

STATE OF NORTH CAROLINA - DEPARTMENT OF ADMINISTRATION
STATE CONSTRUCTION OFFICE
PROPOSED REPAIR & RENOVATION OR CAPITAL IMPROVEMENT PROJECT
BIENNIUM 2019-2021

BAC 4.2
Form OC-25
(Rev 10/2018)

DEPARTMENT and DIVISION: UNC Greensboro DATE: 10/23/19
PROJECT IDENTIFICATION: Steam Plant Control Systems Upgrade
PROJECT CITY or LOCATION: Greensboro, NC
PROJECT DESCRIPTION & JUSTIFICATION: (Attach add'l data as necessary to indicate need, size, function of improvements as well as a master plan.)

The existing Steam Plant Control System is old, inefficient and unreliable. The project will provide new controlling equipment and direct digital controls which will substantially improve reliability, operability and efficiency of the campus heat system. Scope includes integration into the University Building Automation System, (4) individual boiler control cabinets with touch screen displays, a new master control cabinet with touch screen display, (5) VFDs for forced draft fans and for feed water pump, new wall mounted monitors for operator's Control Room, new UPS system for Steam Plant control system, new site glasses and level controls for deaerator tank and condensate tank, along with training for all operators.

(Definitions/explanations are provided on pg 2 to assist in completion of this form.)

CURRENT ESTIMATED CONSTRUCTION COST

	QTY	UNIT	COST PER UNIT	TOTAL
A. Land Requirement				\$0
B. Site Preparation				
1. Demolition	1	LS	\$ 25,000.00	\$25,000
2. Site Work				\$0
C. Construction				
1. Utility Services				\$0
2. Building Construction				\$0
3. Building Construction (existing)				\$0
4. Plumbing (new space)				\$0
5. HVAC (new space)				\$0
6. Electrical (Includes TV & Radio Studio)				\$0
7. Fire Suppression and Alarm Systems				\$0
8. Telephone, Data, Video	1	LS	\$ 75,000.00	\$75,000
9. Associated Construction Costs	1	LS	\$ 19,500.00	\$19,500
10. Other: <u>Steam Plant Control Systems Upgrade</u>	1	LS	\$ 300,000.00	\$300,000
11. Other: _____				\$0
D. Equipment				
1. Fixed				\$0
2. Moveable				\$0
Total Cost of Work				\$ 419,500

Items below may be calculated by percentage or lump sum. If using lump sum, make entry in \$ field.

DESIGN FEE	9.75 %	(% of Estimated Construction Costs)	\$ 40,901
PRECONSTRUCTION COSTS	0 %	(% of Estimated Construction Costs [1% for CM@Risk])	\$ -
COMMISSIONING	1.5 %	(0.5% simple; 1.0% moderate; 1.5% complex)	\$ 6,293
SPECIAL INSPECTIONS/MATERIALS	0 %	(1.25% estimated)	\$ -
SUSTAINABILITY	0 %	(3% LEED Gold, 2% LEED Silver)	\$ -
ADVANCE PLANNING	0 %	Includes programming, feasibility, analysis (% of Estimated Construction Costs)	\$ -
CONTINGENCIES	5 %	(% of Estimated Construction Costs [3% New or 5% R&R])	\$ 20,975
ESTIMATED COSTS		(% of Estimated Construction Costs + Contingencies + Design Fee)	\$ 487,669

Escalation = percent per month multiplied by number of months

(From Est. Date to mid-point of construction) = 6 months 5.0 % annually beginning on month 1

ESCALATION COST INCREASE (Total of Estimated Construction Costs x Escalation %) \$12,192

TOTAL ESTIMATED PROJECT COSTS (Estimated Construction Costs + Escalation Cost Increase) **\$ 499,860**

APPROVED BY: _____ TITLE: _____ Date: _____
(Governing Board or Agency Head)

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DEFINITIONS OR EXPLANATIONS

(Items not listed below are presumed to be self-explanatory. Questions may be directed to the State Construction Office.)

Item on Form	Definition/Explanation
CURRENT ESTIMATED CONSTRUCTION COST	Attach basis and justification for estimate. Include description, quantities, units, special features, similar cost on recent projects, etc.
A. Land Requirement	Includes purchase and acquisition costs (title search, filing fees, other legal fees, etc.) required to obtain land.
B. 1. Demolition	Includes but may not be limited to lead and/or asbestos testing and removal, building or interior space demolition in whole or part.
B. 2. Site Work	Includes but may not be limited to grading, excavating, poor soils and/or rock removal, utilities relocation, roads, walks, parking, streambank repairs, stormwater management, retaining walls, rainwater harvesting systems, landscaping.
C. 1. Utility Services	Attach explanation of any special building, mechanical, or electrical service requirements with appropriate distance to existing buildings, water, gas, electrical or other utility service.
C. 9. Associated Construction Costs	Includes but may not be limited to construction fire alarm testing, utility shut downs, utilities, signage, security, displaced parking, staging, lock cores, keys, State Construction Office charges.
C. 10. Other	List other significant sources of cost not included elsewhere. Additional lines may be added if needed.
PRECONSTRUCTION COSTS	Includes but may not be limited to land surveys, lead/asbestos surveys, environmental assessments, copying, postage, costs of print advertising, and destructive testing. For CM at Risk, preconstruction costs are consistent with the requirements of the preconstruction services agreement.
CONTINGENCIES	Unanticipated or unforeseen conditions including but not limited to design error and omissions, concealed site conditions, utility conflicts, and extended overhead resulting from weather or other delay.