



UNIVERSITY SCIENCES BUILDING

NORTHEAST USA

KATHRYN GROMOWSKI | STRUCTURAL OPTION

GENERAL INFORMATION

Function:	Laboratory/Classroom
Size:	138,000 SF
Height:	94 feet
Construction:	Aug. 2009-Sept. 2011
Construction Cost:	\$50 Million
Delivery:	CM at Risk

ARCHITECTURE

- ❖ Classrooms on first floor, labs/offices above
- ❖ Major focal point—5-story atrium
 - ◆ 4-story Biowall, the first of its kind at a US university
- ❖ Stone-aluminum honeycomb panels comprise the majority of the facade
- ❖ Windows of different sizes add interest and bring in natural light

PROJECT TEAM

Owner:	Not Released
Architect:	Diamond & Schmitt
Associate Architect:	H2L2 Architects
Structural:	Halcrow Yolles
Associate Structural:	Keast & Hood
MEP:	CEL International
Civil:	Stantec Consulting



Atrium Rendering

STRUCTURE

- Foundation:**
- ❖ Drilled Caissons carry loads from grade beams to bedrock
- Superstructure:**
- ❖ Voided Filigree slabs and beams (precast/cast-in-place concrete hybrid system) comprise lower five floors
 - ◆ Uses 2" precast as leave-in formwork under C.I.P Concrete
 - ❖ Mechanical penthouse is steel columns/beams

MEP SYSTEMS

- Mechanical:**
- ❖ Nine AHU's ranging from 6,000-42,500 CFM
 - ❖ Two 620 ton capacity chillers
 - ❖ VAV boxes with reheat coils throughout building
- Lighting/Electrical**
- ❖ 13.2 kV main switchgear
 - ❖ Main power is 480/277V 3 phase, 4-wire
 - ❖ 600 kW diesel emergency generator on the roof
 - ❖ Uses CFL, Fluorescent, Metal-Halide & LED lighting
- Fire Protection**
- ❖ Largely wet pipe fire suppression system

CONSTRUCTION

- ❖ Sequencing of construction crucial for structural integrity
 - ◆ Begin at SW corner and build clockwise
- ❖ Architectural concrete columns require special formwork
- ❖ Varying window sizes/locations make placement difficult