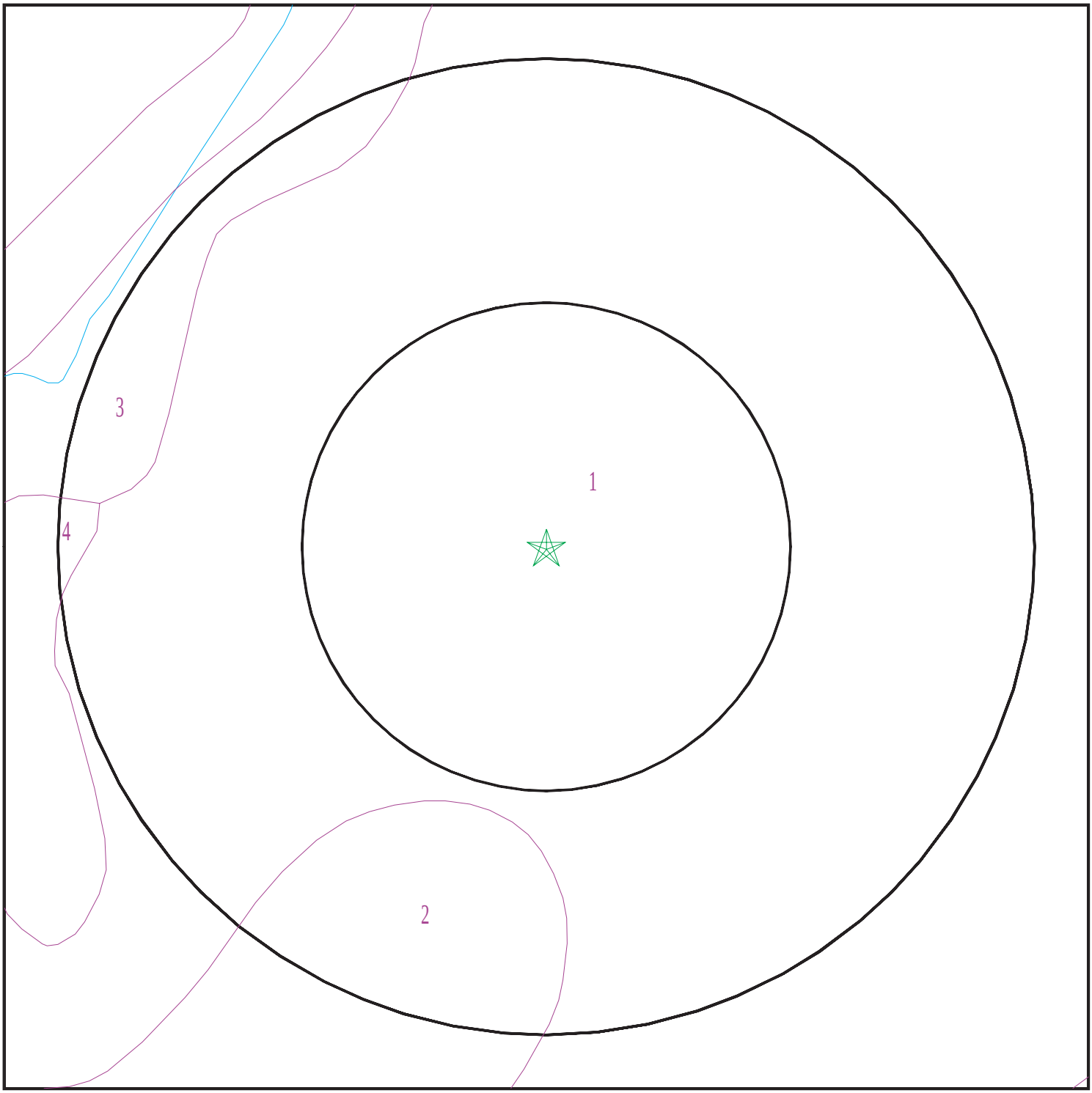
Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7410351.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	USA College of Medicine - Alpha Hall	CLIENT:	Thompson Engineering
ADDRESS:	555 University Blvd Mobile AL 36688	CONTACT:	Jordan Leech
LAT/LONG:	30.698399 / 88.1748	INQUIRY #:	7410351.2s
		DATE:	August 07, 2023 1:59 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Troup

Soil Surface Texture: loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	loamy sand	A-1-b	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5
2	3 inches	68 inches	loamy sand	A-1-b	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5
3	68 inches	85 inches	sandy loam	A-1-b	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5

Soil Map ID: 2

Soil Component Name: Benndale

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 5.5 Min: 4.5
2	11 inches	72 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 5.5 Min: 4.5

Soil Map ID: 3

Soil Component Name: Smithton

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6 Min: 4.5
2	16 inches	25 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6 Min: 4.5
3	25 inches	46 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6 Min: 4.5
4	46 inches	72 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 1.4	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Troup

Soil Surface Texture: loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	loamy sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5
2	3 inches	68 inches	loamy sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5
3	68 inches	85 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 5.5 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000000621	1/2 - 1 Mile SSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

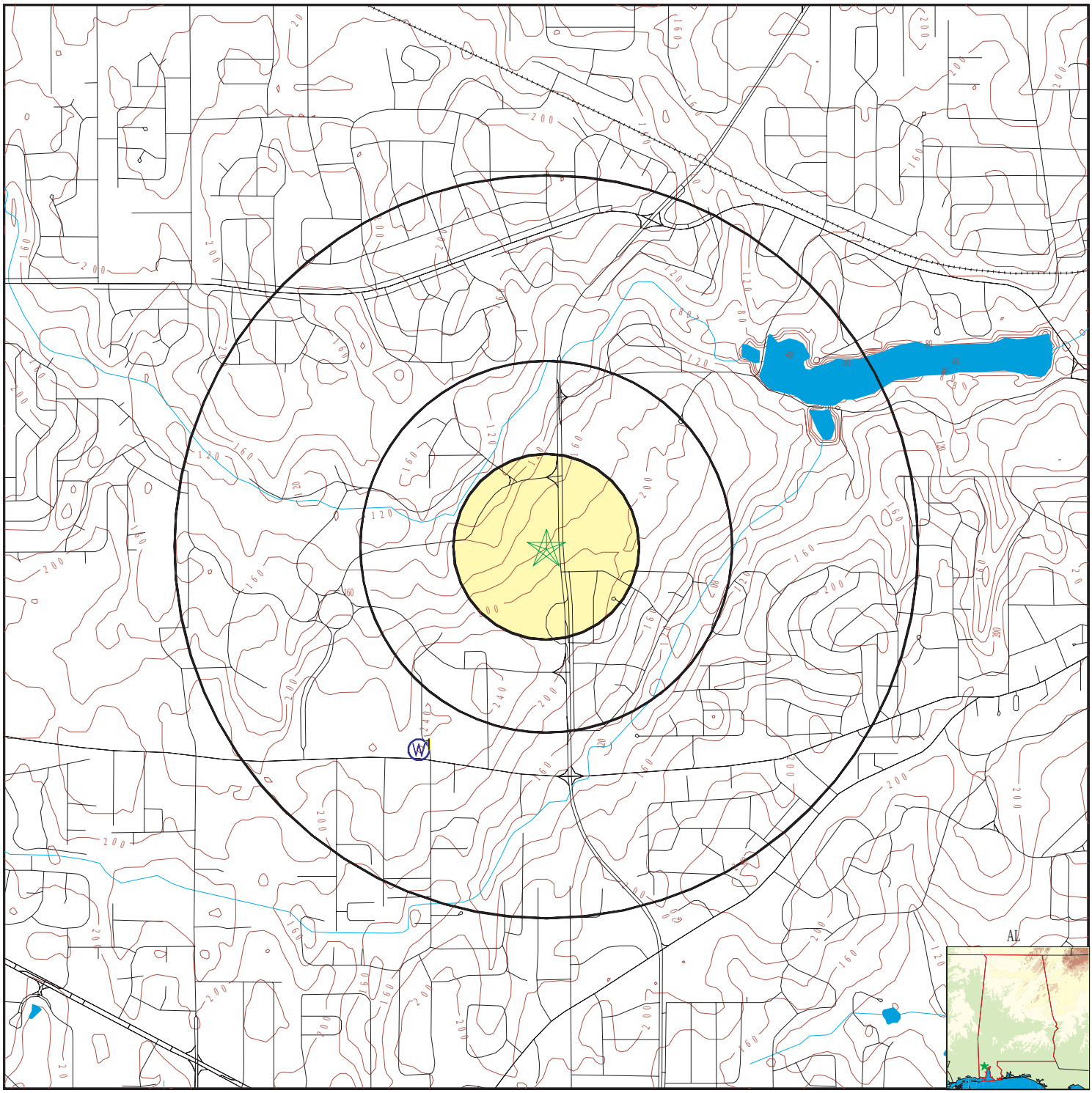
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 7410351.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Oil, gas or related wells

SITE NAME:	USA College of Medicine - Alpha Hall	CLIENT:	Thompson Engineering
ADDRESS:	555 University Blvd Mobile AL 36688	CONTACT:	Jordan Leech
		INQUIRY #:	7410351.2s
LAT/LONG:	30.698399 / 88.1748	DATE:	August 07, 2023 1:59 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 SSW 1/2 - 1 Mile Higher	**Click here for full text details**	**FED USGS**	**USGS40000000621**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: AL Radon

Radon Test Results

Num Tested	< 4 pCi/L	> 4 pCi/L	% > 4 pCi/L	Avg Level	Highest
0	-	-	-	-	-

Federal EPA Radon Zone for MOBILE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for MOBILE COUNTY, AL

Number of sites tested: 38

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.616 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.200 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Data
Source: Alabama State Water Program
Telephone: 334-844-3927

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Alabama Wells Data
Source: Department of Environmental Management
Telephone: 334-271-7985

OTHER STATE DATABASE INFORMATION

Well Surface Locations
Source: Geological Survey of Alabama, State Oil and Gas Board
Telephone: 205-247-3661
A listing of oil and gas well locations in the state.

RADON

State Database: AL Radon
Source: Department of Public Health
Telephone: 334-206-5391
Short-Term Test Results for Alabama Counties

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

USA College of Medicine - Alpha Hall

555 University Blvd

Mobile, AL 36688

Inquiry Number: 7410351.5

August 07, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

08/07/23

Site Name:

USA College of Medicine - Alpł
555 University Blvd
Mobile, AL 36688
EDR Inquiry # 7410351.5

Client Name:

Thompson Engineering
2970 Cottage Hill Road
Mobile, AL 36606
Contact: Jordan Leech

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2019	1"=500'	Flight Year: 2019	USDA/NAIP
2015	1"=500'	Flight Year: 2015	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1997	1"=500'	Acquisition Date: February 11, 1997	USGS/DOQQ
1992	1"=500'	Flight Date: February 01, 1992	USGS
1988	1"=500'	Flight Date: November 18, 1988	USGS
1985	1"=500'	Flight Date: March 25, 1985	USDA
1979	1"=500'	Flight Date: November 15, 1979	USGS
1974	1"=500'	Flight Date: November 21, 1974	USDA
1966	1"=500'	Flight Date: October 27, 1966	USDA
1960	1"=500'	Flight Date: November 30, 1960	USDA
1952	1"=500'	Flight Date: February 21, 1952	USDA
1950	1"=500'	Flight Date: March 23, 1950	USDA
1938	1"=500'	Flight Date: November 20, 1938	USDA

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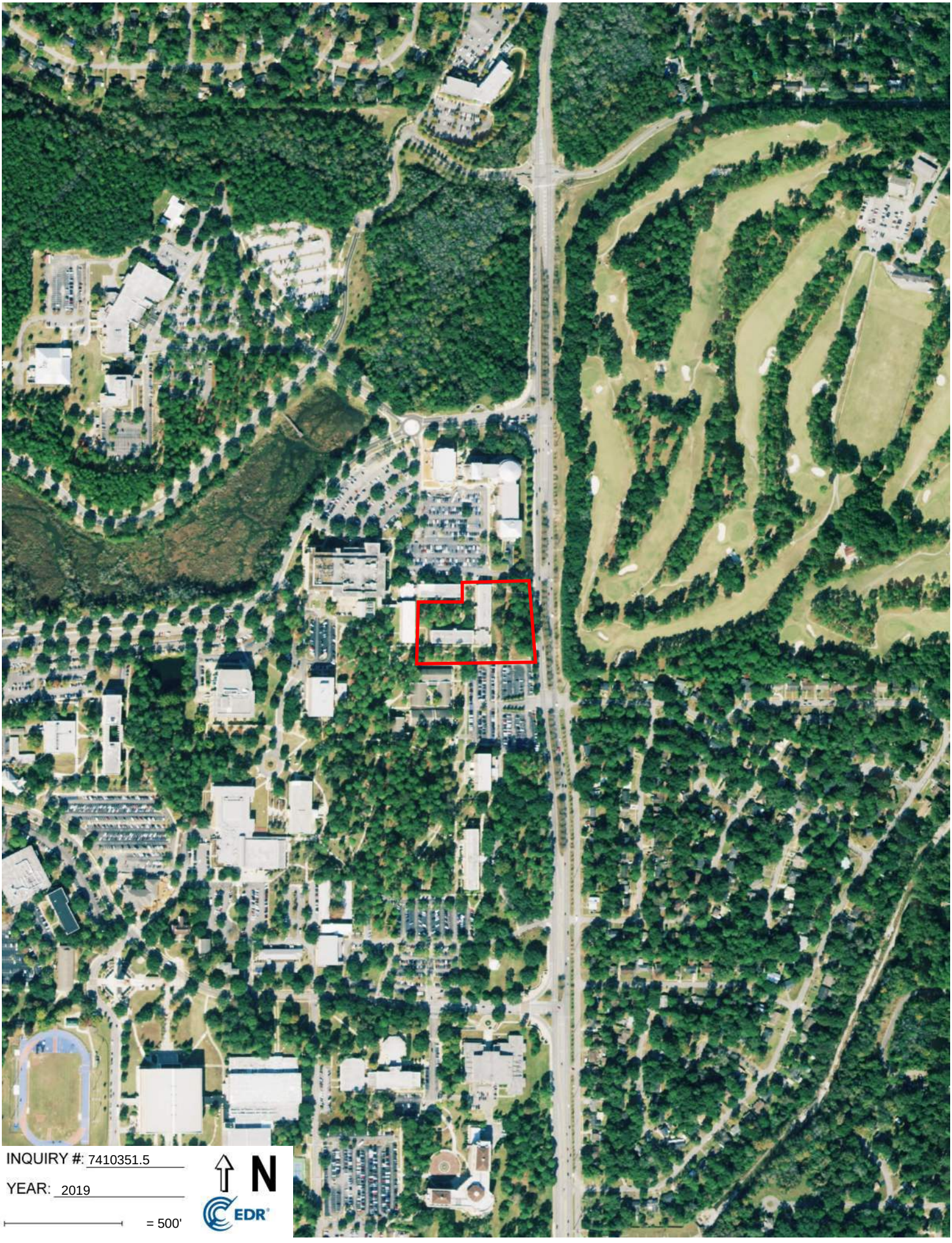
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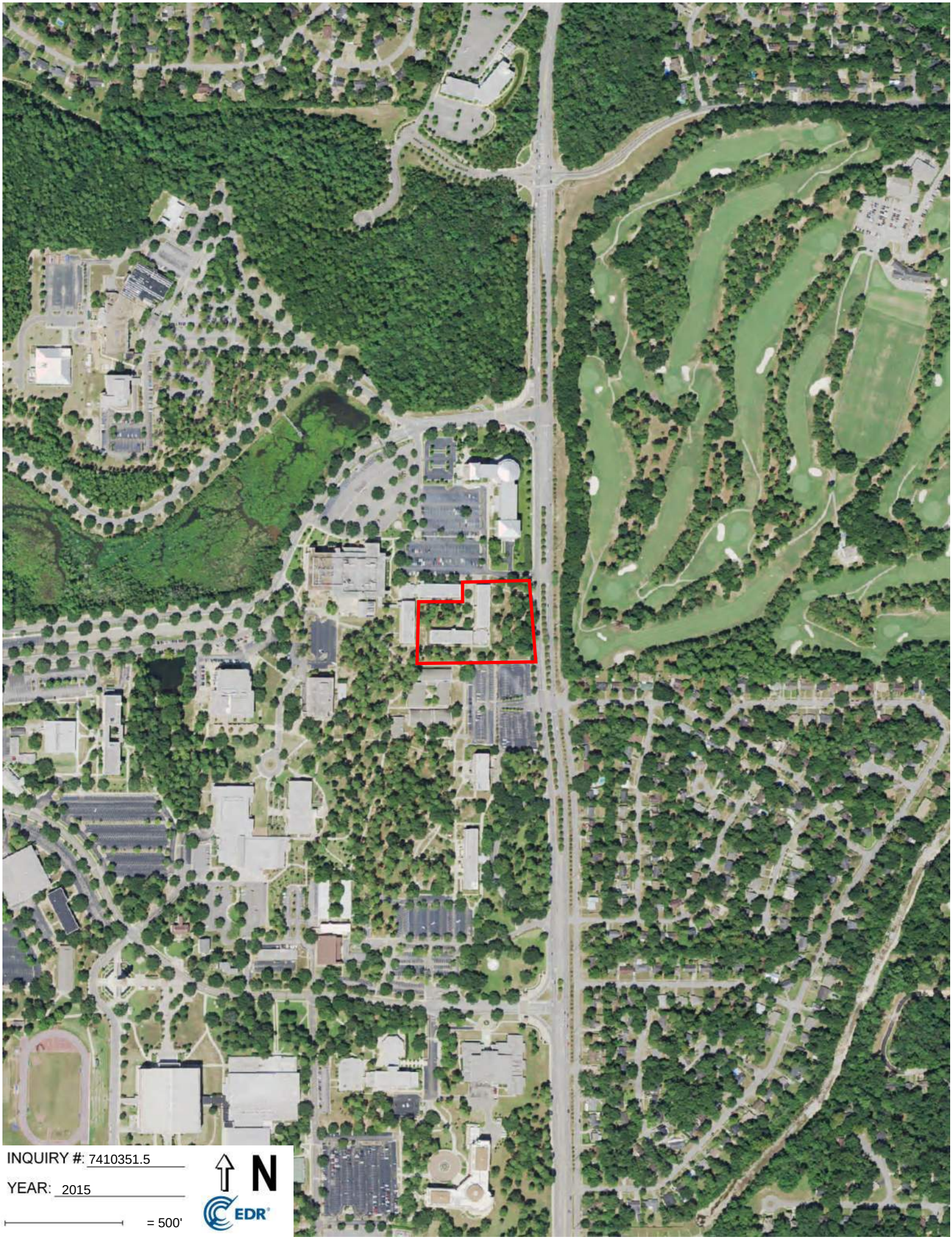
EDR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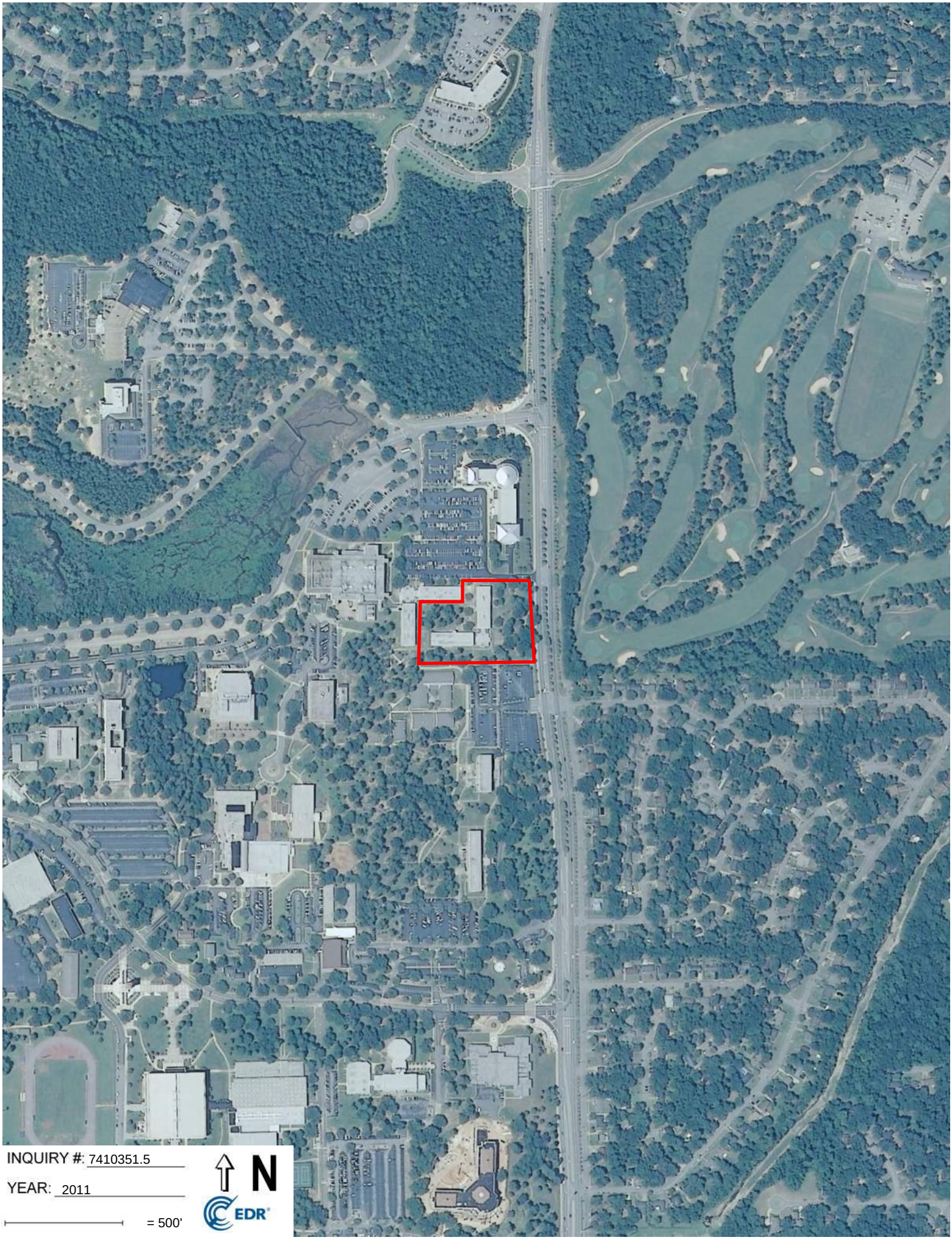
EDR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YEAR: 2011
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EDR


INQUIRY #: 7410351.5
YEAR: 2006
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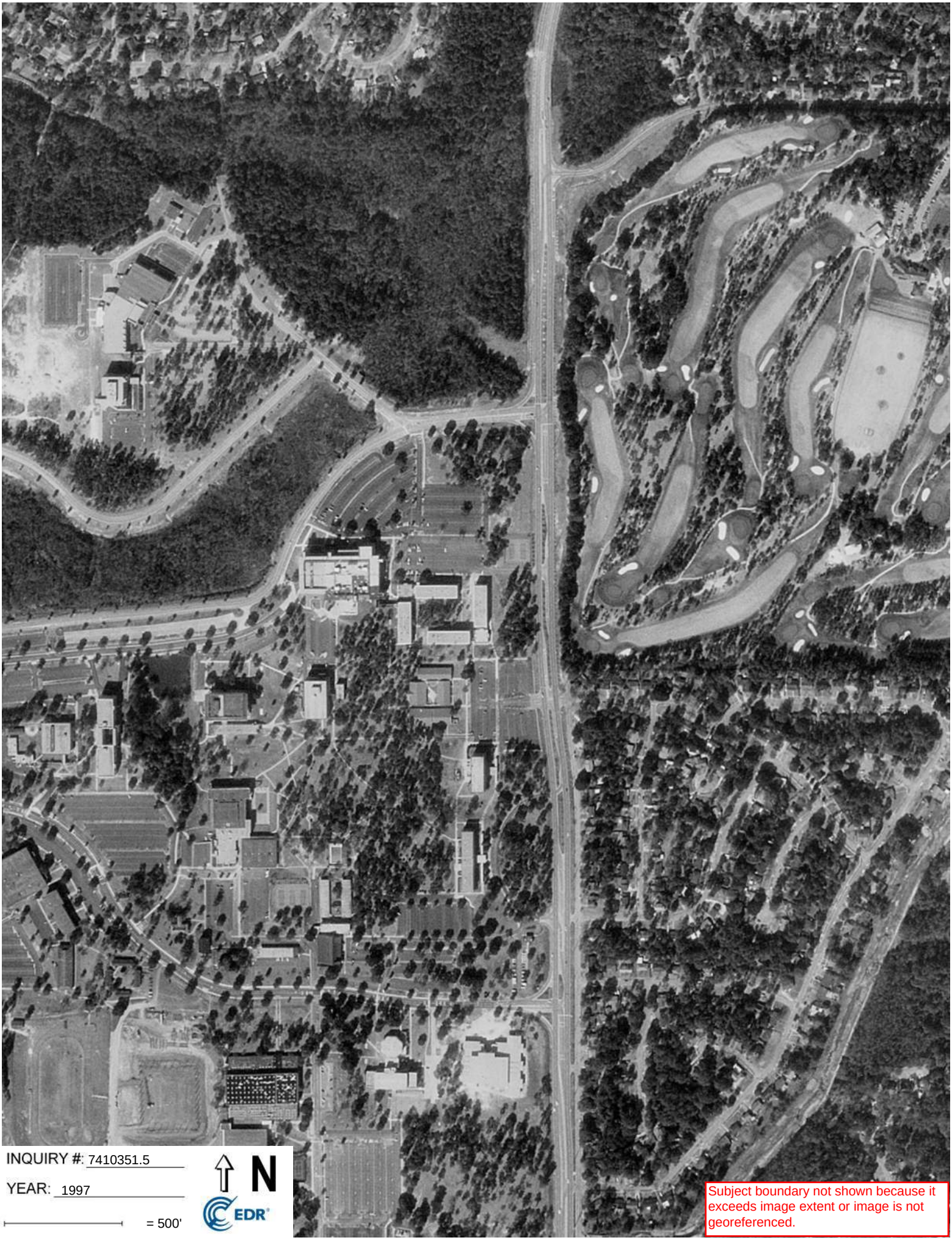
N
EDR



INQUIRY #: 7410351.5

YEAR: 1997

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.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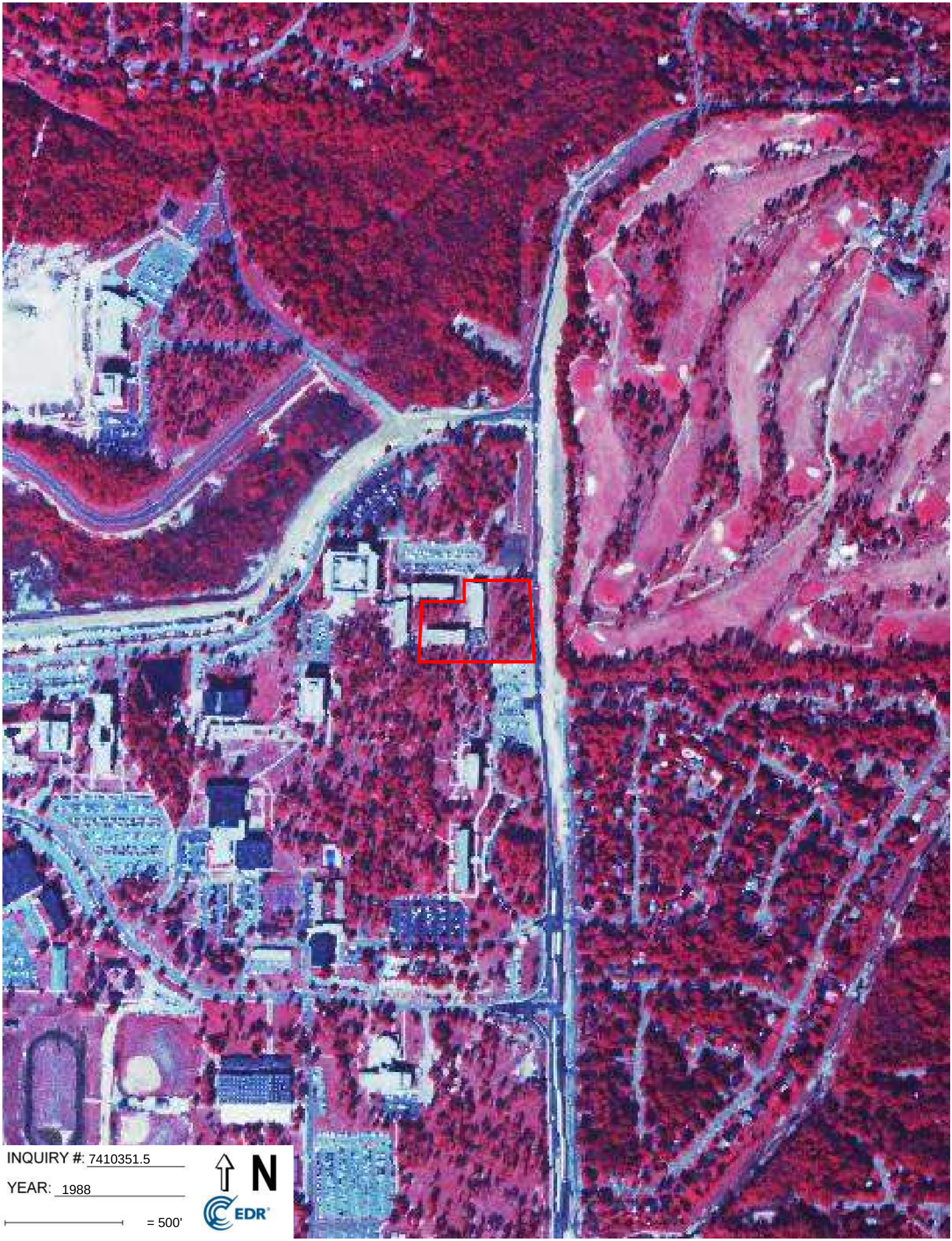
YEAR: 1992
= 500'
N
EDR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YEAR: 1988
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EDR


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YEAR: 1985
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N
EDR


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YEAR: 1979
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EDR

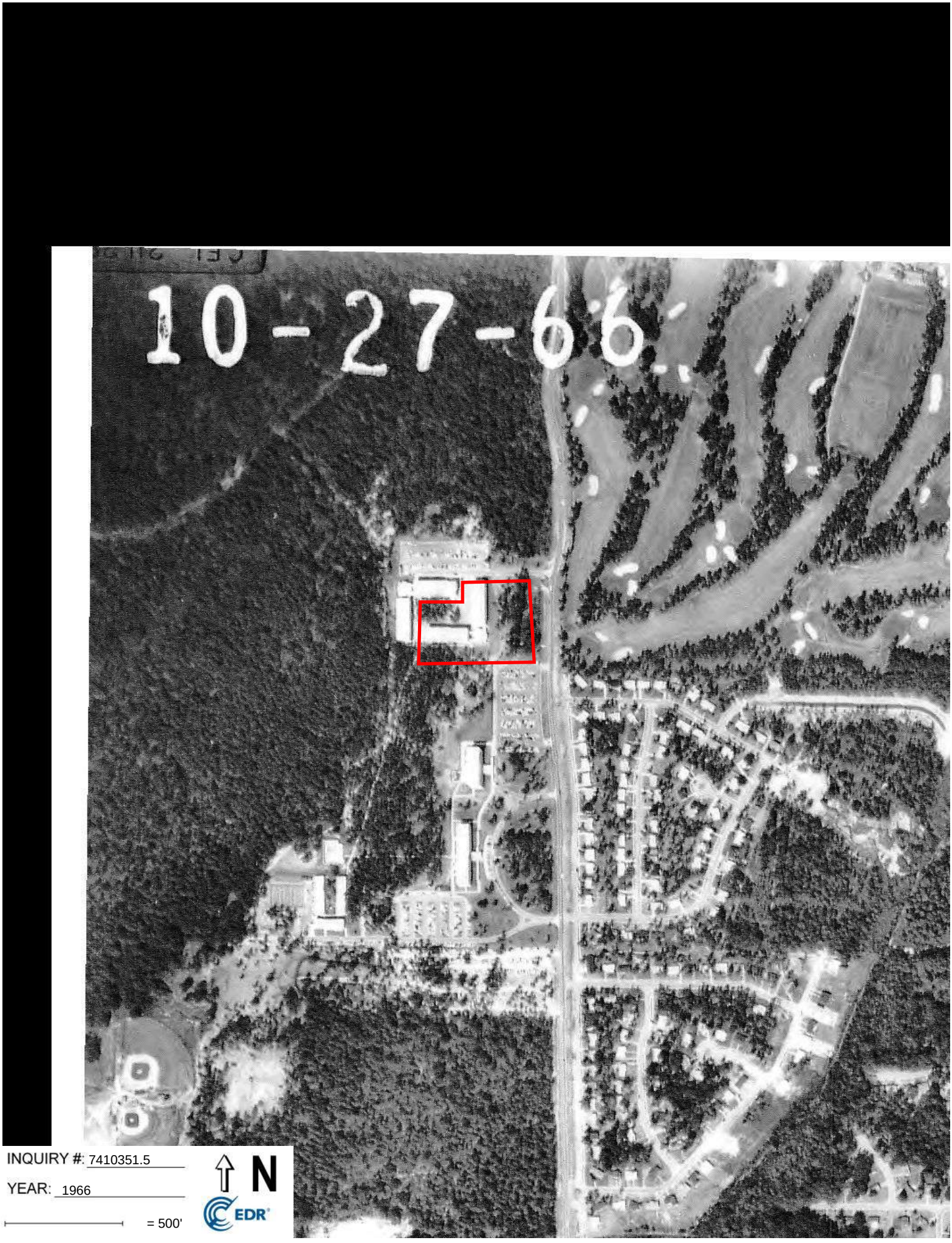
INQUIRY #: 7410351.5

YEAR: 1974

= 500'

N

EDR



INQUIRY #: 7410351.5

YEAR: 1966

= 500'

N

EDR

INQUIRY #: 7410351.5

YEAR: 1960

= 500'

N

EDR

INQUIRY #: 7410351.5

YEAR: 1952

= 500'

N

EDR

INQUIRY #: 7410351.5

YEAR: 1950

= 500'

N

EDR


INQUIRY #: 7410351.5
YEAR: 1938
= 500'
N
EDR

ESA User Questionnaire

ESA USER QUESTIONNAIRE

Site Name/Address: **Alpha Hall Phase I**
555 North University Boulevard
Mobile, Mobile County, Alabama

Thompson Job No.: **23-1101-0136**

Company: University of South Alabama
*Signature: _____
*Signature: _____
*Name (Print):Savannah Wallace/ William Guess
Title: Industrial Hygiene Specialist/ Director, Safety & Environmental Compliance Dept.
*Date: 28 August 2023
*Signature of Person Completing Questionnaire

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

The following are a series of questions from ASTM 1527-21 that must be answered in order to qualify for LLPs under CERCLA. Please provide an answer to each question or attach pertinent information and identify a number for each attachment.

(1.) Environmental cleanup liens that are filed against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

□ X No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any Activity and Use Limitations (AULs), such as engineering controls (e.g. engineered caps, foundations, liners, treatment methods, etc. in use to prevent contamination from migrating to surrounding areas), land use restrictions or institutional controls (e.g. administrative measures restricting groundwater use, construction, or property use) that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

□ X No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

ESA USER QUESTIONNAIRE

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

□ X No □ Yes (Describe or attach information) Attachment No. _____

_____

_____

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

□ No □ Yes (Describe or attach information) Attachment No. _____ _____
Not Applicable

_____

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

□ No □ Yes (Describe or attach information) Attachment No. _____
___N/A_____

_____

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as User,

(a.) Do you know the past uses of the property?

□ No □ X Yes (Describe or attach information) Attachment No. __1____

_____

_____

ESA USER QUESTIONNAIRE

(b.) Do you know of specific chemicals that are present or once were present at the property?

□ No □ X Yes (Describe or attach information) Attachment No. _____
___Small laser lab assigned to one room on the third floor of Alpha North with a small amount of motor oil, alcohols, and common lab chemicals. Lab closed in Summer 2023 and all materials relocated to another building or removed for disposal.
(c.) Do you know of spills or other chemical releases that have taken place at the property?

□ X No □ Yes (Describe or attach information) Attachment No. _1_____

(d.) Do you know of any environmental cleanups that have taken place at the property?

□ X No □ Yes (Describe or attach information) Attachment No. __1____

(6.) The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the User of the ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

□ X No □ Yes (Describe or attach information) Attachment No. _____

Alpha East & Alpha South Questions

1. Are you aware of any environmental issues at or immediately surrounding Alpha East/Alpha South?
    - No reported hazardous material spills reported in the area of Alpha East & South
    - Alpha South used for men's dorms originally and until the early 2000's.
    - 1st floor renovated to house Air Force/Army ROTC.
    - After housing was moved from the building, sometime in the early 2000's, Alpha South renovated for ROTC and shared Art & Sciences classrooms but no biological or chemical laboratories assigned in the building.
    - Alpha East used originally as dorms—converted to classroom and office space in late 1990's

- Natural gas lines located around both of these buildings and in the courtyard and may still be active. High temperature steam lines and electrical lines run down from the Administration building to the west of Alpha South. Several sanitary and storm sewer line run through this area. These lines service the Alpha Complex, Medical Sciences and HAHN.

2. Can you confirm how many active underground storage tanks (USTs) and aboveground storage tanks (ASTs) are located on the South Alabama main campus? If you have a map, that would be helpful.
    - There are six active UST's (diesel for emergency generators) on Main Campus—none located in the area of Alpha East/South. Two UST's were decommissioned and Closest UST's to this area would be Medical Science (Southwest parking) and Life Sciences Building (West side of loading dock behind the electrical transformers cage).
    - See maps and information provided.

3. Are you aware of any hazardous chemicals (Oils, Acids, Bases, etc.) previously stored in Alpha East or Alpha South?
    - Physics had a small laser lab located in Alpha East on the 3rd floor, north end of the building. This lab was decommissioned and materials relocated by members of the Physics Department in Spring 2023. Minimum quantities of machine oil, alcohols and common lab chemicals were either moved to the Physics department or removed for disposal (oils) by the Safety & Environmental Compliance Department in June 2023.

ADDITIONAL DOCUMENTS

USA College of Medicine - Alpha Hall

555 University Blvd

Mobile, AL 36688

Inquiry Number: 7410351.3

August 07, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/07/23

Site Name:

USA College of Medicine - Alpł
555 University Blvd
Mobile, AL 36688
EDR Inquiry # 7410351.3

Client Name:

Thompson Engineering
2970 Cottage Hill Road
Mobile, AL 36606
Contact: Jordan Leech

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Thompson Engineering were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 5029-41E0-81A2

PO # 2311010136

Project USA Coll. of Medicine-Phase I

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 5029-41E0-81A2

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX D

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

JORDAN LEECH, P.G., MSCE

STAFF SCIENTIST/ENGINEERING ASSOCIATE/DRONE PILOT

ASSIGNMENT
Engineer/Geologist

FIRM
Thompson Engineering, Inc.

YEARS OF EXPERIENCE
With This Firm: 6
Total: 7

EDUCATION
BS/Geology, Auburn University, 2014
MS/Civil Engineering, University of South Alabama, 2017

ACTIVE REGISTRATIONS
Professional Geologist
Alabama #1607

UAS Remote Pilot #4125371
ADEM Qualified Credential Inspector (QCI), #T5298

EXPERIENCE AND QUALIFICATIONS

Mr. Leech has seven plus years of experience working in the environmental engineering and consulting industry concentrating his efforts on providing environmental and geological services to private and governmental clientele.

His technical experience includes:

- Air, soil, and groundwater monitoring, sampling, and analysis
- AHERA asbestos supervisor and inspector
- Bridge and roadway structural inspections
- Computer mapping using AutoCAD and GIS software
- Design of environmental and low-impact development (LID) structures
- Drone and land surveying
- Geographic Information Systems (GIS)
- Geotechnical investigations
- Hazardous waste and materials surveys
- Groundwater well installation, development, and monitoring
- Operation and maintenance (O&M) of groundwater and soil remediation systems
- QCI inspections
- Shoreline monitoring
- Soil and groundwater contamination
- State and federal permitting
- Static sheen test surveying
- Subsurface exploration
- Underground Storage Tank (UST) closures
- Wetland delineation/endangered species surveys

Development of project reports and plans has included:

- Best Management Practices (BMP) plans
- Construction Best Management Practices Plans (CBMPP)
- Dredge Material Evaluation Reports
- Groundwater Monitoring Reports
- Phase I and Phase II Environmental Site Assessments (ESA)
- Preliminary and Secondary Investigation Reports
- Project Management Plans (PMP)
- Spill Prevention, Control, and Countermeasure (SPCC) Plans
- Stormwater Pollution Prevention (SWPP) Plans
- Risk Management Plans (RMP)
- UST Closure Site Assessment Reports

PROJECT EXPERIENCE

Asbestos, Lead Based Paint, Hazardous Materials

Greenfield Environmental Trust Group, Inc., Hazardous Material Survey, Mobile, AL, 2016 (GeoTerra Engineering LLC) – Geologist. Performance of site surveying and documentation of hazardous materials on the industrial site. Tasks included determination of hazardous material for testing such as polychlorinated biphenyl (PCB), lead based paint, asbestos containing material (ACM), and other hazardous materials; documentation of hazardous material location; and sample collection.

ExxonMobil, Rig WC-171A/Avocet Asbestos Air/Perimeter Monitoring, Gulf of Mexico, 2018 – Engineer. Conducted compliance monitoring and perimeter air sampling for the

removal of asbestos containing materials. Collected and analyzed multiple perimeter air samples in accordance with industry standards.

ExxonMobil, Rig MC-133A/C Hazardous Materials Survey, Gulf of Mexico, 2018 – Engineer. Conducted a hazardous chemical survey for an offshore rig as part of the decommissioning process. Identified, inventoried, and quantified all environmental hazardous chemicals onboard for disposal.

ExxonMobil, SP-93A/MC-280A Static Sheen Testing, Gulf of Mexico, 2018 – Engineer. Performance of a static sheen tests for several pipeline decommissioning in compliance with regulation and industry standards.

Hellen Hunting Camp, Hazardous Materials Survey and Investigation, Saraland, AL, 2021 – Engineer/Geologist. Conducted a hazardous chemical survey and investigation of the subject property with numerous unidentifiable 55-gallon drums. Identified, inventoried, sampled, and quantified all drums and conducted soil testing in drum staging area.

Mobile County Public School System, Lead Testing, Mobile, AL, 2019 – Engineer. Conducted and evaluated samples for the presence of lead contaminates from potable and drinking water sources in several MCPSS buildings across Mobile County.

Bridge and Roadway Inspections

Office of State Aid Road Construction, Bridge Inspection, Mississippi, 2018-2019 – Engineer. Conducted annual and intermediate complex bridge and road surface inspections to determine the structural condition and integrity throughout various counties in Mississippi.

Alabama Department of Transportation, Bridge Inspection, Alabama, 2019 – Engineer. Conducted annual and intermediate complex bridge road surface inspections to determine the structural condition and integrity throughout various counties in Alabama.

Coastal / Stream Restoration

University of South Alabama, Bioinfiltration Swale Implementation on USA Main Campus in the Upper Three-Mile Creek Watershed, Mobile, Alabama, 2017 (University of South Alabama) – Civil Engineer Research Assistant - Research, inspection, and determination of sediment and pollutant loading sources into Three-Mile Creek. Assisted in the development of Alabama Department of Environmental Management (ADEM) grant proposal for numerous locations on the University of South Alabama main campus. Design of primary and alternative innovated low impact development (LID) structures to reduce sediment and pollutant loading into Three-Mile Creek. Utilized various computer models including STEPL, EPA SWMM (v. 5.1), and GIS to determine theoretical implementation results.

Drone and Land Surveys

Alabama Department of Transportation, Pinto Pass Mitigation Project, Drone Survey, Mobile, AL, 2019 – Engineer/Drone Pilot. Conducted a site survey using drone photogrammetry technologies for mitigation operations. Project deliverables included orthomosaic imagery, topographic survey with elevations, and NDVI analysis.

Marsh Island Restoration Monitoring Program, Mobile, AL, 2019-2021 – Engineer/Drone Pilot. Conduct yearly drone reconnaissance flight using drone photogrammetry technology to monitor the progression of the site. Project tasks include providing orthomosaic imagery to be used to assess vegetation maturation and growth and NDVI used to assess the overall vegetation health.

Mon Louis Island Restoration Monitoring Program, Mobile, AL, 2017-2021 – Engineer/Drone Pilot. Conduct yearly drone reconnaissance flight using drone photogrammetry technology to monitor the progression of the site. Project tasks include providing orthomosaic imagery to be used to assess vegetation maturation and growth and NDVI used to assess the overall vegetation health.

Sam's Town Casino & Hotel, Drone Survey, Tunica, MS, 2019 – Engineer/Drone Pilot. Conducted a site survey using drone photogrammetry technology for analysis of potential flooding conditions. Project deliverables included orthoscopic imagery and topographic map with elevations of the entire facility and the surrounding dike.

Trans-Ash, Borrow Pit Drone Survey, Turnerville, AL, Ongoing – Conducted a site survey using drone photogrammetry technology for topographic analysis and permitting purposes. Project deliverables included orthoscopic imagery and topographic map with elevations of the 100-acre site.

Southern Light, LLC., Montgomery CRAN, Montgomery, AL, 2019 – Engineer. Conducted a site surveying activities for the installation of an 8-inch fiber optics cable crossing on US Highway 31 across the Alabama River. Project deliverables included figures, maps, and drawings used in the design and state and federal application processes.

Uniti Fiber, Causeway Fiber Optics Line Survey, Mobile, AL, 2019 – Engineer/Drone Pilot. Conducted a site survey using drone photogrammetry technology for a new fiber optics line installation. Project deliverables included orthoscopic imagery

and topographic map with elevations for a 7½ mile stretch of roadway.

Ecological Investigation

Alabama Power Company, Wetland and Ecological Services, Statewide, AL, 2017-2021 – Engineer/Geologist. Conducted site delineation of wetlands and location of threatened and endangered species. The project has included over two hundred miles of power lines surveying in existing easements as well as new alignments throughout the State. In total, hundreds of wetlands have been delineated and hundreds of endangered species have been identified.

Alabama Department of Corrections, Wetland and Ecological Services, Atmore, AL, 2022 – Engineer/Geologist. Conducted and identified wetland areas and threatened and endangered species across the project site. Assisted in the investigation and relocation of Gopher Tortoise in accordance with federal and state regulations.

Environmental Engineering / Design

Mobile County Public School System, UST Removal and AST Replacement Cost Analysis, Mobile, Alabama, 2018 – Engineer. Provided client with a cost estimate of the removal and closure of 3 out-of-service underground storage tanks (UST) in accordance with regulations. Produce preliminary designs of two aboveground storage tanks (AST) in accordance with regulations and provided client with a cost estimate of installation.

Mobile County Commission, Bayou La Batre Effluent Force Main Extension, Alabama, 2021-2022 – Engineer. Designed and produced bid documents for the 5-mile extension of the Bayou La Batre WWTP effluent force main as part of a team. Tasks included calculating flow rates, adequately sizing the effluent piping based on known variables, price estimating, and assisting in the overall design of the system.

SES – Tyndall Air Force Base, Erosion and Sediment Control Plans and As-Builts, Panama City, Florida, 2019 – Engineer. Designed and provided erosion and sediment control plans for 15 sites preforming earthwork that adhere to State and Federal regulations. The tasks preformed included site visits, determining site BMP requirements, designing site plans with drawings, provided a technical report when required, provided as-builts of utility connections, and project planning activities.

Southern Light, LLC., Montgomery CRAN, Montgomery, AL, 2019 – Engineer. Provided designs and plans for the installation of an 8-inch fiber optics cable crossing via horizontal directional drilling on US Highway 31 across the Alabama River. Project deliverables included design plans used for the state and federal permitting process and in the bidding process.

Uniti Fiber, Tampa 5G CRAN Polygon, Tampa, FL, 2020-2022 – Engineer. Designed and developed plans for the installation of over 50-miles of 8-inch fiber optics cable within established right-of-ways across the Tampa area. Project tasks and deliverables included attending weekly project meeting with clients, coordination of survey personnel, coordinating with federal and state government personnel, and develop and produce design plans used for the state and federal permitting process and bid documents.

Geotechnical Investigation

Chevron Corporation, Tank Settlement Survey, Pascagoula, MS, 2017 – Engineer. Performed tank settlement field tests in accordance with ASTM standards. Tasks included field equipment operation, troubleshooting, equipment calibration, and documentation.

Greenfield Environmental Trust Group, Inc., Magnetic Delineation Survey, Mobile, Alabama, On-going – Geologist. Conducted a magnetic delineation survey for on-going remediation actives and documentation.

Regulatory, Compliance, and Permitting

Alabama Army-National Guard, SPCC Plan Permits, AL, 2021 – Engineer. Produced spill prevention, control and countermeasure (SPCC) plans for various Alabama Army National Guard military facilities throughout Alabama. Tasks included project coordination with military personnel, site inspections, document review, and technical report development.

Blakely Boat Works, Regulatory Air Compliance Monitoring, Mobile, AL, Ongoing – Engineer. Performance of monthly monitoring and quarterly documentation of air emissions. Thompson Engineering provides preparation of permitting documentation and calculation of VOCs and HAPs for air emissions reports in accordance with regulatory requirements.

Cooper Marine and Timberland Corp., Environmental Permitting, Alabama/Mississippi, Ongoing – Engineer. Assess and develop various environmental permits for timber and marine operational facilities across the State of Alabama and Mississippi in accordance with regulation and industry standards. Environmental permits include BMP Plans, SPCC plans, SWPP Plans, Tier II reporting, regulated waste notifications, Quarterly Air Monitoring Reports, CAA permitting, Vessel General Permits, and annual auditing.

Lauderdale County Solid Waste Department, BMP Plans, Florence, AL, 2021 – Engineer/Geologist. Developed BMP

plans for the Lauderdale County Solid Waste Department's Underwood Landfill facility and SWD Office.

Mitsubishi Polycrystalline Silicon America Corp., Risk Management Plan, Theodore, AL, 2022 – Engineer. Developed a Risk Management Plan (RMP) document for the Mitsubishi Polysilicon industrial plant in accordance with regulatory standards. Project tasks include project coordination with client and regulatory agencies; document and regulatory record review; and technical report writing.

Nexeo Solutions, Stormwater Compliance, Mobile AL, 2016 (GeoTerra Engineering, LLC) – Geologist. Performance of semi-annual collection of stormwater sampling and documentation as per regulatory compliance and ASTM standards.

Shapiro Metals, BMP Plan, Mobile, AL, 2015 (GeoTerra Engineering, LLC) – Geologist. Development of BMP documents for the metal recycling facility in accordance with industrial standards and regulatory compliance. Project tasks included project coordination, site inspection, and report development.

Southern Light, LLC., Montgomery CRAN, Montgomery, AL, 2019 – Engineer. Developed and produced USCOE permit packages for the installation of an 8-inch fiber optics cable crossing on US Highway 31 across the Alabama River. Project tasks included permit applications, figures, maps, plans, and drawings used in the application processes.

Technip FMC, SWPP, BMP, and SPCC Plans, Theodore, AL, 2018 – Engineer. Development of SWPP, BMP, and SPCC documents for the industrial underwater pipeline facility in accordance with industrial standards and regulatory compliance. Project tasks included project coordination with client, site inspection, and report development.

The Landings Association, Environmental Permitting and Planning, Savannah, GA, 2018 – Engineer. Developed BMP and SPCC plans for boat storage and launching facility in accordance with state and federal regulations.

Uniti Fiber, Causeway Fiber Optics Line Survey, Mobile, AL, 2019 – Engineer/Drone Pilot. Developed and produced USCOE permit packages for the installation of an 8-inch fiber optics cable across the 7½-mile stretch on the Causeway. Project tasks and deliverables included project coordination with client, state, and federal personnel, permit applications, figures, maps, plans, and drawings used in the application processes.

Uniti Fiber, Tampa 5G CRAN Polygon, Tampa, FL, 2020-2022 – Engineer. Developed permit packages for the installation of around 50-miles of 8-inch fiber optics cable within established right-of-ways across waterbodies and wetlands the Tampa area. Project tasks and deliverables included attending weekly project meeting with clients, coordination of survey personnel, coordinating with federal and state government personnel, permit applications, figures, maps, plans, and drawings used in the application processes.

Project Management

Mobile County Commission, Bayou La Batre Effluent Force Main Extension – Project Management Plan, AL, 2021 – Engineer. Developed and produced the Project Management Plan for the 5-mile extension of the Bayou La Batre WWTP's effluent force main. The document defines project objects, scope of services, project schedules, project organization, task descriptions, QA/QC procedures, contract conditions, billing/budget procedures, and safety planning.

Soil and Groundwater Assessments / Remediation / Geologic Investigations

Alabama Department of Environmental Management, LUST – Geologic Investigation, Florence, AL, 2019 – Geologist. Conducted a geologic investigation for multiple Leaking Underground Storage Tank (LUST) site. Task included site/method planning; project coordination; technical report development; field management; and environmental sampling.

Alabama Department of Transportation, Virginia Street Preliminary and Secondary Investigations, Mobile, AL, Ongoing – Geologist. Conducted preliminary and secondary investigations of project sites with suspected release events. Task included site/method planning; project management and coordination; technical report writing; analysis of laboratory results; field management and supervision of drill crew; well development; and environmental sampling.

Alabama Department of Transportation, Virginia Street UST Closure, Mobile, AL, 2019 – Geologist. Performed closure of several Underground Storage Tanks (USTs) of a former service station in accordance with industry standards and regulatory requirements. Task included site/method planning; project management and coordination; analysis of laboratory results; field management and supervision of drill crew; environmental sampling; analysis of laboratory results; technical report writing.

Alabama Department of Transportation, Victory Fuel Station UST Closure, Huntsville, AL, 2020 – Geologist. Performed closure of several Underground Storage Tanks (USTs) of a former service station in accordance with industry standards and regulatory requirements. Task included site/method planning; project coordination; analysis of laboratory results; environmental sampling; analysis of laboratory results; technical report writing.

Alabama Department of Transportation, Florence Firehouse UST Closure, Florence, AL, 2021 – Geologist. Performed closure of an Underground Storage Tank (UST) in accordance with industry standards and regulatory requirements. Task included site/method planning; project management and coordination; analysis of laboratory results; field management and supervision of drill crew; environmental sampling; analysis of laboratory results; technical report writing.

Alabama Department of Transportation, Florence Utilities Electricity Department UST Closure, Florence, AL, 2022 – Geologist. Performed closure of several Underground Storage Tanks (USTs) in accordance with industry standards and regulatory requirements. Task included site/method planning; project management and coordination; analysis of laboratory results; field management and supervision of drill crew; environmental sampling; analysis of laboratory results; technical report writing.

Alabama Department of Transportation, Florence UST Closure, Florence, AL, 2023 – Geologist. Performed closure of several Underground Storage Tanks (USTs) of multiple service station in accordance with industry standards and regulatory requirements. Task included site/method planning; project coordination; analysis of laboratory results; field management and supervision of drill crew; well development; environmental sampling; analysis of laboratory results; technical report writing.

Ashland Chemical, Groundwater Well Installation, Mobile, AL, 2016 (GeoTerra Engineering LLC) – Geologist. Oversite for the installation of numerous pumping wells, monitoring wells, and piezometers. Tasks include the supervision and coordination of drilling crew; documentation of daily activities; core logging; determination of well location and well depth; development of wells; and connection of new wells to existing well manifold.

Ashland Chemical, Soil and Groundwater Remediation Project, Mobile, AL, 2015-2017 (GeoTerra Engineering LLC) – Geologist. Management of operations and maintenance of pump & treat groundwater and soil remediation site. Tasks included the inspection and maintenance of system components (piping, pumps, tanks, etc.); collection of routine influent and effluent water samples for permit compliance; maintenance of existing monitoring and recovery well network (including piezometers); collection of semi-annual groundwater sampling events; collection of monthly water level measurements; and documentation of O&M activities.

Greenfield Environmental Trust Group, Inc., Groundwater Monitoring Well Installation, Mobile, AL, 2018 – Geologist. Oversite and management for the installation of numerous monitoring wells and piezometers. Tasks include the supervision and coordination of drilling crew; documentation of daily activities; core logging; collection of soil and groundwater samples; and well development.

Greenfield Environmental Trust Group, Inc., Detention Pond Survey, Mobile, AL, 2016 (GeoTerra Engineering LLC) – Geologist. Technical report preparation and collection of soil and groundwater samples in accordance with ASTM standards.

Nick's Conoco, ADEM UST Soil and Groundwater Remediation, Prichard, AL, On-going – Engineer. Various project activities for an active UST soil and groundwater remediation project at a gas station. Tasks include the performance of operation and maintenance of system, collection of quarterly groundwater effluent sampling, groundwater monitoring, and technical report development.

Environmental Site Assessments

Airbus America, Inc., Phase I Environmental Site Assessments, Mobile, AL, 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of the Airbus U.S. Manufacturing Facility in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Alabama Export Railroad, Phase I Environmental Site Assessments, Mobile, AL, 2020-2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of multiple undeveloped parcels in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Alabama Export Railroad, Phase II Environmental Site Assessments, Mobile, AL, 2021 – Geologist/Engineer. Planned and conducted an ESA Phase II site investigation of two undeveloped industrial parcels in accordance with in industry and ASTM standards. Project tasks include the review of historical documents; project coordination planning; supervision and coordination of drilling crew; documentation of field activities; core logging; collection of soil and groundwater samples; analysis of laboratory results and technical report development.

Austal USA, Phase I Environmental Site Assessments, Mobile, AL, 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of multiple industrial parcels in accordance with

ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Ball Healthcare, Phase I Environmental Site Assessments, Mobile, AL, 2021 - 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation for multiple commercial parcels in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Cooper Marine and Timberland Corp., Phase I Environmental Site Assessments, McComb, MS, 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of an operational lumber mill in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Florida Army-National Guard - HARB, Phase II Environmental Site Assessments, Homestead, FL, Ongoing – Geologist. Conducted an ESA Phase II/Soil Assessment and Groundwater Monitoring Plan of 5 parcels located at the Homestead Air Reserve Base in accordance with in industry and ASTM standards. Project tasks include the review of historical documents; project planning; analysis of laboratory results; and technical report development.

Mitsubishi Polycrystalline Silicon America Corp., Phase I Environmental Site Assessments, Theodore, AL, 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of the 58-acre industrial plant in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, regulatory record review.

Mitsubishi Polycrystalline Silicon America Corp., Phase II Environmental Site Assessments, Theodore, AL, 2022– Geologist. Planned and conducted an ESA Phase II investigation of the 58-acre industrial plant in accordance with in industry and ASTM standards. Project tasks include the review of historical documents; project planning; supervision and coordination of drilling crew; documentation of field activities; core logging; collection of soil and groundwater samples; analysis of laboratory results; and technical report development.

NGL Supply Co. Ltd., Phase I Environmental Site Assessments, Petal, MS, 2022 – Geologist/Engineer. Conducted an ESA Phase I investigation of an operational industrial chemical facility in accordance with ASTM and industrial standards. Project tasks included proposal preparation, client coordination, site inspection, technical report development, site history, aerial photograph review, interviews with relevant government agencies and parties, soil stratigraphy, groundwater flow characterization, and regulatory record review.

Other

Solid Waste Authority of Florida, Hurricane Irma Emergency Disaster Response, Florida, 2017 – Supervisor. Management and supervision of daily operations for the documentation of storm-related vegetated and construction debris by various contractors for 70+ field monitors and 5+ disposal sites in West Palm Beach County, Florida. Daily activities included documentation and coordination of field monitors; safety coordination; IT device repair and troubleshooting; supervisor management and coordination; and contractor coordination.

Escambia County, Hurricane Sally Emergency Disaster Response, Florida, 2021 – Supervisor. Management and supervision of daily operations for the documentation of storm-related vegetated and construction debris by various contractors for 40+ field monitors and a disposal sites in Pensacola, Florida. Daily activities included documentation and coordination of field monitors; safety coordination; IT device repair and troubleshooting; supervisor management and coordination; and contractor coordination.

ORGANIZATIONS

- Geological Society of America (GSA)
- Southwest Alabama Geology Society (SWAGS)
- Society of Military Engineers (SAME)
- Partners for Environmental Progress (PEP)
- Auburn Alumni Association
- American Society of Civil Engineers (ASCE)

SELECTED PROFESSIONAL TRAINING COURSES

- OSHA "Hazardous Waste Operations and Emergency Response" (HAZWOPER) – 40-hour training and 8-hour refresher course
- Basic Orientation Plus
- Naturally Accelerator Radioactive Materials (NARM)
- AHERA Asbestos Building Inspector
- AHERA Asbestos Contractor Supervisor
- Qualified Credentialed Inspector (QCI)
- Asbestos in Building: Air Sampling and Analysis (NIOSH 582 Equivalent)
- FAA Small-Unmanned Aircraft License (Part 107)

COMMUNITY SERVICE

- Mobile Baykeepers
- Thompson Engineering Eco Team

SUZANNE SWEETSER, CPESC

SENIOR SCIENTIST

ASSIGNMENT

Senior Scientist

FIRM

Thompson Engineering, Inc.

YEARS OF EXPERIENCE

With This Firm: 14

Total: 17

EDUCATION

MS/Biology: Plant Ecology, University of South Alabama, 2008

BS/Biology, University of South Alabama, 2004

ACTIVE REGISTRATIONS

Certified Professional in Erosion and Sediment Control #8855

EXPERIENCE AND QUALIFICATIONS

Ms. Sweetser is a Project Manager working out of Thompson Engineering's Mobile, Alabama, office. She is experienced in Project Management, storm water reporting and inspections, preparation of NEPA documents, wetland identification, development of Best Management Practices (BMPs) plans, Phase I ESAs, and soil and groundwater sampling methodology. She has been involved with permitting projects that require understanding of State and Federal regulations from agencies such as USACE, ADEM, MDEQ, FDEP, SHPO's, USFWS, DCNR's and State Lands Divisions. Ms. Sweetser is a Qualified Credentialed Inspector, as recognized by the Alabama Department of Environmental Management (ADEM).

University of South Alabama: Research Assistant – 2 years. Ms. Sweetser is experienced in conducting plant surveys that entail the analysis of large volumes of data. She has experience collecting water samples over artificial oyster reefs, collecting insects using malaise traps, and collecting Herpifauna (reptiles and amphibians).

University of South Alabama: Laboratory Instructor - 1 year. Duties included teaching students how to: use a microscope and prepare slides, identify microorganisms, and perform experiments using the scientific method. Ms Sweetser assessed the students' performance through standard testing and grading procedures.

PROJECT EXPERIENCE

Alabama Power Company, Wetland Delineations and Threatened and Endangered (T&E) Species Surveys - Ongoing – Project Scientist for Wetland Delineations and T & E Surveys involving existing and new power lines and associated Right of Way areas throughout the state of Alabama.

Mobile Bay National Estuary Program, Fly Creek Watershed Management Plan, Baldwin County, AL - Ongoing– Project Manager for developing the Watershed Management Plan for the 21,800 acre Fly Creek Watershed/Eastern Shore community. This watershed contains approximately 74 miles of stream and 22 miles of coastline.

City of Fairhope, Fly Creek Restoration, Fairhope, AL – Project Scientist for the development of a watershed restoration project as part of the BP Deepwater Horizon Oil Spill for the city. The project included a GIS-based analysis of the approximate 5,000 watershed, assessing historic, existing, and projected land uses, environmental issues, identification of 15 prioritized watershed restoration measures, restoration cost, and financing alternatives.

ADCNR Weeks Bay East Gateway Phase I - Phase I ESAs are conducted in general conformance with American Society for Testing and Materials (ASTM) Standard Practice Designation E 2247-16, Process for Forestland or Rural Property.

KMG Chemicals Phase I at the Syngenta Property - Phase I ESAs are conducted in general conformance with American Society for Testing and Materials (ASTM) Standard Practice Designation E 1527. Special considerations for this project included in depth assessment and research of surrounding industrial and chemical facility permits, recorded, and non-recorded environmental conditions.

Mobile Bay National Estuary Program, Mon Louis Island Restoration, Mobile County, AL – Project Scientist for the restoration of Mon Louis Island. The National Fish and Wildlife Foundation (NFWF) provided a grant to the Mobile Bay National Estuary Program (MBNEP) for restoration the northern end of Mon Louis Island. Thompson Engineering was selected to provide engineering and design to stabilize the shoreline along the bay side of the island and create/enhance aquatic, wetland, and upland habitats to the extent possible. The intent of the project is not to offer protection from catastrophic weather events, but to stabilize the shoreline from chronic, routine impacts. Design components include wave attenuation and shoreline stabilization structures, associated provision of hardened

substrate for attachment of oysters and other estuarine benthic species, planting of appropriate native wetland and upland vegetation, beneficial use of dredged materials, and beach optimization.

Mobile Bay National Estuary Program, Joe's Branch Phase II, Spanish Fort, AL – Project Scientist for an extensive Stream Restoration Project in Spanish Fort Alabama. The project was fund by a grant from the National Fish and Wildlife Foundation (NFWF) due to the BP Deepwater Horizon Oil Spill. Thompson Engineering was tasked by the Mobile Bay National Estuary Program (MBNEP) to provide professional engineering services for engineering design, procurement, and construction oversight for the restoration of streams and installation of stormwater management measures in the Joe's Branch portion of the D'Olive Watershed.

Retirement Systems of Alabama, Van Antwerp Building Renovations, Mobile, AL – Project Scientist for the performance of the Hazardous Materials Survey and Abatement during the renovation of the 11-story, 58,300 sq. ft., historic Van Antwerp Building that was constructed in 1908 in downtown Mobile. The project also includes adding 11-stories totaling over 16,000 sq. ft. on the west side of the existing building. Environmental services included a pre-renovation hazardous materials survey, abatement plans and specifications, and asbestos abatement oversight during demolition activities. Thompson is also responsible for the structural engineering design for the demolition, renovation, and addition as well as the building envelope inspections for the windows, roofing system, and facade.

Retirement Systems of Alabama, Bank Trust Building Hazardous Materials Survey, Mobile, AL – Project Scientist for the performance of the Hazardous Materials Survey prior to and during the total renovation of a 34-story, high-rise office building. The survey identified asbestos-containing materials, lead-based paint, and other hazardous and regulated materials. Thompson Engineering provided abatement plans, structural engineering services, inspection of the entire building envelope, water tightness testing, contract administration, air monitoring, and inspection services.

Mobile County Commission, Airport Boulevard Resurfacing, Mobile, AL – Project Scientist for the design and construction oversight of the Airport Boulevard resurfacing project from Snow Road west to the Mississippi State line. The project includes surveying, clearing, patching, leveling, milling, resurfacing of existing pavement, minor drainage improvements, shoulder improvements, traffic control installation, pavement striping and raised pavement markers, guardrail, and intersection improvements.

CBL and Associates Developers, Geotechnical Investigation 2018 – Project Manager for a geotechnical investigation of a property owned by CBL. This case is in litigation and is highly confidential. While the exact details of the case cannot be disclosed, management requires the integration of several diverse fields to end in a product that is reproducible and can hold up to scrutiny in a court of law.

University of South Alabama, Women's and Children's Hospital Addition, Ongoing – Project Manager for Construction Materials Testing (CMT), Building Envelope Inspections, LEED Commissioning and Geotechnical. Providing oversight of concrete/foundation inspections, break test reports, floor flatness data, roofing inspections, window inspections, masonry inspections, storm water inspections and geotechnical reports during Phase I of construction.

University of South Alabama, Engineering Building, Ongoing – Project Manager for CMT, Building Envelope Inspections, LEED Commissioning and Geotechnical. Providing oversight of geotechnical reports, roofing inspections, window spray testing, stormwater inspections, and commissioning services.

University of South Alabama, Specialized Laboratory Environmental Assessment (EA), Mobile, AL – Project Scientist for the development of a National Environmental Policy Act (NEPA) EA for a new 25,800 sq. ft. facility that will contain BSL-2, BSL-3, and ABSL labs. The EA was prepared to comply with National Institutes of Health (NIH) requirements as part of a grant application. Thompson Engineering provided a Phase I ESA and EA that included regulatory coordination; wetlands assessment; T&E and Cultural Resources Survey; and safety and security evaluation.

Mobile Bay National Estuary Program, D'Olive Bay Comprehensive Watershed Management Plan (CWMP), Baldwin County, AL – Project Scientist for developing a CWMP to address the impact from increased sediment loadings on the watersheds of D'Olive Creek, Tiawasee Creek, and Joe's Branch. Thompson Engineering was responsible for data compilation, evaluation, and synthesis; watershed characterization; wetlands assessment; stream geomorphological and erosion activity assessment; environmental restoration and mitigation alternatives; conceptual engineering and feasibility evaluation.

Alabama State Port Authority, Frascati Yard Subsurface Investigation, Mobile, AL – Project Scientist for a subsurface investigation of a former railroad repair facility to evaluate recognized environmental conditions associated with the property based on the Phase I ESA. The field activities included collection of soil and groundwater samples. Thompson Engineering was responsible for the Phase I ESA, soil investigation, groundwater investigation, analytical sampling, geoprobe, and temporary well installation.

Austal USA, LLC, New Bulkhead, Cove Reclamation Area, Break Room Facility, Mobile, AL – Provided NPDES Compliance for the Design / Build services for a new bulkhead, cove reclamation, and a 400-employee capacity break room. The project included demolition, a pipe/sheet pile wall system, utility stations, dredge design; land reclamation / site development on the Mobile River over the Bankhead Tunnel, 80-ton mooring bollards and fenders; and the design and construction of a 6,000 sq. ft. break room.

Baldwin Rural Area Transportation System (BRATS), (AMERICAN RECOVERY AND REINVESTMENT ACT), Categorical Exclusion, Fairhope, AL, 2009 – Developed a NEPA document in accordance with Federal Transportation Authority (FTA) guidelines. A NEPA document was developed for the construction of a new hub facility, with car and bus parking. The project is located in downtown Fairhope, Alabama.

Baldwin Rural Area Transportation System (BRATS), (AMERICAN RECOVERY AND REINVESTMENT ACT), Categorical Exclusion, Robertsdale, AL, 2009 – Developed a NEPA document in accordance with Federal Transportation Authority (FTA) guidelines. A NEPA document was developed for the renovations at the Central Transfer Station. Renovations consisted of interior and office design, new maintenance bay, new training and conference rooms, additional parking, and upgrades at the loading/unloading area.

Mississippi Army National Guard, Data Indexing System 2011– Worked closely with the Mississippi National Guard on a Database which compiled and referenced several decades of environmental literature relevant to the environmental and pollution prevention sectors of the MSARNG. Organized and attended workshop for MSANG employees. Assisted with database categories and field title information.

Florida Department of Transportation, Perdido Bridge Replacement, AL and FL, Ongoing – Coordination, compilation, and review of the application package for permitting in Alabama and Florida for USACE, ADEM, and FDEP. The Perdido River is classified by FDEP as an "Outstanding Water."

ALDOT, U.S. Highway 98, Wetland Remediation Assessment, 2009 – Field Assessment of habitat quality of wetlands associated with the failure of numerous BMPs throughout the project site. Ms. Sweetser identified wetland perennial species in targeted habitats and provided recommendations to ADEM for remediation efforts.

Mitsubishi, Polysilicone Risk Management Plan Update, 2009 – Assisted with the gathering and compilation of facility data necessary for the 5 year update of the U.S. EPA required Risk Management Plan.

USA Mitchell Cancer Institute, (AMERICAN RECOVERY AND REINVESTMENT ACT) Review of Environmental Impacts for a Proposed Animal Research Facility, 2009 – Collection of all the necessary information regarding project siting, cultural resources, threatened and endangered species, and local utilities. This information was used for development of the HUD Environmental Assessment for the USA Mitchell Cancer Institute Grant Application.

City of Meridian Mississippi, (AMERICAN RECOVERY AND REINVESTMENT ACT) Categorical Exclusion for Bridge Replacement over Sowashee Creek in Meridian, MS, 2009– Development of the MDOT Categorical Exclusion Document for replacement of a structurally deficient bridge. Due to the nature of the funding source, the work was completed on an expedited basis.

City of Meridian Mississippi, (AMERICAN RECOVERY AND REINVESTMENT ACT) Categorical Exclusion for the repairs of the 26th Avenue Viaduct in Meridian, MS, Ongoing– Development of the MDOT Categorical Exclusion Document for repairs and upgrading of a structurally deficient Viaduct. Due to the age of the structure (1920's) additional coordination with MDAH was required.

MDEQ and USACE, Joint Application Permit for Dredging of Dry-Dock Basin at Bayou Cassote, 2008 – Compilation and review of the permit application and development of an Environmental Assessment/FONSI. Coordination with State and Federal Agencies.

Mitsubishi, Polysilicone, 2008 – Worked as the acting Environmental Specialist at the plant site between staffing assignments. Duties included hazardous/toxic waste inspections, the completion of hazardous/ toxic waste manifests for shipping, weekly plant inspections, weekly waste water sampling, monthly reporting to ADEM and MAWSS, and quarterly reporting to ADEM.

Mitsubishi, Polysilicone Toxic Release Inventory (TRI) report, 2008 – Compiled and calculated the data based on the release of toxic materials at the Mitsubishi Polysilicone plant for development of the annual TRI report.

Fairhope Pier Reef Permitting, 2008 – Assisted the City of Fairhope in meeting USACE and ADEM permit requirements for the construction of a public fishing reef located off of Fairhope Pier in Mobile Bay.

Dawes Dirt Pit Inspections and associated ADEM Quarterly Reporting Activities – Biweekly inspections of the Dawes Dirt

Pit were performed in accordance with the dirt mining permit requirements held by the pit owner. Quarterly Discharge Monitoring Reports were submitted to ADEM.

U.S. Army Corp of Engineers, Mobile District. Environmental Assessment for the Release of Triploid Grass Carp for Hydrilla Management. Walter F. George Lake, AL and GA, 2007 – Development of an Environmental Assessment/FONSI for the USACE. The project involved coordination with Federal and State Agencies, organized and attended two public meetings, addressed written and oral questions from the public, provided information for the EA.

Mitsubishi, Polysilicone Storm Water Sampling, 2007 – Collection of composite storm water samples from the facilities four ADEM permitted discharge points. Compilation of report including sample analysis for ADEM.

Mississippi Army National Guard, Environmental Assessment for Readiness Center, Biloxi/Ocean Springs, MS, 2007 – Development of an Environmental Assessment/FONSI for the MSARNG for construction of a new Readiness Center. Coordination with Federal and State Agencies, research, and report preparation.

PREVIOUS EMPLOYMENT EXPERIENCE

University of South Alabama, Non-native Plant Survey, Mobile and Baldwin Counties, AL – Dr. Kelly Major was awarded funding for a two year study of the non-native naturalized plants in the two southern most counties of Alabama by NOAA and the Alabama State Lands Division. Ms. Sweetser worked with Dr. Major collecting and analyzing data for this effort. Ms. Sweetser's responsibilities included data collection, data mapping (ArcGIS 9.1), and presentations at various professional meetings.

SELECTED TRAINING COURSES

- The Living Shorelines Workshop
- Submerged Aquatic Vegetation Workshop
- U.S. Army Corps of Engineers Wetland Delineation Training Program
- Project Management Boot Camp
- ASI Driver Education Course
- Urban Stream Restoration 2012
- D'Olive Watershed Restoration Workshop
- Clear Water Alabama 2018 & 2019
- Gulf Coast Watershed Sustainability and Modeling Systems Workshop

APPENDIX C

BIOLOGICAL ASSESSMENT REPORT AND U.S. FISH AND WILDLIFE SERVICE COORDINATION

Wetlands, Streams, and Endangered Species Survey Report

University of South Alabama
New College of Medicine Building
Mobile County, Alabama

August 2023

Prepared by:
Thompson Engineering Project No.: 23-1101-0136

Alabama | Florida | Georgia | Louisiana | Mississippi | North Carolina | Tennessee | Texas

2970 Cottage Hill Road. Suite 190, Mobile, AL 36606
thompsonengineering.com | 251.666-2443

Introduction

Thompson Engineering (Thompson) was contracted to perform necessary environmental field surveys on the proposed site of the new College of Medicine building on the main campus of the University of South Alabama (USA). The USA campus is located in west Mobile, generally west of University Boulevard and north of Old Shell Road. The existing habitat on the site for the new College of Medicine building consists of older (constructed in mid-1960's) University of South Alabama buildings, sidewalks, parking lots, utilities, and other associated campus facilities. Areas not covered by the impervious surfaces of the buildings, sidewalks, parking lots, etc. consist predominantly of mowed lawn grasses, landscaping shrubs, and a few mature pines and oaks. Based on the highly developed nature of the site since they were constructed in the mid-1960's, the habitat quality would be described as low for the building site and the surrounding area.

The project area is located within the Threemile Creek watershed. The Thompson environmental survey provides baseline data in the form of distribution and extent of all wetlands and other waters of the United States (WOTUS) regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). The survey also includes a field survey of federally protected endangered and threatened species, as well as proposed and candidate species.

Methodology

A desktop review and field survey to identify jurisdictional wetlands on the site were performed on the project area. The wetland survey was conducted according to methodology and criteria set forth in the *1987 U.S. Army Corps of Engineers Wetland Delineation Manual* and the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*. The *2018 National Wetland Plant List* (http://wetland-plants.usace.army.mil/nwpl_static/data/DOC/lists_2018/States/pdf/AL_2018v1.pdf), dated May 21, 2020, was utilized. Based on the manual and the supplement, wetlands must exhibit all of the following criteria: dominance of wetland vegetation, hydric soils, and sufficient hydrology to sustain hydrophytic plants. The following data were analyzed to determine the presence/absence of jurisdictional wetlands:

- Review of soil survey information
- Review of available aerial photography
- Review of readily available online data
- Field review for the presence/absence of hydrologic indicators
- Field review for presence/absence of hydrophytic vegetation
- Field review to determine presence/absence of hydric soils

Thompson compiled the U.S. Department of Agriculture (USDA), NRCS soil map data, USGS Topographic Quadrangle, USGS NHD, USFWS NWI, topographic data, and aerial photography, to evaluate the site. This information was studied prior to initiation of field activities. Based on our desktop review, no wetlands or streams were identified within the project site. The field survey

was performed on August 15, 2023. The field review of the site was based on topographic features, hydrologic indicators, soil types, and the presence of wetland characteristics as previously mentioned. In addition, the Thompson employee performing the survey (Michael Eubanks) is very familiar with the site since he lived in the Alpha South Hall dormitory during his four years of undergraduate study in biology from 1968-1972.

The site was additionally inspected by a thorough pedestrian survey for presence of the federally protected, proposed, and candidate species and potential habitat for those species. The list of potential threatened and endangered species that may occur on the site was obtained on the USFWS Information for Planning and Consultation (IPaC) website (Appendix A). The field survey evaluated the proposed site for the potential presence of seven federally-listed threatened, endangered, proposed, and candidate species based on the USFWS Endangered Species Program: 1) alligator snapping turtle (*Macrochelys temminckii*), proposed threatened, 2) black pine snake (*Pituophis melanoleucus lodingi*), threatened, 3) eastern indigo snake (*Drymarchon corais couperi*), threatened, 4) gopher tortoise (*Gopherus polyphemus*) threatened, 5) Gulf sturgeon (*Acipenser oxyrinchus [=oxyrhynchus] desotoi*) threatened, 6) monarch butterfly (*Danaus plexippus*), candidate, and tricolored bat (*Perimyotis subflavus*), proposed endangered. No critical habitat for any of these federally protected, proposed, or candidate species exists within the project area. The field survey methods for these species and their habitat consisted of a pedestrian survey across the entire project area looking for these seven species and assessing the existing habitat conditions on the site.

The alligator snapping turtle is the world's largest freshwater turtle (can exceed 200 pounds) generally inhabits rivers, sloughs, and oxbows and only leaves the water to nest. The black pine snake prefers open-canopied longleaf pine habitat with abundant cover of herbaceous understory vegetation of bluestem grasses (*Andropogon* and *Schizachyrium* spp.) to support the rodent prey base of this snake. This habitat is not found on this or other nearby campus areas. The eastern indigo snake, an extremely rare specimen in Alabama, exists only in highly undisturbed areas of longleaf pine forest, which does not exist on the project site. The gopher tortoise typically inhabits fire-maintained upland sandhill communities containing a lush herbaceous groundcover and little woody cover, habitat not found on the developed and manicured landscape of the project site. The Gulf sturgeon is an anadromous fish, with reproduction occurring in large freshwater rivers. Gulf sturgeon have been found in Mobile Bay and Mobile Delta over the past 30 years, but the project site has no aquatic habitat for this large fish. The monarch butterfly requires the presence of milkweed (*Asclepias* spp.) for reproduction and no milkweed plants were observed within the project site. The tricolored bat is often found roosting in caves, abandoned mines, and road-associated culverts, none of which exist on the project site. They are also found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees (none of which exist on the project site). No bats were observed on the site.

Photographs of the project site were taken with a camera displaying date/time/latitude/longitude and are included in Appendix A.

Results

Wetlands and Streams. No wetlands or streams were found on the project site based on the field survey, as well as online sources.

Endangered Species. Based on the field survey, the Thompson staff did not find any of the seven USFWS-listed, proposed, or candidate species. Based on the numerous busy transportation corridors in the area and the urban surroundings (university buildings, offices, sidewalks, parking lots, utilities, and the manicured landscaping on the campus), none of these seven species were found and no suitable habitat for those species was observed on the site.

The USFWS IPaC website provided a clearance to proceed with Federally-Insured Loan and Grant Project Requests for projects that meet certain conditions related to construction within a previously highly impacted site with no designated critical habitat (Appendix C)

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Wetlands, Streams, and Endangered Species Survey Report

University of South Alabama

New College of Medicine Building

Mobile County, Alabama

APPENDIX A

USFWS Information for Planning and Consultation – Species List

Alabama | Florida | Georgia | Louisiana | Mississippi | North Carolina | Tennessee | Texas

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thompsonengineering.com | 251.666-2443

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
Phone: (251) 441-5181 Fax: (251) 441-6222
Email Address: alabama@fws.gov

In Reply Refer To: August 15, 2023
Project Code: 2023-0117307
Project Name: University of South Alabama, New College of Medicine Building

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Project consultation requests may be submitted by mail or email (Alabama@fws.gov). **Ensure that the Project Code in the header of this letter is clearly referenced in any request for consultation or correspondence submitted to our office.**

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Ensure that the Project Code in the header of this letter is clearly referenced with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
(251) 441-5181

PROJECT SUMMARY

Project Code: 2023-0117307

Project Name: University of South Alabama, New College of Medicine Building

Project Type: Mixed-Use Construction

Project Description: The new College of Medicine building will be constructed on the University of South Alabama (USA) campus in west Mobile. Specifically, the new building will be located on University Boulevard, replacing two aging Alpha Hall buildings not affiliated with the College of Medicine (Alpha East and Alpha South). The site has the advantage of placing the new building in close proximity to other existing key buildings in the Medical/Health Sciences campus (the USA Simulation Building, the Health Sciences and Nursing building, the Baugh Biomedical Library, and the Central Services and Administration Building and placing it well away from the existing flood plain of Three Mile Creek along the northwest aspect of the Medical/Health Sciences campus. Cumulatively, the new building will contain a total of approximately 291,000 gross square footage, including all administrative, classroom, offices, laboratories, and other support areas within the four to five story building. Initial work on the project site will include several enabling projects such as demolition of East and South Alpha Halls and utility rerouting -- scheduled to begin in the Fall of 2023. Completion of the facility is anticipated in the 2026/2027 timeframe.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@30.6985637,-88.17518566854855,14z

Counties: Mobile County, Alabama

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened
Black Pinesnake *Pituophis melanoleucus lodingi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/452	Threatened
Eastern Indigo Snake *Drymarchon couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Gopher Tortoise *Gopherus polyphemus* Population: Western DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6994	Threatened

FISHES

NAME	STATUS
Gulf Sturgeon *Acipenser oxyrinchus (=oxyrhynchus) desotoi*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/651

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Michael Eubanks
Address: 2970 Cottage Hill Road
Address Line 2: Suite 190
City: Mobile
State: AL
Zip: 36606
Email meubanks@thompsonengineering.com
Phone: 2513488104

LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Institute of Standards and Technology

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Wetlands, Streams, and Endangered Species Survey Report

University of South Alabama

New College of Medicine Building

Mobile County, Alabama

APPENDIX B

Site Photograph Log

Alabama | Florida | Georgia | Louisiana | Mississippi | North Carolina | Tennessee | Texas

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Photograph 1 – View South from North End of Alpha East

Photograph 2 – View Northwest at Alpha South (left) and Alpha East (right)

Photograph 3 – View West Along South Side of Alpha South

Photograph 4 – View Northeast from West End of Alpha South

Photograph 5 – View South to Alpha South from College of Medicine Administration Building (old Alpha West)

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Wetlands, Streams, and Endangered Species Survey Report

University of South Alabama

New College of Medicine Building

Mobile County, Alabama

APPENDIX C

USFWS Information for Planning and Consultation

Clearance to Proceed with Federally-Insured Loan and Grant Project Requests

Alabama | Florida | Georgia | Louisiana | Mississippi | North Carolina | Tennessee | Texas

2970 Cottage Hill Road. Suite 190, Mobile, AL 36606
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

April 26, 2021

U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests

Background

The U.S. Fish and Wildlife Service (Service) is the lead Federal agency charged with the protection and conservation of Federal Trust Resources, including threatened and endangered species and migratory birds, in accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act, (16 U.S.C. 668-668d) (Eagle Act), and the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 701 et seq.).

Many Federal agencies have activated programs that have resulted in an increased consumer demand to initiate projects through federally-backed loans and grants, all of which require those same Federal agencies or their designees to comply with Section 7 of the ESA. As a result, there has been an increase in the number of requests for review of these government-backed loan and grant projects. These include, but are not limited to:

1. U.S. Department of Housing and Urban Development's (HUD) Neighborhood Stabilization and Community Development Block Grant programs;
2. U.S. Department of Energy's (DOE) Energy Efficiency and Renewable Energy program;
3. U.S. Department of Agriculture's (USDA) Housing Assistance and Rural Development Loan and Grant Assistance programs;
4. U.S. Federal Aviation Administration (FAA) regulatory airport and runway modifications;
5. U.S. Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance program; and
6. U.S. Environmental Protection Agency's (EPA) Clean Water State Revolving Fund.

In order to fulfill the ESA's statutory obligations in a timely and consistent manner, and to assist Federal agencies, State and local governments, and consultants in addressing Section 7 and National Environmental Policy Act (NEPA) environmental impact review requirements, we provide the following guidance and clearance relative to the criteria stated below for federally-insured loan and grant project requests in all cities and unincorporated areas within the jurisdiction of participating Service field offices. Participating field offices are included in Attachment A and may include additional requirements or exclusions.

Species Lists:

To acquire a species list for the area where the project is proposed, please access the Information for Planning and Conservation (IPaC) website (https://ecos.fws.gov/ipac/). The "Review Species and Resources" report contains a list of federally listed threatened and endangered species, critical habitats, migratory birds, wildlife refuges, fish hatcheries, and/or wetlands located in the project footprint, and can help identify trust resources in the general area of the subject property.

Description of Projects Covered:

1. Any federally-insured loan or grant request for **existing** commercial, industrial, and residential structures (including multi-family and single-family housing), and various utilities projects (including, but not limited to, demolition, rehabilitation, renovations, and/or rebuilding of water and wastewater treatment facilities, water lines, sewer lines), provided:
    a. The proposed project can be completed **without** requiring additional clearing of **undeveloped** areas (e.g., native habitat, agricultural areas, pasture, etc.) beyond the original footprint of the existing project in order to complete the action request;
    b. The proposed project will not significantly alter the present capacity of an existing structure;
    c. There are no federally endangered or threatened species using the existing structures or within the project area; and
    d. The project is not within designated critical habitat for any federally listed species (by rule, designated critical habitat does not include already developed parcels).
    e. Specific Service field office requirements and exclusions are met for the state within which the project is located (Attachment A).

2. Any Federal loan transfer where the original lending or mortgage institutions for existing projects are no longer holding the loans and the properties are being transferred via federally-backed loans.

3. Any federally-insured loan or grant for the purchase of new equipment or vehicles.

Clearance to Proceed – The Service believes these types of activities will generally have no effect on species protected under the ESA, based on the criteria referenced above. Therefore, for ALL projects that meet the criteria described above, NO further coordination with the Service is necessary. Use this letter to document your consideration of endangered species and bald eagles.

Additional Considerations for non-federally listed species:

Bald Eagles: If any of the above-referenced activities (rehabilitation, demolition, or rebuilding) are proposed to occur within 660 feet of an active or alternate bald eagle (*Haliaeetus leucocephalus*) nest during the nesting season (October 1 through May 15), we recommend the applicant or their designated agent coordinate with the agency responsible for managing wildlife

in their state. For additional information, please visit the Service's regional web page: https://www.fws.gov/service/3-200-71-eagle-take-associated-not-purpose-activity-incidental-take.

Migratory Birds: If any native birds are using the structures for nesting, actions should be taken to avoid disturbing adults, nests, eggs, or chicks as this could lead to a potential violation of the Migratory Bird Treaty Act. If nests are present or any birds are using the structures regularly for roosting purposes, we recommend the applicant or their designated agent coordinate with the Service's Field Office and visit the Service's Migratory Bird Program website at https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds for recommendations on how impacts can be avoided and minimized.

For projects that do not meet the criteria specified above, and/or meet any of the following conditions, please contact the appropriate Service office for additional assistance:

1. The project occurs within designated critical habitat;
2. The project involves new construction;
3. The project requires disturbance of undeveloped areas; and
4. The project is in close proximity to federally listed species, bald eagle nests, and/or migratory bird roosts.

Reinitiation of consultation may be necessary if: (1) the project is modified in a manner not considered by this assessment; (2) a new species is listed or critical habitat is determined that may be affected by the project; or (3) new information indicates that the project may affect listed species or critical habitat in a manner not previously considered.

If you have any questions or require further information, please contact one of our staff at 706-613-9493.

Sincerely,

CATHERINE PHILLIPS

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Date: 2021.04.26 08:45:44 -04'00'

Catherine T. Phillips, Ph.D.
Assistant Regional Director, Ecological Services
South-Atlantic Gulf and Mississippi Basin Interior Regions

ATTACHMENT A

Participating Service Field Offices

This clearance letter applies to the following field offices, with additional applicable exclusions or restrictions as noted.

Alabama Ecological Services Field Office

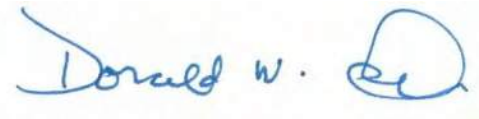
This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above. There are no additional applicable exclusions or restrictions.

William J. Pearson
Field Supervisor

Georgia Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above, with the exception of the following exclusions and/or restrictions:

- If the project is located within 5 miles of a documented observation of eastern indigo snake (*Drymarchon couperi*) or is located within highly suitable habitat, the project may proceed with the following conditions:
    - The proposed action can be completed without requiring additional clearing of undeveloped areas (e.g., native habitat, agricultural areas, pasture, etc.) beyond the original footprint of the existing project in order to complete the action request
    - Best Management Practices (BMPs) are included as part of the action. A list of specific BMPs and associated outreach signage may be found on the field office's website at https://www.fws.gov/story/eastern-indigo-snake-conservation, which primarily includes posting informational material about this species and checking for presence during construction.



Donald W. Imm, Ph.D.
Field Supervisor

Kentucky Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above, with the exception of the following exclusions and/ or restrictions:

- Some federally listed plants are regularly found within or near rights-of-way and the consequences of a proposed action may be negative or positive depending on how the species responds to disturbance, if at all. Therefore, if the species list for your project contains any of the following plants, further coordination with the Service is necessary:

    - Short's goldenrod (*Solidago shortii)*
    - Price's potato-bean (*Apios priceana*)
    - Kentucky glade cress (*Leavenworthia exigua* var. *laciniata*)

VIRGIL ANDREWS Digitally signed by VIRGIL ANDREWS
Date: 2022.08.03 09:46:28 -04'00'

Virgil Lee Andrews, Jr.
Field Supervisor

Mississippi Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above. There are no additional applicable exclusions or restrictions.

Stephen Ricks
Stephen Ricks
Field Supervisor

Raleigh Ecological Services Field Office (North Carolina)

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above. There are no additional applicable exclusions or restrictions.

Pete Benjamin
Field Supervisor

South Carolina Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above, with the exception of the following consideration for northern long-eared bat (*Myotis septentrionalis*):

The Service issued a nationwide programmatic biological opinion (PBO) for the northern longeared bat (Myotis septentrionalis, NLEB) on January 5, 2016. The PBO was issued pursuant to section 7(a)(2) of the ESA to address impacts that Federal actions may have on this species. In addition, the Service published a final 4(d) rule on January 14, 2016, which details special consultation provisions for Federal actions that may affect the NLEB. Briefly, the PBO and the 4(d) rule allow for "incidental" take of the NLEB throughout its range under certain conditions. Take is defined in section 3 of the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Further, incidental take is defined as take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Under the PBO and 4(d) rule, all incidental take of the NLEB is exempted from the ESA's take prohibitions under certain conditions. However, incidental take is prohibited within one quarter mile from known hibemacula and winter roost, or within 150 feet from a known maternity roost tree during the months of June and July.

In consideration of known hibemacula, winter roosts, and maternity roost tree locations in South Carolina, this letter hereby offers blanket concurrence for a may affect, but is not likely to adversely affect determination for the NLEB if the proposed work occurs more than one quarter mile from known hibemacula, winter roosts, or is further than 150 feet from a known maternity roost trees. If an activity falls within one-quarter mile of hibemacula or winter roost or within 150 feet of a maternity roost tree additional consultation with the Service will be required. As a conservation measure for all projects it is recommended that all tree clearing activities be conducted during the NLEB inactive season of November 15th to March 31st of any given year.

Thomas D. McCoy

Tom McCoy
Field Supervisor

Tennessee Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above, with the exception of the following exclusions and/or restrictions:

Some federally listed plants are regularly found within or near rights-of-way and the consequences of a proposed action may be negative or positive depending on how the species responds to disturbance, if at all. Therefore, if the species list for your project contains any of the following plants, and your project would disturb undeveloped areas (e.g., native habitat, agricultural areas, pasture, etc.) within rights-of-way, further coordination with the Service is necessary:

- Large-flowered skullcap (*Scutellaria montana*)
- Leafy prairie-clover (*Dalea foliosa*)
- Morefield's leather flower (Clematis morefieldii)
- Price's potato-bean (*Apios priceana*)
- Pyne's ground-plum (*Astragalus bibullatus*)
- Short's bladderpod (*Physaria globosa*)
- Spring Creek bladderpod (*Lesquerella perforata*)
- Tennessee yellow-eyed grass (*Xyris tennesseensis*)
- White fringeless orchid (*Platanthera integrilabia*)
- Whorled sunflower (*Helianthus annuus*)

DANIEL ELBERT
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Date: 2021.04.30 15:43:41 -05'00'

Daniel Elbert
Field Supervisor

Asheville Ecological Services Field Office

This clearance letter is applicable for all projects within the jurisdiction of this field office that meet the criteria as described above, with the exception of the following exclusions and/ or restrictions:

- Some federally listed plants are regularly found within or near rights-of-way and the consequences of a proposed action may be negative or positive depending on how the species responds to disturbance, if at all. Therefore, if the species list for your project contains any of the following plants, further coordination with the U.S. Fish and Wildlife Service (Service) is necessary:
    - Michaux's sumac (*Rhus michauxii)*
    - Schweinitz's sunflower (*Helianthus schweinitzii*)
    - Smooth coneflower (*Echinacea laevigata*)

- If your project includes work in wetlands, further coordination with the Service is necessary
- Please notify the Service and the North Carolina Wildlife Resources Commission if bats are discovered during work on buildings.

JANET MIZZI

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Date: 2023.02.24 09:08:37 -05'00'

Janet Mizzi
Field Supervisor

APPENDIX D

CULTURAL RESOURCE ASSESSMENT REPORT AND ALABAMA HISTORICAL COMMISSION COORDINATION

Phase I Cultural Resource Assessment for the
Frederick P. Whiddon College of Medicine Building,
University of South Alabama Campus,
Mobile, Alabama

Philip J. Carr, PhD, Principal Investigator, Director
Center for Archaeological Studies
University of South Alabama

Center for Archaeological Studies
University of South Alabama
Mobile, AL 36688-0002

06-20-2023
2023.002

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COVER: The cover photo shows a painted rock on the ground surface in the project tract at the time of the survey. Such rocks, painted and placed by students with encouraging messages, dot the current USA campus landscape.

Acknowledgements

The University of South Alabama Center for Archaeological Studies (USACAS) and McNair Historic Preservation would like to thank the following individuals for their hard-work, research, and kindness throughout the course of this project. We acknowledge Alisha Palmer and Chelsea Cook (staff archaeologists), as well as Savana Jackson (student), for their prompt and enthusiastic work in the field and lab. Additional thanks to Sarah Mattics (staff archaeologist) for her artifact photos and exact knowledge of source locations. Special thanks to Trent Davis (USA Assistant Director, Engineering, Design, and Construction), Elizabeth Hall (USA Interior Designer, Space and Facilities Planning), Vincent D. Walker (USA Coordinator, Space & Facilities Planning), Chris West (USA Project Manager), and staff at The Doy Leale McCall Rare Book and Manuscript Library for providing materials and insights related to the proposed project and the Alpha Hall Complex.

Chapter 1. Frederick P. Whiddon College of Medicine Building Project Tract

Introduction

The University of South Alabama (USA) Assistant Vice President, Mr. Buckley Kelley, Facilities and Construction, requested a Phase I cultural resources assessment for the construction of the Frederick P. Whiddon College of Medicine Building, Mobile, Alabama (Figure 1), as required by the lead federal agency, the National Institute of Standards and Technology, United States Department of Commerce, in compliance with the National Historic Preservation Act. Specifically, the project tract includes the Alpha Hall East and Alpha Hall South Buildings (Alpha Complex) and immediate surrounding area measuring approximately 1.5 hectares (3.7 acres). The location of the project tract is shown on the USGS 7.5' Springhill quadrangle at Township 4 South, Range 2 West, in the southeast quarter of the northeast quarter of Section 16 (Figure 2). Supporting evidence for these investigations are found in appendices (Appendix A – Appendix J). USA Engineering, Design, and Construction conducted an internal study of possible tracts for the Frederick P. Whiddon College of Medicine Building, and the current project tract was identified as the only location that met the required engineering, logistical, and economic considerations (personal communication, Trent Davis, USA Assistant Director, Engineering, Design, and Construction; see letter in Appendix J).

These investigations were conducted in compliance with Alabama Historical Commission (AHC) and National Park Service (NPS) guidelines for evaluation of any significant sites, structures, or resources in terms of the following criteria for potential eligibility for nomination to the National Register of Historic Places (NRHP; NPS 2011):

Criterion A: A property is associated with a specific event in American prehistory or history, or pattern of events that make a significant contribution to the development of a community, a state, or the nation;

Criterion B: A property is associated with a significant individual within a historical context;

Criterion C: A property is significant for its physical design or construction, including distinctive architectural characteristics of type, period, or method of construction; and,

Criterion D: A property has yielded, or has the potential to yield, information important to prehistory or history.

Archaeological fieldwork was conducted by USACAS staff archaeologists Alisha Palmer, Chelsea Cook, and Jeremy Pruit along with undergraduate student Savana Jackson under the direction of Dr. Philip Carr, principal investigator, on April 5th, 2023. A pedestrian walkover and excavation of a total of 11 shovel tests during field work resulted in the identification of no new archaeological sites and no recovery of artifacts 50 years old or older.

An architectural survey was conducted by McNair Historic Preservation's Meri Beth Slaughter, Senior Associate, under the direction of Dr. Stephen McNair, Senior Consultant and Owner. This survey consisted of archival research, architectural materials surveys, photographic surveys, narrative history, and documentation of potentially historic resources. The results of the analysis are found in Chapter 3 of this document.

Figure 1. Frederick P. Whiddon College of Medicine: *Coming Soon!*.

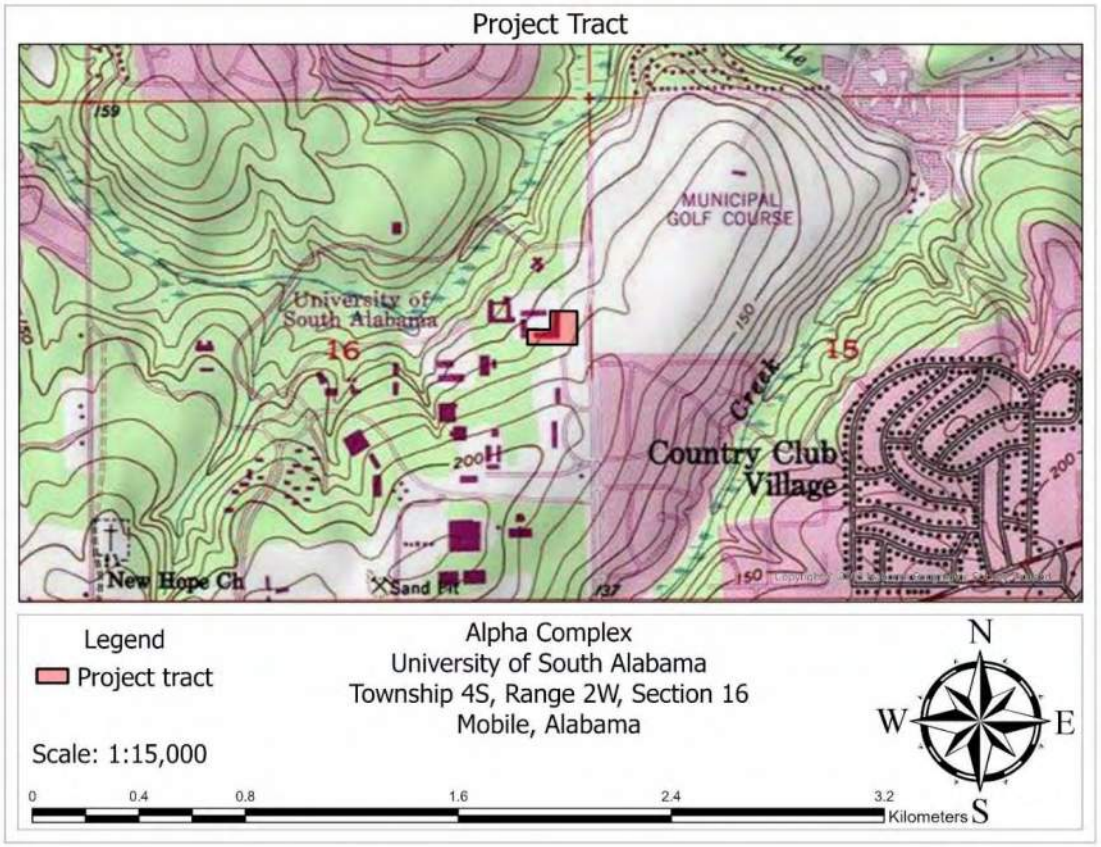

Figure 2. The location of the project tract as shown on the USGS 7.5' Springhill quadrangle at Township 4 South, Range 2 West, in the southeast quarter of the northeast quarter of Section 16.

Environmental Setting

The Alpha Complex is on the eastern edge of the main USA campus, which is located on the west side of the city of Mobile in Mobile County. The project tract is situated on a slight rise at about 170 feet above mean sea level south of Three Mile Creek, which lies approximately 0.4 km (0.25 miles) to the northwest. It is within an urban locale, surrounded by several parking lots, University Boulevard, and other university buildings, such as the Charles M. Baugh Biomedical Library, the Central Services Admin building, Visual Arts building, and the Medical Sciences building. A large portion of the project tract, where most of the archaeological field investigations occurred, lies between the Alpha Complex and University Boulevard amidst several cultivated pine trees and concrete seating areas. The landform slopes slightly down toward Three Mile Creek, except for the area immediately surrounding the Alpha Complex, which was cut and leveled as part of the original building construction (Figure 3).

The Three Mile Creek drainage system headwaters are near Cody Road in west Mobile, and it meanders to the east through the urban expansion of the city of Mobile, where it enters the Mobile River just north of the Alabama State Docks. Portions of the creek have been dammed to create retention ponds, such as the large lake in Municipal Park just east of USA campus. The Alpha Complex, as well as the USA campus, are located in the upland reaches of this creek drainage.

Soils at the Alpha Complex are classified as the Troup-Urban Land Complex (Hickman and Owens 1980: Sheet 70). Troup soils are well-drained with a typical stratigraphy consisting of a surface layer of dark grayish brown loamy sand from 0 to 4 inches, a subsurface horizon of yellowish-brown loamy sand to 15 inches, brownish yellow loamy sand to a depth of 44 inches, reddish yellow loamy sand to 69 inches, all above a red sandy loam (Hickman and Owens 1980:32).

University of South Alabama Historical Background

USA, founded by an Act passed by the Alabama Legislature in May 1963, celebrates the 60th anniversary of its founding this year. Since its inception, the USA campus has undergone significant growth in terms of the number of students it serves and the number of buildings on campus. The Campus Master Plan 2010 (USA 2010:8) describes the campus setting as:

> USA is located in Mobile, Alabama, approximately 140 miles east of New Orleans and 240 miles west of Tallahassee, Florida…The expansion of the city has traditionally occurred from east to west and the University of South Alabama was originally sited to take advantage of this pattern of growth. The main Campus is located approximately 9 miles west of the central business district on a 1,200-acre site, bounded by Old Shell Road on the south and University Boulevard on the east. The main Campus is within close proximity to the Mobile Regional Airport and the City's major interstate highways; I-65, providing access to the Campus from central and northern Alabama, and I-10, providing access from the Florida panhandle, and the Mississippi gulf coast. The main Campus is bordered primarily by single family residential neighborhoods, however, a mix of multi-family apartments available for student occupancy and light commercial

> structures characterize the south, Old Shell Road, boundary. The campus itself is relatively wooded, with native pine predominating. The terrain slopes gently to a watershed that bisects the north-central portion of the campus. While the eastern and southern sections of the campus are more developed, the northern and western sections are all relatively untouched. The heavily wooded area to the north has been dedicated for use by the Technology and Research Park, and the westernmost section, extending to Cody Road, has been reserved for future growth. In addition, another 120 acres have been made available to the University through the redevelopment of the eastern half of the Hillsdale neighborhood.

The Campus Master Plan 2010 (USA 2010:11) goes onto to chronicle the early history of the campus founding and development:

> The institution was initially housed in a single building on St. Louis Street in downtown Mobile. With an eye to the future expansion of enrollment and programs, the Mobile County Higher Education Foundation, with the support of the City of Mobile and the County of Mobile, purchased a large tract of "sixteenth section" land in the western suburban area of the city, and construction was begun on the first building – the present Frederick Palmer Whiddon Administration Building. This structure housed all of the fledgling institution's functions when the first 276 students were admitted in the summer of 1964. During the subsequent four years, construction was completed on the Instructional Laboratory Building (1966), a cafeteria and faculty office buildings (1966), the four-building Alpha Residence Hall Complex (1967), Engineering Building (1968), Health and Physical Education Facility (1968), and the University Library (1968). In 1968, the University received its initial accreditation by, and was admitted to membership in, the Southern Association of Colleges and Schools.

Today, the USA 1,200-acre campus includes new buildings and facilities, including the Hancock Whitney Stadium opened in 2020 as the home of the South Alabama football program. USA offers more than 100 undergraduate, graduate and doctoral programs through its 11 colleges and schools. The Campus Master Plan 2010 (USA 2010:22) states:

> The University is anchored by an administrative core located in the east/central section of the campus, adjacent to University Boulevard. This core is encircled on the north, west, and south by a horseshoe-shaped academic zone… that is extended to include University Commons. An area of athletic facilities abuts the academic zone to the south and runs along Old Shell Road from Jaguar Drive to Stadium Boulevard, and a small utility/maintenance zone attaches to the north. A large area of student housing that includes the Gamma, Beta, Delta, and Epsilon dorms, as well as the sorority and fraternity houses, is located immediately to the west of the academic zone.

Figure 3. Alpha Hall East northeast corner.

Archaeological Sites in the Vicinity

An electronic search of the Alabama State Site Files at the Office of Archaeological Research, Moundville Archaeological Park, revealed several other prehistoric and historic archaeological sites (1MB171, 1MB172, 1MB173, 1MB174, 1MB175, 1MB176, 1MB358, and 1MB360) on the USA campus located on terraces along Three Mile Creek, and within a one-mile radius of the Alpha Complex (Figure 4; Rushing and Spies 1978; Roberts and Carr 2002). Sites 1MB171, 1MB172, 1MB360, and 1MB358 are located on the south side of Three Mile Creek. Sites 1MB173-175 are located on the opposite or north side of the creek. The level of investigation at sites 1MB171-1MB175 was limited to surface collection, and sites 1MB176, 1MB358, and 1MB360 were identified during shovel test surveys.

Sites 1MB171-176 were all recorded during a 1978 cultural resources survey along Three Mile Creek (Rushing and Spies 1978). Site 1MB171 was reported to be located near a small building north of the Laboratory of Molecular Biology. Surface collections were conducted in 1978 during construction activity in this area of the USA campus (Rushing and Spies 1978:2). This artifact assemblage included 23 plain sand-tempered sherds, 51 Baytown Plain grog-tempered sherds, and decorated pottery, including a few examples of cord-marked, check-stamped, and incised sand-tempered sherds, one grog-tempered incised sherd, and one Bayou La Batre stamped sherd. The lithic artifact assemblage included one stemmed and serrated projectile point, one core, three flakes, a sandstone hammerstone, and 11 fragments of worked sandstone. Gray and white chert were identified. These ceramic and lithic artifacts were reportedly dated to the Early Woodland period, ca. 1500-500 BCE, although later Woodland components may also be present (Rushing and Spies 1978:4).

Site 1MB172 was recorded just south of the traffic circle, a short distance south of sites 1MB171 and 1MB360 near the center of the USA campus (Rushing and Spies 1978:5). Much of this site appears to have been destroyed during landscaping and road construction. Pottery was reportedly found in erosional areas in 1978, but not described in the survey report (Rushing and Spies 1978).

Sites 1MB173, 1MB174, and 1MB175 were recorded on the first terrace on the opposite or north side of Three Mile Creek during this 1978 survey. All three sites contained similar artifacts in type and amounts and were recorded as dating to the Early to Middle Formative period (Rushing and Spies 1978). Artifacts collected within an eroded dirt path at site 1MB173 included four sand-tempered sherds, nine Baytown Plain grog-tempered sherds, three of which are cord-marked, a Tallahatta sandstone biface fragment, three Tallahatta flakes, and three ground sandstone pieces. Surface collection from 1MB174 located about one-third mile upstream from 1MB173, included seven sand-tempered sherds, two of which are cord-marked, a Tallahatta sandstone flake scraper, three Tallahatta sandstone flakes, and six ground sandstone fragments. Artifacts from site 1MB175 were one check-stamped sand-tempered sherd, two incised sand-tempered sherds, a Tallahatta sandstone scraper, two quartz flakes, and four ground sandstone fragments.

Site 1MB176 was a small historic-period site located on the same terrace as prehistoric site 1MB175 along Three Mile Creek. In 1978, this site was reported as a scatter of early to mid-nineteenth-century artifacts with several earlier, colonial components (Rushing and Spies 1978:9-10). Artifacts collected in 1978 included ceramics, glass, and metal objects. The ceramics were reported as six sherds of white glazed earthenware, one pink and one blue transfer-printed ware, one

brown salt-glazed earthenware, and one Albany-slipped ware. Four fragments of olive-green bottle glass and a clear glass mug handle comprise the glass artifacts. Metal objects included a sideplate from a flintlock pistol, which was reported to pre-date 1750, two square machine-cut nails, an iron kettle fragment, and a door lock fragment. This site was later relocated during a Phase I survey using three 1-by-1-meter test units and additional shovel tests. Ceramics included undecorated whiteware sherds, molded and painted whiteware, and salt-glazed stoneware. Bottle glass included shards of clear, aqua, amethyst, amber, green, and milk glass. Structural materials included both machine-cut square nails and wire nails, U-shaped staples, and small brick fragments. Other materials included a piece of melted lead and other unidentified iron fragments. Artifacts were reported to date from the late nineteenth to early twentieth centuries. No colonial artifacts were recovered, and the curation location of the 1978 survey is unknown; thus, the site was considered not eligible for the NRHP (Gums 2004).

Site 1MB358 was recorded on the USA campus during a Phase I cultural resources survey in conjunction with a proposed shuttle transportation system through campus (Roberts and Carr 2002). Two quartz flakes, a single chert flake, a quartz pebble with evident flake removal, and unidentified calcined mammal bone were recovered from shovel tests. This site was considered ineligible for potential nomination to the NRHP (Roberts and Carr 2002:8)

Site 1MB360 was located in 2002 as part of a laboratory expansion project for the primate research facility on campus. A Phase I cultural resources survey led by USACAS uncovered a small scatter of ceramic and lithic artifacts (Seacat 2002). Artifacts included four ceramic sherds alongside a Citronelle gravel flake, and Phase II archaeological testing was recommended (Seacat 2002:6). Phase II investigations were then conducted under the direction of Dr. Gregory A. Waselkov, principal investigator, including 11 additional shovel tests and two 1-by-1-meter test units within the artifact scatter. Artifacts located during this Phase II survey included 38 Baytown Plain sherds, one of which was a jar rim, four cord-marked grog-tempered sherds, three sherdlets, two quartz flakes, and one complete Citronelle gravel flake. In June of 2022, USACAS entered an agreement with Poarch Band of Creek Indians (PBCI) to organize an introductory archaeological summer camp for tribal youth, allowing participants to witness and learn field and laboratory archaeological processes. USACAS and PBCI jointly relocated site 1MB360 for testing with four 1-by-1-meter test units. Uncovered artifacts were 11 Baytown Plain sherds, including three jar rims, and six sherdlets. These artifacts, along with the previous two investigations, reportedly dates the site to the Late Woodland period (CE 800-1100). Due to the small size of the artifact assemblage and lack of middens or intact features, site 1MB360 was recommended as not eligible for the NRHP, and further investigations at the site were unnecessary (Carr and Newberry 2022).

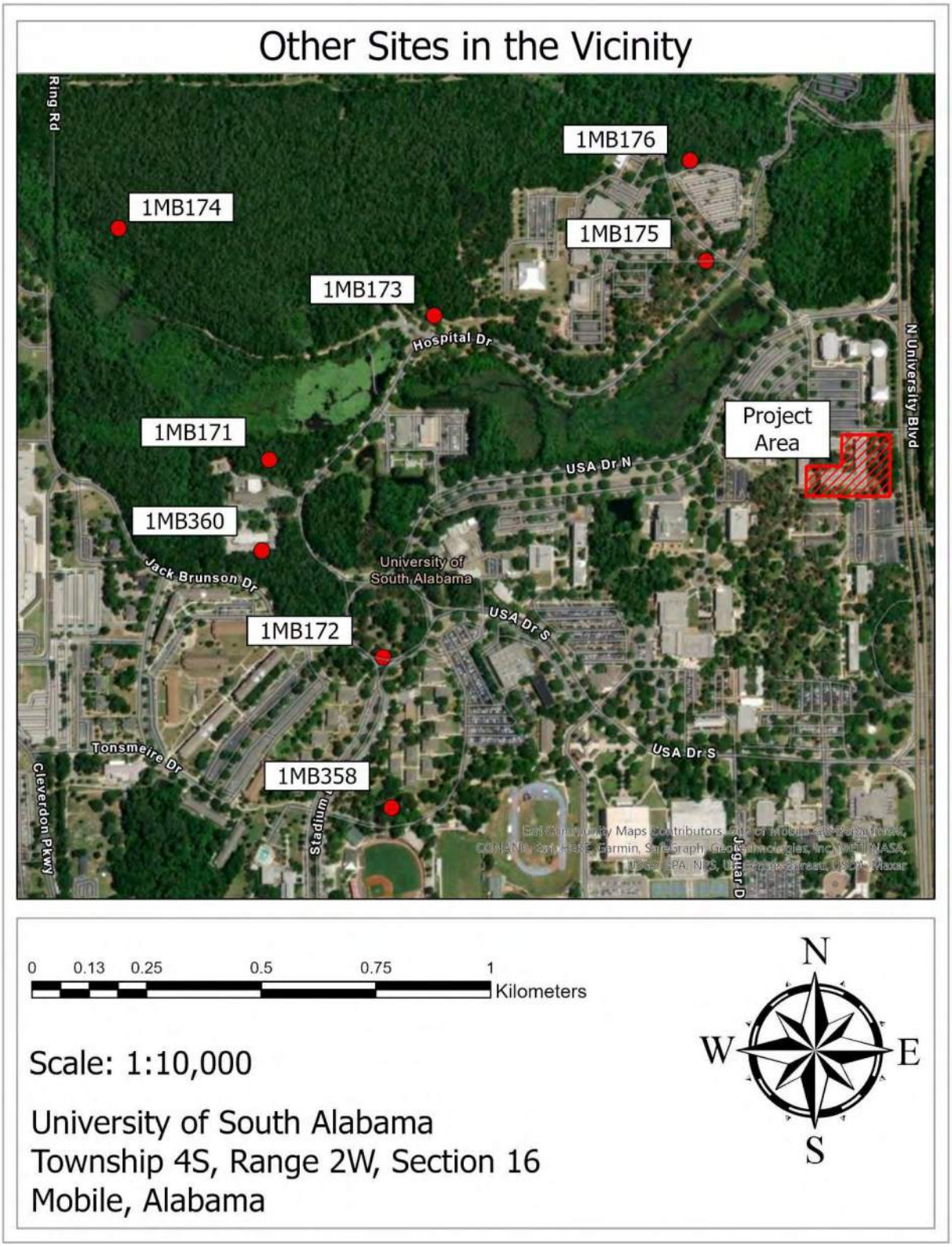

Figure 4. Archaeological sites in the vicinity.

Chapter 2. Archaeological Field Methods

During a preliminary reconnaissance of the project tract, a survey strategy was developed by principal investigator Dr. Philip Carr and archaeologist Jeremy Pruit in accordance with AHC guidelines, using 15 potential shovel tests along three transects and two judgmental tests. Transects 1 and 2 are located from south to north along the open, wooded area to the east of the Alpha Complex between these buildings and University Boulevard, with four shovel tests comprising each transect, and each shovel test spaced at 30-meter intervals. Transect 3 lies along the southern boundary of the project tract between the Alpha Complex and the Visual Arts building and provided for five shovel tests running from west to east at 30-meter intervals. The width of the project tract in this location only allowed for a narrow strip between the sidewalk of Alpha Hall South and the southern boundary of the project tract, which followed atop and along the slope where the landform was originally cut and leveled for the construction of the original Alpha Complex.

The inner courtyard area between the Alpha Hall buildings witnesses heavy human traffic and has significant below-ground disturbances, including numerous sidewalks, concrete benches, and especially utilities that include storm drains and light posts, as well as an exercise and staging area for the ROTC unit operating out of Alpha Hall South (including metal bleachers, pull-up bars, and other instruments of physical training; Figures 5 and 6). For this reason, only two shovel tests were placed in the courtyard: Judgmental 1 by the western exit to Alpha Hall South and Judgmental 2 in a relatively open space near the northwestern corner of Alpha Hall South between the building and the pull-up bars.

Several visible, above-ground utilities (electricity, water, and drains) were obvious near potential shovel test locations, thus necessitating the contact of utility services to identify buried utility locations (Figure 7). Several potential shovel test locations were indeed located directly atop utilities and were subsequently either offset to provide a minimum of a 1-meter buffer or were not excavated.

Fieldwork included pedestrian survey, which is a method used not only to assess whether visible artifacts are present, but also to determine to what extent a project tract has been altered by recent human activities. Such a survey also familiarizes the investigator with the project tract boundaries and layout. Reconnaissance involved noting trash and other human-related features throughout the terrain, as well as recognizing the boundaries of the project tracts using this visual inspection.

Shovel tests were excavated with a round-point shovel, and fill was screened through ¼-inch (6.35 mm) metal-mesh screen. Soil profiles were measured and recorded using the *Munsell Soil Color Charts* (1994). After recording the profiles, shovel tests were backfilled. Shovel tests were recorded with a Garmin GPSMap64 and input into ArcGIS to create the shovel test maps for this report.

Figure 5. ROTC exercise equipment in inner courtyard.

Figure 6. ROTC bleachers in inner courtyard.

Figure 7. Above ground utilities, marked utilities, and a potential shovel test location along Transect 3 facing east, Alpha Hall South shown in upper left.

Laboratory Methods

All material collected in the field was returned to the USACAS laboratory for washing and analysis. Artifacts were rough-sorted according to class, counted and weighed, then further analyzed by assignation to specific types when possible, following standard typologies for historic period artifacts. Any recovered 50 years old or older will be curated at the USACAS.

Chapter 3. Historic Architectural Survey and Results

The Alpha Hall Complex, located on the main campus of USA, in Mobile, Alabama, is potentially significant as it was the first dormitory complex built for the university. The buildings were not the first constructed on campus as part of the university, but they were designed for the first housing options for students. USA initially opened in 1964 as a day college with some night classes offered for the first two years. The Alpha Hall Complex consists of four buildings, Alpha Halls North, South, East, and West, all of which were built in 1966 and configured to create a central, rectangular courtyard (see Appendix A). The buildings are located on the east boundary of campus near N. University Boulevard and are set back from the road, creating a buffer of green space. The four Alpha Halls are identical and feature typical characteristics of mid-century architecture, including flat roofs, the decorative use of brick and concrete, and vertical shaft glazing systems. They are among many extant mid-century buildings on campus that have maintained their historic integrity and represent the early period of USA developing as a large public university. In total, there are thirty-two buildings that have been identified as buildings that potentially qualify as historic resources based on their pre-1973 construction and the NPS's standards (see Appendix B and Appendix C).

The bill establishing USA was enacted into law during a Special Session of the Alabama Legislature in June 1963. According to newspaper announcements, the school's purpose outlined in the bill was to provide general college courses, nurse and teacher training, and courses on the industrial sciences for potential students in the south Alabama area. At the time of publication, Governor George C. Wallace was beginning his search for Board of Trustees members for the new school.[1] The following February, USA announced that it would offer classes for freshmen to junior students from 8 am to 10 pm starting in June 1964. The school started with 13 faculty members, offering courses in the College of Arts and Sciences and the School of Nursing. At this time, it was announced in local newspapers that the first building on campus was near completion. It served as a combination classroom and administration building.[2] The four-story building was estimated to be a $1 million construction with funding from the Mobile County Foundation for Public Higher Education and funds from the Alabama Legislature. [3] The original drawings from the USA Planning and Engineering Department and documentation at the university's campus archive demonstrate that the building was designed by local mid-century

[1] Robert S. Edington, "Legislative Notes," *The Mobile Journal* (Mobile, AL), June 28, 1963.
[2] "Univ. of South Ala. Announces Program of Daily Classes. Makes Other Important Announcements," *The Mobile Journal* (Mobile, AL), February 7, 1964.
[3] "University of South Ala. Takes in Members for Charter Class," *The Mobile Journal* (Mobile, AL), June 5, 1964.

architectural firm Platt Roberts & Co with architect A. B. Benson and contractor J. F. Pate Construction Company. Platt Roberts, understudy A. B. Benson, were responsible for many prominent mid-century buildings in Mobile. Robert's work includes the ca. 1949 Seamen's Club Building and the ca. 1950 Waterman Building downtown. Additionally, Roberts is responsible for the mid-century additions to the UMS Wright Preparatory School, a local high school in midtown Mobile. The buff brick USA building, the Whiddon Administration Building, still sits on the eastern boundary of the campus, visible from N. University Boulevard. The building has a flat roof with exposed concrete capping. It has an overall rectangular massing, with full-height, aluminum, vertical shaft windows with exposed concrete casings symmetrically placed on the east and west elevations. There are three back entrances on the west façade and three on the side elevations, all of which feature glass and aluminum entries with flat roofed concrete overhangs above each door. The east elevation is the building's primary façade, which features a central entrance with a mid-century, flat-roofed, arched, three-bay covered entrance with flanking arched, flat-roofed, covered walkways leading to the glass and aluminum, primarily glazed ground floor façade with two side entrances. Above the entryway, the central bay of the building has painted concrete balconies on the second and third floors. This first building on campus is in excellent condition and has maintained its historic integrity as an example of the campus's earliest mid-century architecture. The first semester of classes on campus were held in the Whiddon Administration Building from June 8, 1964 to late August 1964.[4]

USA, the first state-supported institution of higher education to be opened in Alabama in 70 years, grew quickly.[5] While there was only one building on campus initially, the university owned a 160-acre tract of land surrounding the Whiddon Administration Building.[6] In January of 1965, the school announced plans for a new $1.1 million secondary classroom building. The five-story building, the Mathematical Sciences and Physics Building, offered an additional 50,000 sq ft of instructional space. The building originally contained classrooms, a study center, and an auditorium, as well as geology and engineering labs in the basement. Bond & Bond Architects of Montgomery, Alabama was responsible for the building's design.[7] The building is next to the Whiddon Administration building and is of similar architectural appearance. The exterior brick of the Mathematical Sciences and Physics Building is a combination of buff and red brick laid in a random running bond. It possesses the same overall rectangular massing as the school's first building, with a flat roof and concrete features. It has the same vertical, aluminum, glass, and concrete window configuration, as well as a central entrance on the western elevation. The entrance possesses a similar flat-roofed, arched, concrete, covered walkway on the ground floor, although it is without the second and third floor balconies present on the Whiddon Administration Building. The Mathematical Sciences and Physics Building is in excellent condition and still relays its original purpose as a classroom and instructional building for USA during its earliest years of operation. In 1965, USA predicted a near doubling in the enrollment

[4] "University of South Ala. Takes in Members for Charter Class," *The Mobile Journal* (Mobile, AL), June 5, 1964.
[5] "S. Alabama Opens with 750 Students," *The Birmingham Post-Herald* (Birmingham, AL) September 17, 1964.
[6] "New University Open," *The Mobile Journal* photograph caption (Mobile, AL), October 9, 1964.
[7] "Million Dollar Project Slated," The Selma Times Journal (Selma, AL), January 31, 1965.

of students for their second year of operation, so the addition of a secondary classroom building was a necessity in the face of this early growth.[8]

With the school's exponential growth, the decision was made to evolve the program from one for day students to accommodation of students on campus with the construction of dorms. Ground was first broken for the Alpha Hall dormitory complex in October 1965. The four building, three-story combination classroom and residence complex was slated to house 576 students (see Appendix D).[9] The four buildings added 125,164 square feet of facilities to campus, all fully air-conditioned. Local newspapers reported that in addition to dormitories and classrooms, the complex offered recreational spaces, likely referring to the complex's central courtyard. The buildings were described as having "buff faced brick in contemporary design…to conform to existing structures" (see Appendix E)[10]. The Alpha Halls' exteriors are largely unchanged since their initial construction (see Appendix A C, and G). The four main buildings are of identical design. They have rectangular massing, with flat roofs with exposed concrete capping. The ground floor and upper floors are delineated by a painted concrete band which wraps around all four buildings. The ground floor is flush with this band on some elevations, while on others it is recessed, creating a covered walkway which is supported by painted concrete pillars. These pillars are continuous around the ground floor of the building, alternating in appearance as standalone pillars or pilasters on the flush ground floor. On each building, the lower story is the mosaic of buff and red brick is seen on the Mathematical Sciences and Physics Building, while the two upper stories are buff brick only. The ground floors feature single-pane glass and aluminum full-height windows, some of which are paired, on the North, South, and West Alpha Halls. The East Alpha Hall windows are single pane, vinyl and of a smaller scale, indicating that they may have been altered at an unknown date. On different elevations of each building, the entrances feature a ground floor of primarily glazing, with single-pane glass and aluminum windows and storefront-style glass and aluminum entrances. The two upper stories feature vertical shaft windows with concrete casings, similar to those on the Whiddon Administration and Mathematical Sciences and Physics Buildings, but they also feature decorative, geometric, exposed concrete cut-outs above and below each window. On the northwest and southeast corners of the Alpha Complex are one-story, flat-roofed auxiliary buildings which connect the North and West and South and East Halls. The exteriors predominantly feature glass and aluminum, single-pane glazing that is anchored on each elevation by a central, exposed buff-brick projection. The buildings' facades are cased in painted concrete. The Alpha Halls are no longer used for dormitories, as they were later converted to classroom, administrative, or extra-curricular spaces. Despite their change in function, the exteriors are largely maintained, aside from the addition of elevator towers on each building ca. 2000. The Alpha Hall complex dormitories were open for occupation in the Fall of 1966.[11] They

[8] "University of South Alabama Announces Expansion Program," *The Abbeville Herald* (Abbeville, AL), February 18, 1965.
[9] "Ground Broken for College Dorm," *The Montgomery Advertiser* (Montgomery, AL), October 12, 1965.
[10] "Alabama University Begins $2 Million Building Program," *The Abbeville Herald* (Abbeville, AL), November 18, 1965.
[11] "Senator Sparkman Inspects Dorms," *Union Springs Herald* photograph caption, (Union Springs, AL), November 3, 1966.

remained dormitories until the 1990s, when the Biomedical Sciences Library, Continuing Education Offices, and Army ROTC program took residence in the buildings. The buildings were never returned to dormitories, although this change in function has not greatly altered their exterior character.

At the beginning of 1967, USA announced its most ambitious construction program since its conception in 1963. The $4 million project plan consisted of a three-story library and 96,500 square foot Physical Education building. Both buildings were estimated to be $2 million each and utilized Title III Federal Loans. Additionally, the university purchased 735 houses in a nearby subdivision, purportedly "for occupation by married students."[12] The Marx Library, opened for bids in February of 1967, with an estimated cost of $1.5 million, with details including concrete steel frame construction "with pre-cast stone exterior walls, marble-trimmed windows" and air conditioning.[13] The library was completed and occupied by the commencement of the Fall 1968 semester.[14] Original drawings of the building are signed by the Mobile architects Carl F. Burmeister and Harry Inge Johnstone. The Marx Library still maintains the stone and marble features today, although in 2003 the building was doubled in size with an addition on the north elevation of the building. The addition is of an incongruent style, with a façade of exposed concrete panels and blue tented glazing, with a north elevation of exclusively glazing. The physical education building is now the Health, Kinesiology, and Sport Building toward the south side of campus, between USA South Drive to the north and Old Shell Road to the south. The building has a north-south orientation and is divided into three sections, two one-story wings with a two-story in height middle connector. The exterior of the building features the characteristic exposed buff and red brick combination found on other early campus buildings. Additionally, the building features vertical shaft, glass, aluminum, and concrete windows on the north one-story wing. There are also decorative, vertical concrete castings on the taller, middle portion of the building. This building was also designed by Bond & Bond Architects of Montgomery.

In the Summer of 1968, USA was amid extensive expansion projects on campus. Aside from the Marx Library and Physical Education building, the school was constructing the College of Business and Management Studies Building, a Central Utilities Building[15], and restoring the historic Tuthill home which had been moved to campus to house part of the art department. In total, these efforts represented a $10 million investment into the growth of campus.[16] The Mitchell College of Business is still extant, and although it has been added onto, the additions were placed in relation to the original structure in such a way that the different construction phases are discernable. The ca. 1968 portion of the building is a split level, due to the site's topography, with an octagonal northern first floor above a square ground-floor base. The

[12] "U. of S. Alabama Gets OK on Building Funds," *The Birmingham Post-Herald* (Birmingham, AL), January 17, 1967.
[13] "Library Bids to be Taken," *The Birmingham Post-Herald* (Birmingham, AL) February 7, 1967.
[14] "New Library Planned at South Alabama," *The Montgomery Advertiser* (Montgomery, AL), August 18, 1968.
[15] Copies of the original drawings from the Engineering and Planning Department at USA demonstrate that the architect of the building was Carl F. Burmeister, with Hamlin-Dupree Engineers.
[16] "U. of S. A. Plans Big Expansion," *The Birmingham Post-Herald* (Birmingham, AL), July 4, 1968.

building is primarily exposed red brick and concrete, with prominent glass and aluminum glazing systems. The Central Utilities Building is also still present, and despite numerous additions to accommodate expanding equipment and campus needs, the original ca. 1968 building with red and buff brick is still among the complex. The Tuthill Home is also still on campus, among a group of three historically significant buildings which were relocated on to the USA campus from ca. 1968 to ca. 2003.

Simultaneously, USA announced their next round of construction projects to follow the Summer of 1968. The next, $7 million expansion plan included the construction of a $3 million Life Sciences Building, a $2 million combination bookstore, cafeteria, and post office building, and a $2 million Student Union building, all of which are still extant. By this time, USA had 3,500 students enrolled in its numerous programs.[17] The Life Sciences Building and Auditorium are toward the north edge of campus, in between the Marx Library and the Alpha Hall dormitory complex. The buff brick main building is similar in design to the initial buildings on campus, as the three-story building features vertical shaft windows with concrete casings that rise the full height of the building. The building features a flat roof with concrete capping and exposed red and buff bricks. There is an exposed concrete band that appears to be a water table on the building's south and side elevations but is the principal exterior material on the building's north basement elevation created by the sloping of the site. There is an entrance on the southern elevation with a glass and aluminum entryway with a thick, painted concrete overhang. Additionally, the northern elevation features an offset, exterior stairway of painted concrete construction, with a solid painted concrete core with two flanking concrete and painted metal railing stairways to an entrance on the ground floor that features the same thick, painted concrete overhang that is seen on the north elevation. The east elevation of the main building features a blocky, painted concrete covered walkway with "Life Sciences" attached to the north elevation. This walkway connects the main building and the Life Sciences auditorium; a one-story, flat-roofed, exposed buff and red brick building with no windows, although the brick is laid with rhythmic vertical brick insets that mimic the vertical shaft windows on the main building.

The USA Bookstore and Student Center (previously Student Union) buildings are also still extant, in the middle of campus along USA Drive South. The USA Bookstore building has an east-west orientation, although it faces south and is connected to the Student Center on its west elevation. The Student Center has a north-south orientation, with entrances on the south, east, and north elevations. The ca. 2006 Meisler Hall administration building sits to the southeast of the bookstore and helps to create a complex with a central courtyard space to the rear/north of the bookstore. The south elevations of the bookstore and Student Center Buildings were heavily altered in the 2010s to modernize the main entrances. The percentage of altered exterior of the bookstore is substantial enough to jeopardize its historic significance; however, the larger massing of the Student Center results in the continued feeling and association of the original ca. late 1960s design. While the south elevations convey ca. 2010s higher education architectural design, the elevations which face the interior courtyard and the north and west elevations of the Student Center still largely reflect the campus's mid-century style. They feature exposed red

[17] "U. of S. A. Plans Big Expansion," *The Birmingham Post-Herald* (Birmingham, AL), July 4, 1968.

brick exteriors with concrete cornice below a flat roof, which has cast concrete, decorative square motifs. The upper story of the Student Center features vertical single-pane glass and aluminum rows of windows which are reminiscent of the vertical shaft windows of the campus's earliest buildings. There are multiple exterior stairways on the Student Center building, which project from the east and west elevations and consists of landings with flanking half-turn, open air steps constructed of concrete with repetitive stylistic square motifs. The stairways are two-story in height, with concrete, flat-roofed overhangs supported by square concrete pillars. There are square cutouts within the ceiling of the overhangs. The upper stories of the stairways are largely enclosed by glass and aluminum glazing systems, with a covered walkaround. The lower stories are open-air.

Additional buildings that have been identified by the university as pre-dating 1973 include: the ca. 1966 Faculty Court set of two buildings[18], ca. 1966 Dining Hall[19] (now the University Counseling and Testing Center), ca. 1966-1969 three Archaeology Lab buildings, ca. 1968 Athletics Annex, ca. 1969 Facilities Warehouse Building, ca. 1972-1974 Humanities Building, and ca. 1973-1974 Medical Sciences Building. These listed buildings are all extant as well, and each contain elements of the USA campus's original mid-century academic architectural style and association. They are largely one to three stories in height and feature the distinctive buff or red brick found on the earlier buildings. They are flat-roofed structures, with minimal design elements cast in concrete. The Faculty Court Buildings and Medical Sciences Building feature characteristic vertical windows on upper stories, with concrete casings and features (see Appendix C).

Thirty-two buildings on campus of USA have been identified as pre-1973 structures with the potential to qualify as historic resources based on the NRHP criteria, as defined by the AHC and NPS. Of these thirty-two resources, three are likely to be historically significant in their own right and could potentially qualify to be individually listed on the NRHP outside of the context of the USA campus (see Appendix B and C). These three buildings are 19th century buildings which were relocated to campus and rehabilitated for university use (the Tuthill House, Seamen's Bethel, and Toulmin House).

[18] Copies of the original drawings from the Engineering and Planning Department at USA demonstrate that the architect of the buildings was Bond & Bond Architects

[19] Copies of the original drawings from the Engineering and Planning Department at USA demonstrate that the architect of the building was A. B. Benson & Co. Architects

Of the potential historically contributing resources that have been identified, only five have been altered to the extent that their historic integrity and character may have been compromised to the point of being non-contributing resources. The majority of alterations to buildings on campus have been applied to their interiors to accommodate changes in use, apart from the five identified as "altered" on the provided map (see Appendix B & C).

Excluding the five aforementioned compromised structures, the remaining historic resources on campus of USA can be considered significant under Criterion A for Education and Criterion C for Architecture. As defined by the NPS, Criterion A applies to those historic resources that "are associated with events that have made a significant contribution to the broad patterns of our history" and Criterion C applies to structures and buildings that "embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction." USA is significant as the first state-supported public university in Alabama in the 20th century; as such, its earliest campus buildings are decidedly mid-century in style, which is a deviation from other Alabama universities' founding architectural styles. Additionally, most of the earliest buildings on campus were designed by a handful of prominent, local mid-century architects from the Mobile area.

The four-building Alpha Hall Complex is recommended as eligible for listing to the National Register of Historic Places (State and Local) because the structures demonstrate a high level of architectural integrity as a singly conceived three story residential complex interconnected by extant flat roofed auxiliary buildings. The complex's significance under Criterion A derives from signifying USA's initial phase of development and rapid growth into a residential University. They are also significant under Criterion C for the work of a recognized Master Architect 20th Century Alabama, John Platt Roberts in conjunction with A. B. Benson, one of his protégés. Platt is recognized today in Mobile, AL as one of the very few active and influential architects espousing a decidedly Modern aesthetic in the deep south of the late 20th century.

Chapter 4. Archaeological Survey and Results

USACAS staff members Alisha Palmer, Chelsea Cook, and Jeremy Pruit, along with undergraduate student Savana Jackson, excavated a total of 11 shovel tests within the project tract (Figure 8) and conducted a pedestrian survey (Figure 9). Typically, soil stratigraphy in Transects 1 and 2 took on one of two characteristic soil patterns. On the southern end, shovel tests were typically 40 centimeters deep and consisted of a dark grey to very dark grey (7.5YR 4/1 to 3/1) sandy clay fill layer between 17 and 26 centimeters thick, overlying dark brown (7.5YR 3/2) sandy loam between roughly 20 and 30 centimeters in depth, followed by a brown (7.5YR 5/4) clay loam subsoil (Figure 10). This fill was likely brought in as part of the construction of the Visual Arts Building parking lot immediately to the south, perhaps evidenced by the car battery terminal located in Transect 2, Shovel Test 1 (Figure 11). Shovel tests on the northern end of these transects consisted of a humus layer roughly 10 centimeters in depth, overlying a brown (7.5YR 5/4) sandy clay or clay loam mottled with strong brown (7.5YR 5/6) clay subsoil. Transect 3 was a heavily disturbed soil mottle of brown (7.5YR 4/3 and 5/4) sandy clay top between the surface and 13 centimeters of depth, overlying a mottled brown and very dark brown (7.5YR 5/4 and 3/3) subsoil. The location of Transect 3 running along the southern slope of the Alpha Hall leveling cut, as well as the prevalence of many different underground utilities, accounts for its extremely disturbed nature and lack of artifactual material, aside from a rusted safety pin and glass shard from Transect 3, Shovel Test 3. Judgmental 1 in the western courtyard between Alpha Hall South and the Central Services Admin building featured five stratigraphical layers. A dark grey (7.5YR 4/1) sandy loam 9 centimeters in depth, atop a strong brown (7.5YR 5/6) loamy sand between 9 and 14 centimeters in depth, overlying a brown (7.5YR 4/3) sandy loam between 14 and 22 centimeters in depth, atop a very dark grey (7.5YR 3/1) sandy clay between 22 and 28 centimeters in depth, covering finally a brown (7.5YR 5/4) sandy clay subsoil (Figure 12). The stratigraphy in Judgmental 1 was well-defined. This is attributed to the nature of the western courtyard's construction. The ground of Alpha Hall South and its western entrance lies slightly higher, approximately one meter, than the ground of the Central Services Admin building. Thus, the western courtyard area appears to have been leveled and then raised in a slight slope upwards again toward the western entrance of Alpha Hall South using several layers of fill.

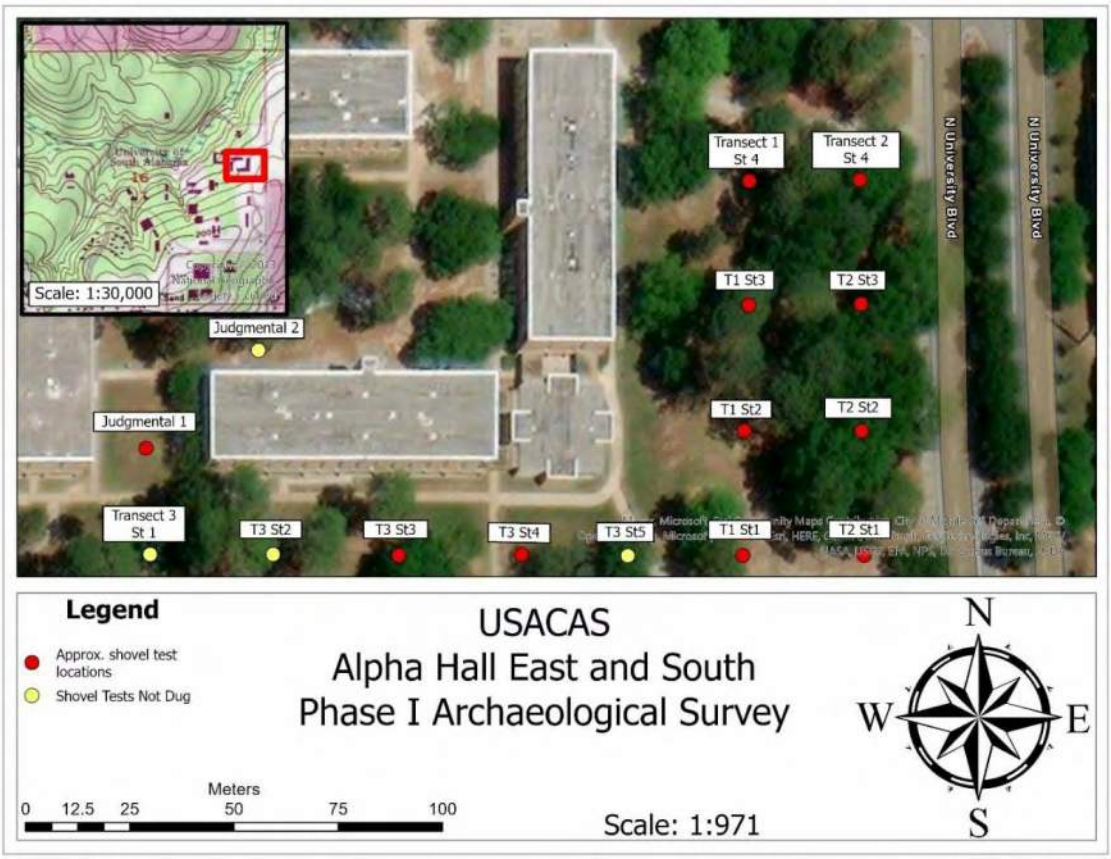

Figure 8. Shovel test locations.

Figure 9. (Left to right) Chelsea Cook, Savana Jackson, and Alisha Palmer conduct a pedestrian survey along Transects 1 and 2 from south to north.

Figure 10. Transect 1 Shovel Test 3.

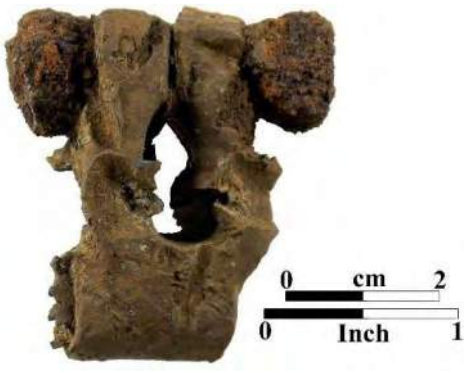

Figure 11. Car battery terminal from Transect 2, Shovel Test 1 (Shown actual size).

Figure 12. Judgmental 1.

Artifacts

Of the 11 total shovel tests excavated in the area surrounding the Alpha Complex, six produced cultural material, and additional cultural material was recovered during pedestrian survey (Table 1). This collection of artifacts pointed to heavy use in recent years as an activity area, construction zone, and parking lot. Shovel tests produced 24 whole or fragmented rangia clam shells, two gulf oyster shell fragments, four fragments of bottle or container glass (aqua, soda green, and clear), one car battery terminal (see Figure 11), one rusted-metal safety pin, five pieces of unidentifiable round metal, and a piece of unidentifiable hard plastic. The surface collection consisted of a greater number of artifacts: several pieces of rusted metal, including nine round metal nails, one of which was bent, a square bolt, one metal nut, one U-shaped metal staple, one flat metal piece with a machine-cut hole, and four other pieces of unidentifiable metal (Figure 13), 90 glass fragments of several types (amber, aqua including a rim piece, soda green, green, and clear bottle glass including several rim and base pieces), along with a small scattering of clear window glass (Figure 14). Four ceramic tiles (Figure 15) were recovered and identified as being identical to those present in the Alpha Hall restrooms as well as a fragment of sewer piping. Fifteen whole or fragmented rangia clam and gulf oyster shells were collected. Lithic material included nine pieces of stone used as "road gravel," some of which were broken/chipped by mechanical collection, transport, and/or dumping. Other miscellaneous materials included four pennies and a dime dating between 1967 and 2012 (Figure 16), a black marble (Figure 17), and a Top Flite brand golf ball. Three artifacts were recorded but not collected, including a piece of asbestos and two painted stones with inspirational messages. One reads "Kindness is your superpower" and the other "Shine" atop a sun motif. These stones were thoughtfully relocated outside of the project tract (Figure 18). In total, 188 artifacts were collected.

Table 1. Frederick P. Whiddon College of Medicine Building project tract artifact inventory.

Provenience	Description	Count	Weight (g)
Transect 1, Shovel Test 1	Rangia clam shell, whole	**7**	**7.96**
	Rangia clam shell, fragment	**17**	**0.12**
Transect 1, Shovel Test 2	Aqua bottle glass, shard	**1**	**0.36**
	UID hard plastic	**1**	**3.68**
Transect 2, Shovel Test 1	Car battery terminal	**1**	**113.30**
	Gulf oyster shell, fragment	**2**	**4.41**
Transect 2, Shovel Test 2	Soda green bottle glass, shard	**2**	**5.36**
Transect 3, Shovel Test 3	Metal safety pin	**1**	**1.41**
	Clear bottle glass, shard	**1**	**0.25**
Judgemental 1	UID round metal	**5**	**5.03**
Courtyard Surface Collection	Round metal nail	**1**	**17.96**
	UID round metal	**1**	**4.78**
	Penny, 1967	**1**	**2.92**
	Amber bottle glass, shard	**3**	**2.92**

	Aqua bottle glass, rim	**1**	**2.97**
	Aqua bottle glass, shard	**3**	**11.20**
	Soda green bottle glass, shard	**8**	**2.25**
	Green bottle glass, rim	**1**	**0.46**
	Clear bottle glass, base	**2**	**4.91**
	Clear bottle glass, shard	**19**	**11.02**
	Clear window glass, shard	**4**	**3.41**
	Ceramic bathroom tile, brown	**2**	**12.97**
	Ceramic bathroom tile, white	**2**	**9.58**
	Asbestos	**1**	**-**
	Rangia clam shell, whole	**1**	**2.38**
	Gulf oyster shell, fragment	**1**	**2.34**
	Road gravel	**2**	**3.54**
Transects Surface Collection	Round metal nail	**7**	**80.27**
	Square metal bolt	**1**	**129.08**
	Bent round metal nail	**1**	**15.28**
	Metal nut	**1**	**24.10**
	Flat metal with hole	**1**	**46.49**
	U-shaped metal staple	**1**	**14.55**
	UID flat metal	**3**	**55.07**
	Penny, 1970	**1**	**3.00**
	Penny, 197-	**1**	**3.00**
	Penny, 1982	**1**	**3.00**
	Penny, 2012	**1**	**2.20**
	Dime, 197-	**1**	**2.20**
	Amber bottle glass, shard	**8**	**11.69**
	Aqua bottle glass, shard	**1**	**0.69**
	Soda green bottle glass, shard	**4**	**9.80**
	Clear bottle glass, rim	**3**	**12.44**
	Clear bottle glass, base	**1**	**17.05**
	Clear bottle glass, textured	**2**	**7.51**
	Clear bottle glass, shard	**29**	**69.9**
	Clear window glass, shard	**1**	**0.62**
	Ceramic bathroom tile	**2**	**9.60**
	Ceramic sewer pipe	**1**	**367.32**
	Aluminum can lid	**1**	**0.85**
	Top Flite golf ball	**1**	**45.72**
	Black marble	**1**	**4.93**
	Rangia clam shell, whole	**9**	**29.25**
	Rangia clam shell, fragment	**1**	**1.41**
	Oyster shell, fragment	**3**	**4.41**
	Road Gravel	**7**	**16.16**
	Painted Stones	**2**	**-**

Figure 13. Sample of surface collected metal artifacts (Shown actual size).

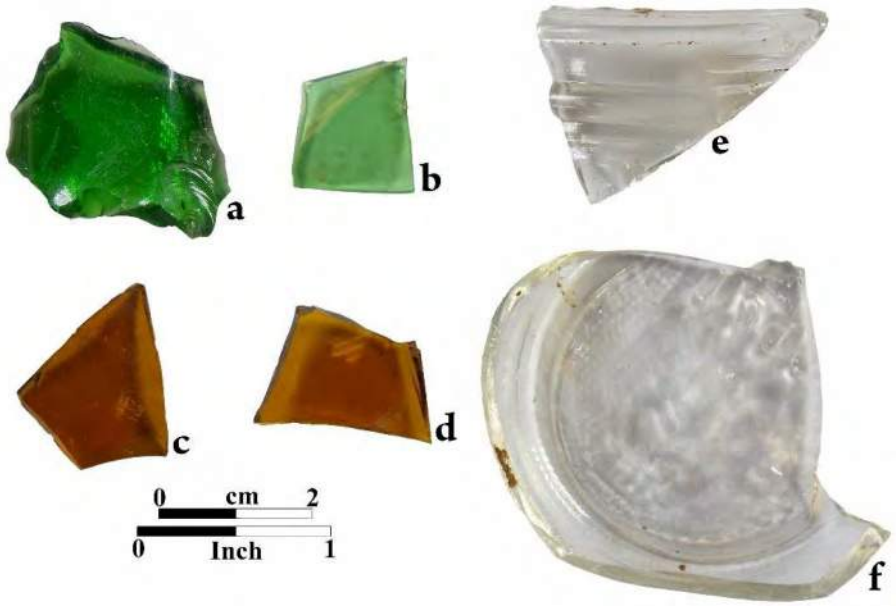

Figure 14. Sample of surface collected glass artifacts (Shown actual size).

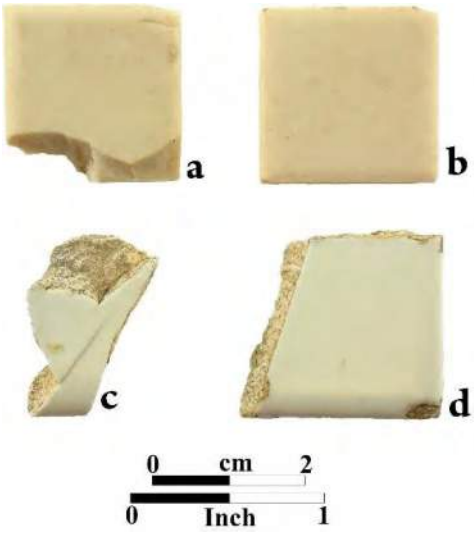

Figure 15. Surface collected bathroom tiles (Shown actual size).

Figure 16. Surface collected coins (Shown actual size).

Figure 17. Surface collected black marble (Shown actual size).

Figure 18. Surface find moved outside project tract.

Chapter 5. Summary and Recommendations

In sum, a Phase I cultural resources survey of the Alpha Complex, including completion of Alabama Historical Commission Building Survey Forms (Appendix I), was conducted for USA. In the absence of any significant archaeological recovery or intact middens or features from the project tract, no further archaeological investigation or mitigation is recommended.

The four-building Alpha Hall Complex is recommended as eligible for listing to the National Register of Historic Places (State and/or Local) because, as noted in Chapter 3, the structures all demonstrate a high level of architectural integrity as a singly conceived three story residential complex interconnected by extant flat roofed auxiliary buildings. The complex's significance under Criterion A derives from signifying USA's initial phase of development and rapid growth into a residential University. They are also significant under Criterion C for the work of a recognized Master Architect 20th Century Alabama, John Platt Roberts in conjunction with A. B. Benson, one of his protégés. Platt is recognized today in Mobile, AL as one of the very few active and influential architects espousing a decidedly Modern aesthetic in the deep south of the late 20th century.

The client should provide the appropriate local, state, and federal agencies with copies of this report, if required for permit applications.

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Appendix A


Buildings outlined in blue are proposed for demolition
Medical Sciences Bldg
Charles M. Baugh Biomedical Library
Alpha Hall South
Alpha East Extension
N University Blvd
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ALPHA HALL EAST


ALPHA HALL EAST


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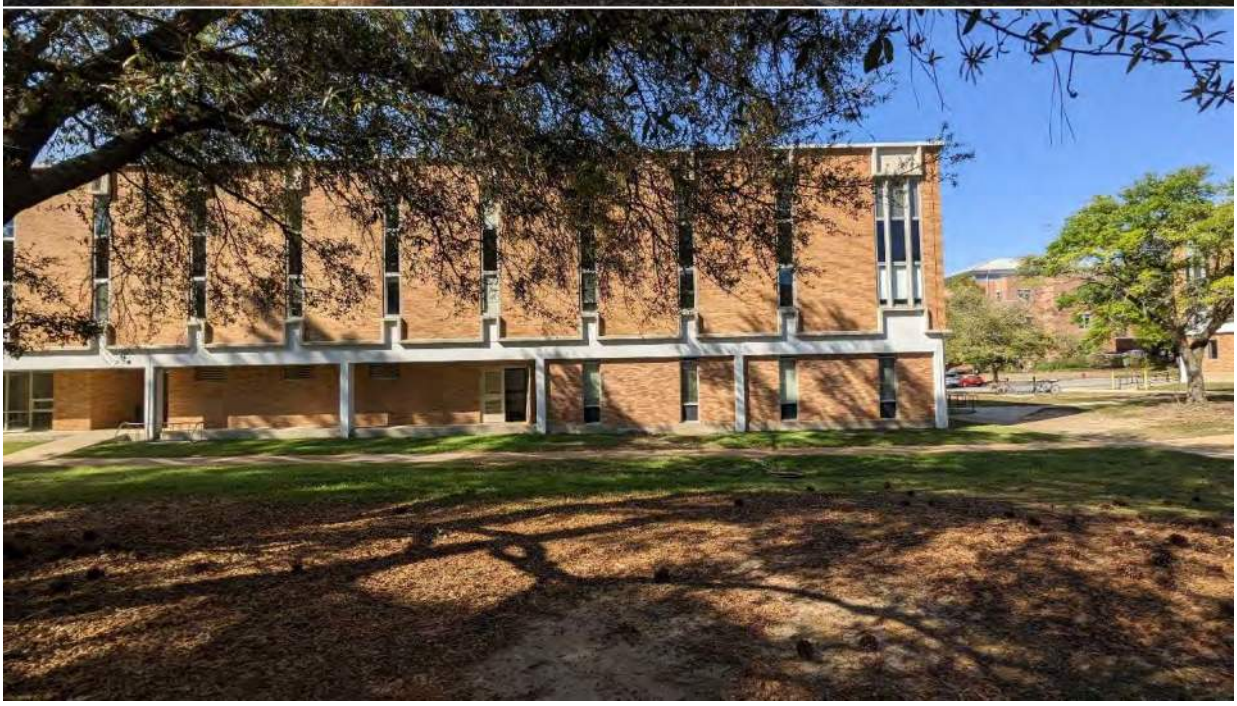
Y ROTC




SOUTH HALL

Appendix B

Historic Buildings Map Inventory

ABBREV	NAME
AA	Athletic Annex
AD	Frederick Palmer Whiddon Administration
ALC	Active Learning Center
AEE	Alpha Hall East Extension
AHE	Alpha Hall East
AHS	Alpha Hall South
ARC1	Archaeology Lab One
ARC2	Archaeology Lab Two
BKST	Bookstore
CBBL	CMB Biomedical Library
CEADR	Cntr for Edu Accessibility/Disability
CPLT	Central Utilities Plant
CSAB	Central Service Admin Building
ELSCB	Earth/Life Sciences Building
FC	Food Court
FSB	Facilities Storage Building
HKS	Health, Kinesiology, and Sport Building
HUMB	Humanities Building
ILC	Innovation in Learning Center
LSLH	Life Sciences Lecture Hall
MCLC	Multi Cultural Leadership Center
MCOB	Mitchell College of Business
ML	Marx Library
MSB	Medical Sciences
MSPB	Mathematical Sciences and Physics Building
MTH	Mobile Townhouse
PS	Property Storage (ARCH III)
SBT	Seaman's Bethel
SC	Student Center
SHC	Student Health Center
UCTC	University Counseling and Testing Center
VTC	Varsity Tennis Courts

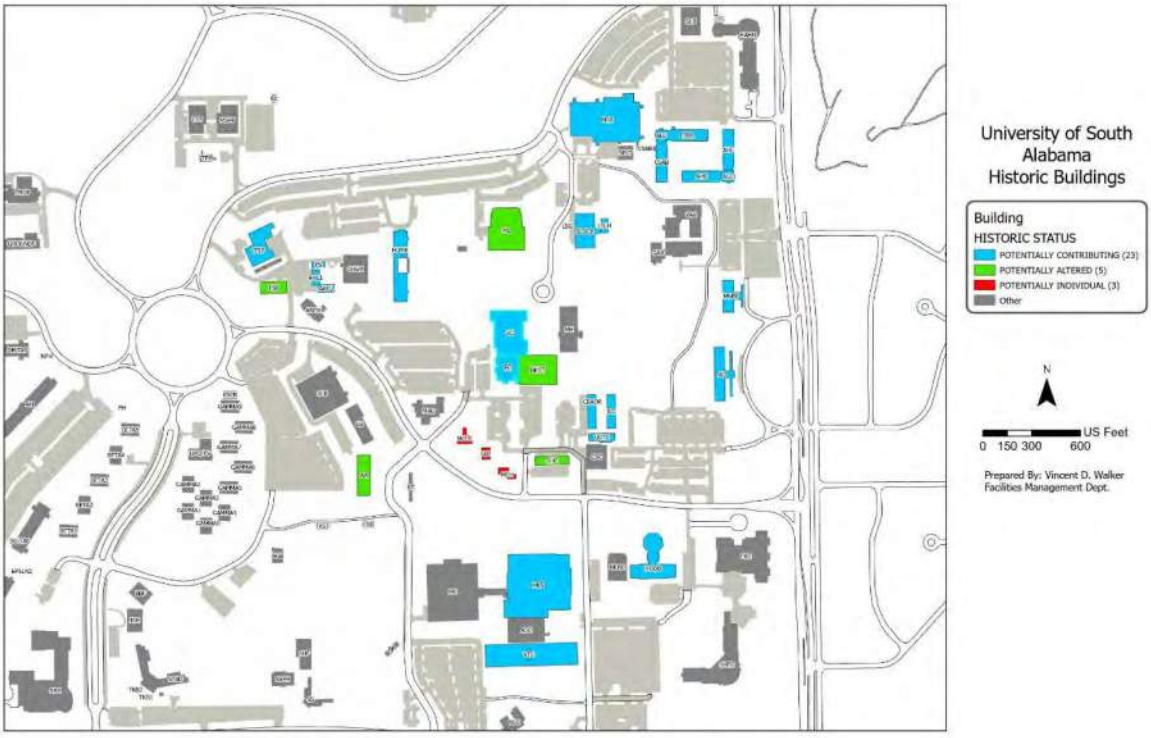
University of South Alabama Building by Construction Era Map Inventory

ABBREV	NAME
ASC	Academic Support Center
ALC	Active Learning Center
ARCM	Alfred & Lucile Delchamps Arch. Building
AGDSH	Alpha Gamma Delta Sorority
AHE	Alpha Hall East
AEE	Alpha Hall East Extension
AHS	Alpha Hall South
AD	Frederick Palmer Whiddon Administration
AOPSH	Alpha Omicron Pi Sorority
ARC1	Archaeology Lab One
ARC2	Archaeology Lab Two
AA	Athletic Annex
AGB	Athletic Ground Building
AH	Azela Hall
BP	Band Practice Feild Pavilion
BSC	Baptist Student Center
BBF	Baseball Batting Cage Facility
BETA1	Beta Residence Hall 1
BETA2	Beta Residence Hall 2
BETA3	Beta Residence Hall 3
BETA4	Beta Residence Hall 4
BETA5	Beta Residence Hall 5
BMA	BMA DialysisCenter
BKST	Bookstore
CH	Camellia Hall
UPD/PS	Campus Police/Parking Services/Gamma Com
CHS	Central House on Stadium Office
CSAB	Central Service Admin Building
CPLT	Central Utilities Plant
CHEM	Chemistry Building
COSH	Chi Omega Sorority
CBBL	CMB Biomedical Library
CEADR	Cntr for Edu Accessibility/Disability

ABBREV	NAME
CB	Communication Building
CSC	Computer Services Center
CSB	Construction Services Building
DLTC	Delta Commons
DELTA3	Delta Residence Hall 3
DELTA4	Delta Residence Hall 4
DELTA5	Delta Residence Hall 5
DELTA6	Delta Residence Hall 6
DF	Dining Facility
ELSCB	Earth/Life Sciences Building
EOB	Education and Outreach Building
EPSLN1	Epsilon Residence Hall 1
EPSLN2	Epsilon Residence Hall 2
FSB	Facilities Storage Building
FC	Faculty Club
FC	Food Court
FFH	Football Field House
FSB	Football Storage Building
GAMMA5	Gamma Apartments 5
GAMMA6	Gamma Apartments 6
GAMMA7	Gamma Apartments 7
GAMMA8	Gamma Apartments 8
GAMMA9	Gamma Apartments 9
GAMMA0	Gamma Dorm 0
GAMMA1	Gamma Dorm 1
GAMMA2	Gamma Dorm 2
GAMMA3	Gamma Dorm 3
GAMMA4	Gamma Dorm 4
GAB	Glass Arts
HWS	Hancock Whitney Stadium
	Hancock Whitney Stadium (North East Bldg)
	Hancock Whitney Stadium (North West Bldg)
	Hancock Whitney Stadium (Press Tower)

ABBREV	NAME
	Hancock Whitney Stadium (South East Bldg)
	Hancock Whitney Stadium (South West Bldg)
	Hancock Whitney Stadium (Ticket Bldg)
HAHN	Health Sciences Building
HKS	Health, Kinesiology, and Sport Building
HUMB	Humanities Building
ILC	Innovation in Learning Center
IFH	Intramurals Field House
JTC	Jaguar Training Center
PAC	John M. Laidlaw Performing Arts Center
JLH	Jon Lieber Clubhouse
KAFH	Kappa Alpha Fraternity
KDSH	Kappa Delta Sorority
KSCR	Kappa Sigma Chapter Room
LID	Laboratory of Infectious Diseases
GROUNDS	Landscaping, Grounds Department
LSG	Life Sciences Greenhouse
LSLH	Life Sciences Lecture Hall
LMBS	LOMB Storage Building
TRDB	LOMB Treatment, Storage, and Disposal
MAC	Macqueen Alumni Center
MSHP	Maintenance Garage
ML	Marx Library
MSPB	Mathematical Sciences and Physics Building
MSB	Medical Sciences
MH	Meisler Hall
MC	Mitchell Center
MCOB	Mitchell College of Business
MLRC	Mitchell Learning Resource Center
AAB	Mobile Conty Comm Cntr For Stu Athl Suc
MTH	Mobile Townhouse
BT	Moulton Tower
MCLC	Multi Cultural Leadership Center
NPH	New Pumphouse
SHF	New Softball Hitting Facility
OR	Outdoor Recreation

ABBREV	NAME
PMSH	Phi Mu Sorority Hous
PKAFH	Pi Kappa Alpha Fraternity
PKPFH	Pi Kappa Phi Fratern
PROP	Property Inventory Warehouse
PS	Property Storage (ARCH III)
PH	Pumphouse
RC	Recycle Center
SPLT	Satellite Utilities Plant
SLB	Science Laboratory Building
SBT	Seaman's Bethel
SGAP	SGA Pavilion
SHEC	Shelby Hall
SCFH	Sigma Chi Fraternity House
HSMIB	Simulation Laboratory Building
SSFH	Soccer/Softball Field House
SS	Softball Stadium
STAD	Stanky Field Stadium
TKB1	Stanky Field Ticket Booth 1
TKB2	Stanky Field Ticket Booth 2
SH	Stokes Hall
SC	Student Center
SHC	Student Health Center
SRC	Student Recreation Center
TEL	Telecommunications Building
TRB	Track Restroom Building
TKST	Track Storage Building
TSB	Transportation Services Building
TRP1	TRP I (Mentor Graphics)
TRP3	TRP III
UCTC	University Counseling and Testing Center
VTC	Varsity Tennis Courts
VAB	Visual Arts Complex
WH	Warehouse


University of South Alabama Historic Buildings
Building
HISTORIC STATUS
POTENTIALLY CONTRIBUTING (23)
POTENTIALLY ALTERED (5)
POTENTIALLY INDIVIDUAL (3)
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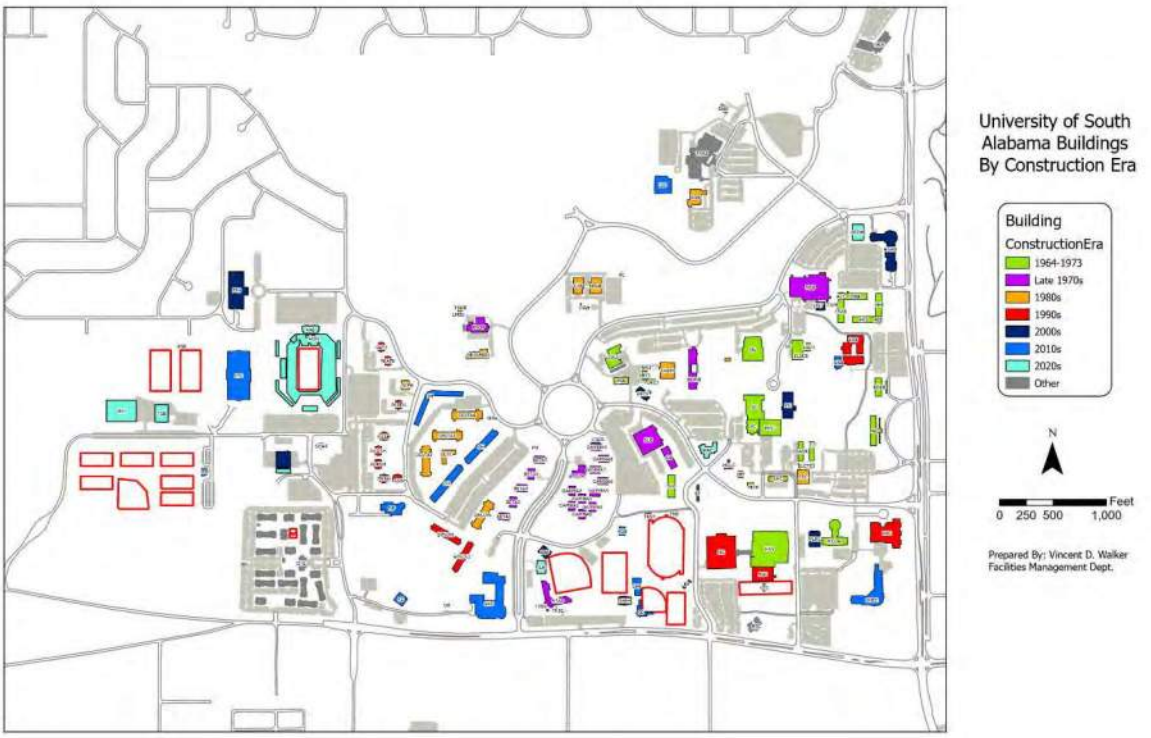
0 150 300 600
Prepared By: Vincent D. Walker
Facilities Management Dept.


University of South Alabama Buildings By Construction Era
Building
ConstructionEra
1964-1973
Late 1970s
1980s
1990s
2000s
2010s
2020s
Other
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0 250 500 1,000
Prepared By: Vincent D. Walker
Facilities Management Dept.

Appendix C

USA Section 106 — Campus Photograph Survey
Photograph Inventory — April 20, 2023

1. Alpha Hall East (AHE). Camera facing southwest.
2. Alpha Hall East (AHE), Alpha Hall East Extension (AEE), and Alpha Hall South (AHS). Camera facing northwest.
3. Alpha Hall East Extension (AEE). Camera facing north.
4. View of Alpha Hall complex interior courtyard between Alpha Hall South (AHS) and Alpha Hall West/Central Services Administration Building (CSAB). Camera facing north.
5. Alpha Hall West/Central Services Administration Building. Camera facing northwest.
6. Alpha Hall West Extension/Active Learning Center (ALC), Alpha Hall West/Central Services Administration Building (CSAB), and Alpha Hall North/CMB Biomedical Library (CBBL). Camera facing southeast.
7. View of Alpha Hall Complex interior courtyard. Camera facing southeast.
8. View of Alpha Hall Complex interior courtyard. Camera facing southwest.
9. View of Alpha Hall East Extension (AEE) from interior courtyard. Camera facing southwest.
10. View of Alpha Hall South (AHS). Camera facing southwest.
11. View of Archaeology Labs 1 (ARC 1) and 2 (ARC 2). Camera facing northeast.
12. View of Archaeology Labs 1 (ARC 1) and 2 (ARC 2). Camera facing west.
13. View of Archaeology Lab 1 (ARC 1). Camera facing west.
14. View of Athletic Annex (AA). Camera facing southeast.
15. View of Athletic Annex (AA). Camera facing southwest.
16. View of Central Utilities Plant (CPLT). Camera facing northwest.
17. View of Student Health Center (SHC). Camera facing northeast.
18. View of Student Health Center (SHC). Camera facing southwest.
19. View of Faculty Court/Cntr for Edu Accessibility/Disability (CEADR). Camera facing northeast.
20. View of Faculty Court/Cntr for Edu Accessibility/Disability (CEADR) and Faculty Court/Innovation in Learning Center (ILC). Camera facing south.
21. View of Faculty Court/Cntr for Edu Accessibility/Disability (CEADR). Camera facing southwest.
22. View of Faculty Court/Innovation in Learning Center (ILC). Camera facing southwest.
23. View of Dining Hall/University Counseling and Testing Center (UCTC). Camera facing northwest.
24. View of Health, Kinesiology, and Sport Building (HKS). Camera facing south.
25. View of Health, Kinesiology, and Sport Building (HKS). Camera facing southwest.
26. View of Health, Kinesiology, and Sport Building (HKS). Camera facing east.
27. View of Health, Kinesiology, and Sport Building (HKS). Camera facing southwest.
28. View of Humanities Building (HUMB). Camera facing west.
29. View of Humanities Building (HUMB). Camera facing southwest.
30. View of Humanities Building (HUMB). Camera facing northeast.
31. View of Earth/Life Sciences Building (ELSCB). Camera facing north.
32. View of Earth/Life Sciences Building (ELSCB). Camera facing southeast.
33. View of Life Sciences Lecture Hall (LSLH). Camera facing northeast.
34. View of Marx Library (ML). Camera facing northwest.
35. View of Marx Library (ML). Camera facing southeast.
36. View of Mathematical Sciences and Physics Building (MSPB). Camera facing southwest.
37. View of Mathematical Sciences and Physics Building (MSPB). Camera facing northeast.
38. View of College of Medicine/Medical Sciences Building (MSB). Camera facing south.
39. View of College of Medicine/Medical Sciences Building (MSB). Camera facing south.
40. View of College of Medicine/Medical Sciences Building (MSB). Camera facing southwest.
41. View of College of Medicine/Medical Sciences Building (MSB). Camera facing southwest.

42. View of Mitchell College of Business (MCOB). Camera facing southwest.
43. View of Mitchell College of Business (MCOB). Camera facing southwest.
44. View of Mitchell College of Business (MCOB). Camera facing west.
45. View of Mitchell College of Business (MCOB). Camera facing northwest.
46. View of Student Center (SC) and Bookstore (BKST). Camera facing northwest.
47. View of Bookstore (BKST). Camera facing west.
48. View of Student Center (SC). Camera facing northwest.
49. View of Bookstore (BKST) and Student Center (SC). Camera facing south.
50. View of Student Center (SC). Camera facing southeast.
51. View of Student Center (SC). Camera facing west.
52. View of the Tuthill House/Multi-Cultural Leadership Center (MCLC). Camera facing north.
53. View of Seamen's Bethel (SBT). Camera facing north.
54. View of Tuthill House/Mobile Townhouse (MTH). Camera facing east.
55. View of Whiddon Administration Building/Frederick Palmer Whiddon Administration (AD). Camera facing northeast.
56. View of Whiddon Administration Building/Frederick Palmer Whiddon Administration (AD). Camera facing northwest.
57. View of Whiddon Administration Building/Frederick Palmer Whiddon Administration (AD). Camera facing west.
58. View of Whiddon Administration Building/Frederick Palmer Whiddon Administration (AD). Camera facing southwest.
59. View of Whiddon Administration Building/Frederick Palmer Whiddon Administration (AD). Camera facing southwest.

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LARRY D. STRIPLIN III PRACTICE FACILITY

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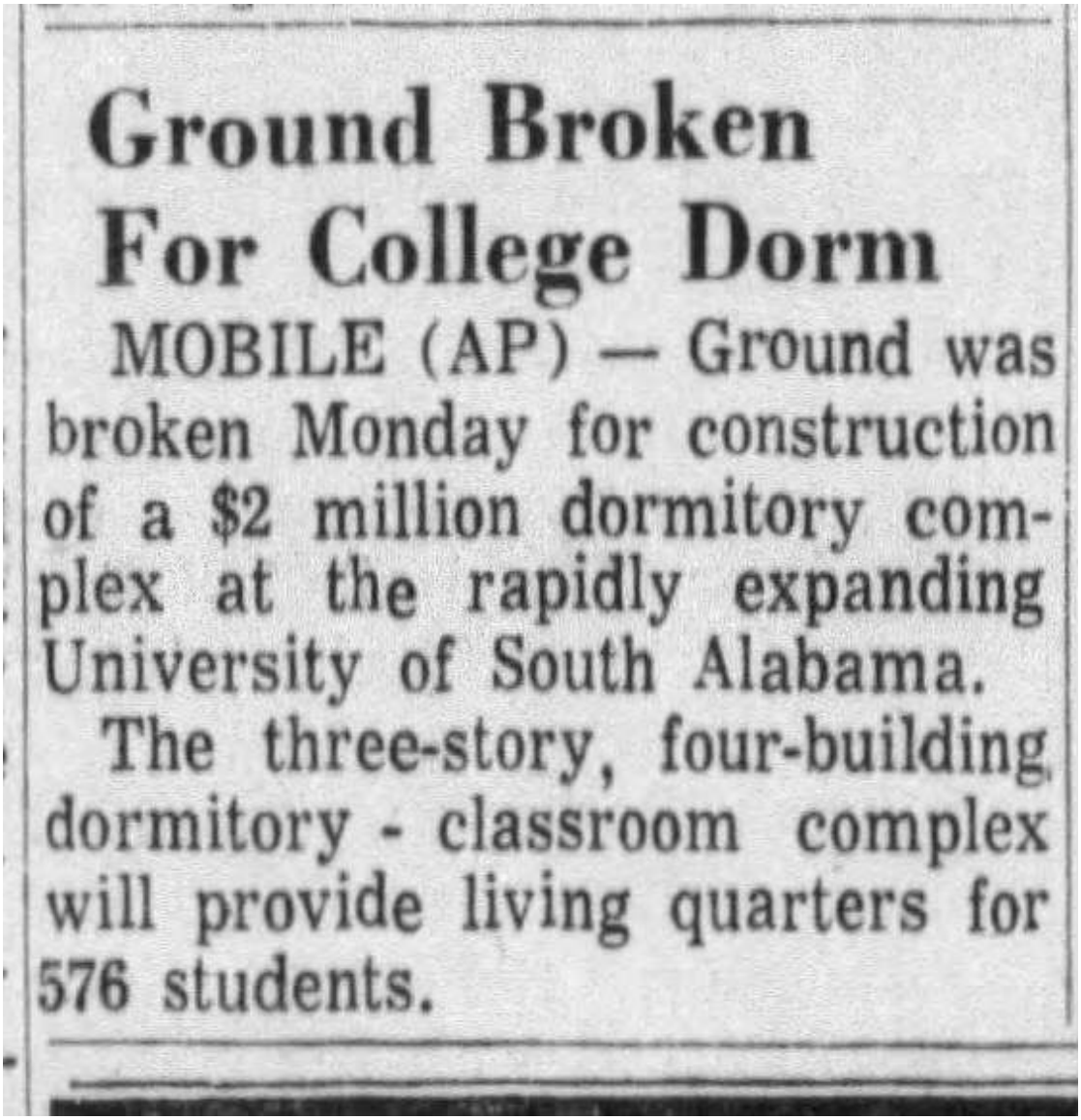
Appendix D



Ground Broken For College Dorm

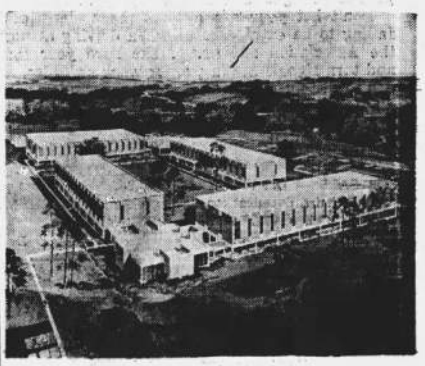
MOBILE (AP) — Ground was broken Monday for construction of a $2 million dormitory complex at the rapidly expanding University of South Alabama.

The three-story, four-building dormitory - classroom complex will provide living quarters for 576 students.

Appendix E

vote for a representative, as- | cancelled.

Alabama University Begins $2 Million Building Program



An architect's drawing shows the new dormitory-classroom complex for the rapidly growing University of South Alabama. The complex is being readied for occupancy next fall (1966). The area contains 125,164 square feet of floor space. The building will be fully air conditioned and will be located to the northwest of the present administration building. Buff faced brick in contemporary design will be used to conform to existing structures. The quadrangle will contain living quarters for 576 students, classrooms and recreational areas.

Recent ground breaking ceremonies at the University of South Alabama, Mobile, signaled the start of a new $2 million building program. Target date for completion is set for September 1966.

Taking part in the event are (l to r) Dr. James F. Caldwell, director for development and contracts; State Senator L. W. Brannon, Jr., Foley; State Representative Mylan R. Engel, Mobile; Ernest G. Cleverdon, Mobile and President Frederick P. Whiddon. Mr. Cleverdon is chairman of the University's board of trustees. Rep. Engel and Senator Brannon are members of the board.

The four-building, three-story complex will provide living quarters for 576 students, classroom and recreational facilities.

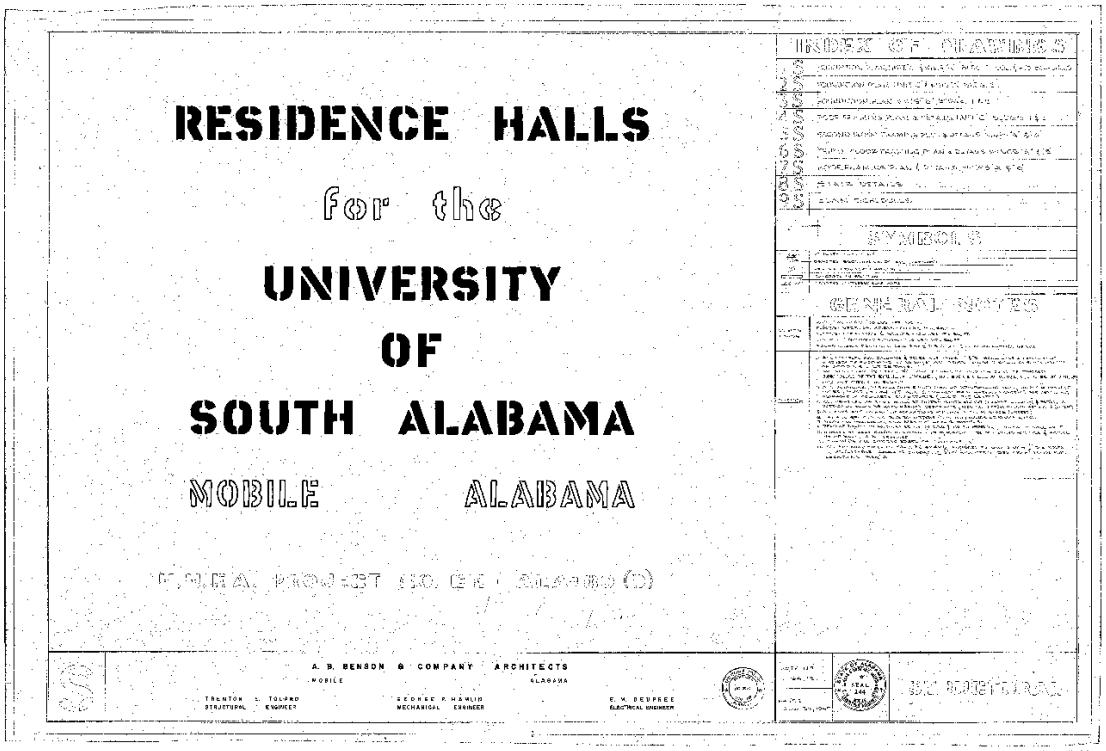
The new building program reflects the rapid growth of the University which began its first fall term a little over a year ago.

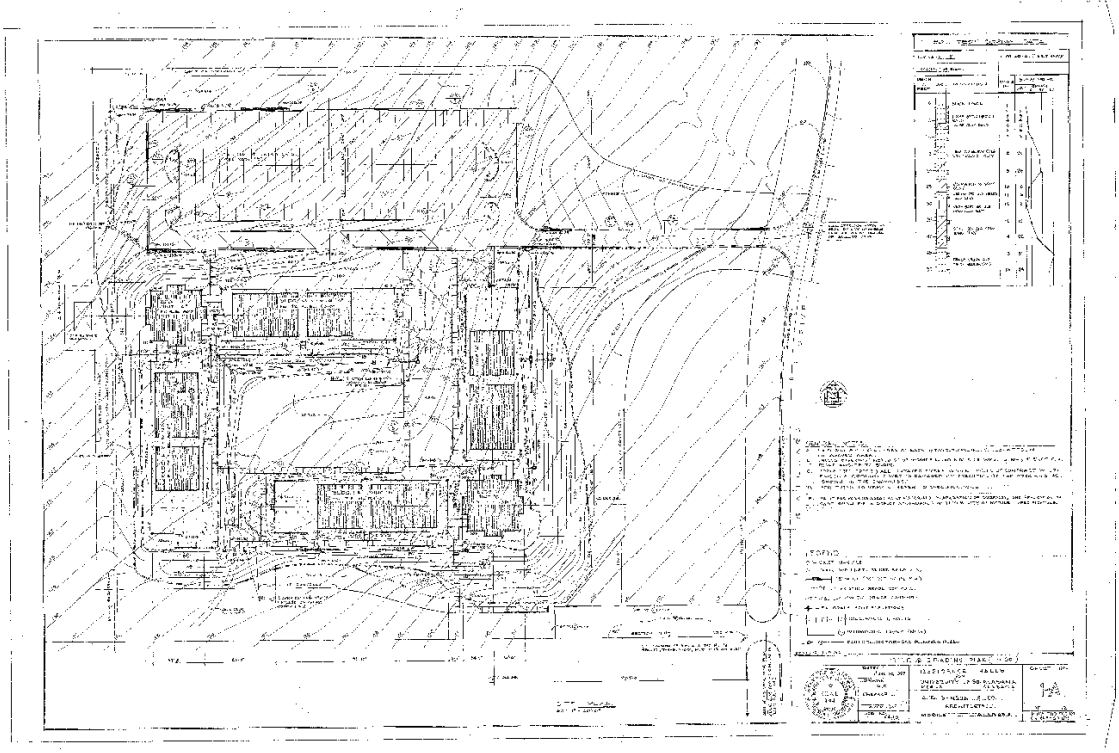
PERSONAL . . .

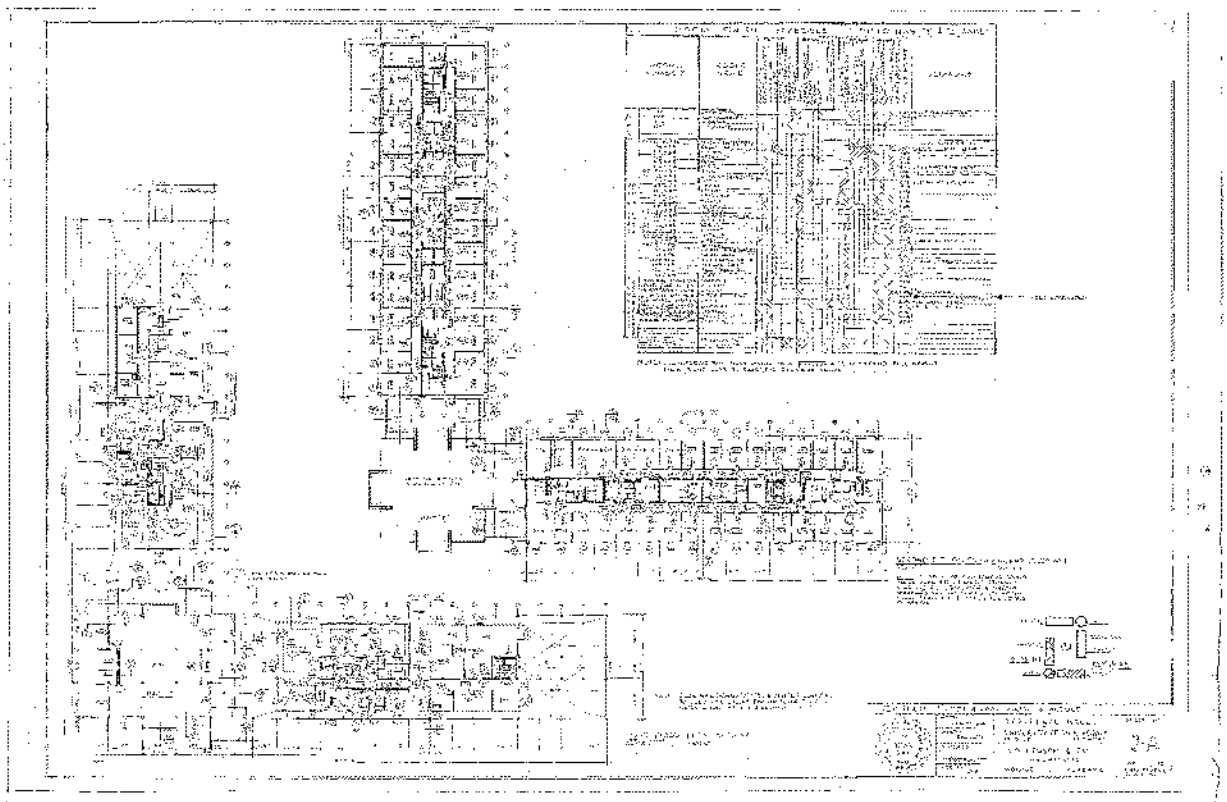
Appendix F

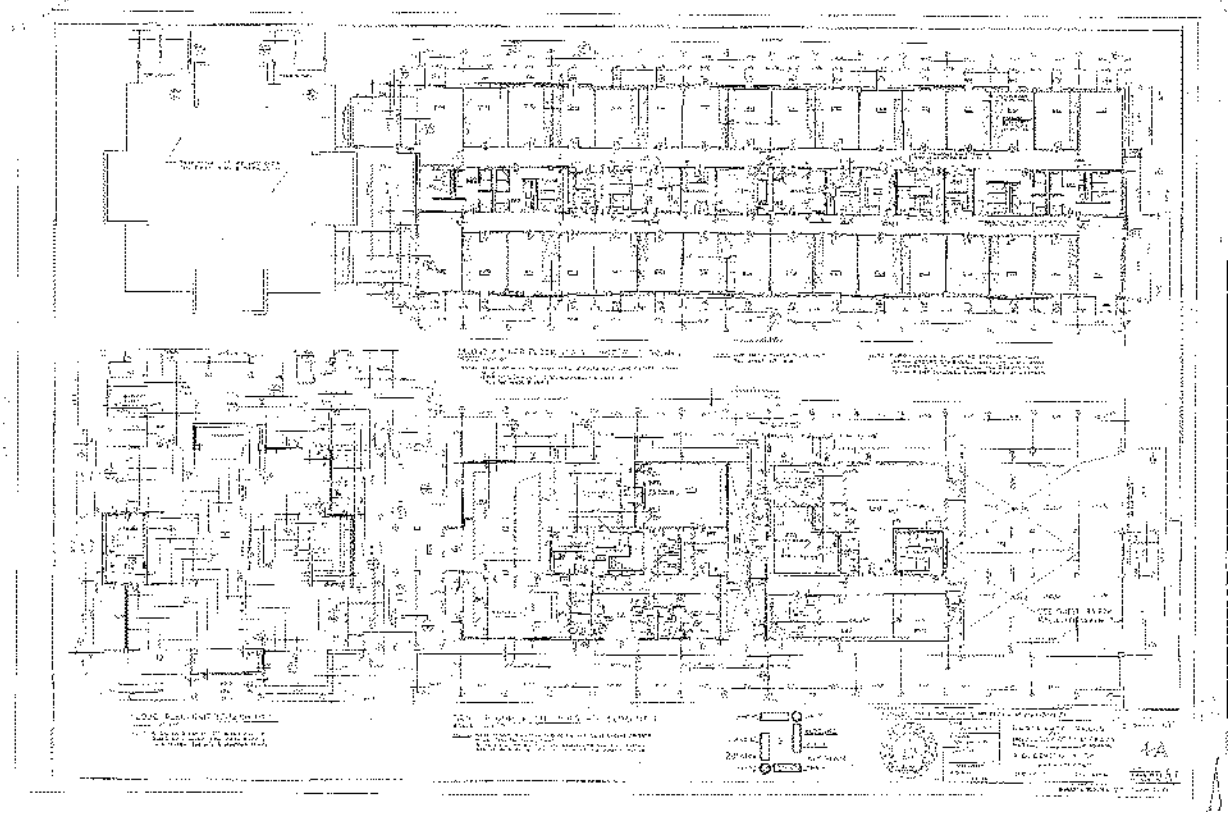
SENATOR SPARKMAN INSPECTS DORMS — Alabama Senator John Sparkman and University of South Alabama President Frederick P. Whiddon, right, inspect four USA dorms built with the aid of federal college housing funds. Senator Sparkman, chairman of the Senate subcommittee on housing, has worked closely with university officials in securing loans and grants. He authored legislation insuring eligibility for the new institution.

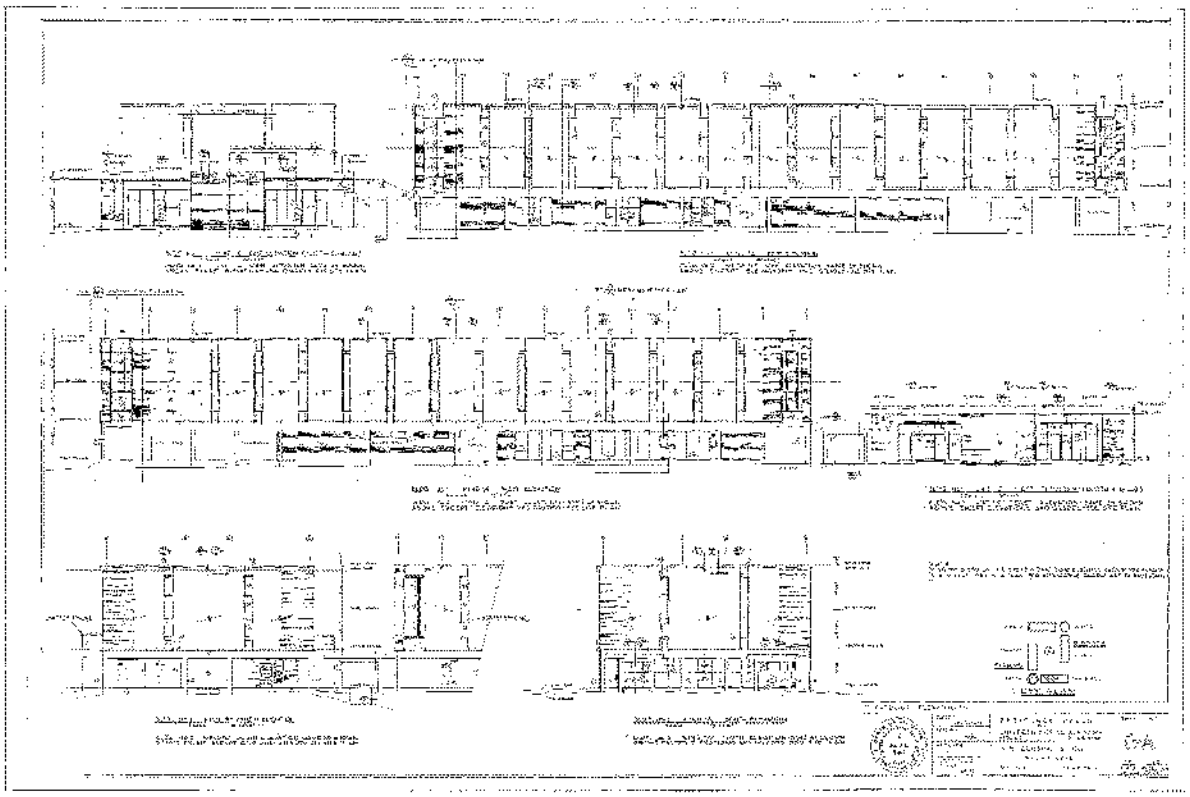
Appendix G

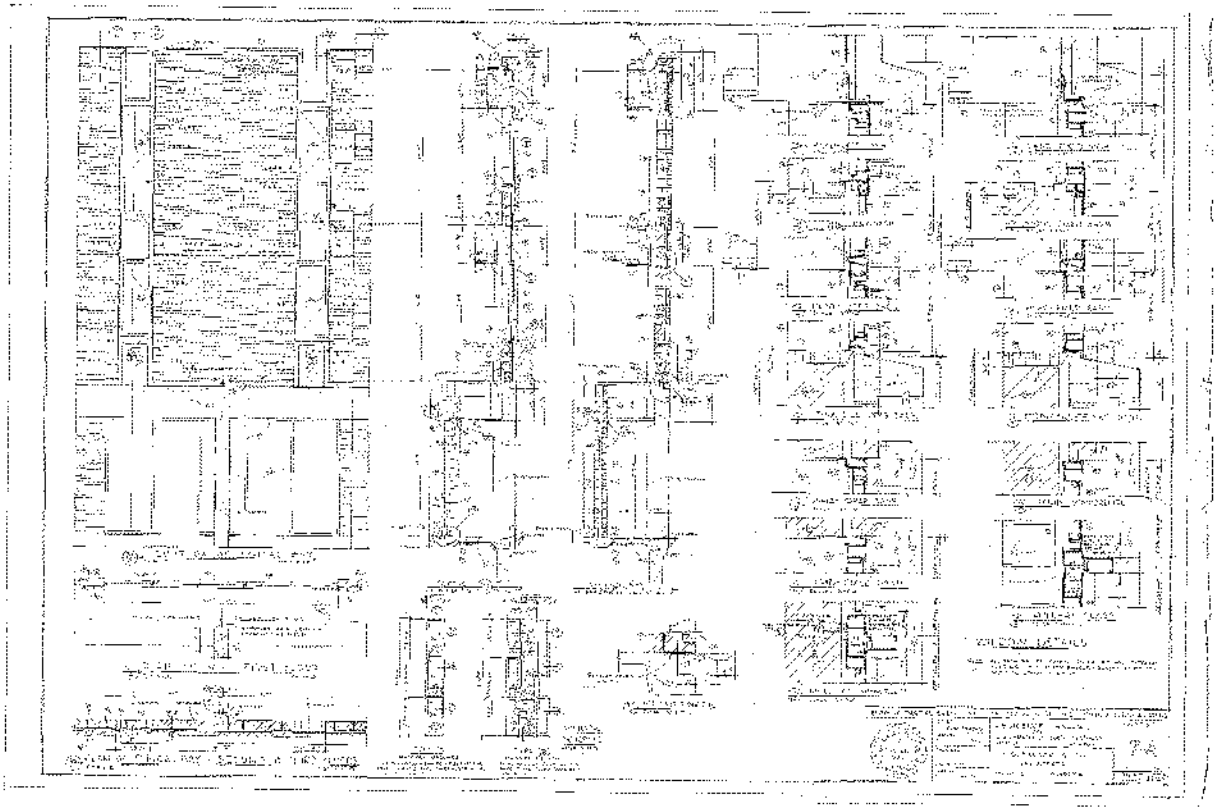

RESIDENCE HALLS
for the
UNIVERSITY
OF
SOUTH ALABAMA
MOBILE ALABAMA
INDEX OF DRAWINGS
SYMBOLS
GENERAL NOTES
A. B. BENSON & COMPANY ARCHITECTS
MOBILE ALABAMA

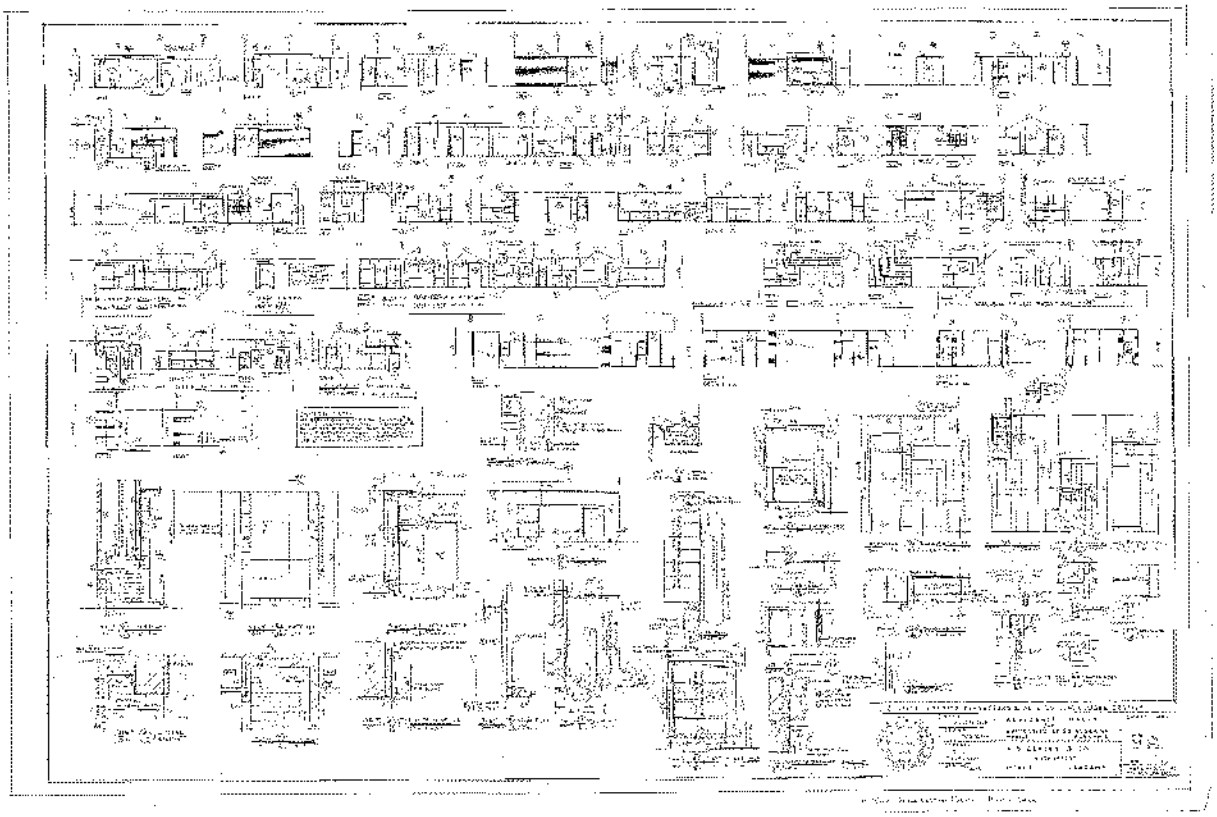


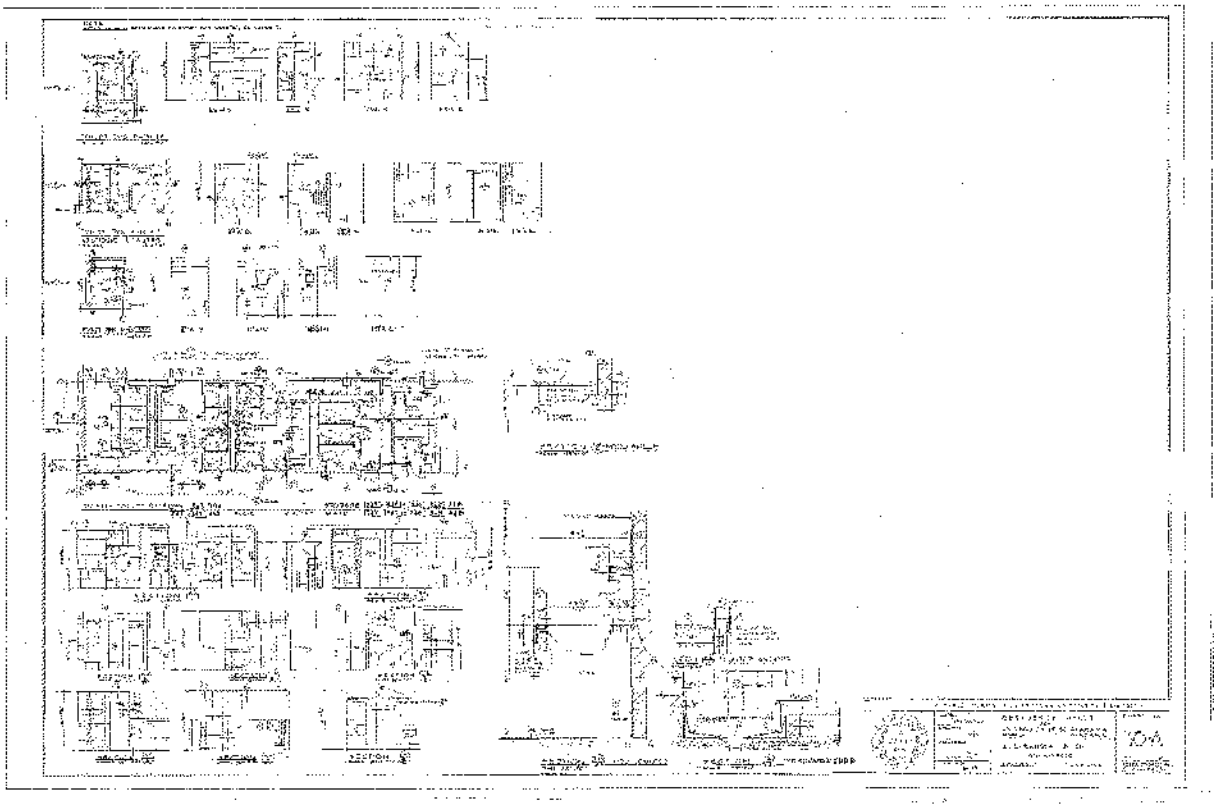


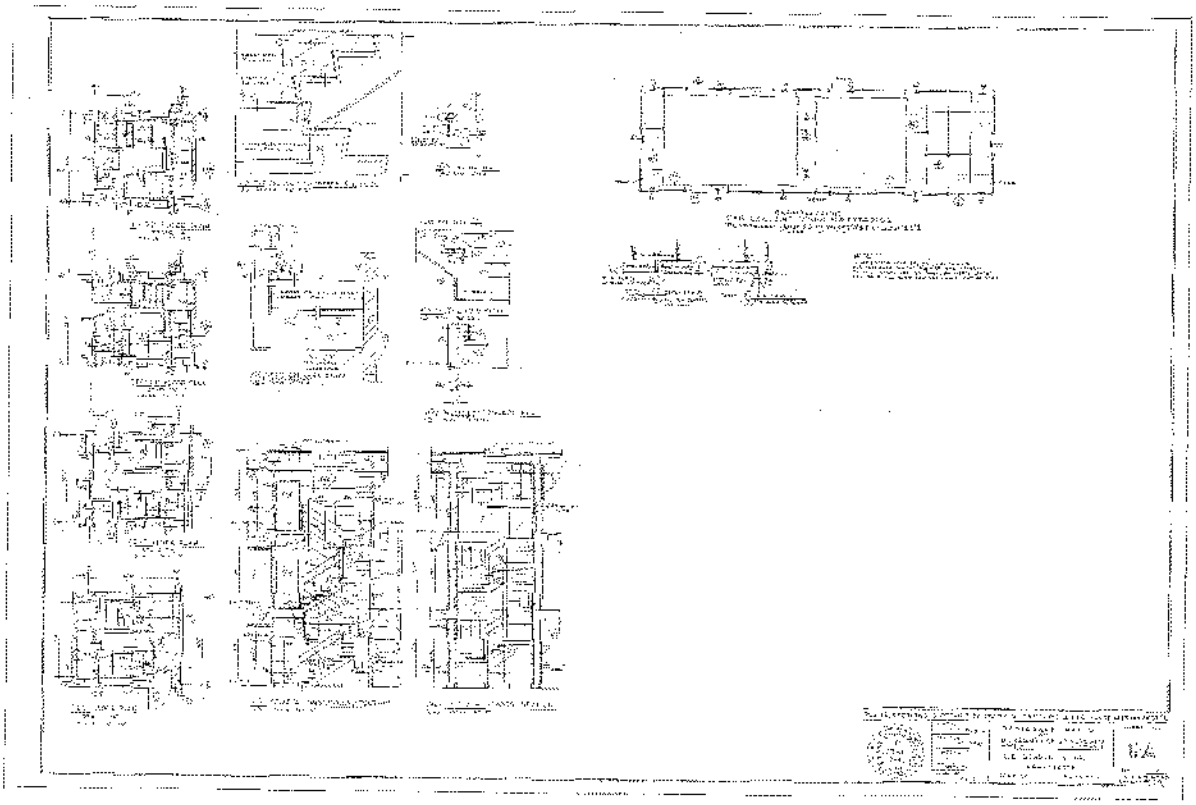


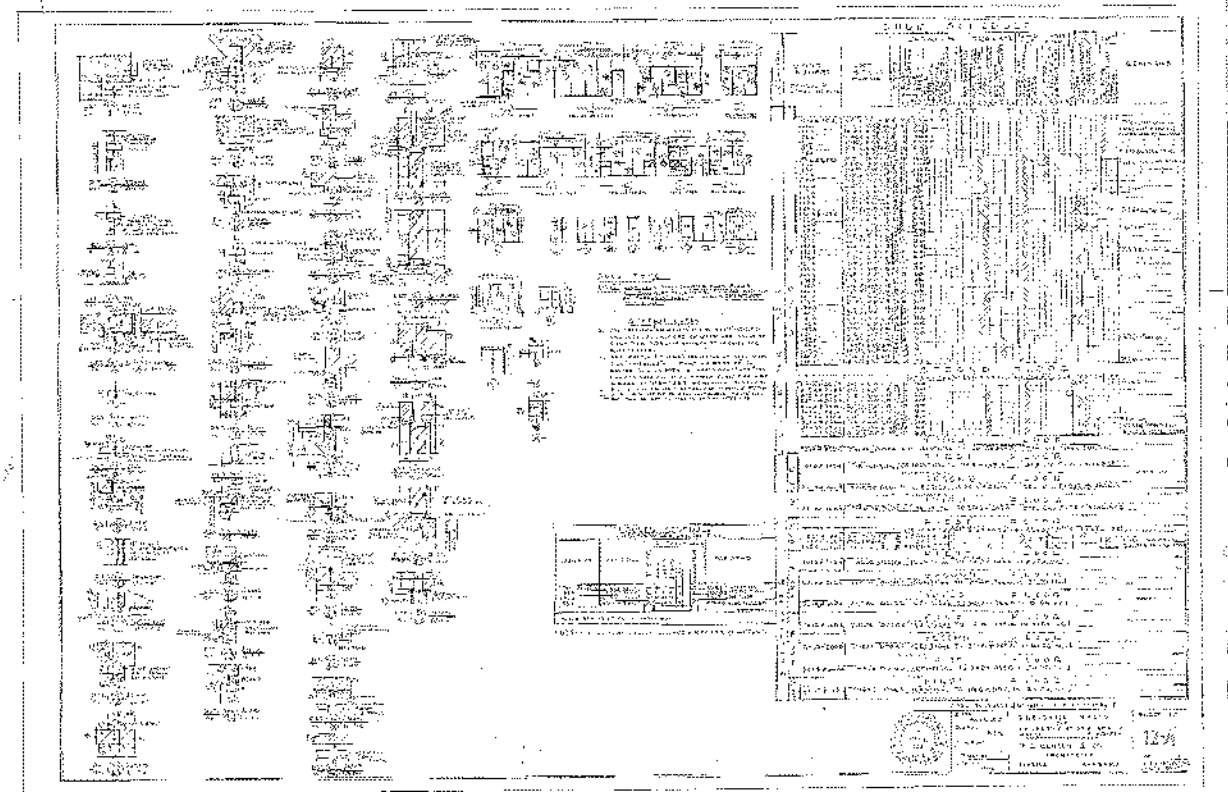




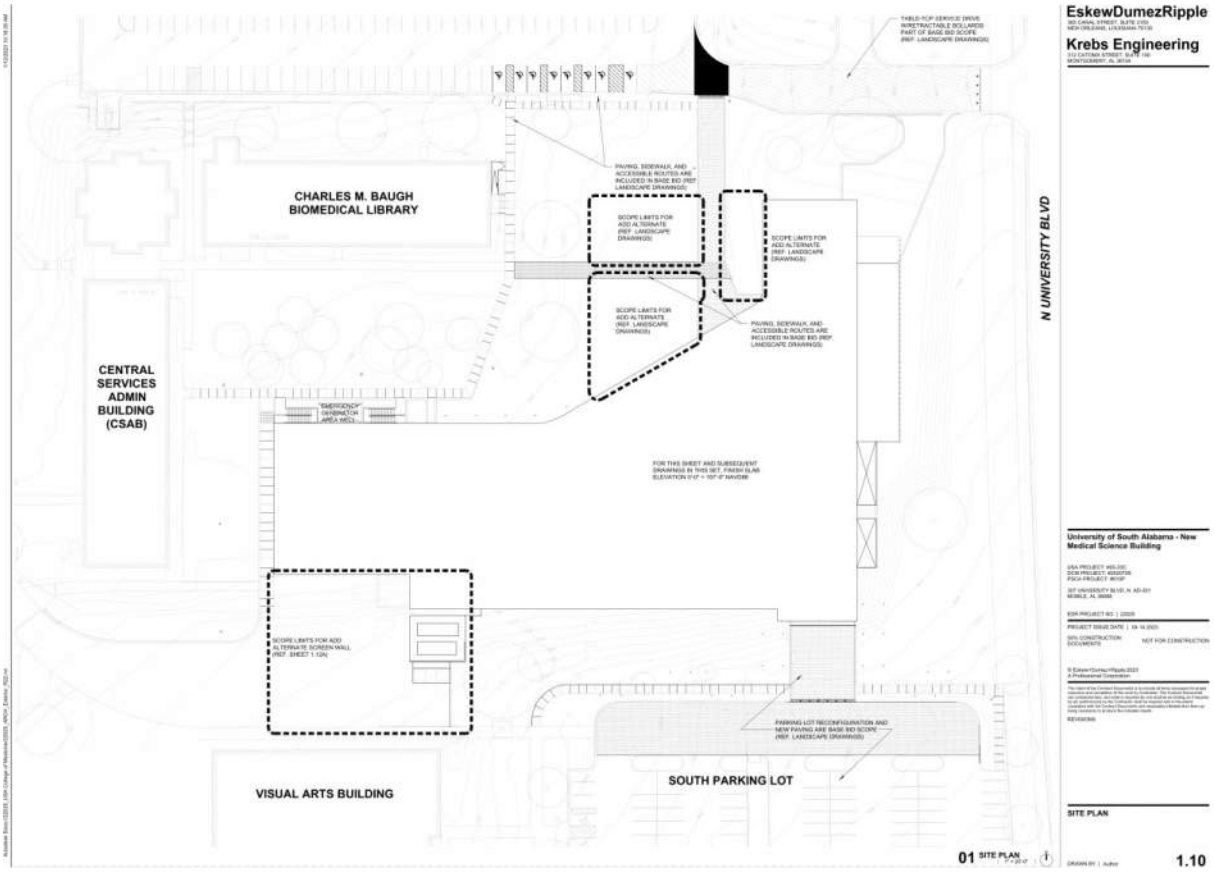








Appendix H


CHARLES M. BAUGH
BIOMEDICAL LIBRARY
CENTRAL
SERVICES
ADMIN
BUILDING
(CSAB)
VISUAL ARTS BUILDING
SOUTH PARKING LOT
N UNIVERSITY BLVD
TABLE-TOP SERVICE DRIVE W/RETRACTABLE BOLLARDS PART OF BASE BID SCOPE (REF. LANDSCAPE DRAWINGS)
PAVING, SIDEWALK, AND ACCESSIBLE ROUTES ARE INCLUDED IN BASE BID (REF. LANDSCAPE DRAWINGS)
SCOPE LIMITS FOR ADD ALTERNATE (REF. LANDSCAPE DRAWINGS)
SCOPE LIMITS FOR ADD ALTERNATE (REF. LANDSCAPE DRAWINGS)
SCOPE LIMITS FOR ADD ALTERNATE (REF. LANDSCAPE DRAWINGS)
PAVING, SIDEWALK, AND ACCESSIBLE ROUTES ARE INCLUDED IN BASE BID (REF. LANDSCAPE DRAWINGS)
EMERGENCY GENERATOR AREA WELL
FOR THIS SHEET AND SUBSEQUENT DRAWINGS IN THIS SET, FINISH SLAB ELEVATION 0'-0" = 100'-0" NAVD88
SCOPE LIMITS FOR ADD ALTERNATE SCREEN WALL (REF. SHEET 1.12A)
PARKING LOT RECONFIGURATION AND NEW PAVING ARE BASE BID SCOPE (REF. LANDSCAPE DRAWINGS)
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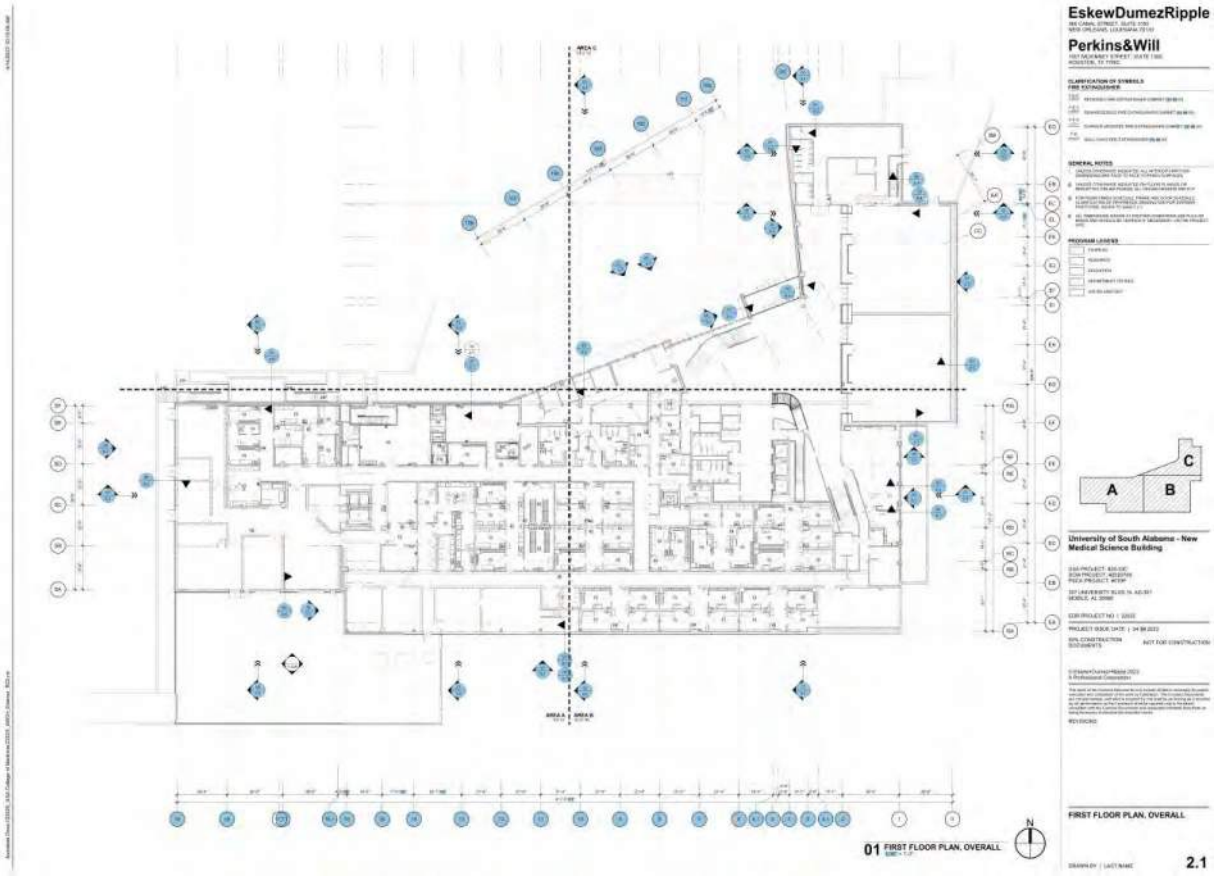
Krebs Engineering
University of South Alabama - New Medical Science Building
SITE PLAN
1.10


EskewDumezRipple
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A
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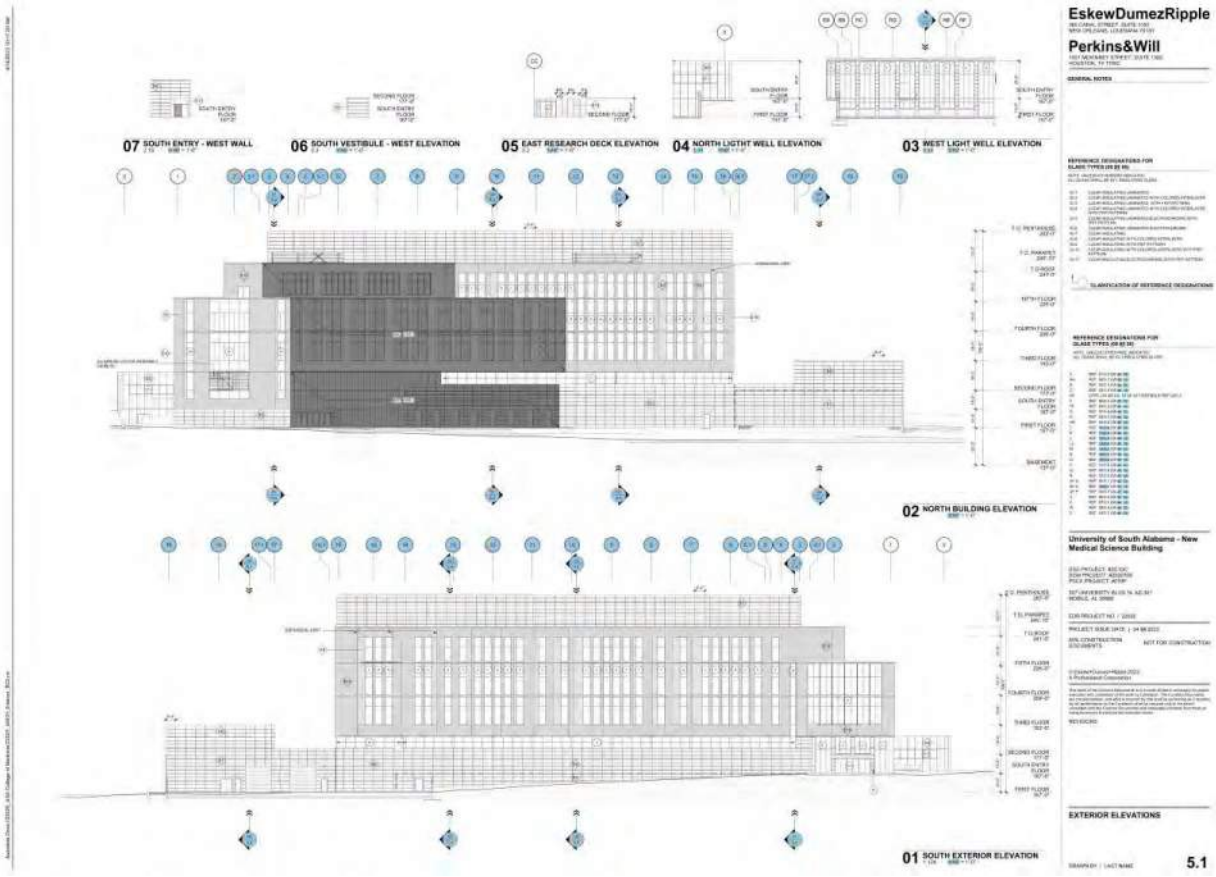
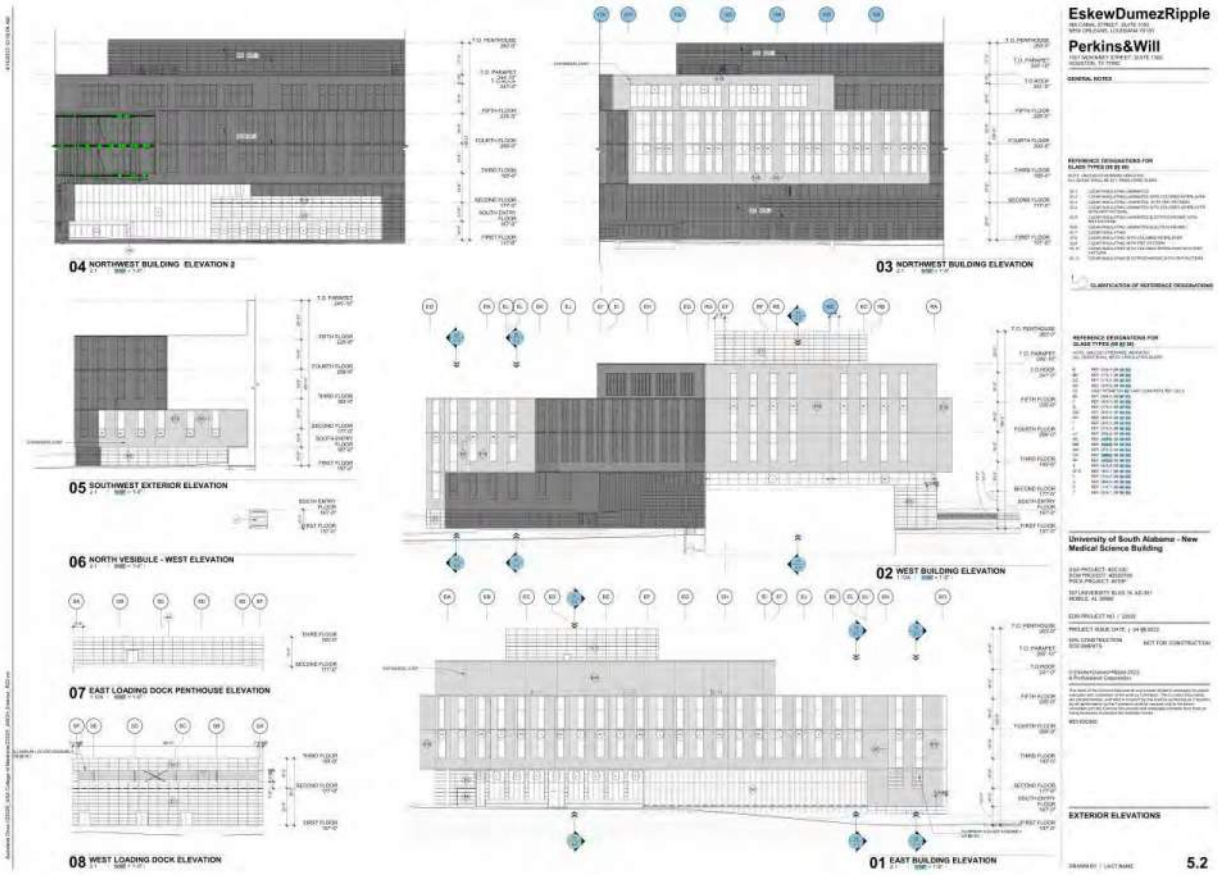
University of South Alabama - New Medical Science Building
FIRST FLOOR PLAN, OVERALL
2.1
01 FIRST FLOOR PLAN, OVERALL


07 SOUTH ENTRY - WEST WALL
06 SOUTH VESTIBULE - WEST ELEVATION
05 EAST RESEARCH DECK ELEVATION
04 NORTH LIGTHT WELL ELEVATION
03 WEST LIGHT WELL ELEVATION
02 NORTH BUILDING ELEVATION
01 SOUTH EXTERIOR ELEVATION
EskewDumezRipple
Perkins&Will
University of South Alabama - New Medical Science Building
EXTERIOR ELEVATIONS
5.1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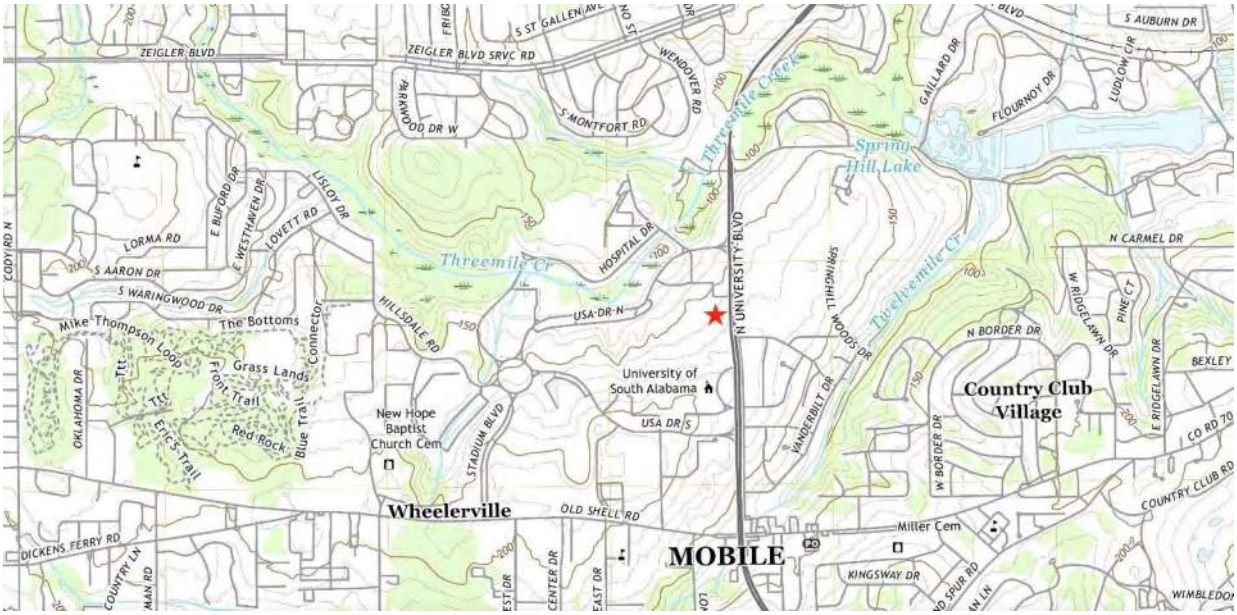
03 NORTHWEST BUILDING ELEVATION
05 SOUTHWEST EXTERIOR ELEVATION
06 NORTH VESIBULE - WEST ELEVATION
02 WEST BUILDING ELEVATION
07 EAST LOADING DOCK PENTHOUSE ELEVATION
08 WEST LOADING DOCK ELEVATION
01 EAST BUILDING ELEVATION
EskewDumezRipple
Perkins&Will
University of South Alabama - New Medical Science Building
EXTERIOR ELEVATIONS
5.2

Appendix I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WENDOVER RD
S MONTFORT RD
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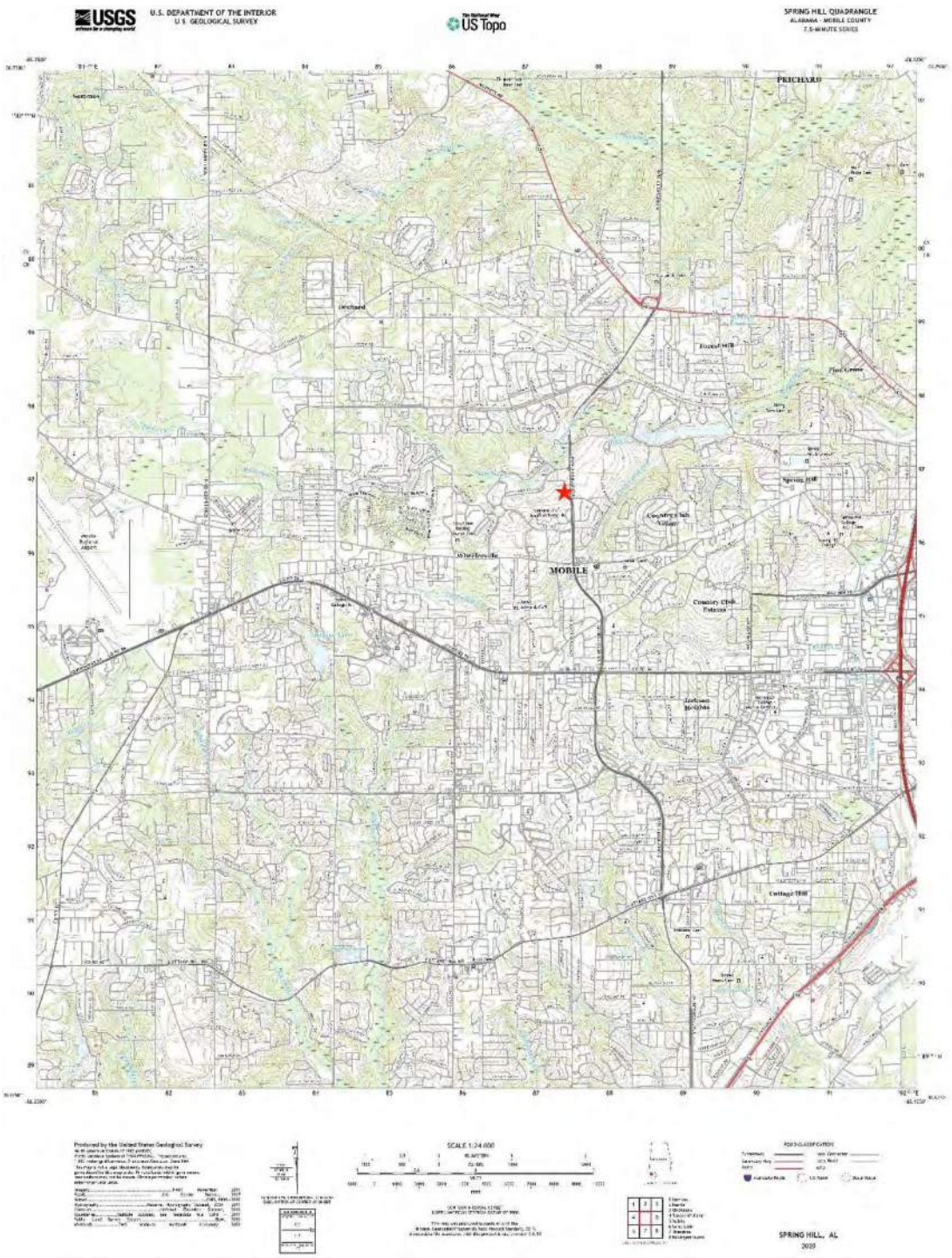
FLOURNOY DR
LUDLOW CIR
S AUBURN DR
LORMA RD
E RUFORD DR
E WESTHAVEN DR
LOVETT RD
LISLOY DR
S AARON DR
S WARINGWOOD DR
Threemile Cr
HOSPITAL DR
USA DR N
HILLSDALE RD
N UNIVERSITY BLVD
SPRINGHILL WOODS DR
Twelvemile Cr
N CARMEL DR
W RIDGELAWN DR
PINE CT
E RIDGELAWN DR
BEXLEY
N BORDER DR
W BORDER DR
Country Club Village
CO RD 70
COUNTRY CLUB RD
Mike Thompson Loop
The Bottoms
Grass Lands
Front Trail
Red Rock
Blue Trail
Connector
Eric's Trail
OKLAHOMA DR
New Hope Baptist Church Cem
STADIUM BLVD
University of South Alabama
USA DR S
VANDERBILT DR
Wheelerville
OLD SHELL RD
DICKENS FERRY RD
COUNTRY LN
MOBILE
Miller Cem
KINGSWAY DR
WIMBLEDON


USGS
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
US Topo
SPRING HILL QUADRANGLE
ALABAMA - MOBILE COUNTY
7.5-MINUTE SERIES
PRICHARD
MOBILE
SCALE 1:24 000
SPRING HILL, AL
2020

ALABAMA HISTORICAL COMMISSION
THE STATE HISTORIC PRESERVATION OFFICE

468 S. Perry Street
Montgomery, Alabama 36130-0900
Voice: (334)242-3184
Fax: (334)262-1083
www.ahc.alabama.gov

HISTORIC BUILDING SURVEY FORM

1. Location/Ownership

AHC Survey Number:		Form completed by:	Meri Beth Slaughter	Date:	May 9, 2023
Property Name:	Alpha Hall East Extension				
Location/Street Address:	University of South Alabama, Main Campus; North University Boulevard				
City/Zip:	Mobile, 36608		County:	Mobile	
USGS Quad:	Spring Hill		Township/Range/Section:	Mobile	
Current Owner's Name & Contact Info (if known):	University of South Alabama				

2. Physical Description

Construction date:	ca. 1966	Source:	Newspaper, Arch. Drawings, USA Campus Archives
Alteration date:	ca. 1981, ca. 1989, ca. 1991, ca. 2000, ca. 2007	Source:	Arch. Drawings, USA Campus Archives
Architect/Builder:	A.B. Benson & Company, Architects	Contractor:	
Physical condition: (Excellent, Good, Fair, Poor, Ruinous)	Good	Remaining historic fabric: (High, Medium, Low)	Medium

No. of stories:	One		
Historic use of property:	Dormitories		
Current use of property:	Administrative Offices and Classrooms		
Architectural style category:	Modern	Architectural style sub-category:	Mid-Century Modern
Basic typology:	Institutional	Basic shape:	Square
Basic floor plan:	N/A	Historic Construction material(s):	Concrete, brick, glass, aluminum, steel
Current exterior wall material(s)	Brick, Concrete, Glass	Roof finish material(s):	Composite tar and gravel
Main roof configuration:	Flat	Foundation material:	Concrete
Porch type:	N/A		
Window type and materials:	Single-pane, glass and aluminum, full-height windows, some paired		
Describe alterations:	Interior alterations in relation to changes in use		
Number and type of all outbuildings: (if significant, fill out separate survey form)	N/A		

Exterior Architectural Description:
Full description in Cultural Resource Assessment of Frederick P. Whiddon College of Medicine Building

Description of Setting:
Located on the east boundary of USA main campus, near N University Blvd; setback from the road creating a buffer of green space

Historical Notes:
Full historical narrative in the Cultural Resource Assessment of Frederick P. Whiddon College of Medicine Building

3. Eligibility

Appears Eligible for Alabama Register:	☐ Yes ☐ No ☑ would contribute to a district ☐ Undetermined
Appears Eligible for National Register:	☐ Yes ☐ No ☑ would contribute to a district ☐ Undetermined
AR Criteria:	☑ A ☐ B ☑ C ☐ D ☐ Undetermined
NR Criteria:	☑ A ☐ B ☑ C ☐ D ☐ Undetermined
Level of Significance:	☐ Local ☐ State ☐ National ☐ Undetermined

Justification of Eligibility/Ineligibility:
First dormitories on USA campus, mid-century in style following early campus architectural style patterns; has maintained its salient historic integrity

ALABAMA HISTORICAL COMMISSION
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Montgomery, Alabama 36130-0900
Voice: (334)242-3184
Fax: (334)262-1083
www.ahc.alabama.gov

HISTORIC BUILDING SURVEY FORM

1. Location/Ownership

AHC Survey Number:		Form completed by:	Meri Beth Slaughter	Date:	May 9, 2023
Property Name:	Alpha Hall East				
Location/Street Address:	University of South Alabama, Main Campus, North University Boulevard				
City/Zip:	Mobile, 36608		County:	Mobile	
USGS Quad:	Spring Hill		Township/Range/Section:	Mobile	
Current Owner's Name & Contact Info (if known):	University of South Alabama				

2. Physical Description

Construction date:	ca. 1966	Source:	Newspaper, Arch. Drawings, USA Campus Archives
Alteration date:	ca. 1981, ca. 1989, ca. 1991, ca. 2000, ca. 2007	Source:	Arch. Drawings, USA Campus Archives
Architect/Builder:	A.B. Benson & Company, Architects	Contractor:	
Physical condition: (Excellent, Good, Fair, Poor, Ruinous)	Good	Remaining historic fabric: (High, Medium, Low)	Medium

No. of stories:	Three		
Historic use of property:	Dormitories		
Current use of property:	Administrative Offices and Classrooms		
Architectural style category:	Modern	Architectural style sub-category:	Mid-Century Modern
Basic typology:	Institutional	Basic shape:	Rectangular
Basic floor plan:	N/A	Historic Construction material(s):	Concrete, brick, glass, aluminum, steel
Current exterior wall material(s)	Brick, Concrete	Roof finish material(s):	Composite tar and gravel
Main roof configuration:	Flat	Foundation material:	Concrete
Porch type:	N/A		
Window type and materials:	Single-pane, vinyl, some paired, upper stories vertical shaft		
Describe alterations:	Elevator Tower added to building ca. 2000		
Number and type of all outbuildings: (if significant, fill out separate survey form)	N/A		

Exterior Architectural Description:
Full description in Cultural Resource Assessment of Frederick P. Whiddon College of Medicine Building

Description of Setting:
Located on the east boundary of USA main campus, near N University Blvd; setback from the road creating a buffer of green space

Historical Notes:
Full historical narrative in the Cultural Resource Assessment of Frederick P. Whiddon College of Medicine Building

3. Eligibility

Appears Eligible for Alabama Register:	☐ Yes ☐ No ☑ would contribute to a district ☐ Undetermined
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AR Criteria:	☑ A ☐ B ☑ C ☐ D ☐ Undetermined
NR Criteria:	☑ A ☐ B ☑ C ☐ D ☐ Undetermined
Level of Significance:	☐ Local ☐ State ☐ National ☐ Undetermined

Justification of Eligibility/Ineligibility:
First dormitories on USA campus, mid-century in style following early campus architectural style patterns; has maintained its salient historic integrity

Appendix J

South Alabama
NATIONAL ALUMNI ASSOCIATION

May 15, 2023

Alabama Historical Commission
468 South Perry Street
Montgomery, AL 36130

Greetings:

On behalf of over 93,000 alumni of the University of South Alabama (USA), thank you for the opportunity to comment on USA's Section 106 application.

With over 9,000 employees and nearly 14,000 students, USA and USA Health is the economic driver for our region in education, research and healthcare. In fact, USA is the only academic medical provider in our region and only one of two medical schools in the entire State of Alabama.

USA is on a trajectory like it's never seen before. The age of the campus infrastructure offers limited opportunities for growth, revitalization, and in most cases, rehab isn't even an option. We have over $128 million in state and federal investments lined up for our new, state of the art, medical school… and only one location which is suitable for construction, the Alpha Complex.

The Alpha Complex served as dorms for USA students in the 1960s and 1970s. These buildings have not served as dorms in several decades and have been minimally utilized due to their aged infrastructure and inability to be efficiently converted. While two will need to be removed for the new medical school complex, two of the Alpha Complex buildings will remain and be incorporated into the design for campus reminiscing.

We appreciate that USA will record memories from alumni concerning Alpha Hall East and South and including them as them as well as other aspects of USA history. We wholeheartedly support the construction of a new facility to house the Frederick P. Whiddon College of Medicine in the proposed location.

Thank you,

Kim Lawkis

Kim Lawkis '11, MPA '13
President
USA National Alumni Association

UNIVERSITY OF SOUTH ALABAMA

May 12, 2023

Amanda McBride
Archaeologist
Environmental Review/Section 106 Coordinator
Alabama Historical Commission

Re: Letter of Support for Frederick P. Whiddon College of Medicine

We are excited to have secured funds for a new facility to house the Frederick P. Whiddon College of Medicine. After a review of our campus, the only suitable location requires the demolition of two buildings (Alpha Hall South and Alpha Hall East) that served as the first campus dormitories. As our campus changed through time, the function of these buildings also changed and neither of these buildings currently serve our campus needs.

Recognizing the original function of the buildings as dormitories and the importance of becoming a residential campus, we look forward to recording our alumni's accounts of their time there and other aspects of USA history related to these buildings. We regret the loss of these buildings, and at the same time celebrate the construction of the new Frederick P. Whiddon College of Medicine that will allow us to fulfill our university's mission.

Sincerely,

Andi M. Kent, Ph.D.
Executive Vice President and Provost

Office of the Executive Vice President and Provost
AD 130 | 307 University Blvd. N. | Mobile, Alabama 36688-0002
TEL: (251) 460-6111 | FAX: (251) 460-6575 | SouthAlabama.edu

UNIVERSITY OF SOUTH ALABAMA

May 16, 2023

Amanda McBride
Archaeologist
Environmental Review/Section 106 Coordinator

Re: Letter of Support for the site location of Frederick P. Whiddon College of Medicine

The University of South Alabama, in order to fulfill its mission, will be building a new facility to house the Frederick P. Whiddon College of Medicine. The only location that meets the engineering, logistical, and economic needs is the site of Alpha Hall East and Alpha Hall South. Plans call for demolishing these structures, clearing the site, and constructing an L-shaped facility to complement the remaining two buildings in the Alpha Complex and the Health Sciences Building, which houses the Pat Capps Covey College of Allied Health Professions and the College of Nursing. The buildings to be razed no longer serve their original function, and we will support documenting the part these building served in the history of our campus. The continued development of USA campus, as exemplified by the construction of a new Frederick P. Whiddon College of Medicine, is critical to serving our students and community.

Sincerely,

Trent Davis
Assistant Director Engineering Design and Construction

FACILITIES - ENGINEERING DESIGN AND CONSTRUCTION
BLDG AD001 | 307 UNIVERSITY BOULEVARD, N | Mobile, Alabama 36688-0002
TEL: (251) 460-7127 | FAX: (251) 461-1370

ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900

Lisa D. Jones
Executive Director
State Historic Preservation Officer

Tel: 334-242-3184
Fax: 334-242-1083

August 17, 2023

Phillip W. Neuberg
NIST
100 Bureau Drive
Gaithersburg, MD 20899

Re: AHC 23-0993
Renovation and Expansion of Research Facilities
Mobile County

Dear Mr. Neuberg:

Upon review of the above referenced project, the AHC concurs with the findings of the architectural survey. We agree that the proposed demolition of NRHP-eligible Alpha Hall East and Alpha Hall South buildings (Alpha Complex) would represent an adverse effect both upon this historic property, as well as the surrounding historic landscape. Our office would recommend the rehabilitation and reuse of the historic school building, if possible. However, should your client wish to continue within this undertaking as currently planned, we recommend the development of a Memorandum of Agreement to mitigate the adverse effect upon historic properties.

If your client wishes to move forward with the proposed undertaking, please submit a proposed mitigation plan for resolving the adverse effect as described in 36 CFR 800.6 (Resolution of Adverse Effects). https://www.achp.gov/digital-library-section-106-landing/section-106-regulations

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Leanne Waller-Trupp at 334.230.2653 or Leanne.Trupp@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/EDS/law

APPENDIX E

MEMORANDUM OF AGREEMENT WITH AHC, NIST, AND USA

MEMORANDUM OF AGREEMENT
BETWEEN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY,
THE ALABAMA STATE HISTORIC PRESERVATION OFFICER, AND
THE UNIVERSITY OF SOUTH ALABAMA REGARDING
THE DEMOLITION OF ALPHA HALLS EAST AND SOUTH
551 UNIVERSITY BLVD, MOBILE, ALABAMA

WHEREAS, the University of South Alabama, Mobile, AL(USA), as part of an overall initiative to redevelop an existing campus and construct a new medical facility, plans to carry out the demolition of Alpha Hall East and Alpha Hall South(undertaking) pursuant to 36 CFR Part 800 implementing Section 106 of the National Historic Preservation Act (54 U.S.C. 306108); and

WHEREAS the undertaking consists of demolishing two three-story masonry combination classrooms and residential buildings and related site improvements using funds allocated by the National Institute of Standards and Technology (NIST) in preparation for constructing a new academic medical facility; and

WHEREAS the new construction will be carried out using funds from (NIST); and

WHEREAS the design of the proposed new academic medical facility was undertaken with consideration for the surrounding nearby historic portions of the campus. The design is intentionally sympathetic to the tone, character, feel, massing, and materials exhibited within the surrounding structures. The choice of location away from other buildings, use of brick and verticality within the windows, massing, and scale create a design that is noticeably new, while also blending into the character of the campus and not detracting or negatively impacting the surrounding structures and campus design. Drawings for the proposed new construction are included within this submission (Appendix B); and

WHEREAS, NIST has defined the undertaking's area of potential effect (APE) as the existing Alpha Hall Complex consisting of four similar Buildings referred to as Alpha Halls, East, West, South and North and its setting; and

WHEREAS, NIST has determined that the undertaking may have an adverse effect on portions of the Alpha Complex (Halls East and South) that has been determined eligible for listing in the National Register of Historic Places and has consulted with the Alabama State Historic Preservation Officer (SHPO) pursuant to 36 C.F.R. 800, of the regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C. 306108); and

NOW, THEREFORE, NIST, USA and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties.

STIPULATIONS

In order to mitigate the adverse effects on historic properties, USA shall ensure that the following measures are carried out by a professional who meets the Secretary of the Interior's *Professional Qualifications Standards:*

I. ARCHIVAL PHOTOGRAPHIC DOCUMENTATION

Prior to the completion of the demolition, USA will make arrangements for State level HABS archival photographic documentation of the Alpha Hall Complex with emphasis upon the visual recordation of the Alpha East and Alpha South on the campus of the University of South Alabama, Mobile, AL photographs shall be made of the representative buildings within the campus including views of the exterior and interior, the overall complex, its setting, and the landscape.

A. The photographer shall comply with the minimum level standards necessary for document retention at SHPO pursuant to the state level *HABS/HAER/HALS Photography Guidelines, Updated June 2015* (Appendix A). A draft copy of the photographic record will be provided to SHPO for review and acceptance.
B. Upon approval, final copies will be provided to SHPO and the local archives at the University of South Alabama and will be available for public view.

II. HISTORIC NARRATIVE

USA will make arrangements for the research and writing of a historic narrative regarding the early period of architectural and campus development on the grounds of the University of South Alabama.

A. The history shall be written from written documents, primary sources, oral histories, and archival photographs. The overall purpose of the document is to record the developmental history of the first period of the construction and expansion of the University of South Alabama.
B. A draft copy of the developmental history report will be submitted to SHPO for review and approval. Upon approval of the draft copy by SHPO, a final copy of the report will be submitted to SHPO in hard copy and digital format. One additional copy will be submitted to the local archives at the University of South Alabama and will be available for public view.

III. HISTORIC SIGNAGE

USA will create a historic interpretive weather resistant sign panel that is to be located within the context of the demolition area and near the remaining Alpha Hall West and Alpha Hall North.

A. The sign will include historical information about the early period of campus construction, architectural explanations of the common style on campus, images of Alpha

Hall East and Alpha Hall South, as well as the original and changing functions of the buildings. The overall purpose of the sign is to educate the public on the early planning and architectural development of the campus and to note the previous location and information as related to the architecture of Alpha Hall East and Alpha Hall South.

B. A draft copy of the sign layout, text, and images will be submitted to SHPO for review and approval. Upon approval of the draft copy by SHPO, a final version will be installed within the context of the remaining Alpha Hall buildings and readily in view for the public.

IV. ARCHAEOLOGICAL ASSESMENT

USA's Center for Archaeological Studies completed a Phase I Cultural Resources Survey of the potential area of impact surrounding Alpha Hall East and Alpha Hall South on April 5, 2023. Their archeological efforts included the excavation of a total of 11 shovel tests within the project tract in addition to a pedestrian survey. At the conclusion of the Phase I Cultural Resources Survey, it was determined that the efforts did not identify any significant archaeological recoveries or intact middens or features from the project tract. Therefore, no further archaeological investigation or mitigation is recommended.

A. The Phase I Cultural Resources Survey in its entirety will be filed within the archives of the University of South Alabama and will be available for public view.

B. Unanticipated Discoveries- In the event that archeological materials are encountered, work shall be halted and NIST and SHPO shall consult on procedures to follow to determine the Register eligibility of archaeological resources and to evaluate the adverse effects of the Project on such resources. For sites of Native American origin, this consultation shall include the Cherokee Nation, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, Kickapoo Tribe in Kansas, Kickapoo Tribe of Oklahoma, Osage Nation, Shawnee Tribe, and United Keetoowah Band of Cherokee Indians in Oklahoma.

1. NIST shall consult with the SHPO to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate project adverse effects on archaeological sites eligible for the National Register.
2. NIST shall ensure that a determination, finding, or agreement is supported by sufficient documentation to enable any reviewing parties to understand its basis.
3. If human remains are discovered at any time during the implementation of this Project, the university shall follow the provisions of the Native American Graves Protection and Repatriation Act (25 USC Section 3001) and Alabama Burial Laws (Alabama Code 34-13-111).

V. DURATION

This MOA will expire if its terms are not carried out within three (3) years from the date of its execution. Prior to such time, USA may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VI below.

VI. MONITORING AND REPORTING

Six months following the execution of this MOA and every twelve (12) months thereafter for a duration of 36 months, until it expires or is terminated, USA shall provide all parties to this MOA a report summarizing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in USA's efforts to carry out the terms of this MOA.

VII. DISPUTE RESOLUTION

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, USA shall consult with such party to resolve the objection. If USA determines that such objection cannot be resolved, USA will:

A. Forward all documentation relevant to the dispute, including the USA's proposed resolution, to the Advisory Council on Historic Preservation (ACHP). The ACHP shall provide USA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, USA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. USA will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, USA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, USA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

C. USA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

VIII. AMENDMENTS

This MOA may be amended by any of its signatories when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the Alabama SHPO.

IX. TERMINATION

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

A. Once the MOA is terminated, and prior to work continuing on the undertaking, USA must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the Alabama SHPO under 36 CFR § 800.7. USA shall notify the signatories as to the course of action it will pursue.

B. Execution of this MOA by USA and SHPO and implementation of its terms evidence that USA has taken into account the effects of this undertaking on historic properties and afforded the SHPO an opportunity to comment.

X. ELECTRONIC SIGNATURE

Each party agrees a person may execute this document by electronic symbol or process attached to or logically associated with the document, with an intent to sign the document and by a method that must include a feature to verify the identity of the signer and the authenticity of the document, commonly referred to as verified electronic signature. Each party further agrees to accept in-person signature with ink for such party who agrees but does not wish to or have access to adequate technology to sign electronically.

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MEMORANDUM OF AGREEMENT
BETWEEN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY,
THE ALABAMA STATE HISTORIC PRESERVATION OFFICER, AND
THE UNIVERSITY OF SOUTH ALABAMA REGARDING
THE DEMOLITION OF ALPHA HALLS EAST AND SOUTH
551 UNIVERSITY BLVD N AND 555 UNIVERSITY BLVD N, MOBILE, ALABAMA

Signed:

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

_____

By: Phillip W. Neuberg, FAIA
Date:
NIST Federal Preservation Officer

MEMORANDUM OF AGREEMENT
BETWEEN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY,
THE ALABAMA STATE HISTORIC PRESERVATION OFFICER, AND
THE UNIVERSITY OF SOUTH ALABAMA REGARDING
THE DEMOLITION OF ALPHA HALLS EAST AND SOUTH
551 UNIVERSITY BLVD N AND 555 UNIVERSITY BLVD N, MOBILE, ALABAMA

Signed:

ALABAMA STATE HISTORIC PRESERVATION OFFICER

__ Lee Anne Hewett, Deputy SHPO Date:
Deputy State Historic Preservation Officer

MEMORANDUM OF AGREEMENT
BETWEEN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY,
THE ALABAMA STATE HISTORIC PRESERVATION OFFICER, AND
THE UNIVERSITY OF SOUTH ALABAMA REGARDING
THE DEMOLITION OF ALPHA HALLS EAST AND SOUTH
551 UNIVERSITY BLVD N AND 555 UNIVERSITY BLVD N, MOBILE, ALABAMA

Signed:

UNIVERSITY OF SOUTH ALABAMA

_____

By: Kristen C. Roberts, CP Date:

9

THIS PAGE RESERVED FOR ANY OTHER IDENTIFIED AND APPROVED SIGNATORY

Appendix A

Heritage Documentation Programs

HABS/HAER/HALS Photography Guidelines

November 2011, updated June 2015

Heritage Documentation Programs (HDP), part of the National Park Service, administers HABS (Historic American Buildings Survey), the Federal Government's oldest preservation program, and companion programs HAER (Historic American Engineering Record), and HALS (Historic American Landscapes Survey). Documentation produced through the programs constitutes one of the nation's largest archives of historic architectural, engineering, and landscape documentation. Records on over 40,000 historic sites, consisting of large-format, black and white photographs, measured drawings, and written historical reports, are maintained in a special collection at the Library of Congress, available to the public copyright free in both hard copy (at the Library of Congress Prints and Photographs Reading Room) and electronic formats (via the Library of Congress' website: http://www.loc.gov/pictures/collection/hh/).

HDP establishes the standards for the production of drawings, histories, and photography, as well as the criteria for preparing documentation for inclusion in the Collection currently recognized as the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation* (hereafter referred to as *Secretary's Standards*). The resulting documentation comes from three sources today. The Washington Office produces documentation in-house directing field teams (made up primarily of students) all over the country. HDP also receives documentation from the mitigation program satisfying Sections 106/110 of the National Historic Preservation Act. This material is often generated by the individual states plus regional offices of the National Park Service. Those preparing mitigation documentation should contact the appropriate regional National Park Service office or the HDP Washington staff with questions and for review of materials. A third source of documentation comes from donated documentation from interested members of the public, such as student-work in university programs or consultants in the preservation field. The following guidelines are intended to provide an overview of the large-format photographic component of the documentation.

General Guidelines

Film

Film continues to be the best way to store visual information about architecture and engineering for the long term, which is why it is still the standard in the HABS, HAER, and HALS collections. Photographs taken and printed for HABS, HAER, or HALS, in accordance with the *Secretary's Standards* are made from large-format, black and white film. The images are perspective corrected in the field at the time of capture using a view camera. Large-format (4x5, 5x7, and 8x10) refers to the size of the negative in inches, not the print.

The large-format negative is preferred for two reasons: longevity of the film and clarity of the image. The material stability of cut sheet film satisfies the archival requirements for longevity

(500 years), while the clarity of the resulting image comes from a high level of resolution not possible in smaller film formats. Film can always be digitized but exclusively digital information may not always be recoverable due to the vulnerabilities of digital data including media degradation, hardware and software obsolescence, file format migration, proprietary formats, etc. In addition, maintenance of digital archives is much more expensive than maintenance of film archives. While the growing field of digital photography has resulted in decreased availability of some film processing materials and equipment, there still continues to be a broad range of materials available. While there is currently a wide range of film materials available for photographers, photographers may need to anticipate their film and chemistry needs in advance. Therefore, these guidelines reflect the changes in the availability of the necessary materials for producing large-format negatives and prints.

Equipment

The following is a list of recommended equipment to produce large-format photographs that meet the *Secretary's Standards*.

- **Camera:** A large-format view camera with ample movement for perspective correction must be used. Acceptable film formats are 4x5, 5x7, and 8x10. The 5x7 size has long been preferred due to its ability to capture context and structures both long and tall.

- **Lenses:** The minimal complement of lenses includes a sharp rectilinear wide angle, a normal, and a mildly telephoto lens. In the 4x5 format, this would translate to a 65mm, 90mm, 150mm and a 210mm lens. *It is very important to choose lenses that will allow ample movement of both front and rear standards of the camera without vignetting*.

- **Filters:** Use of yellow, orange, and Polarizing filters are recommended in appropriate conditions because of their ability to clarify and reveal details and other information about the structures being documented.

- **Film:** Use polyester-based film when producing HABS, HAER, or HALS photographs. Acceptable polyester-based films include those of medium and slow speed (100 and 400 ASA) produced by Kodak, Ilford, and others. When ordering any film, please ascertain that the base of the film is polyester and not acetate (the old safety film). Acetate must be avoided because the fumes it gives off break down the emulsion, causing the film to curl.

- If continuous tone copy photographs are required for the project, it is best to make these using an orthochromatic copy film specifically manufactured for this purpose. As of November 2011, Ilford Ortho Plus black-and-white film is still available. Kodak recommends using Kodak T-max 100 as a replacement for their discontinued copy film.

  HDP now recommends making line copies of drawings by scanning the originals onto vellum. These can either be transmitted as part of the formal documentation with the appropriate HABS, HAER or HALS title block and adjustments made to insure clarity or legibility, or they can be included in the field records. Line drawings can also be

included as figure pages in an appendix to the historical reports, but again, they must be legible.

Note: If existing drawings or photographs are scanned or photographically copied, a copyright release form *must* be obtained if the drawings are not in the public domain. More information on copyright law and a copyright release form are available at: http://www.nps.gov/hdp/standards/copyright.htm

- **Aerial Photographs:** Aerial photographs are generally used to record large complexes, historic districts and landscapes, as well as geographic or urban contexts. Recommended flying altitude ranges from a low of 150' to 1,000' or more for broader contextual views. Helicopters are preferred over fixed-wing aircraft due to their greater maneuverability. Ideally, the helicopters should be equipped with a sliding door that can be opened while in flight, otherwise the door will have to be removed. Minimum format 4x5 cut film or 5 inch-wide aerial roll film is recommended. Older hand-held press cameras using cut film holders will allow the photographer to use the film of his or her choice and avoid the problem of getting aerial roll film developed. The use of 400 ASA speed film is recommended for adequate shutter speed that will minimize the effects of vibration degradation in the image. The highest shutter speed possible should be used. Yellow and orange (G) filters are recommended to reduce haze and increase contrast.

Views Required

The following are suggested views for various types of structures, but the required views will ultimately depend on the project specifications and the focus of the documentation. A scale device must be included in specific views to show the size of the object recorded, particularly in documentation for the main façade of a building. The direction, such as the cardinal point from which the view was taken or the direction a building is facing, should be noted in the accompanying Index to Photographs.

Architectural Structures:

- General or environmental view(s) to illustrate setting, including landscaping, adjacent building(s), and roadways.
- Front façade, with and without a scale stick.
- Perspective view, front and one side.
- Perspective view, rear and opposing side.
- Detail, front entrance and/or typical doorway.
- Typical window.
- Exterior details, such as chimney, clerestory, oriel, date stone, gingerbread ornamentation, or boot scrape, indicative of era of construction or of historic and architectural interest.
- Interior views to capture spatial relationships, structural evidence, a typical room, and any decorative elements; these include hallways, stairways, attic and basement framing, fireplaces and mantels, moldings, interior shutters, kitchen (especially if original), and mechanicals.

- If they exist, at least one view of any dependency structures, such as privies, milk or ice houses, carriage houses, sheds, detached garages, or barns. These structures need to be identified in the Index to Photographs.

Engineering and Industrial Structures:
This encompasses a wide variety of structure types, such as manufacturing complexes, bridges, locks and dams, and mines. The buildings and structures housing the industrial process should be captured with the types of views outlined above and special attention should be paid to the equipment involved in the flow and transformation of material going through the building. This can include:

- Any extant machinery and equipment, also capturing the spatial arrangements.
- Machinery details, such as the governor on a turbine, valves of a steam engine, or the gearing in machines like fabric looms, or other details that reveal a machine's function like the cone of a rock crusher or drum of a shredder.
- Power transmission systems, such as line shafting.
- General views and details of structural framing systems, including roof trusses and floor beam systems and pedestals that supported the building structure and the equipment and machinery.

Bridges:

- General views of all sides.
- Detail views of portals, portal connections, upper chord connections, vertical members, traffic deck, bridge plates, manufacturer's badge and any decorative features.
- If accessible, the traffic deck support system (such as floor beams and stringers viewed from underneath the bridge).
- Abutments and approach details.

Linear resources:
For canals, railroads, or roads; the photographs should be organized in a logical progression with the captions including mile markers. The following types of views should be captured along with views of the resource itself:

- Significant or typical structures; depending on the resource, this might include culverts, retaining walls, bridges, or locks and dams.
- Contextual shots that illustrate the resource's path through the landscape.

Watercraft:
The captions for watercraft do not include cardinal directions; rather, the maritime terms of aft, forward, starboard, and port are used. In addition, on larger ships, the deck names or numbers must be identified. The following should be captured, depending on whether the watercraft uses mechanical or sail propulsion:

- Elevations of port, starboard, bow, and hull.
- General deck views.
- Details of deck machinery, such as windlasses, as well as propulsion systems.
- Details of ship or vessel that relate directly to its specialized functions. These images should answer what the vessel actually does.

- Sailing rig.

Cultural Landscapes:
Possible subject matter could include formal gardens, ranches, or city parks, with an emphasis on capturing the broader context of landscape design, use, and geography. Aspects of a cultural landscape to capture including the following:

- Contextual views of the landscape under various seasonal conditions; aerial photographs can be especially helpful.
- General landscape views.
- Structures and structural elements, such as fences and hardscaping.
- Views capturing the spatial relations of buildings, structures, and the landscape.
- Vegetation should be identified with both common and botanical names in the Index to Photographs.

Processing

All films and prints are processed according to the manufacturer's specifications using fresh chemistry. The developer should be replenished according to the manufacturer's recommendations or replaced after each batch of film is processed. All film is treated in a hypo clearing bath between water rinses. Increased image permanence can be achieved by adding 3 ounces of selenium toner to each gallon of stock clearing agent, such as Perma-Wash (manufactured by Heico Inc., Delaware Water Gap, Pennsylvania). The final water rinse for the film is the amount of time it takes to completely eliminate hypo from the surface of the film or paper. This can range from 5 minutes to 60 minutes for film. Clearing hypo from double-weight prints, depending on how many prints are being washed at one time, may take much longer. Testing for residual hypo in negatives and prints will help minimize washing time and reduce water waste.

> **Note:** Film and prints developed by automatic processors have repeatedly failed tests for residual hypo. Thus they are not archivally stable and will not be accepted for inclusion in the HDP collection at the Library of Congress.

Prints

Size: All prints are produced at contact print size (e.g. the image area of the print will be the same exact size as the negative), whether digitally or in the wet photo lab. Contact sheets must have the black (bleed) margins of the entire sheet of film to reveal all the detail in the picture area plus the clear film margin. This insures that no cropping of the image has taken place. Same-size enlargements do not meet the *Secretary's Standards*. Prints must include the margins or borders of the film

Paper: *Resin-coated papers of any kind are not archival and will not be accepted for inclusion in the HABS, HAER, and HALS collections in the Library of Congress*. Double-weight paper is now accepted since little, if any, single-weight paper is being manufactured. Photographers

wishing to make traditional contact prints may be able to obtain contact printing paper from the following source:

Smith/Chamlee Photography
P.O. Box 400
Ottsville, PA 18942
610-847-2005

Smith/Chamlee is the only known producer of contact printing paper and is an acceptable replacement for Kodak's discontinued Azo paper. Enlarging paper is another acceptable alternative, but the print results will not be as good as those obtained using slower speed contact printing paper.

Digital Prints: The increasing availability of archival photographic inkjet printing has led HDP to develop methods of printing large-format photographs on archival inkjet paper using pigment or carbon inks. The digitally produced prints must be of equivalent quality to the traditional photographic contact print and be a true representation of the negative including the borders. Digital contact prints can be made from TIFFs by scanning the film and printing it on 100 percent cotton, acid-free matte paper using pigment or carbon inks on an inkjet printer. The paper/printer/ink combination used for the digital prints must have a permanency rating of 150 years or greater by an independent rating organization. For suggestions on workflow for printing large-format photographs, see Appendix 1.

Labeling

The large-format negatives, prints, and photograph sleeves must be labeled with the appropriate HABS, HAER, or HALS number and view number. Please see the Transmittal Guidelines for specific instructions, available at: http://www.nps.gov/hdp/standards/Transmittal.pdf

Index to Photographs

Every set of photographs submitted to HABS, HAER, or HALS is accompanied by a list of captions. These should be submitted in both hard-copy and electronic format as outlined in the Transmittal Guidelines. The captions should include appropriate directional information and any significant details. Site plans or maps with locations of photographs denoted are encouraged, particularly on complex sites or those with several buildings. Please see the Transmittal Guidelines for additional information, available at:
http://www.nps.gov/hdp/standards/Transmittal.pdf

Contacts
Heritage Documentation Programs, Collections Management
hdp_collections@nps.gov

Appendix 1: Creating Digital Print Cards

Heritage Documentation Programs (HDP) has developed the following procedure to produce digital contact prints (instead of wet contact prints) that meet both HDP standards and the archival requirements mandated by the Library of Congress. The basic suggested procedure is the same for both black-and-white prints and color transparencies. This process creates a print card that mimics the photo mount cards HDP has used for decades. HDP photographers developed this method as an efficient way to produce digital print cards. Results may vary based on hardware, software, and scanning environment.

Creating the digital file:

- Scan image emulsion side facing light source on a flatbed scanner with Anti-Newton glass.
- Crop scanning area to include film margins.
- Scan images at a resolution of 5000 pixels across, about 800 ppi for 5x7 negative, to yield a file roughly 18-20 MB for a black & white image and save as an uncompressed TIFF.

Creating the digital print (e.g. photo mount card with image):

- Create a new folder with copies of images for mounting.
- Downsize all images to 400 ppi, for printing ease.
- Mount images upon a 400 ppi black canvas (i.e. 4.75" x 6.76" image area upon a 5" x 7" black canvas) for size uniformity, then flatten to reduce image size.
- Create a new canvas with the dimensions 8.5" x 11" at 400 ppi and copy the image onto that canvas. The image should be centered and the actual image size.
- Using horizontal text tool (Times New Roman, 12 pt., black font) on the overlay grid, create a text box in the upper right-hand corner. The following is an example of what the box must contain:

HISTORIC AMERICAN LANDSCAPES SURVEY
SEE INDEX TO PHOTOGRAPHS FOR CAPTION
HALS No. CA-42-1

Do NOT flatten after this step in case you need to modify the text.

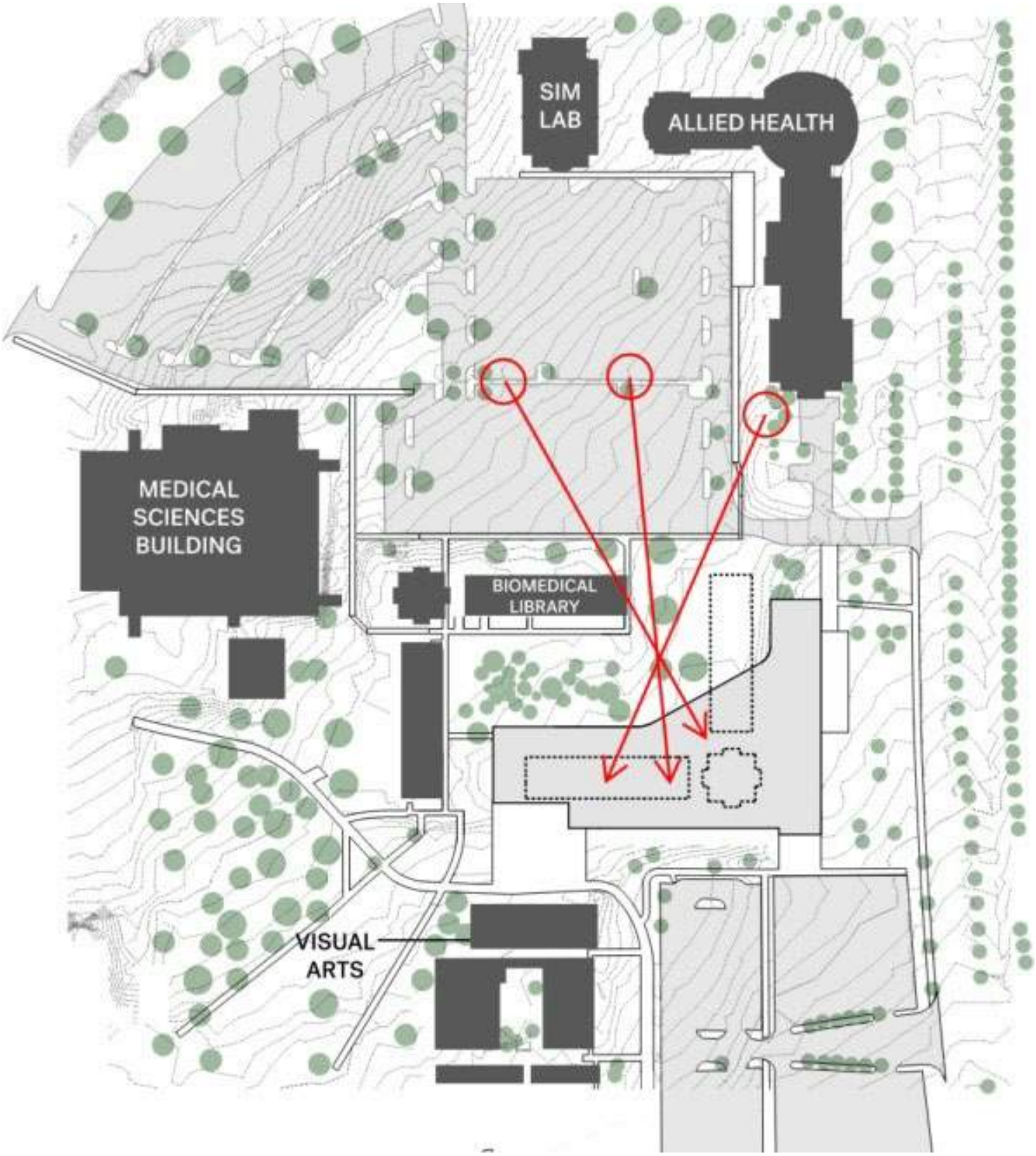
Printing:

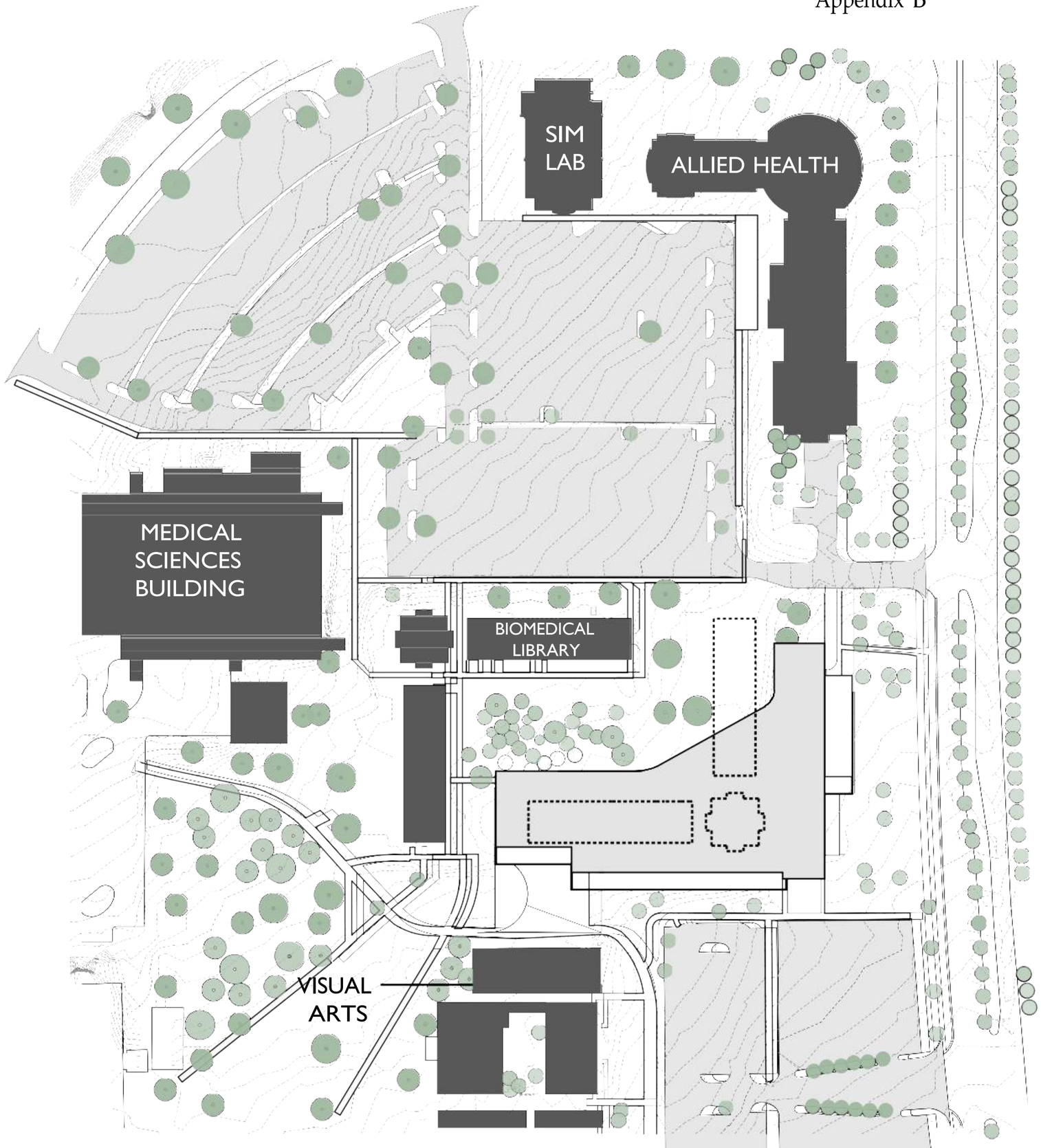
- The print quality should be set to the highest, neutral monochrome settings (unless it is a color image).
- Batch all print cards in one folder and print from folder as “full sheet fax” to prevent image compression and to maintain actual size.
- Print entire folder or use rip software.

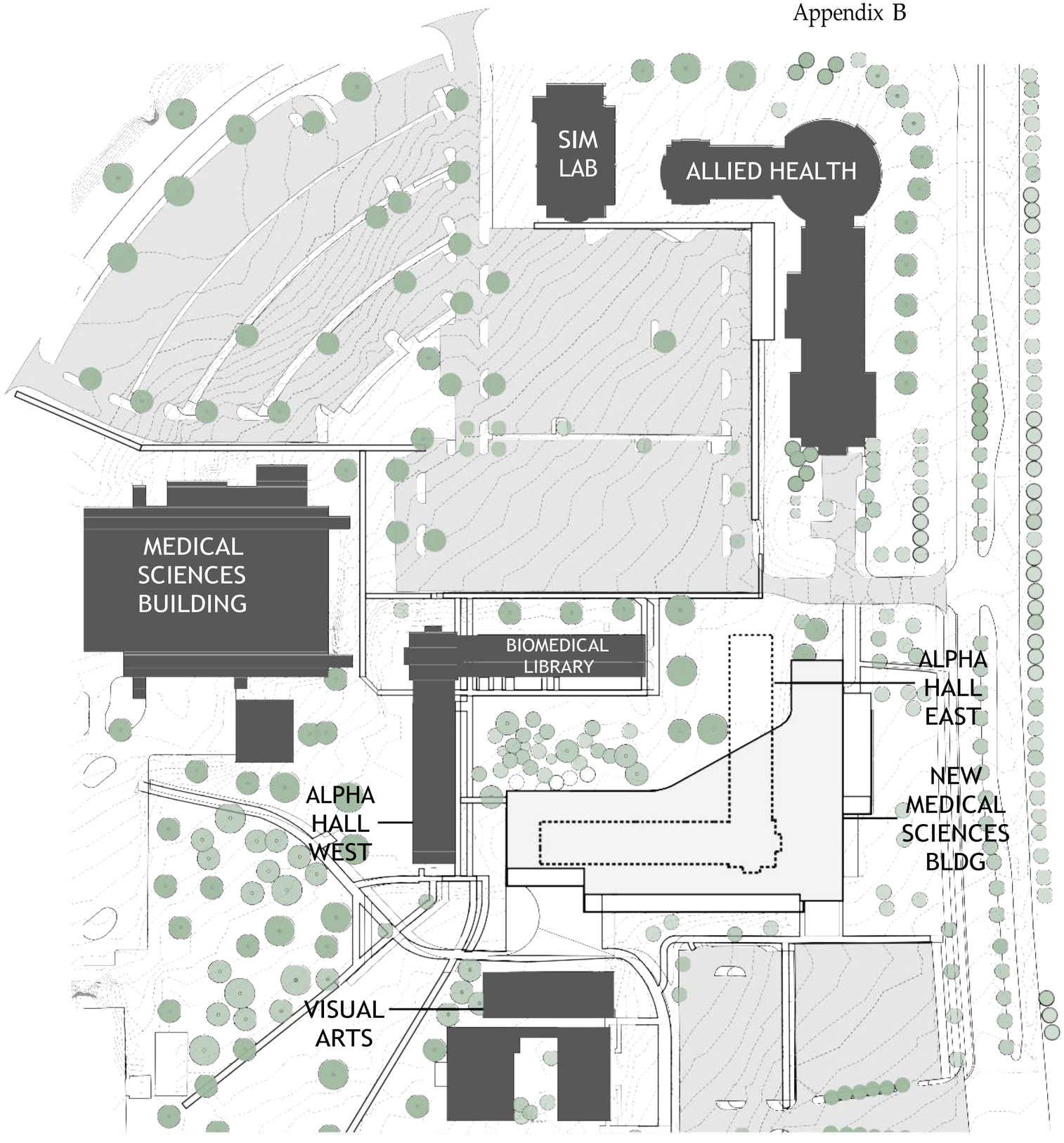
Appendix B

The attachments following this page are in reference to the proposed new construction of the University of South Alabama Medical Facility. Materials include a site plan, elevations, and renderings within the context of remaining structures.

Appendix B


SIM LAB
ALLIED HEALTH
MEDICAL SCIENCES BUILDING
BIOMEDICAL LIBRARY
VISUAL ARTS


SIM
LAB
ALLIED HEALTH
MEDICAL
SCIENCES
BUILDING
BIOMEDICAL
LIBRARY
VISUAL
ARTS

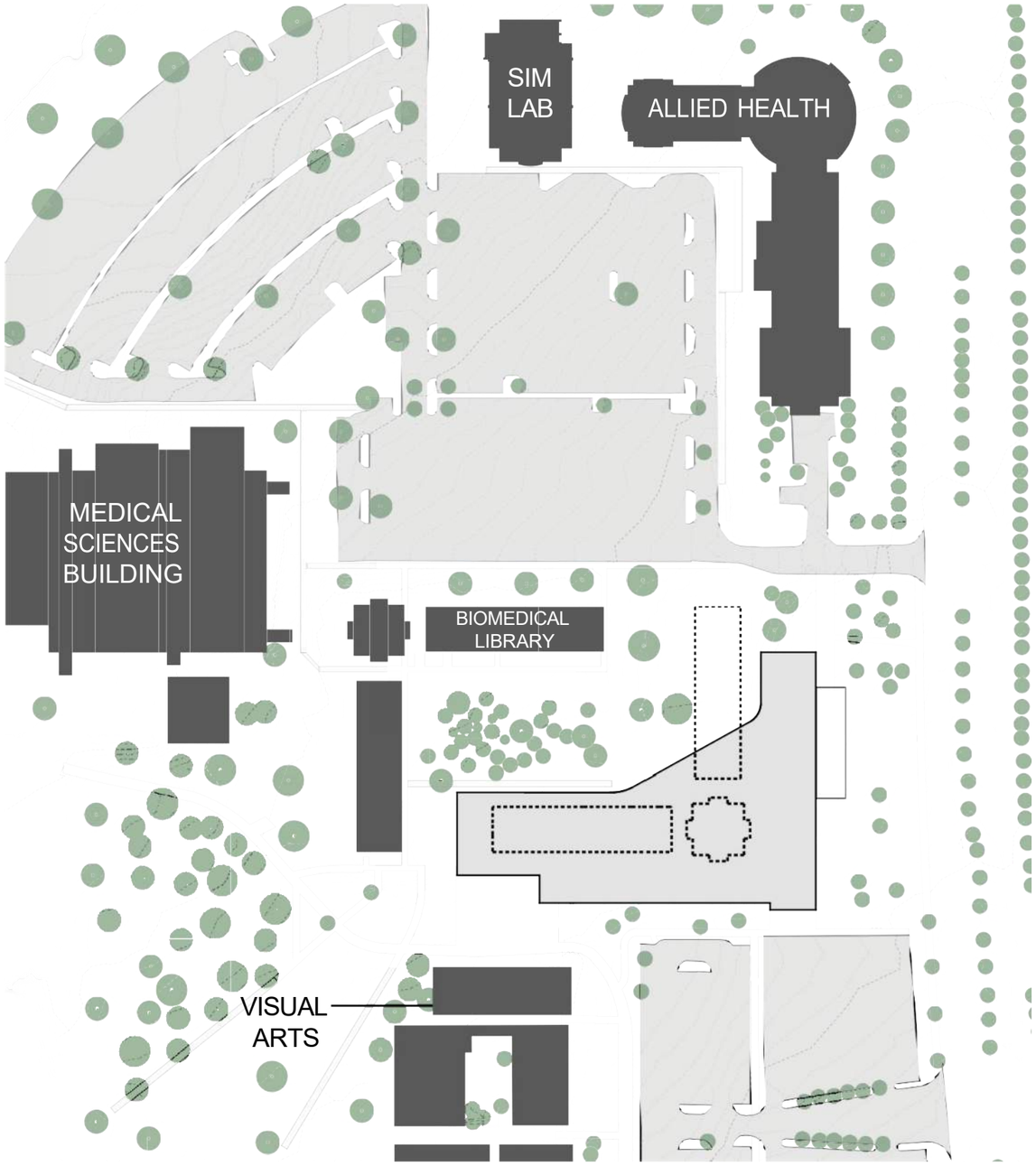


Detail of USA Campus Showing the Location of the Proposed New Medical School

N.T.S.

Massing

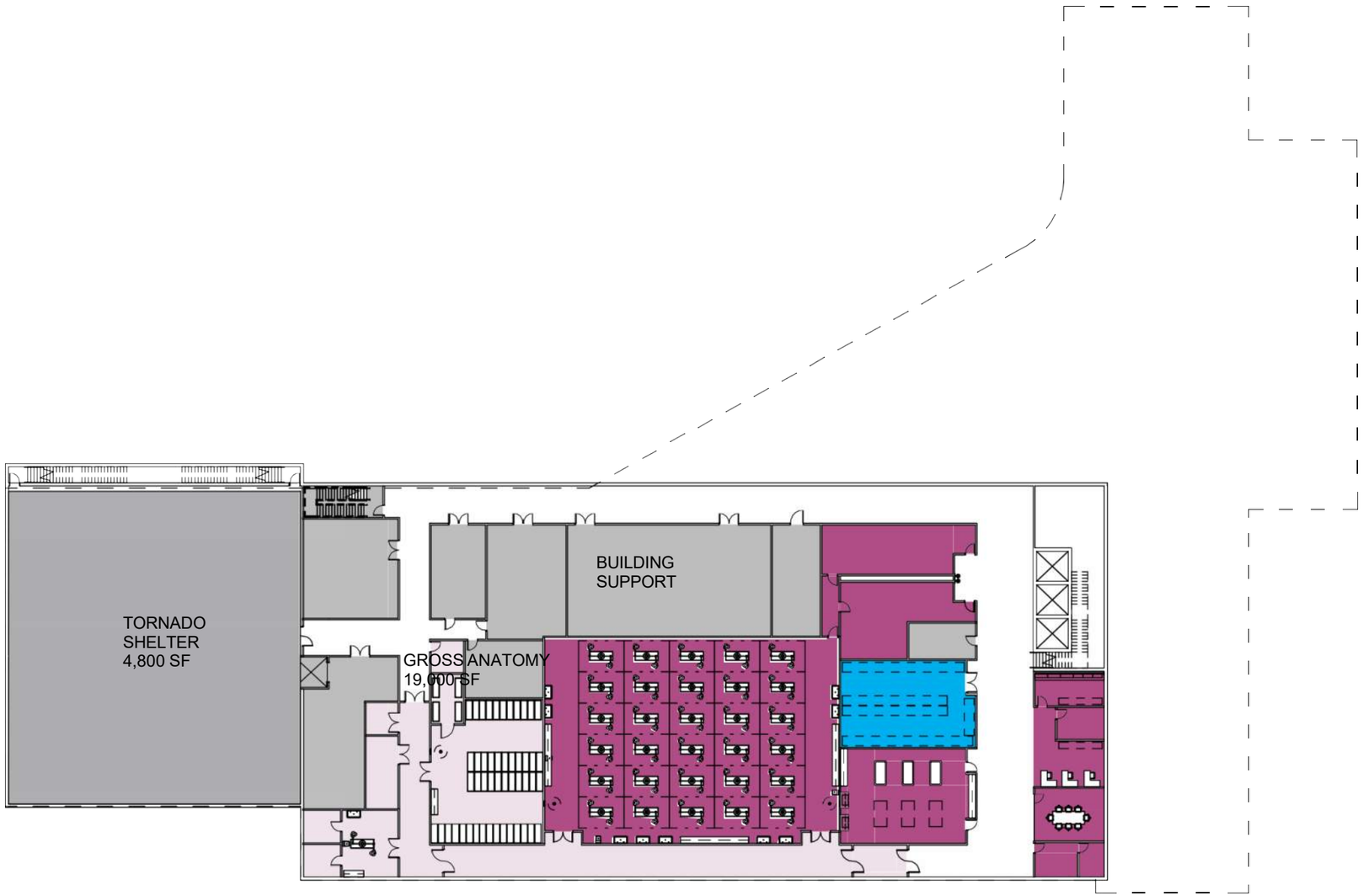
New Building Footprint

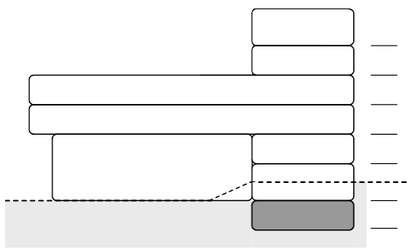


Existing Alpha Hall East

BASEMENT

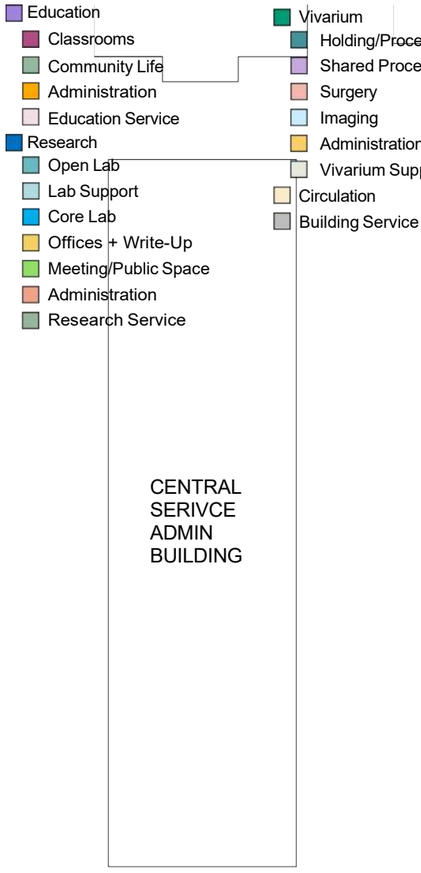
- Education
  - Classrooms
  - Community Life
  - Administration
  - Education Service
- Research
  - Open Lab
  - Lab Support
  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
  - Research Service
- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service

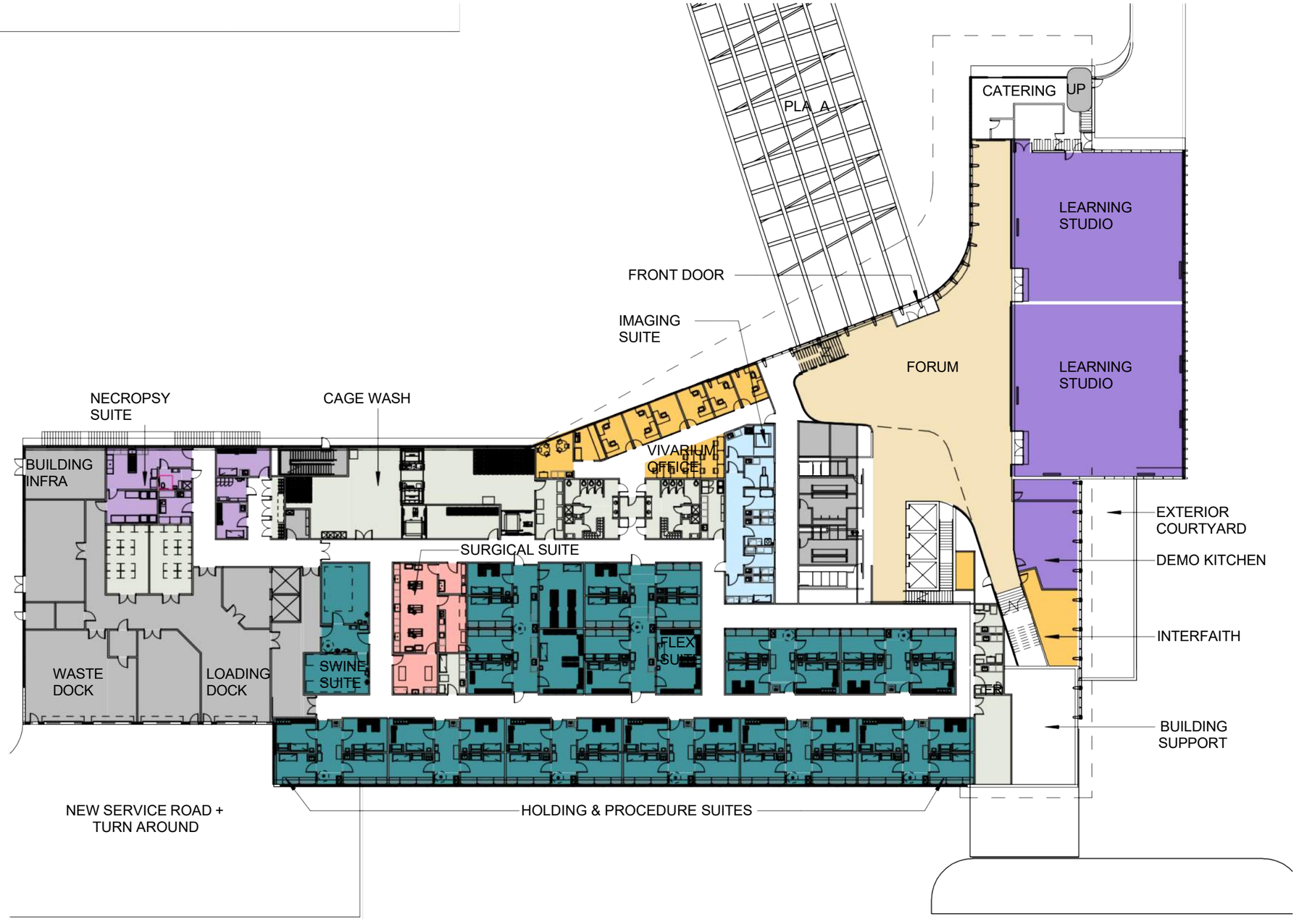




LEVEL 01

- Education
  - Classrooms
  - Community Life
  - Administration
  - Education Service
- Research
  - Open Lab
  - Lab Support
  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
  - Research Service
- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service





LEVEL 1.5

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  - Community Life
  - Administration
  - Education Service
- Research
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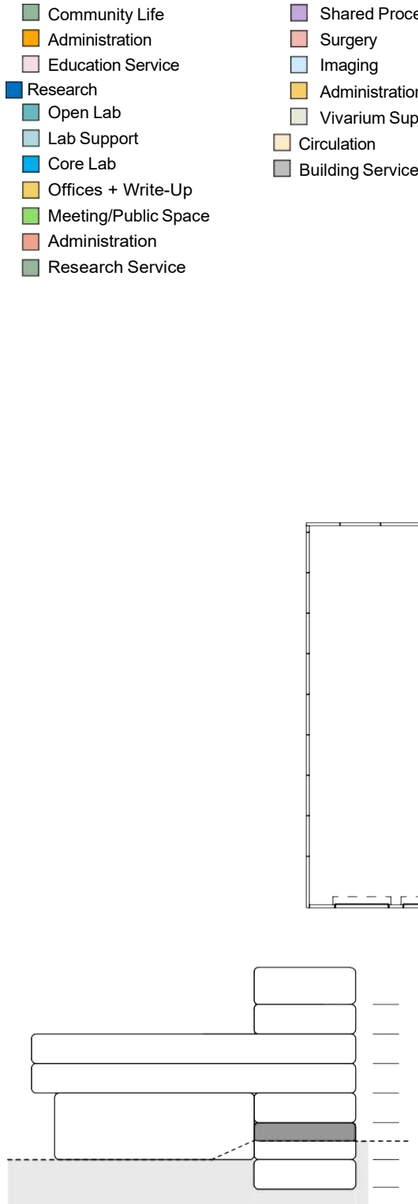
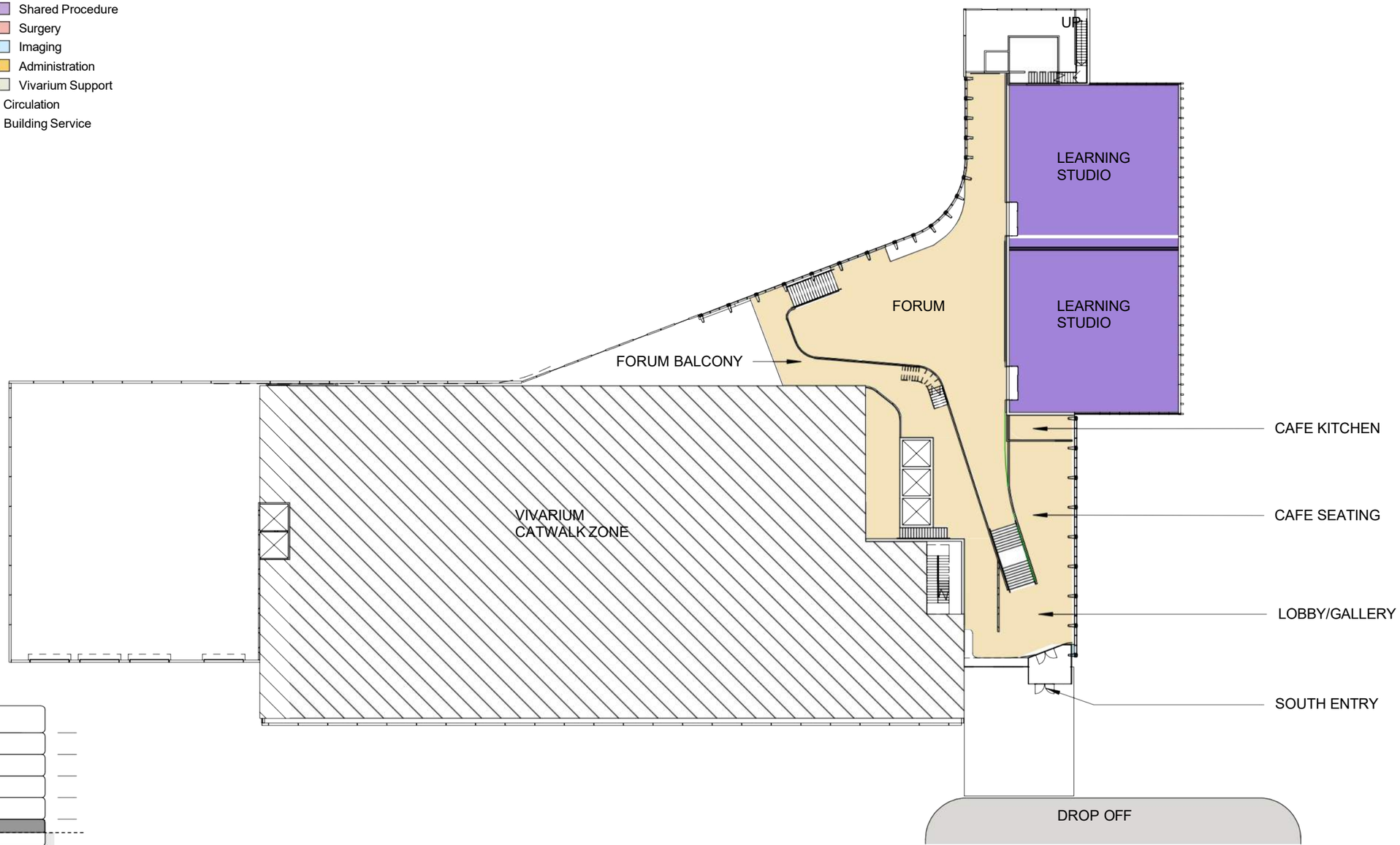
  - Lab Support
  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
  - Research Service
- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service





LEVEL 02

- Education
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  - Education Service
- Research
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  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
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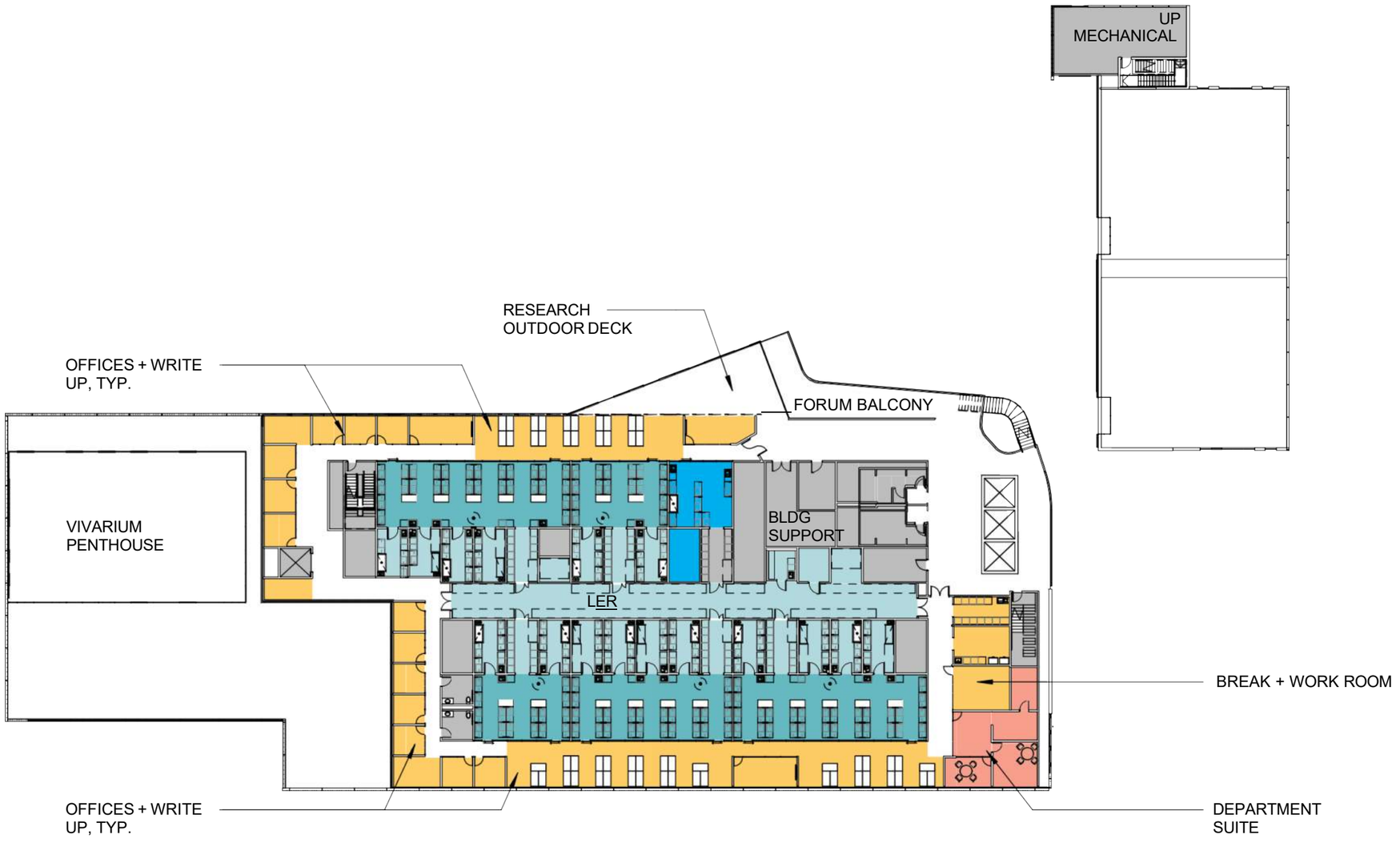
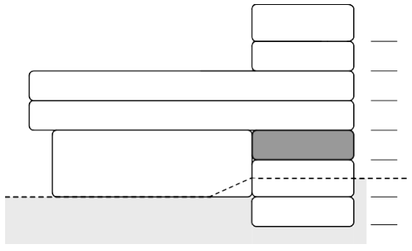
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service





LEVEL 03

- Education
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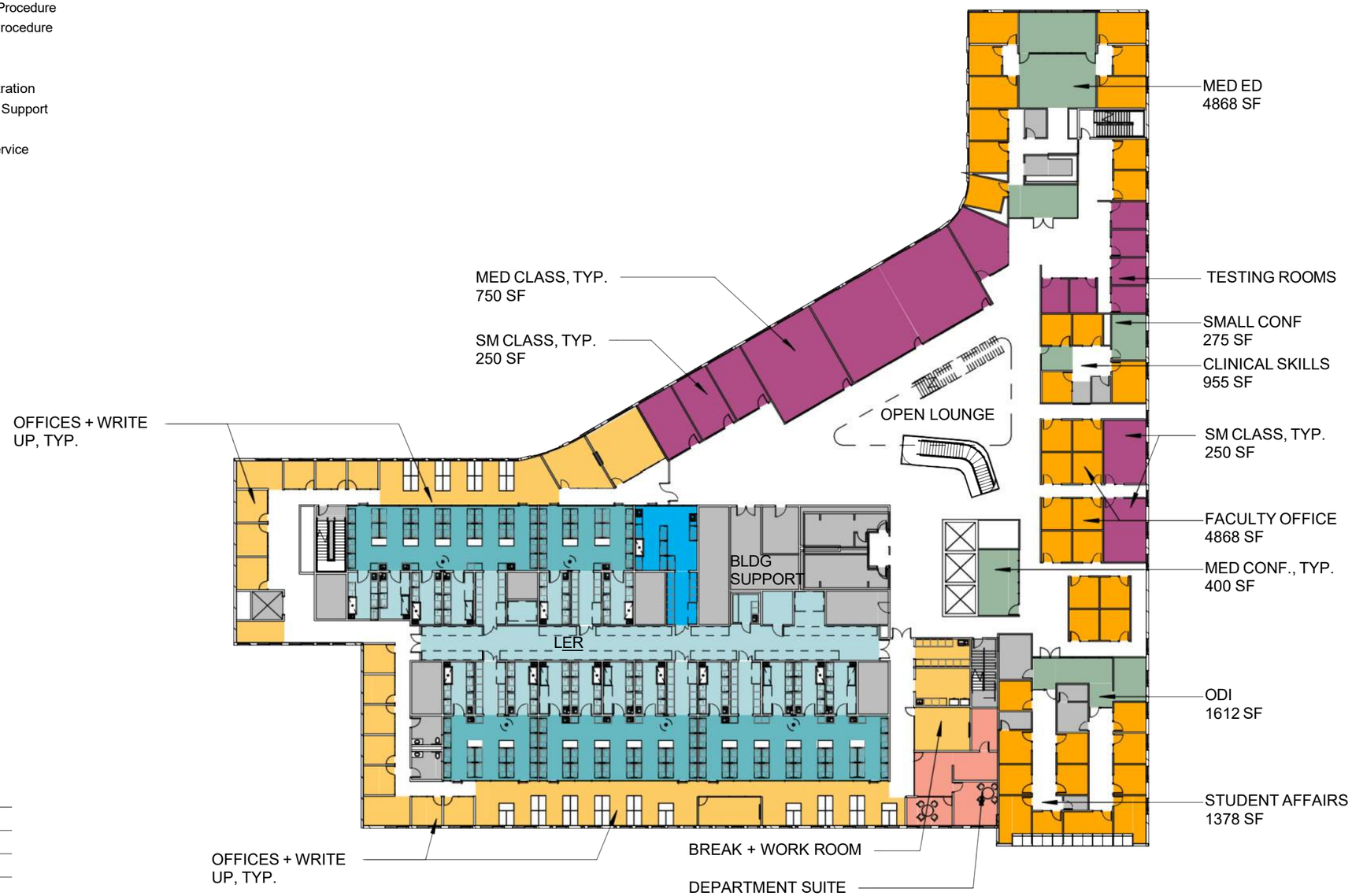
  - Administration
  - Education Service
- Research
  - Open Lab
  - Lab Support
  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
  - Research Service
- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service



LEVEL 04

- Education
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  - Administration
  - Education Service
- Research
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  - Lab Support
  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
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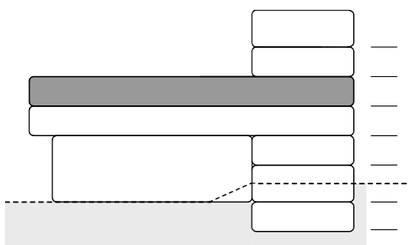
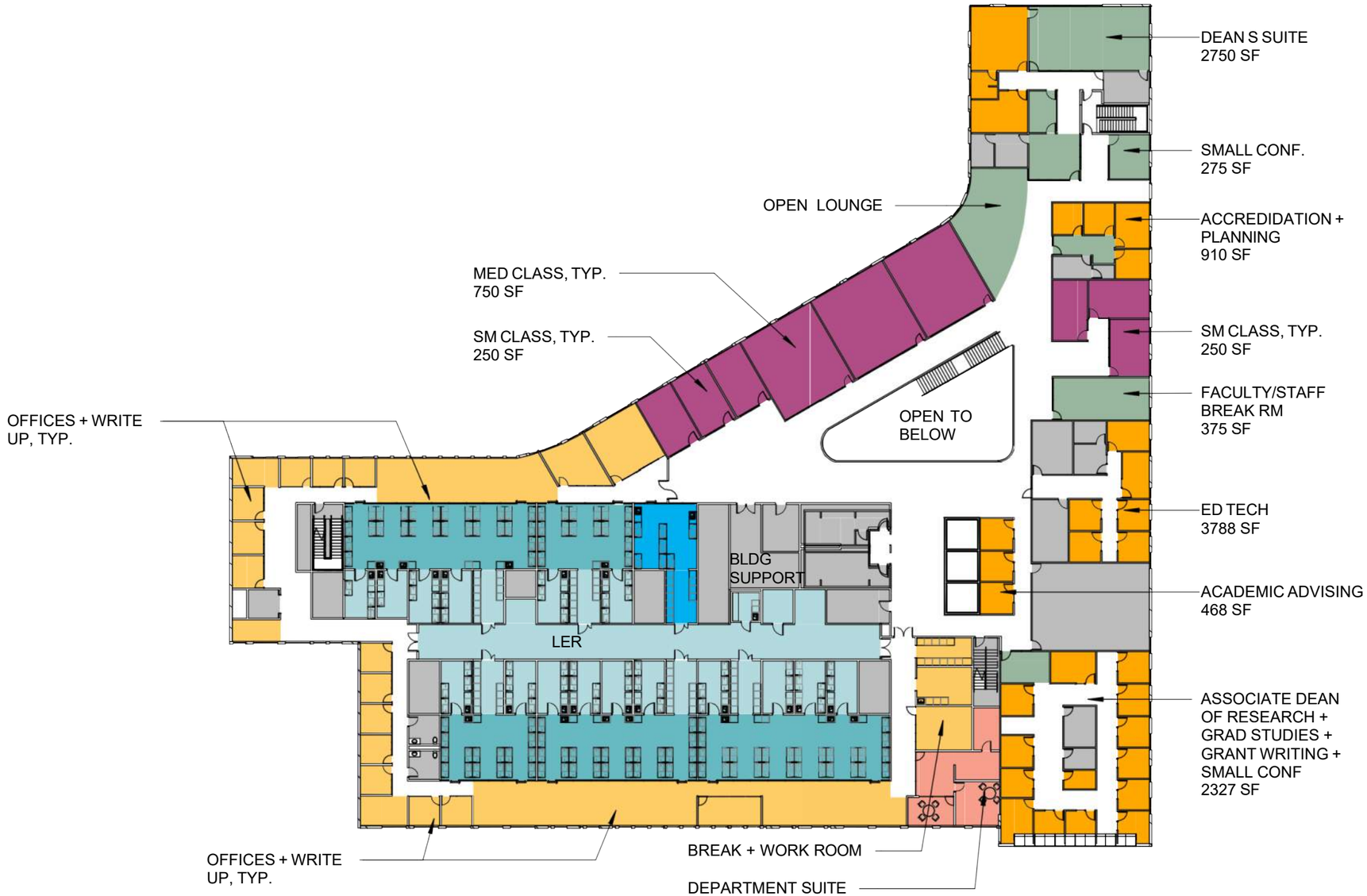
  - Research Service
- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
  - Administration
  - Vivarium Support
- Circulation
- Building Service





LEVEL 05

- Education
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- Research
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  - Core Lab
  - Offices + Write-Up
  - Meeting/Public Space
  - Administration
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- Vivarium
  - Holding/Procedure
  - Shared Procedure
  - Surgery
  - Imaging
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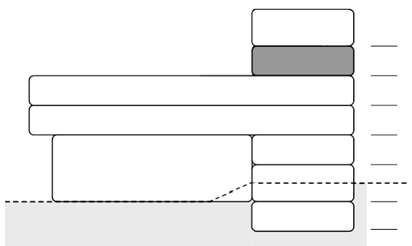
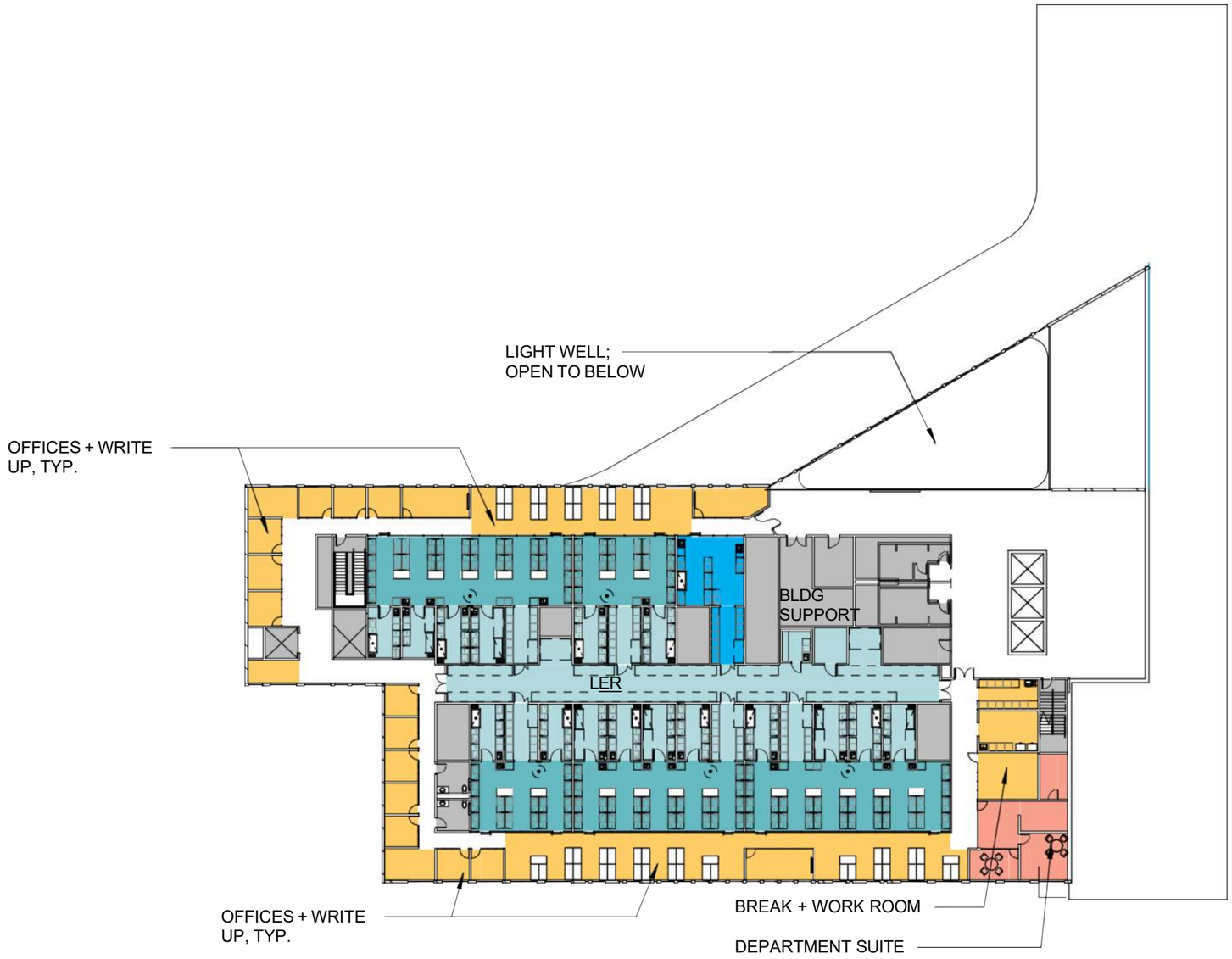
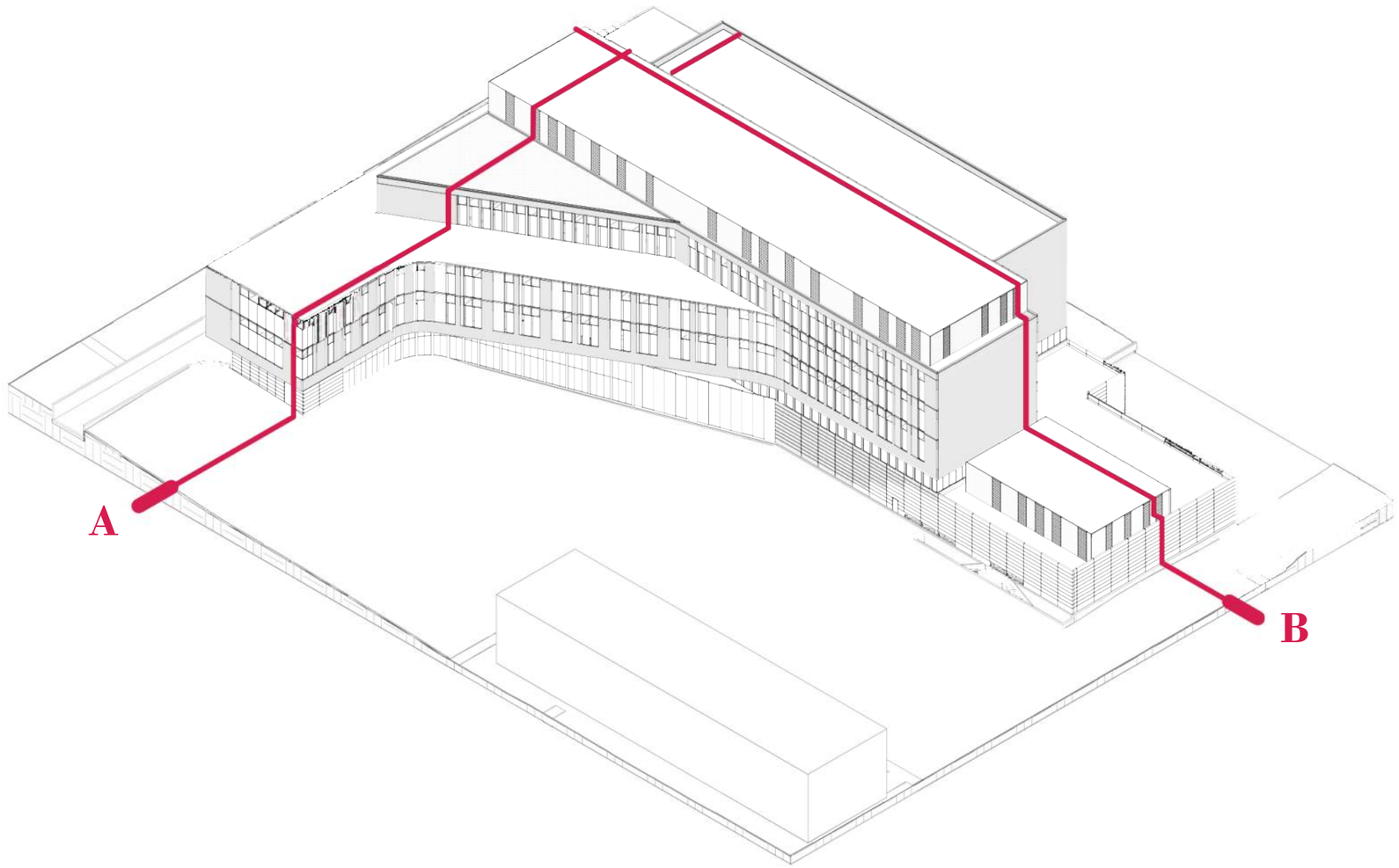
- Circulation
- Building Service



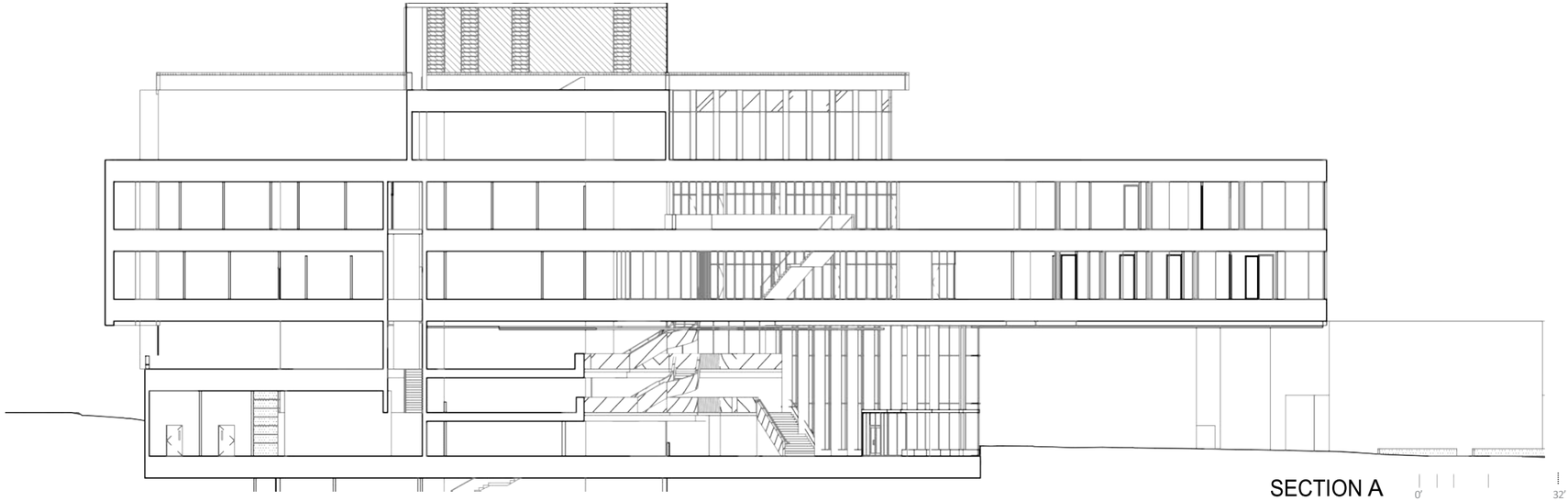


CAMPUS ARCHITECTURE

USA's campus features recurring building elements that create a distinct architectural language. This language is anchored by Rosewood Velour Modular brick masses with vertical or punched windows. Expanses of curtain wall signify entry and take advantage of indirect Northern light. Cast stone building components (cladding, capitals, site walls, etc.) draw inspiration from the formal expression of nearby campus buildings.



BUILDING SECTION LOCATION REFERENCE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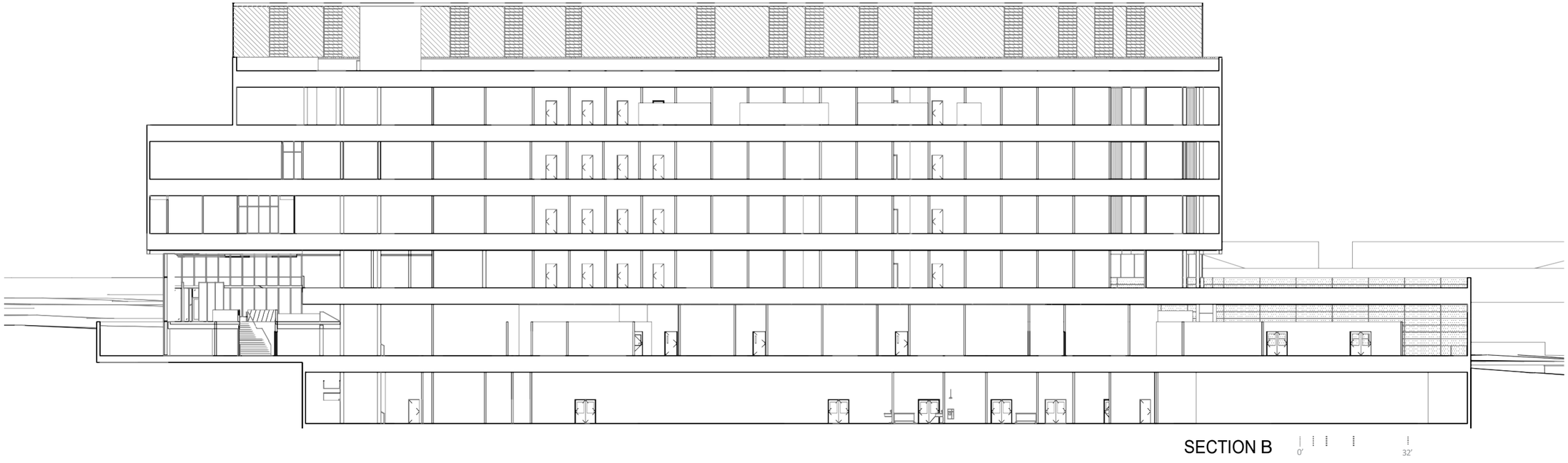
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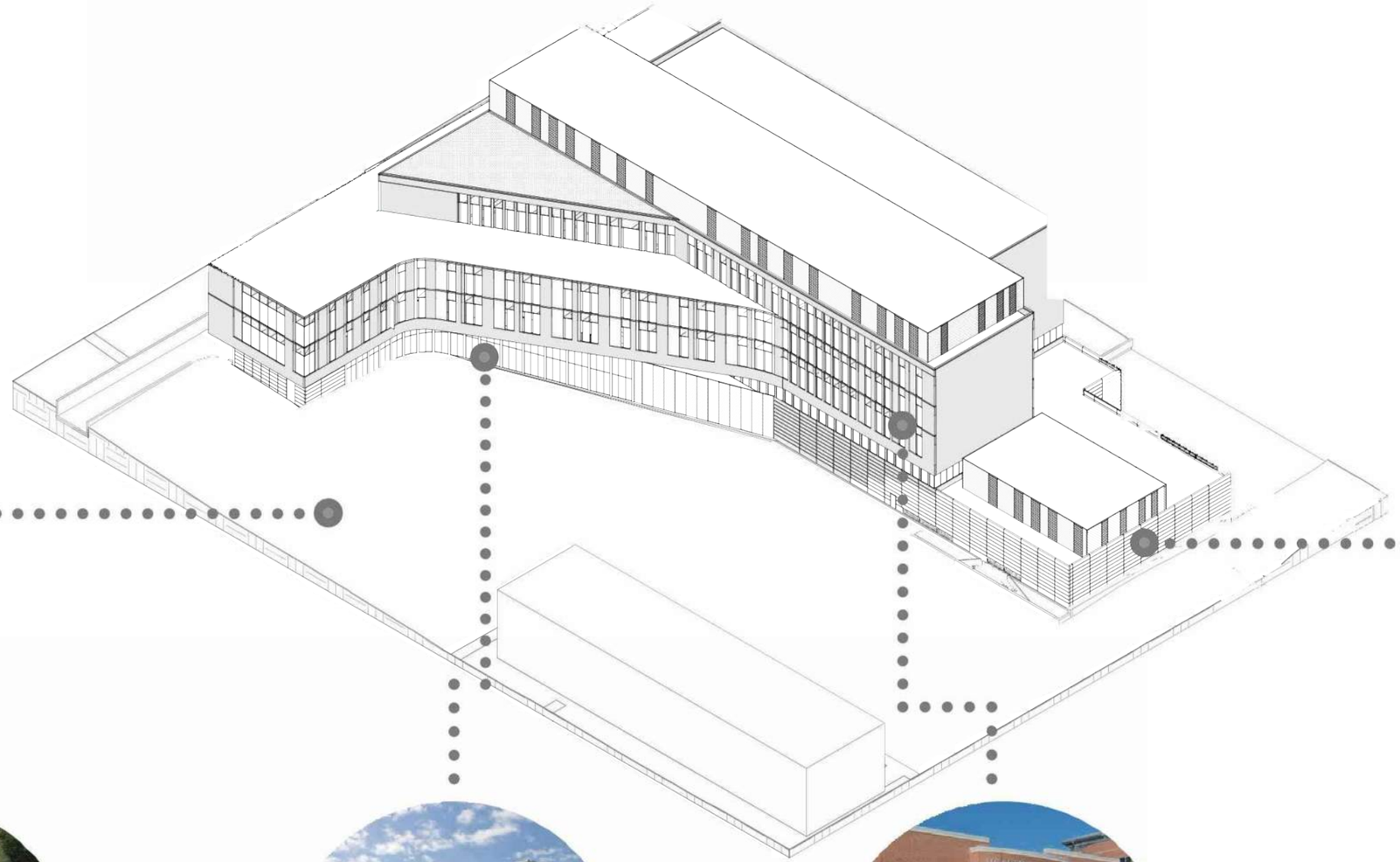


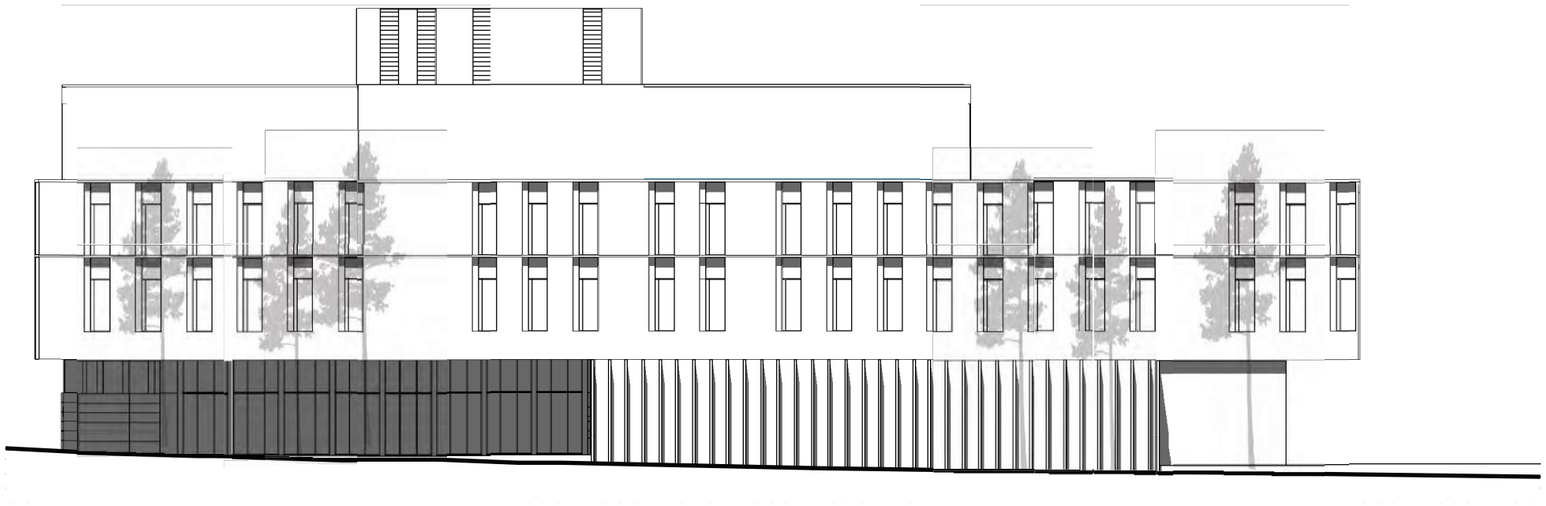
PLAZA PAVING

CURTAIN WALL

VERTICAL WINDOWS

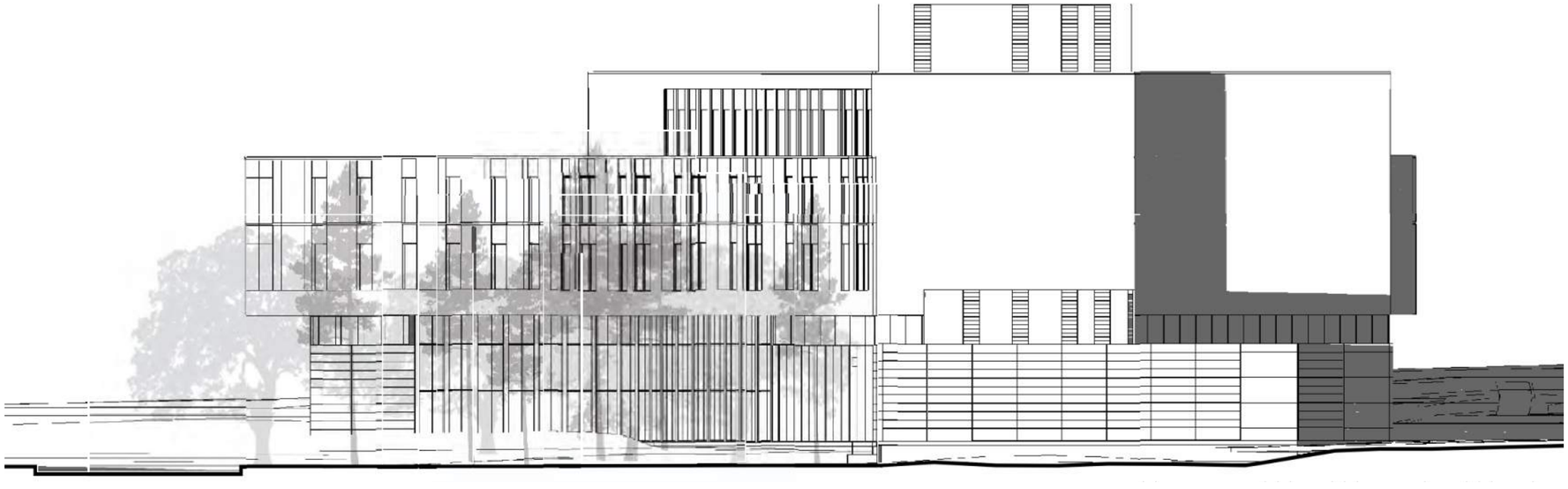
STONE WATER LINE

EXTERIOR BUILDING ELEVATIONS

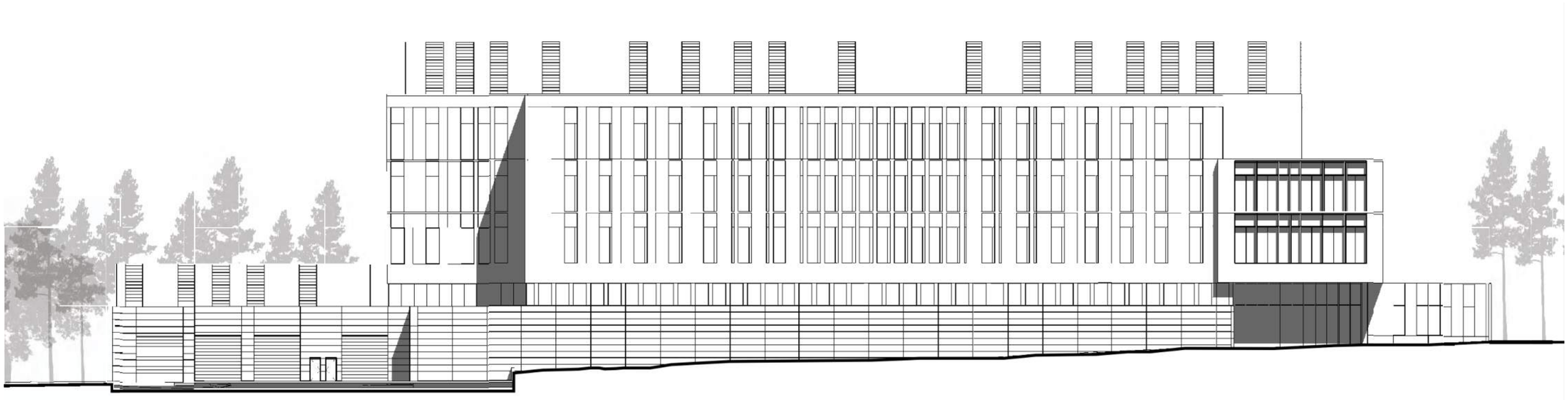


EAST

NORTH



WEST



SOUTH

HORIZONTAL SLIP

VERTICAL PATTERN

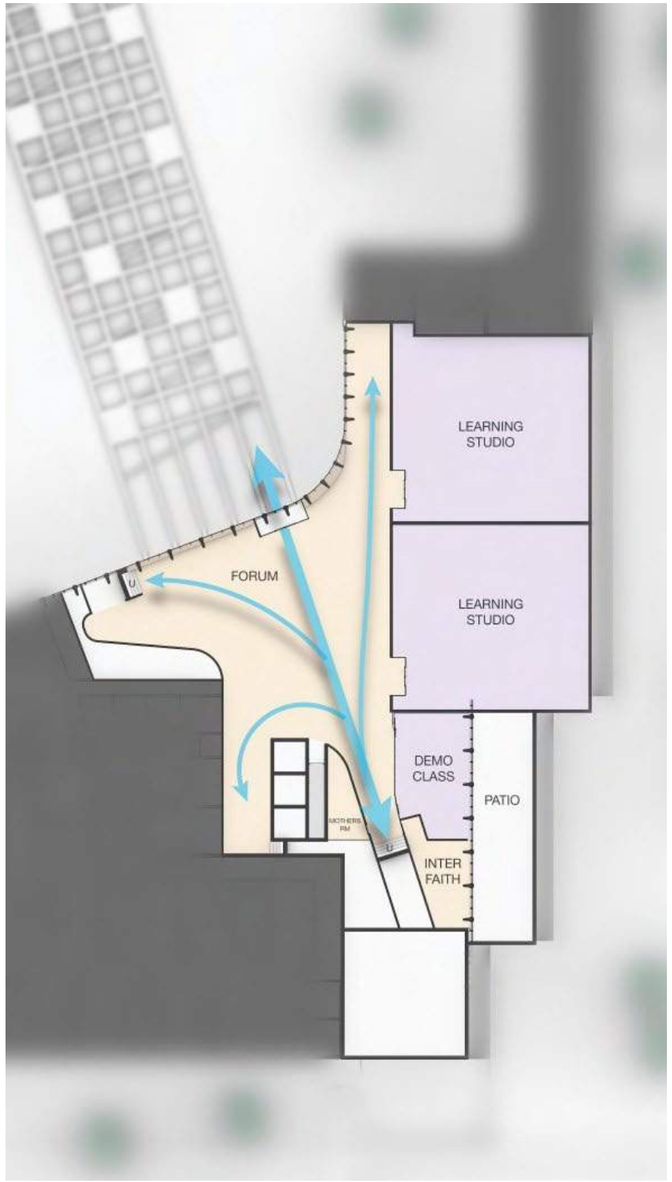
RECESSED PLANE

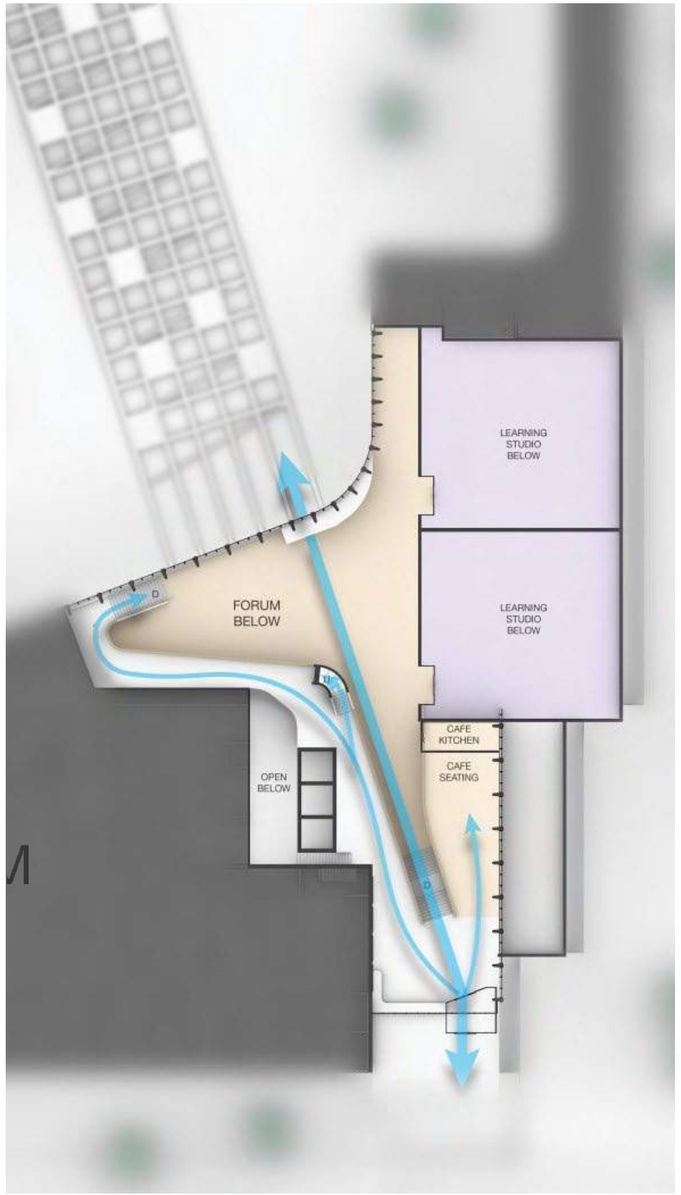
VIEW OF SOUTH ENTRY, FROM N UNIVERSITY BLVD

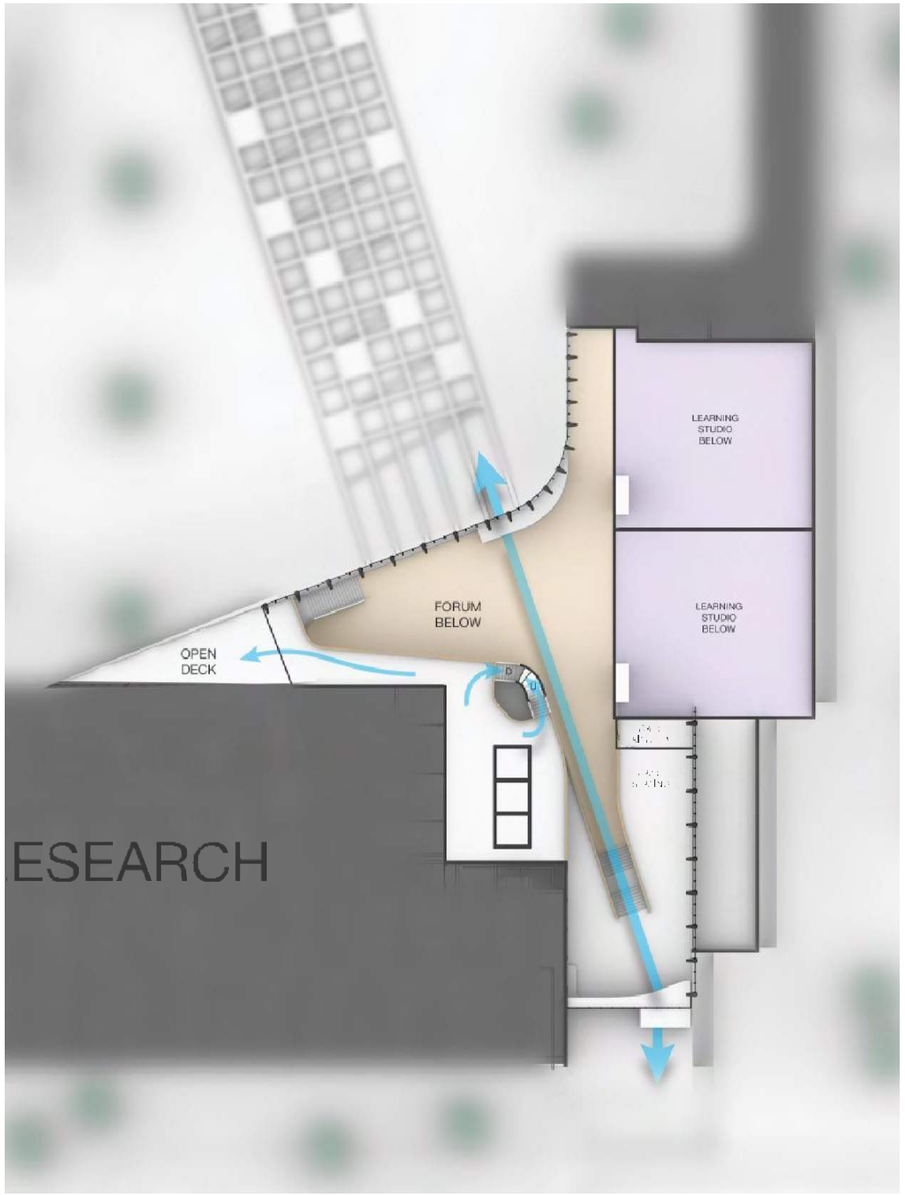
VIEW OF ENTRY, FROM UNIVERSITY BLVD

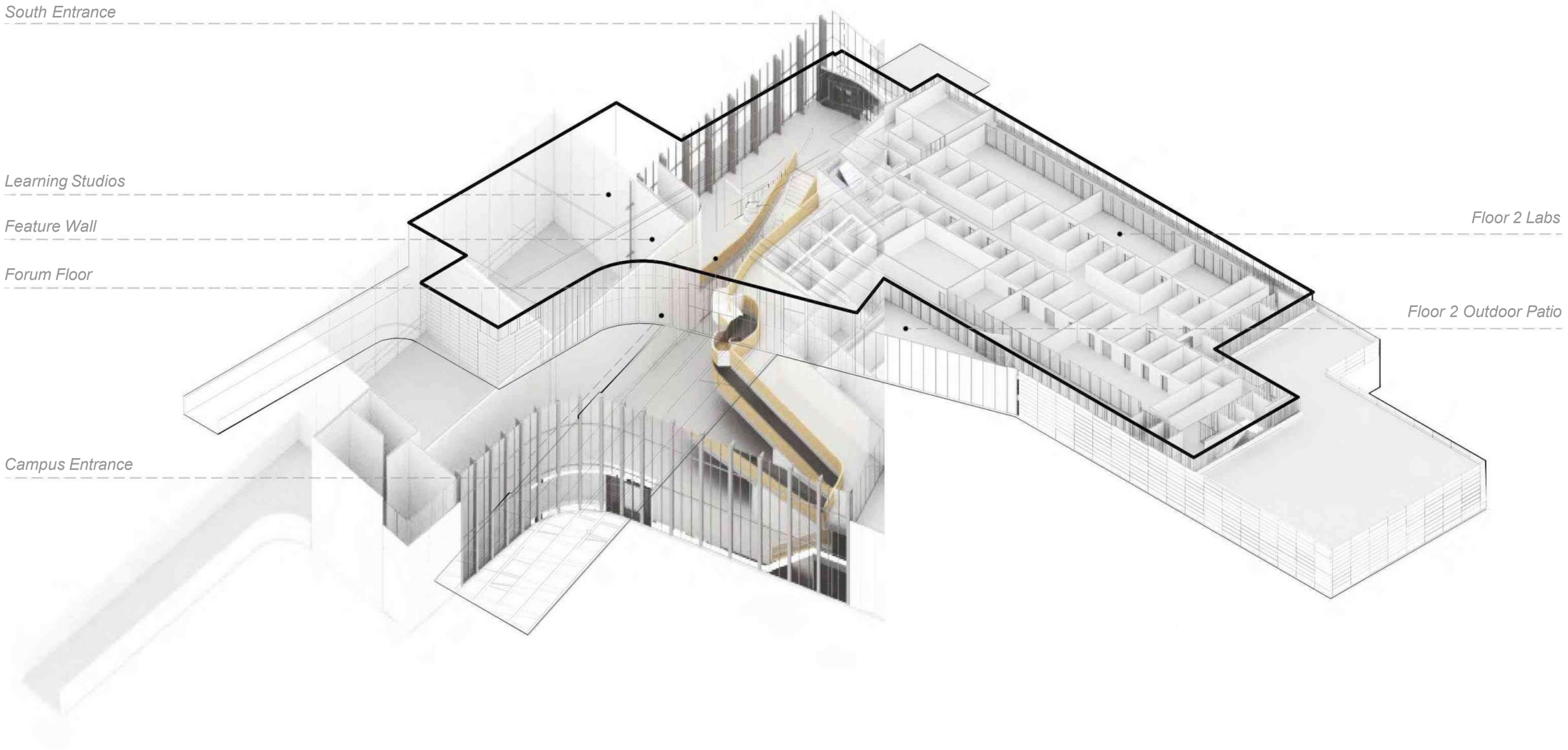
VIEW OF NORTH ENTRY, FROM ALLIED HEALTH

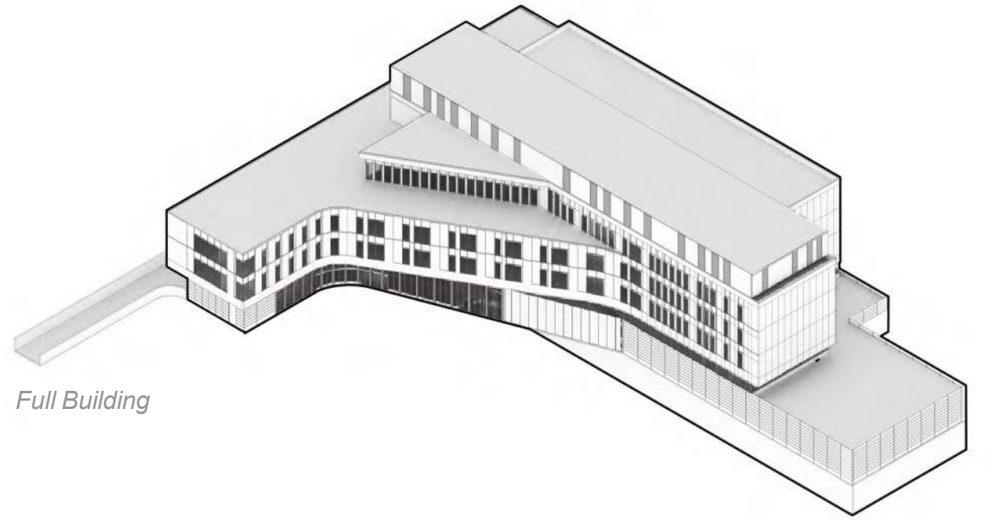
EskewDumezRipple | Perkins&Will


LEARNING STUDIO
FORUM
LEARNING STUDIO
DEMO CLASS
PATIO
INTER FAITH

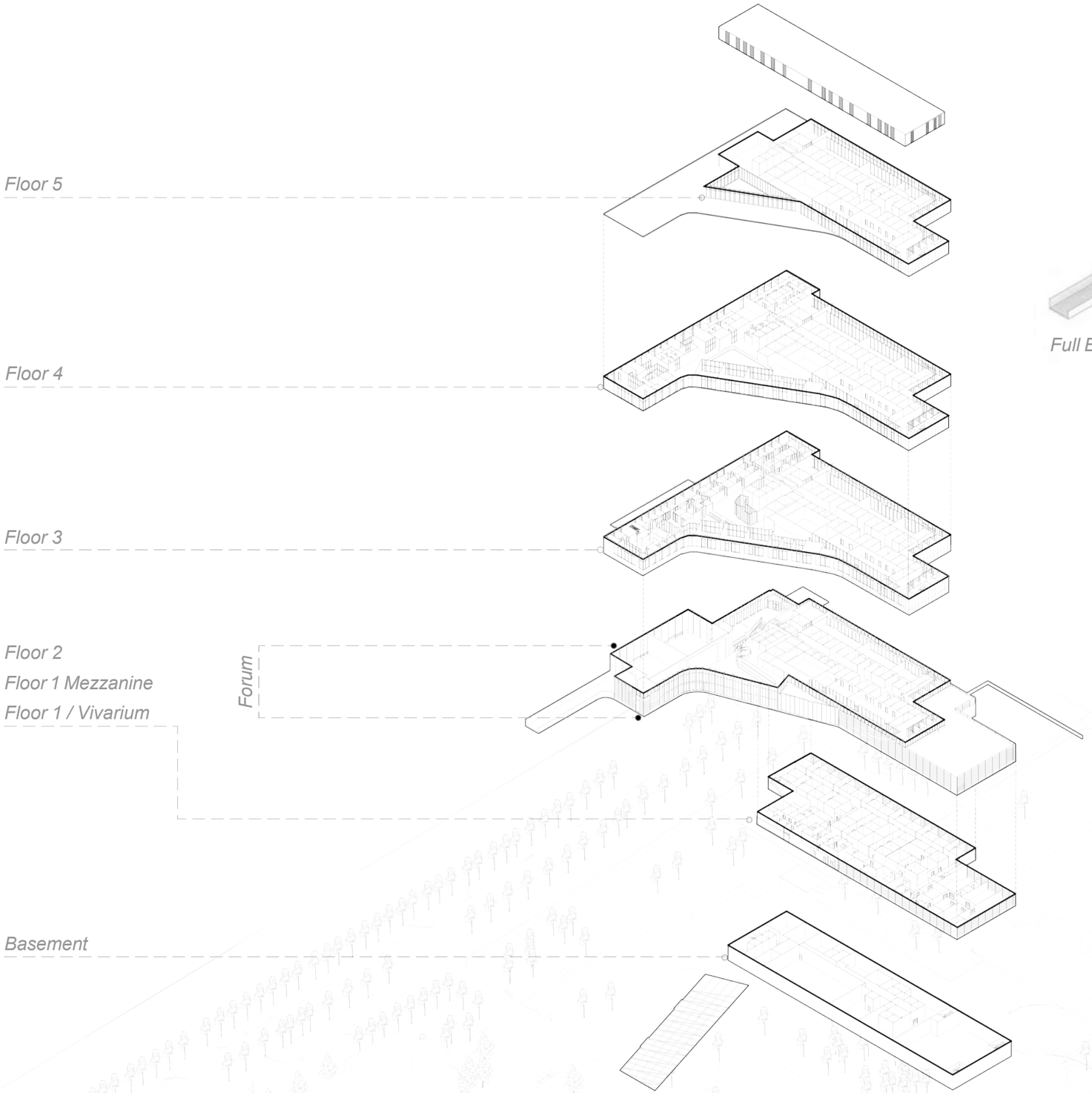

LEARNING STUDIO BELOW
FORUM BELOW
LEARNING STUDIO BELOW
CAFE KITCHEN
CAFE SEATING
OPEN BELOW


LEARNING STUDIO BELOW
FORUM BELOW
OPEN DECK
LEARNING STUDIO BELOW


South Entrance
Learning Studios
Feature Wall
Forum Floor
Campus Entrance
Floor 2 Labs
Floor 2 Outdoor Patio



Full Building



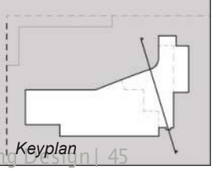
NORTH-SOUTH SECTION

Open Forum Space

Feature Art Installation

Cafe Dining

Connection Stairs



Keyplan

VIEW OF NORTH ENTRY, FROM PLAZA

VIEW OF FORUM

EskewDumezRipple | Perkins&Will

Appendix B

APPENDIX F

NATIONAL FLOOD HAZARD LAYER FIRMETTE MAP

APPENDIX G

CDC/ATSDR ENVIRONMENTAL JUSTICE INDEX 2022

CDC/ATSDR Environmental Justice Index 2022.

Location	Census Tract 36.05, Mobile County, AL
Total Population	951
EJI Rank	
Environmental Burden Rank	
Social Vulnerability Rank	
Ozone	0.00
PM2.5	⚠0.78
Diesel Particulate Matter	0.69
Air Toxics Cancer Risk	⚠0.89
National Priority List Sites	0.00
Toxic Release Inventory Sites	0.00
Treatment, Storage, and Disposal Sites	⚠0.99
Risk Management Plan Sites	0.00
Coal Mines	0.00
Lead Mines	0.00
Lack of Recreational Parks	0.67
Housing Built Pre-1980	
Lack of Walkability	0.69
High-Volume Roads	0.00
Railways	0.27
Airports	0.00
Impaired Surface Water	0.70

Minority Status	0.60
Poverty	0.00
No High School Diploma	0.00
Unemployment	⚠0.87
Housing Tenure	
Housing Burdened, Lower-Income Households	
Lack of Health Insurance	0.13
Lack of Internet Access	
Age 65 and Older	0.00
Age 17 and Younger	0.02
Civilian with a Disability	0.11
Speaks English "Less than Well"	0.00
Group Quarters	⚠1.00
Mobile Homes	
High Pre existing Chronic Disease Prevalence Sum	2 out of 5
High Estimated Prevalence of Asthma	Yes⚠
High Estimated Prevalence of Cancer	No
High Estimated Prevalence of High Blood Pressure	No
High Estimated Prevalence of Diabetes	No
High Estimated Prevalence of Poor Mental Health	Yes⚠

⚠ indicates a score of >0.75 or high prevalence of a chronic condition test

For more information on EJI indicators, click on the indicator names in the table below.

Note: Neither the EJI score, nor individual domain or indicator scores, represent detailed measures of risk or exposure assessments. These indicators are intended to provide only a screening-level overview of the cumulative impacts of environmental burden facing a community relative to other communities in the US.

APPENDIX H

ALABAMA STATE CLIMATE SUMMARY

ALABAMA

Key Messages

Temperatures in Alabama have not risen since the beginning of the 20th century, one of the few areas globally to experience no net warming. However, recent years have been very warm, and the warmest consecutive 5-year interval was the most recent, 2016–2020. Under a higher emissions pathway, historically unprecedented warming is projected during this century.

There are no robust trends in total annual precipitation and the number of extreme precipitation events. Future changes in average precipitation are uncertain, while increases in the frequency and intensity of extreme rainfall are projected.

Global sea level is projected to rise, with a likely range of 1–4 feet by 2100. Sea level along the Alabama coast has risen at the rate of 1.6 inches per decade, faster than the global rate. Projected sea level rise poses widespread and continuing threats to both natural and built environments in coastal Alabama.

Alabama is located at subtropical latitudes between the Gulf of Mexico and the southern end of the vast, relatively flat plains of central North America, which extend from the Arctic Circle to the Gulf of Mexico. The state is therefore exposed to the influences of diverse air masses, including the warm, moist air from the Gulf of Mexico and dry continental air masses, which are cold in the winter and warm in the summer. Clockwise circulation of air around a semipermanent high-pressure system in the North Atlantic (known as the Bermuda High) causes a persistent southerly flow of air off the gulf during the warmer half of the year. Thus, relatively mild winters, hot summers, and year-round precipitation characterize Alabama's climate. In addition to serving as a predominant source of moisture, the Gulf of Mexico helps moderate temperatures along the coast. Alabama's mild climate is an important economic driver for agricultural production and tourism.

Temperatures in Alabama have not risen since the beginning of the 20th century, one of the few areas globally to experience no net warming. However, recent years have been very warm, and the warmest consecutive 5-year interval was the most recent, 2016–2020 (Figure 1). Temperatures in Alabama were highest in the 1920s and 1930s, followed by a substantial cooling of almost 2°F into the 1960s and 1970s. Since that cool period,

Observed and Projected Temperature Change

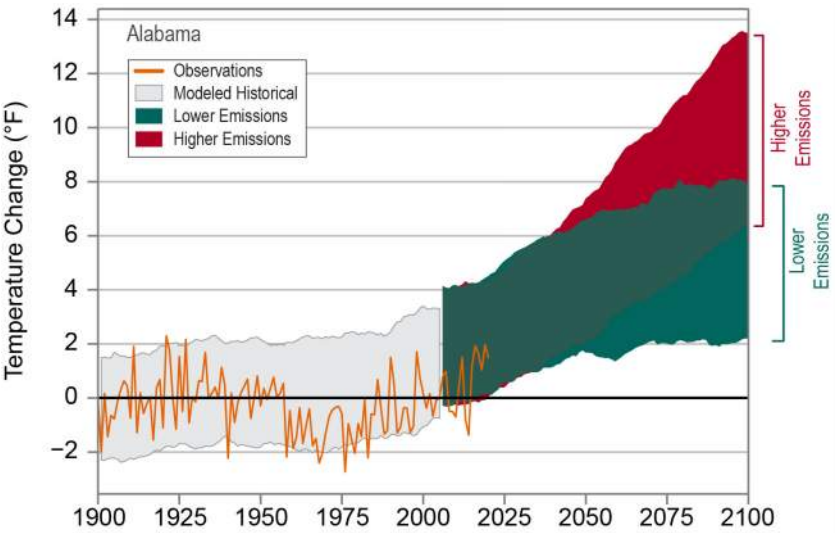


Figure 1: Observed and projected changes (compared to the 1901–1960 average) in near-surface air temperature for Alabama. Observed data are for 1900–2020. Projected changes for 2006–2100 are from global climate models for two possible futures: one in which greenhouse gas emissions continue to increase (higher emissions) and another in which greenhouse gas emissions increase at a slower rate (lower emissions). Temperatures in Alabama (orange line) have not risen since the beginning of the 20th century, one of the few areas globally to experience no net warming. However, recent years have been very warm, and the warmest consecutive 5-year interval was the most recent, 2016–2020. Shading indicates the range of annual temperatures from the set of models. Observed annual temperatures are generally within, but on the very low end of, the envelope of model simulations of the historical period (gray shading). However, for summer daytime maximum temperatures, which have decreased over the 20th century, this localized cooling is not well simulated by climate models. Less warming is expected under a lower emissions future (the coldest end-of-century projections being about as warm as the hottest year in the historical record; green shading) and more warming under a higher emissions future (the hottest end-of-century projections being about 11°F warmer than the hottest year in the historical record; red shading). Sources: CISESS and NOAA NCEI.

e epa u es ha e isen by eo han 2.0°F. The contiguous United States as a whole has war d by about 1.8°F since 1900, although it also cooled fro the 1930s into the 1960s but not by nearly as ch u ma as Alaba . Hypothesized causes for this difference m i in war ng rates include increased cloud cover and p ecipi ation, inc eased s ll pa ticles f o coal burning, natural factors related to forest regrowth, decreased heat flux due to irrigation, and l tidecadal variability in North Atlantic and tropical Pacific sea su face te eratures.

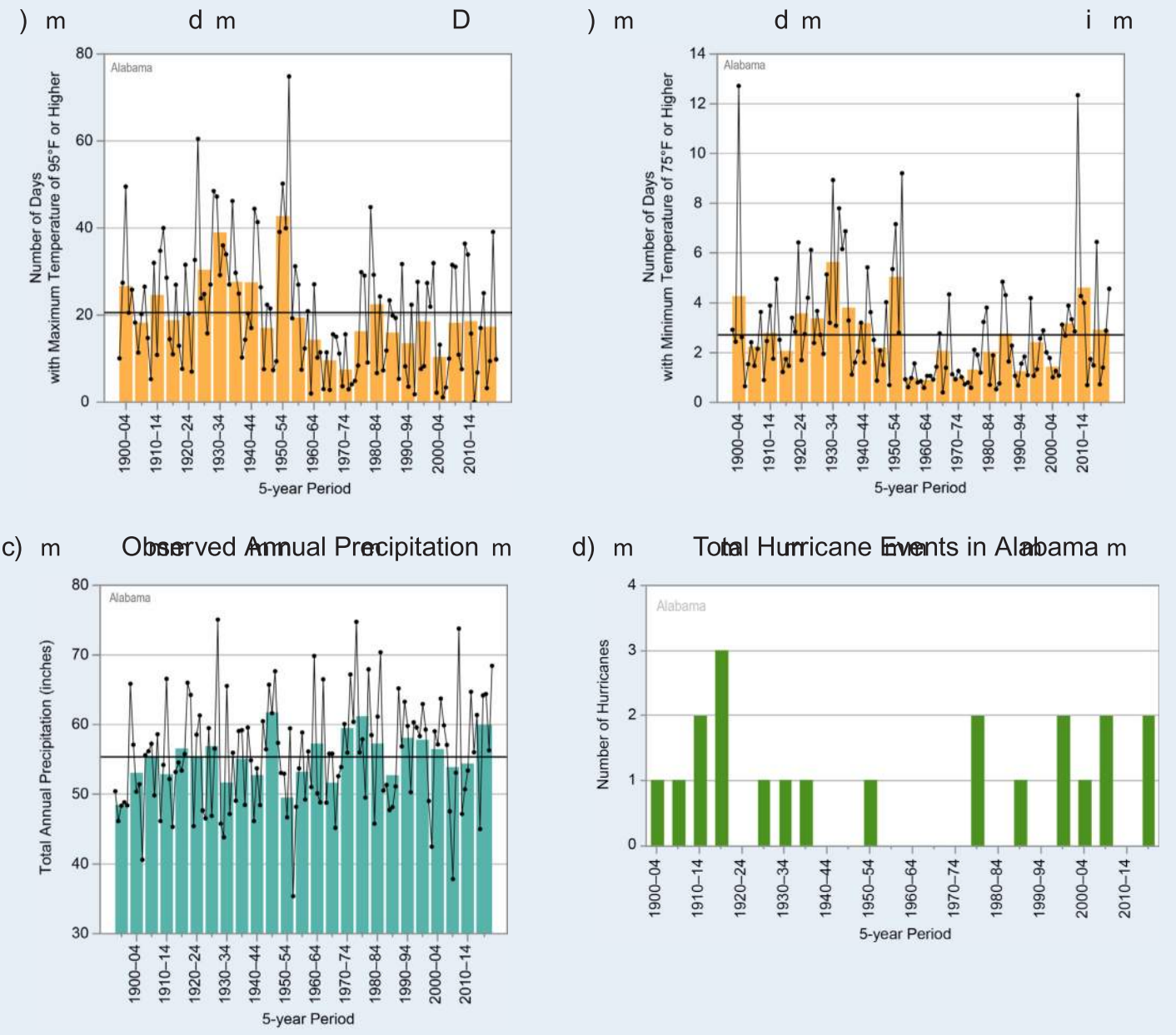


Figure 2: Observed (a) annual number of very hot days (maximum temperature of 95°F or higher), (b) annual number of very warm nights (minimum temperature of 75°F or higher), (c) total annual precipitation, and (d) total number of hurricanes events (wind speeds reaching hurricane strength somewhere in the state) for Alabama from (a, b, d) 1900 to 2020 and (c) 1895 to 2020. In Figures 4a, 4b, and 4c, dots show annual values, bars show averages over 5-year periods (last bar is a 6-year average), and the horizontal black lines shows the long-term (entire period) averages: (a) 21 days, (b) 2.7 nights, (c) 55.4 inches. In Figure 4d, bars show totals over 5-year periods (last bar is a 6-year total). The number of very hot days has been below averages since 1985, while the number of very warm nights has been near or above average since 2005. Total annual precipitation shows high year-to-year variability and no overall trend. Notably, the 2005 to 2009 period had the second-driest (2007) and third-wettest (2009) years on record. There is no long-term trend in the number of hurricane events. Since 2000, the state has been impacted by 5 storms. Sources: (a, b, c) CISESS and NOAA NCEI; (d) NOAA Hurricane Research Division. Data: (a, b) GHCN-Daily from 7 long-term stations; (c) nClimDiv.

t te ide summer ver ge d ytime high temper tures have historically ranged from about 87°F (in 1967) to about 95°F (in 1902), although daily temperatures exceeding 95°F are common. In recent decades, the number of very hot days has been well below the numbers experienced during the early 1930s and early 1950s (Figure 2a). Since 2005, the number of very warm nights has been near or above average but still below the numbers of the early 1930s and early 1950s (Figure 2b). In the winter, average nighttime low temperatures range from 30°F in the northern portion of the state to more than 45°F along the coast. The annual average (1991–2020 normals) number of nights at or below 32°F is 47 and 56 for Birmingham and Huntsville, respectively, compared to only 21 for Mobile.

Annual precipitation is highly variable from year to year (Figure 2c). Statewide annual average precipitation is 55.4 inches and is distributed rather uniformly a throughout the year, except for a relatively dry period between August and October. While there is no long-term trend over the period of record (1895–2020), the 2015–2020 period was above average. The second-driest year on record (2007) and second-driest consecutive 3-year interval (2006–2008) were followed by the third-wettest year (2009). The driest multiyear periods were in the late 1890s and early 1950s and the wettest in the late 1940s and late 1970s. The driest consecutive 5-year interval was 1895–1899, with an annual average of 48.3 inches, and the wettest was 1971–1975, with an annual average of 63.7 inches. The combination of variable summer precipitation patterns and the prevalence of soils with poor water-holding capacity frequently gives rise to short-term drought conditions. **The number of 3-inch extreme precipit tion events h s been ne r or bove ver ge since 1995 but shows no st tistic lly signific nt long-term trend** (Figure 3). a

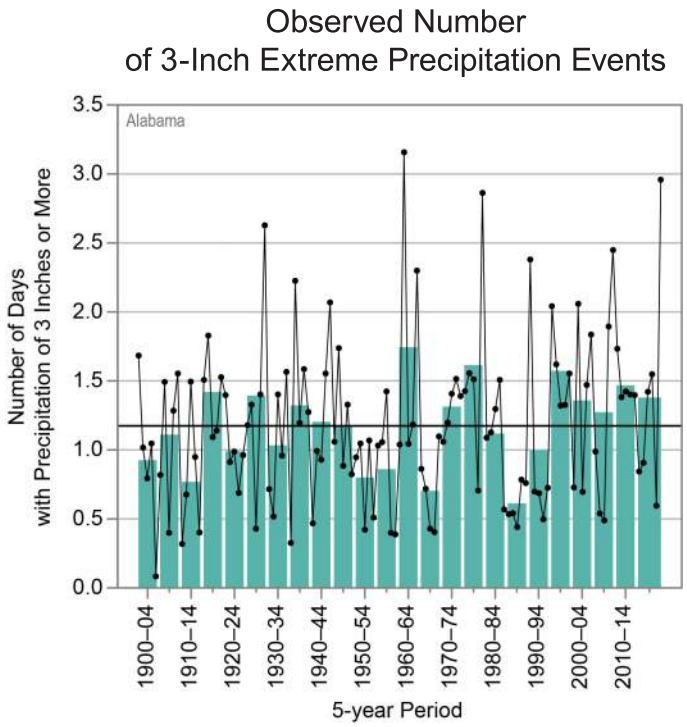


Figure 3: Observed annual number of 3-inch extreme precipitation events (days with precipitation of 3 inches or more) for Alabama from 1900 to 2020. Dots show annual values. Bars show averages over 5-year periods (last bar is a 6-year average). The horizontal black line shows the long-term (entire period) average of 1.2 days. A typical reporting station experiences about 1 event per year. The number of 3-inch extreme precipitation events has been above average since 1995, but there is no statistically significant long-term trend. Sources: CISESS and NOAA NCEI. Data: GHCN-Daily from 12 long-term stations.

Tornadoes and hurricanes are two of the deadliest a weather hazards in Alabama. Between 1895 and 2019, an estimated 43 tornadoes, typically occurring in the spring and fall, touched down in Alabama each year. In 2011, a deadly tornado outbreak swept across the southern, midwestern, and northeastern United States. Alabama was one of the hardest-hit states, suffering an estimated 238 tornado-related deaths and millions of dollars in property and infrastructure damages. Hurricanes and tropical storms can also cause massive property damage. On average (1900–2020), Alabama is directly impacted by a hurricane about once every 6 years; however, there has been no long-term trend over the past century (Figure 2d). In 2005, Hurricane Katrina brought hurricane-force winds along the Alabama coastline, spawning tornadoes and causing widespread wind damage and flooding following a storm tide (storm surge combined with already-present tide) of 14 to 18 feet. In 2012, Hurricane Isaac resulted in a storm surge (the abnormal rise of water generated by a storm over and above the predicted astronomical tide) of 4.63 feet above normal tide levels in the Mobile Bay area and 3 to 5 feet of inundation (the total water level that occurs on normally dry ground as a result of storm tide) along the coast of Alabama.

Under a higher emissions pathway, historically unprecedented warming is projected during this century (Figure 1). Even under a lower emissions a pathway, annual average temperatures are projected to most likely exceed historical record levels by the middle of the century. However, a large range of temperature increases is projected under both pathways, and under a the lower pathway, a few projections are only slightly a

a me than hi to ical co d . Wa ming i p oj ct d despite the lack of a long-te m tempe atu e t end because the inc eased wa ming influence of g eenhouse gases will become g eate than the natu al va iations that have dominated Alabama's tempe atu e climate.

Futu e changes in total annual p ecipitation a e unce tain (Figu e 4). Howeve , any inc ease in tempe atu e will accele ate the ate of soil moistu e loss du ing d y pe iods and likely inc ease the intensity of natu ally occu ing r d oughts. **Increases in extreme precipitation are r projected for Alabama, because it is virtually certain that atmospheric water vapor will increase in a warmer world**.

Increasing temperatures raise concerns for sea level rise in coastal areas. Since 1900, global ave age sea level has isen by about 7–8 inches. It is p ojected to ise anothe 1–8 feet, with a likely ange of 1–4 feet, by 2100 as a esult of both past and futu e emissions f om human activities (Figu 5). Ba d on ob v d data f om 1966 to 2020, th local sea level at Dauphin Island has inc eased 1.6 inches pe decade. Sea level ise has caused an inc ease in tidal floods r associated with nuisance level impacts. Nuisance floods a e events in which wate levels exceed the local th eshold (set by NOAA's National Weathe Se vice) fo mino impacts. These events can damage inf ast uctu e, cause oad closu es, and ove whelm sto m d ains. Nuisance flooding has inc eased in all U.S. coastal a eas, with mo e apid inc eases along the East and Gulf Coasts. Nuisance flooding events in Alabama a e likely to occu mo e f equently as global and local sea levels continue to ise.

Naturally occurring land subsidence (sinking) is a major contributor to increases in sea level rise in Alabama, r with land in the Dauphin Island area projected to subside an additional 6.6 inches by 2100. A ecent U.S. Depa tment of T anspo tation study found that highways and po t and ma ine wate way systems along the low-lying coast of Mobile, as well as coastal wetlands, a e pa ticula ly vulne able to sto m su ge and sea level ise. The pe centage of c itical po ts exposed to sea level ise anges f om 46% unde the study's lowest scena io (1 foot of sea level ise by 2050) to 92% unde the highest scena io (6.6 feet by 2100).

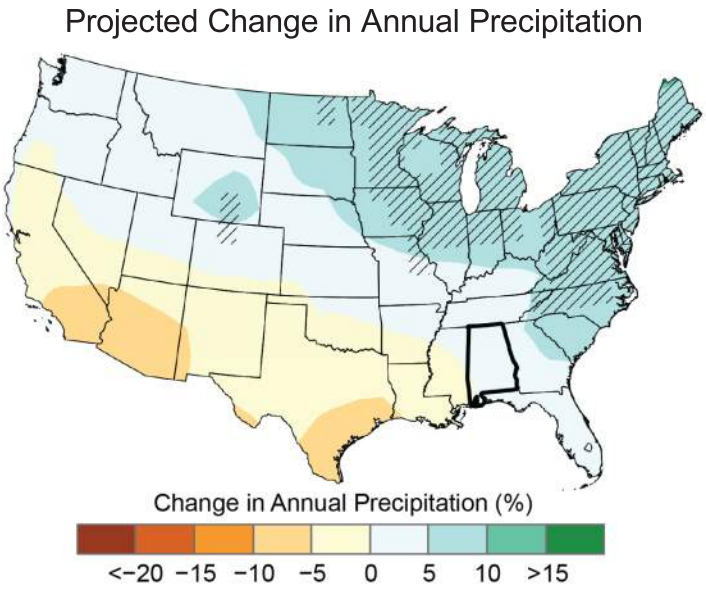


Figure 4: Projected changes in total annual precipitation (%) for the middle of the 21st century compared to the late 20th century under a higher emissions pathway. Hatching represents areas where the majority of climate models indicate a statistically significant change. The southeastern United States, including Alabama, is in a transition r zone between projected high-latitude increases and subtropical decreases in precipitation, and as such, future precipitation changes are uncertain. Sources: CISESS and NEMAC. Data: CMIP5.

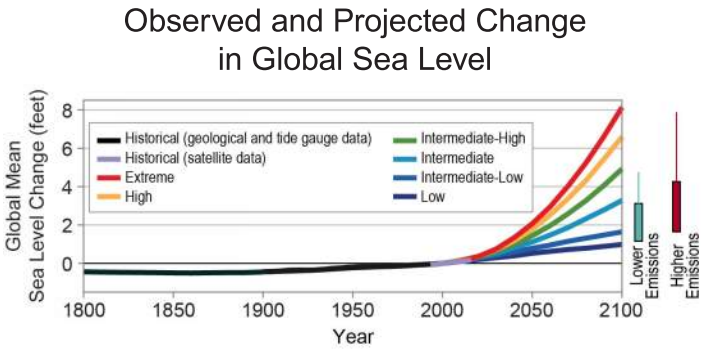


Figure 5: Global mean sea level (GMSL) change from 1800 to 2100. Projections include the six U.S. Interagency Sea Level Rise Task Force GMSL scenarios (Low, navy blue; Intermediate-Low, royal blue; Intermediate, cyan; Intermediate-High, green; High, orange; and Extreme, red curves) relative to historical geological, tide gauge, and satellite altimeter GMSL reconstructions from 1800–2015 (black and magenta lines) and the very likely ranges in 2100 under both lower and higher emissions futures (teal and dark red boxes). Global sea level rise projections range from 1 to 8 feet by 2100, with a likely range of 1 to 4 feet. Source: adapted from Sweet et al. 2017. r

Technical details on observations and projections are available online at https://statesummaries.ncics.org/technicaldetails.