

ONU Student Life and Recreation Center

Project Highlights and Results

- Approximately \$347,000 received in grant / incentive funding through Elara's efforts.
- Four different energy saving design applications used to address four distinct use areas – Natatorium, Field House, Climbing Wall, 4-Story Core Space.
- A highly efficient 144-well vertical district geothermal field employed to optimize the transfer of energy among different use areas.

Project Background

Owner:	Olivet Nazarene University (ONU)
Location:	Bourbonnais, IL
Team/Team Lead:	Steve Maze, Brian Malone, Matt Swanson
Elara Role:	MEFPFIT Engineering Design
Type:	New Construction
Construction Cost:	\$35,000,000

Project Overview

Building Type:	Higher Education
Building Attributes:	Field House, Natatorium, Core Space w/ Atrium 143,500 SF
Initial Construction:	2012
MEFPFIT Systems:	Geothermal heating/cooling, dehumidification, VRE, DCV, DDC

Innovation

- The following identifies the challenges represented by the energy intensive and highly variable needs of the building's major spaces:
 - Long operating hours for spaces specifically including a natatorium, exercise facilities and offices.
 - Pool space (with four different pools) kept at a significantly warmer temperature with resultant evaporation, requiring year-round heating and moisture control.
 - A large, open field house that is highly driven by the outdoor conditions.
 - A climbing wall area that is highly cooling dominant due to solar gains from a south facing ground to roof glass façade.
 - A 4-story core space with diverse heating and cooling needs due to its mixed use and high concentrations of students, faculty and staff.
- Elara's engineering solution ultimately capitalized on the highly contrasting space types with an innovative and energy efficient geothermal design centered on energy transfer among and within the building's spaces.

FIRST PLACE

ASHRAE Excellence in Engineering Award
Chapter Level

SECOND PLACE

ASHRAE Excellence in Engineering Award
Regional Level

