William H. Gates Hall Seattle, WA

University of Washington School of Law

Project Information

Project Name: William H. Gates Hall
Location: Seattle, WA
Size: 196,000 sq ft, 6 stories
Dates of Construction: July 30, 2001 – July 18, 2003
Building Cost: $82,679,787

Primary Design Team

Owner: University of Washington
Architect: Mahlum Architects
Structural Engineer: Magnusson Klemencic Associates
Mechanical Engineer: CBG Consulting Engineers
Electrical Engineer: Sparling

Architecture

- Two story below grade library and four above grade levels of classrooms, seminar rooms, mock courtrooms and offices
- Four trapezoidal sky lights provide day light from terrace to library below
- Two story glazed galleria serves as central circulation corridor
- Façade uses combination of glazed aluminum curtain wall and brick veneer

Lighting

- Recessed compact and linear fluorescent downlights and wallwashers in courtrooms
- Direct/Indirect fluorescent pendant lighting in classrooms & seminar rooms
- Lutron Grafik Eye Dimming System in seminar rooms, classrooms and courtrooms
- Day lighting of lobby and galleria spaces through two story glazed walls.

Electrical

- Two 13.8 KV campus primary feeders service a 15KV 3-section main switch board which switches the primary 2500/3333 KVA transformer
- The secondary serving voltage for the building is 480Y/277 volts, 3 phase, 4 wire and 7 step down transformers provide 208Y/120 V power
- Emergency power is tapped from the campus 2.4kV sysem

Mechanical

- Two centrifugal chillers, each with capacity of 275 tons
- Campus steam system extends to building on east side of site for space and domestic hot water heating
- Nine air handling units with capacity's ranging 10,080 cfm to 29,940 cfm
- Two 59,850 cfm cooling towers located in pit on north side of building

Structural

- Foundation system composed of 1'-4" foundation wall & spead footings
- Floor construction consist of 34'-6" by 34'-6" bays framed with steel beams and girders
- Steel composite beams with 3 ½" concrete slab on 3" metal deck
- Concrete shear walls 12" to 14" thick with two layers of reinforcment

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http://www.arche.psu.edu/thesis/eportfolio/2007/portfolios/kaj172