Pegula Ice Arena

University Park, PA

Project Overview

Owner:	The Pennsylvania State University
Construction Manager:	M. A. Mortenson Construction
Architect:	Crawford Architects
Structural Engineer:	Thorton Tomasetti
Civil Engineer:	Sweetland Engineer
MEP Engineer:	Moore Engineers
Project Cost:	$ 102 million
Size :	Size : 227,000 s.f.
Height:	3 Stories | 65 feet
Duration:	February, 2012 – July, 2013

Construction

- CM at Risk Contract \|Guaranteed Maximum Price
- Construction Sequence Starts in the Center South portion of the Arena. Everything Moves in a Counter-Clockwise Fashion Around the Main Rink.
- Crane and Steel Shakeout Staged Inside the Main Rink

Structural System

- Micropiles Utilized Along Western Portion of Arena
- Cast-In-Place Concrete Foundations and Foundation Walls
- Structural Steel Frame: Moment and Braced Frame
    - W Columns and Beams
    - Rakers (Supports Seating Section)
    - Roof Joists
    - Roof Trusses over Main Ice Arena
- Precast Stadia
- Slab on Metal Deck with Shear Studs and Rebar

Architectural Features

- Two NHL-sized Ice Surfaces
    - Main Rink [6000+ seats]
    - Community Rink [300 seats]
- Occupancy
    - Strength and Conditioning
    - Skate Rental
    - Offices
    - Concessions
    - Tim Horton's Restaurant
    - Club Boxes
- Curtain Wall with Glazing Along Entire East Façade
- Pursuing LEED Certified Rating

Mechanical System

- 12 Air Handling Units
    - 2 AHU's Utilize Energy Recovery Wheels
    - 4 AHU's Function as Dehumidification Units
- 25% Glycol Line Incorporated into Mechanical System
- Radiant Finned Tube System Utilized Along East Curtain Wall
- Wet Pipe Sprinkler System

Electrical System

- 3 Transformers Located at the North West Corner
- Two Transformers Service the Building, One Utilized in Case of System Failure
- Oil filled, Pad Mounted Transformers
- Transformers Setback 15' from Building
- Transformers Carry 3000 amp, 480/277 Volt, 3 Phase, 4 Wire Service

Mortenson construction

Shane Marshall

Construction Management