

Agenda Item No.

**AGENDA ITEM BRIEFING**

**Submitted by:** Michael K. Young, President  
Texas A&M University

**Subject:** Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement at Clements Hall Project, Texas A&M University, College Station, Texas (SSC Project No. 2016-01444)

**Background and Prior Actions:**

The HVAC Replacement at Clements Hall Project was included as an approved project on the FY 2017 – FY 2021 A&M System Capital Plan approved by the Board at the September 2016 meeting.

**Proposed Board Action:**

- (1) Approve the project scope and budget.
- (2) Appropriate \$7,123,200 for construction services and related project costs and revert previous appropriations to the source account.
- (3) Approve construction of the HVAC Replacement at Clements Hall Project at Texas A&M University (Texas A&M).

**Funding/Budget Amount:**

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Revenue Financing System Debt Proceeds	<u>\$7,123,200</u>	\$536,345	Housing Revenue
Total Project Funds	<u>\$7,123,200</u>		

**Project Justification:**

Originally constructed in 1981, Clements Hall is a four-story concrete structure consisting of 128 modular rooms/spaces (the majority being dorm rooms). Total square footage is approximately 62,156 gross square feet (GSF). Each room is conditioned by an individual Fan Coil Unit (FCU) served by a four-pipe Chilled Water (CHW) and Heating Water (HW) piping distribution system. Each room has a pneumatic thermostat and fan speed control switch (Hi/Med/Lo/Off). Corridors are conditioned by floor-mounted FCUs as well as two Outside Air Units (OAU) units located on the roof with a duct chase located adjacent to the stairwells on both ends of each floor.

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Outside Air (OA) is served to the corridor and introduced to each room via door undercut using bathroom exhaust to draw. OA short circuits from the corridor to the bathroom without mixing in the room space. Stairwells are not currently conditioned. OA intake louvers are located in the areaway near grade and ducted in crawl space to ventilate crawlspace via two fans.

The Heating Ventilation Air Conditioning (HVAC) system has reached the end of its useful life and is in need of replacement. Existing electrical switchgear is also beyond its useful life and will be replaced on this project. Gear is fusible type with spare parts not available for use on this project.

**Scope:**

This project will replace all FCUs with new four-pipe FCUs with HW coils in the re-heat position. Each room will have a thermostat and humidistat to implement a humidity control strategy at the room level. A fan speed controller will be provided in each room to allow for student control of the FCU. Corridor floor-mounted FCUs will be replaced. Conditioned OA will be provided via a new roof-mounted air handler with integral Energy Recovery Unit (ERU). Existing exhaust fans will be removed. New exhaust ductwork will be manifolded on the roof and routed to the ERU to capture energy currently being exhausted. New OA and exhaust duct risers will be installed to introduce conditioned fresh air into each room. A new FCU will be provided to serve the stairwells.

General construction shall consist of the removal and replacement of existing ceilings to facilitate mechanical work. A bid alternate for one new roof hatch for safer roof access as well as an alternate for two new floor hatches to be located in each stairwell will be issued to provide access for replacement of and repair of crawl space exhaust fans.

Construction on this project is scheduled to start in December 2017 with substantial completion scheduled for July 2018. The total project budget is \$7,123,200.

**Other Major Fiscal Impacts:**

None.

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**TEXAS A&M UNIVERSITY**

Office of the President

June 30, 2017

Members, Board of Regents  
The Texas A&M University System

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement at Clements Hall Project, Texas A&M University, College Station, Texas (SSC Project No. 2016-01444)

I recommend adoption of the following minute order:

**“The project scope along with a project budget of \$7,123,200 for the HVAC Replacement at Clements Hall Project is approved.**

**The amount of \$7,123,200 is appropriated from Account No. 01-083540, Revenue Financing System Debt Proceeds (Housing Revenue), for construction services and related project costs. The amount of \$672,000 is reverted to Account No. 02-030062 Residence Life.**

**The HVAC Replacement at Clements Hall Project, Texas A&M University, College Station, Texas, is approved for construction.**

**The Board of Regents of The Texas A&M University System (Board) reasonably expects to incur debt in one or more obligations for this project, and all or a portion of the proceeds received from the sale of such obligations is reasonably expected to be used to reimburse the account(s) for amounts previously appropriated and/or expended from such account(s).**

**As required by Section 5(a) of the Master Resolution of the Revenue Financing System, the Board hereby determines that it will have sufficient funds to meet the financial obligations of The Texas A&M University System, including sufficient Pledged Revenues to satisfy the Annual Debt Service Requirements of the Revenue Financing System and to meet all financial obligations of the Board relating to the Revenue Financing System and that**

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**the Participants, on whose behalf the debt is issued, possess the financial capacity to satisfy their Direct Obligations.”**

Respectfully submitted,

Michael K. Young, President  
Texas A&M University

**Approval Recommended:**

**Approved for Legal Sufficiency:**

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John Sharp  
Chancellor

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Ray Bonilla  
General Counsel

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Billy Hamilton  
Executive Vice Chancellor and  
Chief Financial Officer

**HVAC REPLACEMENT AT CLEMENTS HALL  
TEXAS A&M UNIVERSITY  
SSC PROJECT NO. 2016-01444**

**PROJECT BUDGET**

1.	Amount Available for Construction Contract.....	\$5,740,800
2.	Owner's Contingency .....	574,080
3.	Architectural/Engineering Fees .....	459,840
4.	SSC Project Management Fees .....	204,998
5.	SSC/Physical Plant Services .....	15,500
6.	Energy System Testing & Balancing.....	43,056
7.	Other Project Costs .....	<u>84,926</u>
8.	TOTAL ESTIMATED COST OF PROJECT.....	<u>\$7,123,200</u>

1. BOR Approval to Include in Capital Plan ..... September 1, 2016
2. Issue A/E RFQ ..... March 14, 2017
3. Receive A/E RFQ Responses..... April 4, 2017
4. Interview A/E Shortlist ..... April 5, 2017
5. Design Kick-Off Meeting ..... April 2017
6. Execute AE Agreement ..... May 2017
7. Complete Schematic Design ..... June 2017
8. Complete Design Development ..... July 2017
9. Complete Construction Documents ..... July 2017
10. Advertise for Competitive Sealed Proposals (CSP) ..... July 2017
11. Receive CSPs ..... August 2017
12. CSP Evaluation ..... August 2017
13. BOR Approval for Construction ..... August 23, 2017
14. Execute CSP Agreement ..... August 2017
15. Begin Construction ..... December 2017
16. Substantial Completion ..... July 31, 2018
17. Owner Occupancy ..... August 2018

**TEXAS A&M UNIVERSITY  
REVENUE FINANCING SYSTEM  
HVAC Replacement Clements Hall  
Housing Revenue**

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total	Coverage 1.15x
BONDS	7,195,000.00				
YEAR 1	7,055,000.00	140,000.00	395,725.00	535,725.00	616,083.75
YEAR 2	6,905,000.00	150,000.00	388,025.00	538,025.00	618,728.75
YEAR 3	6,750,000.00	155,000.00	379,775.00	534,775.00	614,991.25
YEAR 4	6,585,000.00	165,000.00	371,250.00	536,250.00	616,687.50
YEAR 5	6,410,000.00	175,000.00	362,175.00	537,175.00	617,751.25
YEAR 6	6,225,000.00	185,000.00	352,550.00	537,550.00	618,182.50
YEAR 7	6,030,000.00	195,000.00	342,375.00	537,375.00	617,981.25
YEAR 8	5,825,000.00	205,000.00	331,650.00	536,650.00	617,147.50
YEAR 9	5,610,000.00	215,000.00	320,375.00	535,375.00	615,681.25
YEAR 10	5,380,000.00	230,000.00	308,550.00	538,550.00	619,332.50
YEAR 11	5,140,000.00	240,000.00	295,900.00	535,900.00	616,285.00
YEAR 12	4,885,000.00	255,000.00	282,700.00	537,700.00	618,355.00
YEAR 13	4,620,000.00	265,000.00	268,675.00	533,675.00	613,726.25
YEAR 14	4,340,000.00	280,000.00	254,100.00	534,100.00	614,215.00
YEAR 15	4,045,000.00	295,000.00	238,700.00	533,700.00	613,755.00
YEAR 16	3,730,000.00	315,000.00	222,475.00	537,475.00	618,096.25
YEAR 17	3,400,000.00	330,000.00	205,150.00	535,150.00	615,422.50
YEAR 18	3,050,000.00	350,000.00	187,000.00	537,000.00	617,550.00
YEAR 19	2,680,000.00	370,000.00	167,750.00	537,750.00	618,412.50
YEAR 20	2,290,000.00	390,000.00	147,400.00	537,400.00	618,010.00
YEAR 21	1,880,000.00	410,000.00	125,950.00	535,950.00	616,342.50
YEAR 22	1,445,000.00	435,000.00	103,400.00	538,400.00	619,160.00
YEAR 23	990,000.00	455,000.00	79,475.00	534,475.00	614,646.25
YEAR 24	510,000.00	480,000.00	54,450.00	534,450.00	614,617.50
YEAR 25	-	510,000.00	28,050.00	538,050.00	618,757.50
		<u>\$ 7,195,000.00</u>	<u>\$ 6,213,625.00</u>	<u>\$ 13,408,625.00</u>	<u>\$ 15,419,918.75</u>

Estimated issuance costs and rounding of \$71,800 are included in this schedule.  
Long-term rates are assumed to be 5.50%. Rates are subject to market change.  
Prepared by the Office of the Treasurer - Treasury Services 6/6/17

**Rates are subject to market change. Amounts are preliminary estimates that will be revised at the time bonds are issued.**

**REVISED**



## HVAC Replacement at Clements Hall

Texas A&M University

SSC Project No. 2016-01444