



Wentz Concert Hall and Fine Arts Center

North Central College, Naperville IL

Will Lesieutre - Lighting/Electrical

<http://www.engr.psu.edu/ae/thesis/portfolios/2012/WWL5031>

Architecture

Total size: 57,000 ft²
 3 stories above grade / 1 partially below grade
 Precast concrete and curtain wall exterior, with aluminum cornice
 Centrally featured lobby flanked by two entrances
 Concert hall (13,000 ft²) seats 605
 Black box theater (2,500 ft²) designed for flexible layout
 Art gallery (1,400 ft²) for showcasing both student and professional work
 Design, bid, build: Constructed July 2006 - September 2008
 Total cost: \$30.6 million

Lighting and Electrical

Power supplied by the Naperville Department of Public Utilities
 Utility owned main transformer, pad mounted on northwest of site
 Emergency power by 200kW/w50 KVA, 480Y/277 3 Φ diesel generator
 Power conditioning used for audiovisual loads
 Primarily incandescent lighting in theater area and fluorescent in offices

Structural

Steel structural system with connections to exterior embedded in precast panels by manufacturer
 Maximum design loads of 30 PSF SDL and 125 PSF LL
 Due to the unusually shaped spaces, there is no standard bay design
 Column sizes range from W10x54 to W14x283
 Beam sizes range from W10x19 to W24x104

Mechanical

Floor plenum system designed for silent air conditioning in concert hall
 Ceiling diffusers and air returns used in the majority of other spaces
 System is supplied by 8 RTUs and 5 air cooled condensing units
 Heaters include both electric baseboards and cabinet units

Project Team

Owner
 North Central College
Architect
 Loebel Schlossman & Hackl
Landscape Architect
 Hitchcock Design Group
Structural Engineer
 Campbell & Associates
MEP and Fire Protection
 WMA Consulting Engineers

Theater Planner
 Schuler Shook
Lighting Designer
 Schuler Shook
Acoustics & Audio Consultant
 Talaske
General Contractor
 Gilbane
Construction Manager
 Gilbane