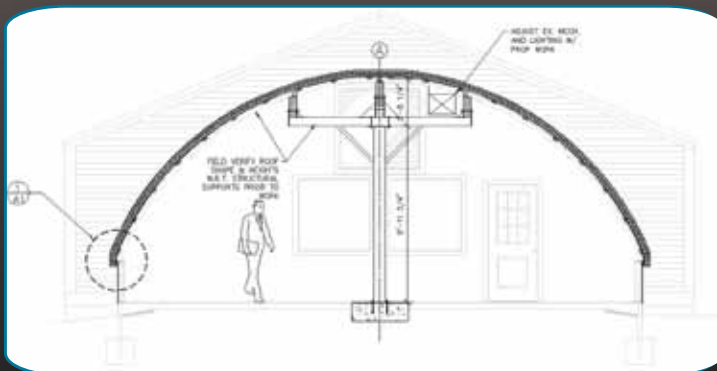


Machin Engineering is a full service civil and structural engineering firm serving the private and public markets throughout Michigan.

Project Profile Structural Retrofit

Machin Engineering was retained by the Maple City Health and Fitness Center to provide structural engineering and design of a roof retrofit. The existing roof and building was a former green house and consists of a tubular roof grid and fabric cover. We prepared an engineered design and construction drawings.

The owner converted the space into a health and fitness center and wanted to convert the roof into an insulated section and required the new structural components in order to support the new snow loads. The new section included a plywood hard cover, 2-inch foam insulation, and a 60-mil waterproof membrane.



The new structural components were designed to be lifted in through the existing doorways and assembled within the building. Since the existing structure was a manufactured type system it was assumed the new components will support the roof similar to an umbrella.

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