

NU Rogers House Residence Hall

Project Highlights and Results

- LEED Gold Designation
- Renovation of historic building served as the first green residence hall on the University's Evanston Campus
- Designed a steam-to-hot water heating conversion reusing the existing radiation and implemented natural ventilation and mechanical exhaust

Project Background

Owner:	Northwestern University (NU)
Location:	Evanston, IL (Evanston Campus)
Team/Team Lead:	Don McLauchlan, Brian Malone
Elara Role:	MEFPFIT Engineering Design
Type:	Renovation
Construction Cost:	\$2,500,000

Project Overview

Building Type:	Higher Education, Residential
Building Attributes:	4-Stories; 14,500 SF
Initial Construction:	Late 1920s
MEFPFIT Systems:	Condensing Boiler Plant, Natural Ventilation, Earth Duct, Daylight Harvesting, DDC

Innovation

- At the time of renovation, the building had no means of mechanical exhaust and space heating was accomplished by steam radiators at the building perimeter.
- In addition to supporting building space upgrades, Elara designed a steam-to-hot water heating conversion that included the installation of a new steam-to-hot water converter that used the campus' steam supply and pressure reducing station.
- Existing steam radiators, steam and condensate piping were reused for the new hot water heating systems with new hot water radiators and fan coils added where necessary.
- Elara designed mechanical ventilation system and exhaust per code for winter operation and with fan assisted natural ventilation for summer operation.
- All installed mechanical systems are now controlled by a new DDC central building automation system.
- New energy efficient lighting and low-flow plumbing fixtures were designed and installed to further reduce building operating costs.

