

Item Name: Review of Annual Capital Plan, Including Waiver of ABOR Policy Requiring ACP Projects to Appear on a Previous Capital Improvement Plan (ASU) Action Item

Requested Action: Arizona State University (ASU) asks the committee to review and recommend forwarding to the full board for approval its Annual Capital Plan (ACP), including waiver of ABOR Policy requiring ACP projects to appear in a previous Capital Improvement Plan (CIP). The ACP includes one new project and one resubmitted project, which total \$39.3 million, as described in this executive summary.

Background/History of Previous Board Action

- Annual Capital Plan September 2022
 - Polytechnic Utilities Expansion (Polytechnic campus)
- Tempe Campus West Quadrant Utility Expansion (Tempe campus) - No prior action

Prior Year Activity

- Four projects totaling \$252,800,000 were substantially completed within the last 12 months.
- Fourteen projects totaling \$488,410,000 began or continued construction activity in the last 12 months, excluding two third-party projects.
- Detail on completed and ongoing projects are listed in Exhibit 1.

Overview and Alignment with Enterprise and University Goals and Objectives

- The ASU ACP includes two projects totaling \$39.3 million.
- ASU has developed the ACP to align with university's campus master plan, the system Enterprise, and university strategic goals and objectives.
- The primary institutional priorities supported by the ACP include:
 - **Academic Success:** The proposed projects will contribute to advancing the university's twin pillars of academic success—leadership in academic excellence

Contact Information:

Morgan R. Olsen, ASU

Morgan.R.Olsen@asu.edu

480-727-9920

and accessibility and establishing national standing in academic quality. These projects will provide essential support to achieving these goals and metrics:

- Enhance the university graduation rate to greater than 85 percent and more than 40,000 graduates
 - Attain national standing in the learning and post-graduation outcomes for students in all colleges and schools
 - Enhance our local impact and social embeddedness.
- **Research and Development:** The proposed projects will support the university's research goals, including the enhancement of its research competitiveness to more than \$1 billion in annual research expenditures by 2028. University research expenditures are used in part to advance the state of knowledge in various fields; 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 the fields of science, technology and medicine.
 - **Campus Operations and Infrastructure Priorities:** To advance the university's academic and research goals, its facilities and related infrastructure must be maintained in a safe and reliable operational condition. Buildings and utility systems also must be cost-effective to maximize the use of the university's operational funds over time.
 - **Life Safety and Code Compliance:** Life safety and code compliance issues must be resolved promptly and assume the highest priority in ensuring the safety and security of students, faculty, staff and visitors, as well as supporting the achievement of the university's academic and research goals.

Annual Capital Plan Projects

- The following new project is proposed for ACP approval, including notations where board policy waivers are requested:
 - Tempe Campus West Quadrant Utility Expansion (Tempe campus) – Waiver requested
- The following resubmitted project also is proposed for ACP approval, which is the prior Thermal Energy Storage Installation project. It is being resubmitted due to scope and name changes. The new scope eliminates the thermal energy storage portion of the project:
 - Polytechnic Utilities Expansion (Polytechnic campus)

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

Fiscal Impact and Management

- The ASU ACP, if fully implemented, will cost a total of \$39.3 million.
- Of the total amount, \$39.3 million will be financed using debt.
- **Debt Ratio Impact:** The debt service associated with the non-SPEED projects in the ACP will increase the debt ratio by 0.07 percent. The current debt ratio prior to these projects is 4.5 percent excluding SPEED projects and 4.8 percent including SPEED projects.
- The tables in Exhibits 2 and 3 provide detailed project financing, funding sources and debt ratio impact.

Other Projects

- ASU does not anticipate any third-party projects, component unit projects, and commercial long-term leases that require board approval to be entered into in the next year.

Statutory/Policy Requirements

- Pursuant to ABOR Policy 7-102.B.2, each university shall submit an ACP for the upcoming twelve-month period in accordance with the calendar and form approved by the executive director of the board.
- ACPs are reviewed by the University Governance and Operations Committee and approved by the board.
- Approval of the ACP authorizes the university to seek legislative review for debt-funded or third-party projects, if applicable. A university cannot proceed with financing or execute construction contracts for a project until the committee has reviewed and the board has approved the Individual Project and Financing phase.
- Pursuant to ABOR Policy 7-102.B.2.a.(1), if a project has not appeared in a prior

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CIP, a waiver of this board policy can be requested in order for a project to appear on an ACP. ASU seeks an exception to the policy for the Tempe Campus West Quadrant Utility Expansion as a result of increased demand for additional electrical capacity to power existing and future developments in the area.

EXHIBIT 1

Arizona State University Capital Project Status Report							
Project Name	Est. Gross Square Footage	Total Budget	Direct Construction Budget	Percent Work Completed	Percent to Gift Target	Date Last Board Approval	Original/ Revised Occupancy Date
Ongoing Projects							
Building and Infrastructure Enhancements/Modifications	N/A	\$20,000,000	\$14,000,000	92	N/A	2/13/2020	12/1/2024
Building and Infrastructure Enhancements/Modifications	N/A	\$20,000,000	\$16,000,000	78	N/A	9/30/2021	12/1/2026
Building and Infrastructure Enhancements and Modifications	N/A	\$35,000,000	\$35,000,000	12	N/A	11/17/2022	2/1/2027
Classroom/Academic Renovations	44,643	\$15,000,000	\$10,500,000	78	N/A	9/30/2021	12/31/2024
Classroom/Academic Renovations	50,000	\$15,000,000	\$11,250,000	90	N/A	2/13/2020	2/1/2024
Classroom/Academic Renovations	39,170	\$15,000,000	\$10,500,000	16	N/A	11/17/2022	2/1/2027
Classroom Office Building	169,626	\$113,100,000	\$94,236,277	61	N/A	9/30/2021	7/24/2024
IT Infrastructure Improvements	N/A	\$36,810,000	\$36,810,000	60	N/A	9/30/2021	12/31/2024
Mill Avenue Student Housing Academic and Office Space	28,247	\$27,000,000	\$25,000,000	2	N/A	6/15/2023	6/13/2025
Research Laboratory Renovations	32,000	\$20,000,000	\$14,000,000	78	N/A	9/30/2021	12/31/2024
Research Laboratory Renovations	40,000	\$20,000,000	\$14,000,000	90	N/A	2/13/2020	2/1/2024
Research Laboratory Renovations	28,400	\$30,000,000	\$30,000,000	12	N/A	11/17/2022	2/1/2027
Tempe Campus Academic and Office Space	129,300	\$88,000,000	\$68,000,000	38	N/A	11/17/2022	8/1/2024
West Campus Student Housing Academic and Office Space	52,315	\$33,500,000	\$25,717,200	16	N/A	12/13/2022	12/11/2024
Ongoing Third-Party Projects							
Mill Avenue Student Housing	175,000	\$113,500,000	\$113,500,000	2	N/A	6/15/2023	6/13/2025
West Campus Student Housing	134,264	\$54,000,000	\$54,000,000	27	N/A	6/15/2023	7/19/2024
Substantially Completed Projects							
Bateman Physical Sciences Center Improvements	90,400	\$60,000,000	\$48,000,000	100	N/A	2/11/2021	6/5/2023
Mill Avenue Parking Structure	401,874	\$42,000,000	\$35,360,000	100	N/A	9/30/2021	7/12/2023
Multipurpose Arena	193,638	\$137,200,000	\$110,021,746	100	N/A	11/19/2020	11/30/2022
University Drive Pedestrian Bridge and Plaza	N/A	\$13,600,000	\$11,433,381	100	N/A	6/12/2020	9/30/2022
Substantially Completed Third-Party Projects							
No Substantially Completed Third-Party Projects							
This report reflects the status of Arizona State University capital projects effective September 14, 2023.							

EXHIBIT 2

Arizona State University Annual Capital Plan							
Project	Board Approval Status	Est. Gross Square Footage	Project Cost	Amount Financed	Funding Method	Annual Debt Service	Debt Ratio
New Projects							
ASUT-Tempe Campus West Quadrant Utility Expansion	None	4,000	\$22,000,000	\$22,000,000	System Revenue Bonds	\$1,760,800	0.04%
New Projects Subtotal		4,000	\$22,000,000	\$22,000,000		\$1,760,800	0.04%
Resubmitted Projects							
ASUP-Polytechnic Utilities Expansion	ACP 2022	3,000	\$17,300,000	\$17,300,000	System Revenue Bonds	\$1,094,400	0.03%
Resubmitted Projects Subtotal		3,000	\$17,300,000	\$17,300,000		\$1,094,400	0.03%
Third Party Projects							
No Third-Party Projects							
Third Party Projects Subtotal		0					
TOTAL ACP		7,000	\$39,300,000	\$39,300,000	\$0	\$2,855,200	0.07%

EXHIBIT 3

Annual Capital Plan—Annual Debt Service by Funding Source											
Project	Amount Financed	CIF	TUI	AUX	ICR	OLF	SLP	FGT	DFG	OTH	Total Annual Debt Service
New Projects											
ASUT-Tempe Campus West Quadrant Utility Expansion	\$22,000,000		\$1,760,800								\$1,760,800
New Projects Subtotal	\$22,000,000	\$0	\$1,760,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,760,800
Resubmitted Projects											
ASUP-Polytechnic Utilities Expansion	\$17,300,000		\$1,094,400								\$1,094,400
Resubmitted Projects Subtotal	\$17,300,000	\$0	\$1,094,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,094,400
Total ACP	\$39,300,000	\$0	\$2,855,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,855,200

Funding Source Codes:

(CIF) Capital Infrastructure Fund (ICR) Indirect Cost Recovery

(TUI) Tuition (OLF) Other Local Funds

(AUX) Auxiliary (SLP) State Lottery Proceeds

(FGT) Federal Grant

(DFG) Debt Financed by Gifts

(OTH) Other

Annual Capital Plan—Operation and Maintenance by Funding Source											
Project	CIF	TUI	AUX	ICR	OLF	GFA	FGT	DFG	OTH	Total Annual O&M	
New Projects											
ASUT-Tempe Campus West Quadrant Utility Expansion		\$124,921								\$124,921	
Subtotal	\$0	\$124,921	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$124,921	
Resubmitted Projects											
ASUP-Polytechnic Utilities Expansion		\$118,642								\$118,642	
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$118,642	
Total ACP	\$0	\$243,563	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$243,563	

Funding Source Codes:

(CIF) Capital Infrastructure Fund

(TUI) Tuition

(AUX) Auxiliary

(ICR) Indirect Cost Recovery

(OLF) Other Local Funds

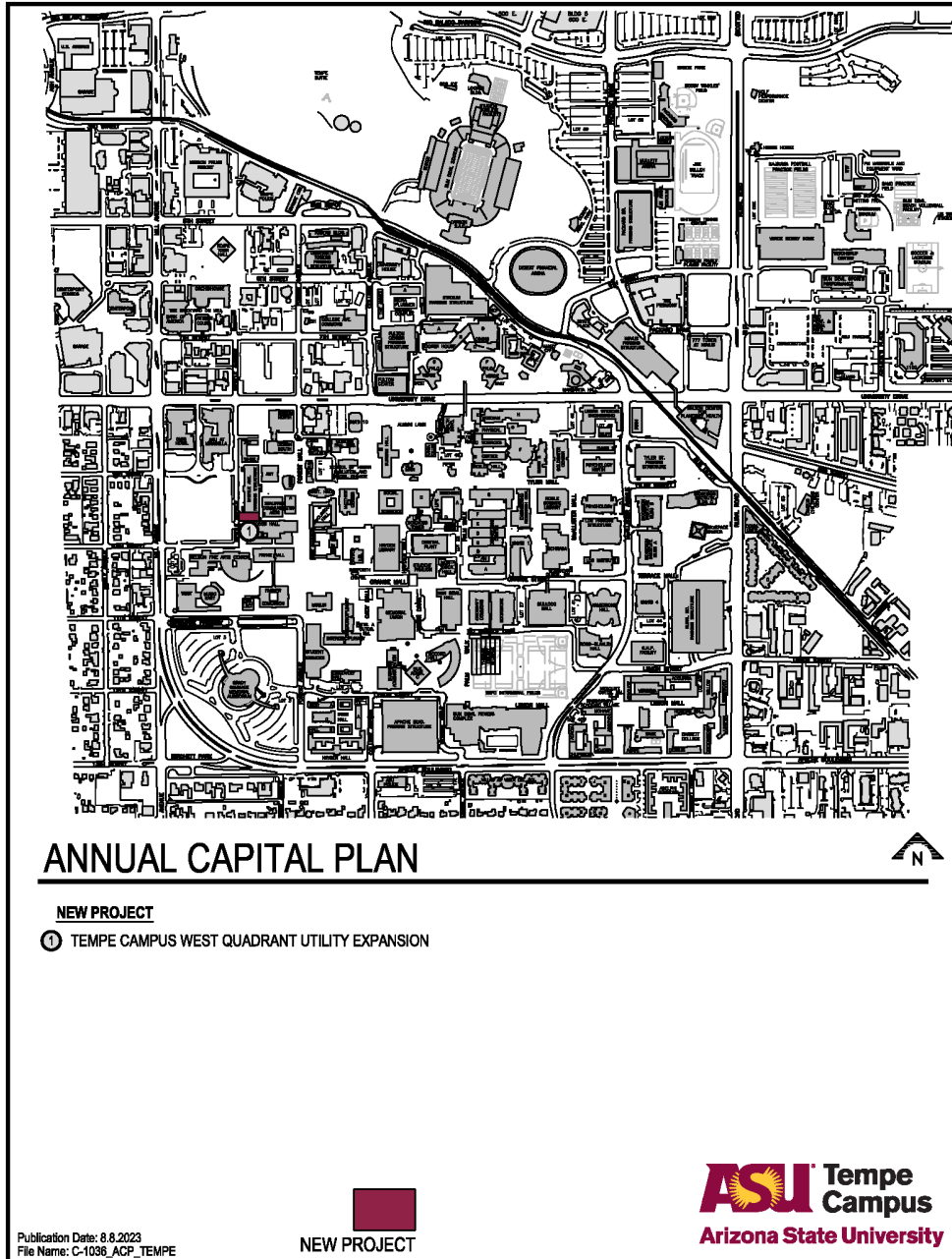
(GFA) General Fund Appropriation

(FGT) Federal Grant

(DFG) Debt Financed by Gifts

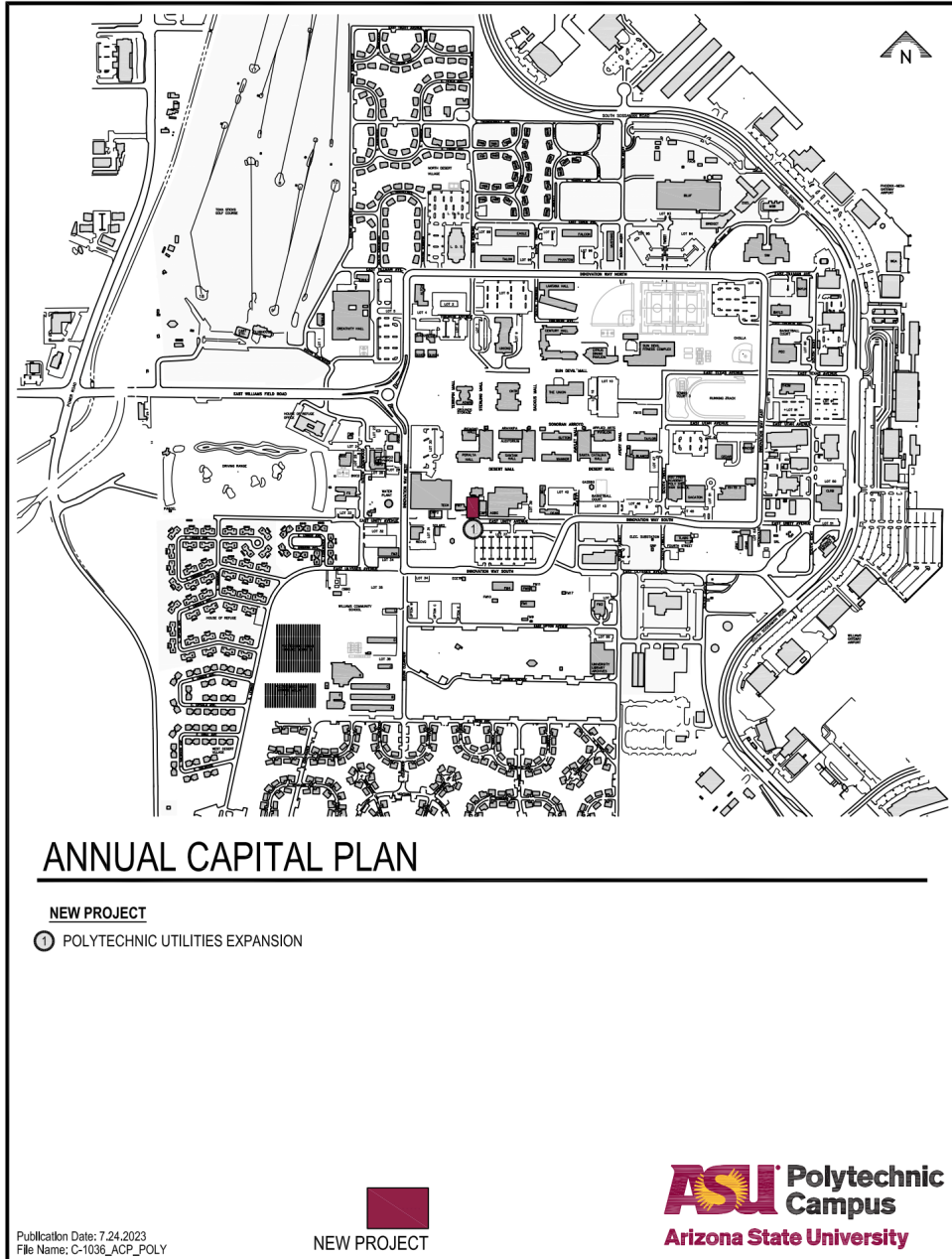
(OTH) Other

EXHIBIT 4(a)
Arizona State University
Tempe Campus Site Location Map



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**EXHIBIT 4(b)
Arizona State University
Polytechnic Campus Site Location Map**



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**EXHIBIT 5
 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).

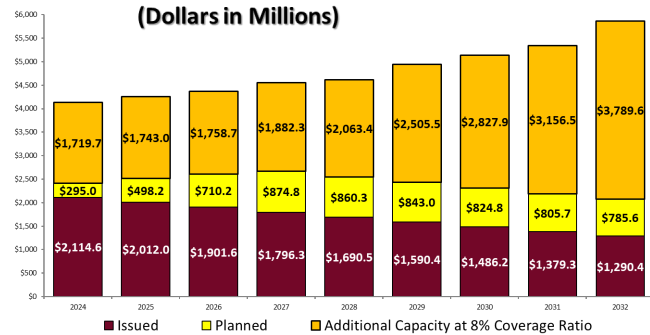
PROJECTED DEBT CAPACITY

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

5.1%/5.5%

Based upon the projects included in this ACP and the first year of the CIP, the maximum projected debt ratio is 5.1 percent in FY 2026. Outstanding debt in FY 2026 is projected to be \$2.61 billion at par, with total annual debt service of \$215.0 million. The 5.1 percent ratio is within the range used by credit rating firms to confirm an institution's creditworthiness and is below the 8 percent statutory maximum.

Currently outstanding (issued) debt declines from \$2.1 billion in FY 2024 to \$1.3 billion in FY 2032 as debt is retired. Planned debt includes future financings of projects included in the first year of the 2025-2028 CIP and projects that have received ACP approval. 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 included in the first year of the FY 2025-28 Capital Improvement Plan (CIP) and those projects that have received ACP or CDP approval. These projects are included in the future debt capacity assumptions.

	Project Budget	Remaining Amount to be Financed
Tempe Research Building ISTB 9	\$ 228,800,000	\$ 228,800,000
Polytechnic Research and Educational Building	187,000,000	156,000,000
Tempe Campus Classroom Office Building	113,100,000	57,100,000
Building and Infrastructure Enhancements and Modifications	90,000,000	90,000,000
Tempe Campus Classroom and Office Space	88,000,000	44,000,000
IT Infrastructure Improvements	63,000,000	63,000,000
Polytechnic Student Union Expansion	52,325,000	52,325,000
Tempe District Utility Plant	52,165,000	52,165,000
Research Laboratory Renovations	50,000,000	40,000,000
University Athletic Village Master Plan Tennis, Track & Field Facilities	49,000,000	49,000,000
West Campus Student Housing Academic and Office Space	33,500,000	33,500,000
Classroom and Academic Renovations	30,000,000	30,000,000
Mill Ave Student Housing Academic, Office, & Dining Space	27,000,000	27,000,000
Tempe Campus West Quadrant Utility Expansion	22,000,000	22,000,000
Polytechnic Utilities Expansion	17,300,000	17,300,000
	\$ 1,103,190,000	\$ 962,190,000

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CREDIT RATINGS

Positive rating factors cited by the credit rating agencies include ASU's strong brand recognition that has translated into solid donor support, growing enrollment, growing tuition revenue, and increased research diversity; excellent financial policy and risk management; consistently positive operating performance; and regular capital investment.

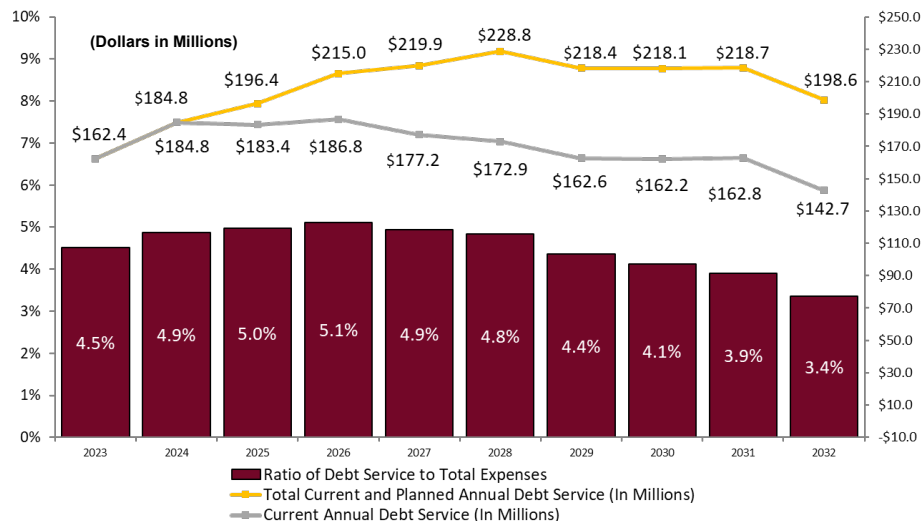
Offsetting factors identified by the agencies include high debt levels, ongoing capital needs, modest state support, exposure to online education component, and limited revenue diversity with high student dependence.

Fiscal Year	Moody's		Standard & Poor's (S&P)	
	Rating	Outlook	Rating	Outlook
2016	Aa3	Positive	AA	Stable
2017	Aa3	Positive	AA	Stable
2018	Aa2	Stable	AA	Stable
2019	Aa2	Stable	AA	Stable
2020	Aa2	Stable	AA	Stable
2021	Aa2	Stable	AA	Stable
2022	Aa2	Stable	AA	Stable
2023	Aa2	Stable	AA	Stable

RATIO OF DEBT SERVICE TO TOTAL EXPENSES

Annual debt service on system revenue bonds and certificates of participation (COPs) is projected to increase from \$162.4 million in FY 2023 to a maximum of \$228.8 million in FY 2028. The projected ratio of debt service to total expenses is expected to reach its highest point in FY 2026, at 5.1 percent.

SPEED (Stimulus Plan for Economic and Educational Development) bonds are funded up to eighty 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 is included, the highest projected debt ratio increases to 5.5 percent.



ASU
Annual Capital Plan – Project Justification Report
Polytechnic Utilities Expansion

Background/History of Previous Board Action

- FY 2023–2025 Capital Improvement Plan October 2021
- Annual Capital Plan September 2022

Project Justification/Description/Scope

- This project constructs a new 3,000 gross-square-foot central plant to provide chilled and hot water, electrical distribution, chilled water loop improvements and emergency power to existing and future buildings across the growing Polytechnic campus. This includes core facilities already connected to the chilled water loop, such as research facilities, food services, the Sun Devil Fitness Center, and academic buildings as well as planned facilities including the multi-level Interdisciplinary Science and Technologies Building 12 for new manufacturing engineering programs. The plant will be located west of the existing Central Plant between East Unity Avenue and South Innovation Way, as depicted on the attached map as Exhibit A.
- The ability to continuously create and store chilled water reduces operating and utility costs through an overnight chilling process targeting off-peak hours. This approach places less demand on the utility grid and reduces the amount of energy required to cool the water to the needed temperatures before distributing it to the surrounding facilities for critical climate control functions.
- This project not only will enhance the quality of the Polytechnic campus infrastructure and systems, but also support increased enrollment and program offerings within the Ira A. Fulton Schools of Engineering, one of the largest and most comprehensive engineering education programs in the United States.

Project Delivery Method and Process

- The project will be constructed through the Design Build (DB) delivery method. This approach was selected to streamline project delivery and to alleviate potentially adversarial project environments.
- ASU has selected Chasse Building Team as the contractor and Spectrum Engineers as the architect for this project. The selection process included six responses and three teams were interviewed.

Project Status and Schedule

- The project is scheduled to begin construction in February 2024. The project is scheduled for completion in October 2024.

Project Cost

- The budget for this approximately 3,000 gross-square-foot project is \$17.3 million. The budget represents an estimated construction cost of approximately \$4,600 per gross square foot. The estimated total project cost is \$5,767 per gross square foot.
- By comparison, the existing Central Chiller Plant on Tempe Campus was upgraded in 2016 to replace obsolete mechanical equipment and upgrade the control system at a cost of \$10,319,120. Unlike this renovation and upgrade, this utilities expansion project will be a completely new design build project.

• **Comparable Projects:**

Project	Description	Location	Project Size GSF	Total Project Cost/GSF	Year Completed
NCP Satellite Central Plant	New facility with 5,000 tons of chiller capability.	Tempe	4,500	\$1,644	2016
Infrastructure Phase VI	Renovations to existing Arizona Health Sciences Center Central Heating and Refrigeration Plant including two 5,000 ton chillers and three 30,000 LB/HR broilers	Tucson	36,221	\$511	2006
Average Comparable Total Project Cost				\$1,078	

Fiscal Impact and Financing Plan

- The \$17.3 million project will be debt-financed with system revenue bonds and amortized over an approximately thirty-year term. The annual debt service will be funded by tuition and is included in current budget planning.

- **Debt Ratio Impact:** The projected incremental debt ratio impact for this project bundle is 0.03 percent.
- Operations and maintenance costs are estimated at \$118,642 annually and will be funded by tuition.

Occupancy Plan

- This project will not affect occupancy or existing programs but will provide increased infrastructure to support continued Poly campus physical expansion and new programs that support the advancement of the university's academic and research initiatives.

Statutory/Policy Requirements

- ABOR Policy 7-102 requires all Major Capital Projects with an estimated project cost of \$10 million or more to be included in the ACP, including new construction, renovation, infrastructure, information technology and third-party projects.

Capital Project Information Summary

University: Arizona State University **Project Name:** Polytechnic Utilities Expansion

Project Description and Location: This project constructs a new 3,000 gross-square-foot central plant to provide chilled and hot water, electrical distribution, chilled water loop improvements, and emergency power to existing and future buildings across the growing Polytechnic campus. This includes core facilities already connected to the chilled water loop, such as research facilities, food services, the Sun Devil Fitness Center, and academic buildings as well as planned facilities including the multi-level Interdisciplinary Science and Technologies Building 12 for new manufacturing engineering programs. The plant will be located west of the existing Central Plant between East Unity Avenue and South Innovation Way, as depicted on the attached map as Exhibit A.

Project Schedule:

Planning	June	2019
Design Start	October	2023
Construction Start	February	2024
Construction Completion	October	2024

Project Budget:

Total Project Cost	\$	17,300,000
Total Project Construction Cost	\$	13,800,000
Total Project Cost per GSF	\$	5,767
Construction Cost per GSF	\$	4,600

Estimated Annual O&M Cost:

Utilities	\$	8,928
Personnel		99,807
All Other Operations		9,907
Subtotal	\$	118,642

Funding Sources:

A. System Revenue Bonds	\$	17,300,000
Debt Service Funding Source:		Tuition
Operation/Maintenance	\$	118,642
Funding Source:		Tuition

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	<u>Annual Capital Plan</u>
Capital Costs	
1. Land Acquisition	
2. Construction Cost	
A. New Construction	\$ 11,100,000
B. Tenant Improvement	-
C. Special Fixed Equipment	-
D. Site Development (excl. 2.E.)	-
E. Parking and Landscaping	350,000
F. Utilities Extensions	2,300,000
G. Other* (Demolition/abatement)	50,000
Subtotal Construction Cost	<u>\$ 13,800,000</u>
3. Fees	
A. CMAR Pre-Construction	\$ 100,000
B. Architect/Engineer	1,100,000
C. Other	-
Subtotal Consultant Fees	<u>\$ 1,200,000</u>
4. FF&E Movable	\$ -
5. Contingency, Design Phase	150,000
6. Contingency, Constr. Phase	1,326,000
7. Parking Reserve	-
8. Telecommunications Equipment	20,000
Subtotal Items 4-8	<u>\$ 1,496,000</u>
9. Additional University Costs	
A. Surveys, Tests, Haz. Mat. Abatement	\$ 236,000
B. Move-in Costs	-
C. Printing Advertisement	-
D. Keying, signage, facilities support	35,000
E. Project Management Cost	490,000
F. State Risk Mgt. Ins. (.0034 **)	43,000
Subtotal Addl. Univ. Costs	<u>\$ 804,000</u>
Total Capital Cost	<u><u>\$ 17,300,000</u></u>

* Universities shall identify items included in this category.

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

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**Exhibit A
Polytechnic Utilities Expansion
Site Location Map**



Academic Center	CNTR 5D	Dean Hall	DEAN 6E	Santa Catalina Hall	SANCA 6E	Chandler-Gilbert Comm. College	
Administration	ADMIN 5D	ECET Research	ECET 7D	Santan Hall	SANTN 6D	Baylor Hall	BAYL 4H
Agribusiness Center	AGBC 6D	Engineering Studio	ENGR 6D	Simulator Building	SIM 3G	Bluford Hall	BLUF 3G
Altitude Chamber	ALTO 4C	Fac. Mgt. & Police Dept.	FMPD 6C	Student Health	SDFCP 4F	Bridget Hall	BRID 3G
Applied Arts Pavilion	AAPAV 5F	Facilities Services	FS 6C	Student Union	UNION 5E	Eagle Residence Hall	EAGLE 3D
Aravaipa Auditorium	ARAVA 6D	Greenhouse	GRNHS 7G	Sun Devil Fitness Comp.	SDFCP 4F	Engle Hall	EGEL 3G
Ball Residence Hall	BELL 6E	Inter. Sc. & Tech. III	ISTB3 6G	Sutton Hall	SUTON 5E	Falcon Residence Hall	FALCO 3E
Cedar Hall	CDRHL 6G	Ironwood Building	IRNWD 6C	Taylor Hall	TAYLO 5F	Mortuary Science Bldg.	MSB 3G
Central Receiving	RECVG 7C	Lantana Hall	LNTAHL 4E	Technology Center	TECH 6C	Mustang Res. Hall	MUSTA 3E
Century Hall	CNTRY 4E	Palo Blanco	PALOB 6F	Tech. Innovation Labs	TLABS 7F	Phantom Res. Hall	PHANT 5H
Citrus Dining Pavilion	CITRS 5F	Peñalta Hall	PRLTA 6D	Union Aux. & Housing	UNION2 4D	Physical Ed. Center	PEC 4G
Classroom Building	CLRB 6H	Picacho Hall	PICHO 5D	Wanner Hall	WANER 6E	Talon Residence Hall	TALON 3D
Communications	COMUN 6C	Prep. Poly. STEM High School	PPAHS 6F	Williams Comm. Schl.	WCS 6B	Thomas Hall	THOM 5H
Creativity Hall	CRHL 4C	Quads	QUADS 4C				
Creativity Hall Admin.	CRHLA 4B	Rincon Building	RINCN 6G				
Creativity Hall Srvs.	CRHLS 4C	Sacaton Hall	SACTN 6F				

EXECUTIVE SUMMARY

ASU
Annual Capital Plan – Project Justification Report
Tempe Campus West Quadrant Utility Expansion

Background/History of Previous Board Action

- No previous action
- Requesting waiver

Project Justification/Description/Scope

- This project creates a new 4,000 gross-square-foot power distribution center (PDC) to provide needed electrical capacity to the west quadrant of the Tempe campus and to accommodate planned growth and development of the area. The facility will be located at Lot 8 near South Myrtle Avenue and East 10th Street, as depicted on the map attached as Exhibit B, which is currently a small parking lot north of Lattie F. Coor Hall.
- The project will include 6,000 linear feet of trench and conduit, six five-inch conduit duct banks, and 9,300 linear feet of feeder cable underground from the APS Butte Substation, located north of University Drive and Dorsey Lane, to the new PDC at Lot 8, which will feed power to the Tempe District Utility Plant to power the chillers and future developments included as part of the current 10-year masterplan.
- Lot 8 improvements will include a fenced in utility yard to house the APS metering cabinets and the 15 kilovolt (kV) line up. The new 15kV PDC/Switchgear at Lot 8 will utilize both existing TP12 feeder and TP20 feeder capacity in parallel. The new APS Butte 17 feeder will be connected to the 15kV PDC/Switchgear and will also provide N+1 redundancy.
- The additional electrical capacity will support numerous existing facilities and programs, including Herberger Institute of Design and the Arts facilities such as Grady Gammage Memorial Auditorium, the Music Building, Nelson Fine Arts Center as well as Stauffer Community Arts and the Design School. It will also support the new Mill Avenue Student Housing project and Tempe Campus Academic and Office Space currently under construction along with future projects aligned with ASU's 10-year masterplan.
- The project will enhance the capabilities of the campus utility infrastructure and systems as well as enable the university to look ahead at additional development to enhance the Tempe campus with new academic, laboratory and student housing projects.

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- ASU is requesting a waiver of the ABOR Policy requiring CIP approval. The project was not originally included on the previous CIP, which was approved by ABOR on September 28, 2022.

Project Delivery Method and Process

- The project will be constructed through the CMAR delivery method. This approach is construction-led and selected as the contractor will coordinate the design throughout the project development and budgeting phases.
- ASU selected GLHN Architects and Engineers as the architect via a bid waiver as it has developed academic plans for the project and was selected via the design professionals ARFQ selection.
- ASU will solicit invitations to bid via a CMAR ARFQ process in accordance with ABOR requirements for the construction of the project.

Project Status and Schedule

- The project is scheduled to begin construction in May 2024. The project is scheduled for completion in December 2024.

Project Cost

- The budget for this approximately 4,000 gross-square-foot project is \$22 million. The budget represents an estimated construction cost of approximately \$4,081 per gross square foot. The estimated total cost is \$5,500 per gross square foot.

- Comparable Projects:

Project	Description	Location	Project Size GSF	Total Project Cost/GSF	Year Completed
Central Plant Emergency Power System Upgrades	Replaced a 600 KW Central Plant Generator with a 1.75 MW generator and updated the parallel switchgear.	Tempe	2,000	\$3,185	2021
NCP Satellite Central Plant	New facility with 5,000 tons of chiller capability.	Tempe	4,500	\$1,644	2016

EXECUTIVE SUMMARY

Infrastructure Phase VI	Renovations to existing Arizona Health Sciences Center Central Heating and Refrigeration Plant including two 5,000 ton chillers and three 30,000 LB/HR broilers	Tucson	36,221	\$511	2006
Average Comparable Total Project Cost				\$1,780	

Fiscal Impact and Financing Plan

- The \$22.0 million project will be debt-financed with system revenue bonds and amortized over an approximate thirty-year term. The annual debt service will be funded by tuition and is included in current budget planning.
- **Debt Ratio Impact:** The projected incremental debt ratio impact for this project bundle is 0.04 percent.
- Operations and maintenance costs are estimated at \$124,921 annually and will be funded by tuition.

Occupancy Plan

- This project will not affect occupancy or existing programs but will provide increased infrastructure to support continued physical expansion and new programs that support the advancement of the university’s academic and research initiatives.

Statutory/Policy Requirements

- ABOR Policy 7-102 requires all Major Capital Projects with an estimated project cost of \$10 million or more to be included in the ACP, including new construction, renovation, infrastructure, information technology and third-party projects.
- Pursuant to ABOR Policy 7-102.B.2.a.(1), if a project has not appeared in a prior CIP, a waiver of this board policy can be requested in order for a project to appear on an ACP. ASU seeks an exception to the policy for the Tempe Campus West Quadrant Utility Expansion as a result of increased demand for additional electrical capacity to power existing and future developments in the area.

Capital Project Information Summary

University: Arizona State University **Project Name:** Tempe Campus West Quadrant Utility Expansion

Project Description and Location: This project creates a new 4,000 gross-square-foot power distribution center (PDC) to provide additional electrical capacity to the west quadrant of Tempe campus and accommodate planned growth and development of the area. The facility will be located at Lot 8 near South Myrtle Avenue and East 10th Street, as depicted on the map attached as Exhibit B.

Project Schedule:

Planning	January	2023
Design Start	July	2023
Construction Start	May	2024
Construction Completion	December	2024

Project Budget:

Total Project Cost	\$	22,000,000
Total Project Construction Cost	\$	16,322,900
Total Project Cost per GSF	\$	5,500
Construction Cost per GSF	\$	4,081

Estimated Annual O & M Cost:

Utilities	\$	11,904
Personnel		99,807
All Other Operating		13,210
Subtotal	\$	124,921

Funding Sources:

A. System Revenue Bonds	\$	22,000,000
Debt Service Funding Source:		Tuition
B. Operations/Maintenance	\$	124,921
Funding Source:		Tuition

EXECUTIVE SUMMARY

Capital Project Budget Summary

University: Arizona State University

Project: Tempe Campus West Quadrant Utility Expansion

	Annual Capital Plan
Capital Costs	
1. Land Acquisition	
2. Construction Cost	
A. New Construction	\$ -
B. Renovation	
C. Special Fixed Equipment (Ice Plant)	7,450,000
D. Site Development (excl. 2.E.)	1,466,950
E. Parking and Landscaping	400,950
F. Utilities Extensions	7,000,000
G. Other*	5,000
Subtotal Construction Cost	<u>\$ 16,322,900</u>
3. Fees	
A. Pre-Construction	\$ 500,000
B. Architect/Engineer	\$ 750,000
C. Other	
Subtotal Consultant Fees	<u>\$ 1,250,000</u>
4. FF&E Movable	\$ -
5. Contingency, Design Phase	225,000
6. Contingency, Constr. Phase	2,537,010
7. Parking Replacement	500,000
8. Telecommunications Equipment	60,000
Subtotal Items 4-8	<u>\$ 3,322,010</u>
9. Additional University Costs	
A. Surveys, Tests, Haz. Mat. Abatement	\$ 250,000
B. Move-in Costs	-
C. Printing Advertising	-
D. Keying, signage, facilities support	30,000
E. Project Management Cost	635,262
F. State Risk Mgt. Ins. (.0034 **)	189,828
Subtotal Addl. Univ. Costs	<u>\$ 1,105,090</u>
Total Capital Cost	<u><u>\$ 22,000,000</u></u>

* Universities shall identify items included in this category

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

EXECUTIVE SUMMARY

Exhibit B
 Tempe Campus West Quadrant Utility Expansion
 Site Location Map



Acacia Hall	ACACI 7E	College Ave. Market	CAM 3C	Health Service	HSB 4D	Northern Chiller Plant	NCP 3D	Sun Devil Stadium	STAD 2D
Acortia Hall	ACHAL 6F	College Ave. Commons	CAVC 3C	Honors Hall	HONHAL 7F	Off-Camp. Stndt. Srv.	OCSS 5G	Sun Angel Stadium	TRACK 2F
Adephi Commons	ADEL 7F	Cmb'd Heat & Pwr. Fac.	CHFF 6F	Intndiscipln. A/B	INTDSA/B 6C	Old Main	MAIN 4D	The Annex	ANN 3C
Agave Hall	AGVHAL 7F	Community Serv. Bldg.	CSB 1F	Intndiscipln. Sc. & Tech. 1	ISTB1 6D	Ochilidhouse (Brckyd.)	BYOH 5B	Tooler House A-D	TKRHA D 3D
Aquatic Complex	AQUAT 3D	Coor Hall	COOR 5B	Intndiscipln. Sc. & Tech. 2	ISTB2 4E	Palo Verde East	PVE 3D	Toner Center	TOWER 4B
Armstrong Hall	ARM 6E	Cottonwood Hall	CW-HAL 7F	Intndiscipln. Sc. & Tech. 4	ISTB4 6F	Palo Verde West	PWW 3D	University Ctr. A-C	UCNTRA-C 3H
Arroyo Hall	ARHAL 7E	Cowden Fam. Rarcs.	COWDN 4C	Intndiscipln. Sc. & Tech. 5	ISTB5 4E	Payne Hall	EDB 5B	University Club	UCLUB 4D
Art Building	ART 4B	Creativity Commons	CRVYC 4D	Irish Hall	IRISH 7C	Perform. & Media Arts	AFMA 3G	Vander University Serv. Bldg.	VDS 8G
Art Warehouse	ARWH 4B	Design Annex	DFA 3E	Juniper Hall	JNHAL 7F	Physical Sci. Wings	PSB-H 4D	University Serv. Engin.	USE 4E
ASU at Mirabella	MRELA 4B	Design North	DSCNK 3C	Life Sciences Center	LS 4D	Piper Writers House	PWH 4D	University Towers	UNIVT 2C
Best Hall	MB 7C	Design South	DS 4B	Life Sciences C-wing	LS 4D	Police	ASUPD 7C	Verbera Hall	VBHAL 6F
Business Admin.	BA 6E	Dixie Gammage Hall	DGHALL 5C	Material Srv. Bldg.	MSB 6B	Psychology Building	PSY 5E	Vista del Sol Cmplx.	VDS 8E
Business Admin. C Wing	BAC 6D	Durham Hall	DURHAM 4B	Mathews Center	MCHD 5D	Psychology North	PSYN 4E	Villas @ Vista del Sol	VVDS 8E
Biodesgn. Inst. Bldg. A	BDA 5F	Engineering Center	ECA-G 3D	Mathews Center	MCHD 5D	Rosewood Hall	RYC 4C	Walton Cntr. For Plntry. Hlth.	WCFH 4F
Biodesgn. Inst. Bldg. B	BDB 5F	Engin. Research Cntr.	ENGRC 4D	Maternal Srv. Bldg.	MSB 6B	Ross-Blakley Hall	RBHL 6E	Weather Center	WHALL 5C
Biodesgn. Inst. Bldg. C	BDC 5F	Farmer Education Bldg.	FED 6B	Memorial Union	MU 6C	Sage Hall	SGHAL 7F	West Hall	WHL 5C
Bookstore	BKSTR 6D	Fulton Center	FULTN 4C	Mesquite Hall	MESHAL 6F	Schwads Building	SCOB 5E	Wilson Hall	WILSON 4D
Brickyard Artisan Cntr.	BYAC 3B	Gammage Auditorium	CSMA 6B	McClintock Hall	MCL 5C	Sch. Hu. Ex. Soc. Chg.	SHESC 4C	Wilson Hall	WILSON 5C
Brickyard Engrg.	BYENG 3A	Goldwater Center	GWCC 4E	McCord Hall	MCHD 5D	Social Sciences	SSC 5C	Womens Gymst. Trng.	WGTF 2H
Bulldog Hall	BDH 6E	Goldwater Center	GWCC 4E	Memorial Union	MU 6C	Sage Hall	SGHAL 7F	Westing Training Fac.	WTF 2H
Campus Child'n's Cntr.	CHLD 5G	Greek Ldrsp. Vlg. A-D	GLVA-D 5G	Moscow Building	MUR 5D	San Pablo Hall	SPBLO 3D	Zero Waste Office	ZWO 8G
Carson Stndt Ath Cntr.	CSAC 2D	Greek Ldrsp. Vlg. CC	GLVCC 5G	Murdoch Lecture Hall	MUR 5D	San Pablo Hall	SPBLO 3D	777 Tower at Novus	NVSI 3F
Centerpoint	CTRPT 5A	Grounds Maint. Facility	GMF 8G	Music Building	MUSIC 6B	Schwads Building	SCOB 5E		
Ceres Hall	CERHAL 7F	Harrington-Birchett House	HBYH 3C	Newb Hall	NEB 5B	Sch. Hu. Ex. Soc. Chg.	SHESC 4C		
Center for Fam. Studies	CF 4C	Hayden Library	HAYDN 7C	Nelson Fine Arts Center	FAC 5B	Sun Devil Clubhouse	SDH 4D		
Central Plant	CP 3D			Noble Sci. Library	NOBLE 5E	Sun Devil Sports Perf.	SDSP 3H		
Central Plant South	CPSS 3F								
Cholla Apartments	CHOLA 5G								
Chuparosa Hall	CHUPA 7E								

EXECUTIVE SUMMARY

APS Butte Substation Feeder Route to the Tempe Campus (Lot 8)

