EXECUTIVE SUMMARY

Item Name: **FY 2020 Capital Development Plan (UA)**

☒ Action Item

Requested Action: The University of Arizona (UA) asks the board to approve its FY 2020 Capital Development Plan (CDP) and financing, which includes three new projects totaling $86,000,000 and two revised projects totaling $200,000,000. The CDP total project budget is $286,000,000. The financing request is $257,500,000 for the projects in the financing plan outlined in the CDP. The FY 2020 CDP does not include any third-party projects, as described in this executive summary.

Previous Board Action

- The Center for Integrative Medicine, Chemistry Building Renovation and Facilities Management Relocation and Consolidation Facility projects were submitted in Arizona's FY2021-2023 Capital Improvement Plan.
- The Applied Research Building and Grand Challenges Research Building both received CIP approval in September 2018 and CDP approval in November 2018.

Prior Year Activity

- Six (6) capital projects totaling $228,550,000 were substantially completed in the last 12 months. Additionally, a third-party project totaling $100,325,100 was completed.
- Six (6) capital projects, totaling $362,000,000, began or were under construction activity in the last 12 months.

Overview and Alignment with Enterprise and University Goals and Objectives

- Arizona's FY 2020 CDP includes three new and two revised projects totaling $286,000,000.
- Arizona has developed the CDP to align with its Strategic Plan and Campus Master Plan, and with the system enterprise strategic goals and objectives.
- The primary institutional priorities supported by the CDP include:

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Academic Success: Facility investment and development are targeted toward student success, academic excellence, diversity, and accessibility as measured by our strategic plan goals for enrollment, retention, graduation rates, and degrees awarded.

Research & Development: University research greatly contributes to the quality of life and economic vitality of our state. Sponsored research expenditures include the purchase of local goods and services which help to create new companies and employment benefits. Research and development provides hands-on experience for students while attracting top research talent and giving the state a competitive advantage in core areas such as science, technology and medicine. Facilities, research faculty and sponsored grants are key to meeting the objectives of the ABOR 2025 Vision Plan.

Campus Operations and Infrastructure Priorities: To advance our academic success and research goals, our facilities and related infrastructure must be safe, reliable and operational. Building and utility systems must be efficient to operate and maintain to reduce the burden on reduced operational funds. Spaces and systems must maximize functionality and performance while minimizing investments.

Life Safety & Code Compliance: Life safety is our highest priority in ensuring a safe, functional, and serviceable environment for students, faculty, staff, and visitors. This priority is established for new and existing facilities alike.

Community Service Opportunities: Engaging and serving Arizona communities are integral to the University's mission and land grant responsibilities. Our community outreach and service efforts are focused on the quality of life and economic prosperity in Arizona.

Construction Market Conditions: The current construction market is active with increasing labor shortages and accompanying price escalations for the foreseeable future. It is advisable to proceed with projects and lock-in prices to minimize additional escalation for the University.

Funding Sources & Financing Options: Project funding and financing are carefully considered on a project-by-project basis and take advantage of opportunities to minimize impacts to tuition. State appropriations, gift funding and indirect cost recovery are leveraged and maximized while fees, tuition and operational funding are carefully metered for highest yield. At all times the University's financial strength, standing and ratings are considered to ensure long term stability and success.

Capital Development Plan Projects

- The following three new projects are being submitted for CDP approval.
  - Chemistry Building Renovation
  - Center for Integrative Medicine
  - Facilities Management Relocation and Consolidation Facility (FMRCF)

- The following two projects are being submitted for Revised CDP approval due to scope and budget adjustments.
  - Applied Research Building with Campus Research Infrastructure Component
  - Grand Challenges Research Building

- Additional detail on project costs, financing, and scope can be found in the tables in Exhibits 2 & 3, and the individual Project Justification Reports are attached.

Fiscal Impact and Management

- Arizona's CDP includes three new projects, the Center for Integrative Medicine, Chemistry Building Renovation and the Facilities Management Relocation and Consolidation Facility projects and two revised projects, Applied Research Building, Grand Challenges Research Building. Arizona's CDP, if fully implemented, will cost a total of $286 million

- Of the total $286 million CDP budget, $257.5 million will be financed using debt. The remaining amount will be financed using $20 million in gift funds and $9 million in land sale proceeds.

- The estimated annual debt service on projects to be financed totals $15.6 million. The annual debt payments are based on financing terms of approximately 24-30 year maturities and estimated 2.90 – 3.00 percent interest rates. The financing terms are based on differing types of issuance, including both tax-exempt and taxable System Revenue Bonds, final maturity, and the timing of the debt issuance.

  Detailed financing information is presented in Exhibits 2 & 3.

- The total operating and maintenance (O&M) cost associated with the projects in the CDP is estimated to be $2.4 million. Arizona plans to use indirect cost recovery and other local funds to pay the O&M cost.

  Arizona will:
  a. Sell one or more series of System Revenue Bonds to finance the projects as outlined in the CDP, costs of issuances, and payments to a bond insurer or

other credit enhancer provided such payments result in a benefit that exceeds the amount of such payments;

b. Sell bonds at a price at, above, or below par, on a tax-exempt or taxable basis, in one or more series, at a fixed or variable rate of interest; and

c. Enter into necessary agreements, including those related to bond insurance or other credit enhancement agreements.

d. Arizona intends to utilize a financial advisor, a bond counsel, and bond trustee(s) for the financing. The SRBs will be marketed and sold on a negotiated basis either to one or more investment banking firms currently in a pool of bond underwriters procured by the three State universities or by the State of Arizona or by a direct sale to a bank or banks or other financial institutions.

- Debt Ratio Impact: The debt service associated with projects in the CDP will increase the debt ratio to the highest level of 5.3 percent in FY 2021, excluding SPEED Bonds, and 6.5 percent, including SPEED Bonds.

Committee Review and Recommendation

The Finance, Capital and Resources Committee reviewed this item at its November 7, 2019 meeting and recommended forwarding to the full board for approval.

Statutory/Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-107, each university shall submit an annual Capital Development Plan for the upcoming year in accordance with the calendar approved by the executive director of the board.

- Capital Development Plans are reviewed by the Finance, Capital and Resources Committee and approved by the board.

- Approval of the CDP allows universities to complete design, execute construction and financing agreements, and begin construction as outlined in policy.

EXECUTIVE SUMMARY

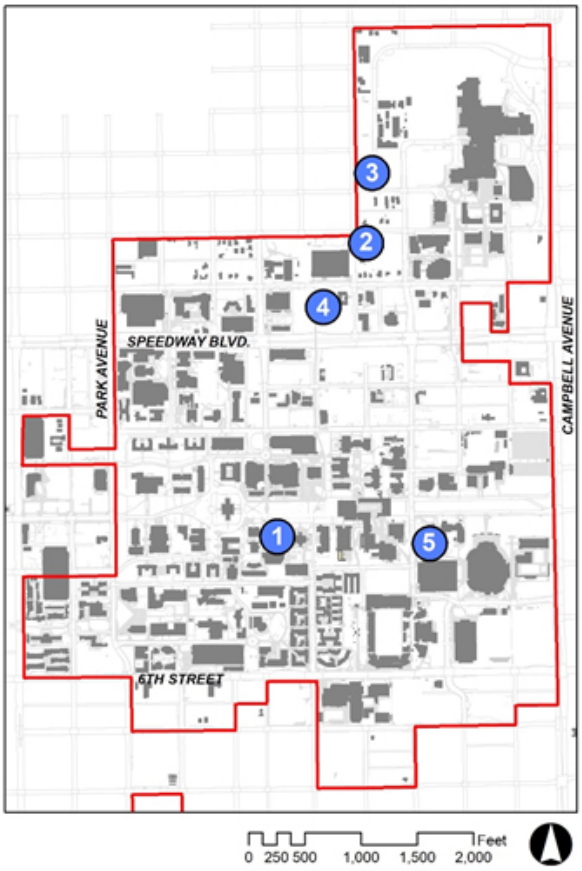
University of Arizona
FY 2020 Capital Development Plan

New Projects

1. Chemistry Building Renovation
2. Center for Integrative Medicine
3. Facilities Management Relocation and Consolidation Facility

Revised Projects

4. Applied Research Building with Infrastructure Component
5. Grand Challenges Research Building



EXECUTIVE SUMMARY

EXHIBIT 1
THE UNIVERSITY OF ARIZONA
FY 2020 CAPITAL DEVELOPMENT PLAN

UNIVERSITY OF ARIZONA
CAPITAL PROJECT STATUS REPORT

Project Name	Gross Square Feet	Total Budget	Direct Construction Budget	Percent Const. Work Completed*	Percent Total Expended*	Percent to Gift Target*	Date Last Board Approval	Original /Revised Occupancy Date
Ongoing Projects								
College of Pharmacy Skaggs Building Addition and Renovation	30,000	$26,000,000	$20,985,000	73%	62%	100%	Feb 18	Nov 19
Student Success District	173,425	$81,000,000	$55,200,000	23%	20%	49%	Nov 18	Jun 21
Phoenix Biomedical Sciences Partnership 3rd & 4th Floor Finish Shell Space	46,100	$34,000,000	$29,000,000	1%	1%	N/A	Nov 18	Feb 21
Applied Research Building**	60,000	$50,000,000	$35,500,000	1%	1%	N/A	Nov 18	Aug 22
Grand Challenges Research Building**	170,000	$150,000,000	$109,000,000	0%	0%	N/A	Nov 18	Mar 23
Campus Deferred Maintenance 2019	N/A	$21,000,000	$17,700,000	49%	23%	N/A	Nov 18	May 2020
Ongoing Project Totals		$362,000,000	$267,385,000					
Previously Approved Project								
Campus Research Infrastructure**	NA	$16,000,000	$12,550,000	0%	NA	N/A	Nov 18	Feb 21
Previously Approved Project Totals		$16,000,000	$12,550,000					
Completed Projects								
Bldg. 90 Deferred Maintenance	59,914	$18,000,000	$15,950,000	99%	NA	N/A	Jun 17	Mar 19
Health Sciences Innovation Building	247,155	$165,000,000	$138,800,000	98%	NA	N/A	Jun 16	May 19
ICA Indoor Sports Center	45,000	$16,300,000	$13,550,000	98%	NA	N/A	Nov 17	Feb 19
Hillenbrand Aquatic Center Improvements	29,000	$13,250,000	$10,113,000	99%	NA	N/A	Nov 17	Dec 18
Hillenbrand Softball Facility Improvements	N/A	$8,000,000	$7,182,000	99%	NA	N/A	Nov 17	Mar 19
Oro Valley Veterinarian Medical Program Improvement	27,500	$8,000,000	$4,857,000	95%	NA	N/A	Nov 17	Aug 19
Completed Projects Total		$228,550,000	$190,452,000					
Completed Third-Party Projects								
UA Honors Village		$100,325,100		94%	NA	N/A	Jun 17	Aug 19
Completed Third-Party Project Total		$100,325,100						

*Value as of September 30, 2019

**A proposed revised budget for Applied Research Building and Grand Challenges Research Building are included in Revised CDP (See Exhibit 2)

EXECUTIVE SUMMARY

EXHIBIT 2
THE UNIVERSITY OF ARIZONA
FY 2020 CAPITAL DEVELOPMENT PLAN

UNIVERSITY OF ARIZONA CAPITAL DEVELOPMENT PLAN								
	BOARD APPROVAL STATUS	GROSS SQUARE FOOTAGE	PROJECT COST	AMOUNT FINANCED	FUNDING METHOD	ANNUAL DEBT SERVICE	FINAL MATURITY	DEBT RATIO
NEW CAPITAL PROJECTS								
Chemistry Building Renovation	CIP Sept 2019	76,000	$42,000,000	$42,000,000	System Revenue Bonds	$2,500,000	FY2043	.07
Center for Integrative Medicine	CIP Sept 2019	34,000	$20,000,000		Gifts			NA
Facilities Management Relocation and Consolidation Facility	CIP Sept 2019	70,000	$24,000,000	$15,500,000	System Revenue Bonds Land Sale Proceeds	$930,000	FY2043	.03
NEW CAPITAL PROJECT TOTAL			$86,000,000	$57,500,000		$3,430,000		.10
REVISED CAPITAL PROJECTS								
Applied Research Building / Campus Research Infrastructure	CDP Nov 2018	85,250	$101,000,000	$101,000,000	System Revenue Bonds	$6,200,000	FY2043	.27
Grand Challenges Research Building	CDP Nov 2018	110,000	$99,000,000	$99,000,000	System Revenue Bonds	$6,000,000	FY2043	.17
REVISED CAPITAL PROJECT TOTAL			$200,000,000	$200,000,000		$12,200,000		.44
TOTALS			**$286,000,000**	**$257,500,000**		**$15,630,000**		**.54**

EXECUTIVE SUMMARY

EXHIBIT 3
THE UNIVERSITY OF ARIZONA
FY 2020 CAPITAL DEVELOPMENT PLAN
ANNUAL DEBT SERVICE BY FUNDING SOURCE

CAPITAL DEVELOPMENT PLAN ANNUAL DEBT SERVICE BY FUNDING SOURCE									
PROJECT	AMOUNT FINANCED	TUI	SFE	ICR	OLF	SCI	SLP	OTH	TOTAL ANNUAL DEBT SERVICE
NEW CAPITAL PROJECTS									
Chemistry Building Renovation	$42,000,000	$1,950,000				$550,000			$2,500,000
Center for Integrative Medicine	NA								
Facilities Management Relocation and Consolidation Facility	$15,500,000	$930,000							$930,000
NEW CAPITAL PROJECT TOTAL	$57,500,000	$2,880,000				$550,000			$3,430,000
REVISED CAPITAL PROJECTS									
Applied Research Building / Campus Research Infrastructure	$101,000,000				$3,100,000	$3,100,000			$6,200,000
Grand Challenges Research Building	$99,000,000				$3,000,000	$3,000,000			$6,000,000
REVISED CAPITAL PROJECTS TOTAL	$200,000,000				$6,100,000	$6,100,000			$12,200,000
TOTALS	**$257,500,000**	**$2,880,000**			**$6,100,000**	**$6,650,000**			**$15,630,000**

Debt Service Funding Source Codes
(TUI) Tuition (SFE) Student Fees (ICR) Indirect Cost Recovery (OLF) Other Local Funds (SCI) State Capital Infrastructure Appropriations HB2547
(SLP) State Lottery Allocation Proceeds (OTH) Other

EXECUTIVE SUMMARY

EXHIBIT 4
THE UNIVERSITY OF ARIZONA
FY 2020 CAPITAL DEVELOPMENT PLAN
ANNUAL OPERATION AND MAINTENANCE BY FUNDING SOURCE

CAPITAL DEVELOPMENT PLAN ANNUAL OPERATION AND MAINTENANCE BY FUNDING SOURCE									
PROJECT	TOTAL ANNUAL O&M	TUI	SFE	ICR	OLF	GFA	FGT	DFG	OTH
NEW CAPITAL PROJECTS									
Chemistry Building Renovation									
Center for Integrative Medicine	$244,900				$244,900				
Facilities Management Relocation and Consolidation Facility	$504,200	$504,200							
NEW CAPITAL PROJECT TOTAL	$749,100	$504,200			$244,900				
REVISED CAPITAL PROJECTS									
Applied Research Building	$707,900			$707,900					
Grand Challenges Research Building	$951,000			$951,000					
REVISED CAPITAL PROJECTS TOTAL	$1,658,900			$1,658,900					
TOTALS	**$2,408,000**	**$504,200**		**$1,658,900**	**$244,900**				

Operation and Maintenance Funding Source Codes
(TUI) Tuition (SFE) Student Fees (ICR) Indirect Cost Recovery (OLF) Other Local Funds (GFA) General Fund Appropriations (FGT) Federal Grant (DFG) Debt Financed by Gifts (OTH) Other

EXHIBIT 4
Debt Capacity Report

THE UNIVERSITY OF ARIZONA

2019 DEBT CAPACITY

PURPOSE

To demonstrate The University of Arizona's ability to finance additional capital investment through debt instruments and to fund the related debt service (principal and interest).

PROJECTED DEBT CAPACITY

The debt capacity report includes four projects from the Capital Development Plan (CDP): Applied Research Building, Grand Challenges Research Building, Chemistry Building Renovation, and Facilities Management Relocation and Consolidation Facility. With the financing of the projects listed, the projects highest debt ratio is 5.3 percent in FY 2021, relative to the ABOR policy and statutory debt limit of 8 percent. The University outstanding debt in that year is projected to be $1.72 billion. The year with the highest debt service will be FY 2022 at $120.0 million. The 5.3 percent ratio is within the range used by the bond rating firms to just an institution's creditworthiness to service debt.

Maximum Projected Debt Service to Total Expenditures Excluding/ Including SPEED debt
5.3% / 6.5%

The UA projects outstanding debt (issued) to decline from $1.1 billion in FY 2019 to $601.3 million in FY 2028 as debt is retired. The planned debt includes financing of the projects listed in the paragraph above. Additional debt capacity represents debt that can be issued in any given year based on the statutory 8 percent debt ratio limit.

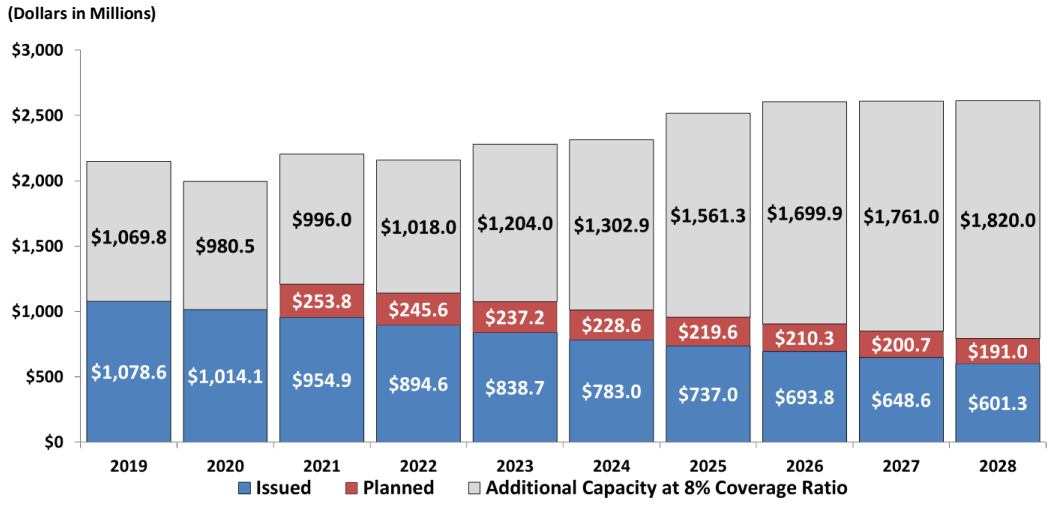


EXHIBIT 4
Debt Capacity Report Continued

FUTURE PROJECTS

Future projects to be debt financed include four from the current CDP. These planned projects are included in the Debt Capacity

	Project Budget	Amount Financed
Applied Research Building*	$ 101,000,000	$ 101,000,000
Grand Challenges Research Building*	99,000,000	99,000,000
Chemistry Building Renovation*	42,000,000	42,000,000
Facilities Management Facility	24,000,000	15,000,000
Total	$ 266,000,000	$ 257,000,000

** Includes funding from State Capital Appropriation HB2547*

CREDIT RATINGS

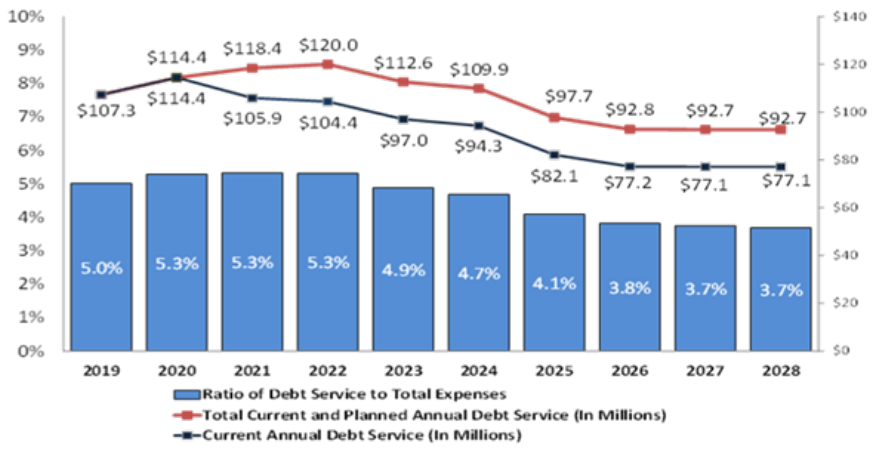
UA's current credit rating is Aa2 (Moody's) and AA- (S&P) Positive rating factors include the UA as the flagship and land-grant institution, as well as its important role in the provision of medical education for the State of Arizona. UA continues to see improved cash flows provide necessary funds for strategic reinvestment and sizable

	Moody's		Standard & Poor's (S&P)	
Fiscal Year	Rating	Outlook	Rating	Outlook
2014	Aa2	Negative	AA-	Stable
2015	Aa2	Stable	AA-	Stable
2016	Aa2	Stable	AA-	Stable
2017	Aa2	Stable	AA-	Stable
2018	Aa2	Stable	AA-	Stable
2019	Aa2	Stable	AA-	Stable

sponsored research funding with diverse sources. Offsetting factors include high leverage; low spendable cash and investments to debt compared to comprehensive universities median, relative weak state operating and capital support, and increasingly competitive researching funding environment.

RATIO OF DEBT SERVICE TO TOTAL EXPENSES

Annual debt service on System Revenue Bonds (SRBs) and Certificates of Participation (COPs) is projected to increase from $107.3 million in FY 2019 to a maximum of $120.0 million in FY 2022. The ratio of debt service to total expenses is projected to peak in FY 2021 at 5.3 percent relative to the 8 percent statutory limit. The peak planned debt ratio includes debt service for the projects listed on the previous page. The Stimulus Plan for Economic and Educational Development (SPEED) bonds are funded up to 80 percent by state lottery revenues, with the balance funded by the University. SPEED debt service is excluded from the statutory debt ratio. If SPEED debt were included, the debt ratio is projected to peak in FY 2021 at 6.5 percent. The maximum projected annual debt service is $147.5 million in FY 2022.



Arizona Board of Regents
The University of Arizona
FY 2020 Capital Development Plan (CDP)
Project Justification Report

Chemistry Building Renovation

Previous Board Action

- Capital Improvement Plan FY 2021-2023 September 2019

Statutory/Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-102 (B)(1), all capital projects with an estimated total project cost of $10,000,000 or more, including information technology and third-party projects, shall be included in the Capital Development Plan.

Project Justification, Description, and Scope

- This project is a component of Pillar 1 under the University of Arizona Strategic Plan, Wildcat Journey – preparing students with the skills and mindset to lead the 4th Industrial Revolution. Active and collaborative learning strategies result in increased student learning, engagement, and development of workplace-relevant skills. Although many evidence-based teaching strategies can be implemented in any physical setting, there is no doubt that the physical layout of the classroom can impact student engagement and the use of instructional strategies. To build on Arizona's commitment to provide deep and meaningful learning experiences, this initiative involves a high-visibility renovation of the centrally located, historic Chemistry building into an innovative-teaching hub. In addition, this initiative provides support to continue the important work of renovating existing centrally scheduled, informal, and departmentally-owned learning spaces to expand the options for using evidence-based instructional strategies.

  The project will also incorporate much needed and overdue life-cycle renovations and deferred maintenance. The existing building was constructed in 1936 (first phase) and 1948 (second phase), with another addition in 1962.

- The scope includes the following primary elements:
  - Per Strategic Plan Pillar 1: renovate the historic Chemistry building into an innovative-teaching hub (collaborative learning spaces in two-thirds of the building, tentatively 1st & 2nd floors)
  - Office space for Office of General Education and Department of Chemistry & Biochemistry (CBC)

- Remaining core chemistry functions: central receiving (also serves adjoining buildings), chemical storage "bunker", NMRs & shops (to be relocated either within Chemistry or to neighboring building).

- Renovations to address deferred maintenance, life safety, accessibility, building code upgrades, and sustainability

This project encompasses 76,000 Gross Square Feet (GSF), which includes approximately 51,000 Net Assignable Square Feet (NASF).

Project Delivery Method and Process

- This project is being delivered through a Design-Build (D-B) delivery method. This approach was selected for this project because it can provide early cost control and save time through project scheduling, while providing contractor constructability and design input and coordination throughout the project, improving potentially adversarial project environments and still allowing for the selection of the most qualified architect-contractor team for this project.

- The Design-Builder provides a Guaranteed Maximum Price (GMP) based on the amount previously agreed upon in the Design-Build agreement. In the selection of major subcontractors, the Design-Builder uses a qualification-based selection process prescribed by the ABOR Procurement Code to allow major subcontractors a design-assist role during the design phase. All remaining subcontractor work is awarded on the basis of the lowest responsive and responsible subcontractor bids. For this work, a minimum of three subcontractor bids will be required, except for specialty items or instances where proprietary systems are required.

- The Design-Build Team was selected through the appropriate project search committee process prescribed by the ABOR Procurement Code. A licensed contractor was included on the search committee as required by ABOR Policy.

Project Status and Schedule

- Programming is underway. This project is scheduled to commence design during fall of 2019.

- Project construction is scheduled to commence during fall of 2020 and will be completed during spring of 2022.

Project Cost

- The total project budget is $42 million, with a construction cost of $28 million.

- The construction budget for this project was developed by in-house University professionals using cost data from industry-standard cost databases and from completed comparable
  projects.

Fiscal Impact and Financing Plan

- The University plans to issue $42 million of System Revenue Bonds (SRBs) to fund the Chemistry Building Renovation. The annual debt service payments on the SRBs is estimated to be $2.5 million. For $18 million of the debt financing, Arizona plans to use state appropriations tied to the Capital Infrastructure Fund established in ARS 15-1671 to pay for half of the debt service and retained tuition matching funds to pay the other half. The remaining $24 million of debt financing will be funded with retained tuition.

- The operations and maintenance (O&M) cost for the space effected is already included in Arizona's current budget.

Debt Ratio Impact:

- The estimated annual debt service of $2.5 million on this project would increase Arizona's debt ratio by 0.07 percent.

Occupancy Plan

- It is anticipated that the existing facility will be vacated for the duration of the construction, with the exception of the attached wing that serves as the chemical storage "bunker" and the receiving for several adjoining building. The Chemistry Labs and NMRs that had not previously been relocated from the building are being considered for permanent relocation to either other facilities on campus or consolidated to one area within Chemistry at the start of the renovations

- This facility renovation will provide additional general education classrooms as well as office space for faculty. It is not anticipated that any existing space will be released, or that any existing facilities will be demolished.

Capital Project Information Summary

University: The University of Arizona
Project Name: Chemistry Building Renovation

Project Description / Location:
This project will renovate the historic Chemistry Building into an innovative teaching hub that supports evidence-based teaching strategies (collaboration, inclusive practices, and active learning) and will be located at 1306 E University Blvd, on the Campus of the University of Arizona in Tucson.

	FY2020 Capital Development Plan November 2019
Project Schedule (Beginning Month/Year):	
Planning	Spring 2019
Design	Fall 2019
Construction	Fall 2020
Occupancy	Spring 2022
Project Budget:	
Total Project Cost	$ 42,000,000
Total Project Cost per GSF	$ 550
Direct Construction Cost - Renovation	$ 28,000,000
Construction Cost per GSF - Renovation	$ 370
Change in Annual Oper./Maint. Cost	$0
Utilities	
Personnel	
Other	
Funding Sources:	
Capital:	
• State Appropriation	$ 9,000,000
• Retained Tuition	$ 33,000,000
Operation/Maintenance:	$0

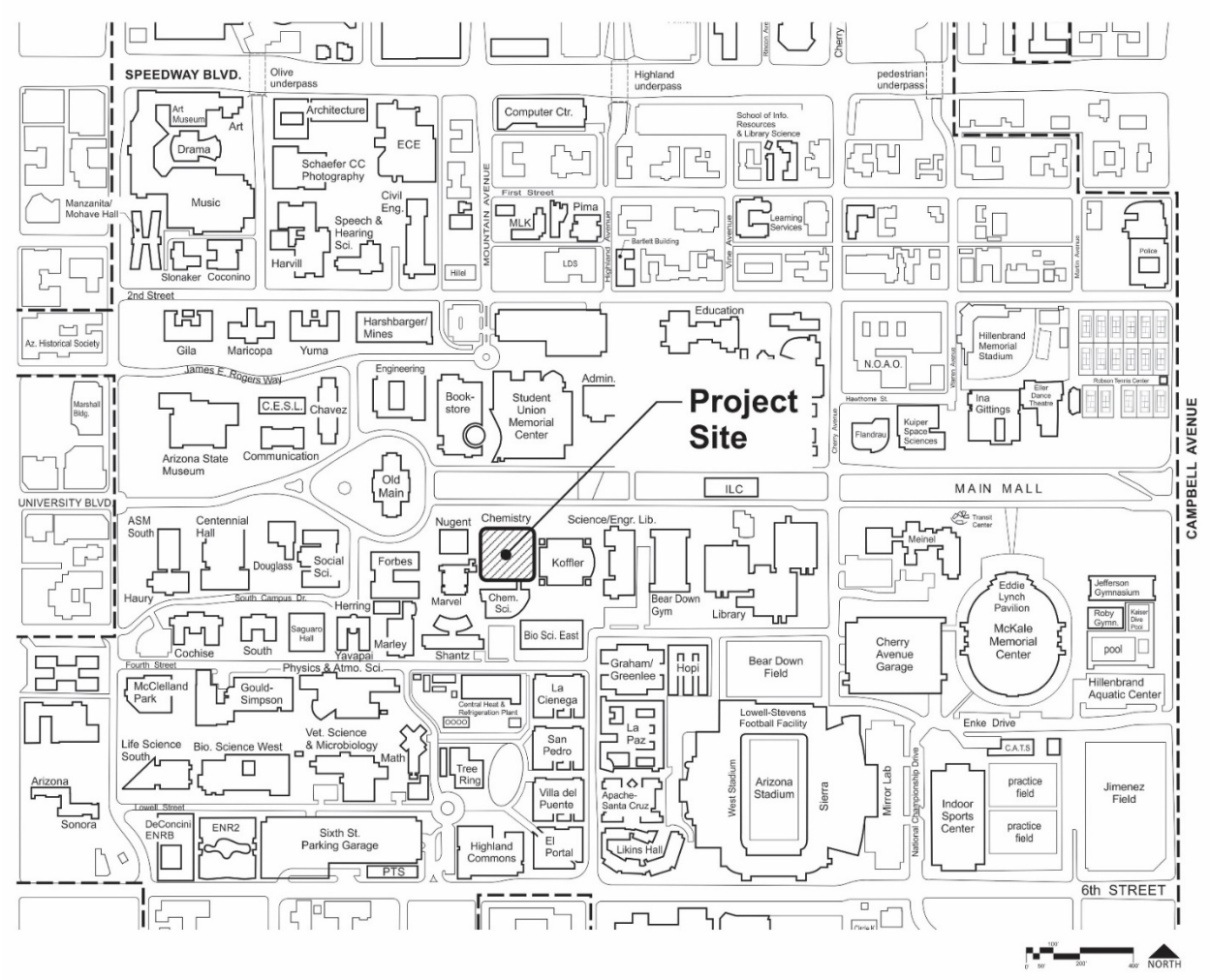
Capital Project Budget Summary

University: The University of Arizona
Project Name: Chemistry Building Renovation

Date of Budget Estimate		FY 2020 Capital Development Plan November 2019
1.	Land	$ 0
2.	Construction Cost	
	A. New Construction	$ 0
	B. Renovation	$ 27,500,000
	C. Fixed Equipment	$ 250,000
	D. Site Development (exclude 2.E.)	$ 0
	E. Parking & Landscaping	$ 0
	F. Utilities Extensions	$ 0
	G. Other (asbestos only)	$ 250,000
	Subtotal Construction Cost	**$ 28,000,000**
3.	Consultant Fees	
	A. Construction Manager	$ 400,000
	B. Architect/Engineering Fees	$ 3,550,000
	C. Other (Programming, Special Conslt.)	$ 250,000
	Subtotal Consultant Fees	**$ 4,200,000**
4.	Furniture Fixtures and Equipment	$ 4,450,000
5.	Contingency, Design Phase	$ 1,400,000
6.	Contingency, Construction Phase	$ 1,400,000
7.	Parking Reserve	$ 0
8.	Telecommunications Equipment	$ 800,000
	Subtotal Items 4-8	**$ 8,050,000**
9.	Additional University Costs	
	A. Surveys and Tests	$ 150,000
	B. Move-in Costs	$ 200,000
	C. Public Art	$ 0
	D. Printing/Advertisement	$ 5,000
	E. Univ. Facilities & Project Mgmnt.	$ 1,190,000
	F. State Risk Mgt. Ins	$ 205,000
	Subtotal Additional University Costs	**$ 1,750,000**
TOTAL CAPITAL COST		**$ 42,000,000**

Project Site Map

Chemistry Building Renovation



Arizona Board of Regents
The University of Arizona
FY 2020 Capital Development Plan (CDP)
Project Justification Report

Center for Integrative Medicine

Previous Board Action

- Capital Improvement Plan FY 2021-2023 September 5, 2019

Statutory/Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-102 (B)(1), all capital projects with an estimated total project cost of $10,000,000 or more, including information technology and third-party projects, shall be included in the Capital Development Plan.

Project Justification, Description, and Scope

- This new building for the Center for Integrative Medicine (CIM) will be located North East of the Highland Parking Garage at Mabel Street and Vine Avenue, on the campus of The University of Arizona, Tucson, Arizona. The Center for Integrative Medicine and its exterior spaces will house the following basic functions: clinical simulation, educational, culinary demonstrations, meditation and administrative spaces. The Center will facilitate the fundamental goal of creating a physical environment that supports the evidence based philosophy of integrative medicine while reflecting a distinctive life-enhancing environment that will attract the local community, national and international visitors.

- Locating the CIM on the campus of the University of Arizona and adjacent to the Health Sciences is critical to the Centers' vision, goals, and future growth.

- This project encompasses 34,000 Gross Square Feet (GSF), which includes 24,500 Net Assignable Square Feet (NASF). The project also includes development of outdoor meditation garden space and leverages the existing adjacent green spaces to the west.

Project Delivery Method and Process

- This project is being delivered through the Construction Manager at Risk (CM@Risk) method. This approach was selected for the project because it can save time and cost through fast-track project scheduling, provides contractor design input and coordination throughout the project, improves potentially adversarial project environments and allows for the selection of the most

qualified contractor leadership team for this project.

- The CM@Risk will be selected through the capital project search committee process prescribed by the ABOR Procurement Code. A licensed contractor will be included on the search committee as required by ABOR policy. The design team has been selected through a similar ABOR process.

Project Status and Schedule

- Programming and concept design are underway.

- Project construction is scheduled to commence during fall of 2020 and will be completed during fall of 2021.

Project Cost

- The total project budget is $20 million, with a construction cost of $14,185,000 million.

- The construction budget for this project was generated as part of a gift agreement. As the project progresses, peer reviews of the CM@Risk's estimates will be reconciled by the Project Team.

Fiscal Impact and Financing Plan

- The University plans to use $20 million in gift funds for the Center for Integrative Medicine Building with a total project budget of $20 million.

- The operations and maintenance (O&M) cost for the building is estimated to be $244,900. Other local funds will be utilized to fund the O&M cost.

Debt Ratio Impact:
- This project will have no impact on the University's debt ratios because no debt will be issued to finance this project.

Occupancy Plan

- This facility will provide new space for new and existing faculty and staff. It is anticipated that some of the existing space will be retained by Health Sciences when the CIM staff and faculty are relocated to their new building. The existing facilities will not be demolished and will be re-assigned by Health Sciences.

Capital Project Information Summary

University: The University of Arizona
Project Name: Center for Integrative Medicine

Project Description / Location:
This new building for the Center for Integrative Medicine (CIM) will be located North East of the Highland Parking Garage at Mabel Street and Vine Avenue, on the campus of The University of Arizona, Tucson, Arizona. The Center for Integrative Medicine and its exterior spaces will house the following basic functions: clinical simulation, educational, culinary demonstrations, meditation and administrative spaces. The Center will facilitate the fundamental goal of creating a physical environment that supports the evidence based philosophy of integrative medicine while reflecting a distinctive life-enhancing environment that will attract the local community, national and international visitors.

Locating the CIM on the campus of the University of Arizona and adjacent to the Health Sciences is critical to the Centers' vision, goals, and future growth.

	FY 2020 Capital Development Plan November 2019
Project Schedule (Beginning Month/Year):	
Planning	Summer 2019
Design	Summer 2019
Construction	Fall 2020
Occupancy	Fall 2021
Project Budget:	
Total Project Cost	$ 20,000,000
Total Project Cost per GSF	$ 588
Direct Construction Cost	$ 14,185,000
Construction Cost per GSF	$ 417
Change in Annual Oper./Maint. Cost	
Utilities	$ 75,000
Personnel	$113,800
Other	$56,100
Funding Sources:	
Capital:	
• Gift Funds	$ 20,000,000
Operation/Maintenance:	
• Other Local Funds	$ 244,900

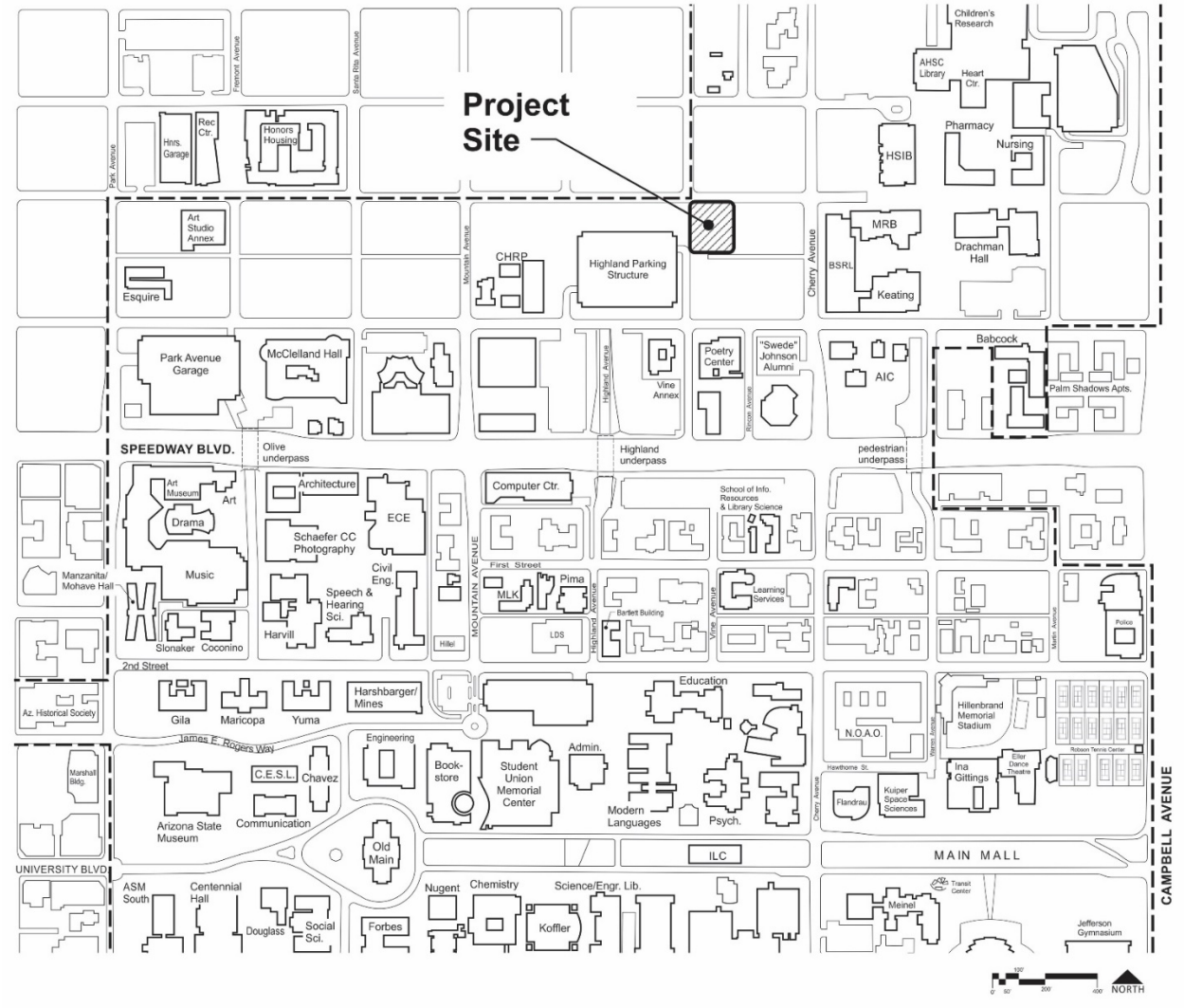
Capital Project Budget Summary

University: The University of Arizona
Project Name: Center for Integrative Medicine

Date of Budget Estimate		FY2020 Capital Development Plan November 2019
1. Land	$	0
2. Construction Cost		
A. New Construction	$	13,190,000
B. Renovation	$	0
C. Fixed Equipment	$	500,000
D. Site Development (exclude 2.E.)	$	25,000
E. Parking & Landscaping	$	0
F. Utilities Extensions	$	470,000
G. Other (asbestos only)	$	0
Subtotal Construction Cost	**$**	**14,185,000**
3. Consultant Fees		
A. Construction Manager	$	105,000
B. Architect/Engineering Fees	$	1,650,000
C. Other (Programming, Special Conslt.)	$	175,000
Subtotal Consultant Fees	**$**	**1,930,000**
4. Furniture Fixtures and Equipment	$	705,000
5. Contingency, Design Phase	$	650,000
6. Contingency, Construction Phase	$	650,000
7. Parking Reserve	$	600,000
8. Telecommunications Equipment	$	425,000
Subtotal Items 4-8	**$**	**3,030,000**
9. Additional University Costs		
A. Surveys and Tests	$	140,000
B. Move-in Costs	$	15,000
C. Public Art	$	0
D. Printing/Advertisement	$	5,000
E. Univ. Facilities & Project Mgmnt.	$	595,000
F. State Risk Mgt. Ins	$	100,000
Subtotal Additional University Costs	**$**	**855,000**
TOTAL CAPITAL COST	**$**	**20,000,000**

Project Site Map

Center for Integrative Medicine



Arizona Board of Regents
The University of Arizona
FY 2020 Capital Development Plan (CDP)
Project Justification Report

Facilities Management Relocation and Consolidation Facility (FMRCF)

Previous Board Action

- Capital Improvement Plan FY 2021-2023 September 2019

Statutory/Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-102 (B)(1), all capital projects with an estimated total project cost of $10,000,000 or more, including information technology and third-party projects, shall be included in the Capital Development Plan.

Project Justification, Description, and Scope

- Facilities Management services are currently scattered across the University campus. In addition, it must relocate much of its operations from a site to be utilized for a new utility-scale 138kv substation. The utility's valley-wide electric utility distribution system and new substation is a component of a landmark power purchase agreement that will eliminate all of Arizona's Scope 2 emissions – a national first for a Research 1 institution of Arizona's size. The distribution system will serve the University, Banner Hospital and the community with more reliable and efficient power while building in needed redundancy.

- In alignment with Pillar 5 of Arizona's Strategic Plan, the new 70,000 GSF Facilities Management Relocation and Consolidation Facility is envisioned as a multi-story building that will bring together FM operations from 20 locations across campus, while also relocating the administrative, warehouse and shops functions from the vacated 138kv substation site.

Project Delivery Method and Process

- This project is being delivered through a Design-Build (D-B) delivery method. This approach was selected for this project because it can provide early cost control and save time through project scheduling, while providing contractor constructability and design input and coordination throughout the project, improving potentially adversarial project environments and still allowing for the selection of the most qualified architect-contractor team for this project.

- The Design-Builder provides a Guaranteed Maximum Price (GMP) based on the amount previously agreed upon in the Design-Build agreement. In the selection of major subcontractors, the Design-Builder uses a qualification-based selection process prescribed by the ABOR Procurement Code to allow major subcontractors a design-assist role during the design phase. All remaining subcontractor work is awarded on the basis of the lowest responsive and responsible subcontractor bids. For this work, a minimum of three subcontractor bids will be required, except for specialty items or instances where proprietary systems are required.

- The Design-Build Team will be selected through the capital project search committee process prescribed by the ABOR Procurement Code. A licensed contractor will be included on the search committee as required by ABOR Policy.

Project Status and Schedule

- Programming is underway. This project is scheduled to commence design during winter of 2019.

- Project construction is scheduled to commence during fall of 2020 and will be completed during winter of 2021.

Project Cost

- The total project budget is $24 million, with a construction cost of $18,640,000.

- The construction budget for this project was developed by a design and costing consultant using cost data from industry-standard cost databases and from completed comparable projects. As the project progresses, peer reviews of the Design-Builder's estimates will be reconciled by the Project Team.

Fiscal Impact and Financing Plan

- The University plans to issue $15 million of System Revenue Bonds (SRBs) to fund the Facilities Management Relocation and Consolidation Facility. The additional $9.0 million for the project will be funded with land sale proceeds. The annual debt service payments on the SRBs is estimated to be $930,000. Arizona plans to fund the debt service with retained tuition.

- The estimated operations and maintenance (O&M) cost for the GSF Facilities Management Relocation and Consolidation Facility is $504,200. Arizona plans to fund the O&M with retained tuition.

Debt Ratio Impact:

- The estimated annual debt service of $930,000 on this project would increase Arizona's debt ratio by 0.03 percent.

Occupancy Plan

- This facility will provide replacement space for existing core facilities displaced by a new utility-scale electrical substation and also allows consolidation of 20 smaller, scattered functions, many occupying modified residential structures, into a new and efficient facility. Many of the scattered facilities will be demolished to allow for future higher density development.

Capital Project Information Summary

University: The University of Arizona
Project Name: Facilities Management Relocation and Consolidation Facility

Project Description / Location:
The new Facilities Management Relocation and Consolidation Facility will bring together FM operations from 20 locations across campus while relocating the primary administration, warehouse and shops functions from a site to be utilized for a new utility scale 138kv substation. The utility's valley-wide electric utility distribution system and new substation will serve the University, Banner Hospital and the community with more reliable and efficient power while building in needed redundancy.

	FY2020 Capital Development Plan November 2019
Project Schedule (Beginning Month/Year):	
Planning	Fall 2019
Design	Winter 2019
Construction	Fall 2020
Occupancy	Winter 2021
Project Budget:	
Total Project Cost	$ 24,000,000
Total Project Cost per GSF	$ 343
Direct Construction Cost	$18,640,000
Construction Cost per GSF	$266
Change in Annual Oper./Maint. Cost	
Utilities	$154,400
Personnel	$234,300
Other	$115,500
Funding Sources:	
Capital:	
• Land Sale	$8,500,000
• Bond Sale	$15,500,000
Operation/Maintenance:	
• Retained Tuition	$504,200

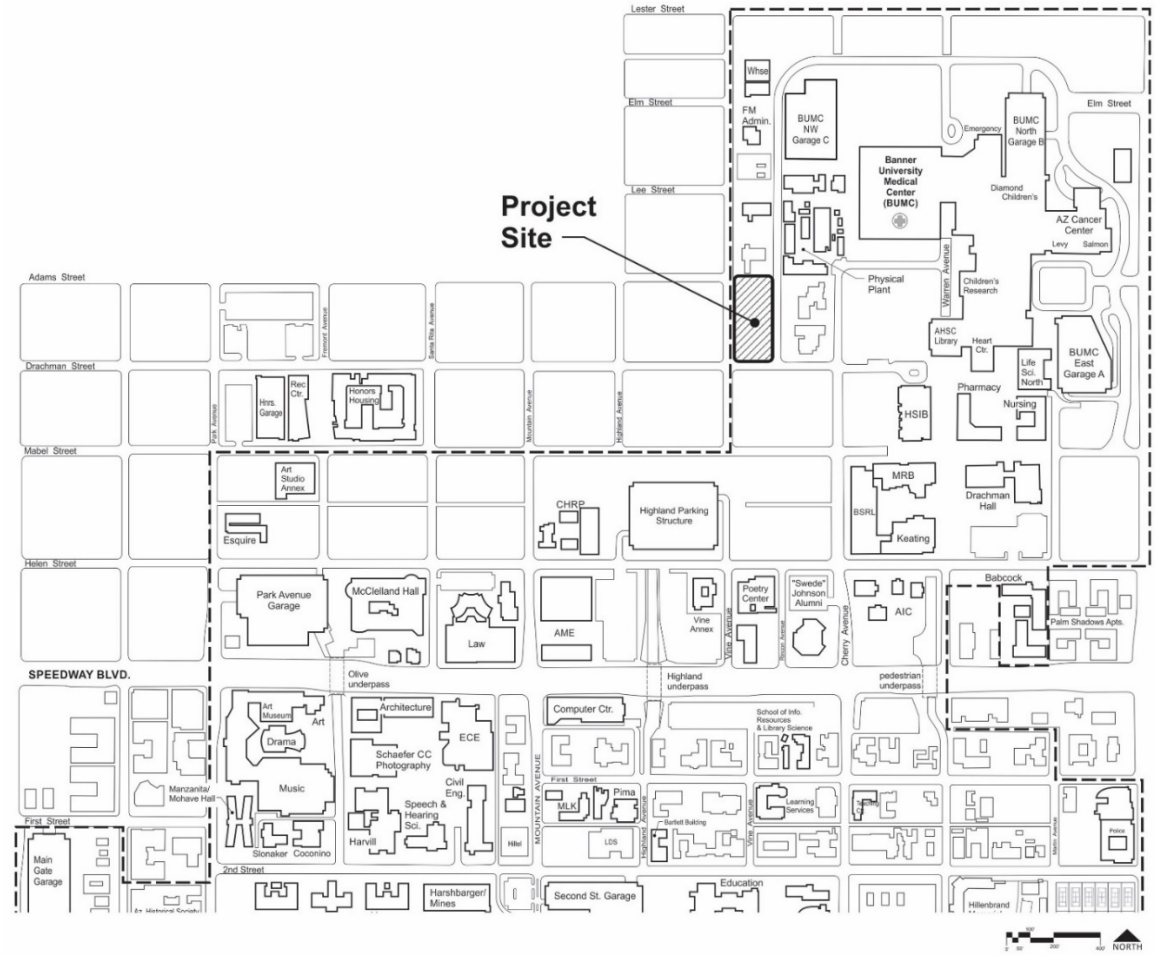
Capital Project Budget Summary

University: The University of Arizona
Project Name: Facilities Management Relocation and Consolidation Facility

Date of Budget Estimate		FY 2020 Capital Development Plan November 2019
1.	Land	$ 0
2.	Construction Cost	
	A. New Construction	$ 18,000,000
	B. Renovation	$ 0
	C. Fixed Equipment	$ 50,000
	D. Site Development (exclude 2.E.)	$ 150,000
	E. Parking & Landscaping	$ 250,000
	F. Utilities Extensions	$ 190,000
	G. Other (asbestos only)	$ 0
	Subtotal Construction Cost	**$ 18,640,000**
3.	Consultant Fees	
	A. Construction Manager	$ 240,000
	B. Architect/Engineering Fees	$ 1,900,000
	C. Other (Prog.; Special Consultants)	$ 160,000
	Subtotal Consultant Fees	**$ 2,300,000**
4.	Furniture Fixtures and Equipment	$ 0
5.	Contingency, Design Phase	$ 900,000
6.	Contingency, Construction Phase	$ 900,000
7.	Parking Reserve	$ 0
8.	Telecommunications Equipment	$ 400,000
	Subtotal Items 4-8	**$ 2,200,000**
9.	Additional University Costs	
	A. Surveys and Tests	$ 160,000
	B. Move-in Costs	$ 30,000
	C. Public Art	$ 0
	D. Printing/Advertisement	$ 30,000
	E. Univ. Facilities & Project Mgmnt.	$ 500,000
	F. State Risk Mgt. Ins	$ 140,000
	Subtotal Additional University Costs	**$ 860,000**
TOTAL CAPITAL COST		**$ 24,000,000**

Project Site Map

Facilities Management Relocation and Consolidation Facility



Arizona Board of Regents
The University of Arizona
FY 2020 Capital Development Plan (CDP)
Project Justification Report

Applied Research Building (ARB)
(Revised)

Previous Board Action

- Capital Improvement Plan FY 2020-2022 September 2018
- FY 2019 Capital Development Plan November 2018

Statutory and Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-102 (B)(1), all capital projects with an estimated total project cost of $10,000,000 or more, including information technology and third-party projects, shall be included in the Capital Development Plan.

Project Justification, Description and Scope

- A new $85 million building that is critically needed for the continued success of, and grant revenue generation related to, cross-campus research programs focused on applied research. This facility will create new and regionally-unique capabilities for the University, while consolidating a number of strategic interdisciplinary programs in one location, including advanced manufacturing, cubesat design and testing, payload integration, optical and IR imaging technology, and dynamic testing of high-performance materials. The program will benefit by being located in close proximity to the existing Aerospace and Mechanical Engineering building and near other interdisciplinary programs in the Biosciences Research Labs, as well as the Keating Bioresearch and Medical Research buildings. This building is being delivered together with a related research infrastructure augmentation project of $16 million, which will support the increase to utility capacity that is necessary to serve the new and existing buildings. Together the combined total project budget is $101 million.

- This 85,250 GSF facility is envisioned as a multi-story building with a mix of space types including high bay and secure access to accommodate export-controlled projects that facilitate cubesat fabrication/testing, advanced manufacturing and payload integration research.

- The scope and budget for this project has been rebalanced with the other research building project being presented in this CDP: the Grand Challenges Research Building. Together these projects are supported by state appropriations tied to the Capital Infrastructure Fund established in ARS 15-1671 which commits the State to pay half of the debt service on $200M of capital construction. While the $200M total program budget remains the same, we are rebalancing the two project budgets to better accommodate the now known needs and specifics of each project.

- The new Applied Research Building (ARB) will improve competitiveness and research revenues while driving new industry partnerships and regional economic development. It expands interdisciplinary applied physical sciences and engineering research focused on imaging, space systems, additive manufacturing, sensors, and targeted applications in the defense and biomedical sectors. At the same time, it will become a central asset in Arizona's ability to both recruit and retain high-performing faculty whose research is focused on systematic study of specific, practical challenges.

  The ARB will include advanced facilities such as clean rooms, thermal vacuum chambers, and advanced fabrication, prototyping, testing, and characterization facilities with high precision equipment to support research of interest to industry.

Project Delivery Method and Process

- This project is being delivered through a Design-Build (D-B) delivery method. This approach was selected for this project because it can provide early cost control and save time through project scheduling, while providing contractor constructability and design input and coordination throughout the project, improving potentially adversarial project environments and still allowing for the selection of the most qualified architect-contractor team for this project.

- The Design-Builder provides a Guaranteed Maximum Price (GMP) based on the amount previously agreed upon in the Design-Build agreement. In the selection of major subcontractors, the Design-Builder uses a qualification-based selection process prescribed by the ABOR Procurement Code to allow major subcontractors a design-assist role during the design phase. All remaining subcontractor work is awarded on the basis of the lowest responsive and responsible subcontractor bids. For this work, a minimum of three subcontractor bids will be required, except for specialty items or instances where proprietary systems are required.

- The Design-Build Team was selected through the appropriate project search committee process prescribed by the ABOR Procurement Code. A licensed contractor was included on the search committee as required by ABOR Policy.

Project Status and Schedule

- Programming and concept design are underway.

- Project construction is scheduled to commence in the fall of 2020 and scheduled to be completed in the spring of 2022.

Project Cost

- The total project budget is $85 million, with a construction cost of $60 million. The total budget for the related research infrastructure augmentation is $16 million. The combined total project budget is $101 million.

- The construction budget for this project was developed by in-house University professionals using cost data from industry-standard cost databases and from completed comparable projects.

Fiscal Impact and Financing Plan

- The University plans to issue $101 million of System Revenue Bonds (SRBs) to fund the Applied Research Building. The annual debt service payments on the SRBs is estimated to be $6.2 million. Arizona plans to use state appropriations tied to the Capital Infrastructure Fund established in ARS 15-1671 to pay for half of the debt service, and Arizona's other local matching funds to pay the other half.

- The estimated operations and maintenance (O&M) cost for the Applied Research Building is $707,900. Arizona plans to fund the O&M with indirect cost recovery revenues.

Debt Ratio Impact:

- The estimated annual debt service of $6.2 million on this project SRBs would increase Arizona's debt ratio by 0.27 percent.

Occupancy Plan

- This facility will provide new space for new researchers, it is not anticipated that space will be released.

Capital Project Information Summary

University: The University of Arizona
Project Name: Applied Research Building

Project Description / Location:
This project will create a new applied research facility and will be located adjacent to the Aerospace & Mechanical Engineering Building lot north of Speedway Blvd.

	FY 2019 Capital Development Plan	FY 2020 Capital Development Plan (Revised)
Planning	Winter 2018	Winter 2018
Design	Spring 2019	Spring 2019
Construction	Summer 2020	Fall 2020
Occupancy	Fall 2021	Spring 2022
Total Project Cost	$ 50,000,000	$ 101,000,000
Total Project Cost per GSF (excluding utility augmentation)	$ 833	$ 997*
Direct Construction Cost (excluding utility augmentation)	$ 35,500,000	$ 60,000,000
Construction Cost per GSF	$ 592	$ 703*
Change in Annual Oper. / Maint. Cost		
Utilities	$ 208,400	$ 281,900
Personnel	$ 207,500	$ 285,300
Other	$ 102,500	$ 140,700
Capital:		
• System Revenue Bonds (Debt service paid by State Appropriations and Arizona Other Local Matching Funds)	$ 50,000,000	$101,000,000
Operation/Maintenance:		
• Indirect Cost Recovery	$ 518,400	$707,900

*Increase is due to refinement of scope and other user-needs during the programming phase – includes addition of clean rooms; specialized, ground-floor space for high-bay; and other technical spaces.

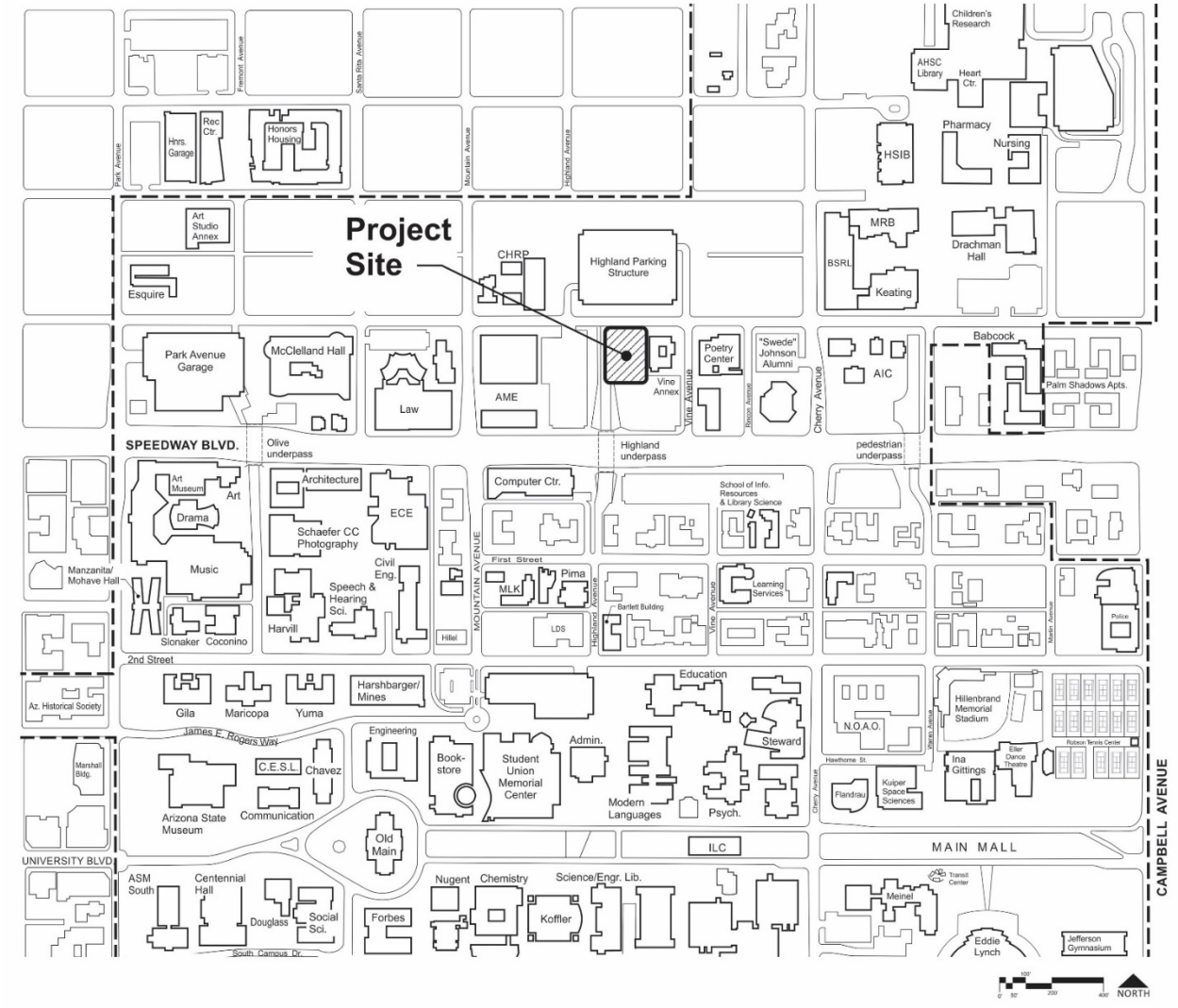
Capital Project Budget Summary

University: The University of Arizona
Project Name: Applied Research Building

Date of Budget Estimate	FY 2019 Capital Development Plan November 2018	FY 2020 Capital Development Plan (Revised) November 2019
1. Infrastructure Augmentation (previously included in a separate stand-alone infrastructure project.)	$ 0	$ 16,000,000
2. Construction Cost		
A. New Construction	$ 34,300,000	$ 53,600,000
B. Renovation	$ 0	$ 0
C. Fixed Equipment	$ 700,000	$ 700,000
D. Site Development (exclude 2.E.)	$ 100,000	$ 3,000,000
E. Parking & Landscaping	$ 200,000	$ 2,000,000
F. Utilities Extensions	$ 200,000	$ 700,000
G. Other (asbestos only)	$ 0	$ 0
Subtotal Construction Cost	**$ 35,500,000**	**$ 60,000,000**
3. Consultant Fees		
A. Construction Manager	$ 800,000	$ 900,000
B. Architect/Engineering Fees	$ 3,600,000	$ 7,000,000
C. Other (Programming, Special Conslt.)	$ 400,000	$ 600,000
Subtotal Consultant Fees	**$ 4,800,000**	**$ 8,500,000**
4. Furniture Fixtures and Equipment	$ 2,200,000	$ 3,500,000
5. Contingency, Design Phase	$ 1,800,000	$ 3,000,000
6. Contingency, Construction Phase	$ 1,800,000	$ 3,000,000
7. Parking Reserve	$ 900,000	$ 1,600,000
8. Telecommunications Equipment	$ 800,000	$ 1,600,000
Subtotal Items 4-8	**$ 7,500,000**	**12,700,000**
9. Additional University Costs		
A. Surveys and Tests	$ 250,000	$ 750,000
B. Move-in Costs	$ 100,000	$ 500,000
C. Public Art	$ 0	$ 0
D. Printing/Advertisement	$ 10,000	$ 50,000
E. Univ. Facilities & Project Mgmnt.	$ 1,540,000	$ 2,050,000
F. State Risk Mgt. Ins	$ 300,000	$ 450,000
Subtotal Additional University Costs	**$ 2,200,000**	**$ 3,800,000**
TOTAL CAPITAL COST	**$ 50,000,000**	**$ 101,000,000**

Project Site Map

Applied Research Building



Arizona Board of Regents
The University of Arizona
FY 2020 Capital Development Plan (CDP)
Project Justification Report

Grand Challenges Research Building (GCRB)
(Revised)

Previous Board Action

- Capital Improvement Plan FY 2020-2022 September 2018
- FY 2019 Capital Development Plan November 2018

Statutory and Policy Requirements

- Pursuant to Arizona Board of Regents Policy Chapter 7-102 (B)(1), all capital projects with an estimated total project cost of $10,000,000 or more, including information technology and third-party projects, shall be included in the Capital Development Plan.

Project Justification, Description and Scope

- Grand Challenges Research Building is a new $99 million interdisciplinary research facility to support the University of Arizona's research strengths. Research is in the core of Arizona's 2018 strategic plan, and this new building will stimulate interdisciplinary and public engagements providing space for new researchers and new sponsored projects.

- This 110,000 square foot facility is envisioned as a six-story facility (basement plus five stories above grade) in close proximity to other research entities to foster additional collaboration.

- The scope and budget for this project has been rebalanced with the other research building project being presented in this CDP: the Applied Research Building. Together these projects are supported by state appropriations tied to the Capital Infrastructure Fund established in ARS 15-1671 which commits the State to pay half of the debt service on $200M of capital construction. While the $200M total program budget remains the same, we are rebalancing the two project budgets to better accommodate the now known needs and specifics of each project.

- The University of Arizona will leverage its core strengths in the sciences through a strategic investment in this new building to drive high-impact interdisciplinary research programs that will broadly benefit the University's mission and the state of Arizona. By fostering new and sustainable collaboration in strategic domains, this building will accelerate the University's impact on our economy through advances in research. Consistent with Arizona's long-term strategic imperatives, the colocation synergy of this building will support application demonstrators, translational research and cooperative commercial application development partnership, and education.

- The GCRB will provide a strong return on investment in research awards, as well as human and intellectual capital. The broadly recognized impact and potential of Arizona's strategic research initiatives has resulted in a highly favorable investment climate for public and private sector extramural research partnerships that will provide an outstanding venue for student research experiences and workforce development at the cutting edge of science and technology. This opportunity will have major reputational impact on the University by bringing leading thinkers to our campus and fostering collaborations between scientists, engineers, and members of the health science community.

- The majority of the GCRB facility will be dedicated to interdisciplinary and collaborative laboratory space to execute research partnerships, with highly efficient faculty and shared student spaces for the participating colleges and potential visiting private-sector partners.

Project Delivery Method and Process

- This project is being delivered through a Design-Build (D-B) delivery method. This approach was selected for this project because it can provide early cost control and save time through project scheduling, while providing contractor constructability and design input and coordination throughout the project, improving potentially adversarial project environments and still allowing for the selection of the most qualified architect-contractor team for this project.

- The Design-Builder provides a Guaranteed Maximum Price (GMP) based on the amount previously agreed upon in the Design-Build agreement. In the selection of major subcontractors, the Design-Builder uses a qualification-based selection process prescribed by the ABOR Procurement Code to allow major subcontractors a design-assist role during the design phase. All remaining subcontractor work is awarded on the basis of the lowest responsive and responsible subcontractor bids. For this work, a minimum of three subcontractor bids will be required, except for specialty items or instances where proprietary systems are required.

- The Design-Build Team was selected through the appropriate project search committee process prescribed by the ABOR Procurement Code. A licensed contractor was included on the search committee as required by ABOR Policy.

Project Status and Schedule

- Programming and concept design are underway.

- Project construction is scheduled to commence summer of 2020 and be completed winter of 2022.

Project Cost

- The total project budget for GCRB is $99 million, with a construction cost of $70.5 million.

- The construction budget for this project was developed by in-house University professionals using cost data from industry-standard cost databases and from completed comparable projects.

Fiscal Impact and Financing Plan

- The University plans to issue $99 million of System Revenue Bonds (SRBs) to fund the Grand Challenges Research Building. The annual debt service payments on the SRBs is estimated to be $6.0 million. Arizona plans to use state appropriations tied to the Capital Infrastructure Fund established in ARS 15-1671 to pay for half of the debt service, and Arizona's other local matching funds to pay the other half.

- The estimated operations and maintenance (O&M) cost for the Grand Challenges Research Building is $951,000. Arizona plans to fund the O&M with indirect cost recovery revenues.

Debt Ratio Impact:

- The estimated annual debt service of $6.0 million on this project would increase Arizona's debt ratio by 0.17 percent.

Occupancy Plan

- This facility will provide space for new researchers; it is not anticipated that space will be released.

Capital Project Information Summary

University: The University of Arizona
Project Name: Grand Challenges Research Building

Project Description / Location:
This project will create a new interdisciplinary research facility to be located along Cherry Avenue south of the main mall and the Meinel Optical Sciences Building. The project also includes related research infrastructure augmentation that will provide utility capacity for the new building.

	FY 2019 Capital Development Plan	FY 2020 Capital Development Plan (Revised)
Planning	Early 2019	Early 2019
Design	Mid 2019	Summer 2019
Construction	Mid 2020	Summer 2020
Occupancy	Late 2022	Winter 2022
Total Project Cost	$ 150,000,000	$ 99,000,000
Total Project Cost per GSF	$ 882	$ 900
Direct Construction Cost	$ 109,000,000	$ 70,500,000
Construction Cost per GSF	$ 641	$ 641
Change in Annual Oper. / Maint. Cost		
Utilities	$ 619,920	$382,000
Personnel	$ 608,600	$381,100
Other	$ 300,600	$187,900
Capital:		
• System Revenue Bonds (Debt service paid by State Appropriations and Other Arizona Local Matching Funds)	$ 150,000,000	$99,000,000
Operation/Maintenance:		
• Indirect Cost Recovery	$ 1,529,120	$951,000

Capital Project Budget Summary

University: The University of Arizona
Project Name: Grand Challenges Research Building

Date of Budget Estimate	FY 2019 Capital Development Plan November 2018	FY2020 Capital Development Plan (Revised) November 2019
1. Land	$ 0	$ 0
2. Construction Cost		
A. New Construction	$ 105,500,000	$ 67,500,000
B. Renovation	$ 0	$ 0
C. Fixed Equipment	$ 2,000,000	$ 1,500,000
D. Site Development (exclude 2.E.)	$ 500,000	$ 500,000
E. Parking & Landscaping	$ 500,000	$ 500,000
F. Utilities Extensions	$ 500,000	$ 500,000
G. Other (asbestos only)	$ 0	$ 0
Subtotal Construction Cost	**$ 109,000,000**	**$ 70,500,000**
3. Consultant Fees		
A. Construction Manager	$ 1,100,000	$ 900,000
B. Architect/Engineering Fees	$ 11,100,000	$ 7,900,000
C. Other (Special Conslt.)	$ 800,000	$ 600,000
Subtotal Consultant Fees	**$ 13,000,000**	**$ 9,400,000**
4. Furniture Fixtures and Equipment	$ 8,000,000	$ 5,700,000
5. Contingency, Design Phase	$ 5,500,000	$ 3,600,000
6. Contingency, Construction Phase	$ 5,500,000	$ 3,600,000
7. Parking Reserve	$ 500,000	$ 500,000
8. Telecommunications Equipment	$ 2,500,000	$ 1,700,000
Subtotal Items 4-8	**$ 22,000,000**	**$ 15,100,000**
9. Additional University Costs		
A. Surveys and Tests	$ 800,000	$ 500,000
B. Move-in Costs	$ 350,000	$ 150,000
C. Public Art	$ 0	$ 0
D. Printing/Advertisement	$ 50,000	$ 50,000
E. Univ. Facilities & Project Mgmnt.	$ 4,000,000	$ 2,700,000
F. State Risk Mgt. Ins	$ 800,000	$ 600,000
Subtotal Additional University Costs	**$ 6,000,000**	**$ 4,000,000**
TOTAL CAPITAL COST	**$ 150,000,000**	**$ 99,000,000**

Project Site Map

Grand Challenges Research Building