

University of Virginia Health System

Central Bed Tower Expansion

Charlottesville, VA



Building Summary

Owner:	UVA Health Systems
Building Name:	Central Tower Bed Expansion
Function:	Medical Center
Size:	60,000 Square Feet
Total Height:	7 floors
Duration:	November 2008 – December 2011
Delivery Method:	Design Assist -CM Agency
Cost:	\$55 Million



Architectural Features

- ◆ The Bed Tower Expansion will include a 2nd floor mechanical space and 6 patient occupied floors (3rd—8th)
- ◆ Each of the occupied floors will accommodate 12 patient rooms along the new façade.
- ◆ Façade is composed of metal wall panels, glass, and glazing
- ◆ Expansion will tie into existing hospital.

MEP Systems

- ◆ The Bed Tower Expansion will be serviced by the hospital wing's existing 8 air handler units
- ◆ 3,250 sqft of the new 2nd floor space will be dedicated to a relief air plenum
- ◆ The other 3,250 sqft of the new 2nd floor will accommodate a new 4000A, 480/270V transformer system and two new electrical rooms.
- ◆ A 25,000 and 45,000 CFM air plenum spaces will be added to the existing pent-house.

Structural System

- ◆ Bed Tower Expansion will sit on existing main lobby of hospital
- ◆ Select steel columns will need to be reinforced before construction can begin.
- ◆ Structure will consist of wide flange beams and columns
- ◆ Structural steel will support 4 1/2" lightweight concrete slabs poured on a 2" gage galvanized metal deck
- ◆ New addition will be bolted or welded into existing columns creating moment connections.
- ◆ Glass façade will be connected to the steel structure so weight will be self supported

Sarah L. Bell

Architectural Engineering | Construction Option

<http://www.engr.psu.edu/ae/thesis/portfolios/2012/SLB5205/index.html>