



# PROPOSED EXPANSION OF THE COMPLEX FOR FORENSIC ANTHROPOLOGY RESEARCH

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## **Complex for Forensic Anthropology Research (CFAR) Expansion Proposal Executive Summary**

Propose to expand the physical space of the outdoor human decomposition research facility currently at SIU (CFAR) from approximately 1/3 acre of useable land to approximately 4.5 acres and add a laboratory building to the facility to store and process human cadaver donations before and after research at the outdoor facility and provide appropriate space for other forensic anthropology teaching, research, and service. This expansion should include additions of faculty lines, support staff lines, and graduate student research assistant lines to adequately staff a world class teaching and research institute. The Complex for Forensic Anthropology Research can serve as a cornerstone for future expansion into the broader discipline of forensic sciences, as proposed during the Saluki Innovation Annex Grand Challenge<sup>1</sup>.

### **Immediate Personnel additions:**

1. Establish director position as an official position with appropriate salary line on 11/12 month contract with 1:1 teaching load
2. Add at least two tenure/tenure track faculty lines in forensic anthropology
3. Add one full-time research staff position to facilitate communications and synergistic and outreach programs
4. Add four university funded PhD level GA lines at 0.50FTE to facilitate donation intakes, placement, and facility maintenance

**Cost:** \$13.5 million for structural improvements<sup>2</sup> plus personnel costs

### **Benefits:**

1. Raise Southern Illinois University's profile. CFAR is one of eight similar human decomposition facilities in the world. It is one of two universities in the world where you can earn a PhD in a forensic science and study at a human decomposition facility.
2. Increased potential for future funding, similar facilities have obtained \$1.5-2 million dollars each over the last four years. NSF Integrative Graduate Education and Research Traineeship Program (IGERT) grants offer up to \$2-3 million for development of educational programs such as the one proposed here.
3. Synergism with other existing and proposed SIU entities such as the proposed police academy, SIU Medical School, SIU Law School, SIU mortuary sciences program, and external entities such as local, state, and federal law enforcement agencies and cadaver dog trainers.
4. Increase tuition paying student enrollments at the undergraduate and graduate levels by offering dynamic programs not available in other institutions within the state or region. CFAR is the only outdoor human decomposition research facility in Illinois or any of the surrounding states. The closest facility is over 300 miles from Carbondale. Increased faculty size and investment in facilities could enable not only an expansion of the forensic anthropology undergraduate and graduate programs, but also facilitate the development of a post-graduate certificate in forensic anthropology, drawing in tuition paying students.

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<sup>1</sup> See Appendix A for the proposed Center for Education and Research in Forensic Sciences.

<sup>2</sup> See Appendix B for proposed budget

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### **Mission Statement**

The Complex for Forensic Anthropology Research at Southern Illinois University-Carbondale (CFAR@SIUC) is dedicated to maintaining a world-class research facility where scientifically sound investigations on the effect Southern Illinois' unique climate and environmental conditions have on taphonomic<sup>3</sup> processes can be conducted. In addition, CFAR is committed to providing high quality, professional training and education in Forensic Anthropology to students and law enforcement professionals alike, through traditional semester-long courses, short courses, and training seminars. Through research and education CFAR strives to assist law enforcement with the identification of unknown deceased individuals.

### **Expansion Plan**

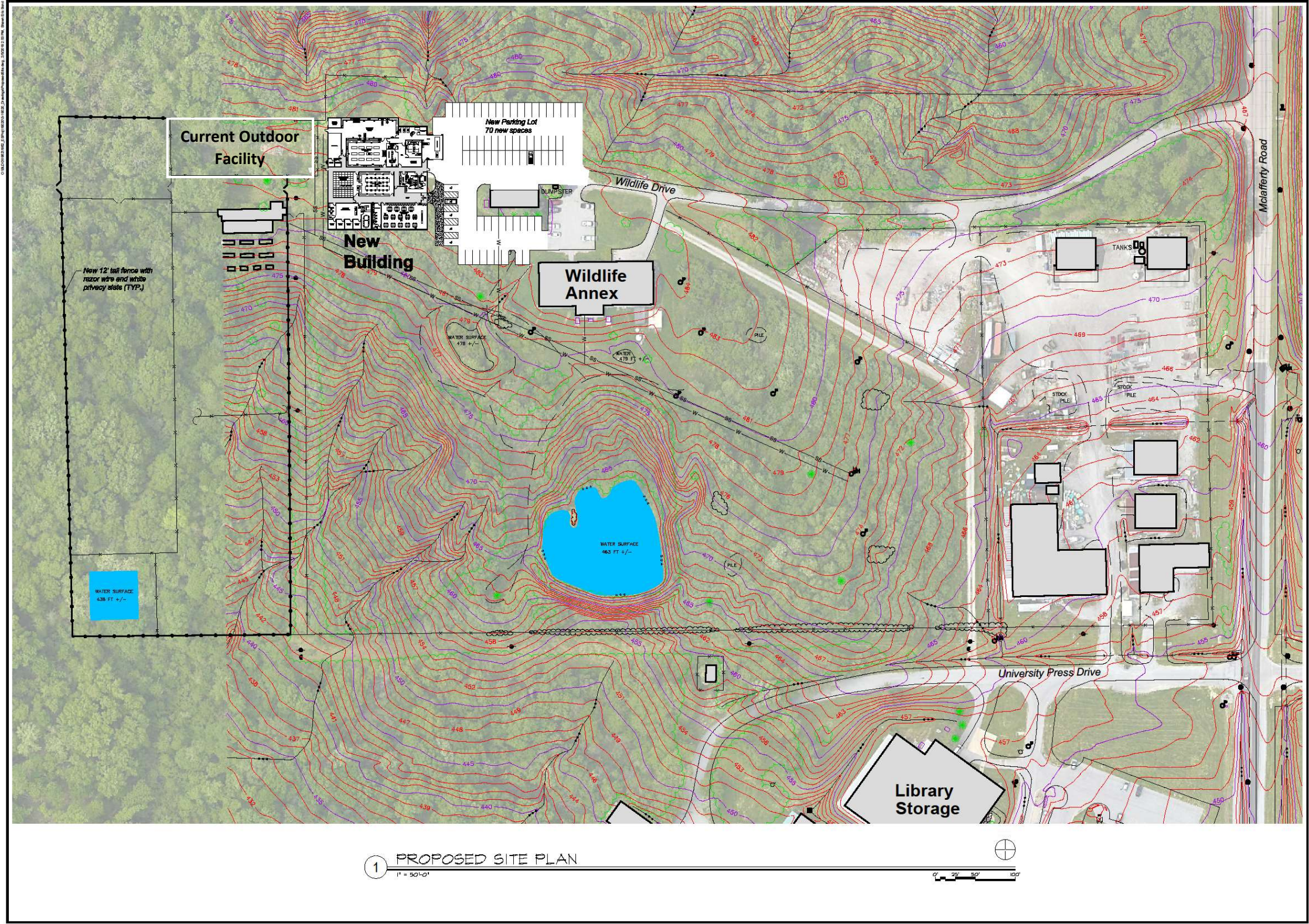
CFAR currently occupies approximately 1/3 of an acre of open grassland at the terminus of Wildlife Dr. This space is fully fenced with variable height fencing and some areas are topped with razor wire. The proposed expansion will increase the usable land to approximately 4.5 acres and will incorporate two new landscape features for research, woodlands and a freshwater pond. The proposed expansion will utilize 12' fencing with privacy panels and razor wire across the top for security. There will be paths cut within the area to ease transport of donor remains and for the safety of students and staff. Electronic monitoring will be present with exterior cameras to monitor the perimeter of the facility.

The proposed expansion also includes the addition of a dedicated teaching, research, office, and storage facility onsite to facilitate the teaching, research, and service missions of CFAR. This building (see Figures 1 and 2) will provide space for teaching classes and training seminars, intake of donor bodies, office space for several researchers, and curation of the growing skeletal collection. There is also dedicated dry lab space available for research on skeletal remains once they have been curated into the skeletal collection.

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<sup>3</sup> Forensic taphonomy is the study of what happens to a body after death





**1** PROPOSED SITE PLAN  
 1" = 50'-0"

Physical Plant Engineering Services  
 Service Building 1, Room 0108, Mail Code 6727  
 Southern Illinois University, Carbondale  
 210 Physical Plant Drive  
 Carbondale, IL 62902-2108  
 Phone: (618) 453-8777  
 Fax: (618) 453-1381

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**PROPOSED SITE PLAN**  
 GROUNDS - WILDLIFE ANNEX  
 CENTER FOR EDUCATION AND RESEARCH IN  
 FORENSIC SCIENCES

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<b>MSN:</b>	1962	<b>DATE:</b>	02/02/2019
<b>REV. NO.:</b>	0000	<b>DATE:</b>	02/02/2019
<b>REV. BY:</b>	S.L.W.	<b>DATE:</b>	02/02/2019
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<b>C2.0</b>			
No. 3 of 4 Sheets			

Figure 1 Current Site of CFAR and proposed outdoor expansion with new construction







Figure 3 Example indoor fixtures from Colorado Mesa University's Forensic Investigation Research Station

### Funding Opportunities Available After Expansion

#### *National Institute of Justice*

Other similar facilities have obtained multiple NIJ grants over the last four years. University of Tennessee's Forensic Anthropology Center was granted funded on seven different projects totaling \$1,971,426 (2014-2017) and the second largest facility at Texas State University-San Marcos was granted funds on six different projects totaling \$1,554,425 (2013-2017).

#### *National Science Foundation--Integrative Graduate Education and Research Traineeship (IGERT)*

The IGERT grants over the last five years have ranged from \$2.5-4.5 million. The IGERT program has been developed to meet the challenges of educating U.S. Ph.D. scientists and engineers who will pursue careers in research and education with the interdisciplinary backgrounds, deep knowledge in chosen disciplines, and technical, professional, and personal skills to become, in their own careers, leaders and creative agents for change. The program is intended to catalyze a cultural change in graduate education, for students, faculty, and institutions, by establishing innovative models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce (from NSF IGERT website).

#### *Forensic Sciences Foundation*

Forensic Sciences Foundation grants small, student level grants of up to \$5,000 to support graduate level thesis and dissertation research in the forensic sciences. CFAR related projects have received two of these awards.

### *State Budget Line item*

The Forensic Anthropology and Computer Enhancement Services Laboratory (FACES Laboratory) at Louisiana State University receives \$350-400,000 annually from the state in exchange for service as the state's repository for unidentified skeletal remains. As of March 2018, the FACES lab has approximately 350 such cases ranging from full skeletons to individual skeletal elements. This is a potential avenue of funding to support CFAR long term.

### *Short Courses on Forensic Anthropology*

The University of Tennessee, Texas State University-San Marcos, and Sam Houston State University all offer short courses in topics on forensic anthropology. These courses range from two to five days in length and generally are offered in the summer. Each course ranges in cost from \$500-1000 per student. Class sizes are capped at various sizes depending on the topic and number of instructors required to supervise learning. Generally the audience at these short courses are advanced undergraduate students, law enforcement officers, and general public with interests in forensic anthropology.

### *Case Consultation Fees*

Dr. Dabbs is paid an hourly rate for all forensic anthropology case consultations she performs. These payments are added to the CFAR coffers to fund travel to conferences, research projects, and daily operations. An expansion of CFAR could result in increased consultation on forensic casework as more law enforcement agencies are impacted by the synergistic activities outlined below.

### *Merchandise Sales*

Several other outdoor decomposition facilities earn small amounts of money through the sale of merchandise such as t-shirts, hooded sweatshirts, coffee mugs, pens, hats, etc. This type of activity could easily be implemented at SIU to support some of the educational and research efforts, although the total dollar amounts could be relatively small. Similar merchandise sales are available at other institutions (<http://fac.utk.edu/merchandise/>).

### *Bench Fees*

As the skeletal collection grows, there is opportunity to charge grant-funded researchers fees for access to the collection for research projects. These fees would vary depending on the degree of access researchers require, the length of time necessary to conduct research, and if the project is considered destructive or not.

### *Private Donors*

CFAR has received small fiscal donations to the facility, generally from family and friends of individuals who were donated to the program. There is substantial room for growth in private donations with the appropriate efforts.

A public donation drive to partially fund the construction of the expanded CFAR and building. Donations of specific dollar values could receive recognition in various ways, with each tier receiving benefits from previous tiers. For example:  
Donations up to \$1,000—personal letter of thanks from the director of CFAR



Donations \$1,001-5,000—hat, mug, or patch (donor’s choice) with CFAR donor logo (to be designed)  
Donations \$5,001-10,000—sweatshirt with CFAR donor logo (to be designed)  
Donations \$10,001-50,000—invitation to public reception at building opening  
Donations \$50,001-100,000—donor’s name on plaque of donors at public entrance to building  
Donations \$100,001-1,000,000—invitation to private reception at building opening  
Donations >\$1,000,000—private, personal tour of completed building facility with director (does not include outdoor facility)

## Hiring plan

### *Immediate personnel needs:*

- 1.) Director--salary commensurate with other directors (~\$130-160K), 1:1 teaching load, 11-12 month contract  
Duties include general oversight of facility, research, teaching, and staff; development of long term teaching program to meet the needs of enrolled and prospective students; development of graduate certificate program in Forensic Anthropology and eventually contribute to graduate certificate and/or graduate program in forensic sciences; pursuit of grant and other types of funding; and general outreach.
- 2.) MA level research and facilities assistant to the director (full time)  
Duties to include oversight of facilities maintenance and general research tasks, communications with donors, database management and entry, skeletal curation and facilitation of outside researcher access
- 3.) 4 Graduate students RAs to facilitate operations  
Duties to include donation intake, donation placement, daily recording of donor decomposition progress, site management, maceration
- 4.) 2 Tenured/TT faculty in Forensic Anthropology (one as assistant director of CFAR)
- 5.) Office Support (0.25-0.50FTE)  
Handle daily purchasing of supplies, grant management, general office support

### *Long term hires:*

- 1.) 2 additional tenured/TT faculty in Forensic Anthropology
- 2.) Additional tenured/TT faculty in other forensic science disciplines (chemistry, biology, accounting, digital and multimedia)

## Proposed Organizational Structure for CFAR

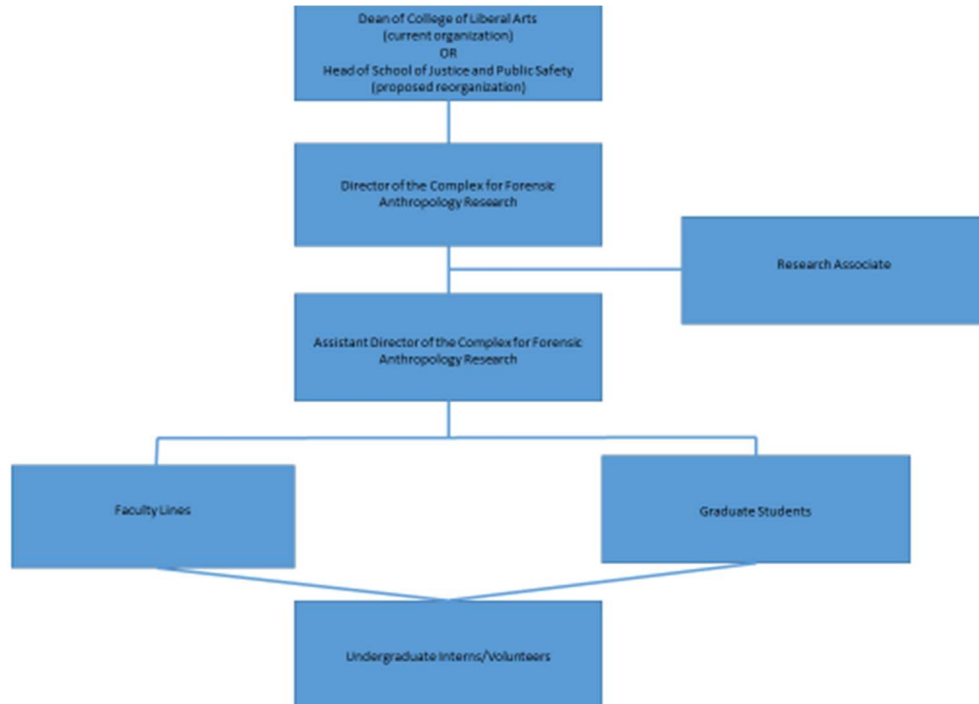


Figure 4 Proposed organizational chart for CFAR, note graduate student would report to individual faculty advisors concerning classes, research activities pertaining to thesis/dissertation, but within the context of CFAR activities, report to the Assistant Director

### Impact on Student Enrollment

Unique programs tend to draw large numbers of students. Currently, I have two graduate students interested in forensic anthropology (1 MA; 1 PhD). The number of graduate students interested in forensic anthropology is quite high, over the last five years more than 60% of the graduate applications to the department of anthropology have indicated interest in studying forensic anthropology. The low number of currently enrolled graduate students is a result of only one faculty member in forensic anthropology. Additionally, I teach approximately 60-70 students (grad and undergrad) in forensic anthropology related classes each year. Increasing the number of faculty in forensic anthropology and funding CFAR will increase our footprint in the growing field of forensic anthropology education, allowing us to take more graduate students, including self-funded graduate students, increasing the number of undergraduate courses taught in forensic anthropology, and increasing enrollment in forensic related majors. Other institutions with outdoor decomposition facilities have significantly higher enrollments in both graduate programs (averaging approximately 30 MA/PhD combined) and undergraduate programs. Western Carolina University's Department of Anthropology has 166 undergraduate anthropology majors (university total enrollment is 11,043).

### Impact on Student Engagement

Expanding and improving the current CFAR facility, including personnel additions will increase learning opportunities for undergraduate and graduate students at SIU. Increasing the number of faculty and staff available to supervise student activities will directly impact the total number of students who can actively participate in projects at CFAR. The University of Tennessee's

program includes anywhere from 50-100 undergraduate student volunteers who gain experience working within the confines of a human decomposition research facility. They also have upwards of 13 supervisory faculty, staff, and graduate students at any one time.

### **Synergistic Activities**

#### *Current/Past*

Through CFAR I have already established significant synergistic relationships both within and beyond campus. Before the suspension of research activity, students and faculty from multiple scientific disciplines including plant biology, entomology, and forensic DNA analysis were participating or planning research activity based at CFAR. Additionally, outside researchers from both the public and private sectors have initiated contact with regards to conducting research at CFAR. Further, CFAR has been the site of multiple law enforcement training seminars, multiple cadaver dog training seminars, cadaver dog research projects, and the research conducted at CFAR has served as the basis for several forensic case analyses on several murder investigations.

#### *Potential*

##### Proposed Police Academy

There is potential for CFAR and the proposed police academy to interact in a mutually beneficial way to train law enforcement personnel in search and recovery of human skeletal remains, forensic taphonomy, and forensic anthropological analysis, while at the same time using police academy resources to train anthropology students in aspects of forensic investigations like evidence handling, court testimony, crime scene behavior and expectations, etc. The goal here is not to train either side to do the job of the other, but instead to make each side aware of the capacities and potentials of the other to encourage active engagement of the appropriate specialists when necessary.

##### SIU Medical School

Medical schools often focus, naturally, on the soft tissue anatomy. An expanded CFAR could offer the potential for training of medical school students in osteology (the study of human bones) and the effect of traumas (gunshot wounds, fractures), age related degeneration (arthritis), and disease (cancers, autoimmune disorders) on skeletal remains that they would not normally have the opportunity to observe in living patients or on donated cadavers in anatomy labs.

##### Mortuary Sciences

Mortuary scientists often are required to embalm and/or reconstruct bodies and faces of partially decomposed individuals to prepare them for viewing in a funeral or visitation. There is potential for collaborative efforts with the mortuary sciences program to provide students with exposure to what partially decomposed bodies look and feel like. This could lead to reciprocity in the mortuary sciences department providing limited training to forensic anthropology students in how embalming and reconstruction is performed.

##### Law School

I have already established a synergistic relationship with faculty in the SIU Law School, whereby we have gathered our students together for training in court room testimony practices. The Law School students are enriched by exposure to the discipline of forensic anthropology and have the opportunity to practice both direct and cross-examination of scientific experts, while the



anthropology students under my direction are exposed to process of court room testimony, something most people do not get experience in until they are on the witness stand as an expert witness in a real case, with real consequences and people's futures on the line. By expanding CFAR and the faculty and staff, more students will be able to engage in this type of activity.

#### Law Enforcement/Coroners/Medical Examiner

Expansion of CFAR will directly impact law enforcement, coroners, and medical examiners in and beyond the state of Illinois. By increasing the size of CFAR and the faculty and staff, more opportunities for training seminars will be available. Up to this point, I have been able to provide approximately one training session to some portion of these groups (i.e., either law enforcement or coroners or medical examiners) per year. It would certainly be advantageous both for CFAR and for the law enforcement/death investigation/legal community to have more of these training seminars available each year. While it may seem like a one-way transfer of information, it certainly is not. I learn much from those involved in the daily investigation of death and the questions they ask during these training seminars often result in small projects that could be pursued by graduate students for theses or dissertations. For example, the published project concerning the process of decomposition in concrete was a direct result of a question from the FBI concerning a case in Oklahoma.

#### Cadaver/Search and Rescue Dog Training and Research

CFAR has hosted multiple cadaver dog training sessions where cadaver dogs are brought to CFAR to be exposed to whole body decomposition. These sessions step-wise and controlled, with the dogs gaining greater access to the human remains as they demonstrate their abilities in locating the remains within the facility. For the last two years I have been working with Craig Schultz of the FBI to establish CFAR as the training and testing grounds for federally certified cadaver dogs. This relationship would expose SIU students to another facet of forensic investigations.

CFAR has also participated in research investigating the health and well-being of search and rescue/cadaver dogs during their work. Erin Venable from Animal Science Food and Nutrition and her team of colleagues and graduate students has conducted this research at CFAR with my team of graduate students and me supervising access to the donor remains and working to provide access necessary to specific types of human tissues required for this work, both soft and hard.

#### Outside Researchers

CFAR has received inquiries from multiple non-SIU researchers requesting access to either the outdoor research facility itself, or the skeletal remains from the human donors to conduct research in forensic taphonomy and forensic anthropology. These types of research connections not only establish good will toward SIU within the discipline and law enforcement communities, but also provide opportunities for students to meet prominent researchers within our fields and can provide some level of funding to facilitate CFAR operations through bench fees and research access fees.

**Appendix A--Center for Education and Research in Forensic  
Science proposal submitted to Saluki Innovation Annex  
program**

(selected as the best project)

## Center for Education and Research in Forensic Science



Coordinator & Point of Contact: Gretchen R. Dabbs, Department of Anthropology

### Contributors:

Aldwin Anterola  
Sara Baer  
Kaleigh Best  
Jennifer Brobst  
Da Chen  
Ying Chen  
Megan Cleary  
Malloy DeChant  
David Gibson  
Lalit Gupta  
Scott Hamilton-Brehm  
Harvey Henson  
Tom Imboden

Mary Elizabeth Kinsel  
Elizabeth Klaver  
David Lightfoot  
Dhrubodhi Mukherjee  
Kurt Neubig  
Maria Panakhyo  
Ellie Powell  
Lindsey Roberts  
Joseph Schafer  
Jessica Spencer  
Rosanne Szekely  
Jun Qin  
Erin Venable



## Abstract

Southern Illinois University has strengths in forensic science education and research, including the Law School, an interdisciplinary forensic sciences minor, a concentration in forensic chemistry, and the Complex for Forensic Anthropology Research. The National Institute of Justice stated that 2015 marked an expansion of forensic science research, with tremendous potential for funding, following the National Academy of Sciences' seminal critique of the misuse of forensic data in the courtroom.<sup>4</sup> The proposed Center for Education and Research in Forensic Sciences aims to build on the strengths of SIU by establishing a physical, conceptual, and intellectual home for allied forensic researchers and scholars, allowing for forensic research and casework and a system of connections to develop and expand interdisciplinary research, teaching, and outreach opportunities in the local, regional, and national communities.

## Introduction

Forensic Science is the application of scientific knowledge to the law. As such, almost any academic discipline has a forensic application. The Center for Education and Research in Forensic Sciences (CERFS) will bring together SIU faculty from different departments and colleges with a common interest in interdisciplinary collaboration in forensic education, research, and service. Faculty members in several departments are already involved in teaching forensic sciences and applications in criminal justice, chemistry, anthropology, botany, law, and accounting courses. An interdisciplinary minor in forensic sciences and a concentration in forensic chemistry are currently offered at the undergraduate level.

The current centerpiece of the research aspect of forensic sciences at SIU is the Complex for Forensic Anthropology Research (CFAR), an outdoor human decomposition laboratory administered by the Department of Anthropology. This is one of only six facilities in the United States where interdisciplinary research surrounding the decomposition of human remains is possible. Only two of these facilities are associated with PhD granting institutions. Several other faculty members across campus are interested in collaborative forensic education and research, including, but not limited to, DNA testing, behavioral genetics studies,<sup>5</sup> imaging, pattern recognition, acoustics, microbial identification from preserved artifacts, botany, ecology, entomology, toxicology, criminal law and evidence, social work, working dog training and testing, and writing.

The Law School at SIU provides the opportunity to merge these disparate teaching and research areas into a single cohesive unit, providing the context within which the role of science in the courtroom and the evolution of legal interpretations regarding expert witnesses in various related forensic science fields can be understood and applied. For example, the Scientific and Medical Evidence course (Law 609) (taught by Jennifer Brobst) integrates interdisciplinary fields in honing expert witness testimony to improve the conveyance of forensic scientific information to juries and judges, with existing collaborations with CFAR, the School of Medicine, the School of Social Work, and local law enforcement.

The National Academy of Sciences (NAS) and the President's Council of Advisors on Science and Technology (PCAST) have both recognized the need for research and development in the field of forensic science. Along with several recommendations, the NAS has called for "much more federal funding" to support forensic science research in universities,<sup>6</sup> while the PCAST has recommended "major expansion and strengthening of the academic research community working on forensic sciences, including substantially increased funding for both research and training."<sup>7</sup>

Although the core of forensic sciences is what might be considered "natural sciences", more broadly the discipline and associated funding opportunities involve aspects of social science and supporting

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<sup>4</sup> National Academy of Sciences. *Strengthening Forensic Science in The United States: A Path Forward*. National Academies Press; Washington, D.C: 2009.

<sup>5</sup> SIU holds one of two national licenses from the National Institute for Health for behavioral genetics studies; <https://www.genetests.org/tests/details.php?id=140124>

<sup>6</sup> National Academy of Sciences. *Strengthening Forensic Science in The United States: A Path Forward*. National Academies Press; Washington, D.C: 2009.

<sup>7</sup> President's Council of Advisors on Science and Technology, *Report to the President on the Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*, September 2016., pg 16.

technologies, such as forensic psychology and forensic accounting. For example, researchers in criminal justice at Sam Houston State University led an effort to improve the use of ballistics testing and databases. Their focus was not on the science of ballistics, but conducting interviews and surveys to understand why a federal database was under-utilized and what users suggested to improve the database as an investigative tool.<sup>8</sup> There has also been a push to reduce the backlog of sexual assault kits that emphasizes not only efficiency in the laboratory process of testing DNA and other evidence, but deriving a better understanding of the central role evidence plays in criminal investigations and achieving fair and accurate dispositions. The research suggests improving sexual assault investigations requires a better understanding of how forensic evidence is used and communicated by police detectives and prosecutors (e.g., correcting statistical fallacies in identifying a “match”) and the role advocates can play in assisting victims.<sup>9</sup>

**Merit Criteria:**

1. Collaborative nature, including students

This project currently involves 27 individuals from 16 departments/schools in seven different colleges across the University. The team includes both graduate students and faculty.

Collaborator	Department	College	Position	Specialty
Aldwin Anterola	PLB	COS	Faculty	Lab Management and Accreditation
Sara Baer	PLB	COS	Act. Chair	Ecology and Entomology
Kaleigh Best	ANTH	CoLA	Grad St.	Forensic Anthropology
Jennifer Brobst	LAW/MED	LAW	Faculty	Criminal Law & Expert Testimony
Da Chen	ZOOL	COS	Faculty	Toxicology
Ying Chen	ECE	ENG	Faculty	Imaging
Megan Cleary	ANTH	CoLA	Grad St.	Forensic Anthropology
Gretchen Dabbs	ANTH	CoLA	Faculty	Forensic Anthropology
Mallory DeChant	ANS	AGSCI	Grad St.	Cadaver Dog Training
David Gibson	PLB	COS	Faculty	Forensic Botany and Ecology
Lalit Gupta	ECE	ENG	Faculty	Pattern Recognition
Scott Hamilton-Brehm	MICR	COS	Faculty	Microbiology/DNA
Harvey Henson	GEOL	COS	Faculty	Applied Geophysics & Remote Sensing
Tom Imboden	ISAT	ASA	Faculty	Cyber Security
Mary Elizabeth Kinsel	CHEM	COS	Faculty	Forensic Chemistry
Elizabeth Klaver	ENGL	CoLA	Faculty	Modern American Literature
David Lightfoot	PSAS	AGSCI	Faculty	Genetics/DNA
Dhrubodhi Mukherjee	SOCW	CEHS	Faculty	Mental Health Diagnosis & Testimony
Kurt Neubig	PLB	COS	Faculty	Forensic Botany/DNA
Maria Panakhyo	ANTH	CoLA	Grad St.	Forensic Anthropology
Ellie Powell	ANS	AGSCI	Grad St.	Cadaver Dog Training
Lindsey Roberts	ANTH	CoLA	Grad St.	Forensic Anthropology
Joseph Schafer	CCJ	CoLA	Faculty	Criminal Justice
Jessica Spencer	ANTH	CoLA	Grad St.	Forensic Anthropology
Rosanne Szekely	SAH	ASA	Faculty	Radiographic Imaging
Jun Qin	ECE	ENG	Faculty	Acoustics
Erin Venable	ANS	AGSCI	Faculty	Cadaver Dog Training & Testing

2. Ability to meet the vision outlined (e.g., scholarship, diversity, outreach)

The CERFS builds upon SIU’s unique situation as only one of six universities in the United States to host an outdoor human decomposition laboratory (CFAR) and only one of three institutions to couple that laboratory with a broadly based, interdisciplinary forensic sciences program. The Innovation Annex space will be used for research, teaching (university credit based courses, short courses, and training seminars),

<sup>8</sup> [http://www.shsu.edu/pin\\_www/T@S/2014/ballisticsking.html](http://www.shsu.edu/pin_www/T@S/2014/ballisticsking.html)

<sup>9</sup> <http://www.nij.gov/topics/law-enforcement/investigations/sexual-assault/Pages/untested-sexual-assault.aspx>

consultations with law enforcement and prosecutors/defense attorneys on criminal and civil casework, and interactive collaboration for all of the above. CFAR, the forensic anthropology program, and the interdisciplinary minor in forensic sciences all currently place SIU among only a small handful of programs where specific types of education in forensic sciences can be earned. Establishing the CERFS would add to that prestige and encourage increased enrollment, broaden our ability to serve our community through forensic case consultation, and create an opportunity to engage the public in a way not often possible in forensic work due to security and privacy concerns.

### 3. Does the collaboration include the arts and humanities?

The current list of collaborators includes faculty and/or graduate students in Anthropology, Social Work, Criminology and Criminal Justice, Law, and English. Over the last two years, the School of Law, Anthropology, and Social Work have fostered separate expert witness training opportunities, bringing together graduate students and attorneys in mock trials to practice presenting forensic evidence and serving as expert witnesses. Acoustics and voice pattern recognition are both theoretically and practically aligned with music. Although not currently a collaborator, Forensic Art in terms of sculpting and digital imaging is an ever growing field associated with facial reconstruction. Forensic cases often involve cultural components, from deciding if a situation is forensically significant at all, through trial, incarceration, rehabilitation, and re-entry.

### 4. Is the collaboration valuable to STEM teaching and training?

As the application of principles of scientific disciplines to situations under the framework of the legal system, any scientific discipline may become a forensic science simply by applying the method and theory of that discipline toward a criminal or civil case. CERFS will serve STEM teaching and training by providing real world examples of how the principles of these disciplines can be applied, while fostering skills and productive relationships in interdisciplinary practice. For example, pathologists would work closely with anthropologists, physicians, dentists, chemists, botanists, and attorneys in assisting law enforcement in criminal investigations.

### 5. Feasibility of the project

Established in 2010, CFAR is one of only six outdoor human decomposition laboratories in the United States. The faculty and students have produced multiple peer-reviewed articles and book chapters and several forensic anthropology consultations. Additionally, CFAR has provided a variety of training seminars to law enforcement, cadaver dog handlers, and local students and community groups. The interdisciplinary forensic sciences minor currently has 105 students enrolled from five colleges and 11 majors.<sup>10</sup> This educational collaboration will expand the number of courses available to meet the requirements of the forensic sciences minor, potentially increasing undergraduate enrollment.

Facilities such as CFAR attract great numbers of exceptionally high quality graduate applications. At Texas State University-San Marcos the graduate applications in Anthropology almost tripled (from 55 to 139) over a five year period after they opened their outdoor decomposition facility and associated indoor laboratory.<sup>11</sup> At SIU the interest in Forensic Anthropology at the graduate level is high. Over 60% of the applicants to the Anthropology Department for Fall 2015 expressed interest in Biological Anthropology, of which Forensic Anthropology is a sub-discipline. This is up from 33% in Fall 2012.

The SIU School of Law has a longstanding trial practice program and specialization, with dual degree programs with the School of Medicine and Accounting. These programs lend themselves to a focus on expert testimony, and with the recent addition of the advanced Scientific and Medical Evidence course, the law school has more directly connected law students with graduate students from other departments. The law school has a strong record and reputation of placing its students in criminal justice system positions after graduation, such as Assistant State Attorneys and Public Defenders, positions that require an understanding of the reliability of forensic evidence. Many of these attorneys go on to become judges. While a clear understanding of forensic evidence is vital within the criminal justice system, the interest in sharing resources

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<sup>10</sup> 10 day data from Fa2016, provided by Timothy Bogard, Institutional Research

<sup>11</sup> Personal communication with Daniel Wescott, Director of the Forensic Anthropology Center, Texas State University



across SIU departments to achieve a reputation for excellence in forensic science is already a clear priority.

6. Funding opportunities (grants, contracts, charitable giving, student recruitment and retention, public-private partnerships, commercialization)

In July 2016, a bill was (re-)introduced in Congress that will establish a “National Forensic Science Research Initiative to improve, expand, and coordinate Federal research in the forensic sciences.”<sup>12</sup> This bill directs the National Science Foundation “to award forensic science basic research grants to improve the foundation and practice of forensic science in the United States... [and] to award grants to support one or more forensic science research centers.” Although this bill is still pending, it demonstrates continued support in the legislature for more research in forensic science and the likelihood that more funding for forensic research will be available in the future.

Current sources of grant funding for forensic research and education include a variety of local, state, and federal agencies, including, but not limited to National Endowment for the Humanities, Federal Bureau of Investigation, Federal Emergency Management Agency, National Education Association, National Institute of Justice, National Institute of Standards and Testing, National Science Foundation, Department of Defense, Department of Homeland Security, Substance Abuse and Mental Health Services Administration, and Human Resources Services Administration.

CFAR currently self-funds its entire operational budget through private donations, forensic consultations, and training seminars, the latter two having established fee schedules. Revenue streams could be expanded by offering short-courses in topics of broad interest to the academic, legal, and general community (human osteology, forensic anthropology, decomposition, etc.). These revenue streams would also be open to all collaborators, including interdisciplinary short courses and training seminars through the CERFS, utilizing the collaborative and teaching spaces available at the Innovation Annex. A training room with virtual capabilities could also engage our local community and experts in collaborations with other universities across the nation and even internationally at a relatively low cost.

Another component of CFAR is the growing skeletal collection of individuals with known biographical data, a valuable resource in forensic anthropology and other fields. As the collection grows, there is potential for non-SIU affiliated researchers to pay a fee to utilize it for research, which is consistent with other similar collections housed at other institutions.

7. Tie-ins with campus and regional community. How does this fit with our current and future identity as a research university and commitment to engagement?

CFAR currently offers a variety of law enforcement training seminars, cadaver dog training seminars (partnered with Erin Venable in ANS), forensic case consultation to local, state, and federal law enforcement agencies and prosecution/defense teams, and public outreach events with local schools and community service partners. Such partnerships are of increasing importance as communities struggle with the consequences of crime labs being shuttered due to controversial practices.<sup>13</sup>

The federally funded SIU Trauma Based Behavioral Health Fellowship through the School of Social Work trains over 25 graduate fellows a year to enter the region as mental health clinicians with cutting-edge, evidence-based training to assess, diagnose, and treat child traumatic stress. Their year-long training includes expert witness testimony training with the School of Law faculty and students. These physical and sexual abuse cases are frequently litigated in the civil and criminal justice systems and also involve medical, DNA, and other forensic evidence to prove injury and/or the defendant’s identity.

With the development of CERFS and interdisciplinary collaboration, engagements with the campus and regional community could be expanded to cover more topics, reach broader audiences, and increase frequency to reach larger numbers. CERFS would facilitate the development of a wider array of courses to satisfy the requirements of the interdisciplinary forensic sciences minor on campus, expanding the impact of that minor.

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<sup>12</sup> Forensic Science and Standards Act of 2016 (H.R 5795)

<sup>13</sup> <http://kxan.com/2016/10/17/closure-of-apds-dna-lab-causing-crisis-in-the-court-system/>

## Use of Innovation Annex Space

This proposal requests 11,200 ft<sup>2</sup> total (Figure 1). This physical space must be strictly access controlled to meet the standards for chain of custody in forensic consultations. While CFAR has an associated laboratory that currently meets these standards, it is not possible to expand within Faner Hall and therefore this proposal is being put forth to expand the indoor research laboratory space of CFAR and supply a flexible forensic processing laboratory for those scholars who may occasionally perform forensic consultations that would require the use of a secure laboratory for a short period of time and/or space to conduct collaborative forensic-related research projects. CFAR faculty and staff will take responsibility for the security of the entire space, as procedures and guidelines already exist under the auspices of CFAR.

Cleanrooms are enclosures whose environment can be exclusively controlled, excluding pollutants (microbes, volatile chemicals, particles, etc.). This is a critical aspect of DNA and genetic research. Cleanrooms provide a reliable work space where forensic evidence can be manipulated without fear of contamination, DNA extractions from ancient artifacts can be performed, and other applications from pharmaceutical packaging to delicate circuit board engineering can be attempted.

The team will also utilize the classrooms, conference rooms, and open collaboration areas available at the Innovation Annex to host training seminars, conduct short courses, develop cooperative teaching ideas, collaborate on research ideas, and generally engage in outreach to the greater community. Such activities could be more easily fund generating for the programs and university if they provide a convenient, virtually accessible, modern space for interdisciplinary resource sharing.

## Timeline and Project Life

CFAR currently operates out of a small laboratory space in Faner Hall. The outdoor facility has been accepting human donations, delivering law enforcement training seminars, participating in cadaver dog training, and providing public outreach since 2010. This application for the Innovation Annex space would allow for the expansion of all of these activities and provide the opportunity for greater interdisciplinary collaboration through CERFS. The current activities of CFAR and the teaching activities associated with the forensic anthropology program, the Law School, the interdisciplinary forensic sciences minor, and the forensic chemistry concentration should be considered Phase I.

Phase II (years 1-3) is a fundraising period, whereby the principal participants in the CERFS will pursue a variety of sources of outside public and private funding, in hopes that SIU will be able to match the funds. During Phase II, the members of CERFS will work to develop additional classes that meet the core mission of CERFS and will continue to develop and offer training seminars, short courses, and community outreach within the bounds created by current funding and facilities limitations.

Phase III (years 3-5) is contingent upon the successful procurement of funds to secure and outfit the laboratory space outlined in Figure 1. Phase III would see the CERFS come into full operation, with training seminars and short courses offered at the Innovation Annex, public outreach through hands on demonstrations and open houses, and collaborative teaching in the forensic sciences all while continuing to build on the current research programs of those working in the forensic sciences.

The projected life of the CERFS and CFAR is infinite. Forensic Sciences are a mainstay in our society and legal system and will be for the foreseeable future. Facilities similar to CFAR were first developed in 1980 and the original facility is still open. With resources and personnel provided,

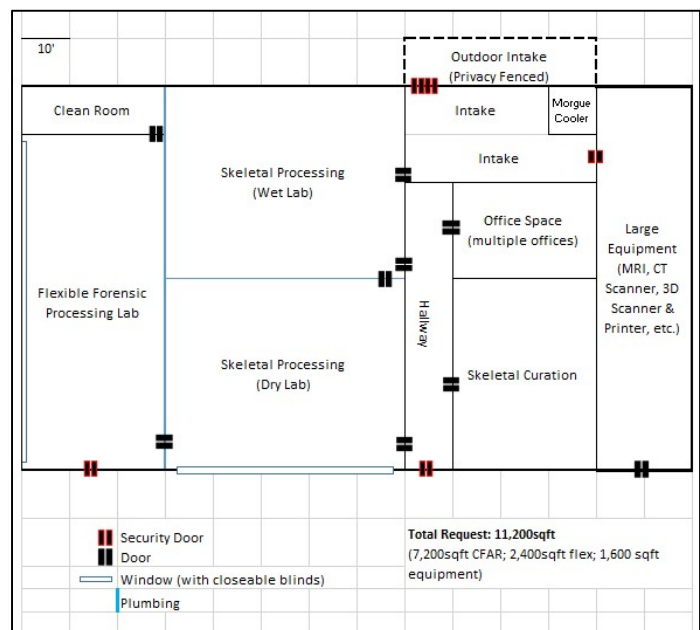


Figure 1 Proposed Facility Space Usage

it is likely CFAR and the CERFS could also enjoy such longevity and build upon an already respectable national reputation. The demand for education and training in the forensic sciences is extremely high, and the promise of government funding is already borne out by recent legislation, allowing CERFS to draw student and professional interest to the region and university.

## **Appendix B--Proposed Construction Budget**

Room Description	G&F	Room Use Category	**G&F	Cost	Comments
Vestibule	104.31	General Use	\$348.65	\$36,367.68	
Lobby	551.69	General Use	\$348.65	\$192,346.72	call window to admin. assistant
Corridor	2036.07	Supporting Facilities	\$272.42	\$554,666.19	
Faculty Office	147.92	Office	\$301.95	\$44,664.44	private offices
Faculty Office	137.4	Office	\$301.95	\$41,487.93	private offices
Faculty Office	137.4	Office	\$301.95	\$41,487.93	private offices
Faculty Office	137.4	Office	\$301.95	\$41,487.93	private offices
Admin. Asst. Office	84.01	Office	\$301.95	\$25,366.82	open office
Admin. Asst. Office	102.03	Office	\$301.95	\$30,807.96	open office
Grad. Student Office	299.51	Office	\$301.95	\$90,437.04	open office
Conference	281.66	Office	\$301.95	\$85,047.24	
Storage	37.31	Office	\$301.95	\$11,265.75	
Office Reception/Hall	316.01	Office	\$301.95	\$95,419.22	
Intake	1544.71	Laboratory/Research (avg.)	\$446.52	\$689,743.91	1 autopsy table/sink, 10' wide roll-up doors, direct access to Skeletal Analysis Lab (wet) and Large Equipment.
CT Scanner Control (Room)	105.5	Health Care	\$457.75	\$48,292.63	
CT Scanner (Room)	321.59	Health Care	\$457.75	\$147,207.82	
X-Ray (Room)	445.11	Health Care	\$457.75	\$203,749.10	
3D Scanner, 3D Printer, Hall (Room)	508.49	Supporting Facilities	\$272.42	\$138,522.85	
Autopsy Style Processing Lab	2186.17	Laboratory/Research (wet)	\$457.67	\$1,000,544.42	2 autopsy tables, 2 autopsy sinks, 1 regular sink, walk-in hood
Skeletal Analysis Lab (wet)	1711.09	Laboratory/Research (wet)	\$457.67	\$783,114.56	10 mobile tables (skelton size), walk-in hood
Skeletal Analysis Lab (dry)	1319.15	Laboratory/Research (dry)	\$435.37	\$574,318.34	50 disassembled skeletons, knee space at counters/tables, 1 hand wash sink only
Skeletal Collection	1030.26	Supporting Facilities	\$272.42	\$280,663.43	3000 disassembled skeletons in boxes on high density shelving
Lab Style "Smart" Classroom	1929.9	Laboratory/Instructional (avg.)	\$336.15	\$648,735.89	mobile tables/chairs for students, fixed counter/storage for instructor, hand wash sink, tall storage cabinets, 2 exits
Break	162.11	Office	\$301.95	\$48,949.11	refrigerator, microwave, etc.
Locker/Shower - Employee	361.1	General Use	\$348.65	\$125,897.52	used by staff only, 10 people maximum, adjacent to laundry, laundry chute
Restroom - Employee	271.92	General Use	\$348.65	\$94,804.91	# fixtures dictated by total occupancy, floor to ceiling walls/doors
Restroom - Public	409.13	General Use	\$348.65	\$142,643.17	# fixtures dictated by total occupancy, floor to ceiling walls/doors
Laundry	167.13	Laboratory/Research (avg.)	\$446.52	\$74,626.89	1 wid, utility sink, tall hanging space, counter, cabinets, adjacent to locker/shower
Custodian	85.36	Supporting Facilities	\$272.42	\$23,253.77	
Exterior Equipment Storage	221.4	Supporting Facilities	\$272.42	\$60,313.79	Access from exterior only via 6' wide roll-up door
Mechanical	544.94	Supporting Facilities	\$272.42	\$148,452.55	
Telecom	93.66	Supporting Facilities	\$272.42	\$25,514.86	
<b>Total G&amp;F</b>	<b>17791.44</b>				
Electrical Service and Site Lighting				\$95,000.00	800 amp, 480 volt electrical switchgear and service and parking lot lighting
Security - CCTV and Access Control				\$30,000.00	
Audio/Video Technology				\$60,000.00	
Water, Sewer, and Gas Connection				\$40,000.00	
Utility Locate				\$1,000.00	
Tree Removal (EA)	35		\$1,000.00	\$35,000.00	
Rough Grading (GF)	60000			\$3,775.00	per RMeans line 0270
Finish Grading for Building (BY)	2600		\$1.81	\$4,706.00	per RMeans line 1100
Finish Grading for Pavement (BY)	4000		\$0.94	\$3,760.00	per RMeans line 0100
Asphalt Paving (GF)	27236.64		\$5.72	\$264,740.14	
Striping (Spaces)	71		\$25.00	\$1,775.00	
Concrete Walks	960.94		\$9.00	\$8,648.46	
Fencing (LF)	1630		\$75.00	\$122,250.00	
Relocate 2 portable storage buildings				\$1,000.00	\$400 first building + \$200 second building + \$400 non-Cook brand fee
<b>Base Building Budget</b>				<b>\$7,221,856.97</b>	
<b>Green Building Design</b>				<b>\$433,311.42</b>	6%
<b>Escalation</b>				<b>\$586,132.34</b>	36 months @ .217% per
<b>Escalated Building Budget</b>				<b>\$8,241,300.73</b>	January 2022 expected bid date
<b>Construction Contingency</b>				<b>\$824,130.07</b>	10%
<b>Subtotal, Building Budget</b>				<b>\$9,065,430.80</b>	
<b>A/E Fees</b>				<b>\$906,543.08</b>	10%
<b>Seismic Design</b>				<b>\$181,308.62</b>	2%
<b>On-site Observation</b>				<b>\$302,400.00</b>	2 full time observers for 18 months
<b>Reimbursables</b>				<b>\$45,327.15</b>	5% of A/E fees
<b>Movable Equipment</b>				<b>\$906,543.08</b>	10%
<b>Commissioning</b>				<b>\$135,981.46</b>	1.50%
<b>Construction Administration (Phys. Plant)</b>				<b>\$90,654.31</b>	1%
<b>Design Development Contingency</b>				<b>\$906,543.08</b>	10%
<b>Total Building Budget</b>				<b>\$12,540,731.58</b>	
<b>Morgue Cooler</b>		Major Movable Equip.		\$42,000.00	within intake room, 9 bodies, drawer style
<b>Freezers</b>		Major Movable Equip.		\$2,427.00	within intake room, (3) 83"x31.5"x31.5" chest freezers
<b>CT Scanner (Equipment &amp; Install)</b>		Major Movable Equip.		\$450,000.00	\$350,000 for refurbished system, within CT Scanner Room
<b>X-Ray (Equipment &amp; Install)</b>		Major Movable Equip.		\$175,000.00	\$130,000 for floor mounted in lieu of ceiling mounted system, within X-Ray Room
<b>3D Scanner (Equipment &amp; Install)</b>		Major Movable Equip.		\$1,000.00	within Hall
<b>3D Printer (Equipment &amp; Install)</b>		Major Movable Equip.		\$1,000.00	within Hall
<b>High Density Shelving</b>	775	Major Movable Equip.	\$115.00	\$89,125.00	within Skeletal Collection, 3000 min. skeleton boxes.
<b>Base Major Movable Equip. Budget</b>				<b>\$760,552.00</b>	
<b>Escalation</b>				<b>\$61,727.08</b>	36 months @ .217% per
<b>Escalated Major Movable Equip. Bdg.</b>				<b>\$822,279.08</b>	
<b>Contingency</b>				<b>\$82,227.91</b>	10%
<b>Total Major Movable Equip. Budget</b>				<b>\$904,506.99</b>	
<b>Project Budget</b>				<b>\$13,445,238.58</b>	

\*\* \$/G&F are based on average standards of finish and include air conditioning, fixed equipment, and IT work. Movable equipment not included.



## Appendix C--CFAR Productivity (2010-2018)

<b>Research</b>		
Published Peer-reviewed Papers		13
Invited Peer-reviewed Book Chapters (in press)		3
Published Abstracts		12
National Conference Presentations		10
Regional Conference Presentations		10
<b>Education</b> (Beyond SIU Courses)		
Law Enforcement Training Seminars (MTU#15)		2
Illinois Coroners' and Medical Examiners' Association Training		3
Egyptian Area Funeral Directors Association		1
<b>Dabbs Forensic Anthropology Service</b>		
Forensic Case Consultations		19
Community Outreach Events		5
Professional Committees related to Forensic Anthropology		3
Leadership roles in Professional Associations		1
Cadaver Dog Training/Research (with additional scheduled May 2019)		2

## **Appendix D--Letters of Support for CFAR from Directors of other Facilities**

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TEXAS  STATE<sup>®</sup>  
FORENSIC ANTHROPOLOGY  
CENTER

August 17, 2018

**Chancellor Carlo Montemagno**  
Southern Illinois University  
Carbondale, IL 62901

**Re: Support for the Complex for Forensic Anthropology Research**

Dear Chancellor Montemagno:

I have recently received information that the Complex for Forensic Anthropology (CFAR) at SIU may be closing. As the director of the Forensic Anthropology Center at Texas State (FACTS), I am writing in strong support of the continued operation of the CFAR and for the director, Dr. Dabbs. As you are already aware, there are numerous advantages to having a human taphonomy facility and associated laboratory. The research and training conducted at human taphonomy facilities like CFAR has been and will continue to be used in real casework and medicolegal policy decisions. CFAR also provides an invaluable skeletal collection and training facility for SIU students and local law enforcement.

I am the Director of FACTS, a Professor in the Department of Anthropology at Texas State University, and a fellow of the American Academy of Forensic Sciences. The mission of FACTS is to advance knowledge in forensic sciences through world-class research, education, and outreach. We provide a number of services including 1) assisting local, state, and federal agencies in medicolegal death investigations, 2) working with human rights organizations to identify and repatriate undocumented border crossers, 3) providing training for medicolegal death investigators, human remains detection dog trainers, search and recovery teams, and law enforcement agents, 4) conducting novel research related to forensic taphonomy, human skeletal variation, and forensic anthropological methods, and 5) providing a unique environment for student learning. As one of the few directors of a human decomposition facility, I have had the pleasure of knowing Dr. Dabbs for approximately 7 years. During this time I have had the opportunity to read her publications and observe her presentations at professional conferences. Therefore, I feel I have a good perspective regarding Dr. Dabbs work associated with CFAR and the efforts that are required to run a successful human taphonomy research facility.

As you know, CFAR is one of only nine taphonomic facilities in the world. As a director of one facility, I have been impressed with the work that has been conducted at CFAR. For the size of the facility Dr. Dabbs and her students have been extremely productive. In fact, I would say that CFAR has been more productive than many of the larger facilities. I use much of the work coming out of CFAR on taphonomy, especially the effects of freezing, vulture scavenging, total body score standardization, and accumulated degree day calculations in my own casework and research. I know that I cite Dr. Dabbs' work in nearly every one of my taphonomic publications and grant proposal. She is one of the top experts in the field, and the work coming out of CFAR reflects well on SIU.

Since 2010, CFAR has already obtained approximately 50 whole body donations. This is an impressive number of donations, especially considering the time and funds that are required for pick up, placement, data collection, and processing of the remains. In addition to the taphonomic data recovered, these 50 individuals also provide a valuable documented skeletal collection for teaching and research. Our experience at FACTS is that as the skeletal collection grows the number of external researchers requesting to conduct projects at our institution has grown considerably. I have no doubt this will be true for SIU as well. SIU will directly benefit from CFAR.

As CFAR grows it will also greatly benefit the local community. At FACTS we provide training opportunities and expert services for local law enforcement. In many cases we can directly test ideas

FORENSIC ANTHROPOLOGY CENTER

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regarding cases. I have no doubt this will also be true for CFAR. Our interactions with local law enforcement has significantly contributed to the success of our faculty and students.

In addition to providing support for the continuation of CFAR, I would also recommend providing financial and staff support and a 12 month position for Dr. Dabbs. With adequate support Dr. Dabbs could turn CFAR into an exceptional forensic science research center. At Texas State University, FACTS is provided with an annual budget, support staff, and graduate student assistantships. Furthermore, I am on a 12 month appointment, and I know this is true of most of the other taphonomy facilities directors. In addition, at Texas State University the normal teaching load is 4:4. However, as the director of FACTS I only have a 1:1 teaching load because running a world-class decomposition facility requires a considerable amount of administrative and research time, especially grant writing. FACTS is primarily a student run center, but without this support we could not operate. I have been amazed at the work that has been done at CFAR by Dr. Dabbs with minimal support. I think if you provided sufficient support CFAR would rise beyond your expectations. It would not only benefit the department but the university and the local community.

In summary, FACTS supports the continuation of CFAR. We also specifically support Dr. Dabbs as the director. We look forward to collaborating on future research. CFAR provides unique research, training, and outreach opportunities that advance our knowledge of forensic science and benefits SIU and the local community. If I can be of further assistance, please feel free to contact me.

Best Regards,



Daniel J. Wescott, PhD  
Director, Forensic Anthropology Center  
Associate Professor of Anthropology

28 February 2018

Dear Chancellor Montemagno,

I am writing to encourage you to provide the necessary funding to continue the functioning of the Complex for Forensic Anthropology Research (CFAR.), founded in 2010 by Dr. Gretchen Dabbs of the Anthropology Department. As you may recall, I was an outside reviewer for Dr. Dabbs' early promotion and tenure, which I strongly supported based on her extensive research and publication history. She is a superlative researcher, one of the outstanding forensic anthropologists of her generation, and a scholar of great scientific integrity.

CFAR is an important research facility in forensic anthropologists continuing quest to provide accurate estimations of the postmortem interval for the medico-legal profession. In the field for forensic taphonomy, there facilities devoted to the study of decomposition are rare, whether they use animal models or human donors. I myself founded and was the research director of such a facility, known as TRACES (Taphonomic research in Anthropology: Center for Experimental Studies), from 2009-2014 in the U.K.

CFAR is a model facility for the study of decomposition. It originally utilized pigs as the facility contended with operational security and experimental and laboratory health and safety protocols. It began accepting human donors in January 2012 and obtained its 50th donation in autumn 2017. Dr. Dabbs and her research group have published extensively, given the small scale and short term of operation of the CFAR facility, on topics including the effects of concrete encasement on decomposition, the vulture scavenging pattern in Southern Illinois, the effects of lawnmowers on skeletal remains, and the effect of freezing on decomposition. The knowledge gained from CFAR has also informed Dr. Dabbs' forensic anthropology casework and assisted in the estimation of the postmortem interval within the region.

I must emphasize that Dr. Dabbs' extensive publication history relating to work stemming from CFAR is also a model for other researchers in the field – and one that is unfortunately not attained by most. In the form of notable contrast, researchers associated with the University of Tennessee's Anthropological Research Facility (ARF, otherwise known as the "body farm") which was *founded over 30 years ago and receiving over 1700 donations of human bodies, have published as scant 5-6 articles relating to decomposition in that entire time period.* **Dr. Dabbs, on the other hand, with an operational period of only seven years, has published 13 peer-reviewed articles incorporating data from the CFAR facility.**

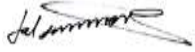
I know firsthand how difficult it is to operate this type of facility and how important the support of one's university administration is. It would be a travesty to let this facility close and have the important research contributions of Dr. Dabbs' come to an end for lack of university support.



In closing, I urge you to reconsider closing the CFAR facility and to offer your full support to Dr. Dabbs in maintaining excellence in research and research productivity.

Should you wish further information concerning anything in this letter, please do not hesitate to contact me via email ([tsimmons@vcu.edu](mailto:tsimmons@vcu.edu)) or phone (804)828-3295 or by post at the address below my signature.

Yours sincerely,



Tal Simmons, PhD, D-ABFA, Cert FA-I  
Professor  
Graduate Program Director  
Department of Forensic Science  
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Dr. Carlo Montemagno, Chancellor  
Southern Illinois University  
Carbondale, IL 62901

26 February 2018

Dear Dr. Montemagno,

I am a forensic anthropologist and the director of the Forensic Research Outdoor Station (FROST) at Northern Michigan University, one of the eight outdoor forensic research facilities in the United States. I recently attended the annual meeting of the Directors' Consortium for Anthropological Research in Taphonomy (DCART), of which Dr. Gretchen Dabbs is the President. As experts in the field, we were saddened when Dr. Dabbs informed our group that the Complex for Forensic Anthropology Research (CFAR) at Southern Illinois University has been temporarily shut down.

I am writing to you to express my support of Dr. Dabbs and the valuable research and educational opportunities that the CFAR facility has produced and will hopefully continue to produce for many years to come. I cannot overstate the importance of CFAR and the contributions made to law enforcement and to forensic science.

Dr. Dabbs is well-respected among taphonomy researchers and her CFAR work has yielded some important publications that I have found to be invaluable as I develop our facility, policies, and curriculum for students. For example, before being permitted to work with human remains, all of my students are required to read two articles co-authored by Dr. Dabbs: "An Update on the Hazards and Risks of Forensic Anthropology, Part I: Human Remains" and "An Update on the Hazards and Risks of Forensic Anthropology, Part II: Field and Laboratory Considerations," both of which were published in the *Journal of Forensic Sciences* in 2016. Also in 2016, Dr. Dabbs co-authored an article with two of the other outdoor facility directors, "Interobserver Reliability of the Total Body Score System for Quantifying Human Decomposition," which also appeared in the *Journal of Forensic Sciences*, and has helped to inform my methods for data collection at our facility. Additionally, her 2010 article in *Forensic Science International*, "Caution! All Data are not Created Equal: The Hazards of Using National Weather Service Data for Calculating Accumulated Degree Days" and her 2015 article in the *Journal of Forensic Sciences*, "How should Forensic Anthropologists Correct National Weather Service Temperature Data for Use Estimating the Postmortem Interval?," were integral parts of my justification for installing a weather station at FROST so we could collect accurate, site-specific weather data. I know of no fewer than five additional publications that have resulted from CFAR research and have been informative of the decomposition process and/or have contributed significantly to our field.

Dr. Dabbs has also helped to resolve a dilemma I was facing with our facility because of her work at CFAR. I learned through a personal communication with Dr. Dabbs that because of her observations at CFAR, she has made adjustments to a common method for calculating the postmortem interval by converting the temperatures from the Celsius scale to the Kelvin scale. Dr. Dabbs' adjusted method will form the basis for all calculations of postmortem interval we calculate at FROST (the Celsius scale is inappropriate for our cold temperatures). FROST and CFAR are located in climate regions that are more similar to one another than they are to the climates of any of the other facilities, and I expect not only complementary research to come out of our facilities, but also tremendous opportunities for collaboration on research projects involving intra-regional variation.

I noticed in your Vision 2025 statement that part of SIU's vision is to reinforce all you do "to serve students through outstanding programs supported by experiential learning and a vibrant campus life." An important aspect of experiential learning is critical reflection of the real-world experiences, which is an inherent component of forensic science. CFAR, FROST and other similar facilities provide a unique opportunity for students to not only conduct innovative research that is essential for the advancement of our field, but also to interact with the law enforcement community and medicolegal professionals. These facilities provide students with real-world experience as they work toward their academic degrees, and students who are afforded first-hand experiences with casework are also exposed

to report writing and the opportunity to see how their science affects the criminal justice process. These are marketable skills as students enter the workforce.

Experience at facilities like FROST and CFAR, which operate as willed body programs, also provide students with experiences associated with death and dying, working with families of recently deceased, and learning about the ethics of our science and research integrity issues concerning confidentiality, privacy, and respect for research subjects. I have known Forensic Anthropologists who have conducted their research as though the remains they studied had no histories as people—as though they were numbers and boxes and bones, with no sense of the fact that they were individuals, many of whom died violent deaths at the hands of another. The education to which SIU's forensic science students have access because of the CFAR facility and Dr. Dabbs' position regarding highly ethical research practices is farther-reaching than most Forensic Anthropology programs in this country offer. Students at SIU stand to learn so much about the human aspect of their science and these facilities are ideal nexuses for student collaboration across seemingly unrelated disciplines. For example, I have found that FROST has attracted not only students in various natural science programs at NMU, but also students enrolled in our Social Work program who have expressed interest in Gerontology.

FROST is a new facility for which I have been building the academic and practical infrastructure since I was hired by NMU in August of 2017. I was hired as the final piece of a puzzle the University administration had been assembling for approximately two years prior to my arrival. NMU administrators visited Dr. Dabbs and CFAR during the early phases of developing the FROST concept, and by all accounts she was a welcoming host and provided numerous helpful insights to those who visited. She has continued to assist me when I have reached out to the other facility directors about various issues and I can honestly say our facility would not be where it is today without Dr. Dabbs.

My administration continues to be extremely supportive of me as the FROST Director and ensuring my access to all of the laboratory & classroom space I need to be successful because they recognize the potential for growth within our university that can start with FROST. NMU's enrollment was at an all-time low until recently, and the University created FROST as an innovative program to recruit and retain students. We have already seen an uptick in enrollment in several programs, with students self-reporting that they chose to attend NMU because of FROST and the potential to conduct research in forensic science. The University administration has already set plans in motion to develop an on-campus forensic science center, complete with laboratories, offices, and a large gathering space to host regional scientific conferences. Much of this space will be devoted to nurturing our programs devoted to the forensic sciences. There is a sense of growth and innovation at NMU, which is already attracting students and has garnered national attention.

CFAR, like FROST, could be a tremendous draw for new students and the basis for innovative collaborations across disciplines at your university. As a Forensic Anthropologist, a facility director, and an educator, I write to you with the hope that you are able to see not only how impactful Dr. Dabbs has been, but how impactful she and her program could be for your university if given the administrative support she needs to be successful.

Thank you for your time.

Respectfully,



Jane C. Wankmiller, Ph.D., D-ABMDI  
Director, Forensic Research Outdoor Station  
Northern Michigan University



February 28, 2018

Dear Dr. Carlo Montemagno,

The Complex for Forensic Anthropology Research is a unique teaching and research opportunity that few universities have duplicated and is on the forefront of integrative/interdisciplinary research in forensic anthropology and forensic sciences. CFAR offers learning opportunities to all levels of student from BA to PhD, something that few other forensic anthropology facilities offer in the United States. Currently I teach physical/forensic anthropology at the University of Louisiana at Lafayette, I also conduct active case work in Louisiana; I earned my PhD from the University of Florida and trained at the C.A. Pound Human Identification Lab, one of the first forensic anthropology labs in the country and a unique facility for its hands on training of students. However, it is lacking a taphonomic research component, something that is distinct to only a few select universities including Southern Illinois University. Now as an Assistant Professor of Anthropology I am even more acutely aware of the opportunities that facilities like CFAR provide its students. In addition, the presence of this facility on your campus gives your faculty and students the ability to generate a large amount of grant funding and service revenue, which benefit the facility and the university as a whole. Lastly, Dr. Gretchen Dabbs has already demonstrated CFARs ability to facilitate nationally and internationally recognized research. All of these things combined with the holistic education that one receives in the Department of Anthropology at the SIU, make CFAR an extremely valuable asset that should be further supported and cultivated by SIU.

As mentioned there are very few dedicated taphonomic research facilities, however research is demonstrating that these facilities and their research is vitally important to our understanding of human decomposition and the determination of time since death. Further, research has indicated that results from one facility, or area, do not directly translate to outcomes in another area; therefore having facilities in various locations is extremely important so that accurate estimations and interpretations can be provided to law enforcement. This accurate and precise information helps solve crimes and provide closure to families.

The hands-on opportunities that are available at CFAR are the true strength of this program, both from a learning and research perspective. Again very few universities have a taphonomic research facility and even among those that do, not all have had the success that CFAR has in obtaining human donations. Working on taphonomic research is invaluable in that it allows students to truly apply what they are being taught, and to see how their lessons directly impact the forensic community. Further, as Dr. Dabbs conducts active case work through CFAR, it puts her and the students at the fore-front of research as they see the questions and issues that are arising in the real-world and they have the opportunity to identify and address them through timely research. Further as an active forensic lab, CFAR and the students in the forensic anthropology program are in a prime position to seek out and receive grants from a variety of

sources, including the National Institute of Justice and the National Science Foundation, helping to fund research and raise the notoriety of the university. All of these factors result in CFAR developing true critical thinking and research-based problem-solving in its students.

The multidisciplinary nature of this type of research creates another unique benefit of a taphonomic research facilities such as CFAR as it allows for various other disciplines (e.g. biology, geology, entomology, chemistry, engineering, and art) to become involved. This results in use of the facility beyond just anthropology, which helps the university develop collaborations, as demonstrated by the Saluki Grand Innovation Challenge proposal presented by Dr. Dabbs and others. Not only does this create professional/collegial development opportunities, but it all demonstrates to students the integrative and interdisciplinary nature of scientific research, something many students of anthropology (and other disciplines) forget due to their siloed programs. Further the inclusion of student participants from BA to PhD allows for both academic and professional development of all involved as BA students have the opportunity to collaborate with graduate students across disciplines, developing an understanding of what research involves and helping them determine if they really want “to do” forensic anthropology as a career (i.e. can they handle the sights and smells?), which helps prepare them for graduate school and future careers, while graduate students are learning about mentorship and teaching.

Lastly training of students, other anthropologists, law enforcement, and legal professionals in forensic anthropology and taphonomy is instrumental in furthering the understanding of this science in both the public and professional arenas. As a working forensic anthropology laboratory CFAR is also offering an invaluable service to the state of Illinois and the surrounding areas, both through case work and training seminars. Other forensic programs/facilities are only now realizing the potential funding from these opportunities, however, CFAR is already ahead of the curve, demonstrating the ingenuity of the faculty and sustainability of the facility. One can only imagine the research, publication, and grant potential of a facility like this that is further supported both financially and academically by its university.

I hope that these statements have provided you with a picture of the value of the Complex for Forensic Anthropology Research to Southern Illinois University, the Anthropology Department, and the state of Illinois in general.

Sincerely,

Maranda A. Kles, Ph.D.  
Assistant Professor of Anthropology  
Anthropology Program Coordinator  
mkles@louisiana.edu  
337-482-5371



# CFAR closing

**Connor, Melissa** <mconnor@coloradomesa.edu>

Sun 3/4/2018 10:13 PM

To:Chancellor <chancellor@siu.edu>;

Cc:Gretchen R. Dabbs <gdabbs@siu.edu>;

March 3, 2018

Dear Chancellor Montemagno:

I was saddened to hear that Southern Illinois University was closing the Complex for Forensic Anthropology Research (CFAR). There are so few human decomposition facilities in the world that each provides unique and incomparable information for those of us studying human decomposition. The variable that impacts decomposition above others is the outdoor environment, and the easiest way to vary this is though having facilities throughout geographical space in different environments.

For instance, the work Dr. Dabbs and her students did with vultures could only be done in southern Illinois. It provides a complement to work done in Texas and has helped to open the discussion on vulture scavenging for the discipline. The work done on methods, such as using the total body score, provided base data on techniques that the discipline was missing until Dr. Dabbs worked on these issues using data from CFAR.

A human decomposition facility does require a strong commitment from the University. I have enjoyed this support for my facility at Colorado Mesa University. It is the rare University that provides this backing- but the benefits to education, service, and research are equally rare. The students have to work hard to move remains into the field, complete daily data collection, input data into a useable database, and clean the remains for a skeletal collection. But the experience cannot be replicated elsewhere. There are so few of these facilities that students, as well as faculty, have unparalleled opportunities to present and publish research. My undergraduate students have the opportunity to present at national conferences because the material they are working with is so important to the discipline.

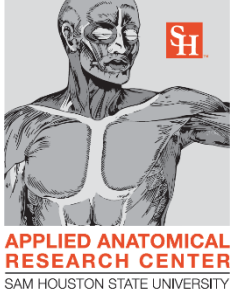
For all these reasons, I find it disappointing that CFAR will disappear. SIU is losing an important resource, and so is the entire taphonomic discipline.

Sincerely,

Melissa Connor, Ph.D.

Professor, Forensic Anthropology  
Director, Forensic Investigation Research Station  
Colorado Mesa University  
Grand Junction CO





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Chancellor, Dr. Carlo Montemagno  
Southern Illinois University, Carbondale  
Carbondale, Illinois 62901

February 27, 2018

RE: Complex for Forensic Anthropology Research (CFAR)

Dear Chancellor,

I am writing to you today with great disappointment upon hearing that the CFAR unit, directed by Dr. Gretchen Dabbs, Department of Anthropology, at Southern Illinois University, Carbondale, is on the verge of permanently closing.

I am the director of the Applied Anatomical Research Center (AARC) at Sam Houston State University, Huntsville Texas, which is also a willed-body donor program. Our facility is a multi-disciplinary research center, and a predominant part of the studies are focused on human decomposition. I too am a forensic anthropologist and Dr. Dabbs and I have published multiple peer-reviewed articles in high impact journals.

The significance of these types of research facilities is multi-faceted. The research conducted at these facilities has very practical application for the medico-legal community. There are numerous times I have assisted law enforcement in estimating the postmortem interval for active and cold cases as Dr. Dabbs has done as well. We are a significant aid to law enforcement in solving crimes.

These research centers are also quite an attraction for incoming students as there are only six of these types of research facilities in the world and students are fascinated by it and want to be a part of it.

To direct this type of center it takes someone who is dedicated and determined, and who has the ability to handle various unattractive, and often times, disturbing tasks, which is what I

have professionally observed in Dr. Dabbs. Dr. Dabbs is very well respected among her colleagues in Forensic Anthropology. She is an accomplished colleague and has the passion and determination to succeed in continuing to direct and develop CFAR. She is the President of the Director's Consortium for Anthropology Research in Taphonomy (DCART) and a member of the Organization of Scientific Area Committee (OSAC) for the National Institute of Standards and Technology (NIST), both prestigious committees in Forensic Anthropology.

These research centers are a great asset to a university and very much need the complete support of the administration.

I am writing in support of Dr. Dabbs and the continuation of CFAR. For research purposes, and practical application for the medico-legal community, we need this facility to continue to conduct and publish data on human decomposition. The environment of southern Illinois is unique in itself and greatly adds to the growing data so needed in taphonomy studies.

If I can be of any help to you, Dr. Dabbs or to CFAR, please don't hesitate contacting me.

Sincerely,

Joan A. Bytheway, PhD, D-ABFA  
Director, Applied Anatomical Research Center  
Sam Houston State University  
Huntsville, Texas 77341