FY 2019
Capital Development Plan

Arizona State University

EXECUTIVE SUMMARY

Item Name: Annual Capital Development Plan (ASU)

- ☐ Action Item
- ☒ Committee Recommendation to Full Board
- ☐ First Read of Proposed Policy Change
- ☐ Information or Discussion Item

Issue: Arizona State University asks committee review and board approval of its $590 million Capital Development Plan (CDP), which includes four new projects and two previously approved projects. No third-party projects are included in this CDP. Of the total, $550 million will be financed with debt, and the university debt ratio including CDP projects and first-year CIP projects will reach a maximum of 5.1% in FY 2021. ASU requests financing approval for the projects as outlined in the CDP.

Previous Board Action

- FY 2018 Capital Development Plan — June 2017
  - Hayden Library Reinvention
  - Health Solutions Innovation Center
- FY 2019-2021 Capital Improvement Plan — September 2017
  - Interdisciplinary Science and Technology Building (ISTB) 7
  - Biomedical Laboratory Research Building Improvements
  - Durham Language and Literature Building Renovation
  - Wells Fargo Arena Renovation and New Multi-Purpose Arena

Enterprise or University Strategic Plan

- ☒ Empower Student Success and Learning
- ☒ Advance Educational Attainment within Arizona
- ☒ Create New Knowledge
- ☒ Impact Arizona
- ☒ Compliance
- ☐ Real Property Purchase/Sale/Lease
- ☐ Other:

Contact Information:
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Statutory/Policy Requirements

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

- Capital Development Plans are reviewed by the Business and Finance Committee and approved by the Board.

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

Prior Year Activity

- Two university projects totaling $49.025 million were substantially completed within the last 12 months. Additionally, a third-party project was completed.

- Six university projects totaling $483.808 million began or continued construction activity in the last 12 months. Additionally, a third-party project is underway.

- Details on completed and ongoing projects are listed in Exhibit 1.

Overview and Alignment with Enterprise and University Goals and Objectives:

- ASU has developed the CDP to align with the university's campus master plan and the system enterprise and university strategic goals and objectives. The ASU CDP includes six projects totaling $590.0 million that are the highest priorities for achieving institutional goals, as described below:

    - Increasing total student enrollment
    - Improving freshman retention
    - Achieving an increase in degree production
    - Expanding research performance and annual research expenditures
    - Enhancing local impact and social embeddedness

- **Academic Success:** These projects will contribute directly to advancing the twin pillars of academic success: leadership in academic excellence and accessibility and establishing national standing in academic quality. Specifically, these new and renovated facilities will provide programmatic and support space necessary to achieve the goals and metrics of:

- increase total enrollment to 125,005 by 2025
- improve the freshman retention rate to 90% by 2025
- increase the six-year graduation rate to 75% by 2025
- increase the number of bachelor's degrees awarded to 21,430 and graduate degrees awarded to 10,670 by 2025.

- **Research and Development Grants:** University research expenditures are used in part to purchase local goods and services; help create new companies and jobs; support the development of next-generation scientists and innovators; and attract top research talent to the faculty. Research and development expenditures also support the state's competitive advantage in science, technology and medicine. Research revenues are targeted to increase by more than $815 million or eighty percent by 2025 to meet the goals of the ABOR *2025 Vision* plan.

- **Campus Operations and Infrastructure Priorities:** In order for the university to advance its academic and research goals, the facilities and related infrastructure must be maintained in safe, operational condition. Buildings and utility systems also must be efficient and cost-effective to maximize the use of operational funds over time. Critical maintenance and renovations cannot fall behind, despite the absence of state building renewal funding support.

- **Life Safety and Code Compliance:** Life safety and code compliance matters take the highest priority in ensuring a safe environment for students, faculty, staff and visitors and to support the achievement of the university's academic and research goals. Safety and code compliance issues must be resolved promptly.

- **Community Service Opportunities:** Engaging and serving Arizona communities is an integral aspect of the university's mission and its programs. Enhancing and expanding these community service and outreach programs and activities is vital to improving the quality of life and the economic prosperity in Arizona.

- **Capital Infrastructure Fund**: The annual CDP includes the first four projects that will benefit from the recently enacted Capital Infrastructure Fund (CIF) to provide annual funding for capital projects, matched with university funds. These high-priority projects include two new research facilities that support establishing the university as a leading global center for interdisciplinary research and for advancing the transformation of medical education, along with the reinvention and renovation of two existing facilities to address critical deferred maintenance.

Capital Development Plan Projects:

- The following lists the new and previously approved projects proposed for CDP approval:

  - Interdisciplinary Science and Technology Building (ISTB) 7
  - Biomedical Research Laboratory Building Improvements
  - Durham Language and Literature Building Renovation
  - Wells Fargo Arena Renovation and New Multi-Purpose Arena
  - Hayden Library Reinvention (Previously Approved)
  - Health Solutions Innovation Center (Previously Approved)

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

Fiscal Impact and Management:

- The ASU CDP, if fully implemented, will cost a total of $590.0 million.

- Of the total amount, $550.0 will be financed using debt.

- ASU will:
  (a) sell one or more series of System Revenue Bonds to finance five projects as identified in Exhibit 2, costs of issuance, 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.

- **Debt Ratio Impact:** Based upon projects included in this CDP and the first year of the CIP, the debt ratio is expected to reach its maximum in FY 2021 at 5.1 percent excluding SPEED debt. If SPEED debt is included, the FY 2021 debt ratio is 5.5 percent.

- Exhibits 2, 3 and 4 provide detailed project financing, funding sources and debt ratio impact.

Requested Action:

Arizona State University asks the committee to forward to the full board for approval of the ASU Capital Development Plan and Financing Approval, as presented in this Executive Summary.

EXECUTIVE SUMMARY

EXHIBIT 1
Arizona State University
Annual Capital Project Status Report

ARIZONA STATE UNIVERSITY CAPITAL PROJECT STATUS REPORT							
Project Name	**Square Feet**	**Total Budget**	**Percent Work Completed**	**Percent Total Expended**	**Percent to Gift Target**	**Date Last Board Approval**	**Original/ Revised Occupancy Date**
Ongoing Projects							
Armstrong Hall/Ross-Blakley Library Renovation*	167,000	$26,000,000	85	59	N/A	2/2/2017	5/18/2018
Biodesign C	188,447	$120,000,000	74	69	N/A	4/6/2016	8/10/2018
Central Plant Emergency Power System Upgrades	21,989	$5,828,000	50	22	N/A	9/23/2016	10/12/2018
Central Plant Chilled Water System Optimization	21,989	$10,380,000	87	79	N/A	6/9/2016	2/28/2018
Greek Leadership Village Community Center	30,666	$14,000,000	43	22	N/A	6/9/2017	7/3/2018
Sun Devil Stadium Renovation **	813,953	$307,600,000	68	68	90%	9/28/2017	8/31/2018
Ongoing Third-Party Projects							
Greek Leadership Village	309,000		58		N/A	11/17/2016	7/31/2018
Completed Projects							
Gammage Auditorium	10,000	$9,125,000	100	100	99%	6/9/2016	3/10/2017
Student Pavilion	74,653	$39,900,000	100	98	N/A	11/19/2015	8/7/2017
Completed Third-Party Projects							
Fulton Schools Residential Community at Tooker House	450,000		100		N/A	6/4/2015	8/15/2017

* The Board approved the combination of these projects in order to capture efficiencies in the project design and construction process. The renovation of Ross-Blakley Library was substantially completed on 9/14/2017. ** This project budget and schedule reflects all phases of the overall Sun Devil Stadium Renovation project. The Sun Devil Stadium Renovation project will be completed in three phases with a total budget of $307,600,000.

EXECUTIVE SUMMARY

EXHIBIT 2
Arizona State University
Annual Capital Development Plan

ARIZONA STATE UNIVERSITY CAPITAL DEVELOPMENT PLAN							
Project	**Board Approval Status**	**Gross Square Footage**	**Project Cost**	**Amount Financed**	**Funding Method**	**Annual Debt Service**	**Debt Ratio**
New Academic/Support Project							
ASUT - Interdisciplinary Science and Technology Building 7	CIP Sept 2017	258,000	$175,000,000	$175,000,000	System Revenue Bonds	$9,700,000	0.32%
ASUD - Biomedical Research Laboratory Building Improvements	Ground Lease Nov 2017	112,000	$40,000,000		General University Funds		
ASUT - Durham Language and Literature Building Renovation	CIP Sept 2017	137,000	$45,000,000	$45,000,000	System Revenue Bonds	$2,253,000	0.07%
New Auxiliary Project							
ASUT - Wells Fargo Arena Renovation and New Multi-Purpose Arena	CIP Sept 2017	405,000	$160,000,000	$160,000,000	System Revenue Bonds	$10,408,000	0.33%
New Project Total		**912,000**	**$420,000,000**	**$380,000,000**		**$22,361,000**	**0.72%**
Previously Approved Academic/Support Project							
ASUT - Hayden Library Reinvention	CDP June 2017	240,000	$90,000,000	$90,000,000	System Revenue Bonds	$5,376,000	0.19%
ASU - Health Solutions Innovation Center	CDP June 2017	150,000	$80,000,000	$80,000,000	System Revenue Bonds	$5,440,000	0.19%
Previously Approved Project Total		**390,000**	**$170,000,000**	**$170,000,000**		**$10,816,000**	**0.38%**
Total CDP		**1,302,000**	**$590,000,000**	**$550,000,000**		**$33,177,000**	**1.10%**

EXECUTIVE SUMMARY

EXHIBIT 3
Arizona State University
Annual Debt Service by Funding Source

CAPITAL DEVELOPMENT PLAN - ANNUAL DEBT SERVICE BY FUNDING SOURCE											
Project	**Amount Financed**	**CIF**	**TUI**	**AUX**	**ICR**	**OLF**	**SLP**	**FGT**	**DFG**	**OTH**	**TOTAL ANNUAL DEBT SERVICE**
New Academic/Support Project											
ASUT - Interdisciplinary Science and Technology Building 7	$175,000,000	$4,850,000	$4,850,000								$9,700,000
ASUD - Biomedical Research Laboratory Building Improvements											
ASUT - Durham Language and Literature Renovation	$45,000,000	$1,126,500	$1,126,500								$2,253,000
New Auxiliary Project											
ASUT - Wells Fargo Arena Renovation and New Multi-Purpose Arena	$160,000,000			$8,741,000					$ 1,667,000		$10,408,000
New Project Total	**$380,000,000**	**$5,976,500**	**$5,976,500**	**$8,741,000**	**$0**	**$0**	**$0**	**$0**	**$1,667,000**	**$0**	**$22,361,000**
Previously Approved Academic/Support Project											
ASUT - Hayden Library Reinvention	$90,000,000	$1,181,000	$4,195,000								$5,376,000
ASU - Health Soutions Innovation Center	$80,000,000	$2,720,000	$2,720,000								$5,440,000
Previous Approved Project Total	**$170,000,000**	**$3,901,000**	**$6,915,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$10,816,000**
Total	**$550,000,000**	**$9,877,500**	**$12,891,500**	**$8,741,000**	**$0**	**$0**	**$0**	**$0**	**$1,667,000**	**$0**	**$33,177,000**

Funding Source Codes:
(CIF) Capital Infrastructure Fund
(TUI) Tuition
(AUX) Auxiliary
(ICR) Indirect Cost Recovery
(OLF) Other Local Funds
(GFA) General Fund Appropriation
(FGT) Federal Grant
(DFG) Debt Financed by Gifts
(OTH) Other

EXECUTIVE SUMMARY

EXHIBIT 3
Arizona State University
Operation and Maintenance by Funding Source

CAPITAL DEVELOPMENT PLAN - OPERATION AND MAINTENANCE BY FUNDING SOURCE											
Project	**TOTAL ANNUAL O&M**	**CIF**	**TUI**	**AUX**	**ICR**	**OLF**	**GFA**	**FGT**	**DFG**	**OTH**	**TOTAL ANNUAL 0&M**
New Academic Support Project											
ASUT - Interdisciplinary Science and Technology Building 7	$ 3,188,410		$3,188,410								$ 3,188,410
ASUD - Biomedical Research Laboratory Building Improvements	$ 1,000,000									$1,000,000	$ 1,000,000
ASUT - Durham Langugage and Literature Building Renovation	$ -										$ -
New Auxiliary Project											
ASUT - Wells Fargo Arena Renovation and New Multi-Purpose Arena	$ 1,307,094		$1,307,094								$ 1,307,094
Previously Approved Academic Support Project											
ASUT - Hayden Library Reinvention	$96,343		$96,343								$96,343
ASU - Health Solutions Innovation Center	$1,329,188		$1,329,188								$1,329,188
Total	**$ 6,921,035**	$ -	**$ 5,921,035**	$ -	$ -	$ -	$ -	$ -	$ -	**$ 1,000,000**	**$ 6,921,035**

Funding Source Codes:
(CIF) Capital Infrastructure Fund
(TUI) Tuition
(AUX) Auxiliary
(ICR) Indirect Cost Recovery
(OLF) Other Local Funds
(GFA) General Fund Appropriation
(FGT) Federal Grant
(DFG) Debt Financed by Gifts
(OTH) Other

EXHIBIT 4
Debt Capacity Update

PURPOSE

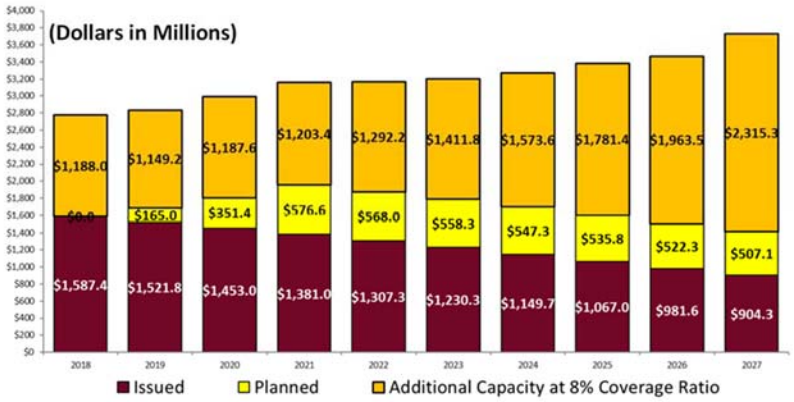
To demonstrate Arizona State University's ability to finance additional capital investment through debt instruments and to fund the related debt service (principal and interest).

PROJECTED DEBT CAPACITY

Maximum Projected Ratio of Debt Service to Total Expenditures Excluding/Including SPEED debt
5.1%/ 5.5%

Based upon the projects included in this CDP and the first year of the CIP, the maximum projected debt ratio is 5.1 percent in FY 2021, relative to the statutory debt limit of 8 percent. Outstanding debt in FY 2021 is projected to be $1.96 billion, with total annual debt service of $152.0 million. The 5.1 percent ratio is within the range used by bond rating firms to confirm an institution's creditworthiness and is below the 8 percent statutory maximum.

Currently outstanding (issued) debt declines from $1.6 billion in FY 2018 to $.9 billion in FY 2027 as debt is retired. Outstanding planned debt includes future financings of projects presented in this annual CDP and those included in the first year of the 2019-2021 CIP. Additional debt capacity represents debt that can be issued in any given year based on the statutory 8 percent debt ratio maximum.



FUTURE PROJECTS

Future debt-financed projects include those in this annual Capital Development Plan (CDP), and those included in the first year of the FY 2019-21 Capital Improvement Plan (CIP). These projects are included in the future Debt Capacity assumptions.

	Project Budget	Amount to be Financed
Tempe Campus Parking Structure	$30,000,000	$30,000,000
Durham Language and Literature Building Renovations	45,000,000	45,000,000
Health Solutions Innovation Center	80,000,000	80,000,000
Hayden Library Renovation	90,000,000	90,000,000
Wells Fargo Arena Renovation and New Multi-Purpose Arena	160,000,000	160,000,000
Interdisciplinary Science and Technology Bldg. (ISTB) 7	175,000,000	175,000,000
	$580,000,000	$580,000,000

CREDIT RATINGS

Positive rating factors cited by the agencies include ASU's rapid growth and increasing brand recognition, robust revenue growth, good budgetary oversight, consistent operating surpluses, healthy cash flow, strategic reinvestment, and stable debt service support from the State of Arizona.

Offsetting factors identified by the agencies include high debt levels, narrow reserves relative to debt, weak state funding, and limited revenue diversity.

	Moody's		Standard & Poor's (S&P)	
Fiscal Year	Rating	Outlook	Rating	Outlook
2012	Aa3	Stable	AA	Stable
2013	Aa3	Stable	AA	Stable
2014	Aa3	Stable	AA	Stable
2015	Aa3	Stable	AA	Negative
2016	Aa3	Positive	AA	Stable
2017	Aa3	Positive	AA	Stable
2018	Aa2	Stable	AA	Stable

RATIO OF DEBT SERVICE TO TOTAL EXPENSES

Annual debt service on system revenue bonds and COPs is projected to increase from $101.7 million in FY 2017 to a maximum of $159.3 million in FY 2024. The ratio of debt service to total expenses is expected to reach maximum in FY 2021 at 5.1 percent.

SPEED (Stimulus Plan for Economic and Educational Development) 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, but if SPEED debt service of $11.9 million is included, the highest projected debt ratio increases to 5.5 percent.

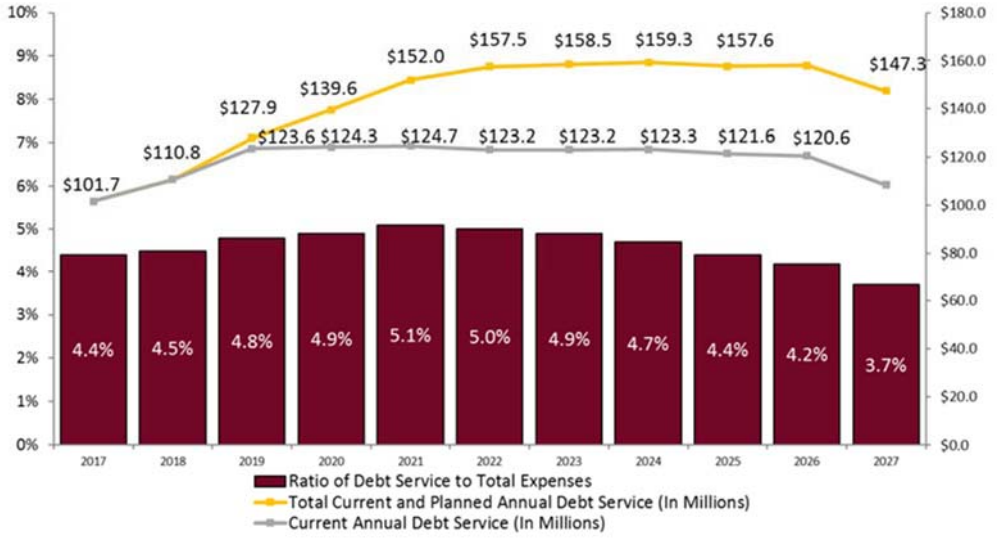


EXHIBIT A
Tempe Campus Site Location Map

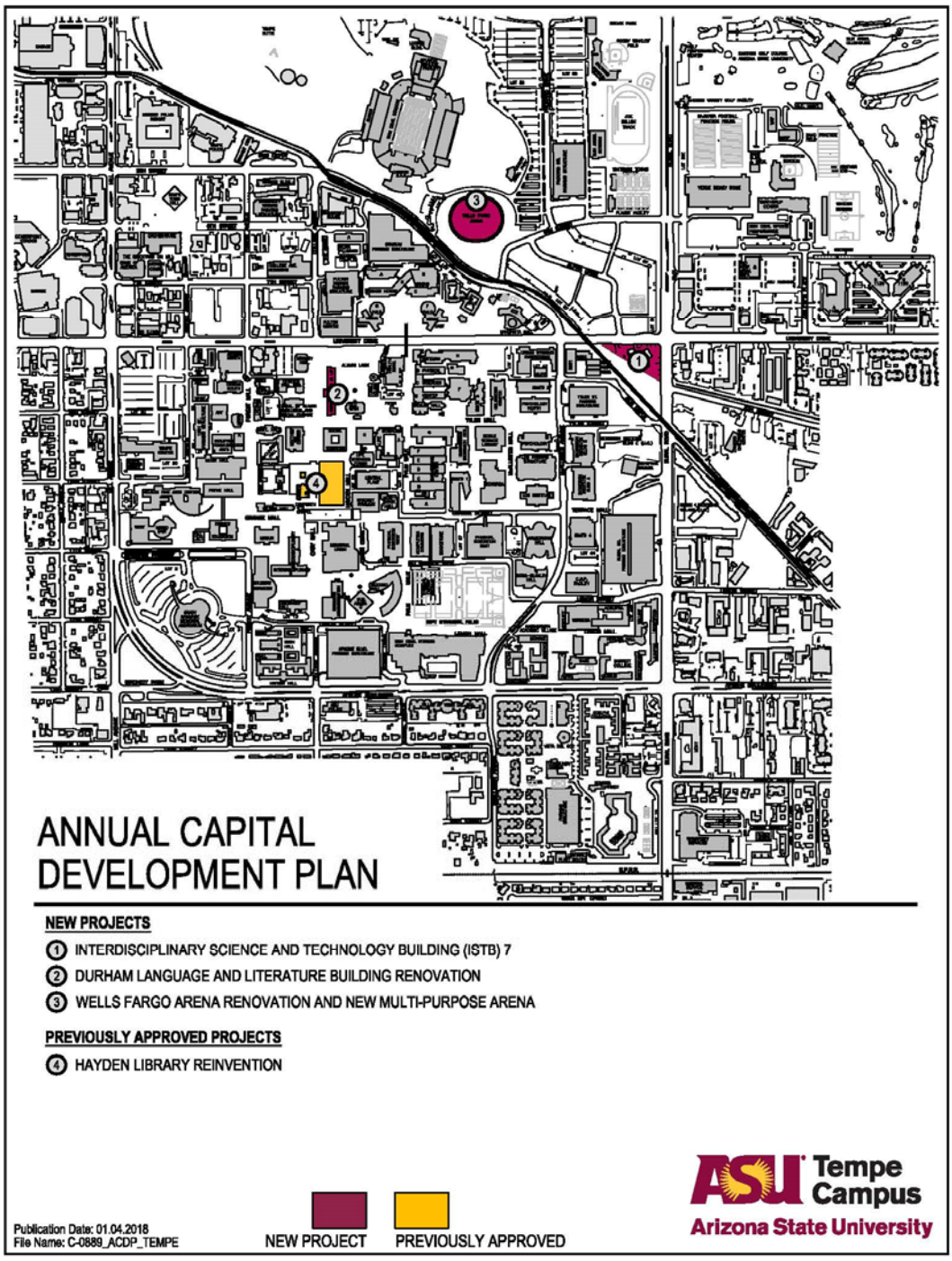
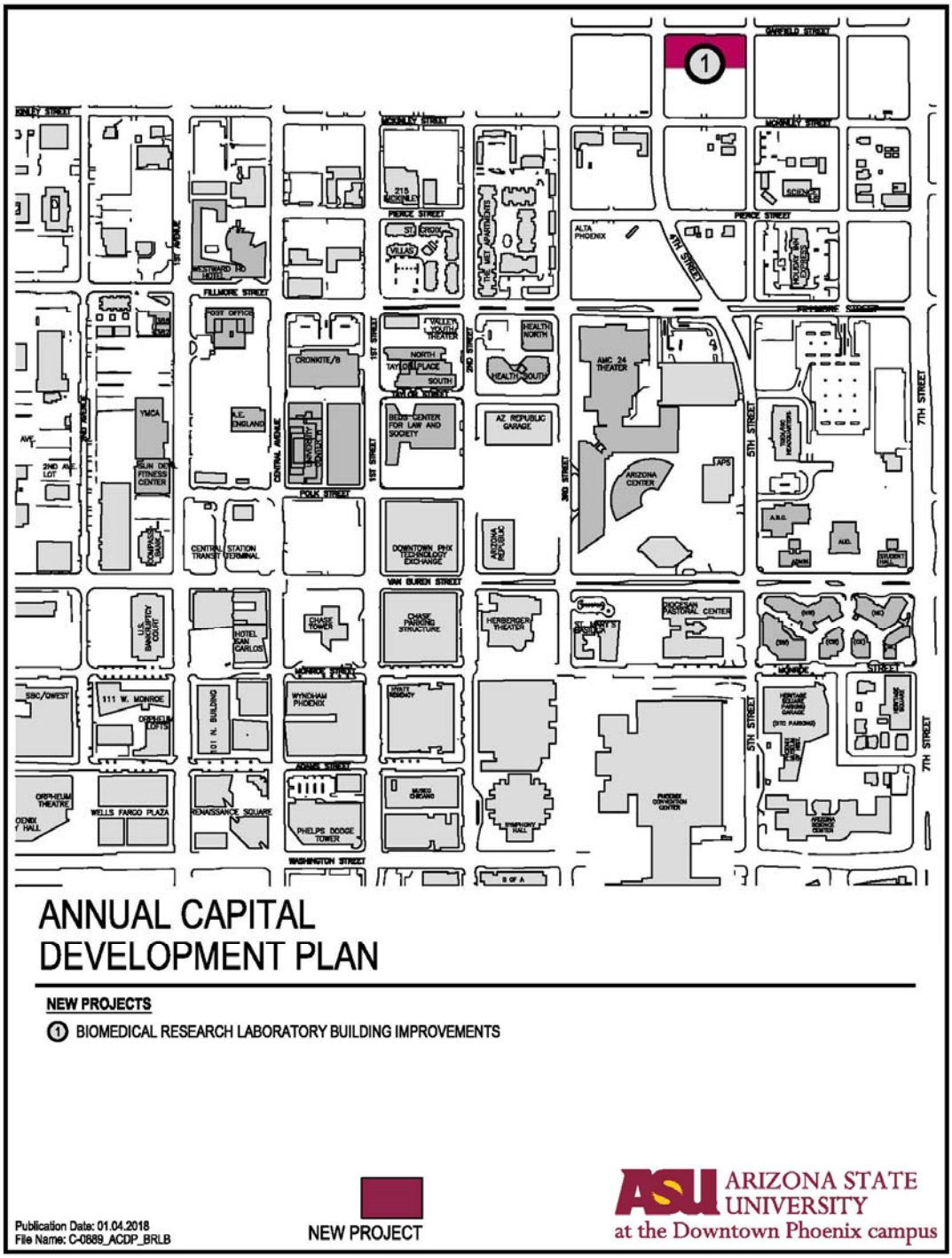
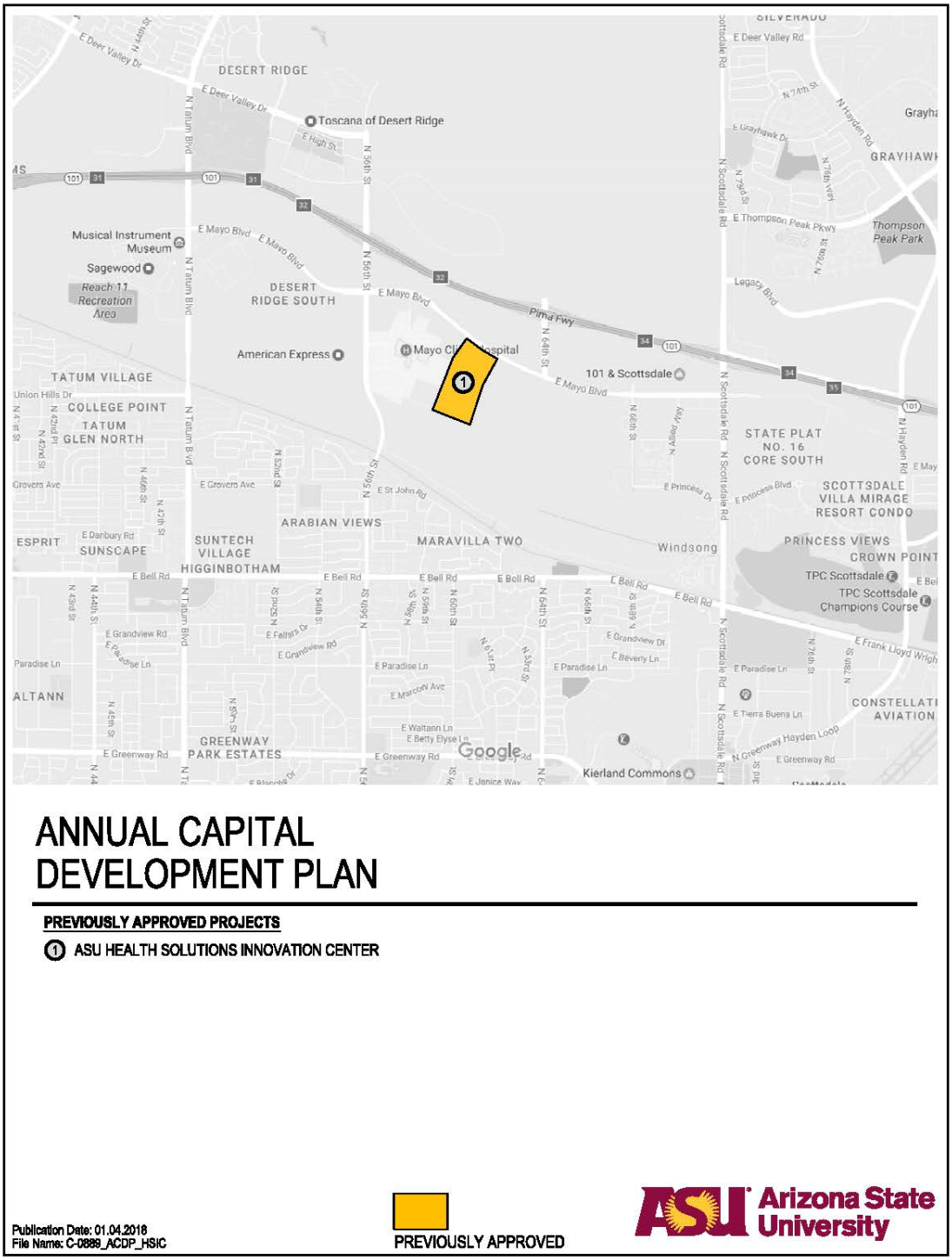


EXHIBIT B
Downtown Phoenix Campus Site Location Map



EXECUTIVE SUMMARY

EXHIBIT C
Phoenix Area Site Location Map



ANNUAL CAPITAL DEVELOPMENT PLAN

PREVIOUSLY APPROVED PROJECTS

① ASU HEALTH SOLUTIONS INNOVATION CENTER

Publication Date: 01.04.2018
File Name: C-0889_ACDP_HSIC

PREVIOUSLY APPROVED

Arizona State University

Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Interdisciplinary Science and Technology Building (ISTB) 7

Previous Board Action:

- FY 2019-21 Capital Improvement Plan September 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all capital projects with an estimated total project cost of $10,000,000 or more for new construction.

Project Justification/Description/Scope

- This project will construct a new, approximately 258,000 gross-square-foot, high-performance research facility that will be a significant addition to the university's growing research district on the Tempe campus. The facility will be designed to foster an interdisciplinary approach to knowledge generation and leading-edge research, including innovative endeavors focusing on the sustainability of food, water and energy.

- ISTB 7 will serve as a new gateway to the Tempe campus, located immediately adjacent to the light rail station and the larger research district, including the Biodesign Institute and the future Novus Innovation Corridor. The site location is depicted on the map attached hereto as Exhibit D. ISTB 7 is in an ideal location to transcend academic disciplines and to connect world-class research with commerce and business applications that will fuel economic growth.

- This leading-edge facility will serve as the new home for the Global Institute of Sustainability and the Institute of Human Origins, which has outgrown its existing space. The School of Sustainability is part of the Julie Ann Wrigley Global Institute of Sustainability, which serves as the hub of ASU's sustainability initiatives. The institute advances research, education and business practices for an urbanizing world. The School's course of study emphasizes experiential learning, research with faculty, corporate and K-12 work, community service and leadership development.

- The Institute of Human Origins is one of the leading research organizations devoted to the science of human origins. Embedded within ASU's School of Human Evolution

and Social Change, the Institute pursues a transdisciplinary strategy for field and analytical paleoanthropological research. This research is central to its founding mission of integrating social, earth, and life science approaches to the most important questions concerning the course, timing and causes of human evolutionary change over deep time.

- Open dry, robust research laboratory space for computing, engineering design and fabrication, as well as wet laboratory or other specialized space for biological sciences, will be included in this project to advance the ambitious research goals of the university. The facility also will include university classrooms and numerous adaptable student workspaces to stimulate and facilitate intellectual contributions to global future outcomes.

- ISTB 7 will have public outreach and exhibit spaces to put "science on display," including a large auditorium and smaller meeting rooms to facilitate public and special events. The spaces will be both public and porous to convey and demonstrate the research and ideas generated within.

- This project will support the primary institutional priority of establishing the university as a leading global center for interdisciplinary research, discovery and development by 2025:
    - Become the leading American center for discovery and scholarship in the integrated social sciences and comprehensive arts and sciences
    - Enhance research competitiveness to more than $815 million in annual research expenditures
    - Transform regional economic competitiveness through research and discovery and value-added programs
    - Become a leading American center for innovation and entrepreneurship at all levels

Project Delivery Method and Process:

- This project will be delivered through the Construction Manager at Risk (CMAR) delivery method. This approach was selected to provide contractor design input and coordination throughout the project, alleviate potentially adversarial project environments and allow for the selection of the most qualified contractor team. With the use of two independent cost estimates at each phase and pre-qualified, low-bid subcontractor work for the actual construction, CMAR project delivery also provides a high level of cost and quality control.

- ASU has selected Architekton-Grimshaw as the Design Professional (DP) team for this project and McCarthy Building Companies, Inc. as the CMAR. The selection

process for the DP included twenty-three responses and four firms were interviewed. During the CMAR selection process, there were nine submittal responses and four contractors were interviewed.

Project Status and Schedule

- Site demolition and utility work is scheduled to begin when the CMAR's Guaranteed Maximum Price is complete and after all approvals are in place. Construction will follow and is scheduled for completion in November 2020.

Project Cost

- The budget for this 258,000 gross-square-foot project is $175.0 million. The budget represents an estimated construction cost of $488 per gross square foot. The estimated total project cost is $678 per gross square foot.

- The CMAR will be at risk to provide the completed project within the agreed-upon Guaranteed Maximum Price (GMP).

Fiscal Impact and Financing Plan:

- The $175.0 million project budget will be funded with system revenue bonds. Debt service will be funded by the State of Arizona Capital Infrastructure Fund and matched with university funds.

- Operations and maintenance costs for this project are estimated at $3,188,410 annually and will be funded by tuition.

- **Debt Ratio Impact**: The projected incremental debt ratio impact for this project is 0.32 percent.

Occupancy Plan

- When the Global Institute of Sustainability and School of Sustainability relocate to ISTB 7, the backfill plan will include the relocation of the School for the Future of Innovation in Society into their current Wrigley Hall location. Occupancy of ISTB 7 is scheduled for January 2021.

Exhibit

- Exhibit D - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Interdisciplinary Science and Technology Building (ISTB) 7

Project Description and Location: This project, as depicted on the attached map as Exhibit D, will construct a new, approximately 258,000 gross-square-foot, high-performance research facility that will be a significant addition to the university's growing research district on the Tempe campus. The facility will be designed to foster an interdisciplinary approach to knowledge generation and leading-edge research.

Project Schedule:

Planning	January	2018
Design Start	May	2018
Construction Start	October	2018
Construction Completion	November	2020

Project Budget:

Total Project Cost	$ 175,000,000
Total Project Construction Cost	$ 126,015,660
Total Project Cost per GSF	$ 678
Construction Cost per GSF	$ 488

Change in Annual O & M Cost:

Utilities	$ 1,563,438
Personnel	459,355
All Other Operating	1,165,617
Subtotal	$ 3,188,410

Funding Sources:

Capital
A. System Revenue Bonds $ 175,000,000
Debt Service Funding Sources: Tuition
Capital Infrastructure Fund

Operation/Maintenance $ 3,188,410
Funding Source: Tuition

Capital Project Budget Summary

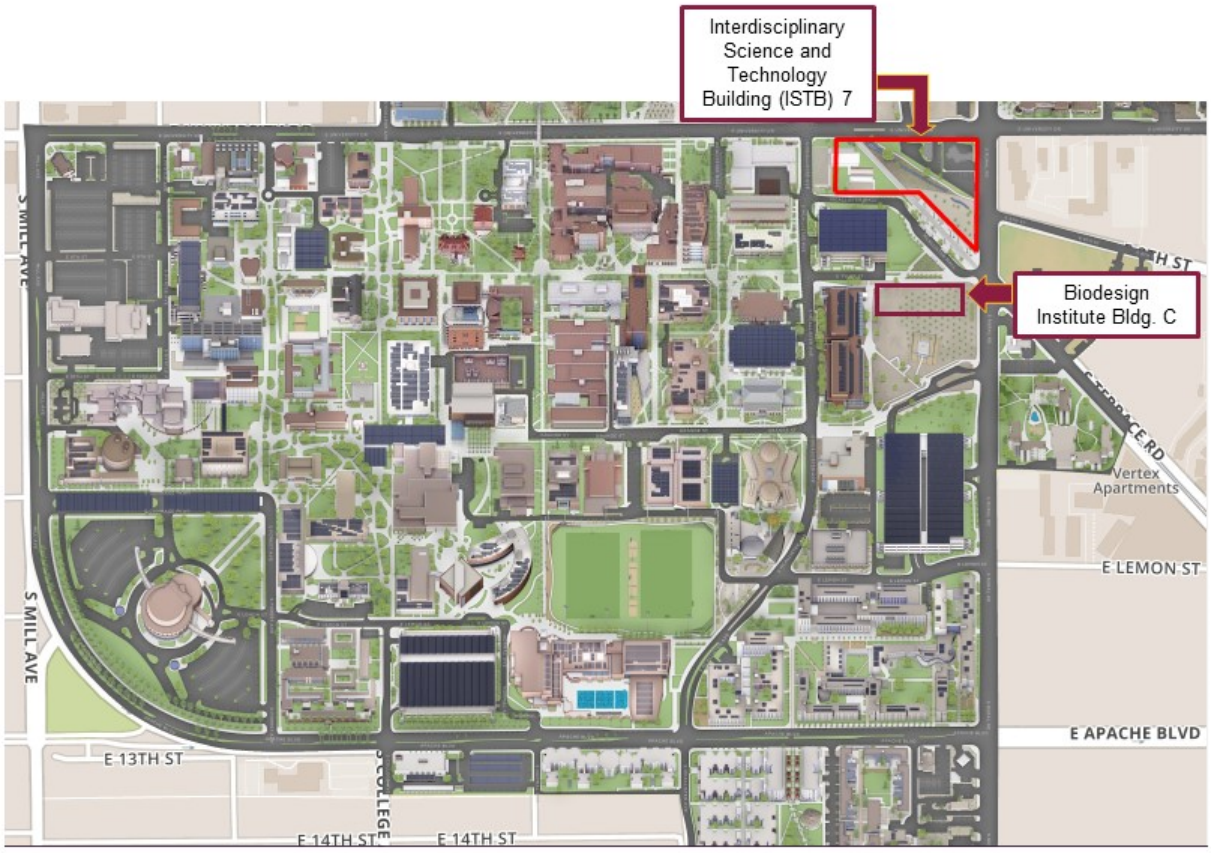
University: Arizona State University **Project:**
Interdisciplinary Science and Technology Building (ISTB) 7

	Capital Development Plan
Capital Costs	
1. Land Acquisition	
2. Construction Cost	
A. New Construction	$ 120,175,000
B. Tenant Improvements	
C. Special Fixed Equipment	2,032,860
D. Site Development (excl. 2.E.)	2,675,000
E. Parking and Landscaping	1,000,000
F. Utilities Extensions	
G. Other* (Demolition/abatement)	132,800
Subtotal Construction Cost	$ 126,015,660
3. Fees	
A. CMAR Pre-Construction	$ 1,892,860
B. Architect/Engineer	15,773,832
C. Other	2,550,390
Subtotal Consultant Fees	$ 20,217,082
4. FF&E Movable	$ 7,210,500
5. Contingency, Design Phase	6,008,750
6. Contingency, Constr. Phase	6,008,750
7. Parking Reserve	
8. Telecommunications Equipment	4,124,250
Subtotal Items 4-8	$ 23,352,250
9. Additional University Costs	
A. Surveys, Tests, Haz. Mat. Abatement	$ 175,000
B. Move-in Costs	50,000
C. Printing Advertisement	35,000
D. Keying, signage, facilities support	10,000
E. Project Management Cost	4,561,908
F. State Risk Mgt. Ins. (.0034 **)	583,100
Subtotal Addl. Univ. Costs	$ 5,415,008
Total Capital Cost	$ 175,000,000

* Universities shall identify items included in this category

** State Risk Management Insurance factor is calculated on construction costs and consultant fees.

EXHIBIT D
Interdisciplinary Science and Technology Building (ISTB) 7
Site Location Map



Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Biomedical Research Laboratory Building Improvements

Previous Board Action:

- Board approval of ground sublease with Wexford Science and Technology for development of laboratory research building on Phoenix Biomedical campus and ASU lease of approximately 112,000 square feet of space within the building — November 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all renovation or infrastructure capital projects with an estimated total project cost of $10,000,000 or more.

Project Justification/Description/Scope

- This project will provide tenant improvements, furniture, fixtures, and equipment for approximately 112,000 gross square feet of ASU laboratory research and related space. This space will be leased in the Wexford Science and Technology building to be developed on the Phoenix Biomedical Campus at the southeast corner of Fourth and Garfield Streets in downtown Phoenix, as depicted on the map attached hereto as Exhibit “E.”

- The project will provide necessary laboratory space to meet the research needs of faculty and students in the College of Health Solutions and the College of Nursing and Health Innovation, as well as provide expansion space in downtown Phoenix for the Biodesign Institute and other university research initiatives.

- Locating this research on the Phoenix Biomedical Campus provides greater opportunities for health and bioscience research collaboration with the other entities on the campus and other clinical research partners. This will allow ASU to continue to grow its health and bioscience research presence in downtown Phoenix and reach its ABOR-adopted research goals. It also will anchor the development of a Health and Bioscience Innovation District on the approximately seven acres of Biomedical campus land owned by the City of Phoenix. This land is designated for approximately 1.5 million square feet of mixed tenant research, education and innovation space.

Project Delivery Method and Process:

- The building developer, Wexford Science and Technology, has privately selected a Design Professional (DP) and Construction Manager at Risk (CMAR) for the building. This team will design and construct the improvements inside the building, under the direction of the developer, to meet ASU's specifications. The first lease payment is due and payable upon occupancy and will include a reimbursement to the developer for tenant improvement costs that were paid for by the developer. This method of delivery ensures the most economical and efficient delivery of improvements that will occur simultaneously with the design and construction of the building itself.

Project Status and Schedule

- The DP and CMAR have been selected by the developer and the schematic design of the building is underway. The tenant improvement project will begin design upon board approval.

- Construction is scheduled to begin in August 2018 after all approvals are in place. Construction on all project components is scheduled for substantial completion by the end of 2019.

Project Cost

- The budget for this project is $40.0 million. The budget represents an estimated construction cost of $254 per gross square foot. The estimated total project cost is $357 per gross square foot.

- The Developer will be at risk to provide the completed project with an agreed-upon Guaranteed Maximum Price.

Fiscal Impact and Financing Plan:

- The $40.0 million project budget will be funded with general university funds.

- Per the lease agreement approved by the board in November 2017, ASU will be responsible for the annual operation and maintenance costs for the incremental space associated with this project, estimated at $1.0 million. These costs will be funded by general university funds.

- This project would have no impact on incremental debt ratio, as it will not be debt financed.

Occupancy Plan

- This project includes primarily new space to support research growth. Occupancy will be scheduled upon project completion at year-end 2019.

Exhibit

- Exhibit E - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Biomedical Research Laboratory Building Improvements

Project Description and Location: This project will provide tenant improvements, furniture, fixtures, and equipment for approximately 112,000 gross square feet of ASU laboratory research and related space. This space will be leased in the Wexford Science and Technology building to be developed on the Phoenix Biomedical Campus, at the southeast corner of Fourth and Garfield Streets in downtown Phoenix, as depicted on the map attached hereto as Exhibit E.

Project Schedule:

Planning	September 2017
Design Start	February 2018
Construction Start	August 2018
Construction Completion	December 2019

Project Budget:

Total Project Cost	$ 40,000,000
Total Project Construction Cost	$ 28,459,200
Total Project Cost per GSF	$ 357
Construction Cost per GSF	$ 254

Change in Annual O & M Cost:

Utilities	$
Personnel	
All Other Operating	
Subtotal	$ 1,000,000

Funding Sources:

Capital

A. General University Funds $ 40,000,000

Operation/Maintenance $ 1,000,000

Funding Source: General University Funds

Capital Project Budget Summary

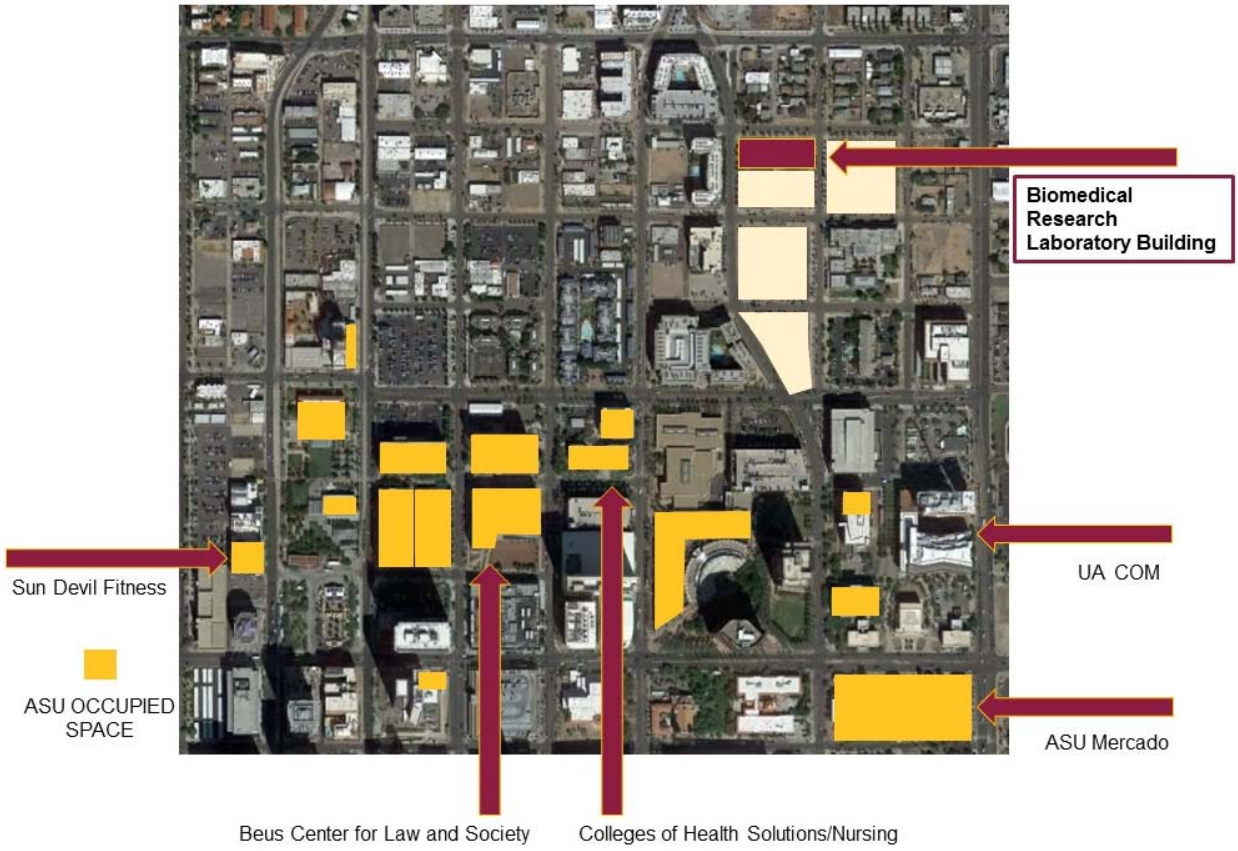
University: Arizona State University **Project:** Biomedical Research Laboratory Building Improvements

	Capital Development Plan
Capital Costs	
1. Land Acquisition	
2. Construction Cost	
A. New Construction	$ -
B. Tenant Improvements	27,500,000
C. Special Fixed Equipment	959,200
D. Site Development (excl. 2.E.)	-
E. Parking and Landscaping	-
F. Utilities Extensions	-
G. Other* (Demolition/abatement)	-
Subtotal Construction Cost	$ 28,459,200
3. Fees	
A. CMAR Pre-Construction	$ 426,888
B. Architect/Engineer	3,415,104
C. Other	-
Subtotal Consultant Fees	$ 3,841,992
4. FF&E Movable	$ 1,707,552
5. Contingency, Design Phase	1,422,957
6. Contingency, Constr. Phase	1,422,960
7. Parking Reserve	-
8. Telecommunications Equipment	1,707,552
Subtotal Items 4-8	$ 6,261,021
9. Additional University Costs	
A. Surveys, Tests, Haz. Mat. Abatement	$ 50,000
B. Move-in Costs	50,000
C. Printing Advertisement	35,000
D. Keying, signage, facilities support	10,000
E. Project Management Cost	1,161,216
F. State Risk Mgt. Ins. (.0034 **)	131,571
Subtotal Addl. Univ. Costs	$ 1,437,787
Total Capital Cost	$ 40,000,000

* Universities shall identify items included in this category

** State Risk Management Insurance factor is calculated on construction costs and consultant fees.

Exhibit E
Biomedical Research Laboratory Building Improvements
Downtown Phoenix Site Location Map



Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Durham Language and Literature Building Renovation

Previous Board Action:

- FY 2020-21 Capital Improvement Plan September 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all renovation or infrastructure capital projects with an estimated total project cost of $10,000,000 or more.

Project Justification/Description/Scope

- This project will provide needed renovations to the Durham Language and Literature Building, located prominently on the Tempe campus near the intersection of University Drive and College Avenue, as depicted on the map attached hereto as Exhibit F. The building is over fifty years old and requires modernization and upgrades to all building infrastructure systems to meet the current building and life safety codes and to advance the university's mission of academic excellence.

- The project will encompass all six floors and the basement of the building. The south wing of the building, consisting of two floors above grade and a basement, and the center tower, consisting of six floors above grade and a basement, were built in 1964. The north wing of the building was built in 1972 and consists of four floors above grade and a basement. The combined total building area is approximately 137,000 gross square feet, which will remain unchanged in this project.

- The project scope includes some demolition of original flooring, walls and ceilings, as well as removal of asbestos-containing materials. The existing building systems, including mechanical, plumbing and electrical, are beyond their useful life and will be replaced with energy-efficient systems. The project will install fire sprinklers and fire alarms and will enhance data, security, audio-visual and building management systems. Existing original restrooms will be upgraded to comply with Americans with Disabilities Act (ADA) accessibility requirements. Exterior building surfaces also will be repaired to provide a weather-tight enclosure.

- The guiding principles of the project include modernizing, maximizing and enhancing the existing spaces for students to connect, collaborate and learn; improving overall accessibility; and updating building technology and comfort.

- The transformation of the Durham Language and Literature Building into an innovative, state-of-the-art learning center will support the university and ABOR goals of advancing student learning and educational success. The renovation of this facility also will support the establishment of the university as a leading global center for interdisciplinary scholarship and discovery.

Project Delivery Method and Process:

- This project will be delivered through the Construction Manager at Risk (CMAR) delivery method. This approach was selected to provide contractor design input and coordination throughout the project, alleviate a potentially adversarial project environment and allow for the selection of the most qualified contractor team. With the use of two independent cost estimates at each phase and pre-qualified, low-bid subcontractor work for the actual construction, CMAR project delivery also provides a high level of cost and quality control.

Project Status and Schedule

- General construction is scheduled to begin when the design is complete and after all approvals are in place. This project is expected to be completed in phases in order to minimize disruption to the over forty university classrooms currently housed in the building. Construction on all project components is scheduled for substantial completion in the summer of 2021.

Project Cost

- The budget for this 137,067 gross-square-foot project is $45.0 million. The budget represents an estimated construction cost of $229 per gross square foot. The estimated total project cost is $328 per gross square foot.

- The CMAR will be at risk to provide the completed project within the agreed-upon Guaranteed Maximum Price (GMP).

Fiscal Impact and Financing Plan:

- The $45.0 million project budget will be funded with system revenue bonds. Debt service will be funded by the State of Arizona Capital Infrastructure Fund and matched with university funds.

- The annual operation and maintenance costs for the incremental space associated with this project are not expected to increase.

- **Debt Ratio Impact**: The projected incremental debt ratio impact for this project is 0.07 percent.

Occupancy Plan

- The Department of English in the College of Liberal Arts and Sciences recently vacated 24,000 square feet of space in the building to relocate to another facility on campus. This move enables the current building tenant, the School of International Letters and Cultures, to expand their department spaces to accommodate program growth, as well as to consolidate their associated student outreach centers within the same building.

Exhibit

- Exhibit “F” - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Durham Language and Literature Building Renovation

Project Description and Location: This project will provide needed renovations to the Durham Language and Literature Building, located prominently on the Tempe campus near the intersection of University Drive and College Avenue, as depicted on the map attached hereto as Exhibit F. The building is over fifty years old and requires modernization and upgrades to all building infrastructure systems to meet the current building and life safety codes and to advance the university's mission of academic excellence.

Project Schedule:

Planning	January	2018
Design Start	September	2018
Construction Start	May	2019
Construction Completion	July	2021

Project Budget:

Total Project Cost	$	45,000,000
Total Project Construction Cost	$	31,403,000
Total Project Cost per GSF	$	328
Construction Cost per GSF	$	229

Change in Annual O & M Cost:

Utilities	$	0
Personnel		0
All Other Operating		0
Subtotal	$	0

Funding Sources:

Capital

A. System Revenue Bonds $ 45,000,000

Debt Service Funding Sources: Tuition
Capital Infrastructure Fund

Operation/Maintenance $ 0

Funding Source:

Capital Project Budget Summary

University: Arizona State University

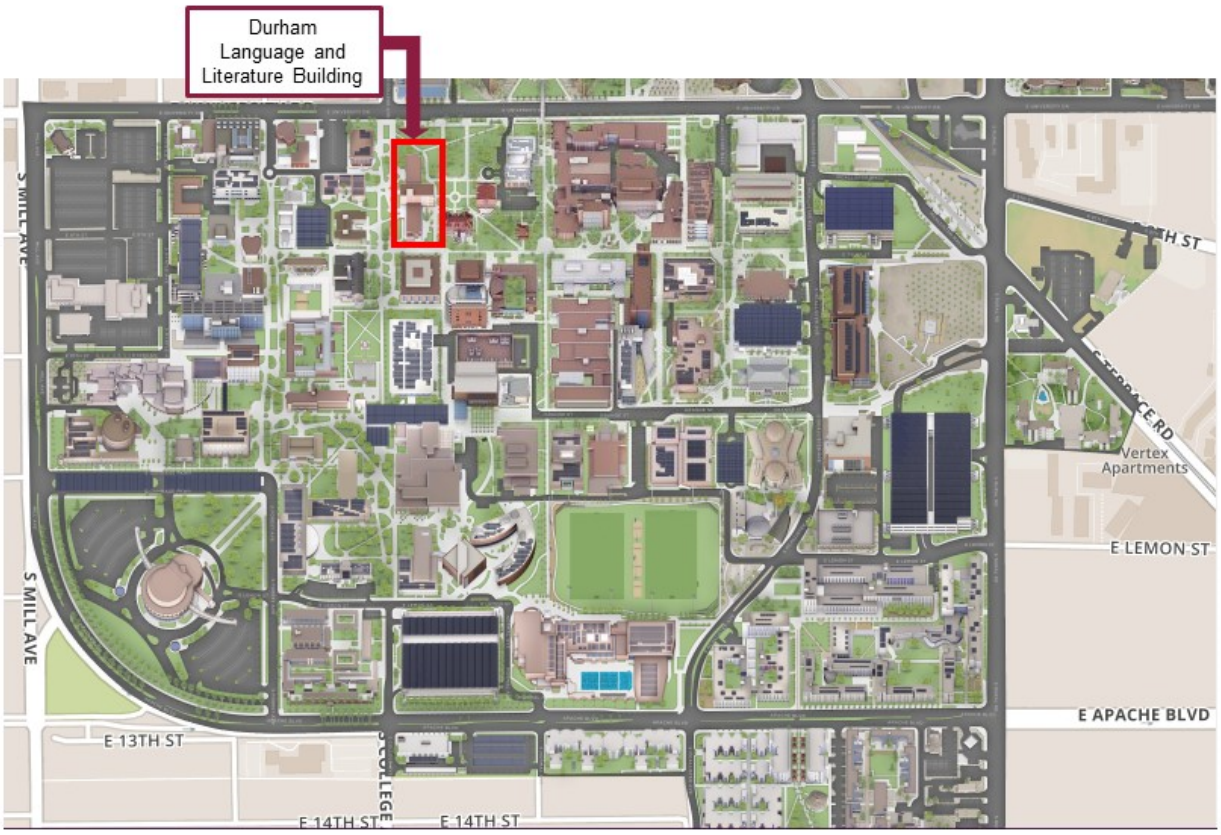
Project: Durham Language and Literature Building Renovation

	Capital Development Plan
Capital Costs	
1. Land Acquisition	
2. Construction Cost	
A. Construction/Renovation	$ -
B. Tenant Improvements	30,506,700
C. Special Fixed Equipment	296,300
D. Site Development (excl. 2.E.)	
E. Parking and Landscaping	500,000
F. Utilities Extensions	
G. Other* (Demolition/abatement)	100,000
Subtotal Construction Cost	$ 31,403,000
3. Fees	
A. CMAR Pre-Construction	$ 457,600
B. Architect/Engineer	3,355,737
C. Other	50,390
Subtotal Consultant Fees	$ 3,863,727
4. FF&E Movable	$ 2,349,402
5. Contingency, Design Phase	1,220,268
6. Contingency, Constr. Phase	1,830,402
7. Parking Reserve	
8. Telecommunications Equipment	915,201
Subtotal Items 4-8	$ 6,315,273
9. Additional University Costs	
A. Surveys, Tests, Haz. Mat. Abatement	$ 2,000,000
B. Move-in Costs	50,000
C. Printing Advertisement	35,000
D. Keying, signage, facilities support	10,000
E. Project Management Cost	1,173,060
F. State Risk Mgt. Ins. (.0034 **)	149,940
Subtotal Addl. Univ. Costs	$ 3,418,000
Total Capital Cost	$ 45,000,000

* Universities shall identify items included in this category

** State Risk Management Insurance factor is calculated on construction costs and consultant fees.

EXHIBIT F
Durham Language and Literature Building Renovation
Site Location Map



Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Wells Fargo Arena Renovation and New Multi-Purpose Arena

Previous Board Action:

- FY 2020-21 Capital Improvement Plan September 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all capital projects with an estimated total project cost of $5,000,000 or more for renovation projects or $10,000,000 or more for new construction projects.

Project Justification/Description/Scope

- Sun Devil Athletics has established the goal of providing excellent performance venues and support facilities for all student-athletes. This goal supports Arizona State University's charter in a number of ways by increasing student, alumni and community engagement and enhancing our local impact and social embeddedness.

- Wells Fargo Arena is a multi-use facility that was constructed in 1974 and is currently the home for top-ranked intercollegiate athletics programs, including Sun Devil men's and women's basketball, volleyball, gymnastics and wrestling**,** as well as the host for public and university special events. The facility is located adjacent to Sun Devil Stadium on the Tempe campus, as depicted in the map attached as Exhibit "G."

- In recent years, the arena has operated with substandard spectator viewing and access issues, as well as infrastructure and transportation deficiencies. The facility does not offer the amenities that are competitive with comparable venues within the PAC-12 or other Division I schools, thereby affecting student-athlete recruitment and the fan experience. Scheduling for sporting events also has been a challenge, with most sports competing in overlapping seasons with limited venue options.

- In addition, the men's ice hockey team currently rents ice time for both practice and games at Oceanside Arena in Scottsdale, which is suboptimal for team development and has limited seating capacity. Student engagement has been high and demand for seating has been greater than the capacity of the venue.

- To address these needs, an evaluation of current facilities was undertaken. A consulting team evaluated multiple arena development options and a conceptual design was selected that renovated the existing Wells Fargo Arena for men's and women's basketball and volleyball and included a new multi-purpose arena for ice hockey, gymnastics, and wrestling**.**

- The new multi-purpose venue would be built directly northeast and connect to the existing arena, creating an integrated indoor sports complex. This single project maximizes efficiency in construction cost, provides optimum cash flow results from the operation of an integrated sports complex, and enhances fundraising prospects by expanding multiple donor interests into a single project structure.

- The new, multi-purpose 5,000-seat, approximately 175,000 gross-square-foot arena would be designed to accommodate the Division I men's ice hockey team. The design includes a second sheet of ice, which would be available to the community to provide alternatives for regional youth and adult hockey club practice and competition, as well as serve as practice ice for the Sun Devil hockey team. The venue design is flexible to accommodate other arena sports and provide an opportunity to host smaller, more intimate family shows and concerts.

- The facility will include premium seating for enhanced revenue generation, including 250 to 300 club and 48 loge seats. The event level of the arena will include an entry facing the planned retail street within the Novus Innovation Corridor. This level will house a club for premium seating, locker rooms, press facilities, and venue support spaces. The concourse level will tie into the concourse for the existing sports arena, allowing for shared services and infrastructure.

- Wells Fargo Arena, the 230,259 square-foot indoor arena, has had very modest investment since it was constructed over forty years ago. Mechanical systems and infrastructure are at the end of or beyond their useful lives, and the facility's appearance, function and amenities are outdated. A major interior renovation of the facility will provide much-needed mechanical and infrastructure upgrades and bring state-of-the art technology to the arena, its locker rooms and the support areas.

- The rehabilitation of the existing arena also will include a significant upgrade to the interior and amenities that will enhance the fan experience. Reconstruction of the entire lower bowl will maximize center court seating and replacement of retractable seating. Special student and end zone seating sections will be included to enhance and promote Sun Devil traditions. A completely redesigned concourse will feature widened pathways and upgraded restroom facilities. The renovation also will include the addition of club and loge seating and upgrades to the current concessions areas and club space for premium season ticket holders.

- Creation of an integrated indoor sports complex will provide the needed facilities to support all Sun Devil Athletics programs. Renovation of the current arena, combined with the construction of a new multi-purpose arena contiguous with the existing facility, will enhance the experience of both student-athletes and fans and will strengthen the university's connections and impact in the communities it serves.

Project Delivery Method and Process:

- This project will be delivered through the Construction Manager at Risk (CMAR) delivery method. This approach was selected to provide contractor design input and coordination throughout the project, alleviate a potentially adversarial project environment and allow for the selection of the most qualified contractor team. With the use of two independent cost estimates at each phase and pre-qualified, low-bid subcontractor work for the actual construction, CMAR project delivery also provides a high level of cost and quality control.

Project Status and Schedule

- General construction is scheduled to begin when the design is complete and after all approvals are in place. Construction on the new multi-purpose arena tentatively is scheduled for substantial completion in July 2020. Renovation of Wells Fargo Arena is projected for substantial completion in July 2021.

Project Cost

- The budget for this approximately 405,259 gross-square-foot project is $160.0 million. The budget represents an estimated construction cost of $286 per gross square foot. The estimated total project cost is $395 per gross square foot.

- The CMAR will be at risk to provide the completed project within the agreed-upon Guaranteed Maximum Price (GMP).

Fiscal Impact and Financing Plan:

- The $160.0 million project budget will be funded with system revenue bonds. Debt service will be funded by auxiliary revenues and gifts.

- The annual operation and maintenance costs for Wells Fargo Arena are not expected to increase and the costs associated with the new multi-purpose arena are estimated at $1,307,094. These costs will be funded by auxiliary revenue.

- **Debt Ratio Impact**: The projected incremental debt ratio impact for this project is 0.33 percent.

Occupancy Plan

- Leased space will be vacated to relocate the Sun Devil men's ice hockey team to the new multi-purpose arena upon project completion in July 2020.

Exhibit

- Exhibit "G" - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Wells Fargo Arena Renovation And New Multi-Purpose Arena

Project Description and Location: This project will renovate the existing Wells Fargo Arena for men's and women's basketball and volleyball and include a new multi-purpose arena for the Sun Devil ice hockey, gymnastics, and wrestling programs. These facilities are located adjacent to Sun Devil Stadium, as depicted in the attached Exhibit G.

Project Schedule:

Planning	September	2016
Design Start	May	2018
Construction Start	February	2019
Construction Completion – New Arena	July	2020
Construction Completion – Wells Fargo	July	2021

Project Budget:

Total Project Cost	$ 160,000,000
Total Project Construction Cost	$ 115,800,000
Total Project Cost per GSF	$ 395
Construction Cost per GSF	$ 279

Change in Annual O & M Cost:

New Multi-Purpose Arena:	
Utilities	$ 616,000
Personnel	179,337
All Other Operating	511,757
Subtotal	$ 1,307,094

Funding Sources:

Capital

A. System Revenue Bonds $ 160,000,000

Debt Service Funding Sources: Auxiliary/Gift

Operation/Maintenance $ 1,307,094

Funding Source: Auxiliary

Capital Project Budget Summary

University: Arizona State University **Project:**
Wells Fargo Arena Renovation and New Multi-Purpose Arena

		Capital Development Plan
Capital Costs		
1. Land Acquisition		
2. Construction Cost		
A. New Construction	$	57,700,000
B. Tenant Improvements		35,100,000
C. Special Fixed Equipment		15,000,000
D. Site Development (excl. 2.E.)		5,500,000
E. Parking and Landscaping		1,750,000
F. Utilities Extensions		
G. Other* (Demolition/abatement)		750,000
Subtotal Construction Cost	$	115,800,000
3. Fees		
A. CMAR Pre-Construction	$	1,737,000
B. Architect/Engineer		12,738,000
C. Other		
Subtotal Consultant Fees	$	14,475,000
4. FF&E Movable	$	-
5. Contingency, Design Phase		5,790,000
6. Contingency, Constr. Phase		5,790,000
7. Parking Reserve		6,832,500
8. Telecommunications Equipment		3,474,000
Subtotal Items 4-8	$	21,886,500
9. Additional University Costs		
A. Surveys, Tests, Haz. Mat. Abatement	$	3,000,000
B. Move-in Costs		50,000
C. Printing Advertisement		34,500
D. Keying, signage, facilities support		50,000
E. Project Management Cost		4,170,880
F. State Risk Mgt. Ins. (.0034 **)		533,120
Subtotal Addl. Univ. Costs	$	7,838,500
Total Capital Cost	$	160,000,000

* Universities shall identify items included in this category

** State Risk Management Insurance factor is calculated on construction costs and consultant fees.

EXHIBIT G
Wells Fargo Arena Renovation and New Multi-Purpose Arena
Site Location Map

Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Hayden Library Reinvention

Previous Board Action:

- FY 2018 Capital Development Plan June 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all renovation or infrastructure capital projects with an estimated total project cost of $10,000,000 or more.

Project Justification/Description/Scope

- This project will reinvent the original spaces of the iconic Hayden Library, the main library located at the heart of the Tempe campus. The library location is depicted on the map attached hereto as Exhibit H. The project will transform the building from a book-intensive traditional library into a hub for 21st century learning, discovery and innovation.

- Reinvention of the library will encompass an expansion of the below-grade level, as well as a full renovation of all five levels of the “tower” portion of the building that was constructed in 1966. This reinvention project will increase the gross square footage (GSF) of the building from 211,000 to approximately 240,000 GSF.

- The guiding principles of the project include maximizing and enhancing space for students to connect, collaborate, learn and make; elevating the visibility of library collections; improving overall accessibility, navigation and discovery through a user-friendly design and multiple entrances on the main level; and strengthening community engagement through curated exhibits, makerspaces and a high-tech geospatial data room.

- Current and future high-technology innovations, including multi-media production spaces, will be accommodated in the flexible and adaptable project design. Building operation and code compliance issues also will be addressed in this project.

- The transformation of Hayden Library into an innovative, state-of-the-art learning center will support the university and ABOR goals of advancing student learning and educational success. The reinvention of this library also will advance the

establishment of the university as a leading global center for interdisciplinary scholarship and discovery.

Project Delivery Method and Process:

- This project will be delivered through the Construction Manager at Risk (CMAR) delivery method. This approach was selected to provide contractor design input and coordination throughout the project, alleviate a potentially adversarial project environment and allow for the selection of the most qualified contractor team. With the use of two independent cost estimates at each phase and pre-qualified, low-bid subcontractor work for the actual construction, CMAR project delivery also provides a high level of cost and quality control.

- ASU has selected Holder Construction as the CMAR and Ayers Saint Gross as the Design Professional (DP) for this project. During the CMAR selection process, there were thirteen submittal responses and five contractors were interviewed. The selection process for the DP included twenty-three responses and five firms were interviewed.

Project Status and Schedule

- General construction is scheduled to begin when the design is complete and after all approvals are in place. Construction on all project components is scheduled for substantial completion in November 2019.

Project Cost

- The budget for this 240,000 gross-square-foot project is $90.0 million. The budget represents an estimated construction cost of $263 per gross square foot. The estimated total project cost is $375 per gross square foot.

- The CMAR will be at risk to provide the completed project within the agreed-upon Guaranteed Maximum Price (GMP).

Fiscal Impact and Financing Plan:

- The $90.0 million project budget will be funded with system revenue bonds. Debt service will be funded by the State of Arizona Capital Infrastructure Fund, matched with university funds, and tuition.

- The annual operation and maintenance costs for the incremental space associated with this project are estimated at $96,343. These costs will be funded by tuition.

- **Debt Ratio Impact**: The projected incremental debt ratio impact for this project is 0.19 percent.

Occupancy Plan

- Some staff and students that normally use Hayden Tower are in temporary spaces that will be released after the library renovation is complete. A significant number of staff and student seats are being relocated to the 1989 portion of Hayden, Noble Library and Fletcher Library to complete the reinvention of Hayden Library.

Exhibit

- Exhibit H - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Hayden Library Reinvention

Project Description and Location: This project will transform the iconic Hayden Library into a 21st century learning center. Hayden Library is the main library on the Tempe campus and is depicted on the attached map as Exhibit H. Through the creation of new entrances, better utilization of space and the inclusion of updated technologies, this renovation will gain much needed classroom, collaboration and study space to enable student success.

Project Schedule:

Planning	September	2016
Design Start	April	2017
Construction Start	March	2018
Construction Completion Lower Tower	July	2019
Construction Completion	November	2019

Project Budget:

Total Project Cost	$	90,000,000
Total Project Construction Cost	$	63,000,000
Total Project Cost per GSF	$	375
Construction Cost per GSF	$	263

Change in Annual O & M Cost:

Utilities	$	45,507
Personnel		0
All Other Operating		50,836
Subtotal	$	96,343

Funding Sources:

Capital

A. System Revenue Bonds $ 90,000,000

Debt Service Funding Sources: Tuition
Capital Infrastructure Fund

Operation/Maintenance $ 96,343

Funding Source: Tuition

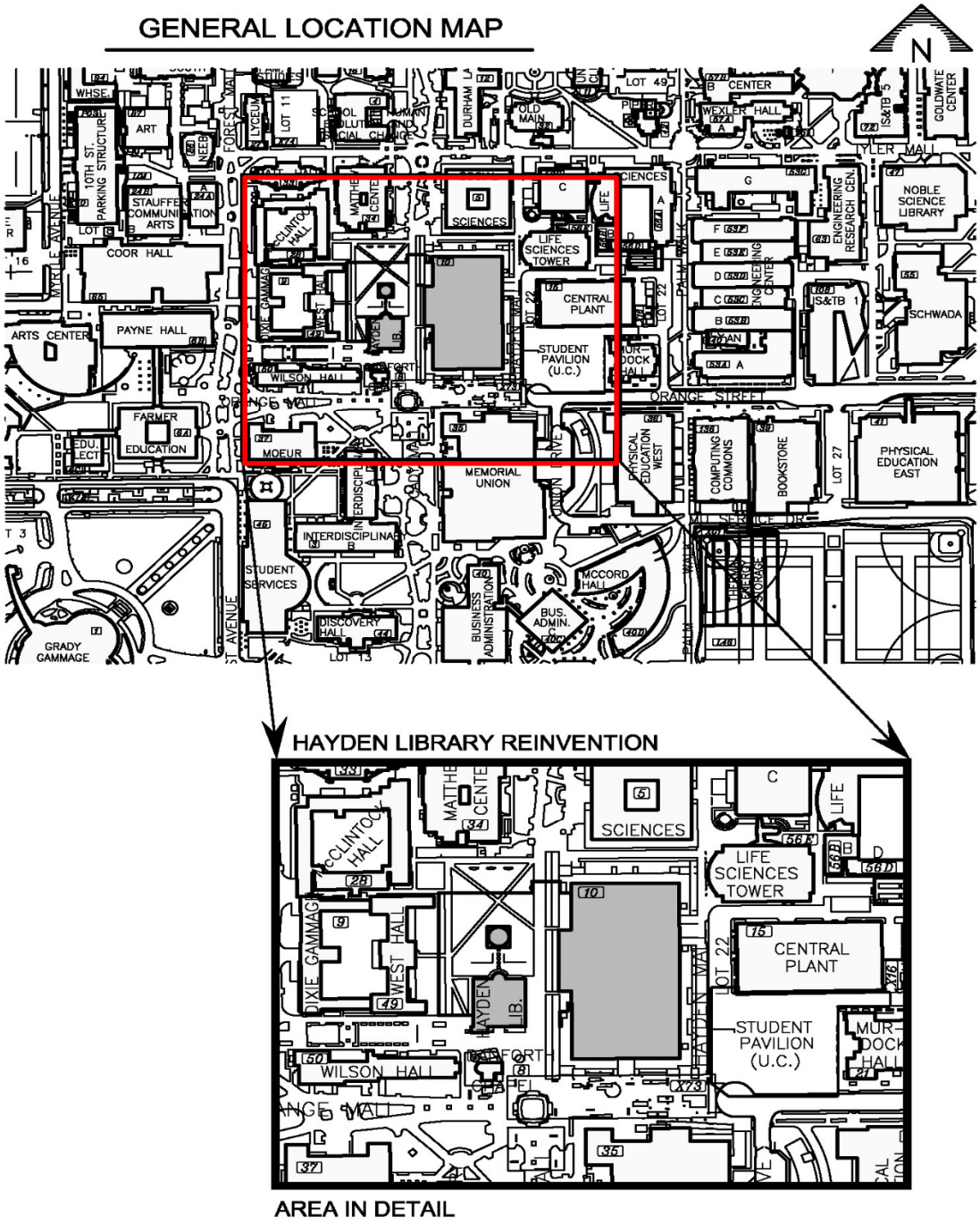
Capital Project Budget Summary

University: Arizona State University **Project:** Hayden Library Reinvention

	Capital Development Plan June 2017	Capital Development Plan February 2018
Capital Costs		
1. Land Acquisition		
2. Construction Cost		
A. New Construction	$ 11,500,000	$ 11,500,000
B. Tenant Improvements	47,000,000	47,000,000
C. Special Fixed Equipment	1,000,000	1,000,000
D. Site Development (excl. 2.E.)	1,500,000	1,500,000
E. Parking and Landscaping	300,000	300,000
F. Utilities Extensions		
G. Other* (Demolition/abatement)	1,700,000	1,700,000
Subtotal Construction Cost	$ 63,000,000	$ 63,000,000
3. Fees		
A. CMAR Pre-Construction	$ 671,667	$ 671,667
B. Architect/Engineer	6,099,880	6,099,880
C. Other	500,000	500,000
Subtotal Consultant Fees	$ 7,271,547	$ 7,271,547
4. FF&E Movable	$ 4,500,000	$ 4,500,000
5. Contingency, Design Phase	505,000	505,000
6. Contingency, Constr. Phase	5,500,561	5,500,561
7. Parking Reserve	150,000	150,000
8. Telecommunications Equipment	1,300,000	1,300,000
Subtotal Items 4-8	$ 11,955,561	$ 11,955,561
9. Additional University Costs		
A. Surveys, Tests, Haz. Mat. Abatement	$ 2,150,000	$ 2,150,000
B. Move-in Costs	550,000	550,000
C. Printing Advertisement	15,000	15,000
D. Keying, signage, facilities support	1,750,000	1,750,000
E. Project Management Cost	3,093,692	3,093,692
F. State Risk Mgt. Ins. (.0034 **)	214,200	214,200
Subtotal Addl. Univ. Costs	$ 7,772,892	$ 7,772,892
Total Capital Cost	$ 90,000,000	$ 90,000,000

* Universities shall identify items included in this category

EXHIBIT "H"
Hayden Library Reinvention
Site Location Map



Arizona Board of Regents
Arizona State University
Capital Development Plan Project Justification Report
Health Solutions Innovation Center

Previous Board Action:

- FY 2018 Capital Development Plan June 2017

Statutory/Policy Requirements

- ABOR Policy 7-102 (B) requires committee review and board approval of all capital projects with an estimated total project cost of $10,000,000 or more for new construction.

Project Justification/Description/Scope

- ASU and the Mayo Clinic share a bold vision to transform medical education and the field of health care. The realization of this shared vision is in their plans to collaborate in a world-class research, innovation and learning environment on ASU-controlled land in northeast Phoenix, adjacent to the Mayo Clinic Hospital campus.

- The planned new facility will be the first to be located on this ASU Health Solutions Innovation zone. The Mayo Clinic's expertise in complex patient care, medical education and research will be joined with ASU's robust engineering, informatics, health solutions and nursing programs on this site. The site will be a destination for top-quality health care, professional education, industry interaction and treatment breakthroughs.

- This approximately 150,000 gross-square-foot, leading-edge facility will feature a med-tech innovation accelerator, biomedical engineering and informatics research labs, and an innovative education zone. Programs from several ASU schools and colleges, particularly those with a focus on the health professions and biomedical sciences, will benefit from the proximity of this facility to the Mayo Clinic Hospital and Cancer Center, as depicted on the map attached hereto as Exhibit I.

- As this is the first facility to be constructed on the ASU Health Solutions Innovation Zone site, the scope of this project will address not only the master plan integration, but also the initial infrastructure requirements. Components, such as hardscape for the site entry, utilities that will serve the needs of the entire future site and a bridge

that connects to the Mayo Clinic Hospital site, are included in the scope and cost of this project.

- Separate from but related to this project, the City of Phoenix has agreed to contribute up to $8.8 million toward the development of off/on-site infrastructure. These funds will support the extension of utilities to the site, as well the connection of a pedestrian/cart bridge over the existing wash.

- This project will support ABOR's goal of increasing capabilities and avenues for state-of-the-art research to enhance Arizona's economy and competitiveness.

Project Delivery Method and Process:

- This project will be delivered through the Construction Manager at Risk (CMAR) delivery method. This approach was selected to provide contractor design input and coordination throughout the project, alleviate potentially adversarial project environments and allow for the selection of the most qualified contractor team. With the use of two independent cost estimates at each phase and pre-qualified, low-bid subcontractor work for the actual construction, CMAR project delivery also provides a high level of cost and quality control.

Project Status and Schedule

- ASU has selected DPR Construction as the CMAR and Dick & Fritsche Design Group as the Design Professional (DP) for this project. During the CMAR selection process, there were ten submittal responses and four contractors were interviewed. The selection process for the DP included fifteen responses and five firms were interviewed.

- General construction is scheduled to begin when the design is complete and after all approvals are in place. Construction is scheduled for completion in December 2019.

Project Cost

- The budget for this project is $80.0 million, and represents an estimated construction cost of $378 per gross square foot. The estimated total project cost is $533 per gross square foot.

- The CMAR will be at risk to provide the completed project within the agreed-upon Guaranteed Maximum Price (GMP).

Fiscal Impact and Financing Plan:

- The $80.0 million project budget will be funded with system revenue bonds. Debt service will be funded by the State of Arizona Capital Infrastructure Fund and matched with university funds.

- Operations and maintenance costs for this project are estimated at $1,329,188 annually and will be funded by tuition

- **Debt Ratio Impact**: The projected incremental debt ratio impact for this project is 0.19 percent.

Occupancy Plan

- University programs from the College and Nursing and Health Innovation, the College of Health Solutions Department of Biomedical Informatics, the Fulton Schools of Engineering and The Center for Mindfulness are expected to occupy this facility. Backfill plans for spaces vacated by these programs are in development.

Exhibit

- Exhibit I - Site Location Map

Capital Project Information Summary

University: Arizona State University **Project Name:** Health Solutions Innovation Center

Project Description and Location: The proposed new 150,000-square-foot leading-edge facility will feature a med-tech innovation accelerator, biomedical engineering and informatics research labs, and an innovative education zone. Programs from several ASU schools and colleges, particularly those with a focus on the health professions and biomedical sciences, will benefit from the proximity of this world class learning facility to the Mayo Clinic Hospital and Cancer Center, as depicted on the attached map as Exhibit I. This is the first building in conjunction with the new innovation zone at this location.

Project Schedule:

Planning	July	2017
Design	December	2017
Construction Start	August	2018
Construction Completion	December	2019

Project Budget:

Total Project Cost	$	80,000,000
Total Project Construction Cost	$	56,694,000
Total Project Cost per GSF	$	533
Construction Cost per GSF	$	378

Change in Annual O & M Cost:

Utilities	$	565,828
Personnel		0
All Other Operating		763,360
Subtotal	$	1,329,188

Funding Sources:

Capital

A. System Revenue Bonds $ 80,000,000
Debt Service Funding Source: Tuition
Capital Infrastructure Fund

Operation/Maintenance $ 1,329,188
Funding Source: Tuition

Capital Project Budget Summary

University: Arizona State University **Project**: Health Solutions Innovation Center

	Capital Development Plan June 2017	Capital Development Plan February 2018
Capital Costs		
1. Land Acquisition		
2. Construction Cost		
A. New Construction	$ 49,000,000	$ 56,238,000
B. Tenant Improvements		-
C. Special Fixed Equipment		-
D. Site Development (excl. 2.E.)	1,000,000	-
E. Parking and Landscaping	2,500,000	456,000
F. Utilities Extensions		-
G. Other* (Demolition/abatement)		-
Subtotal Construction Cost	$ 52,500,000	$ 56,694,000
3. Fees		
A. CMAR Pre-Construction	$ 787,500	$ 850,410
B. Architect/Engineer	6,300,000	6,803,280
C. Other		
Subtotal Consultant Fees	$ 7,087,500	$ 7,653,690
4. FF&E Movable	$ 2,100,000	$ 3,401,640
5. Contingency, Design Phase	4,200,000	2,833,691
6. Contingency, Constr. Phase	4,200,000	2,834,700
7. Parking Reserve		-
8. Telecommunications Equipment	2,719,317	3,401,640
Subtotal Items 4-8	$ 13,219,317	$ 12,471,671
9. Additional University Costs		
A. Surveys, Tests, Haz. Mat. Abatement	$ 25,000	$ 500,000
B. Move-in Costs	5,000	50,000
C. Printing Advertisement	1,000	35,000
D. Keying, signage, facilities support	45,000	10,000
E. Project Management Cost	1,938,683	2,322,461
F. State Risk Mgt. Ins. (.0034 **)	178,500	263,178
Subtotal Addl. Univ. Costs	$ 2,193,183	$ 3,180,639
Total Capital Cost	$ 75,000,000	$ 80,000,000

* Universities shall identify items included in this category

** State Risk Management Insurance factor is calculated on construction costs and consultant fees.

EXHIBIT I
Health Solutions Innovation Center
Phoenix Site Location Map