SUSTAINABLE DESIGN CASE STUDY

50% of existing building reused

95% of project waste diverted from landfill

34% recycled content material used

University Village NW Building Expansion

Seattle, Washington

Completion:	June 2008
Project size:	17,500 gsf
Owner:	University Village, LP
Architecture:	GGLO
Contractor:	Lease Crutcher Lewis
Civil Engineer:	KPFF
Structural:	Magnusson Klemencic Associates
Commissioning:	Glumac
Electrical Engineer:	Sparling
Electrical Contractor:	Clinton Electrical
Mechanical: *(Design-Build)*	Merit Mechanical

LEED® CERTIFIED

for Core and Shell

certification awarded July 2009

LEED Points:	**27**
Sustainable Sites:	5 *of* 15
Water Efficiency	0 *of* 5
Energy & Atmosphere:	5 *of* 14
Materials & Resources:	8 *of* 11
Indoor Environmental Quality:	6 *of* 12
Innovation in Design:	3 *of* 5

GGLO DESIGN

SUSTAINABLE DESIGN CASE STUDY | University Village NW Building Expansion

LEED® CREDIT HIGHLIGHTS

Sustainable Sites	
SS 2	Dense urban location close to community services
SS 7.2	Reflective roof surface to reduce urban heat island effect
SS 9	Tenant Design and Construction Guidelines created to influence this and future development
Energy & Atmosphere	
EA 1.1	Improved wall insulation, limited glazing area, solar shading with sunscreens, and efficient HVAC systems
EA 5.2	Electrical submetering provides real-time feedback to the tenants and building owners
Materials & Resources	
MR 1.2	50% of existing building reused
MR 2.2	95% of construction waste, 343 tons, diverted from landfill
MR 4.2	34% of material content was recycled
MR 5.2	14% of materials regionally sourced and manufactured
Indoor Environmental Quality	
EQ 3	Construction air quality management plan protected absorptive materials and systems from contamination
EQ 4.1 4.2 4.3	Low VOC adhesives, sealant, and paints; urea-formaldehyde free composite wood

Background

The project is located in the University Village lifestyle retail center north of downtown Seattle. University Village is comprised of 13 retail buildings on a 23.5 acre site, with services ranging from general to special-purpose retail, restaurants, childcare, and parking. The project is a redevelopment and second story addition to an existing 1950's-era building, consisting of core and shell construction for future tenant improvements.

A Sustainable Design Catalyst

The project is the first at University Village to pursue LEED certification, and it is intended to act as a prototype and catalyst for sustainable design in future development at the retail center.

Better Site & Energy

- University Village is pedestrian and bicycle-friendly, and has good access to amenities and public transit. The addition of a second story to an existing building increased retail square footage without increasing the building footprint
- Reductions in energy demand were achieved with an efficient building envelope and a high-efficiency HVAC system.
- Envelope improvements exceeding energy code requirements were made in accordance with the City of Seattle's Advanced Buildings Core Performance Guide.
- Glazing on the south-facing facade was maximized to provide daylight, and sunscreens were employed for shading.
- Glazing was minimized on other facades to reduce summer heat gain. Heat gain was further reduced with reflective roof coatings, which also reduce the "urban heat island" effect.
- Electrical submetering systems provide real-time monitoring of electricity consumption, and enable comparisons of actual use to projected use and regional averages

Better Materials & Indoor Environment

- Recycled content materials comprise 34% of the materials by cost.
- More than 10% of materials were manufactured and harvested locally, and more than 60% of all wood used on the project was FSC certified.
- 50% of the existing building was reused and more than 95% of the construction and demolition waste was recycled or salvaged
- To improve building interior environment, a construction indoor air quality plan was implemented, and low-emitting materials were specified. Construction dust was carefully controlled, and all duct work was protected from construction debris. The HVAC system was designed for maximum flexibility; CO2 sensors provide feedback and air flow is optimized according to occupancy, so that adequate fresh air is always supplied.