Capital Project Stage Gate: OSU-Cascades Academic Building 2

BACKGROUND

The OSU-Cascades Academic Building 2 (AB2) project is included in the Ten-Year Capital Forecast, and the university is approaching completion of the schematic design phase. The following information is provided for consideration by the Finance & Administration Committee to advance this project to the next phase of development, pursuant to the Board's Approval of Capital Projects policy.

PROJECT DESCRIPTION, SCOPE AND PROGRAM

The current 10-acre campus of OSU-Cascades includes an academic building (Tykeson Hall), a residence hall, and a dining and classroom building (Obsidian Hall). AB2 will be the first building to be placed on the soon to be reclaimed land that will expand the OSU-Cascades campus to 56 acres.

AB2 will allow OSU-Cascades to grow the teaching and research capacity of STEAM (science, technology, engineering, arts, and math) disciplines, including Engineering, Physical Therapy/Kinesiology, Outdoor Products and Arts Media and Technology. The building will create capacity for more than 500 students at OSU-Cascades and house general-purpose classrooms, flexible laboratories, maker spaces, and offices. At 50,000 square feet, AB2 will incorporate innovative use of Oregon manufactured wood products, potentially including cross-laminated timber (CLT). The design for AB2 is intended to be prototypical, allowing future academic buildings on the campus to leverage its programming, design, and construction lessons, reducing costs and improving building function and aesthetics.

The project will also construct new onsite infrastructure including utilities, landscaping, and roadways necessary for AB2. A new road accessing the campus from Simpson Avenue will add another entrance to the expanding campus. Site work in the project includes an amphitheater and bowl green adjacent to AB2. This building and its associated infrastructure and landscape will showcase the aesthetic and sustainability goals as set forth in the Long Range Development Plan, while offering visitors exceptional views of the "bowl," natural scenery, and skyline.

In addition to the onsite infrastructure, the OSU-Cascades Master Plan, as approved by the city of Bend, requires OSU-Cascades to build offsite infrastructure to mitigate traffic impacts caused by AB2 development. The new offsite infrastructure includes installation of a roundabout as well as improvements at the Simpson Road entrance.

ESTIMATED TOTAL PROJECT BUDGET, FUNDING AND TIMELINE

Academic Building 2, together with the associated on- and offsite infrastructure, is estimated to cost $50.2M, including design, construction, and contingencies. The project will be funded by state-paid XI-Q bonds ($29M), state-paid XI-G bonds ($10M), gift funds ($10M), and student fee reserves ($1.2M).

The $1.2M in student fee reserves is a new addition to the project funding since the last time the Board reviewed this project. Students committed a total of $5M toward construction of a Student Success Center and exterior amenities including the Oval Green. Since state funding for the

Student Success Center project seems unlikely in the present biennium, the students have asked to construct the Oval Green and other exterior amenities ($1.2M total) together with the AB2 contract.

During its May 2019 meeting, the Board approved $4.4M of the AB2 budget to construct the AB2 building pad and associated parking, landscaping, and geothermal field in the same contract with the Cascades Campus Site Reclamation project, as illustrated in the chart below.

Project Funding

	XI-Q Bonds	XI-G Bonds	Gifts	Student Fees	TOTAL
46 Acre Site Reclamation (SRR)	$9M				$9M
Academic Building 2 (AB2)	$29M	$10M	$10M	$1.2M	$50.2M
TOTAL	$38M	$10M	$10M	$1.2M	**$59.2M**

Contracting Strategy

	XI-Q Bonds	XI-G Bonds	Gifts	Student Fees	TOTAL
SRR & AB2 Site Work CM/GC	$9M (SRR) $4.4M (AB2)				$13.4M
AB2 CM/GC	$24.6M	$10M	$10M	$1.2M	$45.8M
TOTAL	$38M	$10M	$10M	$1.2M	**$59.2M**

The project was programmed in summer 2018, starts construction spring 2020, and is expected to be completed in summer 2021.

IDENTIFICATION OF RISKS AND PROPOSED CONTINGENCY

SRG Architects was chosen as the AB2 project team by utilizing a design competition process that highlighted SRG's ability to design an appealing building as well as their passion for the project and problem solving skills. Swinerton Builders was chosen and contracted early in the design process through a construction manager/general contractor (CMGC) contract. Swinerton leads the industry in mass timber experience, having completed three (CLT) projects with nine more projects in various states of execution. This experience will be leveraged on OSU's project. Critical trade partners will be contracted early to utilize a target value design (TVD) process that aligns individual work packages with allowable budgets to avoid cost over runs and reduce risk.

The contingencies for design, construction, and owner are 5%, 6%, and 5%, respectively, which are appropriate for the potential risks identified.

Risks	Consequences	Mitigation Strategy
Construction Escalation	Cost of building construction is higher than our budget allows.	1. Utilize contingency. 2. Design AB2 to allow for simple low impact scope adjustments as more is known about cost. 3. Have a scope priority program that guides the scope adjustments, as more is known about costs. 4. Building program developed for 50K SF with 5K additive alternate.

Building design may be higher $/SF than budgeted	Cost of building construction is higher than our budget allows.	1. Include design cost target within the building design RFP process. 2. Include cost targeting in design process as part of design RFP. 3. Set clear expectation with SRG design team on the funding available. 4. Utilize Target Value Design process to drive choices between building system in order keep each system in the building within its budget amount. 5. Building program developed for 50K SF with 5K additive alternate.
Offsite infrastructure exceeds estimates	Rebalance project budgets and allocate funds appropriately to cover the increase.	1. Get 3rd party estimates of offsite infrastructure costs as soon as possible. 2. Lock in design details as soon as possible with city. 3. Utilize contingency. 4. Adjust scope as necessary on other portions of AB2 project.
Schedule Dependency Risks – AB2 is dependent on Site Reclamation/Remediation (SRR) project	Construction for AB2 will not start on time. .	1. Integrate the SRR schedule with the AB2 schedule. 2. Focus SRR resources on this critical path. 3. Carve out the AB2 pad as a separate scope and drive schedule appropriately
Mass Timber Construction Issues	Significant rework and schedule delays causing budget overruns.	1. Meet with the Forest Science Complex construction team to understand their experience/issues on the project. 2. Utilize a CMGC with extensive mass timber experience. 3. Select mass timber material and manufacturer with proven history of producing a quality product.

TOTAL COST OF OWNERSHIP

Total cost of ownership is a summary of estimated financial obligations for an asset, including initial design and construction expenses, operations and maintenance, debt service, and renewal costs. It is a more useful way of considering the total impacts of E&G projects than the standard project pro forma the university uses for self-support projects, which have a revenue component.

No OSU debt will be used to fund this project. Estimated operating costs for AB2 in current dollars are $364,000/year for utilities, maintenance, and other operations. This amount is included in OSU-Cascades' operating 30-year forecast. Capital renewal cost over the life of the asset is also carried in the 30-year operating forecast for OSU-Cascades. The estimated total cost of ownership over a 25-year life cycle for AB2 is summarized in the table below, which includes total project cost, debt service, operations and maintenance, and capital renewal funding based on depreciation.

Education and General Fund – Forecasted Total Cost of Ownership OSU-Cascades Academic Building 2	
ITEM	**COST**
Total project cost (state backed bonds and gift funds)	$45,800,000
Total debt service for the improvements	$0
Personnel (25 years, $149K/year - escalated 3% annually)	$5,880,709
Operations and maintenance (25 years, $215K/year - escalated 3% annually)	$7,824,314
Building Reserves/Capital renewal (25 years, $420K/year - 1% of owned value)	$10,500,000
Total cost of ownership	**$24,205,023**
Tuition revenue – enrollment associated with additional capacity (25 years)	$25,919,108
Net cost of ownership	**($1,714,085)**

RECOMMENDATION

Staff recommend that the Finance & Administration Committee approve advancing the OSU-Cascades Academic Building 2 project to next phase of design development.