

Agenda Item No. 3.3

AGENDA ITEM BRIEFING

Submitted by: Billy Hamilton, Executive Vice Chancellor and Chief Financial Officer
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 Mosher Hall Project, Texas A&M University, College Station, Texas (Project No. 02-3213)

Background and Prior Actions:

The HVAC Replacement at Mosher Hall Project was included as an approved project on the FY 2016 – FY 2020 A&M System Capital Plan approved by the Board at the September 2015 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$15,028,100 for construction services and related project costs and revert previous appropriations to the source account.
- (3) Approve construction of the HVAC Replacement at Mosher 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>\$15,028,100</u>	\$1,076,980	Housing Revenue
Total Project Funds	<u>\$15,028,100</u>		

Project Justification:

Originally constructed in 1975, Mosher Hall has an existing heating, ventilation, air conditioning (HVAC) system consisting of a constant volume air handling system with zone reheat coils in each room. There are twenty (20) total Air Handler Units (AHUs), including four AHUs per floor for each of the five floors of this building. Outside air (OA) intakes are located on the roof with OA ductwork routed down to each of the mechanical rooms that house the AHUs. The mechanical room serves as an OA/Return Air (RA) mixing plenum with evidence of moisture related issues caused by condensation from humid OA being introduced directly into the room.

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Each pair of dorm rooms share a restroom which is exhausted by a roof mounted exhaust fan that serves the stacked restrooms.

The HVAC system has reached the end of its useful life and is in need of replacement. There have been significant maintenance issues resulting from aged heating water piping which is routed throughout this facility.

Scope:

This renovation project will replace the Mosher Hall HVAC system. The existing mechanical system, which consists of constant volume air handling units in each mechanical room with reheat coils per room, will be removed in its entirety. A new mechanical system will be installed to serve each room. The new system will be a variable air volume (VAV) dual duct system with dual duct zone control valves for each room, thereby giving each room individual temperature control. All ductwork from the new air handlers to the rooms will be new.

In addition, the chilled water and hot water pumps in the Commons mechanical room will be removed and replaced with new pumps located in a pump room. All chilled and hot water distribution piping within the building will be replaced. A new Direct Digital Control (DDC) system will be provided and will be tied into a campus-wide control system for better energy management and control by Utilities and Energy Services (UES).

There will be selective demolition of the existing ceilings in the corridors and restrooms, as well as existing partition walls to route the ductwork from the corridors to the restrooms. All light fixtures which are affected by the ceiling work will be demolished. New ceilings will be installed in the corridors and restrooms, as well as new light fixtures in the corridors and restrooms. There is an alternate for new, energy efficient light fixtures in the rest of the building, less stairwells and exterior lighting.

Construction on this project is scheduled to start in December 2016 with substantial completion scheduled for July 2017. The total project budget is \$15,028,100.

Other Major Fiscal Impacts:

None.

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THE TEXAS A&M UNIVERSITY SYSTEM
FACILITIES PLANNING AND CONSTRUCTION
Office of the Executive Vice Chancellor and Chief Financial Officer
September 28, 2016

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 Mosher Hall Project, Texas A&M University, College Station, Texas (Project No. 02-3213)

I recommend adoption of the following minute order:

“The project scope along with a project budget of \$15,028,100 for the HVAC Replacement at Mosher Hall Project is approved.

The amount of \$15,028,100 is appropriated from Account No. 01-083536, Revenue Financing System Debt Proceeds (Housing Revenue), for construction services and related project costs. The amount of \$1,340,000 is reverted to Account No. 02-030062 Residence Life.

The HVAC Replacement at Mosher 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

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

Respectfully submitted,

[ORIGINAL SIGNED BY]

Billy Hamilton
Executive Vice Chancellor and
Chief Financial Officer

Approval Recommended:

[ORIGINAL SIGNED BY]

John Sharp
Chancellor

Approved for Legal Sufficiency:

[ORIGINAL SIGNED BY]

Ray Bonilla
General Counsel

[ORIGINAL SIGNED BY]

Michael K. Young, President
Texas A&M University

HVAC REPLACEMENT AT MOSHER HALL	PROJECT BUDGET
TEXAS A&M UNIVERSITY	
PROJECT NO. 02-3213	

1.	Amount Available for Construction Contract.....	\$12,440,000
2.	Owner’s Contingency	622,000
3.	Architectural/Engineering Fees	850,000
4.	FP&C Project Management and Inspection Fees	388,000
5.	SSC/Physical Plant Services	3,500
6.	Owner’s Builder’s Risk Insurance (FM Global).....	280,000
7.	Energy System Testing & Balancing.....	90,000
8.	Other Project Costs	<u>354,600</u>
9.	TOTAL ESTIMATED COST OF PROJECT.....	<u>\$15,028,100</u>

1. BOR Approval to Include in Capital Plan September 4, 2015
2. Issue A/E RFQ February 16, 2016
3. Receive A/E RFQ Responses..... March 9, 2016
4. Interview A/E Shortlist April 13, 2016
5. Design Kick-Off Meeting May 12, 2016
6. Execute AE Agreement June 2, 2016
7. Complete Schematic Design June 17, 2016
8. Complete Design Development July 15, 2016
9. Complete Construction Documents August 19, 2016
10. Advertise for Competitive Sealed Proposals (CSP) September 2, 2016
11. Receive CSPs September 26, 2016
12. CSP Evaluation September 27, 2016
13. Chancellor Approval of CSP Rank OrderOctober 14, 2016
14. BOR Approval for ConstructionNovember 10, 2016
15. Execute CSP Agreement December 2, 2016
16. Begin Construction December 9, 2016
17. Substantial Completion July 31, 2017
18. Owner Occupancy August 2017

**TEXAS A&M UNIVERSITY
REVENUE FINANCING SYSTEM
02-3213 HVAC Replacement at Mosher Hall
Housing Revenue**

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total	Coverage 1.15x
BONDS	15,180,000.00				
YEAR 1	14,860,000.00	320,000.00	759,000.00	1,079,000.00	1,240,850.00
YEAR 2	14,525,000.00	335,000.00	743,000.00	1,078,000.00	1,239,700.00
YEAR 3	14,175,000.00	350,000.00	726,250.00	1,076,250.00	1,237,687.50
YEAR 4	13,805,000.00	370,000.00	708,750.00	1,078,750.00	1,240,562.50
YEAR 5	13,420,000.00	385,000.00	690,250.00	1,075,250.00	1,236,537.50
YEAR 6	13,015,000.00	405,000.00	671,000.00	1,076,000.00	1,237,400.00
YEAR 7	12,590,000.00	425,000.00	650,750.00	1,075,750.00	1,237,112.50
YEAR 8	12,145,000.00	445,000.00	629,500.00	1,074,500.00	1,235,675.00
YEAR 9	11,675,000.00	470,000.00	607,250.00	1,077,250.00	1,238,837.50
YEAR 10	11,180,000.00	495,000.00	583,750.00	1,078,750.00	1,240,562.50
YEAR 11	10,660,000.00	520,000.00	559,000.00	1,079,000.00	1,240,850.00
YEAR 12	10,115,000.00	545,000.00	533,000.00	1,078,000.00	1,239,700.00
YEAR 13	9,545,000.00	570,000.00	505,750.00	1,075,750.00	1,237,112.50
YEAR 14	8,945,000.00	600,000.00	477,250.00	1,077,250.00	1,238,837.50
YEAR 15	8,315,000.00	630,000.00	447,250.00	1,077,250.00	1,238,837.50
YEAR 16	7,655,000.00	660,000.00	415,750.00	1,075,750.00	1,237,112.50
YEAR 17	6,960,000.00	695,000.00	382,750.00	1,077,750.00	1,239,412.50
YEAR 18	6,230,000.00	730,000.00	348,000.00	1,078,000.00	1,239,700.00
YEAR 19	5,465,000.00	765,000.00	311,500.00	1,076,500.00	1,237,975.00
YEAR 20	4,660,000.00	805,000.00	273,250.00	1,078,250.00	1,239,987.50
YEAR 21	3,815,000.00	845,000.00	233,000.00	1,078,000.00	1,239,700.00
YEAR 22	2,930,000.00	885,000.00	190,750.00	1,075,750.00	1,237,112.50
YEAR 23	2,000,000.00	930,000.00	146,500.00	1,076,500.00	1,237,975.00
YEAR 24	1,025,000.00	975,000.00	100,000.00	1,075,000.00	1,236,250.00
YEAR 25	-	1,025,000.00	51,250.00	1,076,250.00	1,237,687.50
		<u>\$ 15,180,000.00</u>	<u>\$ 11,744,500.00</u>	<u>\$ 26,924,500.00</u>	<u>\$ 30,963,175.00</u>

Estimated issuance costs and rounding of \$151,900 are included in this schedule.
Long-term rates are assumed to be 5.00%. Rates are subject to market change.
Prepared by the Office of the Treasurer - Treasury Services 9/12/16

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



HVAC Replacement at Mosher Hall

Texas A&M University

Project No. 02-3213