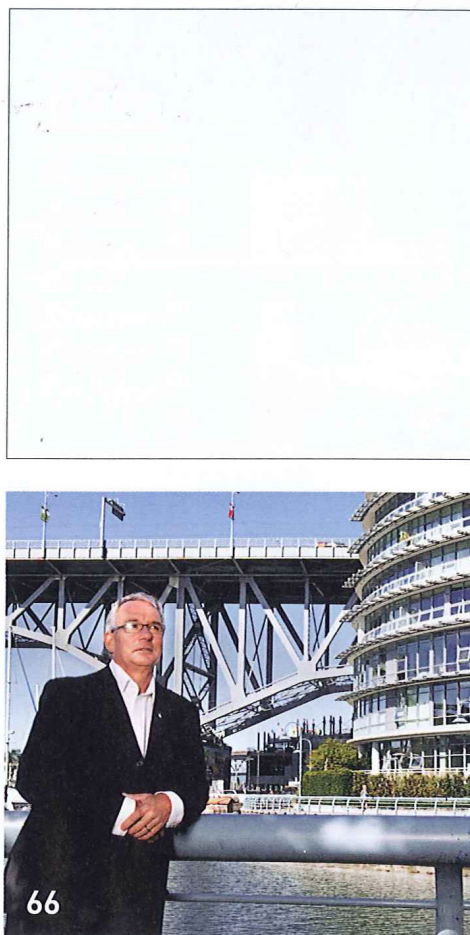


ECO- STRUCTURE



hanley wood

THE 2010 EVERGREEN AWARDS
NEW HEIGHTS



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The 2010 Evergreen Awards

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The Atrium School in Watertown, Mass., designed by Maryann Thompson Architects.

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Peter Busby of Busby Perkins+Will.

On the Cover: Digital Media City Landmark Tower, the 2010 Evergreen Awards On the Boards winner, designed by Skidmore, Owings & Merrill (SOM). Rendering by SOM.

evergreen

THE PURSUIT OF EXCELLENCE

In the ever-growing realm of green building, what constitutes a noteworthy project? We offer one set of examples with the winners of the 2010 Evergreen Awards, ECO-STRUCTURE’s third-annual competition recognizing innovation in environmental performance and design. Showcased on the pages that follow, this year’s winners, plus one honorable mention, span four categories—Ecommercial, Greenhouse, On the Boards (which recognizes unbuilt work), and Perspective (which spotlights an industry champion). The winners share a core attribute: They make projects work both technically and aesthetically, marrying admirable environmental performance that pushes beyond baseline measurements with innovative and thoughtful architecture. These projects (or, in the case of our Perspective winner, his portfolio and industry leadership) are further support in striking down the argument that good design may need to be sacrificed for green design, or vice versa.

As our jury discussed in mulling over this year’s entries, there should no longer be a viable excuse for not combining sustainability and outstanding aesthetics in any space. **The industry and its clients deserve—and should demand—excellence across the board.**

Charged with filtering this year’s winners out of a sizeable entry field were Marc J. Cohen, director of sustainable design at MVE Institutional in Irvine, Calif.; Narada Golden, senior sustainability manager at YRG in Boulder, Colo.; Daniel J. Kaplan, senior partner at FXFowle Architects in New York; Patrick Thibaudeau, vice president at HGA in Minneapolis; and William J. Worthen, vice president at Simon & Associates in San Francisco and director, resource architect for sustainability for the American Institute of Architects.

The 2010 winners will be recognized at a lunch during Greenbuild International Conference and Expo. For more information on the awards and the event, visit eco-structure.com ■

ECOMMERCIAL WINNER
SECOND LIFE

Text David Sokol
Photos Anton Grassl/Esto

Project: Atrium School
Location: Watertown, Mass.

GREEN TEAM

Architect, interior designer, lighting designer: Maryann Thompson Architects, maryannthompson.com
Client/owner: Atrium School, atrium.org
MEP engineer: Wozny/Barbar & Associates, wbaengineers.com
Structural engineer: Richmond So Engineers, richmondso.com
Civil engineer: Gala Simon Associates, gsadesign.com
Construction manager, general contractor: Bowdoin Construction Corp., bowdoinconstruction.com
Landscape architect: Landworks Studio, landworksstudio.com
Green engineer: The Green Engineer, greenengineer.com

MATERIALS AND SOURCES

Acoustical system, ceiling: Decoustics, decoustics.ca
Flooring: Forbo Flooring Systems, forboflooringna.com
Millwork: Environ Biocomposites, environbiocomposites.com
HVAC: FabricAir, fabricair.com
Lighting: B-K Lighting, bklighting.com; Lightolier by Philips, lightolier.com; LSI Industries, lsi-industries.com; Tekal Illumination, teka-illumination.com
Metal: Von Duprin, vonduprin.com
Paints and finishes: The Sherwin-Williams Co., sherwin-williams.com
Plumbing and water systems: Excel Dryer, exceldryer.com; Haws Corp., hawesco.com; Toto USA, totousa.com
Signage: Montana Lettering, signlettersource.com
Windows and doors: EFCO Corp., efcocorp.com; Kamco Supply Corp., kamco.com; Modulex Interior Products, www.modulexinc.com; Schweiss Doors, bifold.com

The whole-child education mission of the Atrium School is not just the stuff of blackboards and gym class. In addition to academic and cognitive growth, the 120-student, K–6 school in Watertown, Mass., emphasizes social development, dialogue across age groups, and environmental awareness. Atrium’s methods for achieving progressive results include weekly school-wide assemblies and common curricula. In all, its approach could have been adapted from the Quaker playbook.

While Atrium’s current pedagogy may coincidentally reference historic educational precedents, its building concretely merges past and present. Since the 2006–2007 academic year, the institution has occupied a 20,000-square-foot warehouse that Maryann Thompson Architects remade as a contemporary learning space and a lesson in sustainable design. The Cambridge, Mass.–based firm accomplished this feat in spite of a lean budget of \$110 per square foot.

The project required a vow of efficiency: In August 2005, the Watertown municipality claimed Atrium’s old building in eminent domain, and gave the school 13 months to vacate. School officials promptly leased a former Wordsworth Books storage facility as a new site. Still, restrictions of time and money dissuaded several of Maryann Thompson’s colleagues from competing for the job, she recalls, adding that initial glimpses of the 1920s-era warehouse caused shudders: “That first walkthrough was a little intimidating. The building has an amazing truss system, but it was painted all black and there were no windows.”

It may have been scary, but it also was sound. The structure, brick on concrete block, was in excellent condition, and the roof membrane required only minimal patching. Thompson’s team removed the “flimsy stage-set partitions” that had divided the interior when the building was a warehouse, and inserted skylights and double-glazed windows—with 85-percent recycled-content aluminum frames—where there would be eight classrooms, five administrative offices, and communal spaces.

The firm then set about transforming the interior from black to white. “We sprayed the whole interior in low-VOC white paint. The trusses are beautiful, like a spiderweb, and [the paint] allows the children to see how the structural systems work,” Thompson says. Acknowledging that an 18-foot-tall warehouse filled with kids could be noisy, the design team installed white linen-covered acoustical tiles liberally.

Minimizing intervention became the rule of thumb. Waterless urinals and low-flow toilets, which are largely responsible for a yearly water consumption of roughly 5.2 gallons per square foot—a figure that is on the low end of the water use range of high-performance schools in the High Performance Buildings Database—were added without moving plumbing lines. Similarly, Thompson “wove the school around” the existing electrical infrastructure. Ductwork was inserted inconspicuously—made of a washable white cloth, it expands and contracts according to use.

One main change, however, dealt with perception. The warehouse originally faced a light-industrial section of Watertown, while its rear elevation and expansive parking lot opened to a residential area. Thompson achieved the zoning change required to flip those faces. “Setting the school’s entrance toward what would seem to be the rear of the building was a deliberate choice to engage the kids in their natural world as their first interaction with the school,” says Jim Newman, chair of the Atrium School’s Board of Trustees. Now, students start their day by passing through a landscape of undulating landforms designed by Michael Blier of Boston-based landscape firm Landworks Studio. This playground is a community amenity that is open to residents. It also conceals basins beneath the mounds that retain stormwater to reduce site runoff and refill the aquifer. The design team also reinstituted grass, trees, and natural drainage on site, decreasing the impervious area from 89 percent to 51 percent.

Thompson designed diagonal wood screens that cover portions of the south-facing brick masonry. These expanses of western red cedar soften the former warehouse’s sharp edges and, Thompson says, “they provide Atrium with an iconographic image.” The move is a gesture toward the residential neighborhood and an exercise in branding. One portion rises above the roofline to form a light well for the multipurpose space below—which acts as a gymnasium, assembly area, theater, and afterschool-program venue—and it expedites natural ventilation in that space by the stack effect. The light well, other skylights, and windows work in tandem with interior luminaires that are activated by motion and daylight sensors. As a result, the school consumes only 14.24 kBtu per square foot. Factoring in a high-intensity boiler and other mechanical systems, total energy consumption is 38.51 kBtu per square foot, or 25 percent less than comparable schools in the High Performance Buildings Database.

The south-facing multipurpose space exemplifies Thompson’s diverse sustainability strategy. In addition to using daylighting and natural ventilation, the building has concrete floors that provide excellent thermal mass; perimeter casework that was fabricated from recycled wheatboard; and a dramatic garage door that emphasizes students’ connections to the outdoors.

While the multipurpose space bookends the building’s southern end, a library forms the northern terminus. Between these two rooms, Thompson threaded classrooms, a faculty lounge, and administrative offices around the existing infrastructure to create an undulating double-loaded corridor that promotes a sense of discovery. More generally, Thompson calls the Atrium School a personal turning point. “Atrium showed me that you could make an adaptive-reuse project beautiful and emotionally interesting,” she says. “Now I think of adaptive reuse as almost a holy thing. It is the most profound form of recycling.” ■

David Sokol writes about architecture from Beacon, N.Y. For all Evergreen Awards coverage, visit eco-structure.com.

ATRIUM SCHOOL
ECOMMERCIAL WINNER



Now: The new entrance to the Atrium School



Before: The streetside warehouse entrance



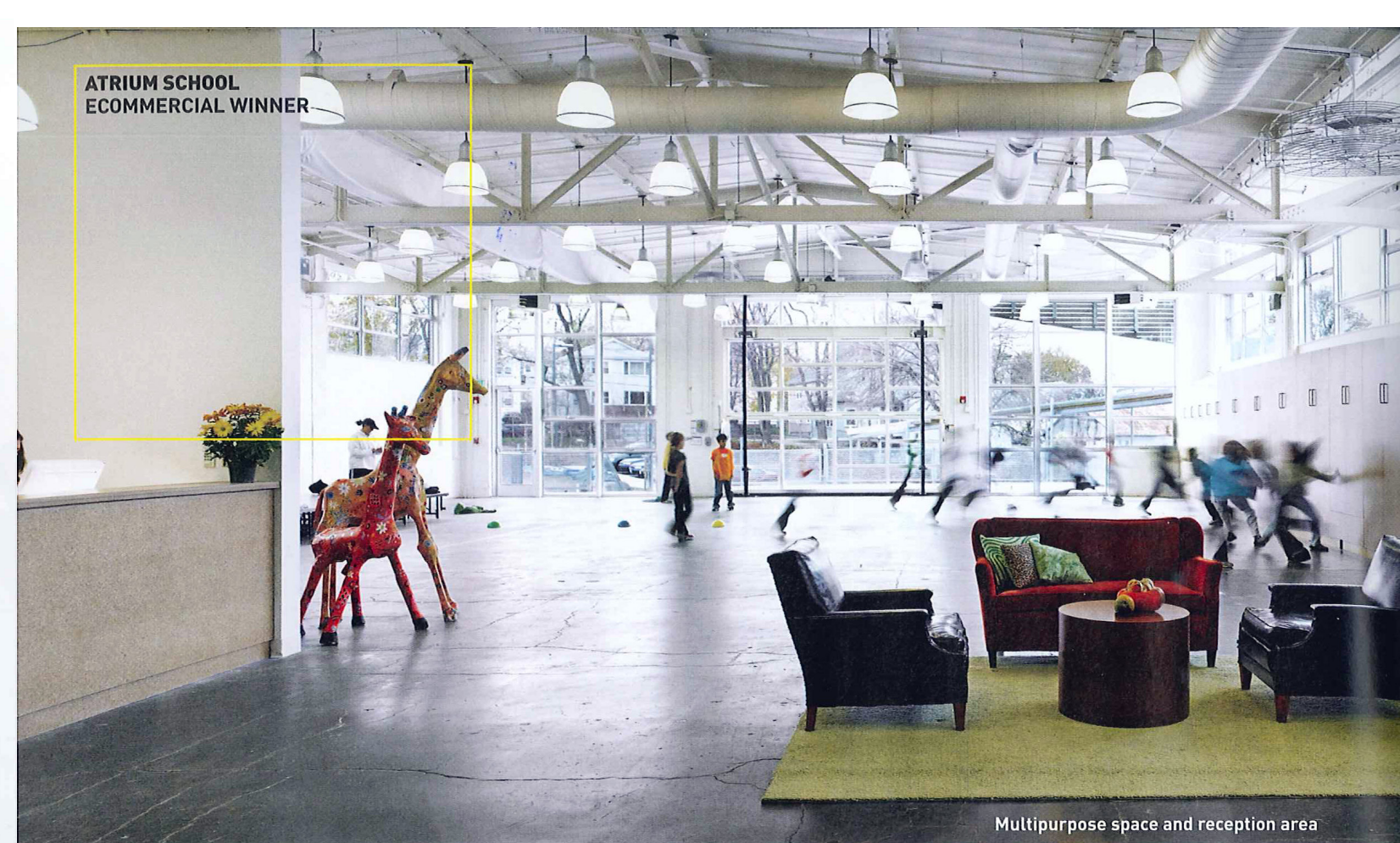
Before: The warehouse rear view



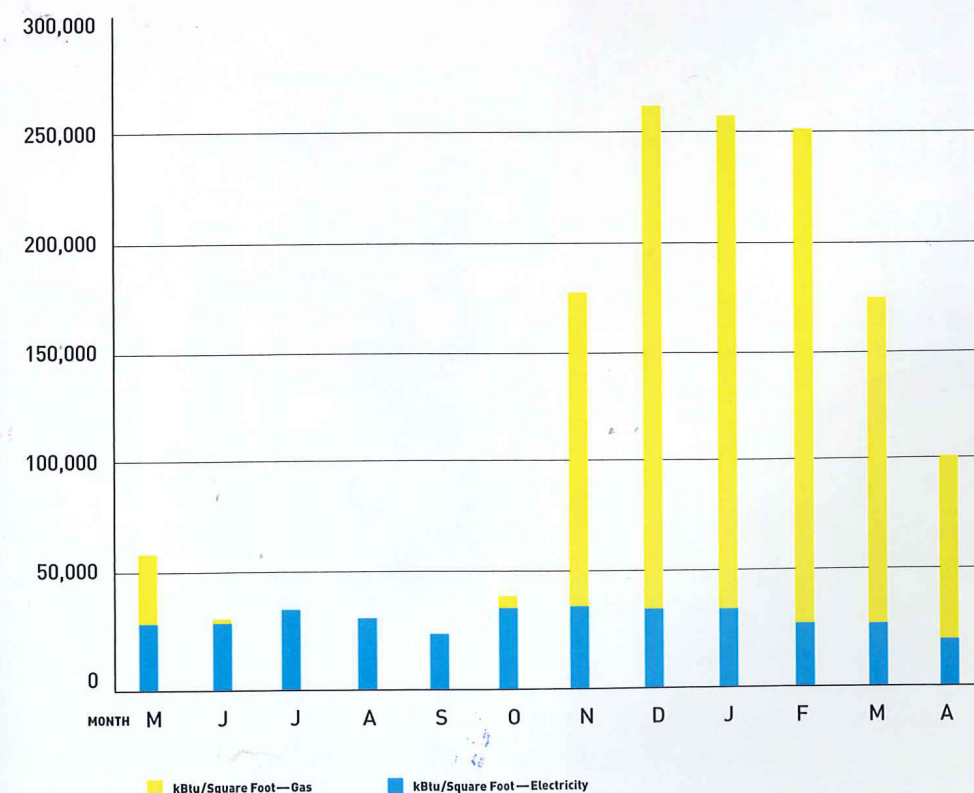
Before: The warehouse side view



The entry landscape, hiding a stormwater storage basin



kBtu Per Month—Gas Plus Electricity





A classroom brightened up
with a new skylight and white paint