

DESCRIPTION OF INTERIM CAPITAL PROJECT FOR CONSIDERATION

April 5, 2018

USC COLUMBIA

PROJECT NAME: Swearingen Roof Replacement

REQUESTED ACTION: Establish Project (Phase I)

REQUESTED ACTION AMOUNT: \$30,000 (1.5%)

Internal Projected Cost: \$2,000,000

BOARD APPROVAL RECEIVED: February 2018

PREVIOUS CHE ACTIONS: N/A

DESCRIPTION:

USC Columbia requests to establish a project to replace the roof on the Swearingen Engineering Center. Swearingen is one of the largest buildings on campus, totaling 217,466 GSF, and the area of the roof is approximately 71,000 GSF. The 31-year-old roof is original to the building, and will be replaced with a PVC roof membrane, with a 20-year warranty. The scope of the project will also include new rigid insulation and will replace all the associated roof flashing at parapet, skylights, and roof-mounted equipment and piping.

This project was identified, and funds committed, during the University's most recent 5-year planning document. It is also included as priority 8 of 9 for the current fiscal year on the 2017 CPIP.

The University will be utilizing Institutional Capital Project Funds (ICPF) for this maintenance project. These funds are excess revenues generated from the portion of student fees designated for the Bond and Renovation Reserve. They are pledged for debt service first, and then any remaining funds are transferred into ICPF at the end of each fiscal year for use in capital improvement projects. Of the State Institution Bond Debt Service Fees charged to students in 2017-2018, approximately \$465, on an FTE basis, is expected to be applied to debt service payments, leaving the remainder to potentially roll in the ICPF account. ICPF is fully committed to University projects through the five and ten-year capital plans. The planned projects and use of ICPF align with the University's CPIP. Over the next five years, the University has approximately \$73.3M planned for E&G and student services projects.

E&G MAINTENANCE NEEDS:

The overall building score on the 2017 Building Condition was 75. Specifically, the ratings of the "physical condition" and "leaks" were 4. At a minimum, the overall building score will increase to a 77 and maintenance needs \$7.1M of will reduce by approximately \$951,000 if these scores are updated to 1's.

ADDITIONAL ANNUAL OPERATING COSTS/SAVINGS:

This project is not expected to impact the operating budget.

Institution Name: USC Columbia
Building Number: 173
Building Name: Swearingen Engineering Center
Location: Main Campus
Gross Square Feet: 217,466
Year Const / Renov: 1987
Replacement Cost: \$47,548,352

Respondent: Don Gibson
Name
Telephone: 803-777-1083
E-Mail: dgibson@fmc.sc.edu

Comments:

Owned Fee Simple
Roof installed 1987
Roof replacement planned for 2019

Please do not enter data in the cells below this line. Begin data entry on Page 2.

	System Avg. Score	Multiplier		System % of Building	=	Current % Value Bldg.
Foundation	3.000	0.500	x	0.13	=	0.0650
Exterior Walls	1.125	0.975	x	0.13	=	0.1268
Floor	1.000	1.000	x	0.07	=	0.0700
Roof	3.000	0.500	x	0.07	=	0.0350
Interior Walls	1.667	0.867	x	0.03	=	0.0260
Windows	1.400	0.920	x	0.02	=	0.0184
Doors	2.200	0.740	x	0.01	=	0.0074
Ceiling	2.250	0.725	x	0.03	=	0.0218
Heating	2.375	0.688	x	0.10	=	0.0688
Cooling	2.625	0.613	x	0.10	=	0.0613
Plumbing	2.111	0.767	x	0.08	=	0.0613
Electrical	2.000	0.800	x	0.08	=	0.0640
Elevators	1.667	0.867	x	0.01	=	0.0087
Safety	1.333	0.933	x	0.05	=	0.0467
Design Standards	2.000	0.800	x	0.09	=	0.0720

Agency Rating: 1.00 0.753

Replacement Cost:	\$47,548,352
Building Condition:	75
Maintenance Need Over 20 Years:	\$11,887,088

Bldg. Avg. Grade	Condition Code	Condition Multiplier	Difference
1	Satisfactory	1.00	
2	Remodel A	0.8	-0.2
3	Remodel B	0.5	-0.3
4	Remodel C	0.2	-0.3
5	Replace	0.00	-0.2

Building Name: Swearingen Engineering Center

Building Number: 173

Foundation 1 - 2 - 3 - 4 - 5	Rating
Cracked Walls	3
Foundation Settlement	3
Foundation Deterioration	3
Design Load	3
Average	3

Exterior Wall System 1 - 2 - 3 - 4 - 5	Rating
Physical Condition	2
Waterproofing	1
Caulking	1
Pointing	1
Code Compliance	1
Insulation	1
Maintainability	1
Painting	1
Average	1.125

Floor System 1 - 2 - 3 - 4 - 5	Rating
Structural Condition	1
Maintainability	1
Floor Finish	1
Vibration	1
Fire Rating	1
Design Load	1
Average	1

Roof System 1 - 2 - 3 - 4 - 5	Rating
Physical Condition	4
Leaks	4
Drainage	3
Insulation	3
Fire Rating	2
Design Load	2
Average	3
Age of Roof Cover:	
Type of Roof Cover:	BUR
Flat:	X
Pitched:	

Interior Wall System 1 - 2 - 3 - 4 - 5	Rating
Physical Condition	1
Strength & Stability	1
Acoustical Quality	2
Appearance	2
Adaptability	2
Maintainability	2
Average	1.6667

Window System 1 - 2 - 3 - 4 - 5	Rating
Physical Condition	1
Appearance	1
Functional Ability	2
Infiltration	1
Maintainability	2
Average	1.4

Door System 1 - 2 - 3 - 4 - 5	Rating
Door Leaf	2
Frame	2
Hardware	3
Security	2
Fire Rating	2
Average	2.2

Ceiling System 1 - 2 - 3 - 4 - 5	Rating
Structural Condition	2
Accoustical	2
Accessibility	2
Appearance	3
Average	2.25

Heating System 1 - 2 - 3 - 4 - 5	Rating
Heating Capacity	2
Temperature Control	3
Noise Level	2
Air Circulation & Vent	3
Reliability	3
Reasonable Energy Consumption	2
Filtration	2
Humidity	2
Average	2.375
Age of System:	
Heating Capacity-BTUs:	

Cooling System 1 - 2 - 3 - 4 - 5	Rating
Cooling Capacity	2
Reasonable Energy Consumption	3
Temperature	3
Noise Level	3
Air Circulation & Vent	3
Reliability	3
Filtration	2
Humidity	2
Average	2.625
Age of System:	
Cooling Capacity-Tons:	

Plumbing System 1 - 2 - 3 - 4 - 5	Rating
Water Pressure & Supply Quantities	2
Sanitation Hazards or Cross Functions	2
Drain & Waste Function	2
Fixture Quantities	3
Fixture Types & Cond.	2
Wheel Chair Fixtures	2
Restroom Facilities	2
Roof Drainage	2
Site Drainage	2
Average	2.1111

Electrical System 1 - 2 - 3 - 4 - 5	Rating
Safety Conditions	2
Service Capacity	2
Panel Capacity	2
Convenience Outlets	2
Light Levels	2
Fixtures	2
Emergency Power	2
Exit Lighting	2
Average	2

Elevator System 1 - 2 - 3 - 4 - 5	Rating
Size & Number	3
Maintainability	1
Code Compliance	1
Average	1.6667

Safety Standards 1 - 2 - 3 - 4 - 5	Rating
Means of Egress	2
Fire Ratings	1
Extinguishing Systems	1
Detection & Alarm Sys.	1
Lighting Systems	1
Handicap Access	2
Average	1.3333

Design Standards 1 - 2 - 3 - 4 - 5	Rating
Flexible Design	2
Suitable for Present Use	2
Gross to Assignable Area	2
Average	2

FOR DEPARTMENT USE ONLY	
CHE	_____
JBRC	_____
SFAA	_____
JBRC Staff	_____
ADMIN Staff	_____
A-1 Form Mailed	_____
SPIRS Date	_____
Summary	_____

(For Department Use Only)
SUMMARY NUMBER
FORM NUMBER

PERMANENT IMPROVEMENT PROJECT REQUEST

1. AGENCY
 Code H27 Name USC Columbia
 Contact Person Derek S Gruner Phone (803)777-1184

2. PROJECT
 Project # _____ Name Swearingen Roof Replacement
 Facility # 173 Facility Name Swearingen Engineering Center

County Code	40 - Richland
New/Revised Budget	\$30,000.00

Project Type	3 - Repair/Renovate Existing Facilities/System
Facility Type	2 - Program/Academic

3. CPIP PROJECT APPROVAL FOR CURRENT FISCAL YEAR
 CPIP priority number 8 of 9 for FY 17/18

4. PROJECT ACTION PROPOSED (Indicate all requested actions by checking the appropriate boxes.)

Establish Project	<input checked="" type="checkbox"/>	Decrease Budget	<input type="checkbox"/>	Close Project	<input type="checkbox"/>
Establish Project - CPIP	<input type="checkbox"/>	Change Source of Funds	<input type="checkbox"/>	Change Project Name	<input type="checkbox"/>
Increase Budget	<input type="checkbox"/>	Revise Scope	<input type="checkbox"/>	Cancel Project	<input type="checkbox"/>

5. PROJECT DESCRIPTION AND JUSTIFICATION
 (Explain and justify the project or revision, including what it is, why it is needed, and any alternatives considered. Attach supporting documentation/maps to fully convey the need for the request.)

ACTION: Establish Project

DESCRIPTION: The project will remove and replace the existing original roof and provide a new PVC roof membrane, new rigid insulation and include the replacement of all associated roof flashing at parapets, skylights, and roof-mounted mechanical equipment and piping. The new roof system will provide a twenty-year warranty.

JUSTIFICATION: The existing roof is 31 years old and is at the end of its useful life.

BUDGET: \$2,000,000

6. OPERATING COSTS IMPLICATIONS
 Attach Form A-49 if any additional operating costs or savings will result from this request. This includes costs to be absorbed with current funding.

7. ESTIMATED PROJECT SCHEDULE AND EXPENDITURES
 Estimated Start Date: January 2018 Estimated Completion Date: August 2020
 Estimated Expenditures: Thru Current FY: \$30,000.00 After Current FY: \$1,970,000.00

8. ESTIMATES OF NEW/REVISED PROJECT COSTS

PROJECT #	
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- | | | | |
|---------------------|---------------------------------------|------------------------|-------------------|
| 1. _____ | Land Purchase ----> | Land: _____ | Acres |
| 2. _____ | Building Purchase ----> | Floor Space: _____ | Gross Square Feet |
| 3. <u>30,000.00</u> | Professional Services Fees | | |
| 4. _____ | Equipment and/or Materials ----> | Information Technology | _____ |
| 5. _____ | Site Development | | |
| 6. _____ | New Construction ----> | Floor Space: _____ | Gross Square Feet |
| 7. _____ | Renovations - Building Interior ----> | Floor Space: _____ | Gross Square Feet |
| 8. _____ | Renovations - Utilities | | |
| 9. _____ | Roofing - _____ Roof Age | | |
| 10. _____ | Renovations - Building Exterior | | |
| 11. _____ | Other Permanent Improvements | | |
| 12. _____ | Landscaping | | |
| 13. _____ | Builders Risk Insurance | | |
| 14. _____ | Other Capital Outlay | | |
| 15. _____ | Labor Costs | | |
| 16. _____ | Bond Issue Costs | | |
| 17. _____ | Other: _____ | | |
| 18. _____ | Contingency | | |

\$30,000.00 TOTAL PROJECT BUDGET

ENVIRONMENTAL HAZARDS

Identify all types of significant environmental hazards (including asbestos, PCB's, etc.) present in the project and the financial impact they will have on the project.

Type: _____


Cost Breakdown

Design Services	\$ _____
Monitoring	\$ _____
Abate/Remed	\$ _____
Total Costs	\$ _____ 0.00

9. PROPOSED SOURCE OF FUNDING

Source	Previously Approved Amount	Increase/Decrease	Original/Revised Budget	Transfer to/from Proj. #	Rev Object Code	Treasurer's ID Number	Rev Sub Fund	Exp Sub Fund
(0) CIB, Group			0.00 0.00		8115		3043	3043
(1) Dept. CIB, Group			0.00 0.00		8115		3143	3143
(2) Institution Bonds			0.00 0.00					3235
(3) Revenue Bonds			0.00 0.00					3393
(4) Excess Debt Service			0.00 0.00					3497
(5) Capital Reserve Fund			0.00 0.00		8895		3603	3603
(6) Appropriated State			0.00 0.00		8895	68800100	1001	3600
(7) Federal			0.00 0.00			78800100		5787
(8) Athletic			0.00 0.00			88800100		3807
(9) Other (Specify) ICPF		30,000.00	30,000.00 0.00 0.00		7262	98800100	4335	3907
TOTAL BUDGET	\$0.00	\$30,000.00	\$30,000.00					

10. SUBMITTED BY:

 Director, Planning and Programming
Signature of Authorized Official and Title

2/26/18
Date

11. APPROVED BY:

(For Department Use Only)

Authorized Signature and Title

Date

**PERMANENT IMPROVEMENT PROJECT INFORMATION FORMAT
FOR PHASE I A&E PRE-DESIGN PROJECTS**

Swearingen Roof Replacement

1. What is the internal projected cost of the project?

The total internal projected cost for this project is \$2,000,000.

2. What is/are the source(s) of funds to be used for A&E pre-design?

The source of funds for A&E pre-design are Institutional Capital Project Funds.

3. What is your agency/institution's definition of the source(s) of funds used for the A&E pre-design? (Please be specific for each source and if there is a statutory authority authorizing the use of the funds for capital projects for the source, please cite the code section. If a source includes any type of fee, what is the fee called, what is the fee amount and when was it put in place?)

Institutional Capital Project Funds are generated from the portion of tuition and fees designated for Bond and Renovation Reserve. These funds pay debt service first and the remainder is used for capital improvements.

4. What is the current fund balance of uncommitted funds in the source of funds for A&E pre-design?

Institutional Capital Project Funds currently have an uncommitted balance of \$2,000,000 available for use in funding this project.

5. What is the source(s) of funds to be used for construction?

Institutional Capital Project Funds

6. What is your agency/institution's definition of the source(s) of funds to be used for construction? (Please be specific for each if different from those in 3 above. If there is statutory authority authorizing the use of the funds for capital project, please cite the code section and if a source includes a fee, what is the fee called, what is the fee amount and when was it put in place?)

Institutional Capital Project Funds are generated from the portion of tuition and fees designated for Bond and Renovation Reserve. These funds pay debt service first and the remainder is used for capital improvements.

7. What is the current fund balance of uncommitted funds in each source to be used for construction?

Institutional Capital Project Funds currently have an uncommitted balance of \$2,000,000 available for use in funding this project.

8. Will the use of any funds for A&E pre-design or for construction require an increase in any student fee or tuition?

No increase in student fees is required.

9. If the use of any funds for A&E pre-design or construction will require any student fee or tuition increase, please explain and include the amount of the fees annually or by semester, what the fee is called and when it was put in place.

The question is not applicable to this project.

10. What is the total square footage of the building to be renovated or constructed?

The total square footage of Swearingen Engineering Center is 217,466 gross square feet.

11. If a portion of the building is to be renovated, what is the square footage of the portion that will be included in the renovation?

The area of the Swearingen roof is approximately 71,000 gross square feet.

12. What program(s) will use the space to be renovated/constructed?

College of Engineering and Computing

13. What is the current age of the building to be renovated?

Swearingen Engineering Center was originally constructed in 1987.

14. What is the current age of the building system(s) to be renovated or replaced?

31 years

15. If any new space is being added to the facility, please provide demand/usage data to support the need.

No new space is being added to the facility.

16. If the A&E pre-design request is above 1.5% of the internal estimated cost of the project, what is the reason the amount exceeds 1.5%?

The A/E pre-design request is not above 1.5%.

17. What are the estimated numbers of students, faculty, staff and/or clients that are expected to use the space affected by the project or for the entire building? (Answer for as many as are applicable.)

Estimated students that will use the space is based on the College of Engineering and Computing which has a population of 850 students. The building has classrooms, faculty offices, and administrative space.

18. Has the project been included in a previous year's CPIP? If so, what was the last year the project was included and for which year, 1-5?

The project is included in Year 1 of the 2017 CPIP. It was listed as priority number 8 of 9.

19. What are the economic impacts of the project, including job creation and retention? If there are none, please explain.

This project will provide economic activity through the construction project itself. Construction creates and/or retains jobs in three ways: 1) it creates direct jobs that are involved in the construction project; 2) it creates indirect jobs through the manufacturing of building materials and systems and the provision of key services in areas like design professions, legal, and accounting services; and 3) it creates induced jobs in other service areas whereby income from the first two categories is spent on goods and services in other areas of the economy. It is estimated that this project will generate 40 jobs.

20. How will your agency/institution address and fund maintenance of this facility construction/renovation?

Maintenance will be funded from the Education and General Maintenance Reserve.

21. If your agency/institution has a deferred maintenance account, what is the name of the account and what is its current uncommitted balance?

Education and General Maintenance Reserve. At this time, there is no uncommitted balance in the E&G Maintenance Reserve Fund account after factoring in all planned projects. The E&G Maintenance Reserve Fund is replenished annually.

22. If how maintenance will be addressed and funded for this facility construction/renovation has not been determined yet, what steps are in place to begin to address how your agency/institution will fund maintenance to this and other agency/institution facilities?

The funding of maintenance is described in the answers to questions 20 and 21.