

## <u>Existing Conditions</u> Bed Tower Addition at Appleton Medical Center

Jessel Elliott – Structural 2011 Architectural Engineering Senior Thesis Studio Jessel Elliott

The Bed Tower Addition at Appleton Medical Center, owned by ThedaCare is located in Appleton, Wisconsin approximately two hours from Madison, Wisconsin. The building was measured at a height of 107'-3" above grade to the highest occupied floor which entails 9 stories including a basement and the total size is at 152,330 sq. ft. including the renovation which was done on the existing hospital it is attached to.





The addition of the bed tower was put into place in order to accommodate more patients for the hospital. Because of its size, it stands out amongst the rest of the complex. It has a unique triangular shape layout which is carried throughout all the

floors of the building. The horizontal streaks of CMU along the exterior make the addition look very sleek and long. Accommodating the long streaks are large areas of glass. Both materials work together in order to show floor separation and this gives the perspective that the addition is deceptively taller than it looks.

The first floor is the lobby area which consists of the registration and waiting area along with a mini coffee shop. The second floor is the office area which is a very large

space and movable partitions. The third floor to the eighth floor consists of the patient rooms, waiting rooms, and floor manager offices. The second through fourth floor connect to the original hospital with the fourth floor extended into the original building.



Courtesy of HGA

Jessel Elliott

Structural

The building façade was very simple and consists of two essential components

which are a stone façade and large areas of glazing. Limestone and Cast Stone make up the entire exterior with the limestone making up the crown running along the bottom of building. The cast stone is what is seen throughout the rest of the exterior which makes up the vertical façade.

Glazing makes up the other half of the exterior. There are three kinds of glazing. They are: 1) Clear Vision Glass 2) Tinted Visual Glass and 3) Spandrel Glass. The clear vision glass is used on the first floor where the lobby is located to allow the most daylight and energy. The tinted



Courtesy of HGA

visual glass and spandrel glass work together to shade the patient rooms and stairwells and they don't allow as much sunlight or energy as the clear vision glass.

Structurally, the addition is made up of a system of steel framing and composite deck. The foundation is a mat padding. On top of the roof, there is a large penthouse



which holds the mechanical equipment which is all supported by the steel framing of the building. For lateral loads, cross bracing is integrated within the frame.

Courtesy of HGA