

Massachusetts Public Library

Construction

Size

- 35,000 SF Renovation
- 70,000 SF Expansion
- 105,000 SF Total

Stories

- 3 above grade (6 total)

Original Contract Sum

- \$70,000,000

Dates of Construction

- January 2007- April 2009

Project Delivery Method

- Design-Bid-Build

Joint Venture Construction

Electrical

2000 kVA service entrance transformer

- NSTAR Electric
- 480 V primary
- 208/120 V secondary

Emergency Power

- Diesel Generator
 - 300kW/375kVa, 480 Y/277 V
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Lighting

Daylighting and Occupancy Controls

- in conjunction with Lutron dimming system

Over 60 fixture types with a variety of lamps

- fluorescent, HID, LED, and incandescent
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Mechanical

Forced air heating and cooling

- with additional fin tube and fan coil units

No units on ceiling (due to code)

- All systems located in main basement
- or located in attic space
- 5 AHUs total

Two cooling towers

- hidden in mechanical well on third floor
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Architectural

State-of-the-art curtain wall facade

- provides daylight, views and accessibility

New children's wing

- featuring a tree-like ceiling

A young adult area

- with media stations and informal seating

Below grade parking for 70 cars

- allows for above grade green space

Underground auditorium

- provides 230 seats and expands program

Smaller craft and story rooms

- allow for private quiet spaces

Large open stacks/seating

- open floorplan and abundant daylight
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Structural

Masonry Wall Construction-(historic)

- Field stone with granite or brownstone

Wood Framing- (historic)

- reinforced with internal steel skeleton
- sits on concrete spread footings
- footings located under a 5" slab on grade

Steel Frame System-(addition)

- with chvron wind bracing
- moment connections for cantilevered beams

Reinforced Concrete Foundation walls-(addition)

- Used for 3 stories below grade
- CIP formed slabs and beams
- 9" or 10" slabs on grade
- concrete spread and strip footings

Sloped Roofing (historic)

- Slate shingles
- A vapor barrier and plywood deck

Flat Roofing (addition)

- Thermoplastic membrane
 - Rigid insulation and vapor barrier
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