PART 1

A LIVING LABORATORY FOR SUSTAINABILITY
A LIVING LABORATORY FOR
AT THE
STUDENT
EXPERIENCE
CENTER
Sustainability has been a core focus of the Student Experience Center (SEC) since the building’s inception.

The OSU Sustainability Office, the Student Sustainability Initiative, Opsis Architecture, and Andersen Construction Company have integrated sustainability values through building features and the overall design of the building as a gathering place for students and the OSU community. The space is designed to be open and inclusive, creating an environment for innovative collaborations to emerge.

Student leaders joined the SEC design team in August 2012 for a Sustainability Workshop to develop priorities for the building. They identified using the building as a teaching tool, cultivating a demonstration garden, visibly reclaiming rainwater, using local building materials, and powering majority of the building with solar energy as key goals.
The Student Sustainability Initiative committed Student Fee funds to finance infrastructure investments to model sustainable building practices and design to achieve LEED Gold certification.

The SEC design committee has worked for years to create an atmosphere of social, economic, and environmental sustainability in the SEC by developing the building as a living laboratory. As SEC employees and building users, it’s our responsibility to uphold this vision, leading by example through our daily habits and programming.
What does a living laboratory for sustainability look like?

“On a sustainable campus, the built environment, operational systems, research, scholarship, and education are linked as a “living laboratory” for sustainability. Users (students, faculty, and staff) have access to research, teaching, and learning opportunities on connections between environmental, social, and economic issues.”

- ISCN-GULF Sustainable Campus Charter
The SEC as a living lab

The SEC is a hands-on learning environment and a model for a sustainable office environment. Building and site features include a bike fix it stand, an electric vehicle charging station, bike racks, edible landscape, reclaimed lumber used for furniture, rooftop solar panels, a stormwater treatment system, efficient room temperature controls, natural lighting, and efficient water features.

Water, electric energy, natural gas, and steam energy heat in the building are being tracked in real-time, and students have access to the data through an interactive Sustainability Screen on the first floor. Check out the screen regularly to see how we’re doing and challenge your office suite or floor to reduce your impact!
Small efforts add up. Keep these quick tips in mind for a more sustainable workplace. DOT is all about identifying behaviors and lifestyle changes that are doable steps to align your actions with your values. It’s about identifying how you can contribute to a more just, sustainable, or livable community.

You can make a difference every day.
Go reusable
Using a reusable water bottle and coffee cup not only reduces campus waste, but also saves you money!

Put computers to sleep
Set computers to sleep if they will be used again soon.

Take the stairs
If you can, skip the elevator to save some energy!

Take advantage of the daylight
Turn off lights during the daylight hours to save energy.

Use that thermostat!
Between 65–68°F is the most energy efficient temperature.

Unplug it!
Unplug appliances not being used around the office, like microwaves and TV screens.

Compost!
Reduce waste by placing compostables in the blue bin.

Print on both sides
Save trees, water, and office resources by defaulting settings to double-sided printing.
PART 2
SUSTAINABLE BUILDING FEATURES
From the start, the SEC was intended to be a sustainable LEED qualified building. To meet the needs and goals of the students, staff, and faculty, the architecture team went to great lengths so that the building would be sustainable and useable. This section highlights these beautiful and inspiring features.
Reclaimed Lumber

Heritage elm, walnut, and red oak trees were salvaged from the campus and were dried in a solar kiln and milled into custom shapes. The salvaged campus trees were diverted from the landfill or chipping, and have instead been repurposed for use in the building. The woodwork was designed, fabricated, and installed by Oregon teams, connecting us to the natural history of the campus.

Red oak was salvaged from the tree that fell in the MU Quad in 2012, the walnut was salvaged from the site of the Centro Cultural César Chávez, and the elm was harvested from the current site of the SEC. The information desk and conference tables are made from the red oak, there are coffee tables throughout the building and benches as well as the exterior door pulls made from the walnut, and the Craft Center Reception desk and meditation room walls and sunshades made from the elm.

Look for this symbol on reclaimed wood throughout the building.
Edible Garden

Grab a snack on your way to the office! The southeast corner of the SEC features a demonstration garden showcasing edible urban landscaping using permaculture design principals. The garden was designed by students in an OSU permaculture class and installed by volunteers. Edibles include coast strawberries, lavender, rosemary, sage, thyme, sunshine blueberry, fruit trees, and more. This garden demonstrates that food can be grown in beautiful, accessible ways that complement the campus aesthetic.
Indoor Water Savings

Did you know that all water is recycled? We drink the same water that the dinosaurs did. It takes large amounts of energy to produce and transport clean water and to process waste water, so conservation is important even in rainy areas like the Pacific Northwest. The Student Experience Center is designed to use 36% less indoor water compared to a conventional building. At an estimated 187,000 gallons per year, the water savings from the SEC could provide enough water for 10,872 showers or 9,350 pints of beer.

Indoor Air Quality

Take a breath of fresh air! A healthy work environment is low in toxic chemicals and allows proper ventilation for air flow. Paints, sealants and carpet with low volatile organic compounds (low-VOC) were selected to reduce the toxins being introduced into the building. The air ventilation system brings in high levels of outdoor air to dilute the level of pollutants introduced by the occupants and their belongings.
Radiant Ceiling System

The white ceiling clouds condition the building through efficient radiant heating and cooling. Radiant heating is the effect you feel when you experience the warmth of a hot stovetop from several feet away without blowing air. Hot or cold water circulates thru concealed copper tubing on the back of the panels, providing heating and cooling with minimal air ventilation requirements. Radiant ceilings work through direct energy transfer between the metal panels and the room surfaces.

Active Chilled Beams

Active chilled beams use chilled water in tubes to move cooling energy around the building, a more efficient way to transport cooling than air. Unconditioned air arrives separately in ducts, passes over the tubes directly overhead, and transfers the cooling to the space below exactly where it is needed. In the Student Experience Center, the active chilled beams used in the lobby and at the open stairs contribute to greater energy savings, lower noise levels, better thermal comfort and higher air quality.
Comprehensive Transportation Approach

Commuting by car has a tremendous environmental impact, comprising 7% of OSU's annual greenhouse gas emissions. The high population density of a college campus is a great fit for alternative transportation. OSU takes a comprehensive approach for alternative transportation that addresses cycling, walking, public transit and car sharing. At the Student Experience Center, an electric vehicle charging station and 110 bike racks were added to promote alternative transportation methods.

Above
A Bicycle Fix-It station located at the north entrance of the building. The fix-it station is equipped with various tools and an air pump so your bike is always ready to go.
Celebrating and Cleaning Stormwater

Stormwater is not clean water! Stormwater runoff often carries pollutants such as sediment, phosphorous, microorganisms, and other toxic chemicals that seriously harm our waters. The building has an underground storm water treatment system that exceeds Corvallis’ water treatment standards.
HOW IT WORKS

The curving steel and glass canopy outside the Student Experience Center directs water to four woven wire mesh downspouts and screens where the water trickles down in plain view and is captured in the sculpted concrete basin. The water is then directed to an onsite treatment structure for cleansing before moving on to the city system.
Renewable Energy

OSU is committed to being a carbon neutral institution by 2025. As one small step in that direction, the SEC rooftop has a 48 kW photovoltaic array that provides 5% of the electricity used in the building, saving an average of $4,277 in energy costs each year. The solar array reduces the SEC’s carbon footprint by 35 tons of CO2 each year, the equivalent of:

- **3,600** gallons of gasoline fueling cars
- **996** trees cleansing the air for an entire year
- **5.6** average homes powered for one year
- **426** light bulbs powered for one year

*Left: An aerial view of the Student Experience Center. The solar panels, (pictured in detail on the left can be seen on top of the building in direct sunlight.*
“Humankind has not woven the web of life. We are but one thread within it. Whatever we do to the web, we do to ourselves. All things are bound together. All things connect.”

-Chief Si'ahl
CREDITS

Photography and Design
The MU Design Studio 204 and James Thomas contributed many of the beautiful photos throughout this book. The aerial photo on page 29 was contributed by Andersen Construction. The design and remaining photos in this book can be accredited to Alyssa Johnson and Nicole Anderson with the Student Sustainability Initiative.

Text and Descriptions
Text by the Student Sustainability Initiative staff & Opsis Architecture, specifically John Shorb.