

Oklahoma University Children's Medical Office Building

Jonathan Ebersole | Structural Option

<http://www.engr.psu.edu/ae/thesis/portfolios/2014/jme5193/index.html>



Project Team

- Owner: University Hospitals Trust
- Construction Manager: Flintco, Inc.
- Project Architect: Miles Associates
- Design Architect: Hellmuth, Obata, and Kassabaum, Inc.
- Structural Engineer: Zahl-Ford
- MEP Engineer: ZRHD, P.C.
- Civil Engineer: Smith, Roberts, Baldischwiler, Inc.

General Information

- Location: 1200 North Children's Avenue, Oklahoma City, Oklahoma
- Occupancy: Office
- Size: 320,000 gsf
- Height: 12 Stories for a total of 172 ft.
- Construction Dates: February 2007-Spring of 2009
- Building Cost: \$59,760,000
- Delivery Method: Design-Bid-Build

Architecture

- Exterior Façade comprised of brick Veneer with large glass curtain wall on the front face of the building
- Supports Hospital with additional office space, exam rooms, and labs
- Membrane roof system with rigid insulation and light weight insulating concrete

Structural Design

- Reinforced concrete columns and beams
- 10" thick flat slab system with drop panels
- Concrete shear walls located in elevator shafts and stairwells
- Drilled pier foundation with a minimum bearing capacity of 45 KSF

Mechanical Design

- 7,500 CFM Air Handling unit occupies each floor
- Heat Exchanger is used to heat water before entering the heating coil
- 850 CFM fans are used to pressurize the stairwells

Lighting/Electrical Design

- Service voltage is 480/277 V, three phase, with 4 wires
- Voltage reduced to 120/208V, three phase, with 4 wires and supplied to each panel box
- Fluorescent lamps are used throughout the building to save energy costs