10-Year OSU Capital Forecast

BACKGROUND

The 10-year OSU Capital Forecast, currently under development, is an instrument that enables short-term and long-range planning for investments in buildings, landscapes and other infrastructure as well as the related financing. These investments form the foundation for academic, research and outreach activities around the state as well as for international programs. Once complete, the Capital Forecast will support OSU's mission, reflect institutional priorities and allow the university to respond to new opportunities. The forecast will be evaluated and presented to the Finance & Administration Committee in January of even years. It will be integrated with the 10-year business forecast and benchmarked against the Board-approved financial metrics.

PROCESS

The 10-year Capital Forecast development began with identifying the needs, plans and aspirations of university leadership. Potential projects from OSU leaders (President, provost, vice provosts, vice presidents, deans and directors) were solicited, refined and cataloged by Capital Planning and Development. Staff from University Housing and Dining Services (UHDS), Athletics, Facilities Services, Environmental Health and Safety, Transportation Services, Information Systems and other central service units also contributed requests and data related to infrastructure needs, including deferred maintenance, building renovations, communication infrastructure, parking lots, roads and energy systems.

The Infrastructure Work Group (IWG) is a subset of the Provost's Council and currently includes the vice president for OSU-Cascades, vice president for research, senior vice provost for academic affairs, vice provost for information services, vice provost for student affairs, and deans of the colleges of Agricultural Sciences, Engineering and Science, and the University Honors College. Over the last four months, the IWG has reviewed, evaluated and prioritized projects for incorporation into the 10-year Capital Forecast. Staff within Capital Planning used the IWG prioritization as well as sequential, financial, logistical and other considerations and constraints to build several integrated, efficient and long-range forecasts for the IWG to evaluate and recommend to the Capital Plan Review Group (provost, vice president for finance and administration, director of budget and fiscal planning, and the associate vice president for capital planning and facilities services).

EVALUATION AND PRIORITIZATION CRITERIA

I. Financial boundaries

The vice president for finance and administration set the following conditions for each biennium for all capital projects based on an assessment of impacts on Board-approved financial metrics and state bond funding, gift and other funding opportunities:

- Alignment with financial metrics
- HECC-requested state paid bonds at $70 million per biennium
- HECC-requested capital improvement and renewal funding at $35 million per biennium
- Gifts and other OSU funds at $95 million per biennium

II. Criteria

The IWG created a hierarchy of criteria to use in developing a comprehensive prioritization matrix for projects. The hierarchy of criteria consists of five higher-level criteria, each further defined by sub-criteria as summarized next:

- Criticality of the Project
  - Life safety and seismic resilience
  - Sustainability
- Alignment with University Mission
  - OSU Strategic Plan 3.0
  - OSU Operating Forecast
  - OSU Enrollment Plan
  - Higher Education Coordinating Commission (HECC) criteria
- Physical Quality of Facility
  - Building condition
  - Accessibility
  - Building efficiency
  - Operating life span
- Impact of Facility
  - Student success
  - Employee success
  - Revenue generation
  - Reputation
  - Scholarship/research
  - Outreach
- Leverage Potential of the Project
  - Cost
  - Collateral advantages
  - Space quality, efficiency and quantity

Data to evaluate projects using these criteria were collected from a variety of sources including:

- Space Inventory: Understanding the quantity and quality of OSU's current facilities is of primary importance. Capital Planning completed a comprehensive statewide space survey of all of OSU's buildings in June 2016. These data are used to assess utilization efficiency of current office and teaching spaces based on current guidelines. A study is in process to inform the development of research space guidelines. From this study, recommendations will be made and space guidelines and standards drafted for adoption by the university. Thorough analyses of the space data and application of standards, coordinated with colleges and units, will occur annually to inform the OSU Biennial Capital Plan and the 10-year Capital Forecast.
- Facility Condition Assessment: The evaluation and prioritization of renovation and new projects strongly considers the condition of existing buildings. The Facility Condition Assessment provides an overview of a building or asset and serves as a common tool by which proposed capital projects can be analyzed, compared and prioritized. Data sources for this analysis include: building history (construction date, renovations and alterations), repair and maintenance data, seismic safety evaluations, energy use data, energy

conservation measures analysis, third-party accessibility assessments, the roof maintenance plan, and the professional judgment of Facilities Services, Environmental Health and Safety, Information Services, building managers and other expert sources. The assessment includes a Facility Condition Rating (FCR), deferred maintenance and systems renewal backlog, and Facilities Condition Needs Index (FCNI). The deferred maintenance and systems renewal backlog reflects the cost to restore the building (or system) to a new condition. The Facilities Condition Needs Index (FCNI) is the ratio of projected costs associated with future renewal (functional), modernization (seismic, hazardous material abatement, technology and sustainability upgrades) and regulatory compliance over the current replacement value (CRV).

Based on feedback from Sightlines, a facilities asset analysis firm, the relative measure of the condition of the facility(ies) is usually organized into a four-tiered condition scale, as follows:

"Good" condition..... 0-15% of Current Replacement Value (CRV)
"Fair" condition ..... 15-30% of CRV
"Poor" condition..... 30-50% of CRV
“Transition” condition..... >50% of CRV

FCNI scores greater than 50% indicate that the deferred maintenance and systems renewal backlog exceeds half of the cost of the building. Values over 60% are often triggers for building replacement with the likely exception of legacy buildings, especially in the historic district where FCNI could be higher.

The estimated overall FCNI for the Corvallis campus for fall 2016 is estimated at 29.6%, indicating the campus infrastructure on average is at the transition between fair to poor condition. Sightlines has been hired to complete a comprehensive analysis of Education & General (E&G) (includes research) and UHDS buildings. Initial conversations led us to set the range for an aspirational institutional FCNI between 15-35%. However, additional data and results from Sightlines will better inform the appropriate value.

- Classroom Utilization Index (CUI): This index provides a basic understanding of classroom space utilization. This calculation is the number of contact hours divided by the available instructional space. This analysis was performed on spaces (general purpose classrooms, unit dedicated classrooms, seminar rooms, and dry, computer and wet laboratories) that were centrally scheduled on Monday – Friday between 8 am and 5 pm. The sample was taken from the week of 18 October 2015. Only E&G buildings were included.

Classroom utilization index (%)						
General purpose	**Unit dedicated**	**Seminar**	**Dry laboratory**	**Computer laboratory**	**Wet laboratory**	**Overall average**
43	25	12	25	25	23	34

In the recent publication “Managing Academic Space: A Guide for Higher Education” (AACARO 2015), utilization categories were created and are summarized in the following table with minor modifications to the ranges of percentages. OSU’s utilization ranged from moderate to low based on these categories.

Utilization Category	Utilization (%)	OSU utilization
Low	< 20	Seminar
Moderately Low	20-34	Unit dedicated, laboratories
Moderate	35-49	General purpose
Moderately High	50-64	
High	65-79	
Very High	≥ 80	

In the short term, we propose that an initial working goal would be to achieve an overall range of 30-65% depending on classroom type.

It is important to note that institutions set their own utilization goals, which consider quality of space, disciplinary norms, pedagogy, etc. Establishing a framework and goals for classroom utilization should be a collaborative process between faculty, students, schedulers and space planners within an institution. Many institutions have discovered that improvements can be made by matching room and class section sizes by studying typical section sizes and re-sizing rooms in renovation projects; reassigning some instructional rooms to different uses; and recognizing that many teaching space needs will be solved with qualitative improvements, including improving the facility condition, reconfiguration and upgrades to classroom technology.

DRAFT 2017-27 CAPITAL FORECAST – MAJOR CAPITAL

I. Financial Impact

The impact of the draft 10-year Capital Forecast on our key financial ratios are illustrated in Attachment 1. Debt burden ratio, primary reserve ratio, debt to revenues ratio and return on net assets ratio would all or mostly be within approved ranges. Debt service coverage and net income ratio would be below approved ranges. One of the “next steps” delineated below is to work to further prioritize the operating and capital forecasts to bring the financial ratios within their approved ranges before Board approval in January 2017.

II. 10-year Proposed Capital Projects

For ease of discussion, the 10-year initial draft capital projects have been divided into sections consisting of OSU-Corvallis; E&G buildings, UHDS, and Athletics; OSU-Cascades; and Capital Improvement and Renewal projects.

<u>OSU – Corvallis</u>

- **Education and General Fund Buildings**

  Seismic Resilience and Physical Quality

  The need for seismic resilience for many OSU’s buildings and the necessary replacement of nearly every system (as noted by a high FCNI) indicate facilities should undergo complete renovation. The 10-year Capital Forecast identifies seven buildings that need major, comprehensive renovations, including seismic resilience, complete systems upgrades and interior space realignment for efficiency and effectiveness. OSU generally chooses the life-

safety performance level for seismic safety retrofits. The American Society for Civil Engineers (ASCE) 41-13 standards (Seismic Evaluation and Retrofit of Existing Buildings) describe deficiency-based and systematic procedures that use performance-based principles to evaluate and retrofit existing buildings to withstand the effects of earthquakes. The next-generation of standards combines the evaluation and retrofit process and puts forth a three-tiered process for seismic evaluation according to a range of building performance levels — from collapse prevention to life-safety to operational — that marry targeted structural performance with the performance of nonstructural elements.

The 10-year Capital Forecast must consider the enrollment plan and loss of critical space as a result of demolition and make considerations for temporary surge space during renovations. The forecast often requires the construction of new buildings before renovations to ensure continued operations of critical university functions.

The Capital Forecast is estimated to reduce the deferred maintenance and systems renewal backlog (estimated at $693.0M) by $330.0M (47.6%), with further reduction in the subsequent three biennia of an additional $185.0M.

Alignment, Impact and Leverage

To reduce the deferred maintenance and systems renewal backlog, buildings that should be replaced rather than renovated were identified. Three buildings with high FCNI scores, little historic value to OSU, large deferred maintenance and systems renewal backlog burdens and poor FCR scores are recommended for replacement. These buildings include Weniger Hall (a 203,000 gross square feet [GSF] research building constructed it the 1960s), Snell Hall high-rise (an 80,000 GSF former dormitory, now used as office and surge space for construction projects), and the Facility Services Shops (a complex of aged metal buildings south of Kerr at the gateway to campus). Several other minor buildings have been identified for eventual demolition.

The Capital Forecast proposes seven new buildings, one building expansion, and nine major renovations in the 10 years of the plan on the OSU-Corvallis campus (see Attachment 2). The Plan adds approximately 560,000 GSF of new E&G buildings and demolishes approximately 140,000 GSF of high FCNI buildings for a net gain of 420,000 GSF over 10 years. An additional 200,000 GSF will be added in the subsequent three biennia, allowing for the demolition of approximately the same square footage in Weniger Hall. Capital programming of these projects will be informed by space standards and university allocation needs, the enrollment plan, classroom utilization, new faculty hires, etc.

- **University Housing and Dining Services' (UHDS) Major Capital Projects**

  Major UHDS projects generally utilize OSU revenue bonds; however, public and private partnerships may be a viable option in some cases. OSU-Corvallis projects included in the forecast are the renovation of Sackett Hall as the Honors College Living Learning Community, the buyout of equity in the Gem Building, the construction of housing in Newport to support the Marine Studies Initiative, new upper division/graduate student housing on campus in Corvallis, and the replacement of the Orchard Court housing complex.

- **Athletics Major Capital Projects**

  OSU-Corvallis Athletics projects will rely primarily on gift funding, which, consequently, make them difficult to predict. Projects in the forecast for Athletics include the completion of the Whyte Track and Field, Reser Stadium West Grandstands, major upgrades to Gill Coliseum, a Gymnastics Practice Facility, and a new Soccer Stadium.

OSU-Cascades Campus

OSU-Cascades serves the fastest growing region in the state. Central Oregon is a largely rural area with a population of more than 200,000 that has been historically underserved by higher education and includes many first-generation and place-bound students who have been unable to attend college. Allocated capital to OSU-Cascades will improve educational access and increase the likelihood of graduates staying in the region. Local economic development leaders agree that the OSU-Cascades campus, academic programs and its graduates represent a promising economic future for Central Oregon.

To support the enrollment and program growth, OSU-Cascades proposes four new academic buildings, a phased implementation strategy to reclaim a brownfield site and the development of site infrastructure, housing, dining, recreation and associated parking.

Capital Improvement and Renewal

Safety, accessibility, building preservation, energy efficiency and other deficiencies in buildings not slated for renovation will be addressed using Capital Improvement and Renewal (CIR) funds, resulting in additional reductions to the deferred maintenance and systems' renewal backlog.

The CIR projects are of two types – Building Renewal and Program Renewal. CIR funding prioritizes the following:

- Reduction of OSU's deferred maintenance backlog,
- Reduction of facility operating and maintenance costs,
- Improvement of the OSU Facilities Conditions Index,
- Retention and recruitment of faculty and
- Increased efficiency of use and quality of instructional space capacity.

The project list is vetted by the IWG prior to the submission of the biennial Capital Plan.

Building Renewal is focused on critically needed repairs and renewal of our existing buildings and infrastructure—particularly the renewal of building systems that serve OSU's academic research facilities. These projects represent our careful assessment of the condition of OSU's capital assets and reflect prioritized investments. This funding enables us to improve ADA accessibility in our facilities, attempts to reverse the deterioration of a wide range of buildings and infrastructure on the OSU Corvallis campus and sustains our most critical instructional and research programs. Fire and life safety, energy efficiency and improved utility system reliability and resilience investments are grouped in a portfolio of minor capital projects. Specific building renewal projects are included in the following general categories:

1. Building repair and renewal, including seismic upgrades that are less than $5.0M;
2. Mechanical and electrical system renewal;

3. Utilities and site work renewal; and
4. Accessibility, fire and life safety improvements.

Campus infrastructure projects such as energy system upgrades, street and transportation improvements and utility upgrades that are <$5.0M primarily utilize CIR funds. The building renewal investment priorities were developed by Facilities Services, Environmental Health and Safety, Information Services and the Research Office and informed by the needs of schools, colleges and units.

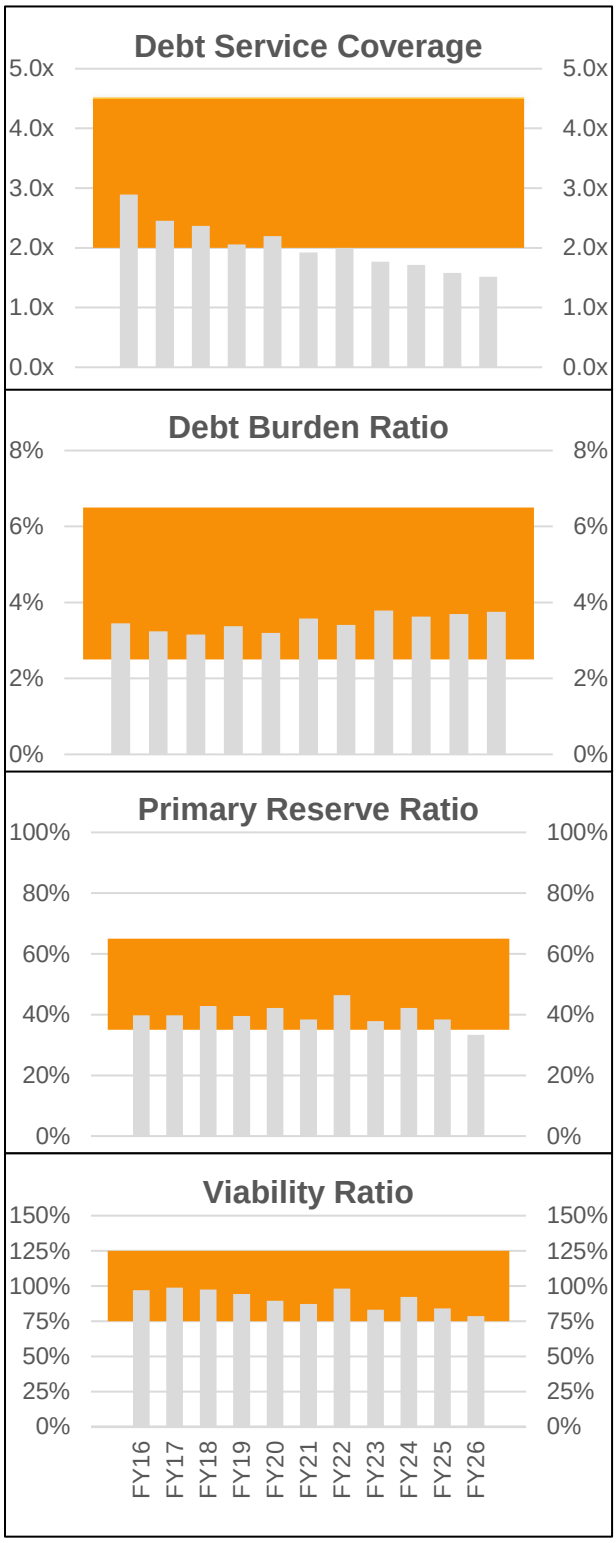
Program Renewal includes the renovation of teaching laboratories and classrooms to support a culture of innovative learning, teaching and research through increased space utilization; the creation of collaborative learning spaces; and the cost-effective transformation of outdated facilities, bringing them up to date to meet modern educational demands. Program renewal needs are based on the priorities of colleges, schools, units and the Classroom Improvement Working Group. Improvements to statewide outreach and research buildings will be included in the forecast and utilize CIR funds.

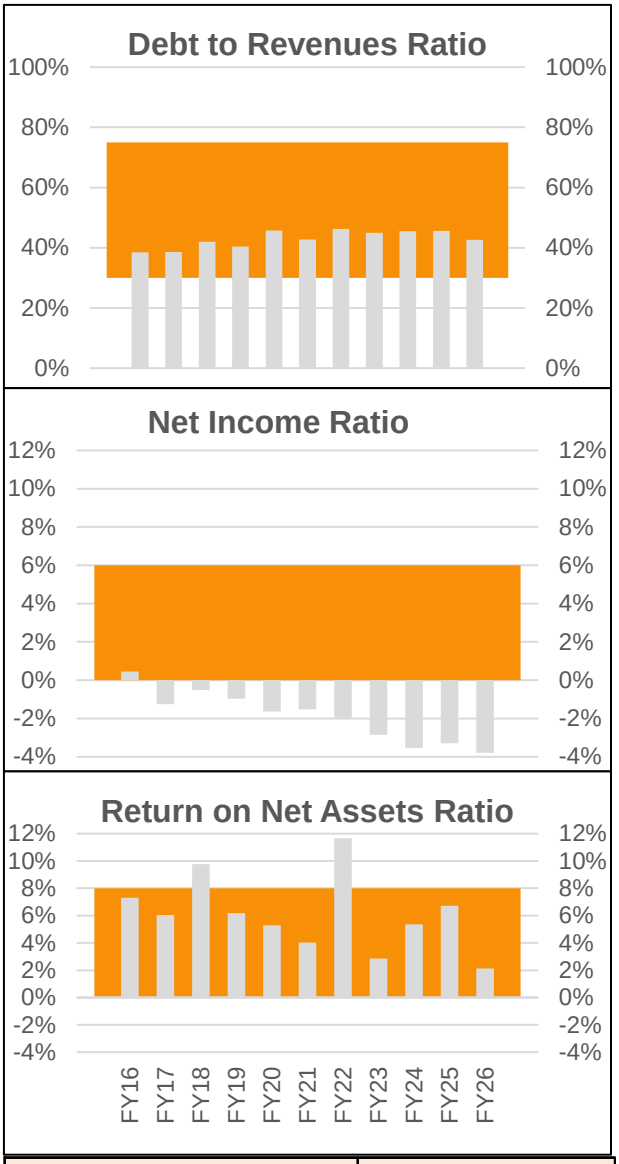
NEXT STEPS

The proposed 10-year Capital Forecast will be completed and presented to the Finance & Administration Committee at its January 2017 meeting. Next steps to complete the plan include:

- Expand the membership of the Infrastructure Working Group to include auxiliaries, students and a member of the Faculty Senate to further vet the draft plan;
- Review and report out on Sightlines “Facility Asset Analysis”;
- Assess the value of a comprehensive classroom utilization study and create goals for utilization; and
- Refine the 10-year Capital Forecast based on results of the above actions and impacts on financial metrics.

Attachment 1: Impact of the 10-year Capital Forecast on OSU's financial metrics (area in orange shows approved operating range)





	Approved Operating Ranges
Debt Service Coverage	2 - 4.5 times
Debt Burden Ratio	2.5% - 6.5%
Primary Reserve Ratio	35% - 65%
Viability Ratio	75% - 125%
Debt/Revenues	30% - 75%
Net Income Ratio	0% - 6%
Return on Net Assets Ratio	0% - 8%

Attachment 2: Proposed Major Capital Projects

OSU – Corvallis E&G Buildings

- **Seismic Resilience and Physical Quality**

  Fairbanks Hall, Gilkey Hall, Cordley Hall, Gilbert Addition, Kidder Hall, Benton Hall, Langton Hall and Withycombe Hall were identified for comprehensive renovations for the 2017-27 period, and five additional buildings have been identified to follow in subsequent years. The **Kerr Administration** building has been identified for a seismic safety upgrade but not a general renovation. Currently the ASCE 41-13 standard is being applied to all renovations. Buildings will be designed appropriately to the new standards, once released. *(Items in parenthesis after the description are the criteria influenced by the capital project.)*

  - **Fairbanks Hall** (*Life safety and seismic, enrollment plan, HECC, all physical quality, student success, reputation, employee success, scholarship, space*)
  - **Gilkey Hall** (*Enrollment plan, HECC, accessibility, operating life span, student success, scholarship, collateral advantage, space*)
  - **Cordley Hall** (*Impacts all of the primary and secondary evaluation criteria*)
  - **Gilbert Addition** (*Life safety and seismic, enrollment plan, HECC, all physical quality, student success, reputation, employee space*)
  - **Benton Hall** (*Life safety and seismic, all physical quality, reputation, employee success, space*)
  - **Kidder Hall** (*Life safety and seismic, operating plan, enrollment plan, HECC, all physical quality, student success, reputation, employee success, scholarship, space*)
  - **Langton Hall** (*Enrollment plan, HECC, accessibility, operating life span, student success, faculty success, scholarship, outreach, space*)
  - **Kerr Administration Seismic** (*Life safety and seismic*)
  - **Withycombe Hall** (*Life safety and seismic, operating plan, enrollment plan, HECC, all physical quality, student success, reputation, employee success, scholarship, collateral advantage, space*)

- **Alignment, Impact and Leverage – New and expansion** *(Items in parenthesis after the description are the criteria influenced by the capital project)**:***

  - **The Performing Arts Education Comple**x is slated for the 2019-2021 biennium and will allow for the renovations of Benton and Withycombe Halls as operations and personnel are moved to new buildings. The renovation of Withycombe Hall will allow for the removal of several smaller, very high FCNI buildings. (*Enrollment plan, building condition, accessibility, efficiency, revenue generation, student success, reputation, employee success, scholarship, outreach, cost, collateral advantage, space*)
  - **The Campus Operations Center** will allow for the removal of the metal building shop complex just south of Kerr Administration Building and thus create space to site the Student Services Building. (*Building condition, Accessibility, efficiency, operating life span, reputation, employee success, collateral advantage, space*)
  - The **Student Services Building** focuses replacement space for Snell Hall (and allows for its removal) with purposeful student-serving space. The Student Services

Building will gather units from Snell, Kerr Administration and around the campus that focus on student needs, wellness, retention and completion. With administrative units aligning in Kerr and the new building, released space around campus will facilitate better functional alignment within buildings and address pressing space needs of dispersed units. (*Operating plan, enrollment plan, HECC criteria, physical quality, student success, reputation, employee success, outreach, collateral advantage and space*)

- The repurposing of the historic **Heat Plant Building** creates an opportunity to satisfy many OSU vital space needs (e.g., maker and collaboration space, academic programs, student success) (*Life safety, seismic, physical quality, student success, collateral advantage, revenue generation, space*)

The demolition of **Weniger Hall** and major renovations to OSU's STEM research buildings are only possible with the addition of new buildings to compensate for the 203,000 SF of space in Weniger, allow for growth required by the 10-year business forecast and increased student population and allow for the movement (temporary or permanent) of units out of buildings that will be renovated. The Capital Forecast calls for the addition of three STEM Education and Research buildings in the next 10 years and two to three more in the subsequent three biennia. The sequence of these buildings is difficult to predict as they will require gift funding. The buildings include an **Analytics Hub** (possibly as a new wing to Kidder, replacing Milne), **Linus Pauling Science Center Phase II**, the **Conservation Biology Building**, a **Bioscience Research Building**, a new **Engineering Building** and the **Marine Studies Initiative Phase II** building.

OSU–Cascades Campus (OSU-Cascades)

- **Academic Building 2** is a new 55,000 gross square feet (GSF) academic building and will provide lab space for bio-sciences, kinesiology and engineering, general purpose classrooms, faculty offices and other learning support and research spaces. Labs and general purpose classrooms will be needed to support the growth of general education requirements and region-specific programs. Academic Building 2 will include the development of an outdoor learning and study space. The project will also include 60,000 GSF of structured and surface parking to support enrollment growth.
- **Academic Buildings 3, 4A, and 4B** will support the growth and development of OSU-Cascades academic programming. During our long-range planning process to be finalized by March 2017, OSU-Cascades will determine the program for each building. By 2027, OSU-Cascades will have an anticipated 3,600+ students enrolled. General program needs include:
    i. Academic space for earth ecosystem programming, lab space for computer and data science, natural resources and environmental science, media and technology 3D production facilities, general purpose classrooms, faculty offices, and other learning support and research spaces.
    ii. Academic space to support programs focused on innovation and economic prosperity and will include lab space and classrooms for industrial and graphic design, marketing, and tourism and outdoor leadership along with office and research spaces.
    iii. Classroom, lab and office space to enable a focus on human health and wellness with interactive learning environments and labs to support

development and expansion of graduate and doctorate programs in public/community health, kinesiology, nursing and physical therapy.

iv. All academic buildings will also include structured and surface parking to support enrollment growth.

- In addition to academic and research space, OSU-Cascades is committed to providing housing and dining options on campus to support a successful retention strategy. Central Oregon, with the fastest population growth in the state, is experiencing a tremendous housing shortage, and OSU-Cascades is committed to providing housing options on-campus for 40% of our students. OSU-Cascades will provide a mix of housing types to support a diverse on-campus resident population. We anticipate a demand of 1,300 additional beds on campus.
- Critical to support student achievement are additional facilities. An initial **Student Success Center** will include a combination of flexible use spaces for classroom, learning commons or tutoring space, advising or counseling space, arts presentation space, informal gathering spaces, maker spaces and student involvement spaces (e.g., multi-cultural/social/outdoor programs). It will also provide offices for student success staff, including study abroad, service learning, sports and clubs, career counseling and internship support.
- In line with student focus groups and community conversations, OSU-Cascades anticipates the need for a **student recreation facility** on campus. The recreation facility will include health and wellness spaces, courts, outdoor fields, an aquatic center and fitness amenities.