

Agenda Item No. 3.2

AGENDA ITEM BRIEFING

Submitted by: Billy Hamilton, Deputy 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 Engineering Classroom and Research Building Project, Prairie View A&M University, Prairie View, Texas (Project No. 05-3300)

Background and Prior Actions:

The Engineering Classroom and Research Building Project was included as an approved project on the FY 2021 – FY 2025 A&M System Capital Plan approved by the Board at the August 2020 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$63,000,000 for construction services and related project costs. \$7,000,000 has been previously appropriated to this project.
- (3) Approve construction of the Engineering Classroom and Research Building Project at Prairie View A&M University (PVAMU).

Funding/Budget Amount:

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Permanent University Fund Debt Proceeds	\$63,000,000	\$4,681,670	Available University Funds
Cash (Gifts)	<u>\$7,000,000</u>	N/A	N/A
Total Project Funds	<u>\$70,000,000</u>		

Project Justification:

The Roy G. Perry College of Engineering Complex consists of five buildings varying in age. Four of these buildings are over 40 years old and have become incapable of supporting current teaching pedagogies and emerging areas of research. The most recent facility built was the Electrical Engineering building over 16 years ago. Over the past 40 years the engineering programs, enrollment, and student and faculty expectations have changed. The enrollment in the College of Engineering rapidly grew from 969 students in 2010 to 1,635 in 2018. The number of graduate students has almost tripled. The college has grown to over 85 faculty and researchers. In addition, four outstanding new research centers have been added to the college. During all this new growth

Agenda Item No. 3.2
Agenda Item Briefing

over a 16-year period, no new space has been added to the engineering complex. The main reasons for needing a new building are:

- Due to growth in enrollment of both undergraduate and graduate programs, the existing space is simply insufficient for the faculty offices, graduate student offices, research laboratories, and teaching labs. Existing labs are overcrowded with students and equipment, forcing students to conduct labs in cramped and isolated spaces. The college's older facilities are incompatible with creating appropriately sized and safe teaching conditions for students. The students often complain that there is no room for collaborative space. There is no room for storage. The current space limits faculty and student productivity.
- The existing buildings do not meet the current demands and future needs of the students and faculty. An initiative of the college is to increase undergraduate and graduate degrees and hire more faculty. In order to achieve this initiative, additional space is required to support existing facilities and the college's growth goals. In addition, the vision of the future of the college cannot be achieved in the current space. The college's forward-thinking strategic plan is to grow research capabilities, bring state-of-the-art research and teaching labs, and create collaborative spaces. Purpose-built construction for engineering research and learning will transform the teaching and research output of the college.
- The college will benefit from more options for collaborative workspaces and multidisciplinary research. These types of spaces are crucial to fostering an interdisciplinary approach to instruction and research across engineering disciplines.
- The existing facilities' physical conditions are incompatible with the infrastructure demands required to produce research of the first class. Certain engineering disciplines—especially chemical-intensive instruction and wet lab intensive research—require purpose-built construction to meet current safety standards for proper air handling, water purity, and accessibility. Existing facilities are showing wear and tear through floor finishes, ceilings, doors, elements of plumbing and mechanical systems, and temporary patches on the roof.

The proposed building is programmed to balance student spaces with focused research spaces. The new lab spaces will be designed to experience multidisciplinary research. There will be dedicated space to support work in 3D manufacturing, space exploration, data analytics and artificial intelligence, robotics, structural analysis, and other areas. A maker space area will promote collaboration of students across engineering disciplines.

Scope:

The proposed Engineering Classroom and Research Building totals 106,146 gross square feet (GSF), which translates to 64,095 assignable square feet (ASF) at 60% efficiency. The new Engineering Classroom and Research Building will be constructed on the main campus in Prairie View, Texas sited west of EE O'Banion Street and south of DW Martin Street. Located in the Engineering Complex, this new facility will help create an engineering quad. Providing much-needed instructional and laboratory capacity for the Roy G. Perry College of Engineering, the new

Agenda Item No. 3.2
Agenda Item Briefing

Engineering Classroom and Research Building will support undergraduate education, student innovation, and emerging areas of research across engineering disciplines.

Allotting almost two-thirds of the assignable square footage to direct instruction, the new facility is programmed to provide the university with six general instructional spaces and 14 specialized instructional labs for the College of Engineering. General instruction spaces for the university support a variety of pedagogical methods and include the following types of classrooms: general purpose, cooperative learning, and computer. Specialized instructional labs are programmed to support the chemical engineering, mechanical engineering, and civil engineering departments.

In addition to direct instructional space, the remaining third of the new facility will be comprised of research lab space for faculty and graduate students. Research space is categorized by three typical distinctions: wet lab space, smart manufacturing + materials + devices/sensors, and computational lab space. Developed according to modular planning principles, all research wet lab spaces are planned using a typical module to maximize bench space with specialty alcoves for fume hoods, biosafety cabinets, and biofermentation as required by principal investigators. Applied to computational labs, this module provides space for reconfigurable workstations and server alcoves. Smart manufacturing + materials + device/ sensor labs represent a hybrid of both wet and computation research.

Construction on this project is scheduled to start in June 2021 with substantial completion scheduled for May 2023. The total project budget is \$70,000,000.

Deferred Maintenance:

There is no deferred maintenance associated with this project. PVAMU budgets deferred maintenance as part of its overall budgeting process. Funds will be allocated towards planned and deferred maintenance for this new facility based on the Gordian deferred maintenance model. PVAMU will soon make a determination about existing aging facilities associated with this academic program and project (demolition and/or rehab).

Other Major Fiscal Impacts:

None.

Strategic Plan Imperative(s) this Item Advances:

The proposed Engineering Classroom and Research Building, the academic degree programs and research that will be conducted in this proposed facility coincide with The Texas A&M University System Strategic Plan Imperatives below:

- Strategic Plan Imperative #3: Our students will leave the A&M System as responsible and engaged citizens prepared for successful careers in an increasingly global economy.
- Strategic Plan Imperative #5: The A&M System will provide services that respond to the needs of the people of Texas and contribute to the strength of the state's economy.

Agenda Item No. 3.2

THE TEXAS A&M UNIVERSITY SYSTEM
FACILITIES PLANNING AND CONSTRUCTION
Office of the Deputy Chancellor and Chief Financial Officer
April 19, 2021

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 Engineering Classroom and Research Building Project, Prairie View A&M University, Prairie View, Texas (Project No. 05-3300)

I recommend adoption of the following minute order:

“The project scope along with a project budget of \$70,000,000 for the Engineering Classroom and Research Building Project is approved.

The amount of \$56,000,000 is appropriated from Account No. 01-084243 Permanent University Fund Debt Proceeds (AUF), and the amount of \$7,000,000 is appropriated from Account No. 05-552180, President’s construction services and related project costs.

The Engineering Classroom and Research Building Project, Prairie View A&M University, Prairie View, 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).”

Respectfully submitted,

[ORIGINAL SIGNED BY]

Billy Hamilton
Deputy Chancellor and
Chief Financial Officer

Approval Recommended:

[ORIGINAL SIGNED BY]

John Sharp
Chancellor

[ORIGINAL SIGNED BY]

Phillip Ray
Vice Chancellor for Business Affairs

Approved for Legal Sufficiency:

[ORIGINAL SIGNED BY]

Ray Bonilla
General Counsel

[ORIGINAL SIGNED BY]

Ruth J. Simmons, President
Prairie View A&M University

ENGINEERING CLASSROOM AND RESEARCH BUILDING PRAIRIE VIEW A&M UNIVERSITY PROJECT NO. 05-3300	PROJECT BUDGET
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1. Construction	\$52,500,000
2. Project Contingency	2,290,413
3. Program of Requirements.....	0
4. Pre-Construction Services	5,098,587
5. Commissioning.....	315,000
6. Construction Testing	667,000
7. Campus Services & Technology	1,283,000
8. Furnishings	2,314,000
9. Equipment	3,139,000
10. Other Project Costs.....	538,000
11. Project Management & Inspection	<u>1,855,000</u>
12. TOTAL ESTIMATED COST OF PROJECT	<u>\$70,000,000</u>

ENGINEERING CLASSROOM AND RESEARCH BUILDING PROJECT SCHEDULE PRAIRIE VIEW A&M UNIVERSITY PROJECT NO. 05-3300
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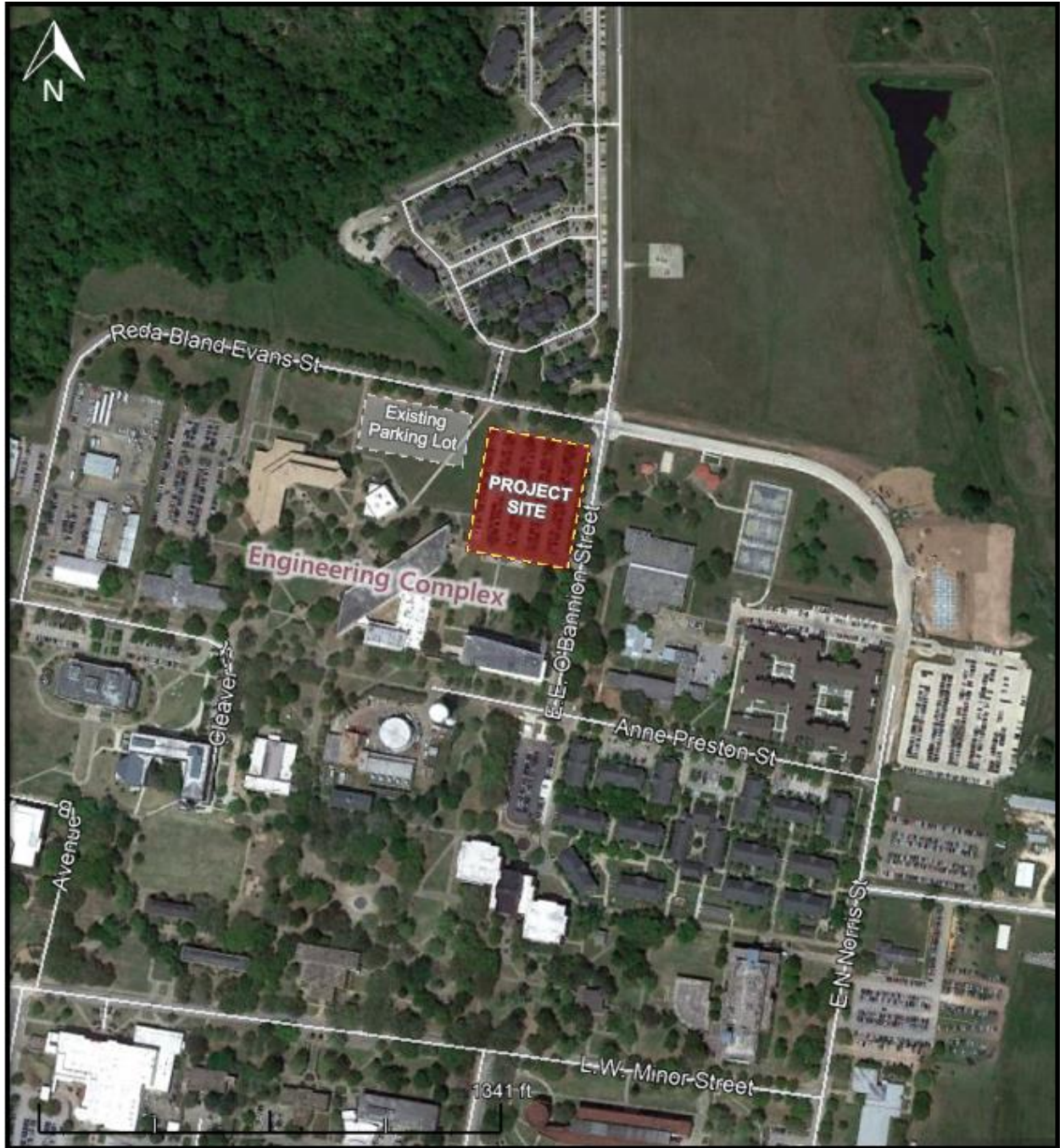
1. BOR Approval to Include in Capital PlanOctober 31, 2019
2. Issue A/E RFQNovember 25, 2019
3. Receive A/E RFQ Responses..... December 17, 2019
4. Shortlist A/E Firms January 7, 2020
5. Issue CMAR RFP January 7, 2020
6. Interview A/E Shortlist January 15, 2020
7. A/E Ranked Order Approved by Chancellor January 28, 2020
8. Receive CMAR RFP Response January 28, 2020
9. Shortlist CMAR Firms February 11, 2020
10. Interview CMAR Shortlist February 18, 2020
11. CMAR Ranked Order Approved by Chancellor March 10, 2020
12. A/E Design Kick-Off March 17, 2020
13. Execute A/E Agreement April 21, 2020
14. Execute CMAR Agreement May 1, 2020
15. Complete Schematic Design July 31, 2020
16. Complete Design Development January 12, 2021
17. Receive GMP from CMAR February 24, 2021
18. Complete Construction Documents May 14, 2021
19. Submit THECB Application May 20, 2021
20. BOR Approval for Construction May 20, 2021
21. Begin Construction June 2021
22. Substantial Completion May 2023
23. Owner Occupancy August 2023

**PRAIRIE VIEW A&M UNIVERSITY
PERMANENT UNIVERSITY FUND
05-3300 Engineering Classroom and Research Building
Available University Fund**

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total
BONDS	63,625,000.00			
YEAR 1	61,490,000.00	2,135,000.00	2,545,000.00	4,680,000.00
YEAR 2	59,270,000.00	2,220,000.00	2,459,600.00	4,679,600.00
YEAR 3	56,960,000.00	2,310,000.00	2,370,800.00	4,680,800.00
YEAR 4	54,555,000.00	2,405,000.00	2,278,400.00	4,683,400.00
YEAR 5	52,055,000.00	2,500,000.00	2,182,200.00	4,682,200.00
YEAR 6	49,455,000.00	2,600,000.00	2,082,200.00	4,682,200.00
YEAR 7	46,750,000.00	2,705,000.00	1,978,200.00	4,683,200.00
YEAR 8	43,940,000.00	2,810,000.00	1,870,000.00	4,680,000.00
YEAR 9	41,015,000.00	2,925,000.00	1,757,600.00	4,682,600.00
YEAR 10	37,975,000.00	3,040,000.00	1,640,600.00	4,680,600.00
YEAR 11	34,810,000.00	3,165,000.00	1,519,000.00	4,684,000.00
YEAR 12	31,520,000.00	3,290,000.00	1,392,400.00	4,682,400.00
YEAR 13	28,100,000.00	3,420,000.00	1,260,800.00	4,680,800.00
YEAR 14	24,540,000.00	3,560,000.00	1,124,000.00	4,684,000.00
YEAR 15	20,840,000.00	3,700,000.00	981,600.00	4,681,600.00
YEAR 16	16,990,000.00	3,850,000.00	833,600.00	4,683,600.00
YEAR 17	12,990,000.00	4,000,000.00	679,600.00	4,679,600.00
YEAR 18	8,830,000.00	4,160,000.00	519,600.00	4,679,600.00
YEAR 19	4,500,000.00	4,330,000.00	353,200.00	4,683,200.00
YEAR 20	-	4,500,000.00	180,000.00	4,680,000.00
		<u>\$ 63,625,000.00</u>	<u>\$ 30,008,400.00</u>	<u>\$ 93,633,400.00</u>

Estimated issuance costs and rounding of \$625,000 are included in this schedule.
 Long-term rates are assumed to be 4.00%. Rates are subject to market change.
 Prepared by the Office of the Treasurer - Treasury Services 03/01/2021

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



Engineering Classroom and Research Building

Prairie View A&M University

Project No. 05-3300