



WAUSAU WINDOW & WALL SYSTEMS WAUSAU, WI

42% Less Water Consumption

44% Of Materials are Regional

99% Of Construction Waste Diverted From Landfill



LEED® Facts

*Wausau Window & Wall Systems
New Office & Manufacturing Center
Wausau, WI*

LEED for New Construction v2.2
Awarded Silver LEED certification 8.12.2009

Silver 38/69

Sustainable Sites 9/14

Water Efficiency 4/5

Energy & Atmosphere 4/17

Materials & Resources 6/13

Indoor Environmental Quality 10/15

Innovation & Design 4/5

**Out of a possible 69 points*

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

PROJECT PROFILE

WAUSAU WINDOW & WALL SYSTEMS

PROJECT BACKGROUND

In an attempt to streamline their manufacturing process and improve product quality, Wausau Window & Wall System adopted portions of the Six Sigma and Lean Manufacturing tools as business improvement strategies in 2001. Realizing the constraints of their current production process, Wausau made a decision in 2007 to consolidate their numerous existing production facilities throughout the Wausau area into a single facility. The goal was to not only meet their current needs, but also provide the flexibility to change their manufacturing process and allow for future expansion.

STRATEGIES AND RESULTS

The 51-acre site was formally a ready-mix plant which was classified as a brownfield site and remediated to restore the site to its natural habitat. The landscape includes walking trails and was purposely designed to exclude an irrigation system to conserve water. Wausau provides preferred parking spaces for low-emitting vehicles. The site's open-space exceeds local zoning by 444%, and includes on-site retention and detention ponds manages the quantity and quality of the site's stormwater and promotes infiltration. Realizing possible future expansion, the building was carefully laid out to avoid disturbance of the surrounding wetlands.

Focused on energy efficiency, the facility envelope is constructed with insulated precast concrete panels, brick and aluminum curtainwall. The glass and glazing showcase Wausau's high-performance products, which reduce glare, maximize daylighting, resist condensation and reduce conductive heat loss. The white TPO single-ply membrane roof helps to mitigate the heat island effect. The building's mechanical system utilizes 400,000 Btu/hr of rejection heat of "process energy" from the air compressors, which is added to the water loop when the plant is in operation. This measure increases cooling tower energy, which in turn eliminates the compressor after-cooler fan and reduces boiler energy. The HVAC system includes a back-up boiler, however the boiler is not utilized during normal operational hours. The energy control system allows the plant operations director to shed electrical loads from the comfort of his desk when the local utility company notifies him of peak demand periods. This allows Wausau to avoid costly peak electrical charges and helps to prevent the need to start up additional generators.

Low-flow plumbing fixtures including hand-wash fountains, dual-flush water closets and ultra low-flow urinals were incorporated to reduce water consumption by nearly 42%. In total, the energy efficiency strategies integrated throughout the building reduce energy consumption 7,713 MBtu/year, which is 16.5% below the code-compliant ASHRAE 90.1-2004 benchmark, saving Wausau well over \$100,000 annually in energy costs. To ensure high-quality indoor air, a Construction Indoor Air Quality Management Plan was implemented throughout the construction process and the building was flushed prior to occupancy. Low-emitting materials (adhesives, sealants, paints, coatings and carpet systems) were installed throughout the facility. Employee comfort was also a project driver. Office personnel are provided with individual lighting and thermal controls.

ABOUT WAUSAU WINDOW & WALL

Wausau, formally known as Wausau Metals, was founded in 1956 and acquired by Apogee Enterprises, Inc., a publicly held US corporation, in 1968. Wausau fabricates and distributes pre-engineered, custom engineered, hurricane impact-resistant, blast hazard mitigation, solar and thermal control, and power-generating glazing high-performance window and curtainwall systems for the commercial building industry. Products include energy-efficient and durable AAMA AW Class aluminum fixed, projected, casement, hung and rolling windows; custom curtainwall systems; and sun shades and light shelves. Wausau products promote natural daylighting and support sustainable design goals using 100% secondary aluminum billet for framing extrusions, ensuring that all projects utilize a high level of pre- and post-consumer recycled content. The INvent™ Series of projected windows introduced in 2010, is certified to AW 100 Performance Class, offering the -XLT option with oversize polyamide thermal barrier, for NFRC U-Factors as low as 0.19 Btu/hr/sf.°F (R 5.3).

ABOUT MIRON CONSTRUCTION CO., INC.



Miron Construction Co., Inc., headquartered in Neenah, Wisconsin, with regional offices in Madison, Wausau and Milwaukee, Wisconsin, and Cedar Rapids, Iowa, has been providing professional construction services to clients throughout the Midwest (with an expanded geographical reach across the U.S.) for the past ninety years. Miron Construction Co., Inc., is currently listed 112th among all general contractors in the United States (based on sales and revenue figures for 2009) by Engineering News Record. For more information, visit miron-construction.com.



Owner: Apogee Enterprises, Inc.
LEED® Project Admin: Miron Construction Co., Inc.
Commissioning Agent: CDH Energy
Construction Manager: Miron Construction Co., Inc.
Civil Engineer: Point of Beginnings
Architect: Somerville, Inc.
Mechanical: Rohde Brothers
Electrical: Faith Technologies
Plumbing: August Winters & Sons
Project Size: 397,186 square feet
Construction Budget: \$16,217,736
Photography: Weston Imaging Group LLC

ABOUT LEED

The LEED® Green Building Rating System™ is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's web site at usgbc.org to learn more about LEED® and green building.

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