## 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 #
New Engineering Student Success Building	40000342
PROJECT CATEGORY	FPMT UNIQUE FACILITY ID # (OR NA)
Replacement - Major	NA
PROP	OSAL IS
Now or Updated Proposal (for scoring)	
	Resubmitted Proposal (retain prior score)
<ul> <li>New proposal</li> <li>Resubmittal to be scored (more than 2 biennia</li> </ul>	Resubmitted Proposal (retain prior score)     Resubmittal from 2018 (2019-21 biennium)     Resubmittal from 2020 (2021-23 biennium)
<ul> <li>New proposal</li> <li>Resubmittal to be scored (more than 2 biennia old or significantly changed)</li> </ul>	Resubmitted Proposal (retain prior score) Resubmittal from 2018 (2019-21 biennium) Resubmittal from 2020 (2021-23 biennium)
<ul> <li>New proposal</li> <li>Resubmittal to be scored (more than 2 biennia old or significantly changed)</li> <li>CONTACT</li> </ul>	Resubmitted Proposal (retain prior score) Resubmittal from 2018 (2019-21 biennium) Resubmittal from 2020 (2021-23 biennium) PHONE NUMBER

Proposal content

- Deroject 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

- Project is not an exclusive enterprise function such as a bookstore, dormitory, or contract food service.
- 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.
- $\Box$  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.
- □ Stand-alone, infrastructure and acquisition proposals is a single project requesting funds for one biennium.

Office of Financial Management June 2022

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Required appendices

- ☑ Project cost estimate: Excel C-100
- Degree Totals and Targets template to indicate the number of Bachelors, High Demand and Advanced degrees expected to be awarded in 2023. (Required for Overarching Criteria scoring criteria for Major Growth, Renovation, Replacement and Research proposals).
- Availability of Space/Campus Utilization template for the campus where the project is located. (Required for all categories/subcategories except Infrastructure and Acquisition proposals).
- Assignable Square Feet template to indicate program-related space allocation. (Required for Growth, Renovation and Replacement proposals, all categories/subcategories).

#### Optional appendices

Attach supplemental and supporting project documentation, *limit to materials directly related to and needed for the evaluation criteria*, such as:

- Degree and enrollment growth projections
- □ Selected excerpts from institutional plans
- □ Data on instructional and/or research space utilization
- □ Additional documentation for selected cost comparables (acquisition)
- $\boxtimes$  Selected materials on facility conditions
- $\Box$  Selected materials on code compliance
- □ Tables supporting calculation of program space allocations, weighted average facility age, etc.
- Evidence of consistency of proposed research projects with state, regional, or local economic development plans
- □ Evidence of availability of non-state matching funds
- □ Selected documentation of prior facility failures, high-cost maintenance, and/or system unreliability for infrastructure projects
- Documentation of professional assessment of costs for land acquisition, land cleanup, and infrastructure projects
- □ Selected documentation of engineering studies, site survey and recommendations, or opinion letters for infrastructure and land cleanup projects
- Other: <u>Reasonableness of Cost</u>

I certify that the above checked items indicate either that the proposed project meets the minimum thresholds, or the corresponding items have been included in this submittal.

Name:	Kathleen Kamerrer	Title:	AVP, Capital Budget & Facilities Business Administration
Signature:		Date:	8/11/22

INSTITUTION	CAMPUS
Washington State University	Pullman, WA
PROJECT TITLE	
New Engineering Student Success Building	

#### SUMMARY NARRATIVE

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

Washington State University requests \$40 million in the 2023-25 capital budget for the design and construction of a new Engineering Student Success Building and for the associated utility infrastructure required in this sector of campus. This funding request will be supplemented by donor funding to support design and construction necessary to consolidate student services within the college, a function currently dispersed across the Pullman campus. This new facility will enhance the college's ability to provide academic support, hone skills employees are seeking, and engage students in career placement. The facility also allows academic advisors to be co-located providing a more accessible and comprehensive advising experience for the students to promote academic success.

The college's engineering and computer science enrollment far exceeds the capacity of existing facilities. Total graduate and undergraduate degree production have doubled in the past decade, far exceeding targets established by the legislature. The availability of required coursework for engineering and computer science majors is frustrated by a lack of available and adequate classroom space. Moreover, student recruitment and retention efforts are heavily influenced by the availability and condition of facilities.

#### **§** History of the project or facility

Prior to the impact of COVID, the college experienced an increase in enrollment in response to industry demands. The college struggled to absorb those increases because of space adequacy and availability. The college's Engineering Advisory Board along with Facilities Services' deferred maintenance analysis have determined nearly every facility operated by the Voiland College of Engineering and Architecture is of poor quality and an ideal candidate for replacement.

With the momentum gained by the advisory board, the college initiated a \$40 million capital campaign to gather potential interest from industry leaders with connections to the university. The college's philanthropic outreach as of August 1, has secured \$31 million in pledges of the \$40 million goal to support this project. Those efforts enhance the purchasing power of state investments in this budget request.

The engineering precinct where this facility is to be located is served by utilities in College Avenue, which are among the oldest on campus, dating back nearly 100 years. Utilities within the roadway connect the campus domestic water system to two major wells, provide crucial connections to sanitary and storm sewer outflows, and contain chilled water connections between one of the campus's two primary chilled water plants. These lines are overdue for replacement and will need to be addressed to accommodate system growth and new facilities.

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

The support services listed below to be co-located in this facility are essential to the success of all 29 fields of study and 14 accredited programs within the college.

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- · Recruitment
- · Advising
- · Departmental classrooms
- · Student research
- Scholastic competitions
- · Extracurricular student clubs and associated support
- · Support programs for students from underrepresented populations
- Tutoring
- · Maker space
- Entrepreneurship program
- · Student capstone design studios
- · Collaboration space
- · Career preparedness and placement services.

## OVERARCHING SCORING CRITERIA

#### 1. Integral to achieving statewide policy goals

Provide degree targets, and describe how the project promotes improvement on 2020-21 degree production totals in the <u>OFM Statewide Public Four-Year Dashboard</u>. Include the degree totals and target template in an appendix.

A. Indicate the number of bachelor's degrees awarded at the close of the 2020-21 academic year, and the number targeted for 2023.

VCEA undergraduate degrees in 2020: 989

Expected increase of 3% a year = +**31 degrees** 

B. Indicate the number of bachelor's degrees awarded in high-demand fields at the close of the 2020-21 academic year, and the number targeted for 2023.

This facility is projected by internal analysis to improve retention of undergraduate students in high demand fields in engineering and computer science by 14% annually, which equates to approximately 132 additional bachelor's degrees per year.

C. Indicate the number of advanced degrees awarded at the close of the 2020-21 academic year, and the number targeted for 2023.

WSU graduate degrees in 2020: 659

Targeted graduate degrees in 2023: 547

See Appendix B for degree totals.

#### 2. Integral to campus/facilities master plan

# A. Describe the proposed project's relationship and relative importance to the institution's most recent campus/facilities master plan or another applicable strategic plan.

WSU's 10-year capital plan reflects the university's continued commitment to reinvestment in existing facilities and infrastructure while also advancing programmatic priorities. It is focused on identifying and prioritizing capital projects that balance stewardship and renewal within a

## **REPLACEMENT – MAJOR PROJECT**

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framework for responsible growth, as informed by WSU's Facility Development Plan, see link: <u>http://go.wsu.edu/WSUDevelopmentPlan2022</u>. This plan also begins the process of identifying important legacy facilities in the core of WSU's oldest campus, and prioritizing space optimization and renovation in that area.

WSU is finalizing a new strategic plan for the Pullman campus which will place an emphasis on student success programs, priorities around diversity, equity, and inclusion, and the arts. This facility will serve as a student success core for the college in keeping with the strategic plan's emphasis and will provide services to promote academic success.

# B. Does the project follow the sequencing laid out in the master plan (if applicable)? If not, explain why it is being requested now.

Yes. This project follows the Facility Development Plan.

This new facility is a necessary first step in the plan for the college to vacate and demolish older facilities such as Dana Hall, circa 1949, which has an \$18 million deferred maintenance backlog. This project also includes upgrades of existing utility services in this area of campus some of which are nearly 100 years old. These infrastructure improvements will help provide utility capacity for future improvements/replacements in the Engineering precinct and for the core of campus.

## 3. Integral to institution's academic programs plan

## Describe the proposed project's relationship and relative importance to the institution's most recent academic programs plan. Must the project be initiated soon in order to: A. Meet academic certification requirements?

Yes. This project will aid in future accreditation as it serves to promote student engagement and retention through the centralization of academic advisors within one building.

## B. Permit enrollment growth and/or specific quality improvements in current programs?

Yes. This project will permit the growth of programs in the high demand fields of engineering and computer science. The facility will improve access to classrooms on the Pullman campus and will support distance education offered to WSU students in Bremerton, Everett, Vancouver, and will serve students from underserved areas.

## C. Permit initiation of new programs?

Yes. The co-location of student support services will help promote existing programs and assist in the development of new programs geared for the future of engineering and computer science advancements such as the new cybersecurity degree program starting in Fall 2023.

## GENERAL CATEGORY 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.

Dana Hall, which will be vacated with and replaced by the construction of this new facility, was constructed in 1949 and has never received a major renovation. The 90,000 square foot, 73-year-old building is not a good candidate for renovation, with limited floor to floor heights, dense column spacing, asbestos containing materials and ADA/Life Safety code compliance issues. It has an \$18 million deferred maintenance backlog and is one of the highest energy consumers on the Pullman campus.

#### 2. Condition of building

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 replacement project will provide new space purposefully designed for the current and future generations of engineering and computer science students. This project will allow WSU to vacate and eventually demolish Dana Hall, which has a **Comparable Framework Study score of 5** (Needs Improvement – Marginal Functionality).

In 2014-2015, WSU conducted facility condition assessments of multiple buildings through VFA, a well-known consulting firm that provides facility assessment services. VFA determines overall building condition by Facility Condition Index (FCI), a ratio of facility requirements to the replacement value, and provides real time FCI updates based on lifecycle requirements associated with critical building systems (**Appendix E**). 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

Building	Gross Sq Ft	Year Constructed	Year Renovated	FCI Score	Comparable Framework Score	DM Backlog
Dana Hall	90,023	1949	n/a	0.56	5	\$18,655,748

#### 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.

#### REPLACEMENT – MAJOR PROJECT 2022 Higher Education Project Proposal Form

The proposed Student Success building will be designed and constructed to meet all applicable codes and requirements. The new building would replace Dana Hall whose deficiencies currently include, but are not limited to, the following code issues:

- Life Safety:
  - NFPA 72, Sections 18.4.1 and 18.4.3 visual and audible fire alarm notifications will be addressed with this project.
  - Access Card Swipe Door hardware will include card swipe access with electronic lock down capabilities necessary for an active shooter response.
  - IBC 2018 Chapter 10 Means of Egress Exit paths will be located and sized appropriately and continuous with no obstructions.
  - IBC 2018 Sec 1005.7.1 Doors when fully opened shall not reduce the required width more than 7 inches. See **Figure 1** below.



Figure 1 - Washington State University, Dana Hall- 1st Floor Hallway

- ADA 2010 Standards:
  - $\circ~$  Section 702 Fire alarm systems will include appropriate ADA audible and visible alarms.
  - Section 404 This project will include ADA-compliant doors and appropriate ADA hardware.
  - Section 308 Laboratory and classroom furniture/casework will comply with ADA forward and side reach requirements. This project will provide new modular furniture/casework satisfying ADA reach requirements.
  - Section 407 Elevators, the new building would provide a passenger elevator and a service elevator able to fit a gurney for emergency assistance.
  - Section 504+5 Stairwells and handrails, the new building would include compliant stair locations and layouts with appropriate handrails and guardrails.
  - Section 703 Signage, the new facility would include all ADA required signage.

## **REPLACEMENT – MAJOR PROJECT**

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- Section 601-609 Plumbing fixtures and grab bars will meet current code requirements.
- Washington Energy Code (WEC):
  - Section C403.4.9 WEC requires variable flow on heating and cooling water systems as well as air distribution.
  - Section C403.4.5.4 -Electronic controls for operation of room temperature and regulation of air flow will be required. WEC requires electronic controls that can vary with loading.
- Washington Clean Energy Performance Standard
  - WAC 194-50 Identify, implement, and verify energy efficient measures necessary to lower energy use intensity where possible. this project will include measures to address this new standard.

## 3. 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 <u>OFM C-100 form</u>. 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.

This project will be consistent with the OFM standards for reasonableness of cost. The estimated Maximum Allowable Construction Cost (MACC) for this proposed replacement project is approximately 101% of the expected MACC for a new higher education facility escalated to the midpoint of construction.

See Appendix C for reasonableness of costs.

The Maximum Allowable Construction Cost (MACC) for this replacement project was estimated using cost per square foot data from similar projects currently under construction (**Appendix A**).

This project will use the Progressive Design Build model for delivery of the project.

## 4. 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 provide new classroom space to replace inadequate space in Dana Hall which will result in improved utilization rates of both classrooms and teaching laboratory spaces within the college's program. Reference **Appendix F** for the Availability of Space/Campus Utilization summary for the Pullman campus.

## 5. 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 space standards noted in the FEPG Benchmark.

FEPG Room Classification Number	FEPG Room Classification Type	Project Description	Project ASF Per Station	FEPG Standard Range	Meets Standard (Y/N)
110	Classroom	Instructional space	20	16-26	Y
311	Faculty Office	Faculty Touchdown offices	120	140	Y
315	Office service	Student Support areas	100	100	Y
350	Conference Rooms	Student Meeting rooms	300	310	Y
610	Auditorium	Large lecture style classroom	20	15-16	N (ADA space)

- B. Identify the following on form CBS002:
  - 1. Usable square feet (USF) in the proposed facility 56,900 USF
  - 2. Gross square feet (GSF) 85,000GSF
  - 3. Building efficiency (USF divided GSF) **66.9**%

#### 6. 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.

Dana Hall is currently the primary student services area for the college. The building layout and poor lighting discourage students from using the facility out of confusion in wayfinding, inadequate collaboration and meeting space, and fear for personal safety related to lighting. The building also lacks appropriate restroom facilities and fundamental ADA access for entering the building or moving between floors. The college seeks a modern facility to provide students with functional meeting and collaboration space, advising and tutoring in a single location, and maker space that will engage students and excite them about their upcoming career opportunities while providing a sense of connection and belonging.

Reference **Appendix D** for the program-related space allocation summary.

#### REPLACEMENT – MAJOR PROJECT 2022 Higher Education Project Proposal Form



Dana Hall – Constructed in 1949

## **APPENDICES**

- S Appendix A C100
- S Appendix B Degree Totals and Targets
- S Appendix C Reasonableness of Cost
- **§** Appendix D Program Related Space Allocation
- **§** Appendix E FCI Analysis
- **§** Appendix F Availability of Space/Campus Utilization

State of Washington				
AGENCY / INSTITUTION PROJECT COST SUMMARY				
Updated June 2022				
Agency	Washington State University			
Project Name New Engineering Student Success Building				
OFM Project Number 40000342				

Contact Information			
Name	Louise Sweeney		
Phone Number	509-335-4437		
Email	lasweeney@wsu.edu		

Statistics						
Gross Square Feet	85,000	MACC per Gross Square Foot	\$509			
Usable Square Feet	56,900	56,900 Escalated MACC per Gross Square Foot				
Alt Gross Unit of Measure						
Space Efficiency	66.9%	A/E Fee Class	В			
Construction Type	College classroom faciliti	A/E Fee Percentage	6.30%			
Remodel	No	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	5%					
Base Month (Estimate Date)	July-22	OFM UFI# (from FPMT, if available)				
Project Administered By	Agency					

Schedule				
Predesign Start	July-22	Predesign End	October-22	
Design Start	January-23	Design End	July-23	
Construction Start	August-23	Construction End	June-25	
Construction Duration	22 Months			

Green cells must be filled in by user

Project Cost Estimate			
Total Project	\$73,399,837	Total Project Escalated	\$80,000,048
		Rounded Escalated Total	\$80,000,000

## **Cost Estimate Summary**

Acquisition

## Appendix A -C100 New Engineering Student Success Building

Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0
	Consult	ant Services	
Predesign Services	\$360,000		
Design Phase Services	\$1,975,222		
Extra Services	\$660,000		
Other Services	\$1,037,419		
Design Services Contingency	\$201,632		
Consultant Services Subtotal	\$4,234,273	Consultant Services Subtotal Escalated	\$4,464,033

Construction					
Maximum Allowable Construction Cost (MACC)	\$43,275,000	Maximum Allowable Construction Cost (MACC) Escalated	\$47,473,098		
DB-Progressive Risk Contingencies	\$1,750,000		\$1,925,875		
DB-Progressive Management	\$2,500,000		\$2,751,250		
Owner Construction Contingency	\$2,163,750		\$2,381,207		
Non-Taxable Items	\$0		\$0		
Sales Tax	\$3,925,411	Sales Tax Escalated	\$4,307,983		
Construction Subtotal	\$53,614,161	Construction Subtotal Escalated	\$58,839,413		

Equipment						
Equipment	\$4,400,000					
Sales Tax	\$347,600					
Non-Taxable Items	\$0		_			
Equipment Subtotal	\$4,747,600	Equipment Subtotal Escalated	\$5,224,734			

		Artwork	
Artwork Subtotal	\$398,010	Artwork Subtotal Escalated	\$398,010

	Agency Proj	ect Administration	
Agency Project Administration Subtotal	\$1,903,292		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$500,000		
Project Administration Subtotal	\$2,403,292	Project Administration Subtotal Escalated	\$2,644,824

Other Costs					
Other Costs Subtotal	\$8,002,500	Other Costs Subtotal Escalated	\$8,429,034		

Project Cost Estimate					
Total Project	\$73,399,837	Total Project Escalated	\$80,000,048		
		Rounded Escalated Total	\$80,000,000		

#### Appendix A -C100 New Engineering Student Success Building

## **Funding Summary**

			New Approp Request			
	Project Cost	Funded in Prior	2023-2025	2025-2027	Out Years	
	(Escalated)	Biennia				
Acquisition	ŚŊ	1			Śŋ	
	ΟÇ				Şΰ	
Consultant Services						
Consultant Services Subtotal	\$4,464,033		\$2,232,017		\$2,232,017	
	•	• •				
Construction					-	
Construction Subtotal	\$58,839,413		\$29,419,707		\$29,419,706	
<b>-</b> · · .						
Equipment	¢5 224 724		\$2,612,267		\$2 612 267	
Equipment Subtotai	\$5,224,734		\$2,012,307		\$2,012,307	
Artwork						
Artwork Subtotal	\$398.010		\$199.005		\$199.005	
	1		1		,,	
Agency Project Administration						
Project Administration Subtotal	\$2,644,824		\$1,322,412		\$1,322,412	
Other Costs	· · ·		· · ·		-	
Other Costs Subtotal	\$8,429,034		\$4,214,517		\$4,214,517	
Project Cost Estimate						
Total Project	\$80,000,048	\$0	\$40,000,024	\$0	\$40,000,024	
-	\$80,000,000	\$0	\$40,000,000	\$0	\$40,000,000	
	Percentage requested as a	new appropriation	50%			
What is planned for the requeste	d new appropriation? (Ex	Acquisition and desig	n nhase 1 construction	etc.)	1	
The new appropriation request is \$40	0.000.000. An additional \$40.	000.000 shown in the O	ut Years column above is co	oming from donors		
(31M pledges confirmed to date).	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
The \$80,000,000 total will be used fo	The \$80,000,000 total will be used for design, new utility infrastructure, and construction of the new building.					
What has been completed or is u	nderway with a previous a	ppropriation?				
There is no previous appropriation for	r this project. Design has cor	mmenced using donor fu	inding.			
Insert Row Here						
Miller to planned with a first					]	
what is planned with a future ap	propriation?					

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	

Item         Base Amount         Escalation Factor         Escalated Cost         Notes           1) Pre-Schematic Design Services         Programming/Site Analysis         \$60.000         Inter: Row Here		Consult	ant Services		
Letm         Base Amount         Factor         Esclated Cost         Notes           1) Pre-Schmatic Design Services         Programming/Site Analysis         560,000         Environmental Analysis         Envitalysis         Envitalys	ltere	Dece Amount	Escalation	Feedlated Cost	Neter
1) Pre-Schematic Design Services Programming/Site Analysis Predesign Study S300,000 Other Insert Row Here Sub TOTAL S360,000 1.0244 S368,784 Escalated to Design Start 2) Construction Documents A/E Basic Design Services S1,975,222 3) Extra Services Cother Sub TOTAL S1,975,222 3) Extra Services Cother Commissioning S100,000 Geotechnical investigation S510,000 Constructability Review Environmental Mirginon (EIS) Landscape Consultant S100,000 Archaeologist S30,000 Construction/Closeout HVXC Balancing Staffing Staff	item	Base Amount	Factor	Escalated Cost	Notes
Programming/Site Analysis Environmental Analysis Predesign Study Other Insert Row Here 2) Construction Documents A/E Basic Design Services Other Insert Row Here Sub TOTAL Staffing Construction/Closeout Environmental Mitigation (EIS) Construction/Review Construction/Review Environmental Mitigation (EIS) Landscape Consultant Staffing Other Services Bid/Construction/Closeout Bid/Construction/Closeout Staffing Staffin	1) Pre-Schematic Design Services				
Environmental Analysis Predesign Study \$300,000 Other Insert Row Here 3 Ush TOTAL \$360,000 1.0244 \$368,784 Escalated to Design Start A/E Basic Design Services Other Insert Row Here Sub TOTAL \$1,975,222 Other Insert Row Here Sub TOTAL \$1,975,222 I.0366 \$2,047,516 Escalated to Mid-Design 3) Extra Services Civil Design (Above Basic Svrs) Second Start \$100,000 Site Survey \$50,000 Commissioning \$100,000 Site Survey \$50,000 Voice/Data Consultant \$50,000 Voice/Data Consultant \$50,000 Voice/Data Consultant \$50,000 Voice/Data Consultant \$50,000 Voice/Data Consultant \$50,000 Voice/Data Consultant \$50,000 Audit \$100,000 Archaeologist \$30,000 Archaeologist \$30,000 Archaeologist \$30,000 Archaeologist \$30,000 Archaeologist \$30,000 I.0366 \$684,156 Escalated to Mid-Design 1.0366 \$684,156 Escalated to Mid-Const. 5) Design Services Contingency Design Services Contingency De	Programming/Site Analysis	\$60,000			
Predesign Study       \$300,000         Other       Insert Row Here         Sub TOTAL       \$360,000         1.0244       \$368,784         Sub TOTAL       \$360,000         2) Construction Documents       69% of A/E Basic Services         Other       Insert Row Here         Insert Row Here       1.0366         Sub TOTAL       \$1,975,222         69% of A/E Basic Services       69% of A/E Basic Services         Civil Design (Above Basic Svcs)       \$50,000         Commissioning       \$100,000         Site Survey       \$50,000         Commissioning       \$100,000         Site Survey       \$50,000         Voice/Data Consultant       \$50,000         Voice/Data Consultant       \$50,000         Voice/Data Consultant       \$50,000         Voice/Data Consultant       \$30,000         Audit       \$100,000         Archaeologist       \$30,000         Sub TOTAL       \$30,000         Audit       \$100,000         Archaeologist       \$30,000         Sub TOTAL       \$660,000         Insert Row Here       1.0366       \$684,156         Bid/Construction/Closcout       \$887,419	Environmental Analysis				
Other         Insert Row Here         Sub TOTAL       \$360,000         1.0244       \$368,784       Escalated to Design Start         2) Construction Documents       A/E Basic Design Services       \$1,975,222       69% of A/E Basic Services         Insert Row Here       Insert Row Here       1.0366       \$2,047,516       Escalated to Mid-Design         Insert Row Here       1.0366       \$2,047,516       Escalated to Mid-Design         Sub TOTAL       \$1,975,222       69% of A/E Basic Services         Civil Design (Above Basic Svcs)       \$50,000       550,000         Geotechnical Investigation       \$75,000	Predesign Study	\$300,000			
Insert Row Here	Other				
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Sub TOTAL       \$1,975,222       1.0366       \$2,047,516       Escalated to Mid-Design         3) Extra Services       S50,000       Geotechnical Investigation       \$75,000       Geotechnical Investigation       \$75,000         Geotechnical Investigation       \$75,000       Geotechnical Investigation       \$75,000       Geotechnical Investigation       \$75,000         Site Survey       \$50,000       Geotechnical Investigation       \$75,000       Geotechnical Investigation       Geotechnical Investinex Investigation       Geotechnica	Insert Row Here				
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Archaeologist       \$30,000         Sub TOTAL       \$660,000         1.0366       \$684,156         Escalated to Mid-Design         4) Other Services         Bid/Construction/Closeout       \$887,419         HVAC Balancing         Garding         Staffing         TSO       \$150,000         Insert Row Here         Sub TOTAL       \$1,037,419         1.1005       \$1,141,680         Escalated to Mid-Const.         5) Design Services Contingency       \$201,632         Other	Audit	\$100,000			
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SUD I UTAL \$201,632 1.1005 \$221,897 Escalated to Mid-Const.	Sub TOTAL	\$201,632	1.1005	\$221,897	Escalated to Mid-Const.

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CONSULTANT SERVICES TOTAL	\$4,234,273	\$4,464,033	

Construction Contracts						
Item	Base Amount	Escalation	Escalated Cost	Notes		
item	base Amount	Factor	Escalated Cost	Notes		
1) Site Work						
G10 - Site Preparation	\$1,000,000					
G20 - Site Improvements						
G30 - Site Mechanical Utilities						
G40 - Site Electrical Utilities						
G60 - Other Site Construction						
Other	\$200,000					
Insert Row Here						
Sub TOTAL	\$1,200,000	1.0533	\$1,263,960			
2) Related Project Costs						
Offsite Improvements						
City Utilities Relocation						
Parking Mitigation	\$1,000,000					
Stormwater Retention/Detention						
Other	\$1,000,000					
Sub TOTAL	\$2,000,000	1.0533	\$2,106,600			
3) Facility Construction						
A10 - Foundations	\$1,500,000					
A20 - Basement Construction						
B10 - Superstructure	\$5,800,000					
B20 - Exterior Closure	\$3,200,000					
B30 - Roofing	\$1,500,000					
C10 - Interior Construction	\$6,000,000					
C20 - Stairs	\$1,000,000					
C30 - Interior Finishes	\$3,000,000					
D10 - Conveying	\$800,000					
D20 - Plumbing Systems	\$2,800,000					
D30 - HVAC Systems	\$6,500,000					
D40 - Fire Protection Systems	\$575,000					
D50 - Electrical Systems	\$4,800,000					
F10 - Special Construction	\$800,000					
F20 - Selective Demolition						
General Conditions	\$1,800,000					
Insert Row Here						
Sub TOTAL	\$40,075,000	1.1005	\$44,102,538			
4) Maximum Allowable Construction Co	ost					
MACC Sub TOTAL	\$43,275,000		\$47,473,098			
	\$509		\$559	per GSF		
	7		<i>+</i> 505	,		

## Appendix A -C100 New Engineering Student Success Building

5) GCCM Risk Contingency				
GCCM Risk Contingency	\$1,750,000		_	
Other				
Insert Row Here		_		
Sub TOTAL	\$1,750,000	1.1005	\$1,925,875	
6) GCCM or Design Build Costs				
GCCM Fee	\$2,500,000			
Bid General Conditions				
GCCM Preconstruction Services				
Other				
Insert Row Here				
Sub TOTAL	\$2,500,000	1.1005	\$2,751,250	
7) Owner Construction Contingency				
Allowance for Change Orders	\$2,163,750			
Other				
Insert Row Here				
Sub TOTAL	\$2,163,750	1.1005	\$2,381,207	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	\$0	1.1005	\$0	
9) Sales Tax				
Sub TOTAL	\$3,925,411		\$4,307,983	
CONSTRUCTION CONTRACTS TOTAL	\$53,614,161		\$58,839,413	

Equipment						
Item	Base Amount	Escalation Factor	Escalated Cost	Notes		
1) Equipment						
E10 - Equipment	\$3,000,000					
E20 - Furnishings	\$1,400,000					
F10 - Special Construction						
Other						
Insert Row Here						
Sub TOTAL	\$4,400,000	1.1005	\$4,842,200			
2) Non Taxable Items						
Other						
Insert Row Here						
Sub TOTAL	\$0	1.1005	\$0			
3) Sales Tax						
Sub TOTAL	\$347,600		\$382,534			
EQUIPMENT TOTAL	\$4,747,600		\$5,224,734			

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	\$398,010			0.5% of total project cost for new and renewal construction		
Other						
Insert Row Here			_			
ARTWORK TOTAL	\$398,010	NA	\$398,010			

Project Management						
Itom	Basa Amount	Escalation	Escalated Cost	Notos		
item	base Amount	Factor	Escalated Cost	Notes		
1) Agency Project Management						
Agency Project Management	\$1,903,292					
Additional Services						
On site Representative	\$500,000					
Insert Row Here						
Subtotal of Other	\$500,000					
PROJECT MANAGEMENT TOTAL	\$2,403,292	1.1005	\$2,644,824			

Other Costs						
ltem	Base Amount		Escalation	Escalated Cost	Notes	
hem	Base Amount		Factor	Esculated Cost	Notes	
Mitigation Costs						
Hazardous Material						
Remediation/Removal						
Historic and Archeological Mitigation						
Utility Infrastructure	\$8,000,000					
Facilities Services Shops	\$2,500					
OTHER COSTS TOTAL	\$ <mark>8,002,500</mark>		1.0533	\$8,429,034		

## C-100(2022) Additional Notes

Tab A. Acquisition

Insert Row Here

Tab B. Consultant Services

Insert Row Here

Tab C. Construction Contracts

Insert Row Here

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

#### Appendix B – Degree Totals and Targets New Engineering Student Success Building

#### **Overarching Criteria: Degree Totals and Targets Template**

Project name:	New Engineering Student Success Building and In	CBS/	OFM Project #:	40000342	
Institution:	WA State University	Sc	oring category:	Replacement - N	/lajor
Campus/Location:	Pullman				
			Bachelor	Bachelor degree's in	Advanced

		degrees	high-demand fields	degrees
2020-21 Public Four-Year Dashboard		3,864	1,399	659
Additional degrees generated by project		31	132	
Projected degrees with building project	а	3,895	1,531	659
Projected growth above 2020-21 actual degrees		0.8%	9.4%	0.0%
Number of degrees targeted in 2023	b	3,696	931	547
Projected degrees as % of 2023 target	b/a =	94.9%	60.8%	83.0%

Score: 1 2 1
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#### Comments:

The statewide dashboards report numbers from two years prior and do not report by campus for Washington State University.

#### Appendix C – Reasonableness of Cost New Engineering Student Success Building

## **Reasonableness of Cost Template**

Project name: New Engineering Student Services Bui	ng and Infrastruc CBS/OFM Project #: 40000342	
Institution: WA State University	Scoring category: Replacement - Major	
Campus/Location: Pullman		

	Construction Begin	Construction End	Construction mid- point	Escalation Multiplier
Construction mid-point:	August-23	June-25	July-24	1.3456

MACC from C-100: \$47,473,098

	Expected MACC/GSF in 2019	Expected MACC/GSF	GSF by type	Expected MACC
Classrooms	\$405	\$545	24,000	\$13,079,161
Instructional labs	\$397	\$534	18,000	\$9,615,605
Research labs	\$545	\$733		\$0
Administration	\$406	\$546	10,000	\$5,463,106
Libraries	\$340	\$458		\$0
Athletic	\$385	\$518		\$0
Assembly, exhibit and meeting rooms	\$428	\$576	33,000	\$19,005,151
			85,000	\$47,163,023

C-100 to expected MACC variance: 101%

Score: 10

#### Appendix D – Program Related Space Allocation New Engineering Student Success Building

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

Project name: New Engineering Student Success Facility and In	
Institution: WA State University	
Campus/Location: Pullman	

CBS/OFM Project #: 40000342 Scoring category: Replacement - Major

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

Type of Space	Doints	Assignable	Percentage of	Score [Points x	
Type of Space	Points	Square Feet	total	Percentage]	
Instructional space (classroom, laboratories)	10	28,400	49.91	4.99	
Research space	2		0.00	0.00	
Office space	4	6,500	11.42	0.46	
Library and study collaborative space	10	22,000	38.66	3.87	
Other non-residential space	8		0.00	0.00	
Support and physical plant space	6		0.00	0.00	
Total:		56,900	100.0	9.31	



Region: Pullman - WSU Main Campus	Asset: DANA HALL
<b>Campus:</b> Pullman Campus - Assessed Buildings	Asset Number: 0056

Currency: USD

Assets are ordered by Asset Name

#### **Statistics**

FCI Cost: RI Cost:	11,725,140	FCI: RI:	0.56
Total Requirement Cost: Current Replacement Value:	18,655,748 20,921,309	Size:	90,023 SF
Address 1 City	305 SPOKANE ST PULLMAN	Address 2 State/Province/Region	- WA



## Photo



## System Description

System Name	Description
A - Substructure-Concrete Footings	Concrete spread column footings.
A - Substructure-Foundation Wall and Footings 12-Ft - Full Basement	Full basement wall and foundation with a 12-Ft. height to include strip footing, underdrains, foundation wall and damp proofing.
A - Substructure-Structural Slab on Grade - Non-Industrial	The building substructure includes a non-industrial type structural slab on grade.
B10 - Superstructure-Multi-	Multi-story concrete floor structure with reinforced cast in place concrete floor slab and beams supported by concrete bearing walls and columns.

May 20, 2022 2:28:22 PM



System Name	Description
Story - Concrete	
B10 - Superstructure-Wood Roof	Wood framed roof structure, includes wood joist and beams supported by heavy timber columns and bearing exterior and interior walls.
B1015 - Exterior Stairs and Fire Escapes-Exterior Stairs - Concrete	Exterior cast in place concrete stairs with railing at the loading dock and providing access to the electrical room.
B1020 - Roof Construction-Fall Protection - Rooftop Guardrails	Metal pipe railings around roof edges. Set in pitch pockets.
B2010 - Exterior Walls-Brick Walls - CIP Concrete Backup	The building exterior wall construction is of cast in place concrete with brick veneer.
B2010 - Exterior Walls-Metal Paneled Walls	The exterior wall construction of the penthouse is of wood frame with aluminum exterior cladding.
B2010 - Exterior Walls-Stone Veneer Walls - Limestone	The lower half of the ground floor exterior walls are covered with a limestone veneer installed over the cast in place concrete walls.
B2020 - Exterior Windows- Aluminum Windows	The building includes aluminum framed operable and fixed exterior units with non insulating glass.
B2030 - Exterior Doors-Door Assembly - 3 x 7 Decorative Metal	The exterior doors include pr. swinging glazed metal clad decorative storefront leafs plus glazed transom, aluminum frame, hardware including closers.
B2030 - Exterior Doors-Door Assembly - 6 x 7 HM	Exterior doors include pr. 3 x 7 glazed steel doors and steel frame with hinges, hardware and locksets.
B2030 - Exterior Doors-Door Assembly - Large Glazed HM	Exterior doors include large double metal clad glazed doors and steel frame with hinges and lockset used to access the fabrication shops adjacent to the loading area.
B30 - Roofing-Built Up Roof	The roofing system is of built up roofing over insulation or installed over the concrete slab above the electrical vault.
B30 - Roofing-Modified Bitumen	The roof covering is a modified bitumen system with a painted reflective coating.
C1010 - Partitions-CMU Block Walls - Plain	Interior walls include 8-in. hollow concrete block, light and regular weight, with no finish and with thin plaster coat (separate system).
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-Plaster Walls -	The building interior walls consist of a thin coat of plaster installed over concrete and concrete block walls.



System Name	Description
Thin Coat	
C1010 - Partitions-Windows/ Storefront Partitions	Building interior includes fixed windows set in metal frames with single pane glass.
C1020 - Interior Doors-Swinging Doors - 3 x 7 HM	Interior doors include rated 3 x 7painted steel door and steel frame with hinges, lockset, hardware and closer.
C1020 - Interior Doors-Swinging Doors - 3 x 7 Wd	Interior doors include rated 3 x 7 painted or stained wood door and steel frame, hinges, lockset, hardware and closer.
C1020 - Interior Doors-Swinging Doors - Pair - 6 x 7 HM - Rated	Interior doors include pr. rated 3 x 7 painted steel glazed doors and steel frame with hinges, locksets hardware and closers.
C1020 - Interior Doors-Swinging Doors - Pair - 6 x 7 Wd - Rated	Interior doors include pr. rated 3 x 7 painted or stained wood doors and steel frame with hinges, locksets hardware and closers.
C1030 - Fittings-Restroom Accessories	The restroom accessories include mirror, grab bars, paper towel dispenser and disposal, toilet paper holder and soap dispenser. - Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
C1030 - Fittings-Restroom Accessories	The restroom accessories include mirror, grab bars, paper towel dispenser and disposal, toilet paper holder and soap dispenser. - Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
C1030 - Fittings-Toilet Partitions - Steel	Restrooms are equipped with standard quality, painted metal ceiling-hung partitions. - Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
C1030 - Fittings-Toilet Partitions - Steel	Restrooms are equipped with standard quality, painted metal ceiling-hung partitions. - Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
C1035 - Identifying Devices- Fittings - Signage (Room Numbering and Identification)	Room, door and graphic symbol signs, adhesive backs non Braille.
C20 - Stairs-Stairs - Concrete	The interior stairs are concrete with a terrazzo finish (included with floor system) and includes wood or aluminum handrails.
C20 - Stairs-Stairs - Spiral Staircase	The interior stairs include an open steel spiral staircase installed between the first and ground floor.
C20 - Stairs-Stairs - Wood	The interior stairs include an open riser wood stair leading to the roof, includes wood wall mounted handrail.
C3010 - Wall Finishes-Glazed Block	Building wall coverings include glazed masonry installed in the restroom walls and the lower half of the corridor and stairwell walls. Tile job includes wainscot with bullnose trim.
C3010 - Wall Finishes-Paint Masonry/Epoxy Finish	Wall finishes include paint on CMU and minimum hi-build epoxy finish.



System Name	Description
C3010 - Wall Finishes-Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	Interior wall finishes include standard paint finish prime and two finish coats.
C3020 - Floor Finishes-Carpeting - Broadloom	Floor finishes include carpeting and base installed primarily in office areas.
C3020 - Floor Finishes-Concrete - Painted	Typical painted or sealed concrete floor slab.
C3020 - Floor Finishes-Terrazzo - Cast-in-Place	Floor finishes include cast-in-place terrazzo and related base installed in the corridors and restrooms and stair and stair landings.
C3020 - Floor Finishes-VAT	Floor finishes include areas of standard older vinyl asbestos tile flooring.
C3020 - Floor Finishes-VCT	Floor finishes include areas of standard VCT flooring and related base. 10% updated in 2019.
C3020 - Floor Finishes-VCT	Floor finishes include areas of standard VCT flooring and related base.
C3030 - Ceiling Finishes-ACT System - Concealed Spline	Ceiling finish includes 12 x 12 x 3/4-in. ACT glued to the concrete substrate or suspended in a concealed spline.
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.
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 furring.
C3030 - Ceiling Finishes-Painted Plaster	Three-coat painted plaster ceiling system on metal lath and suspended channels in the corridors and selected rooms.
D1010 - Elevators and Lifts- Traction Geared Freight Elevator	The 208VAC Otis freight elevator has an 8,000 pound capacity. It travels four floors, Ground, First, Second, and Third. The geared hoist machine and the relay module are located in Elevator Machine Room 501 on the Upper Mechanical Penthouse Floor.
D2010 - Plumbing Fixtures- Custodial/Utility Sinks	The plumbing fixtures include floor-mount custodial/utility sinks. Note: Years Remaining extended due to good condition.
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. Note: Years Remaining extended due to fair condition.
D2010 - Plumbing Fixtures-	The restroom fixtures include vitreous china urinals and water closets, and vitreous china or molded lavatories.



System Name	Description
Restroom Fixtures	- Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
D2010 - Plumbing Fixtures- Restroom Fixtures	The restroom fixtures include vitreous china urinals and water closets, and vitreous china or molded lavatories. - Ground Floor bathroom accessories, partitions and fixtures were updated in project 8933-2016.
D2010 - Plumbing Fixtures- Restroom Fixtures - Group Locker Room Showers	The restroom fixtures include four shower heads and controls in a single shower room.
D2010 - Plumbing Fixtures- Water Coolers - 1970	Plumbing fixtures include six single/dual height water coolers.
D2010 - Plumbing Fixtures- Water Coolers - 1995	Plumbing fixtures include one single height water cooler. Note: Years Remaining extended due to good condition of system.
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 include cast iron, 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 and lab process hot water are provided by two steam heated, instantaneous commercial water heaters, with a recirculation pump, and no storage.
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.
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-Lab Acid Waste System - Polypropylene	The building includes a polypropylene piped acid water waste piping system for the laboratories. The system drains into sanitary lines that is then treated at the campus sewage treatment plant.
D2090 - Other Plumbing Systems-Natural Gas Distribution for Lab	The building includes a natural gas distribution system for the laboratories. Note: Years Remaining extended due to good condition of system.
D2090 - Other Plumbing Systems-Shop Air Compressor	The building is equipped with a Quincy Northwest lab/shop air compressor.



System Name	Description
D3030 - Cooling Generating Systems-DX Condensing Unit - Carrier (Rm15)	Cooling medium for the student project (Rm15) space is provided by one dedicated Carrier DX cooling condenser, with capacity of approximately 5 tons.
D3030 - Cooling Generating Systems-DX Condensing Unit - Carrier (Rm215)	Cooling medium for Rm215 space is provided by one dedicated Mitsubishi Mr. Slim cooling condenser, with capacity of approximately 5 tons.
D3030 - Cooling Generating Systems-DX Condensing Unit - Carrier (Rm301)	Cooling medium for Rm 301 is provided by one dedicated Carrier DX cooling condenser, with capacity of approximately 5 tons.
D3030 - Cooling Generating Systems-DX Condensing Unit - Carrier (Rm302)	Cooling medium for Rm 302 is provided by one dedicated Carrier DX cooling condenser, with capacity of approximately 5 tons.
D3030 - Cooling Generating Systems-DX Condensing Unit - Carrier (Rm306)	Cooling medium for Rm 306 is provided by one dedicated Carrier DX cooling condenser, with capacity of approximately 5 tons.
D3032 - Direct Expansion Systems-Refrigeration Walk-in Unit	The ground floor has two large walk-in refrigeration units with compressors located on the basement level and condensers located on the roof. The system also includes evaporators.
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 located in room 356.
D3040 - Distribution Systems- Exhaust System - Restroom	HVAC ventilation system includes a centralized restroom exhaust fan with ducting.
D3040 - Distribution Systems- Fan Coil System - Cabinet - Heating/Cooling - 4 Pipe	HVAC system includes perimeter wall hung cabinet type fan coil 4-pipe chilled water and heating water system in some rooms.
D3040 - Distribution Systems- Four Pipe Distribution System w/Pumps	HVAC distribution is provided by a four-pipe distribution system.
D3040 - Distribution Systems-	The HVAC system includes constant volume distribution with ductwork and diffusers. Note: Years Remaining extended due to good condition.



System Name	Description
HVAC Distribution System - Ductwork	
D3040 - Distribution Systems- Perimeter Heat System - Hydronic Fin Tube	HVAC distribution within northern offices includes a two-pipe system of heating hot water, with perimeter units. Note: Years Remaining extended due to good condition.
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- Supply Fans 1-6 - Const Volume	The HVAC system includes six constant volume supply fans rated at approximately 7,500 cfm each.
D3050 - Terminal and Package Units-Make-Up Air Unit w/ Cooling Tower - Cooling w/Steam Heat	The HVAC system includes a Trane make-up air unit with steam heat including adjacent Recold cooling tower with capacity of greater than 10 tons.
D3050 - Terminal and Package Units-Unit Heaters - Steam/Hot Water	Heating within mechanical rooms is provided by suspended, steam/hot water unit heaters.
D3050 - Terminal and Package Units-Window AC Units	Cooling is provided by a 12000 BTUH window-mounted air conditioning unit.
D3060 - Controls and Instrumentation-Pneumatic Controls - Average	The building includes average pneumatic HVAC control system with air supply, moderate controls, moderate sensor types and quantities.
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 Standpipe System	The fire protection systems include a light hazard, wet fire standpipe system, with backflow protection. Note: Years Remaining extended due to good condition. Note: Years Remaining extended due to good condition and requirement for sprinklers.
D5010 - Electrical Service and Distribution-Main Emergency Electrical Service	Main emergency building power originates in an underground transformer vault directly west of Room 22 on the Ground Floor. Feeder 13 from a remote campus substation brings 4,160/2,700VAC service into the primary of 45kVA Transformer 13-T12. The transformer secondary sends 208/120VAC power throughout the building.
D5011 - High Tension Service and DistMain Normal Unit	Main normal building power originates in an underground transformer vault directly west of Room 22 on the Ground Floor. Feeder 4 from a remote campus substation brings 4,160/2,700VAC service into an I.T.E. load center. An internal 600kVA transformer secondary sends 208/120VAC power to an adjacent 2,000-amp main switchboard bus. The bus



System Name	Description
Substation - 208Y/120V	extends up through Room 22 to the hallway outside Room 124 on the First Floor. From there, 600-amp branch busses extend through hallways on the different floors.
D5012 - Low Tension Service and DistDistribution Equipment - 2000A 208Y/120V	Branch 600-amp busses extend from the main normal building power load center in the underground transformer vault. Service goes to branch 208/120VAC panels on all floors and directly to loads that include the elevator. Throughout the building, branch panels are in locations that include corridors, mechanical rooms, offices, and machine shops.
D5020 - Lighting and Branch Wiring-Lighting - Exterior	Exterior perimeter lighting consists primarily of a small number of wall-mounted HID floodlights with individual photocells and of fluorescent bulbs recessed under canopies.
D5021 - Branch Wiring Devices- Branch Wiring	Branch wiring for this building includes receptacles, lighting, low voltage systems, an elevator, and equipment for HVAC, refrigeration, and machine shops.
D5022 - Lighting Equipment- Lighting - Interior	Interior fluorescent lighting consists of a wide mixture that includes single light bulbs, ceiling and wall-mounted 4' acrylic fixtures, wrap-around fixtures, recessed downlights, and 4' two-tube industrial fixtures.
D5037 - Fire Alarm Systems-Fire Alarm System	Building fire alarm monitoring and control begins at an addressable Simplex 4100ES Fire Control Panel in the west building entry vestibule on the Ground Floor. Remote field devices include annunciating sub-panels, smoke detectors, heat detectors, manual pull stations, and audio-visual strobe-horns.
D50392 - LAN Network - Wired- LAN System	Category 3 copper twisted-pair cabling is routed through telecommunications rooms to individual work stations in the building.
D5092 - Emergency Light and Power Systems-Exit Signs	Lighted exit signs with both green and red-colored lenses are installed at appropriate egress locations.
E - Equipment and Furnishings- Casework Cabinets	Building includes standard wood casework base and wall cabinets and countertops.
E - Equipment and Furnishings- Laboratory Casework	Building includes laboratory casework, base, wall cabinets and acid resistant countertop.
E10 - Equipment-Steel Crane	Steel crane 1-1/2 ton capacity manually operated including rail and pulley installed in the sheet metal shop.



## 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	Structural Slab on Grade - Non-Industrial	75	6	1949	2030	10,506	175,095
A - Substructure	Concrete Footings	75	6	1949	2030	3,503	58,390
A - Substructure	Foundation Wall and Footings 12-Ft - Full Basement	75	6	1949	2030	16,329	272,151
B10 - Superstructure	Wood Roof	75	6	1949	2028	13,814	230,230
B10 - Superstructure	Multi-Story - Concrete	75	6	1949	2030	146,965	2,449,420
B1015 - Exterior Stairs and Fire Escapes	Exterior Stairs - Concrete	50	125	1949	2021	5,377	13,462
B1020 - Roof Construction	Fall Protection - Rooftop Guardrails	50	110	1980	2027	41,648	37,862
B2010 - Exterior Walls	Brick Walls - CIP Concrete Backup	75	12	1949	2030	169,533	1,412,778
B2010 - Exterior Walls	Stone Veneer Walls - Limestone	75	12	1949	2025	27,346	227,880
B2010 - Exterior Walls	Metal Paneled Walls	60	12	1949	2021	1,758	14,648
B2020 - Exterior Windows	Aluminum Windows	30	125	1949	2017	337,250	269,800
B2030 - Exterior Doors	Door Assembly - 6 x 7 HM	30	125	1990	2021	9,973	7,979
B2030 - Exterior Doors	Door Assembly - Large Glazed HM	27	125	1960	2018	50,639	40,512
B2030 - Exterior Doors	Door Assembly - 3 x 7 Decorative Metal	30	125	1949	2020	107,787	86,229
B30 - Roofing	Modified Bitumen	20	125	2021	2041	829,667	663,733
B30 - Roofing	Built Up Roof	25	125	2017	2042	8,602	6,882
C1010 - Partitions	GWB Walls - Standard (Non-Painted)	50	62	1980	2030	31,868	51,400
C1010 - Partitions	Windows/Storefront Partitions	50	62	1949	2023	10,374	16,732
C1010 - Partitions	Plaster Walls - Thin Coat	50	62	1949	2027	16,182	26,100
C1010 - Partitions	CMU Block Walls - Plain	50	62	1949	2027	542,934	875,700



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
C1020 - Interior Doors	Swinging Doors - 3 x 7 Wd	50	125	1960	2023	433,176	346,541
C1020 - Interior Doors	Swinging Doors - Pair - 6 x 7 Wd - Rated	50	125	1960	2023	293,112	234,490
C1020 - Interior Doors	Swinging Doors - 3 x 7 HM	50	125	1960	2023	227,936	182,349
C1020 - Interior Doors	Swinging Doors - Pair - 6 x 7 HM - Rated	50	125	1960	2021	41,774	33,420
C1030 - Fittings	Restroom Accessories	25	125	1960	2021	11,063	11,801
C1030 - Fittings	Toilet Partitions - Steel	40	125	1970	2021	7,914	8,442
C1030 - Fittings	Toilet Partitions - Steel	40	125	2016	2021	3,957	4,221
C1030 - Fittings	Restroom Accessories	25	125	1960	2021	3,688	3,934
C1035 - Identifying Devices	Fittings - Signage (Room Numbering and Identification)	10	80	1980	2018	16,181	20,226
C20 - Stairs	Stairs - Wood	50	37	1949	2020	11,316	30,583
C20 - Stairs	Stairs - Concrete	75	37	1949	2030	58,392	157,817
C20 - Stairs	Stairs - Spiral Staircase	75	37	1949	2025	4,347	11,747
C3010 - Wall Finishes	Painted Finish - Average (1 Coat Prime - 2 Coats Finish)	10	37	2017	2027	37,000	100,000
C3010 - Wall Finishes	Glazed Block	25	125	1949	2027	319,130	255,304
C3010 - Wall Finishes	Paint Masonry/Epoxy Finish	15	125	2000	2021	279,000	223,200
C3020 - Floor Finishes	Concrete - Painted	5	125	2000	2019	6,175	4,940
C3020 - Floor Finishes	VCT	10	125	1990	2020	51,600	45,866
C3020 - Floor Finishes	VAT	10	125	1949	2018	210,220	169,875
C3020 - Floor Finishes	Terrazzo - Cast-in-Place	50	125	1949	2029	576,888	461,510
C3020 - Floor Finishes	Carpeting - Broadloom	10	125	2000	2022	30,038	24,030
C3020 - Floor Finishes	VCT	10	125	2019	2020	5,733	5,096



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
C3030 - Ceiling Finishes	Painted Plaster	30	125	1960	2021	394,800	315,840
C3030 - Ceiling Finishes	ACT System - Concealed Spline	20	125	1949	2020	253,825	203,060
C3030 - Ceiling Finishes	ACT System - Standard	20	125	2005	2024	55,562	44,450
C3030 - Ceiling Finishes	GWB Taped and Finished	30	125	1980	2021	113,050	90,440
D1010 - Elevators and Lifts	Traction Geared Freight Elevator	35	125	1949	2018	432,436	260,570
D2010 - Plumbing Fixtures	Custodial/Utility Sinks	30	125	1949	2018	29,650	23,720
D2010 - Plumbing Fixtures	Emergency Eyewash and Shower Units	30	125	1995	2021	7,518	6,014
D2010 - Plumbing Fixtures	Laboratory Sinks	30	125	1949	2021	418,018	334,414
D2010 - Plumbing Fixtures	Restroom Fixtures	30	125	1949	2018	114,722	122,370
D2010 - Plumbing Fixtures	Water Coolers - 1970	20	125	1970	2017	30,279	24,223
D2010 - Plumbing Fixtures	Water Coolers - 1995	20	125	1995	2021	30,279	24,223
D2010 - Plumbing Fixtures	Restroom Fixtures - Group Locker Room Showers	30	125	1949	2018	22,594	18,076
D2010 - Plumbing Fixtures	Restroom Fixtures	30	125	1949	2018	38,241	40,790
D2020 - Domestic Water Distribution	Water Heater - Steam Instantaneous	35	112	1949	2027	139,808	124,828
D2020 - Domestic Water Distribution	Water Dist Complete	30	112	1949	2021	115,673	364,761
D2030 - Sanitary Waste	Sanitary Waste - Gravity Disch	50	125	1949	2018	290,169	232,135
D2040 - Rain Water Drainage	Roof Drainage - Gravity	50	125	1949	2018	217,850	174,280
D2090 - Other Plumbing Systems	Shop Air Compressor	20	105	1985	2018	30,498	29,046
D2090 - Other Plumbing Systems	Lab Acid Waste System - Glass Pipe	40	125	1949	2018	320,629	256,503
D2090 - Other Plumbing Systems	Natural Gas Distribution for Lab	40	125	1970	2021	146,069	116,856
D2090 - Other Plumbing Systems	Lab Acid Waste System - Polypropylene	40	125	1998	2039	113,346	90,677



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D3030 - Cooling Generating Systems	DX Condensing Unit - Carrier (Rm306)	15	125	1969	2018	4,832	3,866
D3030 - Cooling Generating Systems	DX Condensing Unit - Carrier (Rm301)	15	125	1969	2018	4,832	3,866
D3030 - Cooling Generating Systems	DX Condensing Unit - Carrier (Rm302)	15	125	1969	2018	4,832	3,866
D3030 - Cooling Generating Systems	DX Condensing Unit - Carrier (Rm215)	15	125	1990	2018	4,832	3,866
D3030 - Cooling Generating Systems	DX Condensing Unit - Carrier (Rm15)	15	125	2012	2018	4,832	3,866
D3032 - Direct Expansion Systems	Refrigeration Walk-in Unit	10	100	1975	2016	32,338	32,338
D3040 - Distribution Systems	Exhaust System - Fume Hoods	25	125	1949	2018	1,027,092	821,674
D3040 - Distribution Systems	Supply Fans 1-6 - Const Volume	25	125	1960	2018	207,655	166,124
D3040 - Distribution Systems	Four Pipe Distribution System w/Pumps	30	125	1960	2018	1,876,807	1,501,446
D3040 - Distribution Systems	Exhaust System - General Building	25	125	1949	2018	89,683	71,746
D3040 - Distribution Systems	Steam Piping and Condensate Return	30	125	1970	2018	204,955	163,964
D3040 - Distribution Systems	Perimeter Heat System - Hydronic Fin Tube	18	112	1949	2021	740,876	661,497
D3040 - Distribution Systems	HVAC Distribution System - Ductwork	40	125	1949	2021	485,353	388,283
D3040 - Distribution Systems	Fan Coil System - Cabinet - Heating/Cooling - 4 Pipe	30	125	1990	2021	167,698	134,158
D3040 - Distribution Systems	Exhaust System - Restroom	20	125	1970	2018	13,815	11,052
D3050 - Terminal and Package Units	Window AC Units	10	105	1995	2018	156,019	148,590
D3050 - Terminal and Package Units	Unit Heaters - Steam/Hot Water	25	112	1949	2018	18,717	16,711
D3050 - Terminal and Package Units	Make-Up Air Unit w/ Cooling Tower - Cooling w/Steam Heat	20	125	1965	2017	26,055	20,844
D3060 - Controls and Instrumentation	Pneumatic Controls - Average	20	112	1949	2018	646,340	577,089
D40 - Fire Protection	Wet Standpipe System	35	125	1949	2021	221,794	177,435
D40 - Fire Protection	Fire Extinguishers - Dry Chem w/Cabinet	30	105	1949	2031	2,984	2,842



Uniformat	System Name	Lifetime (Years)	% Renew	Year Installed	Next Renewal Year	Renewal Cost	Replacement Cost
D5010 - Electrical Service and Distribution	Main Emergency Electrical Service	30	125	1999	2030	88,955	71,164
D5011 - High Tension Service and Dist.	Main Normal Unit Substation - 208Y/120V	30	125	1949	2018	154,441	904,063
D5012 - Low Tension Service and Dist.	Distribution Equipment - 2000A 208Y/120V	30	125	1949	2018	626,049	500,839
D5020 - Lighting and Branch Wiring	Lighting - Exterior	20	125	2013	2034	5,142	4,113
D5021 - Branch Wiring Devices	Branch Wiring	30	125	1949	2018	488,856	391,085
D5022 - Lighting Equipment	Lighting - Interior	20	125	2013	2034	669,963	535,970
D5037 - Fire Alarm Systems	Fire Alarm System	10	125	2006	2017	669,915	535,932
D50392 - LAN Network - Wired	LAN System	15	106	1995	2018	653,348	327,459
D5092 - Emergency Light and Power Systems	Exit Signs	10	125	2013	2024	105,571	84,457
E - Equipment and Furnishings	Laboratory Casework	20	125	1960	2021	394,875	315,900
E - Equipment and Furnishings	Casework Cabinets	20	125	1960	2018	154,440	123,552
E10 - Equipment	Steel Crane	50	100	1949	2018	42,005	42,005
					Subtotal		20,921,309

Overhead:	0
Subtotal	0

Total Replacement Value Based on System Costs with Overheads

20,921,309



## **Requirements including Renewals**



## Costs by Requirement Type

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	Oct 14, 2019	253,825
ACT System - Standard Renewal	Yes	C3030 - Ceiling Finishes	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2023	55,563
Abate and clean crawlspace asbestos, improve crawlspace access	No	F2010 - Building Elements Demolition	Reliability	2- Due within 2 Years of Inspection	Dec 3, 2021	99,951
Aluminum Windows Renewal	Yes	B2020 - Exterior Windows	Lifecycle	2- Due within 2 Years of Inspection	Oct 14, 2016	337,250





Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Branch Wiring - Non-GFCI Receptacle - Room 302	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	247
Branch Wiring - Non-GFCI Receptacles - Lab 108	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	1,977
Branch Wiring - Non-GFCI Receptacles - Lab 203	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	989
Branch Wiring - Non-GFCI Receptacles - Lab 221 Table	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	1,483
Branch Wiring - Non-GFCI Receptacles - Lab 221 Wall	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	741
Branch Wiring - Non-GFCI Receptacles - Lab 240	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	989
Branch Wiring - Non-GFCI Receptacles - Lab 313	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	741
Branch Wiring - Non-GFCI Receptacles - Labs 123 and 124	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	2,719
Branch Wiring - Non-GFCI Receptacles - Restrooms 131 and 135A	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	494
Branch Wiring - Obstructed Panel Access - Room 240A	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	236
Branch Wiring - Obstructed Panel Access - Room 46	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	472
Branch Wiring - Power Receptacles Lacking - Rooftop	No	D5021 - Branch Wiring Devices	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	12,652
Branch Wiring Renewal	Yes	D5021 - Branch Wiring Devices	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	488,856
Building Wireless Upgrade	No	D50393 - LAN Network - Wireless	Technological Improvements	1- Due within 1 Year of Inspection	Aug 25, 2017	196,758



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
CMU Block Walls - Plain Renewal	Yes	C1010 - Partitions	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2026	542,934
Carpeting - Broadloom Renewal	Yes	C3020 - Floor Finishes	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2021	30,038
Casework Cabinets Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	154,440
Concrete - Painted Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2018	6,175
Custodial/Utility Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	29,650
DX Condensing Unit - Carrier (Rm15) Renewal	Yes	D3030 - Cooling Generating Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	4,832
DX Condensing Unit - Carrier (Rm215) Renewal	Yes	D3030 - Cooling Generating Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	4,832
DX Condensing Unit - Carrier (Rm301) Renewal	Yes	D3030 - Cooling Generating Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	4,832
DX Condensing Unit - Carrier (Rm302) Renewal	Yes	D3030 - Cooling Generating Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	4,832
DX Condensing Unit - Carrier (Rm306) Renewal	Yes	D3030 - Cooling Generating Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	4,832
Damaged Exterior Limestone Wall	No	B2010 - Exterior Walls	Reliability	2- Due within 2 Years of Inspection	Oct 14, 2016	304,700
Damaged or Open Ceiling	No	C3030 - Ceiling Finishes	Reliability	2- Due within 2 Years of Inspection	Oct 14, 2016	8,438
Distribution Equipment - 2000A 208Y/120V Renewal	Yes	D5012 - Low Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	626,049
Distribution Equipment - Capacity Upgrade Needed	No	D5012 - Low Tension Service and Dist.	Capacity	2- Due within 2 Years of Inspection	Oct 14, 2016	2,234,950



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Door Assembly - 3 x 7 Decorative Metal Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2019	107,787
Door Assembly - 6 x 7 HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	9,973
Door Assembly - Large Glazed HM Renewal	Yes	B2030 - Exterior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	50,639
Emergency Eyewash and Shower Units Renewal	Yes	D2010 - Plumbing Fixtures	Mission	3- Due within 5 Years of Inspection	Oct 14, 2020	7,518
Exhaust System - Fume Hoods Renewal	Yes	D3040 - Distribution Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	1,027,092
Exhaust System - General Building Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	89,683
Exhaust System - Restroom Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	13,815
Exit Signs Renewal	Yes	D5092 - Emergency Light and Power Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2023	105,571
Exterior Stairs - Concrete Renewal	Yes	B1015 - Exterior Stairs and Fire Escapes	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	5,377
Fall Protection - Rooftop Guardrails Renewal	Yes	B1020 - Roof Construction	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2026	41,648
Fan Coil System - Cabinet - Heating/Cooling - 4 Pipe Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	167,698
Fire Alarm System Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	2- Due within 2 Years of Inspection	Oct 14, 2016	669,915
Fittings - Signage (Room Numbering and Identification) Renewal	Yes	C1035 - Identifying Devices	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2017	16,181
Four Pipe Distribution System w/Pumps Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	1,876,807





Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
GWB Taped and Finished Renewal	Yes	C3030 - Ceiling Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2020	113,050
Glazed Block Renewal	Yes	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2026	319,130
HVAC Distribution System - Ductwork Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	485,353
Heat Trace Installation	No	D2040 - Rain Water Drainage	Reliability	3- Due within 5 Years of Inspection	Aug 28, 2020	25,205
INSTALL SUPPLY/RETURN FANS	No	D3040 - Distribution Systems	Reliability	1- Due within 1 Year of Inspection	Sep 3, 2016	0
Inadequate Ventilation - Engineering Study	No	D30 - HVAC	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	18,175
Install Cowling over Outside Wall Louvers in Rm 316	No	D3040 - Distribution Systems	Lifecycle	1- Due within 1 Year of Inspection	May 26, 2018	14,697
Install Insulation	No	B2010 - Exterior Walls	Reliability	2- Due within 2 Years of Inspection	Sep 1, 2015	60,940
LAN System Renewal	Yes	D50392 - LAN Network - Wired	Technological Improvements	3- Due within 5 Years of Inspection	Oct 14, 2017	653,348
Lab Acid Waste System - Glass Pipe Renewal	Yes	D2090 - Other Plumbing Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	320,629
Laboratory Casework Renewal	Yes	E - Equipment and Furnishings	Mission	3- Due within 5 Years of Inspection	Oct 14, 2020	394,875
Laboratory Sinks Renewal	Yes	D2010 - Plumbing Fixtures	Mission	3- Due within 5 Years of Inspection	Oct 14, 2020	418,018
Main Emergency Electrical Service - Panels Lacking	No	D5010 - Electrical Service and Distribution	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	73,341
Main Normal Unit Substation - 208Y/120V Renewal	Yes	D5011 - High Tension Service and Dist.	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	154,441



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Make-Up Air Unit w/ Cooling Tower - Cooling w/Steam Heat Renewal	Yes	D3050 - Terminal and Package Units	Mission	2- Due within 2 Years of Inspection	Oct 14, 2016	26,055
Metal Paneled Walls Renewal	Yes	B2010 - Exterior Walls	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	1,758
Natural Gas Distribution for Lab Renewal	Yes	D2090 - Other Plumbing Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2020	146,069
PATCH AND PAINT ROOM 251	No	C3010 - Wall Finishes	Lifecycle	2- Due within 2 Years of Inspection	Jun 14, 2018	988
Paint Masonry/Epoxy Finish Renewal	Yes	C3010 - Wall Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2020	279,000
Painted Finish - Average (1 Coat Prime - 2 Coats Finish) Renewal	Yes	C3010 - Wall Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jan 1, 2027	37,000
Painted Plaster Renewal	Yes	C3030 - Ceiling Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2020	394,800
Perimeter Heat System - Hydronic Fin Tube Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	740,876
Plaster Walls - Thin Coat Renewal	Yes	C1010 - Partitions	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2026	16,182
Pneumatic Controls - Average Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	646,340
REPLACE RADIATOR VALVES & TRAPS	No	D3040 - Distribution Systems	Reliability	2- Due within 2 Years of Inspection	Sep 8, 2014	0
Refrigeration Walk-in Unit Renewal	Yes	D3032 - Direct Expansion Systems	Mission	1- Due within 1 Year of Inspection	Oct 14, 2015	32,338
Replace Condensate Receiver Tank and Pumps	No	D3040 - Distribution Systems	Reliability	1- Due within 1 Year of Inspection	May 23, 2018	5,975
Restroom Accessories Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	11,063



Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Restroom Accessories Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	3,688
Restroom Fixtures - Group Locker Room Showers Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	22,594
Restroom Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	114,722
Restroom Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	38,241
Roof Drainage - Gravity Renewal	Yes	D2040 - Rain Water Drainage	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	217,850
Sanitary Waste - Gravity Disch Renewal	Yes	D2030 - Sanitary Waste	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	290,169
Shop Air Compressor Renewal	Yes	D2090 - Other Plumbing Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	30,498
Stairs - Spiral Staircase Renewal	Yes	C20 - Stairs	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2024	4,347
Stairs - Wood Renewal	Yes	C20 - Stairs	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2019	11,316
Steam Piping and Condensate Return Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	204,955
Steel Crane Renewal	Yes	E10 - Equipment	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	42,005
Stone Veneer Walls - Limestone Renewal	Yes	B2010 - Exterior Walls	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2024	27,346
Supply Fans 1-6 - Const Volume Renewal	Yes	D3040 - Distribution Systems	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	207,655
Swinging Doors - 3 x 7 HM Renewal	Yes	C1020 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2022	227,936





Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Swinging Doors - 3 x 7 Wd Renewal	Yes	C1020 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2022	433,176
Swinging Doors - Pair - 6 x 7 HM - Rated Renewal	Yes	C1020 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	41,774
Swinging Doors - Pair - 6 x 7 Wd - Rated Renewal	Yes	C1020 - Interior Doors	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2022	293,112
Toilet Partitions - Steel Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	7,914
Toilet Partitions - Steel Renewal	Yes	C1030 - Fittings	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	3,957
Traction Geared Freight Elevator - Exposed Live Electrical Parts - Elevator Machine Room 501	No	D1010 - Elevators and Lifts	Life Safety	1- Due within 1 Year of Inspection	Oct 14, 2015	4,370
Traction Geared Freight Elevator Renewal	Yes	D1010 - Elevators and Lifts	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	432,436
Unit Heaters - Steam/Hot Water Renewal	Yes	D3050 - Terminal and Package Units	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2017	18,717
Update freight elevator cab wall paint and refinish wood floor and entry doors	No	D1010 - Elevators and Lifts	Interior Finishes	2- Due within 2 Years of Inspection	May 26, 2019	8,364
VAT Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2017	210,220
VCT Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2019	5,733
VCT Renewal	Yes	C3020 - Floor Finishes	Interior Finishes	3- Due within 5 Years of Inspection	Oct 14, 2019	51,600
Water Coolers - 1970 Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	2- Due within 2 Years of Inspection	Oct 14, 2016	30,279
Water Coolers - 1995 Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	30,279





Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Water Dist Complete Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	115,673
Water Heater - Steam Instantaneous Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2026	139,808
Wet Standpipe System Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2020	221,794
Window AC Units Renewal	Yes	D3050 - Terminal and Package Units	Mission	3- Due within 5 Years of Inspection	Oct 14, 2017	156,019
Windows/Storefront Partitions Renewal	Yes	C1010 - Partitions	Lifecycle	3- Due within 5 Years of Inspection	Oct 14, 2022	10,374
Total						18,655,748

#### Appendix F – Availability of Space/Campus Utilization New Engineering Student Success Building

#### Availability of Space/Campus Utilization Template

Project name: New Engineering Student Success Facility & Infr	CBS/OFM Project #: 40000342	
Institution: WA State University	Scoring category: Replacement - N	lajor
Campus/Location: WSU- Pullman		
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 Utiliza	ition	(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.