

FY 2016
Capital Development Plan
University of Arizona

EXECUTIVE SUMMARY

**THE UNIVERSITY OF ARIZONA
 REVISED FY 2016 CAPITAL DEVELOPMENT PLAN**

EXHIBIT 1

	Board Approval Status	Gross Square Footage	Project Cost	Amount Financed	Funding Method	Annual Debt Service	Debt Ratio
Newly Proposed Project							
Simulation Inter-Professional Healthcare Education and Research Building	Pending Revised FY 2016 CDP	226,000	\$163,000,000	\$163,000,000	SRB	\$11,100,000	.19%
Newly Proposed Project Total			\$163,000,000	\$163,000,000		\$11,100,000	
Previously Approved Projects							
North Campus Infrastructure Phase 2 (On Hold)	FY2013 CDP	N/A	\$ 16,000,000				
Engineering Innovation Building (On Hold)	FY2013 CDP	107,000	\$ 63,000,000				
South Stadium Parking Structure	FY2013 CDP	317,000	\$ 18,500,000	\$ 8,500,000	AUX/SRB	\$ 557,000	.02%
Interdisciplinary Chemical Sciences Renovation & Expansion (On Hold)	FY2013 CDP	116,000	\$ 79,200,000				
Previously Approved Projects Total			\$ 176,700,000	\$ 8,500,000			
Total			\$ 339,700,000	\$ 171,500,000		\$ 11,657,000	

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EXHIBIT 2

CAPITAL DEVELOPMENT PLAN - ANNUAL DEBT SERVICE BY FUNDING SOURCE									
Project	Amount Financed	TUI	AUX	ICR	OLF	SLP	FGT	DFG	TOTAL ANNUAL DEBT SERVICE
Newly Proposed Project									
Simulation Inter-Professional Healthcare Education and Research Building	\$163,000,000				\$11,100,000				\$ 11,100,000
Newly Proposed Project Total	\$163,000,000				\$11,100,000				\$ 11,100,000
Previously Approved Projects									
North Campus Infrastructure Phase 2 (On Hold)									
Engineering Innovation Building (On Hold)									
South Stadium Parking Structure	\$ 8,500,000		\$ 557,000						\$ 557,000
Interdisciplinary Chemical Sciences Renovation & Expansion (On Hold)									
Previously Approved Projects Total	\$ 8,500,000		\$ 557,000						\$ 557,000
Total	\$ 171,500,000		\$ 557,000		\$11,100,000				\$ 11,657,000

Debt Service Funding Source Codes:

- | | | |
|-----------------------------------------|------------------------------|------------------------------|
| (TUI) Tuition | (ICR) Indirect Cost Recovery | (FGT) Federal Grant |
| (AUX) Auxiliary | (OLF) Other Local Funds | (DFG) Debt Financed by Gifts |
| (SLP) State Lottery Allocation Proceeds | | |

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EXHIBIT 3

CAPITAL DEVELOPMENT PLAN - OPERATION AND MAINTENANCE BY FUNDING SOURCE									
Project	TOTAL ANNUAL O&M	TUI	AUX	ICR	OLF	GFA	FGT	DFG	OTH
Newly Proposed Project									
Simulation Inter-Professional Healthcare Education and Research Building	\$ 1,887,600				\$ 1,887,600				
Total Newly Proposed Project									
	\$ 1,887,600				\$ 1,887,600				
Previously Approved Projects									
North Campus Infrastructure Phase 2 (On Hold)	N/A								
Engineering Innovation Building (On Hold)	\$ 1,124,000								
South Stadium Parking Structure	\$ 769,000		\$ 769,000						
Interdisciplinary Chemical Sciences Renovation & Expansion (On Hold)	\$ 879,200								
Previously Approved Projects Total									
	\$ 2,772,200		\$ 769,000						
Total									
	\$ 4,659,800		\$ 769,000		\$ 1,887,600				

Operation and Maintenance Funding Source Codes:

- | | | |
|-----------------|------------------------------|----------------------------------|
| (TUI) Tuition | (ICR) Indirect Cost Recovery | (GFA) General Fund Appropriation |
| (AUX) Auxiliary | (OLF) Other Local Funds | (FGT) Federal Grant |
| (OTH) Other | (DFG) Debt Financed by Gifts | |

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**Arizona Board of Regents
The University of Arizona
FY 2016 Capital Development Plan
Project Justification Report**

Simulation, Inter-Professional Healthcare Education and Research Building

Previous Board Action

Capital Improvement Plan FY 2013-2015	September 2011
• Capital Improvement Plan FY 2014-2016	September 2012
• Capital Improvement Plan FY 2015-2017	September 2013
• Capital Improvement Plan FY 2016-2018	September 2014
• Capital Improvement Plan FY 2017-2019	September 2015

Statutory/Policy Requirements

- Board Policy 7-102 requires all capital projects with an estimated total project cost of \$5 million or more for renovation or infrastructure projects, or \$10 million or more for new construction or information technology projects, shall be brought to the Business & Finance Committee for approval regardless of funding source or financing structure.

Project Justification/Strategic Implications/Project Compliance with Mission, Strategic Plan, Master Plan and Community Input Process

This project will entail the construction of 220,000 square feet for the Simulation, Inter-Professional Healthcare Education and Research Building (SIPHER) at The University of Arizona Health Sciences (UAHS), Tucson campus. The SIPHER building is an multidisciplinary, inter-professional education and simulated practice building fostering trans-disciplinary collaborations and serving as a cutting edge platform for multidisciplinary teams of health professional, student and faculty in medicine, nursing, pharmacy and public health. Inter-professional health education and practice have been declared a national priority to improve healthcare quality and safety. UAHS Tucson facilities fall below contemporary space standards and are not aligned with these priorities. Perception of space quality and quantity hinders UAHS's reputation in competition for both students and faculty, and creates challenges for evolving inter-professional and simulation pedagogy, curriculum and skills development. Based on an extensive needs assessment and user group discussions process the building will consist of space for inter-professional instruction, simulation and innovation, clinical skills, interactive learning and instructional support. SIPHER will be a nexus of the UA "Never Settle" plan and is a physical point of convergence to build excellence in UA Health Sciences (UAHS) health disparities, population health and health outcomes, precision health, border health, and neuroscience.

There is no other space like it at UA and few spaces will be like it throughout the country and will set the benchmark for inter-professional health education.

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- The following institutional priorities and critical capital development-related elements of the **Arizona Higher Education Enterprise Plan Goals** are supported by this project:

Academic & Research Needs:

With the current national and state focus on health care, this project is a priority for the University as it addresses its mission to educate our future healthcare providers in an innovative manner. Changing pedagogies require learning studios, small group spaces, classrooms that can flip from a standard lecture hall to a room that fosters creative interaction and collaborative engagement. Examples of innovative learning spaces includes flexible furniture, physically appealing spaces that are “wired” and that can be configured for group learning and collaboration. State-of-the-art technologies are foundational throughout the learning spaces and building at large. The SIPHER building will promote team based, face-to-face communication, while recognizing that this engagement also must occur virtually through multiple technological modalities and will connect learners with technology-enabled patient care (e.g. telehealth, eICUs, home health, and foster faculty’s ability to remotely monitor students in real-world community-based and rural clinical environments).

The facility will:

- Be designed to provide specialized education and training space and provide for future growth in integrated, inter-professional education, training and research.
 - Allow UAHS to meet requirement for increased accrediting agencies emphasis on inter-professional activities which places responsibility on UAHS to ensure students in healthcare professions have demonstrated proficiency *before* they finish their degree training.
 - Allow enhanced research and development of specialized hardware and software aimed at improving healthcare outcomes (for example, “smart” patient sensors that can monitor a patient’s vital signs and notify health professionals when unexpected changes occur) and creating one facility that could bring the Colleges of Public Health, Pharmacy, Nursing and Medicine, and other first responders together to evaluate medical rescue protocols along the border.
 - Allow innovation and leadership in the generation and application of population health evidence to improve health and promote equity in Arizona by building research, knowledge translation, and infrastructure capacity. The facility will help the centers foster an interdisciplinary environment by creating linkages among researchers, health providers, health systems, health payers and policymakers.
- **Community Engagement & Workforce Impact.**

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The SIPHER building will attract students, faculty, scientists, clinicians, business partners, consumers and the public at-large. Significant space will be designated as active and flexible inter-professional learning areas reflecting learner needs today and anticipating future learner needs. Conceptually, the transition to diverse, team-based

education, research and practice needs flexible design from space capable of supporting diverse team learning and competency-based training to large lecture/auditorium space essential to accommodate growing undergraduate and graduate enrollments and engagement with professionals' continuing education and development. SIPHER will facilitate the preparation of new "collaboration-ready" graduates to enter the state and local workforce in high-demand clinical areas, including medicine, nursing, pharmacy and public health.

The entire facility will be a model for innovation through diverse educational and research synergies and that encourages public-private partnerships. This innovative environment is core to advancing health science education, clinical practice and clinical research. Further, as an integrated hub, the SIPHER building will be a place to engage the community on all levels of education, practice, and research.

Construction Market Conditions

The current construction market remains very favorable with good competition and low labor and material prices. But slowly increasing prices of fuel, metals and some other materials across the country make it advisable to expedite the design and construction process to the extent reasonably possible to lock in prices and minimize cost impacts on the University and its students.

Project Description/Scope/Conformance with Space Standards

- The proposed 220,000 gross square feet (GSF) Simulation, Inter-Professional Healthcare Education and Research Building (SIPHER) will serve the needs of UAHS and the community at large. The proposed facility will provide a state-of-the-art Inter-Professional education and simulated practice facility for medical, nursing, pharmacy, and public health education. Due to the proximity of the existing BIO5 Institute, Medical Research Building and the planned BioScience Research Laboratory Building, this facility will foster multi-disciplinary collaborations across campus and will serve as a unique place for productive interactions between inter-Professional teams of health professions for students and faculty.
- To further utilize this proximity nexus, a 6,000 gsf separate connectivity corridor will facilitate the safe and secure movement of University staff and research subjects from the existing UAHS Facility, south through SIPHER to the BIO5 and new BSRL complex.

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- This new facility will help attract the best and the brightest health sciences students from Arizona and beyond, increase enrollment in the health sciences, bring new talented faculty to the UA and support retention of our most innovative faculty.
- The SIPHER Building will be in conformance to UA Design & Specification Standards to minimize operations and maintenance costs and to maximize the University's long-term investment. It will be constructed of high-quality, durable, maintainable materials and systems to maximize energy efficiency and minimize operational, repair and replacement costs and will have long lifecycle.

Project Delivery Method and Process

- This project will be delivered through the Construction Manager at Risk (CMAR) 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. With the use of independent cost estimates at each phase and low-bid subcontractor pricing for the actual construction work, this method also provides a high level of cost and quality control.
- The CMAR will be selected through the capital project selection committee process prescribed by the ABOR Procurement Code. A licensed contractor will be included on the selection committee as required by ABOR policy. The design team has been selected through a similar ABOR Selection Committee process.

Project Status & Schedule

- Programming is underway and this project would commence design in December 2015 with construction commencing in early 2017.
- Project construction would be completed in 2018 for the start of the Fall 2018 UAHS semester.

Project Cost and Methodology Used to Develop the Total Project Cost

- The total project budget is \$163,000,000 with a construction cost of \$115,100,000.
- The construction budget for this project was developed by in-house University professionals and consultants using cost data from the centralized ABOR Project Cost Database, other comparable projects identified elsewhere and the cost model developed specifically for this project. As the project progresses, confirming corroborated estimates

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will be provided and reconciled by the design team and the CMAR. Below is the list of potentially comparable projects and costs identified for budget comparison purposes:

Comparable Project	Location	Project Size (GSF)	Escal. Const. Cost/sf
UA Health Sciences Education Building	Phoenix	265,000 gsf	\$503.63
University of Virginia/Claude Moore Medical Education Building (adjusted to include similar site costs)	Charlottesville, VA	58,342 gsf	\$673.81
University of Pennsylvania/Neural & Behavioral Sciences Building*	Philadelphia	78,000	\$652.40

* Construction cost factored from total project cost numbers available

Average Comparable Project

\$610/gsf

- Considering these comparable construction costs for the most similar projects that could be identified, the SIPHER Building construction cost budget of \$523/gsf appears to be appropriate. The project team will continue to search for potential cost-saving opportunities throughout the design and construction phases.

Fiscal Impact and Financing Plan

- The construction cost associated with the Simulation, Inter-Professional Healthcare Education and Research (SIPHER) Building project with 226,000 gsf is budgeted to be \$163M, which includes the secure transportation corridor.
- The operating and maintenance (O&M) cost is estimated to be \$1.9M for this facility.
- The project would be financed with System Revenue Bonds (SRBs), with debt service to be paid for by the University of Arizona Health Sciences (UAHS) local funds and facility operating revenues when placed in service.

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- UAHS current financial resources and revenues generated by the new facility will provide the capacity to pay for the project's debt service and O&M cost.

Debt Ratio Impact:

- The estimated annual debt service on the SRBs to finance the SIPHER project will increase the UA debt ratio by .19 percent excluding SPEED bonds and .19 percent if SPEED Bonds are included. The projected highest debt ratio is 4.9 percent excluding SPEED projects and 6.0 percent including SPEED projects.

Backfill Plan

- The project would result in the release of approximately 35,000 net square feet within the UA College of Medicine – Tucson and the Arizona Health Sciences Library by the relocation and expansion of the Arizona Simulation and Training Center (ASTEC), clinical skills and BioCommunications. When vacated, this space will help provide space to accommodate those programs and units affected by the loss of space to the Banner property acquisition and hospital construction.

Alternatives to Project

- Very minimal alternatives exists for this much-needed project. A minimum 34,000 SF would be need to be identified as available for instructional, simulation, clinical skills and instructional support space needs. Due to the demands associated with the Banner property acquisition relocation needs, only a maximum of 18,000 GSF of space may be deemed appropriate for simulation and still not fully meet the needed requirements. This space would reduce available current student learning space and require extensive renovation at a preliminary estimate of \$43-48M, which roughly half would be for infrastructure and equipment.
- Without a quality, state-of-the-art, inter-professional education and practice space that will be provided by the SIPHER building, the ability to attract and retain the nation's best and brightest faculty and students will be severely compromised.

Description of Other Related Projects Including Infrastructure Improvements

- There are no related projects.

EXECUTIVE SUMMARY**Capital Project Information Summary****University:** The University of Arizona**Project Name:** Simulation, Inter-Professional Healthcare Education and Research Building**Project Description/Location:**

The proposed 220,000 gsf Simulation, Inter-Professional Healthcare Education and Research Building (SIPHER) would provide state-of-the-art inter-professional education and simulated practice for health related professions. The 6,000 sf connectivity corridor will facilitate the safe and secure movement of University staff and research subjects. This building is appropriately located proximate to the Medical Research Building, BIO5, Keating and the planned UAHS Bio-Science Research Laboratory Building in the Land-Use Zone identified in the Comprehensive Campus Plan for research and education programs.

Project Schedule (Beginning Month/Year):

Planning	May 2015
Design	November 2015
Construction	January 2017
Occupancy	May 2018

Project Budget:

Total Project Cost (excludes \$6M Secure Transportation Corridor)	\$157,000,000
Total Project Cost per GSF New SIPHER Building	\$714
Direct Construction Cost – New SIPHER Building	\$115,100,000
Construction Cost per GSF – New SIPHER Building	\$523
Change in Annual Oper./Maint. Cost	
Utilities	\$744,188
Personnel	\$772,000
Other	\$371,400

Funding Sources:

Capital:	
• System Revenue Bonds (Debt service paid by local funds)	\$163,000,000
Operation/Maintenance:	
• Local Funds	\$1,887,588

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	<u>Capital Development Plan</u>	<u>Project Approval</u>
	<u>Approval</u>	
<u>Date of Budget Estimate</u>	November 2015	
1. Secure Transportation Corridor	\$	6,000,000
2. Construction Cost		
A. New Construction		114,815,000
B. Renovation		0
C. Fixed Equipment		264,000
D. Site Development (exclude 2.E.)		In 2A
E. Parking & Landscaping		In 2A
F. Utilities Extensions		In 2A
G. Other (asbestos)		21,000
Subtotal Construction Cost	\$	<u>115,100,000</u>
3. Consultant Fees		
A. Construction Manager		1,036,000
B. Architect/Engineering Fees		10,704,000
C. Other (Programming, Special Const.)		1,611,000
Subtotal Consultant Fees	\$	<u>13,351,000</u>
4. Furniture Fixtures and Equipment		9,680,000
5. Contingency, Design Phase		4,604,000
6. Contingency, Construction Phase		5,755,000
7. Parking Reserve		2,130,000
8. Telecommunications Equipment		1,842,000
Subtotal Items 4-8	\$	<u>24,011,000</u>
9. Additional University Costs		
A. Surveys and Tests		1,118,000
B. Move-in Costs		50,000
C. Public Art		0
D. Printing/Advertisement		20,000
E. Univ. Facilities & Project Management		2,850,000
F. State Risk Mgt. Ins		500,000
Subtotal Additional University Costs	\$	<u>4,538,000</u>
TOTAL BUILDING COST (lines 2-9)	\$	<u><u>157,000,000</u></u>
TOTAL CAPITAL COST	\$	163,000,000

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Project Site Location Map

