

Saint Vincent Health Center

Infill Building

Erie, PA

General Building Data

- Building Name : Saint Vincent Health Center
- Location : Erie, PA
- Occupancy Type: Medical
- Gross Building Area : 104,660 SF
- Number Of Stories : 3 (1 below ground)
- Total Building Cost: Approx. \$ 45 Mil.
- Dates of Construction: 7/10/2010 – 11/1/2011 (Estimated)
- Project Delivery Method: Construction Management

Architectural / Structural

Façade

- Most will be 8" CMU with rigid insulation & a 2" stone veneer. Some places will be aluminum siding panels, and some brick veneer to match the adjacent Harder Building.

Roofing

- Composed of W18x35 & W10x12 beams, W24x55 & W18x40 Girders. The roof structure will be steel composite decking with a concrete floor/roof. On top of the concrete there will be tapered roof insulation and an EPDM membrane roof.

Structure

- 3 total levels (1 below ground). The structural system consists of a steel frame structure supported by deep foundations. Floors are framed with a 4" concrete slab on a 2" composite steel metal deck. Steel beams and girders carry gravity loads to steel columns supported on concrete caissons.

Project Team

Owner:	Saint Vincent Health Center
Architect:	Rectenwald Architects, Inc.
Structural Engineer:	Atlantic Engineering Service
Mechanical Engineer:	Karpinski Engineering
Electrical Engineer:	Karpinski Engineering
Civil Engineer:	Urban Engineers
Construction Manager:	E.E. Austin, Inc.
Phase 1 Concrete:	Perry Construction Group
Site Utilities:	Wm T. Spaeder Co.
Phase 1 Caissons:	G.M. McCrossin

Mechanical System

Central Plant (lower Level)

- The new boiler plant will serve the existing hospital and future expansions. The control system will be an automated system.
- The Steam system will include (5) 350hp boilers with the space to add two additional 350hp boilers. The heating/reheat system will be served by two variable speed, based mounted, pumps, one pump will run while the other remains standby.

Chilled water system:

- This new chiller plant will serve this addition & future additions. The chiller plant will have (2) 750 ton centrifugal chillers/pumps with space for one additional 750 ton chiller. There will be a new two cell cooling tower on the new ground floor roof.

Electrical System

The existing hospital is served by two 36KV primary services and two 5MVA transformers. A single 4160V feeder will serve a medium voltage load interrupter switchgear lineup located in the lower level of the addition. Emergency Power for the Hospital – The new addition shall include two new 1000KW generators and new paralleling switchgear. The parallel switchgear was sized to include the addition of one future 1000KW generator.



Tyler Jaggi

Construction Option

<http://www.engr.psu.edu/ae/thesis/portfolios/2011/tsj1111/index.html>