

Brian Genduso  
Structural Option  
Faculty Consultant – Dr. Linda Hanagan  
University of Cincinnati Athletic Center  
Cincinnati, Ohio



Courtesy of Bernard Tschumi Architects

## Building Statistics - September 24, 2003

---

### Executive Summary

---

This report contains general background information on the UC Athletic Center, including project/construction data and architectural features. Much of the information came from existing reports and correspondence with industry contacts, however, some items are unavailable at this time.

### General Project Data

---

- Building Name: University of Cincinnati Athletic Center
- Location and Site: University of Cincinnati “Varsity Village”, Cincinnati, Ohio
- Occupant : University of Cincinnati Athletic Department
- Function: Multi-use, including offices, a ticket center, meeting space, computer labs, locker rooms, an auditorium, and gymnasium facilities
- Number of Stories: 8 total (5 above grade, 3 below)
- Size: 220,000 ft<sup>2</sup> total (150,000 ft<sup>2</sup> above, 70,000 ft<sup>2</sup> below)
- Primary Project Team:
  - Design Architect – Bernard Tschumi Architects
  - Local Architect – Glaserworks, Inc.
  - Building Engineer – Arup, New York
  - Local Structural Engineer – THP Limited, Inc.
  - Local MEP Engineer – Heapy Engineering, LLC
  - CM Advisor – Turner Construction
- Construction Dates: May 2003 – December 2005 (expected)
- Estimated Cost: \$50.7 million
- Project Delivery Method: Design-Bid-Build, State of Ohio – low bidder

### Architecture

---

- Architecture
  - The overall architectural design of the UC Athletic Center is characterized by its unique exterior façade. The façade consists of a triangulated “exo-skeleton” of concrete-covered steel. This skeleton, sometimes referred to as a “diagrid”, forms a visually dominant shell around the building. The heaviness of this exterior system is offset by its light color and by the fact it appears to be lifted off the ground by a series of v-shaped columns. Also unique to the building is its curved shape. There are no corners in plan, creating a rather unusual kidney or “link-pin” shape. The interior space of the building itself is divided

by a 5-story atrium running down the middle of its main section. To each side are offices, meeting rooms, and administrative areas. Below ground is a more conventional rectangular footprint, with mainly sports facilities and locker rooms. Horizontal movement through the building is kept simple by its compact design, however vertical movement is facilitated by a set of elevators and a grand staircase in the atrium.

- Major National Model Codes

The building code used for this project is the 1998 Ohio Basic Building Code. Other major codes and standards are: Structural - ACI 301, AISC LRFD Design Specs; Mechanical – ASHRAE 90; Electrical – NEC 2002. All disciplines also reference the University of Cincinnati Design Guidelines and Standards Manual.

- Zoning and Historical

The building sits on an extremely tight site between the Nippert Football Stadium and Shoemaker Center. The footprint bends to accommodate the existing facilities, however, part of the Shoemaker Center will be demolished to eventually connect to the UC Athletic Center below grade. The Athletic Center is the centerpiece in a multi-facility construction plan dubbed the “Varsity Village”. It has been designed to become the main architectural and social link between all current and planned athletic facilities.

- Building Envelope

The building envelope is primarily composed of the triangular diagrid mentioned above. This system is used for the exterior walls of the four uppermost levels. The system skeleton consists of steel W-sections with concrete casings. Most of the triangles contain offset glazings, however some have concrete fills to create a smooth, continuous surface. Below grade is a typical concrete retaining wall system and slab on grade. The roof is a 4” normal weight topping on steel deck and framing.