



## ThedaCare Medical Center

Shawano, WI

The new facility was proposed as an addition to the existing ThedaCare Physicians Building, bringing together three campuses to serve as a medical hub for the community. By bringing these services together, the new location would save \$1.6 million over 10 years on maintenance and energy costs. The combined campus would eliminate duplicate technology and save over \$750,000 each year in service contracts and other costs. It would also allow the hospital and clinic personnel to work together, reducing the cost of staffing the same services in multiple locations

For nearly a year before the start of construction, Tweet/Garot's Plumbing Design/Build and HVAC Design/Assist Teams worked on the design and budgeting for the mechanical and med-gas systems, focusing on BIM (Building Information Modeling), Modularization, Prefabrication and Coordination of all systems. Once full enclosure was accomplished in January of 2015, the Tweet/Garot team fully geared up to implement all of the planning and preparation, and take on any new challenges that arose in providing this much needed new medical center to a community of 9300 residents.

### Project Challenges

The tight construction schedule, limited lay-down area, and maintaining mechanical service to the existing, occupied structure during construction of the new addition were just a few of the hurdles ahead.

#### Owner:

ThedaCare

#### Architect/Engineer:

HGA Architects and Engineers

#### Plumbing Engineer:

Tweet/Garot Mechanical, Inc.

#### HVAC Design/Assist:

Tweet/Garot Mechanical, Inc.

#### Approx. Contract:

\$52,000,000

#### Project Duration:

July 2013 - Sept. 2014

#### Project Certification:

Silver LEED Certified

#### Contact Information:

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Getting the new chiller plant operational without disrupting the existing air-cooled chillers serving the still-occupied portion of the facility, but in the way of construction, was a challenge that required the knowledge and experience of the T/G team as well as coordination and cooperation of the site team. This situation was resolved by precision planning and an expedited schedule to bring the new chiller plant online a full year earlier than the construction schedule called for, which allowed us to continue supplying chilled water to the existing ThedaCare Physicians' Clinic prior to bringing the entire new facility online

## Project Components

The HVAC system chosen for the new medical center was a variable air volume system, which senses the occupancy of parts of the facility and heats or cools accordingly. Together with low-flow plumbing fixtures to save on water consumption, and optimal use of daylight to preserve electricity, the new facility saves money and natural resources in a manner that was impossible at the old SMC's complex maze of heating and cooling systems that were added onto over the years. The new boiler system alone increases efficiency from 85 percent to 96 percent and cooling is accomplished by magnetic bearing chillers. This is the first medical facility in the State to opt for this type of high-efficiency air-conditioning method. This HVAC system also includes a Heat Recovery Chiller that allows areas of the facility that require year-round cooling to capture the heat and utilize it for heating hot water to supplement the boiler system.

On September 20, 2015, ThedaCare Medical Center - Shawano became an operating critical access hospital that holds to the exact same standards as ThedaCare's larger urban hospitals. This new 128,000 square foot facility is Silver LEED Certified for green building practices.

