

## Lehigh University Grace Hall Renovation



Lehigh University's Grace Hall project included renovation of the existing 1948 building into a state-of-the-art competition wrestling and recreational facility with a new grand stairway connecting all five levels of activity space. Not only did the \$4 million renovation have to restore Grace Hall to its position as the premier U.S. wrestling venue, but it also had to provide much needed new flexible athletic and student recreation space, including new locker rooms, athletic offices, and storage space, as well as provide a venue for women's volleyball and student recreational basketball. This all had to be accomplished within the existing stone building's footprint while maintaining its historic character.

MKSD's first task was to reveal the gym arena's strong presence to visitors entering the building. This was accomplished by demolishing the existing gym wall, expanding the lobby into the arena floor and connecting the two spaces through a large glass wall. The glass provides an instant view to the event floor, and the expanded lobby also provides a place for socializing before matches. MKSD also designed new ticket offices and intramural offices into the "expanded" lobby space, linking the lobby and the gym floor with views into each other.

**Location**

Bethlehem, PA

**Client**

Lehigh University

**Area**

35,000 sf

**Schedule**

2002-2003

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Flexibility was introduced into the space by removing the existing built-in steel bleachers and replacing them with retractable bleachers on two levels. When retracted, this provides an open gym court that is 50% larger than the original and can be used as a multi-purpose area, a permanent home for the Women's Volleyball Team, a basketball practice facility, training space for the Crew Team, and a 24-hour recreational/athletic student facility. The split personality of the building—wrestling arena on one hand and multifunctional student recreation center on the other—provides Lehigh University with a transformed facility that is more useful than it requested.

The newly named “Leeman-Turner Arena” at Grace Hall boasts an upscale VIP Balcony Lounge and VIP upholstered chairback seating area for 127 season ticket holders. The VIP Balcony was carved out of an underutilized storage mezzanine, transformed by utilizing wood panel detail with accent lighting and a wood counter that allows for refreshments to be served. For the non-VIPs, the facility features 1,900 new spectator seats that extend to the very edge of the mat, bringing the spectators as close as possible to the action.

A small access-way balcony on the opposite side of the arena, originally only used for TV camera setup, was doubled in width to transform the space into a spacious balcony overlooking the gym floor. The expanded balcony provides a highly energized standing room space for 250 spectators, as well as space for concessions and a press box for media and TV cameras.



VIP balcony seating area



Stair to balcony levels



Mezzanine level

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The architectural focus of the balcony is a new sculptural-suspended staircase that provides a much-needed link between the arena and the upper-floor Student Center. The stair is suspended from the ceiling structure, floating above the floor on two steel I-beams.

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Transformation of the scale of the space was accomplished by removing the existing ceiling to reveal the 7' deep structural girders that span the entire gym floor's length, without a single column. Courtesy of Bethlehem Steel just a few blocks from campus, these gigantic existing girders became an architectural feature of the space through the use of indirect lighting. The ceiling's removal created a "taller" space.

Lighting also played a critical role in the design of the space. General illumination is provided by uniform indirect lighting, decorative column sconces and recessed trim lighting. But for wrestling events, the stage is set dramatically by darkening the entire arena while the center circle of the mat is intensely lit with direct lighting.

**Construction Cost:** \$4,000,000 vs. \$3,875,000

**Size:** 35,000 sf

**Client:** Lehigh University, Anthony Corallo, Assoc. President of Facilities Services, 461 Webster Street, Bethlehem, PA 18015, 610.758.3970

**Contractor:** Alvin H. Butz, Inc., John Szalachowski, Senior Project Manager, Route 309 North of Route 22, Allentown, PA 18105-0509, 610.395.6871

**Facility Size; Construction Cost:** 35,000 sf; \$4,000,000

**Consultants:** ME&P – Brinjac Engineering; Structural – D. Scott Bigley, P.E.

**Budget:** \$4,000,000 estimated versus \$3,875,000 actual

**Schedule:** design – December 2002 through October 2002; construction – November 2002 through October 2003

#### **Project Statistics**

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|---------------------|----------------------|
| • 35,000 sf         | 35,000 sf renovation |
| • Owner's Budget    | \$4,000,000          |
| • Construction Cost | \$3,875,000          |