Milgard Hall Building

OVERCAST INNOVATIONS

Tacoma, WA

The three-story, 55,000 square-foot Milgard Hall will house elements of the Milgard School of Business, laboratory spaces to support the School of Engineering and Technology, expanded space for the Global Innovation and Design Lab, a High Impact Practices teaching space and general classrooms. The new mass-timber Milgard Hall, an interdisciplinary STEM and business building at the University of Washington Tacoma, responds to the need for STEM programming in the South Sound and supports innovation and design thinking.

VALUE PROPOSITION/BENEFITS

Enabling Efficiencies Through Standardization

Asset Standardization

Given the complexity of new product development, Overcast worked closely with MEFPT engineers to realign equipment layouts to create an efficient integrated ceiling system. In parallel, Overcast Engineering developed product families to maximize engineering reuse (+85%) and accommodate the various space and use case types. The standardization of product families enabled engineering, manufacturing, and field installation efficiencies and quality advances via common systems/ device interfaces and well documented assembly and install instructions.

PROJECT DETAILS

Location
Tacoma, WA

Project Dates
01/2021 – 12/2022

Project Site
# of floors: **4**
SF: **55,000**
Contract Value Total: **$404,337**
# of Clouds: **167**

Space Applications
Open Office / Conference Rooms / Huddle Rooms / Private Offices

Delivery Method
Design Build, Integrated Delivery

PROJECT TEAM

Owner's Representative
University of Washinton, Tacoma

Architect
Architecture Research Office (ARO)

General Contractor
Anderson Construction

Mechanical Contractor
Auburn Mechanical

Electrical Contractor
McKinstry , Co

Engineer of Record
PAE Engineers

CLOUD SYSTEMS INTEGRATED & INSTALLED

- HVAC Equipment
- Lighting & Lighting Controls
- Fire Sprinkler Daylighting & Occupancy Sensors
- Life Safety
- Temperature Controls
- AV Speakers
- WiFi Access Points

Schedule & Labor Efficiencies

This project leveraged a singular crew for device installation as opposed to utilizing the traditional approach, which would require a separate crew for all five trades in the ceiling space. This provided significant productivity increases and schedule savings. Additional schedule savings were achieved by downstream trades associated with the installation of the Cloud devices and Spline routes. This installation consolidation meant that the equivalent of ~80 devices were installed each day, leading to ~18 days saved on the schedule.

COST SAVINGS ANALYSIS

	TRADITIONAL Approach & Cost			Utilizing Overcast Cloud & Spline Solution			
SCOPE OF WORK ITEMS	**QUANTITY**	**$ / SF**	**TOTAL**	**QUANTITY**	**$ / SF**	**TOTAL**	**DELTA**
GENERAL CONTRACTOR SCOPE							
Cloud Panel Installation				167		$31,730	$31,730
Acoustic Ceiling Panel Costs	28,850	5.10	$147,135		3.60		($147,135)
MECHANICAL SCOPE							
HVAC Mechanical Systems (Materials & Labor)	28,850	1.85	$53,373				($53,373)
Fire Suppression / Fire Sprinkler	28,850	4.26	$122,901	28,850	3.20	$92,320	($30,581)
ELECTRICAL SCOPE							
Lighting Fixtures (Materials & Labor)	28,850	19.85	$572,673	28,850	5.35	$154,348	($418,325)
Fire Alarm Horns & Strobes (Materials & Labor)	28,850	6.05	$165,022	28,850	4.15	$119,728	($45,295)
Audio / Visual Devices (Materials & Labor)	28,850	7.15	$195,315	28,850	5.83	$168,196	($27,119)
IT (WAP) Devices (Materials & Labor)	28,850	5.15	$134,153	28,850	3.65	$105,303	($28,850)
OTHER RELATED SCOPE OF WORK ITEMS							
Design & Field Coordination							TBD
Subcontractor Startup & Commissioning							TBD
Jobsite Equipment Staging & Logistics							TBD
OVERCAST CLOUD & SPLINE SCOPE ITEMS							
Cloud Appliances				167		$522,376	($522,376)
TOTAL COST			$1,390,570			$1,193,999	($196,571)
TOTAL COST SAVINGS S/F							$6.81
% TOTAL DIRECT COST SAVINGS							14.1%

In-Direct Project Cost Savings			
General Conditions		8%	($15,726)
Bonds and Insurance		2%	($3,931)
Contractor's Fee		3%	($5,897)
Design Contingency		5%	($9,829)
Construction Contingency		3%	($5,897)
SUB-TOTAL			($41,280)
PROJECT TOTAL DIRECT & INDIRECT COST SAVINGS			($237,851)
TOTAL COST SAVINGS / SF TOTAL			$8.24