



Exterior sunshades reduce heat gain, diffuse daylight, and unify the facade (left and right).

Photos: Maylone Photography



## Dynamic, Progressive, and Green

*Moseley Architects' engineering and computing center at Old Dominion University reflects technological savvy, exuberant ambition, and environmental sensitivity.*

Located near the heart of campus, the Engineering and Computational Sciences Building, like the Convocation Center, is a key piece of ODU's strategic growth puzzle. It consolidates previously dispersed programs, housing them in a facility that manages at once to contribute to the established campus fabric while also expressing the university's values and progressive ambition.

The building, by Moseley Architects' Virginia Beach office, consists of two wings. The short leg of its L-shaped layout faces Elkhorn Avenue (salted for conversion from vehicular traffic to pedestrian greenway), while its longer wing faces south, defining the Sciences Quadrangle and reinforcing a major cross-campus pedestrian connection. An entry on the corner overlooks future student housing, currently under construction across the street.

Inside the two-story lobby, metal panels complement gray terrazzo floors, stainless steel-and-glass guardrails, and an articulated ceiling of suspended metallic panels and drywall. Finishes and materials, along with a large video display wall promoting student and faculty research, reinforce the impression that technologically-savvy scholarship happens on site. Immediately adjacent, in "the CAVE," students and faculty conduct visualizations, modeling, and simulations using the latest virtual reality tools. These sessions can be simultaneously projected for larger audiences in the adjacent 100-seat auditorium, equipped with rear-project screens and artfully-arranged acoustic paneling. The auditorium utilizes geothermal heating and cooling – a pilot application for the university.

Cladding the south- and west-facing facades, exterior sunshades reveal another key initiative: to employ the U.S. Green

Building Council's *Green Building Rating System*, also known as LEED (Leadership in Energy and Environmental Design). The project went on to earn LEED certification and recently won a Merit Award from the James River Green Building Council. The sunshades reduce heat gain, energy usage, and glare. Combined with interior light shelves, they simultaneously increase the amount of ambient interior daylight. They also perform a key aesthetic function, applied individually on lower floors to express the individual nature of private offices. Like a cornice, the sunshades also link a row of top-story windows, unifying building elements and bays into a cohesive whole and signifying the more communal nature of the open-office OCCS and Data Center.

By introducing metal panels into the standard campus material palette, the architects were better able to integrate the

aluminum sunshades, underscoring the building's technology-invested program and the campus's growth and progress.

The building does, after all, site directly adjacent to a research-stage prototype of the nation's first magnetic levitation rail line, which hopes to elegantly flip the German and Japanese paradigm of "smart track/dumb car" and dramatically reduce track-laying and revolutionize mass rail transit. In its latest iteration, the project's team structure relies more directly on input from ODU's scientific and engineering community.

The resulting facility neatly expresses the technologically progressive nature of its occupants, faithfully fulfills its traditional campus planning duties, sets a responsible example with regard to environmental sustainability, and ultimately sets an optimistic tone for the future of this young, dynamic, and ambitious campus community.

—Rab McClure, AIA



Finishes in the lobby, along with video display monitors, convey the technological savvy of building occupants.

Photos: Maylone Photography



Interior light shelves and exterior sunshade louvers provide diffuse natural light in open-office spaces (above) and individual offices (right).

**Project:** Engineering & Computational Sciences Building, Norfolk

**Architect:** Moseley Architects, Virginia Beach (George Nasis, AIA, principal-in-charge; Matthew Shirk, AIA, design architect; Bryna Dunn, Assoc. AIA, sustainable design planner; Jeff Hyder, AIA, Tim Pruitt, Patrick Ramirez, Bill Zawistowski, Kenney Payne, AIA, design team; Tim Meinhardt, Billie Harvey, Toi Reeves, construction management and administrative team)

**Consultants:** Stroud Pence & Associates (structural); LandMark Design Group (civil); PACE Collaborative (mechanical/electrical)

**Contractor:** Hathaway-Duke Construction Co.

**Owner:** Old Dominion University

**RESOURCES**

**CARPET:** Interface Flooring Systems (see ad, p. 36);

**PRECAST CONCRETE:** Architectural Concrete Products, Inc. (see ad, p. 2)

Other Vendors: **VINYL STAIR TREADS:** Forbo;

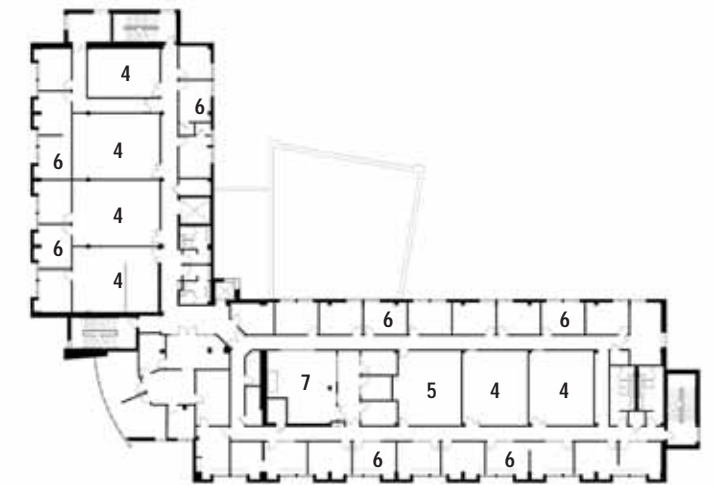
**CURTAINWALL & ALUMINUM ENTRANCES:** Kawneer Corp.;

**WALLS-ALUMINUM COMPOSITE:** Precision Walls;

**PAINT:** Sherwin-Williams;

**GEOTHERMAL HEAT PUMP:** Trane

- 1 Lobby
- 2 Auditorium
- 3 Cave
- 4 Research Lab
- 5 Conference Room
- 6 Offices
- 7 Data Center



Third Floor Plan



First Floor Plan