



Customer focused. Built on values.

Case Study

Location: Grafton, WI

Industry: Healthcare

Scope: BIM, HVAC, Plumbing, Medical Gas, Structural Metals, Temperature Controls, Underground Utilities

Contract Amount: \$49.3 MN



Building SqFt: 520,000

Owner: Aurora Health Care

Owner's Rep: Hammes Company

General Contractor:

Mortenson Construction

Architect: Albert Khan Associates

Engineer: KJWW Engineering

Delivery Method: Design Assist

Contract Type: Guaranteed Maximum Price

LEED: Silver NC Rating

Website: www.grunau.com

Aurora Medical Center Grafton

With a long-standing relationship of trust and collaboration, Aurora Health Care requested Grunau to design and install the mechanical and steel systems in their new 500,000+ square foot hospital in Grafton.

For HVAC, Grunau installed two large, water cooled chillers which are among the most energy efficient heating and cooling systems and run three of the four seasons. However in Wisconsin winters, the water in this system would normally freeze, so air cooled chillers were installed for balance. The energy recovery chillers both heat and cool, recycling the byproduct of cool air, further saving energy for this facility which obtained a LEED Silver rating.

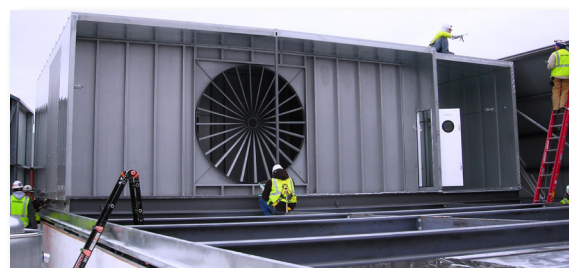
Ten air handling units were installed on the roof of the complex, including seven massive units. For an idea on the immensity of this project, it took 6-8 semi trucks to transport all the components for each massive roof-top unit and one of the largest hydro cranes available to lift them into place.

Grunau also installed the medical gas lines that ran oxygen, nitrogen, medical air, vacuum, CO₂, and nitrous oxide throughout the building. Along with 31 steam humidification zones, the ventilation system keeps the vital hospital air fresh and clean.

Grunau's underground utilities team accomplished all of the excavation work required for the plumbing and HVAC systems, including a portion of the site utilities which tied into the large storm drainage ponds.

Grunau Metals fabricated and installed HVAC and piping support, fire escape stairs, and structural supports for procedure lights, MRIs, X-Ray machines and other hospital equipment. The Metals team also created a 3-story ornamental stairway with decorative glass handrails in the atrium lobby.

Using BIM, Grunau was able to virtually lay out, 3-D model and plan projects before starting on any construction to minimize problems. With many teams working on simultaneous tasks and being on a tight schedule, collaboration and communication were essential on this project. Overall, it took a mere 22 months to go from a cornfield to the first critical heart operation.



1 of 10 massive rooftop air-handling units