### 2022 PROJECT PROPOSAL CHECKLIST

2023-25 Biennium Four-year Higher Education Scoring Process

INSTITUTION	CAMPUS LOCATION		
365 - Washington State University	Pullman, WA		
PROJECT TITLE	OFM/CBS Project #		
Bustad Renovation (SIM for Vet Teaching Anatomy) - CBPS	40000344		
PROJECT CATEGORY	FPMT UNIQUE FACILITY ID # (OR NA)		
Renovation - Standalone	A04256		
PROPOSAL IS			
New or Updated Proposal (for scoring)	Resubmitted Proposal (retain prior score)		
	☐ Resubmittal from 2018 (2019-21 biennium)		
☐ Resubmittal to be scored (more than 2 biennia old or significantly changed)	☐ Resubmittal from 2020 (2021-23 biennium)		
CONTACT	PHONE NUMBER		
Kate Kamerrer	Click or tap here to enter text.		

### Proposal content

- ☑ Project Proposal Checklist: this form; one for each proposal
- ☑ Project Proposal Form: Specific to category/subcategory (10-page limit)
- Appendices: templates, forms, exhibits and supporting/supplemental documentation for scoring.

### Institutional priority

☑ Institutional Priority Form. Sent separately (not in this packet).

Check the corresponding boxes below if the proposed project meets the minimum threshold or if the item listed is provided in the proposal submittal.

#### Minimum thresholds

$\boxtimes$	Project is not an exclusive enterprise function such as a bookstore, dormitory, or contract food service
$\boxtimes$	Project meets LEED Silver Standard requirements.
	Institution has a greenhouse gas emissions reduction policy in place in accordance with RCW 70A.45.050 and vehicle emissions reduction policy in place per RCW 47.01.440 or RCW 43.160.020 as applicable.
	A complete predesign report was submitted to OFM by July 1, 2022 and approved.
	Growth proposals: Based on solid enrollment projections and is more cost-effectively providing enrollment access than alternatives such as university centers and distance learning.
	Renovation proposals: Project should cost between $60 - 80\%$ of current replacement value and extend the useful life of the facility by at least 25 years.
	Acquisition proposals: Land acquisition is not related to a current facility funding request.
	Infrastructure proposals: Project is not a facility repair project.

### 2022 PROJECT PROPOSAL CHECKLIST

2023-25 Biennium Four-year Higher Education Scoring Process

$\boxtimes$	Stand-al bienniur	one, infrastructure and acquisition propon.	osals is a singl	e project requesting funds for one
Requ	uired ap	pendices		
$\boxtimes$	Project o	cost estimate: Excel C-100		
	degrees		red for Overa	Bachelors, High Demand and Advanced rching Criteria scoring criteria for Major
$\boxtimes$		lity of Space/Campus Utilization templared for all categories/subcategories excep		1 /
$\boxtimes$		ble Square Feet template to indicate prog tion and Replacement proposals, all cate	_	
Opti	onal ap	pendices		
		mental and supporting project documen ia, such as:	tation, <i>limit to</i>	materials directly related to and needed for the
	Degree a	and enrollment growth projections		
	Selected	excerpts from institutional plans		
	Data on	instructional and/or research space utili	zation	
	Addition	nal documentation for selected cost com-	parables (acqu	aisition)
$\boxtimes$	Selected	materials on facility conditions		
	Selected	materials on code compliance		
$\boxtimes$	Tables s	upporting calculation of program space	allocations, w	reighted average facility age, etc.
		e of consistency of proposed research prement plans	rojects with st	ate, regional, or local economic
	Evidence	e of availability of non-state matching fu	ınds	
		documentation of prior facility failures, acture projects	high-cost mai	intenance, and/or system unreliability for
		entation of professional assessment of coacture projects	osts for land a	cquisition, land cleanup, and
		documentation of engineering studies, s structure and land cleanup projects	ite survey and	l recommendations, or opinion letters
	Other:			
	•	ne above checked items indicate either the onding items have been included in this		ed project meets the minimum thresholds,
Nar	me:	Kathleen Kamerrer	Title:	AVP, Capital Budget & Facilities Business Administration
Sigr	nature:	Kathleen Kamerrer	Date:	8/8/22

2022 Higher Education Project Proposal Form

INSTITUTION	CAMPUS	
Washington State University	Pullman, WA	
PROJECT TITLE		
Bustad Renovation (SIM for Vet Teaching Anatomy) - CBPS		

#### SUMMARY NARRATIVE

### Problem statement (short description of the project – the needs and the benefits)

Washington State University requests \$8 million in the 2023-25 capital budget for the renovation of vacant space in Bustad Hall on the Pullman campus to enhance the Simulation-Based Education program within the College of Veterinary Medicine and service unmet student demand. This funding will support the design and construction necessary to renovate existing laboratory space, including associated building systems and infrastructure. This project will create safe, collaborative, and technologically advanced simulation-based learning spaces, which in turn, will promote active learning and enhance student success.

Evolution of the professional veterinary landscape requires graduates to demonstrate competence in a multitude of clinical skills. The College of Veterinary Medicine has few flexible education spaces for creative and innovative instructional design and delivery needed to provide a modern veterinary medical education at WSU. This proposed renovation will support the recruitment of students and faculty, create educational research and incubator opportunities, and establish a safe environment conducive to deep learning.

#### History of the project or facility

The opening of a new wing of the Paul G. Allen School for Global Health has consolidated biomedical programs there and made two floors of Bustad Hall available for renovation. This proposal is intended to modernize this space to house the Simulation-Based Education program, currently located McCoy Hall. The university plans to decommission McCoy Hall as soon as all remaining programs in the building can be relocated. Challenges associated with temperature control underscore the broad infrastructural challenges present in McCoy Hall, one of the costliest and least energy inefficient facilities on the Pullman campus. In the past year alone, temperatures in existing simulation spaces in McCoy have ranged from a high of 95 degrees to a low of 45 degrees. In addition to posing potential problems for the care of sensitive high-fidelity teaching models, these temperatures prevent students from effectively engaging in the practice of clinical skills. The proposed renovation in Bustad Hall will provide modern functional program space necessary for the simulation program to maintain its status as the only veterinary program accredited through the Society for Simulation in Healthcare.

Bustad Hall was constructed in 1978. Its laboratories still serve some of the university's largest programs. The building systems supporting science labs are served by aging air handling infrastructure that needs to be renewed to ensure the health, safety and comfort of students and faculty. Other planned improvements to plumbing, electrical, storage and security — including card-swipe access — will extend the lifespan of laboratories, samples, and supplies. In addition, this renovation will include energy efficiency measures needed to optimize operations and assist in compliance with the Clean Buildings Performance Standard (CBPS).

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The university's 10-year Facility Development Plan (go.wsu.edu/WSUDevelopmentPlan2022) and corresponding 10-year capital plan both reflect the intent and need for this type of standalone renovation project in order to renovate and modernize obsolete and underutilized space.

#### University programs addressed or encompassed by the project

Space renovated in Bustad Hall will support both the College of Veterinary Medicine and the College of Education, whose athletic training program regularly utilizes the services provided by the Simulation-Based Education program. Interdisciplinary collaborations have also included Educational Psychology, Mechanical Engineering, and Bioengineering. Simulation can be a vital component to prepare graduates in a multitude of disciplines and contributes to educational equity by leveling the educational playing field for students from diverse backgrounds.

Clientele served by the college's simulation-based education program include over 520 Doctor of Veterinary Medicine students per year, interns, and residents in specialty training programs as well as faculty developing skill sets. Additional clientele served include undergraduate students and faculty in the athletic training program, as well as undergraduate students and faculty in future interdisciplinary endeavors. Approximately 12,000 learner contact hours per year have been documented and that number could double with the proposed renovation.

#### CATEGORY-SPECIFIC SCORING CRITERIA

### 1. Age of building since last major remodel

Identify the number of years since the last substantial renovation of the facility or portion proposed for renovation. If only one portion of a building is to be remodeled, provide the age of that portion only. If the project involves multiple wings of a building that were constructed or renovated at different times, calculate and provide a weighted average facility age, based upon the gross square feet and age of each wing.

Bustad Hall was constructed in 1978 with a significant addition completed in 1982. Since then, there have been no major renovation projects in Bustad Hall, only minor space alterations and maintenance. The building is effectively 42 years old.

#### 2. Condition of building

A. Provide the facility's condition score (1 superior – 5 marginal functionality) from the 2016 Comparable Framework study, and summarize the major structural and systems conditions that resulted in that score. Provide selected supporting documentation in appendix, and reference them in the body of the proposal.

This proposed standalone renovation project will improve existing space within Bustad Hall and vacate inadequate space within McCoy Hall. As shown in *Table 1*, Bustad Hall and McCoy Hall both have a current Comparable Framework Study score of 5 (Needs Improvement – Marginal Functionality). As a result of this project, the Comparable Framework Study score for Bustad will improve and the university will be one step closer to decommissioning McCoy Hall.

Building	Gross Sq Ft	Year Constructed	Year Renovated	FCI Score	Comparable Framework Score	DM Backlog
Bustad	143,159	1978	1982	0.80	5	\$38,277,518
McCoy	111,157	1942	1990	0.88	5	\$25,684,003

Table 1 - FCI Data

In 2014-2015, WSU conducted facility condition assessments of multiple buildings through VFA Facility, a well-known deferred maintenance database owned and operated by Gordian. VFA Facility determines overall building condition by Facility Condition Index (FCI), a ratio of requirements to the facility replacement value, and provides real time updates based on lifecycle requirements associated with critical building systems (**Appendix B**). Facility requirements include (but are not limited to):

- HVAC systems (supply/exhaust fans, pumps, heating, cooling, fume hoods)
- Structure (foundations, gravity and lateral support systems)
- Life Safety (fire sprinklers, fire detection and alarms)
- Skin (envelope, doors, windows)
- Access (exiting, ADA)
- Finishes (floors, partitions, ceilings)
- Furnishings (furniture, casework, equipment)
- Building controls and IT infrastructure

# B. Identify whether the building is listed on the Washington Heritage Register, and if so, summarize its historic significance.

Bustad Hall is not on the historic register.

### 3. Significant health, safety, and code issues

It is understood that all projects that obtain a building permit will have to comply with current building codes. Identify whether the project is needed to bring the facility within current life safety (including seismic and ADA), or energy code requirements. Clearly identify the applicable standard or code, and describe how the project will improve consistency with it. Provide selected supporting documentation in appendix, and reference them in the body of the proposal.

Reference the following for a summary of code issues that will be addressed with this renovation project:

- Life Safety:
  - NFPA 72, Sections 18.4.1 and 18.4.3 Existing visual and audible fire alarm notifications
    that are found to be non-compliant will be addressed with this project, including the
    necessary ADA upgrades noted below.
  - o NFPA 72, Sections 17.5.3.1 and 17.5.3.2 Existing "spot" fire alarm coverage will be upgraded to improve the "selective" coverage requirements of the current code.
  - O Access Card Swipe New door hardware will include card swipe access with electronic lock down capabilities necessary for an active shooter response.

O Asbestos Containing Materials - The ducting, control mixing boxes, flooring and other finishes are insulated or made with asbestos-containing materials as was common at the time of construction. This renovation project will abate these asbestos containing materials and replace with modern, safe materials.

#### • ADA 2010 Standards:

- Section 702 Fire alarm systems will be upgraded to include appropriate ADA audible and visible alarms.
- Section 404 Existing door size, clearance and hardware do not comply with ADA requirements. This project will correct any non-compliant doors and install appropriate ADA hardware.
- Washington Energy Code (WEC):
  - Section C403.4.9 Existing constant volume dual duct air handling systems are energy inefficient. WEC requires variable flow on heating and cooling water systems as well as air distribution.
  - Section C403.4.5.4 Existing controls for operation of room temperature and regulation of air flow are pneumatic or operated with manual dampers. WEC requires electronic controls that can vary with loading.
- Washington Clean Buildings Performance Standard:
  - o WAC 194-50 Identify, implement and verify energy efficiency measures necessary to lower energy use intensity where possible.

#### 4. Reasonableness of cost

Provide as much detailed cost information as possible, including baseline comparison of costs per square foot (SF) with the cost data provided in Chapter 5 of the scoring process instructions and a completed OFM C-100 form. Also, describe the construction methodology that will be used for the proposed project.

If applicable, provide Life Cycle Cost Analysis results demonstrating significant projected savings for selected system alternates (Uniformat Level II) over 50 years, in terms of net present savings.

The estimated Maximum Allowable Construction Cost (MACC) for this proposed renovation project is less than the expected MACC per square foot for the facility type, escalated to the construction mid-point (**Appendix C**). The proposed renovation includes a mix of classrooms, teaching laboratories and associated support space. Therefore, the reasonableness of cost calculation is conservatively based on comparison with the "instructional labs" facility type. The MACC for this renovation project was estimated using cost per square foot data from similar projects currently under construction. Reference the C100 (**Appendix A**) for a detailed cost estimate.

#### 5. Availability of space/utilization on campus

Describe the institution's plan for improving space utilization and how the project will impact the following:

- A. The utilization of classroom space
- B. The utilization of class laboratory space

This project will renovate vacated space in Bustad Hall and create purpose-built space that will improve utilization within the Simulation-Based Education program. As a result, the program will move out of

2022 Higher Education Project Proposal Form

inadequate space in McCoy Hall that does not exceed the HECB utilization standards. Reference **Appendix D** for the Availability of Space/Campus Utilization summary for the Pullman campus.

### 6. Efficiency of space allocation

A. For each major function in the proposed facility (classroom, instructional labs, offices), identify whether space allocations will be consistent with Facility Evaluation and Planning Guide (FEPG) assignable square feet standards. To the extent any proposed allocations exceed FEPG standards, explain the alternative standard that has been used, and why. See Chapter 4 of the scoring process instructions for an example. Supporting tables may be included in an appendix.

The proposed space allocations for this renovation project are consistent with FEPG space standards recommended for Health Professions (*Table 2*). The first floor will consist of auditorium style space intended for large group instruction using full size models. The second floor will consist of multiple spaces intended to emulate operating rooms for small group simulation-based education.

FEPG Room Classification Number	FEPG Room Classification Type	Project Description	Project ASF Per Station	FEPG Standard Range	Meets Standard (Y/N)
210	Class Lab - 1st Floor	Large instructional laboratory	60	40 - 175	Y
215	Class Lab Service - 1st Floor	Support space		40 - 175	
210	Class Lab - 2nd Floor	Multiple small instructional laboratories	40	40 - 175	Υ
215	Class Lab Service - 2nd Floor	Support space		40 - 175	

Table 2 - FEPG Space Standard Summary

#### B. Identify the following from the C-100:

- 1. Usable square feet (USF) in the proposed facility 7,942
- 2. Gross square feet (GSF) 8,432
- 3. Building efficiency (USF divided GSF) 0.94

#### 7. Adequacy of space

Describe whether and the extent to which the project is needed to meet modern educational standards and/or to improve space configurations, and how it would accomplish that.

This renovation project is necessary to meet modern pedagogical standards. The simulation program's current teaching lab space in McCoy Hall consists of partial height partition walls constructed in the middle of a room once used to hold large live animals. The support space and observation rooms necessary to practice simulation-based education methods are cramped and inadequate. Renovating existing laboratory space in Bustad Hall will create ideal simulation teaching labs complete with appropriate audio/visual technology and built-in observation rooms. In addition, the available space on

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the first floor of Bustad Hall includes a large former necropsy lab that will be repurposed to allow an entire class to conduct simulation-based education using large animal models.

Reference **Appendix E** for the program related space allocation summary.

#### **APPENDICES**

- Appendix A C100
- Appendix B FCI Analysis
- Appendix C Reasonableness of Cost
- Appendix D Availability of Space/Campus Utilization
- Appendix E Program Related Space Allocation

# STATE OF WASHINGTON AGENCY / INSTITUTION PROJECT COST SUMMARY Updated June 2022 Agency Project Name CBPS: Bustad Renovation (SIM for Vet Teaching Anatomy) OFM Project Number

Contact Information				
Name Phil Johnson				
Phone Number				
Email	philrjohnson@wsu.edu			

Statistics					
Gross Square Feet	8,432	MACC per Gross Square Foot	\$403		
Usable Square Feet	7,942	Escalated MACC per Gross Square Foot	\$450		
Alt Gross Unit of Measure					
Space Efficiency	94.2%	A/E Fee Class	В		
Construction Type	College classroom faciliti	A/E Fee Percentage	12.09%		
Remodel	Yes	Projected Life of Asset (Years)	30		
	Additiona	al Project Details			
Procurement Approach	DB-Progressive	Art Requirement Applies	Yes		
Inflation Rate	4.90%	Higher Ed Institution	Yes		
Sales Tax Rate %	7.90%	Location Used for Tax Rate	3,812		
Contingency Rate	10%				
Base Month (Estimate Date)	July-22	OFM UFI# (from FPMT, if available)	A04256		
Project Administered By	Agency				

Schedule				
Predesign Start		Predesign End		
Design Start	August-23	Design End	February-24	
Construction Start	April-24	Construction End	April-25	
Construction Duration	13 Months			

Green cells must be filled in by user

Project Cost Estimate			
Total Project	\$7,976,648	Total Project Escalated	\$7,999,778
		Rounded Escalated Total	\$8,000,000

## **Cost Estimate Summary**

Acquisition				
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0	

\$244,688

_	Consult	ant Services	
Predesign Services	\$0		
Design Phase Services	\$311,995		
Extra Services	\$51,000		
Other Services	\$140,171		
Design Services Contingency	\$50,317		
Consultant Services Subtotal	\$553,483	Consultant Services Subtotal Escalated	\$600,209
	Cons	struction	
Maximum Allowable Construction		Maximum Allowable Construction Cost	
Cost (MACC)	\$3,400,000	(MACC) Escalated	\$3,794,060
DB-Progressive Risk Contingencies	\$175,000	(IIII lee) 2550 aced	\$195,283
DB-Progressive Management	\$550,000		\$613,745
Owner Construction Contingency	\$340,000		\$379,406
Non-Taxable Items	\$0		\$0
Sales Tax	\$410,010	Sales Tax Escalated	\$393,617
Construction Subtotal	\$5,600,010	Construction Subtotal Escalated	\$5,376,111
	Fau	ipment	
Equipment	\$1,000,000	ipment	
Sales Tax	\$79,000		
Non-Taxable Items	\$0		
Equipment Subtotal	\$1,079,000	Equipment Subtotal Escalated	\$1,204,057
	•		
		twork	
Artwork Subtotal	\$39,800	Artwork Subtotal Escalated	\$39,800
	Agency Proje	ct Administration	
Agency Project Administration Subtotal	\$275,176		
DES Additional Services Subtotal	\$90,000		
Other Project Admin Costs	\$114,180		
Project Administration Subtotal	\$479,356	Project Administration Subtotal Escalated	\$534,913
	Oth	er Costs	

Project Cost Estimate				
\$7,976,648	Total Project Escalated	\$7,999,778		
	Rounded Escalated Total	\$8,000,000		
		\$7,976,648 Total Project Escalated		

**Other Costs Subtotal Escalated** 

\$225,000

Other Costs Subtotal

### **Funding Summary**

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
Acquisition					
Acquisition Subtotal	\$0	\$0	\$0	\$0	\$0
Consultant Services		4.0	4000 000	40	4.0
Consultant Services Subtotal	\$600,209	\$0	\$600,209	\$0	\$0
Construction					
Construction Subtotal	\$5,376,111	\$0	\$5,376,111	\$0	\$0
Equipment					
Equipment Subtotal	\$1,204,057	\$0	\$1,204,057	\$0	\$0
Artwork					
Artwork Subtotal	\$39,800	\$0	\$39,800	\$0	\$0
	<del>, φου,σου</del>	70	φου,ουσ	70	1 +~1
Agency Project Administration					
Project Administration Subtotal	\$534,913	\$0	\$534,913	\$0	\$0
Other Costs	, , , , , , , , , , , , , , , , , , ,				
Other Costs Subtotal	\$244,688	\$0	\$244,688	\$0	\$0
Project Cost Estimate					
Total Project	\$7,999,778 \$8,000,000 Percentage requested as a	\$0 \$0 a new appropriation	\$7,999,778 \$8,000,000	\$0 \$0	\$0 \$0

### What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)

A standalone renovation in portions of Bustad Hall to accommodate the simulation-based education program in the College of Veterinary Medicine.

The 23-25 funding request includes design and construction.

Insert Row Here

### What has been completed or is underway with a previous appropriation?

Nothing, this is a standalone request intended to take renovate vacant space in Bustad Hall. The space is now vacant due to the completion of the Paul G. Allen School for Global Health.

Insert Row Here

### What is planned with a future appropriation?

Nothing at this time. This is a standalone request intended to complete design and construction in 23-25.

Insert Row Here

Acquisition Costs					
Item	Base Amount	Escalation Factor	Escalated Cost	Notes	
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
ACQUISITION TOTAL	\$0	NA	\$0		

Consultant Services						
ltem	Base Amount	Escalation Factor	Escalated Cost	Notes		
1) Pre-Schematic Design Services						
Programming/Site Analysis						
Environmental Analysis						
Predesign Study						
Other						
Insert Row Here						
Sub TOTAL	\$0	1.0533	\$0	Escalated to Design Start		
2) Construction Documents						
2) Construction Documents	¢244.005			COOK of A/E David Commission		
A/E Basic Design Services Other	\$311,995			69% of A/E Basic Services		
Insert Row Here						
Sub TOTAL	\$311,995	1.0679	\$222 170	Escalated to Mid-Design		
Sub TOTAL	Ç 311,333	1.00/3	,333,173	Lacalated to Min-Design		
3) Extra Services						
Civil Design (Above Basic Svcs)						
Geotechnical Investigation						
Commissioning	\$26,000					
Site Survey	7_0,000					
Testing	\$25,000					
LEED Services						
Voice/Data Consultant						
Value Engineering						
Constructability Review						
Environmental Mitigation (EIS)						
Landscape Consultant						
Other						
Insert Row Here						
Sub TOTAL	\$51,000	1.0679	\$54,463	Escalated to Mid-Design		
4) Other Services	4					
Bid/Construction/Closeout	\$140,171			31% of A/E Basic Services		
HVAC Balancing						
Staffing						
Other						
Insert Row Here	¢140 174	1 1150	64EC 440	Escalated to Mid Caret		
Sub TOTAL	\$140,171	1.1159	\$156,418	Escalated to Mid-Const.		
5) Design Services Contingency						
Design Services Contingency  Design Services Contingency	\$50,317					
Other	750,517					
Insert Row Here						
Sub TOTAL	\$50,317	1.1159	\$56.149	Escalated to Mid-Const.		

Appendix A - C100 Bustad Renovation (SIM for Vet Teaching Anatomy) - CBPS

\$553,483 CONSULTANT SERVICES TOTAL \$600,209 Green cells must be filled in by user

Construction Contracts					
Item	Base Amount	Escalation	Escalated Cost	Notes	
	base Amount	Factor	Escalated cost	Notes	
1) Site Work					
G10 - Site Preparation					
G20 - Site Improvements					
G30 - Site Mechanical Utilities					
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Other					
Insert Row Here	_				
Sub TOTAL	\$0	1.0875	\$0		
2) 2. 1. 1. 1. 2. 1. 1. 2. 1.					
2) Related Project Costs					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention					
Other					
Insert Row Here					
Sub TOTAL	\$0	1.0875	\$0		
3) Facility Construction					
A10 - Foundations					
A20 - Basement Construction					
B10 - Superstructure					
B20 - Exterior Closure					
B30 - Roofing	4=00.000				
C10 - Interior Construction	\$500,000				
C20 - Stairs	4=== 000				
C30 - Interior Finishes	\$750,000				
D10 - Conveying	40-0-00				
D20 - Plumbing Systems	\$250,000				
D30 - HVAC Systems	\$1,000,000				
D40 - Fire Protection Systems	\$50,000				
D50 - Electrical Systems	\$500,000				
F10 - Special Construction	4				
F20 - Selective Demolition	\$250,000				
General Conditions	\$100,000				
Other Direct Cost					
Insert Row Here					
Sub TOTAL	\$3,400,000	1.1159	\$3,794,060		
4) Maximum Allowable Construction C					
MACC Sub TOTAL	\$3,400,000		\$3,794,060		
	\$403		\$450	per GSF	

5) GCCM Risk Contingency				
GCCM Risk Contingency	\$175,000			
Other				
Insert Row Here				
Sub TOTAL	\$175,000	1.1159	\$195,283	
6) GCCM or Design Build Costs				
GCCM Fee	\$175,000			
Bid General Conditions	\$200,000			
GCCM Preconstruction Services	\$75,000			
Bonds/Insurance	\$100,000			
Insert Row Here				
Sub TOTAL	\$550,000	1.1159	\$613,745	
7) Owner Construction Contingency				
Allowance for Change Orders	\$340,000			
Other				
Insert Row Here				
Sub TOTAL	\$340,000	1.1159	\$379,406	
8) Non-Taxable Items			ĺ	
Other				
Insert Row Here				
Sub TOTAL	\$0	1.1159	\$0	
0) 6.1 7.				
9) Sales Tax	4440.040		4005 51-	
Sub TOTAL	\$410,010		\$393,617	
	41		1	
CONSTRUCTION CONTRACTS TOTAL	\$5,600,010		\$5,376,111	

	Equipment						
ltem	Base Amount	Escalation Factor	Escalated Cost	Notes			
1) Equipment							
E10 - Equipment	\$300,000						
E20 - Furnishings	\$700,000						
F10 - Special Construction							
Other							
Insert Row Here							
Sub TOTAL	\$1,000,000	1.1159	\$1,115,900				
2) Non Taxable Items							
Other							
Insert Row Here							
Sub TOTAL	\$0	1.1159	\$0				
3) Sales Tax							
Sub TOTAL	\$79,000		\$88,157				
EQUIPMENT TOTAL	\$1,079,000		\$1,204,057				

Artwork					
Item	Base Amount	Escalation Factor	Escalated Cost	Notes	
1) Artwork					
Project Artwork	\$0			0.5% of total project cost for new construction	
Higher Ed Artwork	\$39,800			0.5% of total project cost for new and renewal construction	
Other					
Insert Row Here					
ARTWORK TOTAL	\$39,800	NA	\$39,800		

Project Management					
Item	Base Amount	Escalation Factor	Escalated Cost	Notes	
1) Agency Project Management					
Agency Project Management	\$275,176				
Additional Services	\$90,000			Additional Agency Project Management (4.79%)	
Other	\$114,180			On-Site Construction Management (2.2%)	
Insert Row Here					
Subtotal of Other	\$114,180				
PROJECT MANAGEMENT TOTAL	\$479,356	1.1159	\$534,913		

Other Costs						
ltem	Base Amount		Escalation Factor	<b>Escalated Cost</b>	Notes	
Mitigation Costs						
Hazardous Material	\$175,000					
Remediation/Removal	\$175,000					
Historic and Archeological Mitigation						
Other	\$50,000				WSU Shops Support	
Insert Row Here		<u> </u>	_			
OTHER COSTS TOTAL	\$225,000		1.0875	\$244,688		

# C-100(2022) Additional Notes

Tab A. Acquisition
Insert Row Here
Tab B. Consultant Services
Tab D. Consultant Services
Insert Row Here
inscretion here
Tab C. Construction Contracts
Insert Row Here
Tab D. Equipment
Tab D. Equipment
Insert Row Here
Tab E. Artwork
Insert Row Here
Tab F. Project Management
Insert Row Here
Tab G. Other Costs
Insert Row Here



 $\textbf{Region:} \ \textbf{Pullman - WSU Main Campus}$ 

Campus: Pullman Campus - Assessed

Buildings

**Asset:** BUSTAD HALL

Asset Number: 0807

Assets are ordered by Asset Name C

**Currency:** USD

### **Statistics**

FCI Cost:	36,511,436	FCI:	0.80
RI Cost:	38,319,413	RI:	0.84
Total Requirement Cost:	38,277,518	Size:	143,159 SF
Current Replacement Value:	45,635,541		

Address 1 1845 GRIMES WAY
City PULLMAN

Address 2

State/Province/Region

WA



### **Photo**



BUSTAD HALL Auditor Touch Photo

# **System Description**

System Name	Description
A - Substructure-Foundation Wall and Footings 12-Ft - Full Basement	Full basement wall and foundation with a 12-Ft. height to include strip footing, foundation wall and damp proofing. Also included are the underdrains.
A - Substructure-Structural Slab on Grade - Non- Industrial	The building substructure includes a non-industrial type structural slab on grade.
A - Substructure-~Caissons (Drilled Pier) in Rock	[This substructure includes concrete caissons, 50-ft. deep in soft rock.]
B10 - Superstructure-Multi-Story - Concrete	Multi-story lightweight structure with reinforced concrete construction.
B10 - Superstructure-Multi-Story - Steel	Multi-story steel building includes steel columns, beams, floor pans, and roof structure. This includes the penthouse areas.



System Name	Description				
B1014 - Ramps-Accessible Ramp - Exterior Concrete	Concrete in place, handicapped ramp w/cheek walls & rails both sides, 5' wide.				
B1015 - Exterior Stairs and Fire Escapes-Exterior Stairs - Concrete	Exterior concrete stairs (6' wide x 5 risers) with railing.				
B1015 - Exterior Stairs and Fire Escapes-Interior Stairs - Steel (Interior)	Interior steel stairs (one flight) with railing.				
B2010 - Exterior Walls-Brick Cavity Walls - CMU Backup	The exterior wall construction is of brick cavity walls with CMU backup.				
B2010 - Exterior Walls-Metal Paneled Walls - Economy	The exterior wall finishes are of metal siding such as corrugated materials. Located at the exterior penthouse areas.				
B2020 - Exterior Windows-Aluminum Windows (1978)	The building includes aluminum framed exterior units with insulating glass.				
B2020 - Exterior Windows-Aluminum Windows (2012)	The building includes aluminum framed exterior units with insulating glass.				
B2030 - Exterior Doors-Door Assembly - 3 x 7 HM	Exterior doors include 3 x 7 steel door and steel frame with hinges, lockset (lever), exit hardware and closer. Includes painted door and painted frame.				
B2030 - Exterior Doors-Door Assembly - 3 x 7 Storefront	The exterior doors include swinging glazed aluminum storefront leaf plus glazed transom, aluminum frame, hardware including closer.				
B2030 - Exterior Doors-Door Assembly - 6 x 7 HM	Exterior doors include pr. 3 x 7 steel doors and steel frame with hinges, locksets (lever), exit hardware and closers. Includes painted doors and painted frame.				
B2030 - Exterior Doors-Door Assembly - 6 x 7 Storefront	The exterior doors include pr. swinging glazed aluminum storefront leafs plus glazed transom, aluminum frame, hardware including closers.				
B2030 - Exterior Doors-Overhead Rolling Doors - Electric Operation	Exterior openings include overhead rolling doors with electric operators.				
B30 - Roofing-Gutters and Downspouts - Aluminum	Rain water is removed from the roof by perimeter aluminum gutters, scuppers and downspouts which discharge to the surrounding property.				
B30 - Roofing-Metal Roofing - High End	The roof covering is of formed metal roofing, such as standing seam metal.				
B30 - Roofing-Single-Ply Membrane - Fully Adhered	The roof covering is of a single-ply fully adhered membrane with insulation.				
B3022 - Roof Hatches-Roof Hatch	Roof hatch with insulated curb.				
C1010 - Partitions-CMU Block Walls - Plain	Interior walls are of 8-in. hollow concrete block, light and regular weight, with no finish.				
C1010 - Partitions-GWB Walls - Standard (Non-Painted)	The building interior includes standard GWB partitions, taped and finished, but not painted, with no insulation.				
$C1010 - Partitions-Windows/Store front\ Partitions - Average$	Building interior includes economy grade windows and storefront partitions.				
C1020 - Interior Doors-Swinging Doors - 3 x 7 HM -	Interior doors include rated 3 x 7 steel door and steel frame with hinges, lockset (lever), panic hardware and closer. Includes painted door and painted frame.				



System Name	Description					
Rated						
C1020 - Interior Doors-Swinging Doors - 3 x 7 Wd - Rated	Interior doors include rated 3 x 7 wood door and steel frame with vision lite, hinges, lockset (lever), panic hardware and closer. Includes painted (stained) d and painted frame.					
C1020 - Interior Doors-Swinging Doors - Pair - 6 x 7 Wd - Rated	Interior doors include pr. rated 3 x 7 wood doors and steel frame with hinges, locksets (lever), panic hardware and closers. Includes finished doors and painted frame.					
C1030 - Fittings-Restroom Accessories - Average	The restroom accessories include mirror, grab bars, paper towel dispenser and disposal, diaper changing station, toilet paper holder and soap dispenser.					
C1030 - Fittings-Toilet Partitions - Average	Restrooms are equipped with standard quality, ceiling-hung partitions.					
C1035 - Identifying Devices-Fittings - Signage (Room Numbering and Identification)	Room, door and graphic symbol signs. Adhesive backs and Braille.					
C20 - Stairs-Stairs - Average	The interior stairs include 12 risers per flight with landing and 2 flights per story. Approximately 28 LF of center rail plus 28 feet of wall rail per flight included in cost estimate.					
C3010 - Wall Finishes-Ceramic Tile	Building wall coverings include 4-in. x 4-in. thin set ceramic decorator tiles at medium price. Tile job includes wainscot with bullnose trim.					
C3010 - Wall Finishes-Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	Interior wall finishes include standard paint finish.					
C3020 - Floor Finishes-Carpeting - Broadloom - Medium Range	Floor finishes include medium priced carpeting and base. Located in some of the first floor offices.					
C3020 - Floor Finishes-Carpeting - Tile	Floor finishes include a standard range carpet tiles (18 x 18 or 24 x 24 modules) and vinyl or rubber base, for medium traffic areas.					
C3020 - Floor Finishes-Ceramic Tile (1978)	Floor finishes include ceramic tile and base in 3rd floor dirty side.					
C3020 - Floor Finishes-Ceramic Tile (1990)	Floor finishes include ceramic tile and base in restrooms. Located in the second and third floor restrooms.					
C3020 - Floor Finishes-Epoxy Flooring (2009)	Floor finishes include cement epoxy flooring.					
C3020 - Floor Finishes-Epoxy Flooring (Vivarium)	Floor finishes include cement epoxy flooring.					
C3020 - Floor Finishes-Terrazzo - Cast-in-Place	Floor finishes include cast-in-place terrazzo and related base. Located in the first floor corridors.					
C3020 - Floor Finishes-VCT - Average	Floor finishes include areas of standard VCT flooring and related base.					
C3020 - Floor Finishes-Vinyl Sheet Goods	Floor finishes include areas of vinyl sheet goods flooring and related base.					
C3030 - Ceiling Finishes-ACT System - Concealed Spline	Concealed spline 12 x 12 x 3/4-in. ACT ceiling system with "Z" grid.					
C3030 - Ceiling Finishes-ACT System - Concealed Spline (Vivarium)	Concealed spline 12 x 12 x 3/4-in. ACT ceiling system with "Z" grid.					



System Name	Description					
C3030 - Ceiling Finishes-ACT System - Standard	Standard suspended ACT ceiling system with 2 x 2 or 2 x 4 regular tiles in 15/16 or 9/16-in. grids. Use add-ons as applicable.					
C3030 - Ceiling Finishes-GWB Taped and Finished	GWB ceiling system over 8-ft above floor taped, finished and painted with primer and 2 finish coats. Ceiling on suspension system or fastened to metal or wo furring.					
D1093 - Hoists and Cranes-Hoist System	The heating water distribution system is served by various types of circulation pumps rated at 1 to 1.5-HP.					
D2010 - Plumbing Fixtures-Kitchenette - Sink	The plumbing fixtures in the building include a kitchenette sink with faucet.					
D2010 - Plumbing Fixtures-Laboratory Sinks	The building plumbing fixtures include chemical-resistant laboratory sinks.					
D2010 - Plumbing Fixtures-Plumbing Fixtures - Custodial Sinks	The plumbing fixtures include custodial mop sinks with faucets.					
D2010 - Plumbing Fixtures-Plumbing Fixtures - Drinking Fountains	The building has plumbing fixtures which includes wall mounted drinking fountains on each level.					
D2010 - Plumbing Fixtures-Plumbing Fixtures - Emergency Eyewash and Safety Showers	The buildings plumbing fixtures which include emergency safety shower in corridors and eyewash devices in the laboratories, along with combination units in mechanical areas and other hazardous locations.					
	The fixture count is estimated.					
D2010 - Plumbing Fixtures-Plumbing Fixtures - Tiled Individual Shower	The building has plumbing fixtures which includes tiled individual shower stalls in locker rooms.					
D2010 - Plumbing Fixtures-Restroom Fixtures - Lavatory	The restroom plumbing fixtures include vitreous china or molded lavatories with faucets.					
	The years remaining is extended with replacement requirement for the faucets.					
D2010 - Plumbing Fixtures-Restroom Fixtures - Urinal	The restroom plumbing fixtures include vitreous china urinals with flush valves.					
D2010 - Plumbing Fixtures-Restroom Fixtures - Water Closets	The restroom plumbing fixtures include vitreous china water closets with flush valve.					
	The years remaining is extended with the replacement requirement for the flush valves.					
D2020 - Domestic Water Distribution-Domestic Water - Distribution	The building domestic water distribution system includes a main line, water meter, back-flow prevention, with rough ins included. This System does not include a water heater.					
D2020 - Domestic Water Distribution-Domestic Water - Pressure Booster Pump	The domestic water distribution system includes a pressure booster pump system.					
D2020 - Domestic Water Distribution-Water Heater - Steam - Aerco	The domestic hot water is provided by a steam heated, semi-instantaneous commercial water heater, with a recirculation pump, and no storage.					
	The years remaining are adjusted based on field observations					



System Name	Description					
D2020 - Domestic Water Distribution-Water Heater - Steam - Storage Tank	The domestic hot water is provided by a steam-heated, storage tank and recirculation pump.					
D2023 - Domestic Water Supply Equipment-Domestic Water- Backflow	The domestic water supply is protected by backflow prevention devices.					
D2030 - Sanitary Waste-Sanitary Waste - Gravity Disch	The building has sanitary waste piping consisting of cast iron piping, with gravity discharge toa municipal system.					
D2040 - Rain Water Drainage-Roof Drainage - Gravity	The building has storm water drainage includes interior piping, roof drains and 4-inch discharge piping by gravity flow to a municipal system.					
D2090 - Other Plumbing Systems-Lab Air Compressor	The building is equipped with a triplex 5-HP laboratory air compressor.					
	The unit was being installed during assessment.					
D2090 - Other Plumbing Systems-Lab Gas Distribution - Air Systems	The building includes Laboratory compressed air and vacuum systems.					
•	The years remaining are adjusted based on field observations					
D2090 - Other Plumbing Systems-Lab High Purity Water	The building has a high purity water system consisting of RO, DI tanks, Storage Tank, pump and Piping.					
D2090 - Other Plumbing Systems-Lab Vacuum Pump	The building is equipped with a duplex laboratory vacuum pump					
D2090 - Other Plumbing Systems-Laboratory Waste System - Polypropylene	The building includes a polypropylene laboratory waste piping system.					
D2090 - Other Plumbing Systems-Natural Gas Distribution - Laboratory Only	The building includes natural gas distribution system specific for the laboratories.					
D3030 - Cooling Generating Systems-Chiller - Reciprocating w/Cooling Tower	The supply fan SF-09 has DX cooling medium is provided by a water-cooled reciprocating chiller and cooling tower.					
D3030 - Cooling Generating Systems-Condensing Unit - Air-Cooled	The building has DX cooling provided from a roof mounted air cooled condenser-compressor unit. The unit serves the Necropsy area.					
D3040 - Distribution Systems-Air Handling Unit - SF1- Hot-Cold Deck	The HVAC systems include central air handling unit with Hot and Cold deck. The air handler is estimated at 21,000 CFM with 150 HP supply fan motor.					
not con beek	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.					
D3040 - Distribution Systems-Air Handling Unit - SF2- VAV - Penthouse	The HVAC systems include central air handling units with variable frequency drives (VFD) on the supply fans. The air handlers are approximately 15,000 CFM with 30-40 HP supply fan motors.					
	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.					



System Name	Description				
D3040 - Distribution Systems-Air Handling Unit - SF3 -	The HVAC systems include air handling units estimated at 3-5,000 CFM with 5 HP supply fan motor.				
Lecture Room 145	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.				
D3040 - Distribution Systems-Air Handling Unit - SF4	The HVAC systems include central air handling units estimated at 15,000 CFM with 30-40 HP supply fan motors.				
	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.				
D3040 - Distribution Systems-Air Handling Unit - SF5 - Hot / Cold Deck	The HVAC systems include central air handling units with Hot / Cold deck estimated at 15,000 CFM with 30-40 HP supply fan motors.				
not / Cold Beck	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.				
D3040 - Distribution Systems-Air Handling Unit - SF6 - Hot / Cold Deck	$The \ HVAC \ systems \ include \ central \ air \ handling \ units \ \ with \ Hot \ / \ Cold \ deck \ estimated \ at \ 15,000 \ CFM \ with \ 30-40 \ HP \ supply \ fan \ motors.$				
not / Cold Deck	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.				
D3040 - Distribution Systems-Air Handling Unit - SF9-VAV	The HVAC systems include central air handling units with variable frequency drives (VFD) on the supply fans. The air handlers are estimated at 10-20,000 CFM with 30-40 HP supply fan motors.				
	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.				
D3040 - Distribution Systems-Chilled Water Supply and Return	The HVAC system includes chilled water supply and return piping.				
D3040 - Distribution Systems-Distribution - Circulation Pumps - CHW - A11 & A17	The chilled water distribution system is served by various types of circulation pumps rated at 1 to 1.5-HP.				
D3040 - Distribution Systems-Distribution - Circulation Pumps - CHW - $A6$	The chilled water distribution system is served by 7.5-HP circulation pumps.				
D3040 - Distribution Systems-Distribution - Circulation Pumps - CHW - A8 & A9	The chilled water distribution system is served by 7.5-HP circulation pumps.				
D3040 - Distribution Systems-Distribution - Circulation Pumps - CHW at SF-9 $$	The chilled water distribution system is served by 3-HP circulation pumps.				



System Name	Description					
D3040 - Distribution Systems-Distribution - Circulation Pumps - HHW - A1 $&$ A2	The heating water distribution system is served by 7.5-HP circulation pumps.					
D3040 - Distribution Systems-Distribution - Circulation Pumps - HHW - $A10$	The heating water distribution system is served by various types of circulation pumps rated at 1 to 1.5-HP.					
D3040 - Distribution Systems-Distribution - Circulation Pumps - HHW - A12 $&$ A13	The heating water distribution system is served by 1.5-HP circulation pumps.					
$D3040$ - Distribution Systems-Distribution - Circulation Pumps - HHW - $\mbox{\rm A7}$	he heating water distribution system is served by various types of circulation pumps rated at 5-HP.					
D3040 - Distribution Systems-Distribution - Circulation Pumps - HHW at SF-9 $$	The heating water distribution system is served by 1-HP circulation pumps.					
D3040 - Distribution Systems-Distribution - Exhaust System - Restroom w/Roof Fan	he buildings HVAC ventilation system includes roof mounted restroom exhaust fans with ducting.					
D3040 - Distribution Systems-Distribution - Re-Claim Pumps - A14	The building heat reclaim water system is served by 15-HP circulation pumps.					
$\rm D3040$ - Distribution Systems-Distribution - Re-Claim Pumps - A15 & A 16	The building heat reclaim water system is served by 10-HP circulation pumps.					
D3040 - Distribution Systems-Distribution Ductwork - Central HVAC	The HVAC system has central air handling units with ducted distribution, mixing boxes, diffusers, and return air plenum.					
	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.					
D3040 - Distribution Systems-Distribution Ductwork - Return Air	The HVAC system has return / exhaust air ductwork.					
	Supply systems are reported at the limit for air flow with noticeable static pressure issues observed.					
D3040 - Distribution Systems-Distribution Piping - Steam and Condensate	The building has steam distribution and reducing stations along with condensate return piping with condensate receivers and pumps.					
D3040 - Distribution Systems-Distribution Pumps - Hydronic Heating Water	The building HVAC systems includes a pair of hydronic heating water pumps A-1 and A-2 are rated at 7.5 HP					
D3040 - Distribution Systems-EXhaust Fan - EF34	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.					
D3040 - Distribution Systems-Exhaust Fan - EF1	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.					
D3040 - Distribution Systems-Exhaust Fan - EF2	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.					



System Name	Description				
D3040 - Distribution Systems-Exhaust Fan - EF35	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.				
D3040 - Distribution Systems-Exhaust Fan - EF6	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.				
D3040 - Distribution Systems-Exhaust System - Fume Hood - Ductwork/Fan	The building HVAC ventilation system includes laboratory fume hoods along with the exhaust ductwork and fan.				
	Count is approximate and does not included laminar flow/clean bench exhaust				
D3040 - Distribution Systems-Exhaust System - Utility Fans	The HVAC ventilation system includes dedicated, stack exhaust systems for the general laboratory exhaust, specific lab equipment and vivarium ventilation. Some may include Bag-In and Bag-Out Filters.  The fan and exhaust vary and ranges from 5-800 to 5,000 CFM.				
D3040 - Distribution Systems-Heat Exchanger - Re- Claim Loop - HE-3 & HE-4	The HVAC system includes a water to water shell and tube heat exchanger for heat re-claim system.				
D3040 - Distribution Systems-Heat Exchanger - Re- Claim Loop - HE-5	The HVAC system includes a water to water shell and tube heat exchanger for heat re-claim system.				
D3040 - Distribution Systems-Heat Exchanger - Steam/HW	The HVAC system includes a steam to HW shell and tube heat exchanger for producing heating hot water.				
D3040 - Distribution Systems-Hydronic Distribution Piping	The building has hydronic piping for Chilled water and Heating water distribution which consists of steel piping including insulation.				
D3040 - Distribution Systems-Return Fan - RF3	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.				
D3040 - Distribution Systems-Return Fan - RF4	The HVAC systems include return and exhaust fans in sheet metal assemblies with reclaim coils.				
D3050 - Terminal and Package Units-Terminal Units - Fan Coil System - 2 Pipe	The buildings HVAC systems include cabinet type fan coil units for heating and cooling				
${\rm D3060}$ - Controls and Instrumentation-Controls - Air Compressor	The building HVAC control system includes an air supply compressor with refrigerated dryer.				
D3060 - Controls and Instrumentation-Controls - Air Compressor at SF-9 $$	The building HVAC control system includes an air supply compressor with refrigerated dryer.				
D3060 - Controls and Instrumentation-Controls - Hybrid DDC/Pneumatic System	The buildings HVAC controls are a hybrid system of electric/electronic and pneumatic devices.  The System includes Siemens DDC-based HVAC controls with high-end technology main equipment controllers. Zone-level DDC controls are nearing obsolescence; plan for eventual replacement. Robert Shaw pneumatic valves (utility controllers) are obsolete and should be replaced.				
D3090 - Other HVAC Systems and Equipment-Walk-in Refrigerator- Cold Room 250AA	The building equipment includes walk-in refrigerators for storage. The room is typically 8 by 10 ft with remote mounted condenser-compressor sections.				
D3090 - Other HVAC Systems and Equipment-Walk-in	$The \ building \ equipment \ includes \ walk-in \ refrigerators \ for \ storage. \ The \ room \ is \ typically \ 8 \ by \ 10 \ ft \ with \ remote \ mounted \ condenser-compressor \ sections.$				



System Name	Description			
Refrigerator- Cold Room A (Rm 224A)				
D3090 - Other HVAC Systems and Equipment-Walk-in Refrigerator- Cold Room B (Rm 224B)	The building equipment includes walk-in refrigerators for storage. The room is typically 8 by 10 ft with remote mounted condenser-compressor sections.			
D3090 - Other HVAC Systems and Equipment-Walk-in Refrigerator- Cold Room Necropsy Recieving	The building equipment includes walk-in refrigerators for storage. The room is approximately 15 by 20 ft with 20 ft ceiling height. The room has remote mounted condenser-compressor sections.			
D3090 - Other HVAC Systems and Equipment-Walk-in Refrigerator- Cold Room Necropsy Shipping	The building equipment includes walk-in refrigerators for storage. The room is approximately 15 by 25 ft with 20 ft ceiling height. The room has remote mounted condenser-compressor sections.			
D40 - Fire Protection-Fire Protection - Extinguishers	The building has hand held style fire extinguishers mounted on the wall or in standpipe hose cabinets.			
D40 - Fire Protection-Fire Protection - Standpipe System	The building has fire protection systems which include a ordinary hazard wet fire standpipe system with hose cabinets.			
D40 - Fire Protection-Fire Protection - Wet Sprinkler System - Ordinary Hazard	The building fire protection systems include a ordinary hazard wet sprinkler system.			
D40 - Fire Protection-Fire Pump - Electric	The fire protection standpipe system includes 25 HP booster pump with controller and jockey pump.			
D5011 - High Tension Service and DistMain Electrical Service	The building is supplied power via three (3) $4.160~\text{KV}$ - $277/480\text{V}$ transformers, owned by the university, which feed a $1200\text{A}$ $277/480\text{V}$ switchboard and a $2300\text{A}$ $277/480\text{V}$ switchboard.			
	Note: The Main Electrical Vault was not accessible.			
D5012 - Low Tension Service and DistElectrical Distribution Equipment - Motor Control Center	The building includes 277/480V and 120/208 V motor control centers serving the air handling units and exhaust fans.			
D5012 - Low Tension Service and DistMain Electrical Service - Main Switchboard - 1200 A, 277/480V	The 277/480V switchboard, located in the main electrical room, is supplied via three (3) 4.16KV/277/480V transformers, owned by the university. It includes a 1200A 277/480V circuit breaker and feeder.			
D5012 - Low Tension Service and DistMain Electrical Service - Main Switchboard - 2300 A, 277/480V	The 277/480V switchboard, located in the main electrical room, is supplied via three (3) 4.16KV/277/480V transformers, owned by the university. It includes a 2300A 277/480V circuit breaker and feeder.			
D5012 - Low Tension Service and DistMain Electrical Service - Main Switchboard - 277/480V - Tie Breaker	The 1200 A 277/480V switchboard and the 2300 A 277/480V switchboard are joined by a 277/480V tie breaker.			
D5012 - Low Tension Service and DistMain Electrical Service - Transformer - 480/120/208V - 112.5 KVA	The main service includes a 480/120/208V 112.5 KVA transformer.			



System Name	Description
D5012 - Low Tension Service and DistMain Electrical Service - Transformer - 480/120/208V - 15 KVA	The main service includes four (4) 480/120/208V 15 KVA transformers.
D5012 - Low Tension Service and DistMain Electrical Service - Transformer - 480/120/208V - 45 KVA	The main service includes a 480/120/208V 45 KVA transformer.
D5012 - Low Tension Service and DistMain Electrical Service - Transformer - 480/120/208V - 75 KVA	The main service includes six (6) 480/120/208V 75 KVA transformers.
D5021 - Branch Wiring Devices-Branch Wiring - Equipment & Devices - Panelboards - 2012	Branch wiring includes 120/208V panelboards and adjacent wiring.
D5021 - Branch Wiring Devices-Branch Wiring - Equipment & Devices - Panelboards -1978	Branch wiring includes 120/208V panelboards and adjacent wiring.
D5021 - Branch Wiring Devices-Branch Wiring - Equipment & Devices - 1978	Branch wiring includes conduit and wire feeders, local disconnects, boxes, branch wiring and receptacles. Includes GFI receptacles with cover plates on the exterior of the building and GFI receptacles near the sinks.
D5021 - Branch Wiring Devices-Branch Wiring - Equipment & Devices - 2012	Branch wiring includes conduit and wire feeders, local disconnects, boxes, branch wiring and receptacles. Includes GFI receptacles with cover plates on the exterior of the building and GFI receptacles near the sinks.
D5022 - Lighting Equipment-Lighting - Exterior - High Pressure Sodium	Exterior lighting includes wall recessed high pressure sodium lighting fixtures around the perimeter of the building.
D5022 - Lighting Equipment-Lighting - Exterior - Metal Halide	Exterior lighting includes wall recessed metal halide lighting fixtures around the perimeter of the building.
D5022 - Lighting Equipment-Lighting - Interior - CFL - 2000	The lighting for the lobbies on each floor is provided by recessed compact fluorescent lamps.
D5022 - Lighting Equipment-Lighting - Interior - CFL - 2012	The lighting for the new section is provided by ceiling mounted compact fluorescent lamps.
D5022 - Lighting Equipment-Lighting Fixtures - Interior - T-12	The Vavarium includes a lighting system which includes interior T-12 lighting fixtures with magnetic ballasts and lamps, conduit and wire. During a major renovation, these lights should be replaced with T-8 lights with electronic ballasts for improved energy savings.



System Name	Description			
D5022 - Lighting Equipment-Lighting Fixtures - Interior - T-8	The building includes a lighting system which includes interior T-8 lighting fixtures with eletronic ballasts and lamps, conduit and wire.			
D5031 - Public Address and Music Systems-Public Address System	The building includes a public address system. The public address system includes amplifier, intercom/monitor, volume control, speakers (ceilings or w conduit and shielded wiring			
D5033 - Telephone Systems-Telephone Distribution System	The building includes a telephone system, distribution wiring, local panels and telephone outlets conveniently distributed throughout the building.			
D5037 - Fire Alarm Systems-Fire Alarm System - Average Density - 2005	This building is equipped with an addressable-type fire alarm system. The fire alarm system includes control panel, manual pull stations at all exit doors, smoke detectors in rooms and ducts, horn/strobes and audible alarms. The main control panel is located in the main electrical room.			
D5037 - Fire Alarm Systems-Fire Alarm System - Average Density - 2009 - Fire Panel	This building is equipped with a Simplex addressable-type fire alarm panel. The fire alarm control panel is located in the main electrical room.			
D5037 - Fire Alarm Systems-Fire Alarm System - Average Density - 2012	The new section of the building is equipped with an addressable-type fire alarm system. The fire alarm system includes control panel, manual pull stations at all exit doors, smoke detectors in rooms and ducts, horn/strobes and audible alarms. The main control panel is located in the main electrical room.			
D5038 - Security and Detection Systems-Security System - CCTV	The building includes a CCTV security system for the exterior of the building. The system monitors points of egress. The CCTV security system includes video recorder, monitoring station, cameras, conduit, and cabling.			
D5038 - Security and Detection Systems-Security System - Card Access System	The building includes a typical card access security system. The security system includes control panels, card swipe pads, conduit, and cabling.			
D5039 - Local Area Networks-LAN System	Building includes a local area network system with wireless access distributed throughout the building in conduit and on cable trays using CAT3 wiring. The building is in the process of being upgraded to Cat 5 and Cat 5e cabling.			
D5092 - Emergency Light and Power Systems- Emergency Battery Pack Lights - 2005	The emergency lighting system includes self-contained battery packs and lights in the mechanical rooms.			
D5092 - Emergency Light and Power Systems- Emergency Battery Pack Lights - 2012	The emergency lighting system includes self-contained battery packs in the new section.			
D5092 - Emergency Light and Power Systems-Exit Signs - Fluorescent - 2005	The facility has fluorescent exit signs and includes single and double sided Exit signs, conduit, wire, boxes, conduit bends, connections and circuit breakers.			
D5092 - Emergency Light and Power Systems-Exit Signs - Fluorescent - 2012	The facility has LED exit signs and includes single and double sided Exit signs, conduit, wire, boxes, conduit bends, connections and circuit breakers.			
E - Equipment and Furnishings-Laboratory Equipment - College	The building includes laboratory equipment and casework for an average college.			
E - Equipment and Furnishings-Laboratory Equipment - College	The building includes laboratory equipment and casework for an average college.			



System Name Description

E10 - Equipment-Access Ladder

Access ladder is installed.

### Replacement Value Based on System Costs with Overheads

Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
A - Substructure	Foundation Wall and Footings 12-Ft - Full Basement	75	6	1978	2054	18,418	306,965
A - Substructure	~Caissons (Drilled Pier) in Rock	75	6	1978	2053	0	0
A - Substructure	Structural Slab on Grade - Non-Industrial	75	6	1978	2054	16,765	279,419
B10 - Superstructure	Multi-Story - Steel	75	6	1978	2054	15,272	254,542
B10 - Superstructure	Multi-Story - Concrete	75	6	1978	2054	309,360	5,155,993
B1014 - Ramps	Accessible Ramp - Exterior Concrete	50	12	1978	2029	8,444	70,365
B1015 - Exterior Stairs and Fire Escapes	Interior Stairs - Steel (Interior)	50	125	1978	2029	15,596	12,477
B1015 - Exterior Stairs and Fire Escapes	Exterior Stairs - Concrete	50	125	1978	2029	23,827	19,062
B2010 - Exterior Walls	Brick Cavity Walls - CMU Backup	75	12	1978	2054	150,734	1,256,120
B2010 - Exterior Walls	Metal Paneled Walls - Economy	60	12	1978	2039	3,643	30,360
B2020 - Exterior Windows	Aluminum Windows (2012)	30	125	2012	2043	39,765	31,812
B2020 - Exterior Windows	Aluminum Windows (1978)	30	125	1978	2018	1,192,950	954,360
B2030 - Exterior Doors	Overhead Rolling Doors - Electric Operation	30	125	1978	2015	29,466	23,573
B2030 - Exterior Doors	Door Assembly - 6 x 7 Storefront	30	125	1978	2018	11,432	9,145
B2030 - Exterior Doors	Door Assembly - 3 x 7 Storefront	30	125	1978	2018	35,253	28,203
B2030 - Exterior Doors	Door Assembly - 3 x 7 HM	28	125	1978	2018	81,343	65,074



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
B2030 - Exterior Doors	Door Assembly - 6 x 7 HM	30	125	1978	2018	9,973	7,979
B30 - Roofing	Gutters and Downspouts - Aluminum	25	125	2012	2038	1,101	881
B30 - Roofing	Metal Roofing - High End	65	125	2012	2078	15,908	12,726
B30 - Roofing	Single-Ply Membrane - Fully Adhered	25	125	2012	2038	447,991	358,393
B3022 - Roof Hatches	Roof Hatch	40	125	1978	2019	6,026	4,821
C1010 - Partitions	CMU Block Walls - Plain	50	62	1978	2029	293,184	472,878
C1010 - Partitions	Windows/Storefront Partitions - Average	50	62	1978	2029	10,374	16,732
C1010 - Partitions	GWB Walls - Standard (Non-Painted)	50	62	1978	2029	494,751	797,985
C1020 - Interior Doors	Swinging Doors - Pair - 6 x 7 Wd - Rated	50	125	1978	2029	82,941	66,353
C1020 - Interior Doors	Swinging Doors - 3 x 7 Wd - Rated	50	125	1978	2029	1,016,298	813,038
C1020 - Interior Doors	Swinging Doors - 3 x 7 HM - Rated	50	125	1978	2029	925,754	740,603
C1030 - Fittings	Toilet Partitions - Average	40	125	1978	2019	346,556	277,245
C1030 - Fittings	Restroom Accessories - Average	25	125	1990	2016	177,405	141,924
C1035 - Identifying Devices	Fittings - Signage (Room Numbering and Identification)	10	80	1978	2018	91,434	114,292
C20 - Stairs	Stairs - Average	75	37	1978	2054	92,455	249,877
C3010 - Wall Finishes	Ceramic Tile	25	125	1978	2018	28,194	22,555
C3010 - Wall Finishes	Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	10	47	2004	2018	259,461	193,050
C3020 - Floor Finishes	Ceramic Tile (1978)	25	125	1978	2018	12,175	9,740
C3020 - Floor Finishes	Carpeting - Broadloom - Medium Range	10	125	1990	2021	3,755	3,004
C3020 - Floor Finishes	VCT - Average	10	125	1978	2018	169,875	135,900
C3020 - Floor Finishes	Epoxy Flooring (Vivarium)	50	125	2004	2060	397,188	317,750



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
C3020 - Floor Finishes	Epoxy Flooring (2009)	50	125	2009	2060	31,775	25,420
C3020 - Floor Finishes	Vinyl Sheet Goods	12	125	1978	2018	785,062	628,050
C3020 - Floor Finishes	Carpeting - Tile	10	125	2005	2018	14,819	11,855
C3020 - Floor Finishes	Terrazzo - Cast-in-Place	50	125	1978	2029	144,222	115,378
C3020 - Floor Finishes	Ceramic Tile (1990)	25	125	1990	2018	14,610	11,688
C3030 - Ceiling Finishes	ACT System - Concealed Spline (Vivarium)	20	125	2022	2042	49,550	39,640
C3030 - Ceiling Finishes	GWB Taped and Finished	30	125	1978	2015	133,000	106,400
C3030 - Ceiling Finishes	ACT System - Standard	20	125	1978	2015	1,111,250	889,000
C3030 - Ceiling Finishes	ACT System - Concealed Spline	20	125	1978	2018	43,356	34,685
D1093 - Hoists and Cranes	Hoist System	25	125	1978	2020	44,211	35,369
D2010 - Plumbing Fixtures	Kitchenette - Sink	30	125	1995	2026	340,735	272,588
D2010 - Plumbing Fixtures	Plumbing Fixtures - Custodial Sinks	30	125	1978	2023	13,602	10,881
D2010 - Plumbing Fixtures	Laboratory Sinks	30	125	1995	2026	338,269	270,616
D2010 - Plumbing Fixtures	Restroom Fixtures - Lavatory	30	125	1978	2023	89,374	71,499
D2010 - Plumbing Fixtures	Restroom Fixtures - Urinal	30	125	1978	2023	26,835	21,468
D2010 - Plumbing Fixtures	Restroom Fixtures - Water Closets	30	125	1978	2023	74,004	59,203
D2010 - Plumbing Fixtures	Plumbing Fixtures - Emergency Eyewash and Safety Showers	30	125	1995	2026	552,388	441,911
D2010 - Plumbing Fixtures	Plumbing Fixtures - Tiled Individual Shower	30	125	1995	2026	28,038	22,430
D2010 - Plumbing Fixtures	Plumbing Fixtures - Drinking Fountains	20	125	1995	2021	31,014	24,811
D2020 - Domestic Water Distribution	Domestic Water - Distribution	30	125	1978	2020	1,666,095	1,332,876
D2020 - Domestic Water Distribution	Water Heater - Steam - Storage Tank	20	125	1999	2023	51,027	40,822



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D2020 - Domestic Water Distribution	Domestic Water - Pressure Booster Pump	15	125	1995	2025	95,493	76,394
D2020 - Domestic Water Distribution	Water Heater - Steam - Aerco	30	125	1985	2023	122,598	98,078
D2023 - Domestic Water Supply Equipment	Domestic Water- Backflow	15	125	1995	2025	26,381	21,105
D2030 - Sanitary Waste	Sanitary Waste - Gravity Disch	50	125	1978	2029	461,440	369,152
D2040 - Rain Water Drainage	Roof Drainage - Gravity	50	125	1995	2046	346,436	277,149
D2090 - Other Plumbing Systems	Lab Air Compressor	20	125	2014	2035	57,784	46,227
D2090 - Other Plumbing Systems	Lab Vacuum Pump	20	125	1995	2021	37,194	29,755
D2090 - Other Plumbing Systems	Lab Gas Distribution - Air Systems	25	125	1995	2025	303,844	243,075
D2090 - Other Plumbing Systems	Natural Gas Distribution - Laboratory Only	40	125	1995	2036	142,714	114,171
D2090 - Other Plumbing Systems	Laboratory Waste System - Polypropylene	40	125	1995	2036	1,081,766	865,413
D2090 - Other Plumbing Systems	Lab High Purity Water	30	125	2005	2036	56,338	45,070
D3030 - Cooling Generating Systems	Chiller - Reciprocating w/Cooling Tower	20	125	1982	2019	169,348	135,479
D3030 - Cooling Generating Systems	Condensing Unit - Air-Cooled	20	125	1995	2023	47,944	38,355
D3040 - Distribution Systems	Air Handling Unit - SF5 - Hot / Cold Deck	25	125	1995	2020	116,571	93,257
D3040 - Distribution Systems	Distribution - Re-Claim Pumps - A14	25	125	1995	2021	24,935	19,948
D3040 - Distribution Systems	Air Handling Unit - SF9- VAV	25	125	1982	2020	138,081	110,464
D3040 - Distribution Systems	Air Handling Unit - SF2- VAV - Penthouse	25	125	1995	2020	138,081	110,464
D3040 - Distribution Systems	Air Handling Unit - SF3 - Lecture Room 145	25	125	1995	2020	47,823	38,258
D3040 - Distribution Systems	Chilled Water Supply and Return	30	125	1995	2026	142,638	114,110
D3040 - Distribution Systems	Distribution - Exhaust System - Restroom w/Roof Fan	20	125	1995	2023	152,712	122,170
D3040 - Distribution Systems	Distribution Ductwork - Central HVAC	25	125	1995	2020	3,338,182	2,670,545



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3040 - Distribution Systems	Distribution Ductwork - Return Air	20	125	1995	2020	1,193,703	954,962
D3040 - Distribution Systems	Distribution Piping - Steam and Condensate	30	125	1995	2026	1,136,372	909,098
D3040 - Distribution Systems	Distribution Pumps - Hydronic Heating Water	25	125	1995	2021	26,276	21,021
D3040 - Distribution Systems	Heat Exchanger - Steam/HW	30	125	1995	2026	222,980	178,384
D3040 - Distribution Systems	Hydronic Distribution Piping	30	125	1995	2026	849,738	679,791
D3040 - Distribution Systems	Distribution - Circulation Pumps - CHW - A8 & A9	25	125	1995	2021	20,370	16,296
D3040 - Distribution Systems	Distribution - Circulation Pumps - CHW - A11 & A17	25	125	1995	2021	9,462	7,570
D3040 - Distribution Systems	Distribution - Circulation Pumps - HHW - A12 & A13	25	125	1995	2021	13,483	10,786
D3040 - Distribution Systems	Air Handling Unit - SF6 - Hot / Cold Deck	25	125	1995	2020	116,571	93,257
D3040 - Distribution Systems	Air Handling Unit - SF4	25	125	1995	2020	138,081	110,464
D3040 - Distribution Systems	Exhaust System - Utility Fans	15	125	1995	2027	318,762	255,010
D3040 - Distribution Systems	Distribution - Circulation Pumps - CHW at SF-9	25	125	1982	2019	13,634	10,907
D3040 - Distribution Systems	Distribution - Circulation Pumps - HHW at SF-9	25	125	1982	2019	7,250	5,800
D3040 - Distribution Systems	Distribution - Re-Claim Pumps - A15 & A 16	25	125	1995	2021	21,816	17,453
D3040 - Distribution Systems	Distribution - Circulation Pumps - HHW - A7	25	125	1995	2021	8,248	6,599
D3040 - Distribution Systems	Exhaust Fan - EF6	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	EXhaust Fan - EF34	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	Exhaust Fan - EF35	25	125	1995	2020	36,917	29,534



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3040 - Distribution Systems	Distribution - Circulation Pumps - CHW - A6	25	125	1995	2021	10,185	8,148
D3040 - Distribution Systems	Air Handling Unit - SF1- Hot-Cold Deck	25	125	1995	2020	272,233	217,786
D3040 - Distribution Systems	Distribution - Circulation Pumps - HHW - A1 & A2	25	125	1995	2021	20,370	16,296
D3040 - Distribution Systems	Return Fan - RF4	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	Exhaust Fan - EF1	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	Exhaust Fan - EF2	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	Exhaust System - Fume Hood - Ductwork/Fan	25	125	1995	2021	2,160,425	1,728,340
D3040 - Distribution Systems	Distribution - Circulation Pumps - HHW - A10	25	125	1995	2021	4,731	3,785
D3040 - Distribution Systems	Heat Exchanger - Re-Claim Loop - HE-5	30	125	1995	2026	234,912	187,930
D3040 - Distribution Systems	Return Fan - RF3	25	125	1995	2020	36,917	29,534
D3040 - Distribution Systems	Heat Exchanger - Re-Claim Loop - HE-3 & HE-4	30	125	1995	2026	469,824	375,859
D3050 - Terminal and Package Units	Terminal Units - Fan Coil System - 2 Pipe	30	125	2005	2036	1,609,297	1,287,437
D3060 - Controls and Instrumentation	Controls - Air Compressor	20	125	1995	2021	35,865	28,692
D3060 - Controls and Instrumentation	Controls - Air Compressor at SF-9	20	125	1995	2021	18,911	15,129
D3060 - Controls and Instrumentation	Controls - Hybrid DDC/Pneumatic System	25	125	1995	2028	907,427	725,942
D3090 - Other HVAC Systems and Equipment	Walk-in Refrigerator- Cold Room Necropsy Recieving	20	125	2005	2026	112,739	90,191
D3090 - Other HVAC Systems and Equipment	Walk-in Refrigerator- Cold Room 250AA	20	125	2005	2026	15,429	12,343



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3090 - Other HVAC Systems and Equipment	Walk-in Refrigerator- Cold Room B (Rm 224B)	20	125	2005	2026	15,429	12,343
D3090 - Other HVAC Systems and Equipment	Walk-in Refrigerator- Cold Room Necropsy Shipping	20	125	2005	2026	169,108	135,287
D3090 - Other HVAC Systems and Equipment	Walk-in Refrigerator- Cold Room A (Rm 224A)	20	125	2005	2026	15,429	12,343
D40 - Fire Protection	Fire Protection - Wet Sprinkler System - Ordinary Hazard	35	125	1995	2031	896,533	717,227
D40 - Fire Protection	Fire Protection - Standpipe System	35	125	1978	2023	254,016	203,212
D40 - Fire Protection	Fire Pump - Electric	30	125	1995	2026	41,571	33,257
D40 - Fire Protection	Fire Protection - Extinguishers	30	125	1995	2026	33,698	26,958
D5011 - High Tension Service and Dist.	Main Electrical Service	30	125	1978	2018	203,595	162,876
D5012 - Low Tension Service and Dist.	Main Electrical Service - Transformer - 480/120/208V - 15 KVA	30	125	1985	2020	74,166	59,333
D5012 - Low Tension Service and Dist.	Main Electrical Service - Transformer - 480/120/208V - 112.5 KVA	30	125	1985	2020	27,541	22,032
D5012 - Low Tension Service and Dist.	Main Electrical Service - Main Switchboard - 1200 A, 277/480V	30	125	1978	2019	51,054	40,843
D5012 - Low Tension Service and Dist.	Main Electrical Service - Transformer - 480/120/208V - 45 KVA	30	125	1985	2020	23,291	18,633
D5012 - Low Tension Service and Dist.	Main Electrical Service - Transformer - 480/120/208V - 75 KVA	30	125	1985	2020	165,243	132,195
D5012 - Low Tension Service and Dist.	Main Electrical Service - Main Switchboard - 2300 A, 277/480V	30	125	1978	2019	78,383	62,706
D5012 - Low Tension Service and Dist.	Electrical Distribution Equipment - Motor Control Center	30	125	1985	2025	358,785	287,028



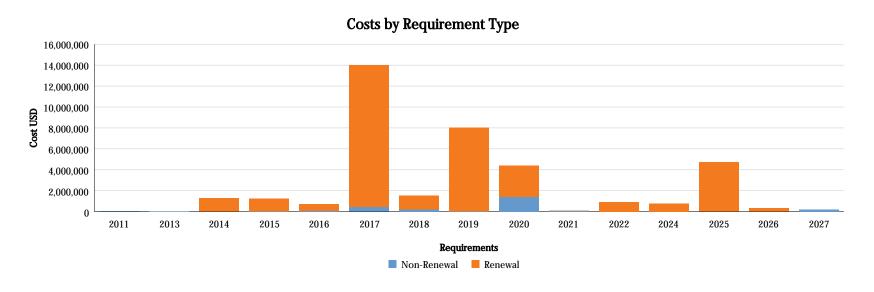
Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D5012 - Low Tension Service and Dist.	Main Electrical Service - Main Switchboard - 277/480V - Tie Breaker	30	125	1978	2019	40,592	32,474
D5021 - Branch Wiring Devices	Branch Wiring - Equipment & Devices - Panelboards -1978	30	125	1978	2018	298,765	239,012
D5021 - Branch Wiring Devices	Branch Wiring - Equipment & Devices - 1978	30	125	1978	2017	520,875	416,700
D5021 - Branch Wiring Devices	Branch Wiring - Equipment & Devices - Panelboards - 2012	30	125	2012	2043	25,980	20,784
D5021 - Branch Wiring Devices	Branch Wiring - Equipment & Devices - 2012	30	125	2012	2043	57,875	46,300
D5022 - Lighting Equipment	Lighting - Interior - CFL - 2012	20	125	2012	2033	135,821	108,657
D5022 - Lighting Equipment	Lighting - Exterior - Metal Halide	20	125	2000	2022	9,122	7,298
D5022 - Lighting Equipment	Lighting Fixtures - Interior - T-12	20	125	1985	2018	133,500	106,800
D5022 - Lighting Equipment	Lighting Fixtures - Interior - T-8	20	125	2000	2021	303,308	242,646
D5022 - Lighting Equipment	Lighting - Interior - CFL - 2000	20	125	2000	2021	169,776	135,821
D5022 - Lighting Equipment	Lighting - Exterior - High Pressure Sodium	20	125	2000	2022	4,561	3,649
D5031 - Public Address and Music Systems	Public Address System	15	125	1978	2017	104,376	83,501
D5033 - Telephone Systems	Telephone Distribution System	10	106	1980	2020	221,531	208,500
D5037 - Fire Alarm Systems	Fire Alarm System - Average Density - 2009 - Fire Panel	10	125	2009	2022	25,577	20,462
D5037 - Fire Alarm Systems	Fire Alarm System - Average Density - 2005	10	125	2005	2019	528,281	422,625
D5037 - Fire Alarm Systems	Fire Alarm System - Average Density - 2012	10	125	2012	2023	52,828	42,262
D5038 - Security and Detection Systems	Security System - CCTV	10	125	2012	2023	23,767	19,013
D5038 - Security and Detection Systems	Security System - Card Access System	10	125	2005	2021	71,699	57,359
D5039 - Local Area Networks	LAN System	15	125	2000	2016	1,056,625	845,300



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D5092 - Emergency Light and Power Systems	Emergency Battery Pack Lights - 2012	10	125	2012	2023	2,564	2,051
D5092 - Emergency Light and Power Systems	Exit Signs - Fluorescent - 2005	10	125	2005	2019	50,131	40,105
D5092 - Emergency Light and Power Systems	Emergency Battery Pack Lights - 2005	10	125	2005	2019	7,692	6,154
D5092 - Emergency Light and Power Systems	Exit Signs - Fluorescent - 2012	10	125	2012	2023	13,039	10,431
E - Equipment and Furnishings	Laboratory Equipment - College	30	125	1978	2018	9,157,909	8,140,364
E - Equipment and Furnishings	Laboratory Equipment - College	30	125	1978	2018	1,017,474	904,422
E10 - Equipment	Access Ladder	30	100	1978	2021	4,143	4,143
					Subtotal		45,635,541
					Overhead:		0
					Subtotal		0
		Total Replacement Value Based on System Costs with Overheads					



#### **Requirements including Renewals**



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
ACT System - Concealed Spline Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	43,356
ACT System - Standard Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	1- Due within 1 Year of Inspection	Sep 8, 2014	1,111,250
Access Ladder Renewal	Yes	E10 - Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	4,143
Air Handling Unit - SF1- Hot-Cold Deck Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	272,233



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Air Handling Unit - SF2- VAV - Penthouse Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	138,081
Air Handling Unit - SF3 - Lecture Room 145 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	47,823
Air Handling Unit - SF4 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	138,081
Air Handling Unit - SF5 - Hot / Cold Deck Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	116,571
Air Handling Unit - SF6 - Hot / Cold Deck Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	116,571
Air Handling Unit - SF9- VAV Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	138,081
Aluminum Windows (1978) Renewal	Yes	B2020 - Exterior Windows	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	1,192,950
Branch Wiring - Equipment & Devices - Panelboards -1978 Renewal	Yes	D5021 - Branch Wiring Devices	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	298,765
Branch Wiring - Equipment & Devices - 1978 Renewal	Yes	D5021 - Branch Wiring Devices	Lifecycle	2- Due within 2 Years of Inspection	Sep 8, 2016	520,875
Building Wireless Upgrade	No	D50393 - LAN Network - Wireless	Technological Improvements	1- Due within 1 Year of Inspection	Aug 18, 2017	325,253
COMPLETE LIFE SAFETY UPGRADES (SPRINKLERS)	No	D40 - Fire Protection	Life Safety	1- Due within 1 Year of Inspection	Jun 30, 2017	146,410
Carpeting - Broadloom - Medium Range Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2020	3,755
Carpeting - Tile Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	14,819
Ceramic Tile (1978) Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	12,175



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Ceramic Tile (1990) Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	14,610
Ceramic Tile Renewal	Yes	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	28,194
Chilled Water Supply and Return Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	142,638
Chiller - Reciprocating w/Cooling Tower Renewal	Yes	D3030 - Cooling Generating Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	169,348
Condensing Unit - Air-Cooled Renewal	Yes	D3030 - Cooling Generating Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	47,944
Controls - Air Compressor Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	35,865
Controls - Air Compressor at SF-9 Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	18,911
Distribution - Circulation Pumps - CHW - A11 & A17 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	9,463
Distribution - Circulation Pumps - CHW - A6 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	10,185
Distribution - Circulation Pumps - CHW - A8 & A9 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	20,370
Distribution - Circulation Pumps - CHW at SF-9 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	13,634
Distribution - Circulation Pumps - HHW - A1 & A2 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	20,370
Distribution - Circulation Pumps - HHW - A10 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	4,731
Distribution - Circulation Pumps - HHW - A12 & A13 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	13,483



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Distribution - Circulation Pumps - HHW - A7 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	8,248
Distribution - Circulation Pumps - HHW at SF-9 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	7,250
Distribution - EF50 Lacking Shaft Guarding	No	D3040 - Distribution Systems	Life Safety	1- Due within 1 Year of Inspection	Sep 8, 2015	1,310
Distribution - Exhaust System - Restroom w/Roof Fan Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	152,712
Distribution - Re-Claim Pumps - A14 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	24,935
Distribution - Re-Claim Pumps - A15 & A 16 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	21,816
Distribution Ductwork - Central HVAC Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	3,338,182
Distribution Ductwork - Return Air Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	1,193,703
Distribution Piping - Steam and Condensate Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	1,136,372
Distribution Pumps - Hydronic Heating Water Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	26,276
Domestic Water - Distribution Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	1,666,095
Domestic Water - Pressure Booster Pump Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2024	95,493
Domestic Water- Backflow Renewal	Yes	D2023 - Domestic Water Supply Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2024	26,381
Door Assembly - 3 x 7 HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	81,343



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Door Assembly - 3 x 7 Storefront Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	35,253
Door Assembly - 6 x 7 HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	9,973
Door Assembly - 6 x 7 Storefront Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	11,432
EXhaust Fan - EF34 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Electrical Distribution Equipment - Motor Control Center Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2024	358,785
Emergency Battery Pack Lights - 2005 Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	7,692
Emergency Battery Pack Lights - 2012 Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	2,564
Emergency Light and Power - Insufficient Means of Egress Lighting	No	D5092 - Emergency Light and Power Systems	Building Code	2- Due within 2 Years of Inspection	Sep 8, 2016	2,364
Emergency Light and Power Systems - Exit Signs Non - Compliant	No	D5092 - Emergency Light and Power Systems	Building Code	2- Due within 2 Years of Inspection	Sep 8, 2016	671
Exhaust Fan - EF1 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Exhaust Fan - EF2 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Exhaust Fan - EF35 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Exhaust Fan - EF6 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Exhaust System - Fume Hood - Ductwork/Fan Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	2,160,425



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Exhaust System - Utility Fans Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2026	318,762
Exit Signs - Fluorescent - 2005 Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 7, 2018	50,131
Exit Signs - Fluorescent - 2012 Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	13,039
Fire Alarm System - Average Density - 2005 Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	528,281
Fire Alarm System - Average Density - 2009 - Fire Panel Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2021	25,577
Fire Alarm System - Average Density - 2012 Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	52,828
Fire Protection - Extinguishers Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	33,698
Fire Protection - Standpipe System Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	254,016
Fire Pump - Electric Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	41,571
Fittings - Signage (Room Numbering and Identification) Renewal	Yes	C1035 - Identifying Devices	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	91,434
GWB Taped and Finished Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	1- Due within 1 Year of Inspection	Sep 8, 2014	133,000
Heat Exchanger - Re-Claim Loop - HE-3 & HE-4 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	469,824
Heat Exchanger - Re-Claim Loop - HE-5 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	234,912
Heat Exchanger - Steam/HW Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	222,980



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Hoist System Renewal	Yes	D1093 - Hoists and Cranes	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	44,211
Hoist System - Inadequate	No	D1093 - Hoists and Cranes	Capacity	2- Due within 2 Years of Inspection	Sep 8, 2016	42,676
Hydronic Distribution Piping Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	849,738
INSTALL LOCAL VENTILATION FOR NECROPSY LAB	No	D3042 - Exhaust Ventilation Systems	Life Safety	2- Due within 2 Years of Inspection	Jun 30, 2018	219,616
Kitchenette - Sink Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	340,735
LAN System Renewal	Yes	D5039 - Local Area Networks	Lifecycle	1- Due within 1 Year of Inspection	Sep 8, 2015	1,056,625
Lab Gas Distribution - Air Systems Renewal	Yes	D2090 - Other Plumbing Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2024	303,844
Lab Vacuum Pump Renewal	Yes	D2090 - Other Plumbing Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	37,194
Laboratory Equipment - College Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	9,157,909
Laboratory Equipment - College Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	1,017,474
Laboratory Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	338,269
Lighting - Exterior - High Pressure Sodium Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2021	4,561
Lighting - Exterior - Metal Halide Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2021	9,122
Lighting - Interior - CFL - 2000 Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	169,776



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Lighting Fixtures - Interior - T-12 Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	133,500
Lighting Fixtures - Interior - T-8 Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	303,308
Main Electrical Service - Main Switchboard - 1200 A, 277/480V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	51,054
Main Electrical Service - Main Switchboard - 2300 A, 277/480V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	78,383
Main Electrical Service - Main Switchboard - 277/480V - Tie Breaker Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	40,592
Main Electrical Service - Transformer - 480/120/208V - 112.5 KVA Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	27,541
Main Electrical Service - Transformer - 480/120/208V - 15 KVA Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	74,166
Main Electrical Service - Transformer - 480/120/208V - 45 KVA Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	23,291
Main Electrical Service - Transformer - 480/120/208V - 75 KVA Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	165,243
Main Electrical Service Renewal	Yes	D5011 - High Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2017	203,595
Overhead Rolling Doors - Electric Operation Renewal	Yes	B2030 - Exterior Doors	Lifecycle	1- Due within 1 Year of Inspection	Sep 8, 2014	29,467
PAINT 1ST & 2ND FLOOR HALLWAYS	No	C3010 - Wall Finishes	Maintenance	3- Due within 5 Years of Inspection	Jun 16, 2021	61,777
Painted Finish - Average (1 Coat Prime - 2 Coats Finish) Renewal	Yes	C3010 - Wall Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	259,461
Plumbing Fixtures - Custodial Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	13,602



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Plumbing Fixtures - Drinking Fountains Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	31,014
Plumbing Fixtures - Emergency Eyewash and Safety Showers Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	552,388
Plumbing Fixtures - Tiled Individual Shower Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	28,038
Public Address System Renewal	Yes	D5031 - Public Address and Music Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 8, 2016	104,376
REPLACE DAMAGED SHEET VINYL RM 324	No	C3020 - Floor Finishes	Reliability	3- Due within 5 Years of Inspection	Sep 1, 2016	37,807
REPLACE FLOORING IN ROOM 260	No	C3020 - Floor Finishes	Reliability	1- Due within 1 Year of Inspection	Sep 1, 2016	25,205
REPLACE PANIC BARS ON DOORS	No	C1020 - Interior Doors	Reliability	3- Due within 5 Years of Inspection	Sep 1, 2011	43,244
Repair Epoxy Flooring, Vivarium Areas	No	C3020 - Floor Finishes	Reliability	2- Due within 2 Years of Inspection	Jan 24, 2019	25,588
Replace Countertops/Sinks in Several Labs	No	E2010 - Fixed Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Apr 13, 2027	200,000
Replace Pneumatic Controls with DDC Controls	No	D3060 - Controls and Instrumentation	Lifecycle	2- Due within 2 Years of Inspection	May 18, 2020	1,388,078
Replace door to roof penthouse room 503	No	B2030 - Exterior Doors	Lifecycle	2- Due within 2 Years of Inspection	Jun 14, 2018	2,471
Restroom Accessories - Average Renewal	Yes	C1030 - Fittings	Lifecycle	1- Due within 1 Year of Inspection	Sep 8, 2015	177,405
Restroom Fixtures - Lavatory Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	89,374
Restroom Fixtures - Urinal Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	26,835



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Restroom Fixtures - Water Closets Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	74,004
Return Fan - RF3 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Return Fan - RF4 Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	36,917
Roof Hatch Renewal	Yes	B3022 - Roof Hatches	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	6,026
Security System - CCTV Renewal	Yes	D5038 - Security and Detection Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	23,767
Security System - Card Access System Renewal	Yes	D5038 - Security and Detection Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2020	71,699
Telephone Distribution System Renewal	Yes	D5033 - Telephone Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2019	221,531
Toilet Partitions - Average Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2018	346,556
Upgrade Door East End Corridor 100	No	C1020 - Interior Doors	Reliability	3- Due within 5 Years of Inspection	Sep 1, 2013	0
VCT - Average Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	169,875
Vinyl Sheet Goods Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	785,063
Walk-in Refrigerator- Cold Room 250AA Renewal	Yes	D3090 - Other HVAC Systems and Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	15,429
Walk-in Refrigerator- Cold Room A (Rm 224A) Renewal	Yes	D3090 - Other HVAC Systems and Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	15,429
Walk-in Refrigerator- Cold Room B (Rm 224B) Renewal	Yes	D3090 - Other HVAC Systems and Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	15,429



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Walk-in Refrigerator- Cold Room Necropsy Recieving Renewal	Yes	D3090 - Other HVAC Systems and Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	112,739
Walk-in Refrigerator- Cold Room Necropsy Shipping Renewal	Yes	D3090 - Other HVAC Systems and Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2025	169,108
Water Heater - Steam - Aerco Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	122,598
Water Heater - Steam - Storage Tank Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 8, 2022	51,027
Total						38,277,518



 $\textbf{Region:} \ \textbf{Pullman - WSU Main Campus}$ 

Campus: Pullman Campus - Assessed

Buildings

Asset: MCCOY HALL

Asset Number: 0044

Assets are ordered by Asset Name

**Currency:** USD

#### **Statistics**

FCI Cost:	24,615,741	FCI:	0.88
RI Cost:	26,230,360	RI:	0.94
Total Requirement Cost:	25,684,003	Size:	111,157 SF
Current Replacement Value:	27,938,708		

Address 1 1605 STADIUM WAY
City PULLMAN

Address 2

State/Province/Region

WA



#### Photo



MCCOY HALL

#### **System Description**

System Name	Description
A - Substructure-Concrete Footings - 1942	Concrete column footings.
A - Substructure-Concrete Footings - 1950	Concrete column footings.
A - Substructure-Concrete Footings - 1960	Concrete column footings.
A - Substructure-Foundation Wall and Footings - No Basement - 1942	Basic foundation for building without basement - to include strip footing, 4-ft foundation wall and damp proofing. Also included are underdrains.



System Name	Description
A - Substructure-Foundation Wall and Footings - No Basement - 1950	Basic foundation for building without basement - to include strip footing, 4-ft foundation wall and damp proofing. Also included are underdrains.
A - Substructure-Foundation Wall and Footings - No Basement - 1960	Basic foundation for building without basement - to include strip footing, 4-ft foundation wall and damp proofing. Also included are underdrains.
A - Substructure-Foundation Wall and Footings 12-Ft - Full Basement - 1942	Full basement wall and foundation with a 12-Ft. height to include strip footing, foundation wall and damp proofing. Also included are the underdrains.
A - Substructure-Grade Beams - 1942	The substructure includes grade beams with a span of 30-feet and 40-inches deep.
A - Substructure-Structural Slab on Grade - Non-Industrial - 1942	The building substructure includes a non-industrial type structural slab on grade.
A - Substructure-Structural Slab on Grade - Non-Industrial - 1950	The building substructure includes a non-industrial type structural slab on grade.
A - Substructure-Structural Slab on Grade - Non-Industrial - 1960	The building substructure includes a non-industrial type structural slab on grade.
B10 - Superstructure-Multi-Story - Concrete - 1942	Multi-story lightweight structure with reinforced concrete construction.
B10 - Superstructure-Multi-Story - Concrete - 1950	Multi-story lightweight structure with reinforced concrete construction.
B10 - Superstructure-Multi-Story - Concrete - 1960	Multi-story lightweight structure with reinforced concrete construction.
B1014 - Ramps-Accessible Ramp - Exterior Concrete	Concrete in place, handicapped ramp w/cheek walls & rails both sides, 5' wide.
B1015 - Exterior Stairs and Fire Escapes- Exterior Stairs - Concrete	Exterior concrete stairs (6' wide x 5 risers) with railing.
B2010 - Exterior Walls-Brick Cavity Walls - CMU Backup - 1942	The exterior wall construction is of brick cavity walls with CMU backup.
B2010 - Exterior Walls-Brick Cavity Walls - CMU Backup - 1950	The exterior wall construction is of brick cavity walls with CMU backup.
B2010 - Exterior Walls-Precast Concrete Panels	The exterior walls are of precast concrete panels in a high-rise building.
B2010 - Exterior Walls-Stucco On CMU	The exterior walls are of stucco over concrete masonry unit backup walls.



System Name	Description
Walls	
B2020 - Exterior Windows-Aluminum Windows - 1960	The building includes aluminum framed exterior units with insulating glass.
B2030 - Exterior Doors-Door Assembly - 3 x 7 HM	Exterior doors include 3 x 7 steel door and steel frame with hinges, lockset (lever), exit hardware and closer. Includes painted door and painted frame.
B2030 - Exterior Doors-Door Assembly - 3 x 7 Storefront	The exterior doors include swinging glazed aluminum storefront leaf plus glazed transom, aluminum frame, hardware including closer.
B2030 - Exterior Doors-Door Assembly - 6 x 7 HM	Exterior doors include pr. 3 x 7 steel doors and steel frame with hinges, locksets (lever), exit hardware and closers. Includes painted doors and painted frame.
B2030 - Exterior Doors-Door Assembly - 6 x 7 HM - Full Glass	Exterior doors include pair 3 x 7 steel door (full glass) and frame with hinges, lockset (lever), exit hardware and closer. Includes painted door and painted frame.
B2030 - Exterior Doors-Door Assembly - 6 x 7 Storefront	The exterior doors include pr. swinging glazed aluminum storefront leafs plus glazed transom, aluminum frame, hardware including closers.
B2030 - Exterior Doors-Door Assembly - Sliding Wood Barn Door	The interior doors include sliding wood barn doors, aluminum frame, hardware, including closers. Note: means line items chosen for cost representation only.
B2030 - Exterior Doors-Overhead Rolling Doors - Electric Operation	Exterior openings include overhead rolling doors with electric operators.
B3010 - Roof Coverings-Two-Ply Membrane - Fully Adhered	Roof features a two ply granulated modified bitumen membrane using Sporema 250GR torch on cap sheet with Soprema 180 mopped on base sheet over 2 layers of 12.7mm high density fibreboard, 76mm polyisocyanurate insulation, 2 ply 15 lb felt BUR vapour barrier on 16mm fibreglass faced gypsum board substrate.
C1010 - Partitions-CMU Block Walls - Plain	Interior walls are of 8-in. hollow concrete block, light and regular weight, with no finish.
C1010 - Partitions-Concrete Walls - Plain, Cast in Place	Interior walls are of 8-in. cast in place concrete, with no finish.
C1010 - Partitions-GWB 2HR Rated Walls	The building interior includes GWB, 2-hour rated partitions.
C1020 - Interior Doors-Door Assembly - 6 x 10 Sliding Wood	The interior doors include sliding wood doors, aluminum frame, hardware, including closers. Note: means line items chosen for cost representation only.
C1020 - Interior Doors-Overhead/Rolling Door - Large (Electric Operation)	Building includes large interior overhead door(s) with electric motorized operation.
C1020 - Interior Doors-Overhead/Rolling Fire Door - Mid-Size (Electric Operation)	Building includes interior, overhead rolling doors. Electrically operated.



System Name	Description
C1020 - Interior Doors-Swinging Doors - 3 x 7 HM - NR	Interior doors include non-rated 3 x 7 steel door and steel frame with hinges, lockset (lever) and closer. Includes painted door and painted frame.
C1020 - Interior Doors-Swinging Doors - 3 x 7 HM - Rated	Interior doors include rated 3 x 7 steel door and steel frame with hinges, lockset (lever), panic hardware and closer. Includes painted door and painted frame.
C1020 - Interior Doors-Swinging Doors - 3 x 7 Wd - NR	Interior doors include non-rated 3 x 7 wood door and steel frame with hinges, lockset (lever) and closer. Includes finished door and painted frame.
C1020 - Interior Doors-Swinging Doors - 3 x 7 Wd - Rated	Interior doors include rated 3 x 7 wood door and steel frame with vision lite, hinges, lockset (lever), panic hardware and closer. Includes painted (stained) door and painted frame.
C1020 - Interior Doors-Swinging Doors - Pair - 6 x 7 HM - NR	Interior doors include pr. non-rated 3 x 7 steel doors and steel frame with hinges, locksets (lever) and closers. Includes painted doors and painted frame.
C1020 - Interior Doors-Swinging Doors - Pair - 6 x 7 Wd - NR	Interior doors include pr. non-rated 3 x 7 wood doors and steel frame with hinges, locksets (lever) and closers. Includes finished doors and painted frame.
C1021 - Interior Doors -Door Assembly - $8x$ 10 HM	Interior doors include pr. 4 x 10 steel doors and steel frame with hinges, locksets (lever), exit hardware and closers. Includes painted doors and painted frame.
C1021 - Interior Doors -Swinging Doors - $3 \times 7$ Storefront	The interior doors include swinging glazed aluminum storefront leaf plus glazed transom, aluminum frame, hardware including closer.
C1024 - Interior Door Wall Opening Elements-Interior Doors - Sliding Security Grille	Interior doors include full height grille doors for commercial purposes.
C1030 - Fittings-Restroom Accessories - Average	The restroom accessories include mirror, grab bars, paper towel dispenser and disposal, diaper changing station, toilet paper holder and soap dispenser.
C1030 - Fittings-Toilet Partitions - Average	Restrooms are equipped with standard quality, ceiling-hung partitions.
C1035 - Identifying Devices-Fittings - Signage (Room Numbering and Identification)	Room, door and graphic symbol signs. Adhesive backs and Braille.
C20 - Stairs-Stairs - Average	The interior stairs include 12 risers per flight with landing and 2 flights per story. Approximately 28 LF of wall rail per flight included in cost estimate.
C3010 - Wall Finishes-Ceramic Wall Tile	Building wall coverings include 4-in. x 4-in. thin set ceramic decorator tiles at medium price. Tile job includes wainscot with bullnose trim. Located on 2nd floor.
C3010 - Wall Finishes-Clean Wall System - Porcelain Coated	Interior wall finishes include a clean wall porcelain coated wall finish system. Located on 2nd floor.



System Name	Description
C3010 - Wall Finishes-Epoxy Finish - Maximum	Wall finishes include high quality hi-build 50 mil epoxy finish.
C3010 - Wall Finishes-Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	Interior wall finishes include standard paint finish.
C3010 - Wall Finishes-Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	Interior wall finishes include standard paint finish.
C3010 - Wall Finishes-Wall System - Vinyl Mat	Interior wall finishes include a vinyl mat wall system.
C3020 - Floor Finishes-Carpeting - Tile	Floor finishes include a standard range carpet tiles (18 x 18 or 24 x 24 modules) and vinyl or rubber base, for medium traffic areas. Located on 1st floor.
C3020 - Floor Finishes-Ceramic Floor Tile	Floor finishes include ceramic tile and base in restrooms.
C3020 - Floor Finishes-Concrete - Applied Rubber Epoxy	Applied concrete topping with an abrasive textured rubber epoxy additive to prevent slipping and hoof damage in animal handling areas. Commonly referred to as "Armor Grip", a polyurethane over foam pads, a fair amount of pitting and delamination is occuring throughout.
C3020 - Floor Finishes-Concrete - Applied Rubber Epoxy	Applied concrete topping with an abrasive textured rubber epoxy additive to prevent slipping and hoof damage in animal handling areas. Commonly referred to as "Armor Grip", a polyurethane over foam pads, a fair amount of pitting and delamination is occuring throughout.
C3020 - Floor Finishes-Epoxy Flooring - 1987	Floor finishes include cement epoxy flooring.
C3020 - Floor Finishes-Epoxy Flooring - 2014	Floor finishes include cement epoxy flooring.
C3020 - Floor Finishes-Glazed Brick	Glazed bricks flooring - mortar bed set with brick base.
C3020 - Floor Finishes-Rubber Floor Tile	Non-slip rubber flooring, sheet or tile, with raised standard pastilles and colors.
C3020 - Floor Finishes-Terrazzo - Cast-in- Place	Floor finishes include cast-in-place terrazzo and related base.
C3020 - Floor Finishes-VAT	Floor finishes include areas of suspected asbestos containing VAT flooring and related base. Approx 1222SF in bsmt, 6549SF on 1st and 7454 SF on 2nd.
C3020 - Floor Finishes-VCT	Floor finishes include areas of standard VCT flooring and related base.
C3020 - Floor Finishes-Vinyl Sheet Goods - 2009	Floor finishes include areas of vinyl sheet goods flooring and related base. Located on 1st floor.
C3020 - Floor Finishes-Vinyl Sheet Goods - 2014	Floor finishes include areas of vinyl sheet goods flooring and related base. Located on 1st floor.
C3030 - Ceiling Finishes-ACT System -	Concealed spline 12 x 12 x 3/4-in. ACT ceiling system with "Z" grid.



System Name	Description
Concealed Spline	
C3030 - Ceiling Finishes-Clean TBar System	Standard suspended 'clean' TBar ceiling system with 2 x 2 or 2 x 4 regular tiles in 15/16 or 9/16-in. grids.
C3030 - Ceiling Finishes-GWB Taped and Finished	GWB ceiling system over 8-ft above floor taped, finished and painted with primer and 2 finish coats. Ceiling on suspension system or fastened to metal or wood furring.
C3030 - Ceiling Finishes-TBar System - 1990	Standard suspended TBar ceiling system with 2 x 2 or 2 x 4 regular tiles in 15/16 or 9/16-in. grids.
C3030 - Ceiling Finishes-TBar System - 2014	Standard suspended TBar ceiling system with 2 x 2 or 2 x 4 regular tiles in 15/16 or 9/16-in. grids.
D1010 - Elevators and Lifts-Hydraulic Passenger Elevator	The conveying equipment includes a passenger hydraulic elevator - two stories, 4,500lbs capacity.
D2010 - Plumbing Fixtures-Custodial/ Utility Sinks	The plumbing fixtures include wall-mount or floor-mount custodial/utility sinks.
D2010 - Plumbing Fixtures-Drinking Fountains - Vitreous China	Plumbing fixtures include single height vitreous china water fountains.
D2010 - Plumbing Fixtures-Emergency Eyewash and Shower Units	Plumbing fixtures include emergency safety shower and eyewash units. Note: some units have been replaced recently.
D2010 - Plumbing Fixtures-Laboratory Sinks	The building plumbing fixtures include stainless steel or molded, chemical-resistant laboratory sinks.
D2010 - Plumbing Fixtures-OR/Surgery Scrub Sinks	The plumbing fixtures include Operating Room scrub sinks which are typically stainless steel, but occasionally porcelain.
D2010 - Plumbing Fixtures-Restroom Fixtures	The restroom fixtures include vitreous china urinals and water closets, and vitreous china or molded lavatories.
D2010 - Plumbing Fixtures-Water Coolers - Wall-Mount	Plumbing fixtures include dual-height and single-height water coolers. Note: Portable water coolers are being used in place of the installed water coolers due to poor tasting water. Potable water distribution piping should be replaced before replacing water coolers/drinking fountains.
D2020 - Domestic Water Distribution- Water Dist Complete	The building domestic water distribution system includes a four inch main line, water meter, rpz backflow preventer, with rough ins included. This System does not include a water heater. Piping materials vary by age, and include cast iron, PVC and copper.  Note: Years Remaining extended due to ongoing upgrades and fair condition.
D2020 - Domestic Water Distribution- Water Heater - Steam Instantaneous	The domestic hot water is provided by a steam heated, instantaneous commercial water heater, with a recirculation pump, and no storage.



System Name	Description
D2030 - Sanitary Waste-Sanitary Waste - Gravity Disch	The building includes an average sanitary waste system, of cast iron piping, with gravity discharge to the municipal system.
D2040 - Rain Water Drainage-Roof Drainage - Gravity	Rain water drainage includes interior piping, roof drains and 4-inch discharge piping by gravity flow to a municipal main. Note: Years Remaining extended due to fair condition of system.
D2090 - Other Plumbing Systems-Lab Acid Waste System - Glass Pipe	The building includes a glass piped acid water waste piping system for the laboratories.
D2090 - Other Plumbing Systems-Natural Gas Distribution for Lab	The building includes a natural gas distribution system for the laboratories.
D3030 - Cooling Generating Systems-DX Condensing Unit - 1983	Cooling medium for the dog kennel is provided by one dedicated DX cooling condenser, with capacity less than 25 tons.
D3030 - Cooling Generating Systems-DX Condensing Unit - 2009	Cooling medium for the south barn area is provided by one dedicated Carrier DX cooling condenser, with capacity less than 25 tons.
D3030 - Cooling Generating Systems-DX Condensing Units - 2000	Cooling medium for the barn area is provided by three dedicated Carrier DX cooling condenser, with capacity less than 25 tons.
D3032 - Direct Expansion Systems- Refrigeration Unit - Animal Anatomy Storage	The ground floor has one large walk-in refrigeration unit for animal bodies used in dissection. Compressors are located on the same level. The system also includes evaporators and condensers.
D3040 - Distribution Systems-AHU-1 - Const Volume w/Distribution	The HVAC system serving the central/west portion of the building includes one 3,500 CFM (approx.) constant volume air handling unit (supply and return fans combined), located in the R2 Penthouse.
D3040 - Distribution Systems-AHU-1N - Const Volume w/Distribution	The HVAC system serving the central/south portion of the building includes one 100,000 CFM constant volume air handling unit (supply and return fans combined), located in the north roof.
D3040 - Distribution Systems-AHU-2 - Const Volume w/Distribution	The HVAC system serving the west portion of the building includes one 3,500 CFM constant volume air handling unit (supply and return fans combined), located in the Lower Roof Penthouse. Note: This unit is also referred to as ERU-2.
D3040 - Distribution Systems-AHU-2N - Const Volume w/Distribution	The HVAC system serving the central/south portion of the building includes one 50,000 CFM (approx.) constant volume air handling unit (supply and return fans combined), located in the north roof.
D3040 - Distribution Systems-AHU-3 - Const Volume w/Distribution	The HVAC system serving the central/south portion of the building includes one 5,000 CFM constant volume air handling unit (supply and return fans combined), located in the Lower Roof Penthouse.
D3040 - Distribution Systems-AHU-4 - Const Volume w/Distribution	The HVAC system serving the central/south portion of the building includes one 3,500 CFM constant volume air handling unit (supply and return fans combined), located in the Lower Roof Penthouse.
D3040 - Distribution Systems-AHU-5 - Const Volume w/Distribution	The HVAC system serving the west portion of the building includes one 2,000 CFM constant volume air handling unit (supply and return fans combined), located in the R3 Penthouse.



System Name	Description
D3040 - Distribution Systems-Exhaust System - Fume Hoods	The laboratory includes fume hoods feeding into individual headers and exhausted via shared exhaust fans.
D3040 - Distribution Systems-Exhaust System - General Building	The HVAC ventilation system includes exhaust fans with ducting, located in the mechanical penthouse.
D3040 - Distribution Systems-Four Pipe Distribution System w/Pump	HVAC distribution is provided by a four-pipe distribution system. Note: Years Remaining are extended due to fair condition of system.
D3040 - Distribution Systems-HVAC Distribution System - Ductwork	The HVAC system includes constant volume distribution with ductwork and diffusers.
D3040 - Distribution Systems-Perimeter Heat System - Steam Radiators	The HVAC system includes steam heat distribution piping, including radiators. This piping system includes condensate return.
D3040 - Distribution Systems-Steam Piping and Condensate Return	The HVAC system includes steam heat distribution piping. This piping system includes simplex condensate return and steam condensate meter. Note: Years Remaining extended due to fair condition.
D3040 - Distribution Systems-Volume Heaters VH1-VH4, VH7, VH8, VH11, VH14, VH15 - Barns	Heating within the barn area includes approximately 15 ceiling-hung Volume Heaters (VH).
D3040 - Distribution Systems-Volume Heaters VH10, VH12, Vh13 - Barns	Heating within the barn area includes approximately 15 ceiling-hung Volume Heaters (VH).
D3050 - Terminal and Package Units- Cabinet AC Units - Chilled Water Unit	The HVAC system for some of the newly refinished areas and classrooms includes chilled water AC units.
D3050 - Terminal and Package Units-Unit Heaters - Steam/Hot Water	Heating within mechanical rooms and portions of the barns is provided by suspended, steam/hot water unit heaters.
D3050 - Terminal and Package Units- Window AC Units	Cooling in the main offices is provided by four thru wall or window air conditioning units.
D3060 - Controls and Instrumentation- DDC/Pneumatic System - Hybrid	HVAC controls include average DDC system for system optimization, basic pc control, moderate sensor types and quantities. System includes pneumatic activation of control valves and dampers.
D40 - Fire Protection-Fire Extinguishers - Dry Chem w/Cabinet	Handheld type dry chemical fire extinguishers are located throughout the building. Includes cabinets.
D40 - Fire Protection-Wet Sprinkler System - Light Hazard wo/Pump	The fire protection systems for the "McCoy South" wing include a light hazard, wet fire sprinkler system. This system includes backflow protection and standpipes but does not include a fire pump.
D40 - Fire Protection-Wet Standpipe System	The fire protection systems include a ordinary hazard wet fire standpipe system with hoses in cabinets.



System Name	Description
D5010 - Electrical Service and Distribution -Feeder 7-0S-B 200-amp 4160VAC	The normal three-phase electrical service from campus substation Feeder 7 directly enters Room 3 on the Basement Floor.
D5010 - Electrical Service and Distribution -Feeder 7-0S-C 200-amp 4160VAC	The normal three-phase electrical service from campus substation Feeder 7 directly enters Room 3 on the Basement Floor.
D5010 - Electrical Service and Distribution -Feeder 7-0S-D 200-amp 4160VAC	The normal three-phase electrical service from campus substation Feeder 7 directly enters Room 3 on the Basement Floor.
D5012 - Low Tension Service and Dist Distribution Equipment - 1000A 208Y/120V	The 208/120VAC Section C main feeds branch panels throughout the building.
D5012 - Low Tension Service and Dist Distribution Equipment - 800A 480Y/277V	The 480/277VAC Section B main feeds branch panels throughout the building.
D5012 - Low Tension Service and Dist Main Emergency Electrical Service - 208Y/120V	Main emergency electrical power for the building comes from three-phase, 4,160VAC Feeder 20 from a remote campus substation. A 208/120VAC service enters the Section A main in Room 3. Distribution then goes throughout the building to branch loads that include receptacles for medical equipment, emergency building lighting, and lighting directly over operating tables.
D5012 - Low Tension Service and Dist Main Normal Electrical Service - 1000A 208Y/120V	A service of 480/277VAC, 800 amps enters the Section B main in Room 3. That main feeds a 50kVA transformer that sends 208/120VAC, 1,000-amp service into the nearby Section C main.
D5012 - Low Tension Service and Dist Main Normal Electrical Service - 800A 480Y/277V	Main normal electrical power for McCoy Hall comes from three-phase, 4,160VAC Feeder 7 from a remote campus substation. A service of 480/277VAC, 800 amps enters the Section B main in Room 3.
D5020 - Lighting and Branch Wiring- Lighting - Exterior	Exterior lighting at the building perimeter consists primarily of wall-mounted HID floodlights and of surface-mounted 1' X 4' fluorescent fixtures on the underside of canopies.
D5021 - Branch Wiring Devices-Branch Wiring	Branch loads include HVAC equipment as well as non-critical lighting and receptacles.
D5022 - Lighting Equipment-Lighting - Interior	Interior lighting consists of a mixture of both acrylic and parabolic fluorescent ceiling fixtures. Fluorescent lighting at scattered locations includes recessed downlights and surface-mounted fixtures with cube-shaped lenses. Two-tube, 4' industrial fluorescent pendant fixtures are installed in rooftop penthouses.
D5033 - Telephone Systems-Telephone System	The building land-line telephone system originates in Room 4T. Cabling is routed from terminal boards in Room 4T up through First and Second Floor locations to end users.
D5037 - Fire Alarm Systems-Fire Alarm System	Fire alarm monitoring and detection for the building is controlled from a non-addressable multi-zone Simplex panel in Custodial Closet 100J on the First Floor. Remote field devices include manual pull stations, heat detectors with their separate annunciating speakers, and annunciating horns. A small number of combination audio-visual strobehorns were installed.



System Name	Description
D5038 - Security and Detection Systems- Security System	Electronic security field devices in the building include motion sensors at doors as well as internal proximity badge readers and 360-degree dome CCTV cameras. A C-Cure apc/8x access control/alarm monitoring panel is installed in CIS Pharmacy Room 239 on the Second Floor.
D5039 - Local Area Networks-LAN System	The building LAN system originates at a data rack in Room 4T on the Basement Floor. Category 3 copper twisted-pair cabling is routed to ceiling-mounted wifi routers at various locations. The routers then serve the individual work stations by wireless transmission.
D5092 - Emergency Light and Power Systems-Emergency Battery Pack Lights	Emergency battery pack lights are installed at appropriate egress locations.
D5092 - Emergency Light and Power Systems-Exit Signs	Exit signs with green lenses are installed at appropriate egress locations.
E - Equipment and Furnishings-Animal Pen Guards	The building includes large, medium and small animal pen metal fencing and guards.
E - Equipment and Furnishings-Fixed Casework - Average	Building includes average plastic laminate casework including wall and undercounter cabinets and countertops, without appliances.
E - Equipment and Furnishings-Laboratory Equipment - College	The building includes laboratory equipment and casework for an average college.

#### **Replacement Value Based on System Costs with Overheads**

Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
A - Substructure	Concrete Footings - 1950	75	6	1950	2035	3,696	61,597
A - Substructure	Foundation Wall and Footings - No Basement - 1950	75	6	1950	2035	5,989	99,817
A - Substructure	Concrete Footings - 1942	75	6	1942	2035	5,172	86,198
A - Substructure	Foundation Wall and Footings - No Basement - 1942	75	6	1942	2035	4,997	83,289
A - Substructure	Foundation Wall and Footings 12-Ft - Full Basement - 1942	75	6	1942	2035	6,659	110,981



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
A - Substructure	Structural Slab on Grade - Non-Industrial - 1950	75	6	1950	2035	11,083	184,713
A - Substructure	Structural Slab on Grade - Non-Industrial - 1942	75	6	1942	2035	17,478	291,299
A - Substructure	Structural Slab on Grade - Non-Industrial - 1960	75	6	1960	2036	1,680	28,008
A - Substructure	Foundation Wall and Footings - No Basement - 1960	75	6	1960	2036	2,333	38,890
A - Substructure	Concrete Footings - 1960	75	6	1960	2036	560	9,340
A - Substructure	Grade Beams - 1942	75	6	1942	2035	4,226	70,428
B10 - Superstructure	Multi-Story - Concrete - 1942	75	6	1942	2035	140,622	2,343,699
B10 - Superstructure	Multi-Story - Concrete - 1950	75	6	1950	2035	83,831	1,397,178
B10 - Superstructure	Multi-Story - Concrete - 1960	75	6	1960	2036	16,763	279,378
B1014 - Ramps	Accessible Ramp - Exterior Concrete	50	12	1990	2041	2,815	23,455
B1015 - Exterior Stairs and Fire Escapes	Exterior Stairs - Concrete	50	125	1990	2041	23,827	19,062
B2010 - Exterior Walls	Brick Cavity Walls - CMU Backup - 1950	75	12	1950	2035	27,473	228,938
B2010 - Exterior Walls	Stucco On CMU Walls	60	12	1960	2035	15,543	129,524
B2010 - Exterior Walls	Precast Concrete Panels	75	12	1950	2035	45,029	375,244
B2010 - Exterior Walls	Brick Cavity Walls - CMU Backup - 1942	75	12	1942	2035	43,937	366,139
B2020 - Exterior Windows	Aluminum Windows - 1960	30	125	1960	2045	593,161	474,529
B2030 - Exterior Doors	Door Assembly - Sliding Wood Barn Door	30	125	1990	2023	11,394	9,116
B2030 - Exterior Doors	Overhead Rolling Doors - Electric Operation	30	125	1990	2023	33,196	26,557
B2030 - Exterior Doors	Door Assembly - 6 x 7 Storefront	30	125	1990	2023	11,432	9,145



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
B2030 - Exterior Doors	Door Assembly - 6 x 7 HM - Full Glass	30	125	1990	2023	21,333	17,067
B2030 - Exterior Doors	Door Assembly - 6 x 7 HM	30	125	1990	2023	69,813	55,851
B2030 - Exterior Doors	Door Assembly - 3 x 7 HM	30	125	1990	2023	50,839	40,672
B2030 - Exterior Doors	Door Assembly - 3 x 7 Storefront	30	125	1990	2023	7,051	5,641
B3010 - Roof Coverings	Two-Ply Membrane - Fully Adhered	25	125	1990	2035	1,029,978	823,983
C1010 - Partitions	GWB 2HR Rated Walls	50	62	1990	2041	125,441	202,324
C1010 - Partitions	Concrete Walls - Plain, Cast in Place	50	62	1990	2041	359,570	575,312
C1010 - Partitions	CMU Block Walls - Plain	50	62	1990	2041	45,374	73,184
C1020 - Interior Doors	Swinging Doors - Pair - 6 x 7 HM - NR	50	125	1990	2041	28,097	22,477
C1020 - Interior Doors	Swinging Doors - Pair - 6 x 7 Wd - NR	50	125	1990	2041	51,824	41,459
C1020 - Interior Doors	Swinging Doors - 3 x 7 Wd - Rated	50	125	1990	2041	9,996	7,997
C1020 - Interior Doors	Swinging Doors - 3 x 7 Wd - NR	50	125	1990	2041	553,570	442,856
C1020 - Interior Doors	Overhead/Rolling Fire Door - Mid-Size (Electric Operation)	50	125	1990	2041	4,826	3,861
C1020 - Interior Doors	Swinging Doors - 3 x 7 HM - NR	50	125	1990	2041	181,852	145,481
C1020 - Interior Doors	Swinging Doors - 3 x 7 HM - Rated	50	125	1990	2041	151,881	121,505
C1020 - Interior Doors	Door Assembly - 6 x 10 Sliding Wood	30	125	1990	2023	2,967	2,373
C1020 - Interior Doors	Overhead/Rolling Door - Large (Electric Operation)	50	125	1990	2041	16,793	13,434
C1021 - Interior Doors	Swinging Doors - 3 x 7 Storefront	30	125	1990	2023	7,051	5,641
C1021 - Interior Doors	Door Assembly - 8 x 10 HM	30	125	1990	2023	101,496	81,197
C1024 - Interior Door Wall Opening Elements	Interior Doors - Sliding Security Grille	35	125	1990	2026	22,313	17,850



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
C1030 - Fittings	Restroom Accessories - Average	25	125	1990	2018	24,411	19,529
C1030 - Fittings	Toilet Partitions - Average	40	125	1990	2031	26,494	21,195
C1035 - Identifying Devices	Fittings - Signage (Room Numbering and Identification)	10	80	1990	2025	12,227	15,283
C20 - Stairs	Stairs - Average	75	37	1960	2036	136,249	368,240
C3010 - Wall Finishes	Clean Wall System - Porcelain Coated	30	125	2009	2040	64,794	51,836
C3010 - Wall Finishes	Ceramic Wall Tile	25	125	1990	2018	2,509	2,007
C3010 - Wall Finishes	Epoxy Finish - Maximum	40	125	1990	2031	374,315	299,452
C3010 - Wall Finishes	Wall System - Vinyl Mat	30	125	1994	2025	15,749	12,599
C3010 - Wall Finishes	Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	10	39	1990	2018	17,234	49,100
C3010 - Wall Finishes	Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	10	39	2015	2018	1,895	5,400
C3020 - Floor Finishes	VAT	15	125	1960	2018	64,659	51,727
C3020 - Floor Finishes	Concrete - Applied Rubber Epoxy	15	125	1994	2015	32,320	25,856
C3020 - Floor Finishes	Carpeting - Tile	10	125	2014	2025	10,692	8,553
C3020 - Floor Finishes	Ceramic Floor Tile	25	125	1990	2018	28,466	22,773
C3020 - Floor Finishes	Concrete - Applied Rubber Epoxy	15	125	2014	2015	120,802	96,642
C3020 - Floor Finishes	Epoxy Flooring - 2014	50	125	2014	2065	6,323	5,059
C3020 - Floor Finishes	Glazed Brick	40	125	1990	2031	51,747	41,397
C3020 - Floor Finishes	Rubber Floor Tile	15	125	2009	2025	14,192	11,353
C3020 - Floor Finishes	Terrazzo - Cast-in-Place	50	125	1990	2041	417,378	333,902
C3020 - Floor Finishes	VCT	15	125	2009	2025	22,759	18,207



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
C3020 - Floor Finishes	Vinyl Sheet Goods - 2009	15	125	2009	2025	36,126	28,901
C3020 - Floor Finishes	Epoxy Flooring - 1987	50	125	1987	2038	85,236	68,189
C3020 - Floor Finishes	Vinyl Sheet Goods - 2014	15	125	2014	2030	32,659	26,127
C3030 - Ceiling Finishes	GWB Taped and Finished	30	125	1990	2025	417,627	334,101
C3030 - Ceiling Finishes	TBar System - 1990	20	125	1990	2018	288,302	230,641
C3030 - Ceiling Finishes	TBar System - 2014	20	125	2014	2035	20,384	16,308
C3030 - Ceiling Finishes	Clean TBar System	20	125	2009	2030	23,719	18,975
C3030 - Ceiling Finishes	ACT System - Concealed Spline	20	125	1960	2018	37,720	30,176
D1010 - Elevators and Lifts	Hydraulic Passenger Elevator	35	125	1965	2018	141,554	113,243
D2010 - Plumbing Fixtures	OR/Surgery Scrub Sinks	30	125	1990	2021	204,600	163,680
D2010 - Plumbing Fixtures	Drinking Fountains - Vitreous China	20	125	1942	2016	10,093	8,074
D2010 - Plumbing Fixtures	Custodial/Utility Sinks	30	125	1942	2018	37,063	29,650
D2010 - Plumbing Fixtures	<b>Emergency Eyewash and Shower Units</b>	30	125	1990	2021	20,047	16,038
D2010 - Plumbing Fixtures	Laboratory Sinks	30	125	1961	2018	743,142	594,514
D2010 - Plumbing Fixtures	Restroom Fixtures	30	125	1965	2018	463,943	371,155
D2010 - Plumbing Fixtures	Water Coolers - Wall-Mount	20	125	1975	2018	25,232	20,186
D2020 - Domestic Water Distribution	Water Heater - Steam Instantaneous	35	112	1965	2018	69,904	62,414
D2020 - Domestic Water Distribution	Water Dist Complete	30	112	1970	2018	504,440	450,393
D2030 - Sanitary Waste	Sanitary Waste - Gravity Disch	50	125	1961	2018	358,289	286,631
D2040 - Rain Water Drainage	Roof Drainage - Gravity	50	125	1965	2021	268,993	215,194
D2090 - Other Plumbing Systems	Natural Gas Distribution for Lab	40	125	1975	2019	827,727	662,181
D2090 - Other Plumbing Systems	Lab Acid Waste System - Glass Pipe	40	125	1942	2018	855,011	684,009



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3030 - Cooling Generating Systems	DX Condensing Units - 2000	15	125	2000	2019	57,986	46,389
D3030 - Cooling Generating Systems	DX Condensing Unit - 2009	15	125	2009	2025	19,329	15,463
D3030 - Cooling Generating Systems	DX Condensing Unit - 1983	15	125	1983	2018	19,329	15,463
D3032 - Direct Expansion Systems	Refrigeration Unit - Animal Anatomy Storage	10	100	1990	2018	45,096	45,096
D3040 - Distribution Systems	AHU-3 - Const Volume w/Distribution	25	125	1965	2017	34,609	27,687
D3040 - Distribution Systems	AHU-5 - Const Volume w/Distribution	25	125	1965	2017	17,305	13,844
D3040 - Distribution Systems	AHU-4 - Const Volume w/Distribution	25	125	1965	2017	24,226	19,381
D3040 - Distribution Systems	AHU-1 - Const Volume w/Distribution	25	125	1965	2017	24,226	19,381
D3040 - Distribution Systems	AHU-2 - Const Volume w/Distribution	25	125	1965	2017	24,226	19,381
D3040 - Distribution Systems	Exhaust System - General Building	25	125	1965	2018	151,220	120,976
D3040 - Distribution Systems	Exhaust System - Fume Hoods	25	125	1961	2018	1,825,941	1,460,753
D3040 - Distribution Systems	HVAC Distribution System - Ductwork	40	125	2014	2025	599,296	479,437
D3040 - Distribution Systems	Steam Piping and Condensate Return	30	125	1961	2018	253,070	202,456
D3040 - Distribution Systems	AHU-1N - Const Volume w/Distribution	25	125	1965	2017	692,184	553,747
D3040 - Distribution Systems	AHU-2N - Const Volume w/Distribution	25	125	1965	2017	346,092	276,874
D3040 - Distribution Systems	Volume Heaters VH10, VH12, Vh13 - Barns	30	125	2015	2045	30,696	24,557
D3040 - Distribution Systems	Four Pipe Distribution System w/Pump	30	125	1980	2021	2,852,840	2,282,272
D3040 - Distribution Systems	Volume Heaters VH1-VH4, VH7, VH8, VH11, VH14, VH15 - Barns	30	125	1990	2021	567,108	81,856
D3040 - Distribution Systems	Perimeter Heat System - Steam Radiators	30	125	1965	2018	977,178	781,743
D3050 - Terminal and Package Units	Unit Heaters - Steam/Hot Water	25	112	1965	2018	8,984	8,021
D3050 - Terminal and Package Units	Cabinet AC Units - Chilled Water Unit	20	125	1990	2018	115,527	92,422



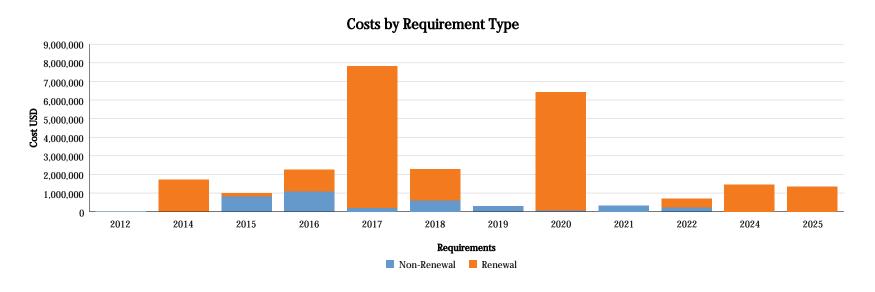
Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3050 - Terminal and Package Units	Window AC Units	10	105	1985	2018	42,310	40,296
D3060 - Controls and Instrumentation	DDC/Pneumatic System - Hybrid	25	125	1990	2019	798,984	639,187
D40 - Fire Protection	Wet Standpipe System	35	125	1961	2018	375,276	300,221
D40 - Fire Protection	Wet Sprinkler System - Light Hazard wo/Pump	35	125	1975	2018	114,206	91,365
D40 - Fire Protection	Fire Extinguishers - Dry Chem w/Cabinet	30	105	1995	2026	3,685	3,509
D5010 - Electrical Service and Distribution	Feeder 7-0S-B 200-amp 4160VAC	30	125	1971	2015	11,751	9,401
D5010 - Electrical Service and Distribution	Feeder 7-0S-C 200-amp 4160VAC	30	125	1971	2015	11,751	9,401
D5010 - Electrical Service and Distribution	Feeder 7-0S-D 200-amp 4160VAC	30	125	1971	2015	11,751	9,401
D5012 - Low Tension Service and Dist.	Main Normal Electrical Service - 800A 480Y/277V	30	125	1990	2021	61,222	48,978
D5012 - Low Tension Service and Dist.	Distribution Equipment - 1000A 208Y/120V	30	125	1990	2021	517,646	414,117
D5012 - Low Tension Service and Dist.	Main Emergency Electrical Service - 208Y/120V	30	125	1990	2021	428,601	342,881
D5012 - Low Tension Service and Dist.	Main Normal Electrical Service - 1000A 208Y/120V	30	125	1990	2021	119,413	95,530
D5012 - Low Tension Service and Dist.	Distribution Equipment - 800A 480Y/277V	30	125	1990	2021	713,996	571,197
D5020 - Lighting and Branch Wiring	Lighting - Exterior	20	125	2005	2026	16,068	12,854
D5021 - Branch Wiring Devices	Branch Wiring	30	125	1990	2021	603,621	482,897
D5022 - Lighting Equipment	Lighting - Interior	20	125	2005	2026	827,245	661,796
D5033 - Telephone Systems	Telephone System	10	106	2005	2025	491,336	463,525
D5037 - Fire Alarm Systems	Fire Alarm System	10	125	1972	2015	827,186	661,749
D5038 - Security and Detection Systems	Security System	10	125	2003	2015	137,107	109,686



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D5039 - Local Area Networks	LAN System	15	106	1995	2015	560,436	528,714
D5092 - Emergency Light and Power Systems	Emergency Battery Pack Lights	10	125	2005	2016	35,249	28,199
D5092 - Emergency Light and Power Systems	Exit Signs	10	125	2005	2016	130,355	104,284
E - Equipment and Furnishings	Fixed Casework - Average	25	125	1990	2018	17,643	14,114
E - Equipment and Furnishings	Animal Pen Guards	30	125	1994	2025	303,367	242,694
E - Equipment and Furnishings	Laboratory Equipment - College	30	125	1990	2023	159,924	127,940
					Subtotal		27,938,708
					Overhead:		0
		Subtotal					0
		Total Replacement Value Based on System Costs with Overheads					27,938,708



#### **Requirements including Renewals**



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
ACT System - Concealed Spline Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	37,720
AHU-1 - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	24,226
AHU-1N - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	692,184
AHU-2 - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	24,226



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
AHU-2N - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	346,092
AHU-3 - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	34,609
AHU-4 - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	24,226
AHU-5 - Const Volume w/Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Sep 2, 2016	17,305
Animal Pen Guards Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	303,367
Branch Wiring - Non-GFCI Receptacles - Restrooms	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	5,691
Branch Wiring - Non-GFCI Receptacles - Room 191A	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	580
Branch Wiring - Non-GFCI Receptacles - Room 202	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	741
Branch Wiring - Non-GFCI Receptacles - Rooms 219-224	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	4,772
Branch Wiring - Power Receptacles Lacking - Rooftop	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	18,554
Branch Wiring Renewal	Yes	D5021 - Branch Wiring Devices	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	603,621
Building Wireless Upgrade	No	D5039 - Local Area Networks	Technological Improvements	2- Due within 2 Years of Inspection	Sep 2, 2016	437,484
Cabinet AC Units - Chilled Water Unit Renewal	Yes	D3050 - Terminal and Package Units	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	115,527
Carpeting - Tile Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	10,692



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Ceramic Floor Tile Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 2, 2017	28,466
Ceramic Wall Tile Renewal	Yes	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	2,509
Concrete - Applied Rubber Epoxy Renewal	Yes	C3020 - Floor Finishes	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	32,320
Concrete - Applied Rubber Epoxy Renewal	Yes	C3020 - Floor Finishes	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	120,802
Custodial/Utility Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	37,063
DDC/Pneumatic System - Hybrid Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2018	798,984
DX Condensing Unit - 1983 Renewal	Yes	D3030 - Cooling Generating Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	19,329
DX Condensing Unit - 2009 Renewal	Yes	D3030 - Cooling Generating Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	19,329
DX Condensing Units - 2000 Renewal	Yes	D3030 - Cooling Generating Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2018	57,986
Distribution Equipment - 1000A 208Y/120V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	517,646
Distribution Equipment - 800A 480Y/277V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	713,996
Door Assembly - 3 x 7 HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	50,839
Door Assembly - 3 x 7 Storefront Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	7,051
Door Assembly - 6 x 10 Sliding Wood Renewal	Yes	C1020 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	2,967



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Door Assembly - 6 x 7 HM - Full Glass Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	21,333
Door Assembly - 6 x 7 HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	69,813
Door Assembly - 6 x 7 Storefront Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	11,432
Door Assembly - 8 x 10 HM Renewal	Yes	C1021 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	101,496
Door Assembly - Sliding Wood Barn Door Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	11,394
Drinking Fountains - Vitreous China Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2015	10,093
Ductwork: Insufficient Air Changes	No	D3040 - Distribution Systems	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	17,961
Emergency Battery Pack Lights Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2015	35,249
Emergency Eyewash and Shower Units Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	20,047
Exhaust System - Fume Hoods Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	1,825,941
Exhaust System - General Building Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	151,220
Exit Signs Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2015	130,355
Exterior Wall - Mortar Joints Deteriorated	No	B2010 - Exterior Walls	Reliability	2- Due within 2 Years of Inspection	Sep 2, 2016	61,777
Feeder 7-0S-B 200-amp 4160VAC Renewal	Yes	D5010 - Electrical Service and Distribution	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	11,751



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Feeder 7-0S-C 200-amp 4160VAC Renewal	Yes	D5010 - Electrical Service and Distribution	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	11,751
Feeder 7-0S-D 200-amp 4160VAC Renewal	Yes	D5010 - Electrical Service and Distribution	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	11,751
Fire Alarm System - Coverage Upgrade Needed	No	D5037 - Fire Alarm Systems	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	603,531
Fire Alarm System Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	827,186
Fire Extinguishers - Dry Chem w/Cabinet Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2025	3,685
Fittings - Signage (Room Numbering and Identification) Renewal	Yes	C1035 - Identifying Devices	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	12,227
Fittings - Signage - Non-Compliant	No	C1035 - Identifying Devices	<b>Building Code</b>	3- Due within 5 Years of Inspection	Sep 2, 2019	18,871
Fixed Casework - Average Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	17,643
Four Pipe Distribution System w/Pump Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	2,852,840
GWB Taped and Finished Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	417,627
HVAC Distribution System - Ductwork Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Nov 21, 2024	599,296
Hydraulic Passenger Elevator Renewal	Yes	D1010 - Elevators and Lifts	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	141,554
INSTALL RUN AROUND COILS	No	D3041 - Air Distribution Systems	Reliability	1- Due within 1 Year of Inspection	Sep 8, 2016	504,096
Install New Blinds & Drapes 203	No	E2013 - Blinds and Other Window Treatment	Interior Finishes	3- Due within 5 Years of Inspection	Sep 1, 2012	7,561



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Interior Doors - Sliding Security Grille Renewal	Yes	C1024 - Interior Door Wall Opening Elements	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2025	22,313
LAN System Renewal	Yes	D5039 - Local Area Networks	Lifecycle	1- Due within 1 Year of Inspection	Sep 2, 2014	560,436
Lab Acid Waste System - Glass Pipe Renewal	Yes	D2090 - Other Plumbing Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	855,011
Laboratory Equipment - College Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	159,924
Laboratory Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	743,143
Lighting - Exterior Renewal	Yes	D5020 - Lighting and Branch Wiring	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2025	16,068
Lighting - Interior Renewal	Yes	D5022 - Lighting Equipment	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2025	827,245
MITIGATE STORMWATER CONTAMINATION	No	G3030 - Storm Sewer	Building Code	1- Due within 1 Year of Inspection	Jun 30, 2017	219,616
Main Emergency Electrical Service - 208Y/120V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	428,601
Main Normal Electrical Service - 1000A 208Y/120V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	119,413
Main Normal Electrical Service - 800A 480Y/277V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	61,222
Natural Gas Distribution for Lab Renewal	Yes	D2090 - Other Plumbing Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2018	827,727
OR/Surgery Scrub Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	204,600
Overhead Rolling Doors - Electric Operation Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	33,196



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
PATCH/PAINT COMMON AREAS	No	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	May 30, 2022	207,223
Painted Finish - Average (1 Coat Prime - 2 Coats Finish) Renewal	Yes	C3010 - Wall Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	1,895
Painted Finish - Average (1 Coat Prime - 2 Coats Finish) Renewal	Yes	C3010 - Wall Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 8, 2017	17,234
Perimeter Heat System - Steam Radiators Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	977,178
Plumbing Fixttures - Acid Neutralization Basin Lacking	No	D2090 - Other Plumbing Systems	Building Code	2- Due within 2 Years of Inspection	Sep 2, 2016	22,949
REDO FLR IN LOADING DOCK STALLS	No	C3020 - Floor Finishes	Reliability	3- Due within 5 Years of Inspection	Jun 15, 2021	117,375
RELOCATE DOMESTIC HW CIRCULATION PUMP AND RETURN VALVE	No	D2022 - Hot Water Service	Maintenance	2- Due within 2 Years of Inspection	Jul 5, 2018	43,244
REPAIR FINISHES (PAINT, FLOOR) MULTIPLE ROOMS	No	C3020 - Floor Finishes	Reliability	2- Due within 2 Years of Inspection	Jun 15, 2018	18,533
REPLACE 8 SURGERY SINKS	No	E - Equipment and Furnishings	Lifecycle	2- Due within 2 Years of Inspection	Jun 16, 2018	67,954
REPLACE FLOORING 178/178A/176A	No	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 15, 2021	216,218
REPLACE LIGHTS IN CADAVER COOLER	No	D5022 - Lighting Equipment	Lifecycle	1- Due within 1 Year of Inspection	Feb 28, 2018	4,924
Refrigeration Unit - Animal Anatomy Storage Renewal	Yes	D3032 - Direct Expansion Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	45,096
Remove Padded Rubber Mat; Apply Epoxy Floor Coating (Rm 172)	No	C3020 - Floor Finishes	Reliability	2- Due within 2 Years of Inspection	Mar 3, 2019	26,763
Renew HVAC in Small animal Teaching Holding Areas	No	D3040 - Distribution Systems	Lifecycle	2- Due within 2 Years of Inspection	Jun 28, 2018	308,883



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Renew flooring in Large Animal BSL2 Isolation, Rm 158	No	C3020 - Floor Finishes	Reliability	2- Due within 2 Years of Inspection	Jun 15, 2018	12,355
Repair West Side Entry Stairs, by Dumpsters	No	B1015 - Exterior Stairs and Fire Escapes	Reliability	3- Due within 5 Years of Inspection	Mar 29, 2022	29,632
Replace Exterior Doors	No	B2030 - Exterior Doors	Reliability	3- Due within 5 Years of Inspection	Aug 27, 2020	75,614
Restroom Accessories - Average Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	24,411
Restroom Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	463,943
Restrooms - Aged and Not Accessible	No	C1030 - Fittings	Accessibility	3- Due within 5 Years of Inspection	Sep 2, 2019	249,864
Roof - Lifeline and Tie Off System Lacking	No	B3010 - Roof Coverings	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	63,294
Roof - Perimeter Safety Railings Lacking	No	B3010 - Roof Coverings	Life Safety	1- Due within 1 Year of Inspection	Sep 2, 2015	111,198
Roof Drainage - Gravity Renewal	Yes	D2040 - Rain Water Drainage	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	268,993
Rubber Floor Tile Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	14,192
Sanitary Waste - Gravity Disch Renewal	Yes	D2030 - Sanitary Waste	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	358,289
Security System Renewal	Yes	D5038 - Security and Detection Systems	Mission	1- Due within 1 Year of Inspection	Sep 2, 2014	137,107
Stair Handrails - Non-Compliant (Exit Enclosure)	No	C20 - Stairs	Building Code	2- Due within 2 Years of Inspection	Sep 2, 2016	67,820
Steam Piping and Condensate Return Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	253,070



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Swinging Doors - 3 x 7 Storefront Renewal	Yes	C1021 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2022	7,051
TBar System - 1990 Renewal	Yes	C3030 - Ceiling Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 2, 2017	288,302
Telephone System Renewal	Yes	D5033 - Telephone Systems	Lifecycle	3- Due within 5 Years of Inspection	Jun 22, 2025	491,336
Unit Heaters - Steam/Hot Water Renewal	Yes	D3050 - Terminal and Package Units	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	8,984
VAT Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Sep 2, 2017	64,659
VCT Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	22,759
VENTILATE ANIMAL SPECIMEN STORAGE ROOM FOR FORMALDEHYDE	No	D3040 - Distribution Systems	Reliability	2- Due within 2 Years of Inspection	Jun 28, 2018	146,410
Vinyl Sheet Goods - 2009 Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	36,126
Volume Heaters VH1-VH4, VH7, VH8, VH11, VH14, VH15 - Barns Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2020	567,108
Wall System - Vinyl Mat Renewal	Yes	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2024	15,749
Water Coolers - Wall-Mount Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	25,232
Water Dist Complete Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	504,440
Water Heater - Steam Instantaneous Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	69,904
Wet Sprinkler System - Light Hazard wo/Pump Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	114,206



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Wet Standpipe System Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Sep 2, 2017	375,276
Window AC Units Renewal	Yes	D3050 - Terminal and Package Units	Mission	3- Due within 5 Years of Inspection	Sep 2, 2017	42,310
Total						25,684,003

#### **Reasonableness of Cost Template**

Project name: Bustad Renovation (SIM for Vet Teach	ing Anatomy)	CBS/OFM Project #:	40000344
Institution: WA State University		Scoring category:	Renovation - Standalone
Campus/Location: Pullman, WA			

	Construction Begin	Construction End	Construction mid- point	Escalation Multiplier
Construction mid-point:	April-24	April-25	October-24	1.3535
MACC from C-100:	\$3,794,060			

	Expected MACC/GSF in 2019	Expected MACC/GSF	GSF by type	Expected MACC
Classrooms	\$405	\$548		\$0
Instructional labs	\$397	\$537	8,432	\$4,530,755
Research labs	\$545	\$738		\$0
Administration	\$406	\$550		\$0
Libraries	\$340	\$460		\$0
Athletic	\$385	\$521		\$0
Assembly, exhibit and meeting rooms	\$428	\$579		\$0
-			8,432	\$4,530,755

C-100 to expected MACC variance: 84%

Score: 10

#### **Availability of Space/Campus Utilization Template**

Project name: Bustad Renovation (SIM for Vet Teaching Anato	CBS/OFM Project #: 40000344
Institution: WA State University	Scoring category: Renovation - Standalone
Campus/Location: Pullman, WA	
Enrollment	
2021 fall on-campus student FTE: 19,114	Expected 2022 fall on-campus student FTE: 19,114
	% increase budgeted: 0.00%

Enter the average number of hours per week each for (a) classroom seat and (b) classroom lab is expected to be utilized in Fall 2022 for the campus where the project is located.

(a) General University Classroom Utilization		(b) General University Lab Utilization		
Fall 2021 Weekly Contact Hours	193,055	Fall 2021 Weekly Contact Hours	39,048	
Multiply by % FTE Increase Budgeted	0.00%	Multiply by % FTE Increase Budgeted	0.00%	
Expected Fall 2022 Contact Hours	193,055	Expected Fall 2022 Contact Hours	39,048	
Expected Fall 2022 Classroom Seats	10,527	Expected Fall 2022 Class Lab Seats	2,810	
Expected Hours per Week Utilization	18.3	Expected Hours per Week Utilization	13.9	
HECB utilization standard (hours/GUC seat)	22.0	HECB utilization standard (hour/GUL seat)	16.0	
Difference in utilization standard	-16.6%	Difference in utilization standard	-13.1%	

If the campus does not meet the 22 hours per classroom seat and/or the 16 hours per class lab HECB utilization standards, describe any institutional plans for achieving the utilization standard.

WSU's Facility Development plan is focused on identifying and prioritizing capital projects which balance continued stewardship and renewal of existing facilities and infrastructure within a framework for responsible growth. While recent completed projects have aided progress towards reaching state targets for classroom and laboratory utilization, additional improvements are still required. This proposed project plans to transform existing underutilized space into modern classrooms and laboratories that will exceed HECB utilization standards. This guiding principle for all WSU projects will contribute to achieving the state's target space utilization goals.

#### **Program Related Space Allocation Template**

Project name:	Bustad Renovation (SIM for Vet Teaching Anato	CBS/OFM Project #:	40000344
		•	

Institution: WA State University Scoring category: Renovation - Standalone

Campus/Location: Pullman, WA

Enter the assignable square feet for the proposed project for the applicable space types:

Type of Space	Points	Assignable	Percentage of	Score [Points x
Type of Space		Square Feet	total	Percentage]
Instructional space (classroom, laboratories)	10	5,961	75.06	7.51
Research space	2		0.00	0.00
Office space	4		0.00	0.00
Library and study collaborative space	10	662	8.34	0.83
Other non-residential space	8	1,319	16.61	1.33
Support and physical plant space	6		0.00	0.00
Total:		7,942	100.0	9.67