



CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT



Stata Center – MIT

Architect: Gehry Partners, LLP

Local Associate Architect: CANNON Design

Structural Engineers: John A. Martin and Associates, Inc.

MEP Engineers: R.G. Vanderweil Engineers, Inc.

Developer: Massachusetts Institute of Technology

General Contractor: Skanska USA Building, Inc.

Geotechnical Engineers: Haley & Aldrich, Inc.

Area: 713,000 square feet

Total Cost: approximately \$300 million

LEED Rating: Did not pursue LEED certification

General Information

The Ray and Maria Stata Center replaces the historic Building 20 site in the MIT campus. The building houses the Artificial Intelligence Laboratory, the Laboratory for Computer Science, the Laboratory for Information Decision Systems, and the Department of Linguistics and Philosophy. Despite what its odd appearance may suggest, architect Frank O. Gehry designed this building from the inside out. The building has been planned so as to foster interactions not just within a department but also between departments, under the assumption that “scientists are not just cogs in a research machine, but highly creative – and highly social – thinkers”. The center invites people to mix in every possible way. In addition to numerous common areas and a central indoor “street” which connects the departments, the Stata Center boasts a café, a pub, a fitness center, a dance studio, and an amphitheater. MIT hopes that this new building – in stark contrast to the many previous uniform rectangular box-shaped labs – will foster innovation on a far greater scale than conventional buildings.

Sustainable Sites

- Light pollution reduction. Very few outdoor fixtures produce upward light
- Proximity to subway and bus routes
- Innovative storm water retention/management system that employs biofiltration, recirculating stored water with a solar-powered pump. Stored water used for irrigation and flushing toilets. Filters water from the roof and surrounding area before any water not reused on site enters the storm water drainage pipes.
- Stata has the capability to reuse reject water from adjacent buildings for flushing toilets.
- Demolished an above grade parking structure and replaced it with a park. New parking is all below grade under the building
- Rooftop terraces with landscaping for shading and stormwater retention
- White reflective roof and vegetated surfaces reduce heat island effect

Water Efficiency

- Irrigation system connected to central weather station for minimization of watering. The system uses weather data to control water flow. The central system can identify leaks and cut off water flow

Energy & Atmosphere

- Minimized the use of refrigerants, and eliminated the use of Halon, a fire retardant, in the building

- Fully commissioned the building in accordance with MIT standards for all new projects including commissioning planning by Facilities' Systems Engineering Group, use of an independent commissioning agent, and improved monitoring systems for follow-up after occupancy.

Materials & Resources

- Management plan by contractor to recycle construction waste. The target was to achieve a recycling rate of greater than 75%
- Demolition of an above-ground garage achieved a 100% recycling rate. The demolition of Building 20 (the main building that occupied the ground on which Stata now stands) also achieved a very high level of recycling
- Select timbers recycled from Building 20 were used as flooring

Indoor Environmental Quality

- Monitoring and controlling of carbon monoxide levels in the garage
- Operable windows for natural ventilation and individual control
- Abundant use of daylight in all interior spaces. Solar control through motorized blinds
- Extensive use of displacement ventilation utilizing a raised floor system, which results in an upward vertical airflow that improves indoor air quality.

The Bottom Line

It is difficult to separate the costs associated with the Stata Center's unique appearance from those associated with its many environmentally friendly attributes. The total cost of the building was high, but its benefits are many. The thermal envelope is state-of-the-art, saving money on both heating and cooling loads over an average and comparably sized building. Costs associated with water usage are reduced through its innovative system of stormwater recycling and reuse. Nor is it a simple matter to quantify the potential benefits of the building's novel design, which hopes to promote interactions between scientists and engineers of many different fields and thus foster cross-disciplinary advances in a wide spectrum of sciences and technologies.

Contacts

Gehry Partners, LLP

12541 Beatrice St
Los Angeles, CA 90066
Tel: 301-482-3000
Fax: 310-482-3006
<http://www.gehrytechnologies.com>

John A. Martin and Associates, Inc.

1212 S. Flower Street
Los Angeles, CA 90015
Tel: 213-483-6490
Fax: 213-483-3084
<http://www.johnmartin.com>
info@johnmartin.com

CANNON Design

One Center Plaza
Boston, Massachusetts 02108
Tel: 617-742-5440
Fax: 617-723-8832
<http://www.cannondesign.com>

Haley & Aldrich, Inc

465 Medford Street
Suite 2200
Boston MA 02129-1400
Tel: 617-886-7400
Fax: 617-886-7600
<http://www.haleyaldrich.com>

R.G. Vanderweil Engineers, Inc

274 Summer Street
Boston, MA 02210
Tel: 617.423.7423
Fax: 617.423.7401
info@vanderweil.com
<http://www.vanderweil.com/>

MIT Department of Facilities

David Silverman
77 Massachusetts Ave.
Cambridge, MA 02139
Tel: 617-258-7634
Fax: 617-258-5900
dsilverm@mit.edu