

Bgemagen Project



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Energy Efficient Renovation of Historic Building
Milwaukee Trust Land

Before

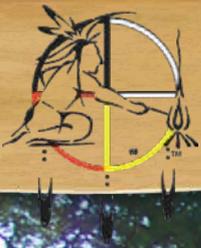




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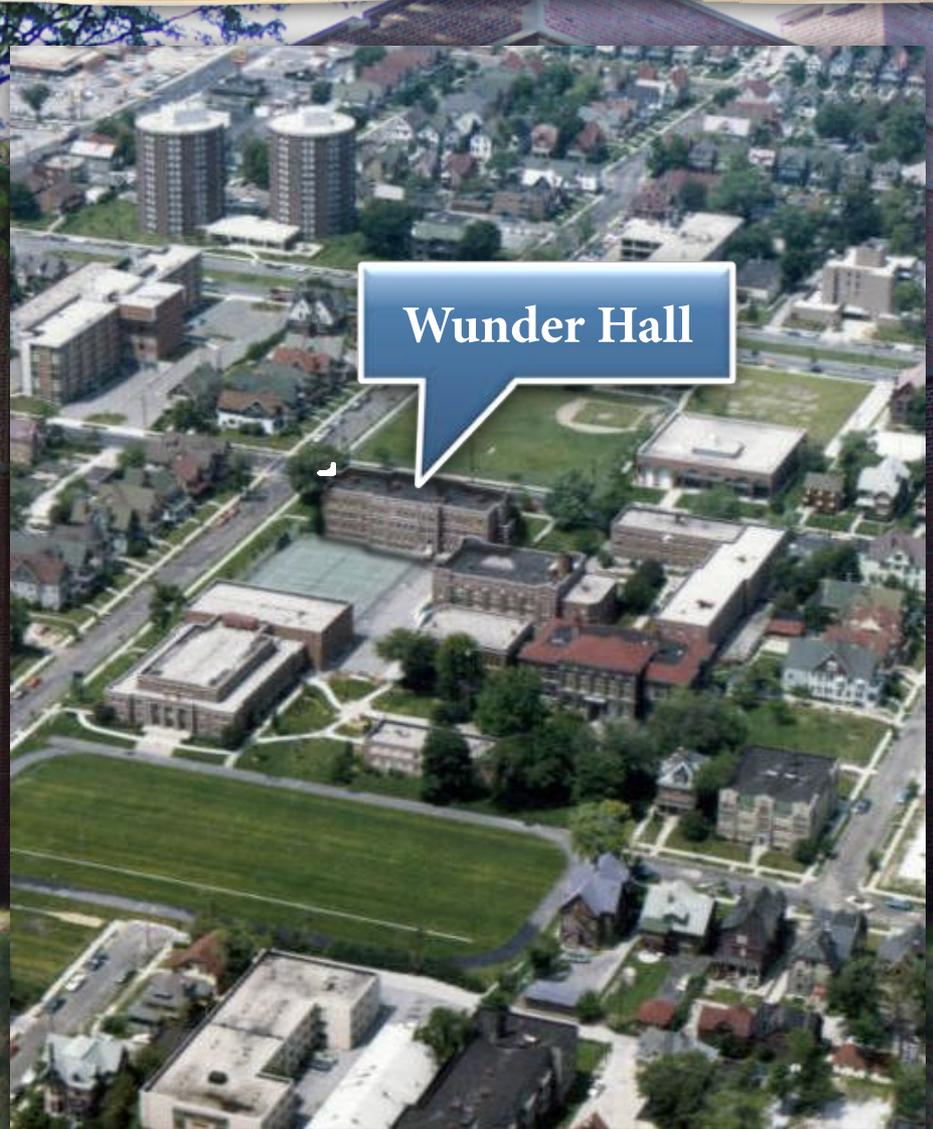
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The Bgemagen

[Bug-mah-gen] *noun*

Potawatomi for “war club”

Also known as Wunder Hall, this 34,000 sq. ft. building is located on the former campus of Concordia College just west of downtown Milwaukee





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Built in 1925 as a dormitory and is listed on the National Register of Historic Places

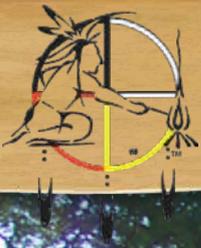


Wunder Hall 1924



Wunder Hall 1950

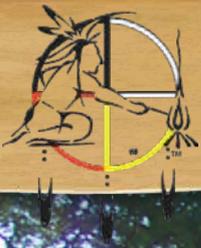




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Project goals

- Renovate and convert the building from a dormitory to a commercial office building
- Incorporate the highest level of sustainability
- Meet National Park Service and State Historic Preservation standards in order to become eligible for historic tax credits



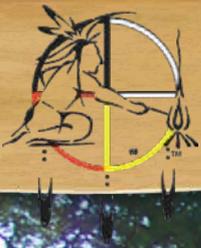
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Renovation project is funded in part with DOE support and includes the following components:

- Building envelope
- Building HVAC system
- Building plumbing system
- Building electrical infrastructure



U.S. DEPARTMENT OF
ENERGY



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Building envelope

- Energy-efficient windows and doors
- Upgraded exterior wall and roof insulation
- Sealing of exterior masonry





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Building HVAC system

- New 94% efficient gas-fired boilers and chillers
- Upgraded insulation on the distribution systems
- Digital control system to optimize efficiency





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Building plumbing system

- New fixtures throughout the building
- All fixtures energy and water saving





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Building electrical infrastructure

- Energy-efficient interior and exterior lighting (florescent or LED)
- Energy-efficient lighting controls include dual-level switching, day-light controls, and automatic shutoff





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Historical preservation project components

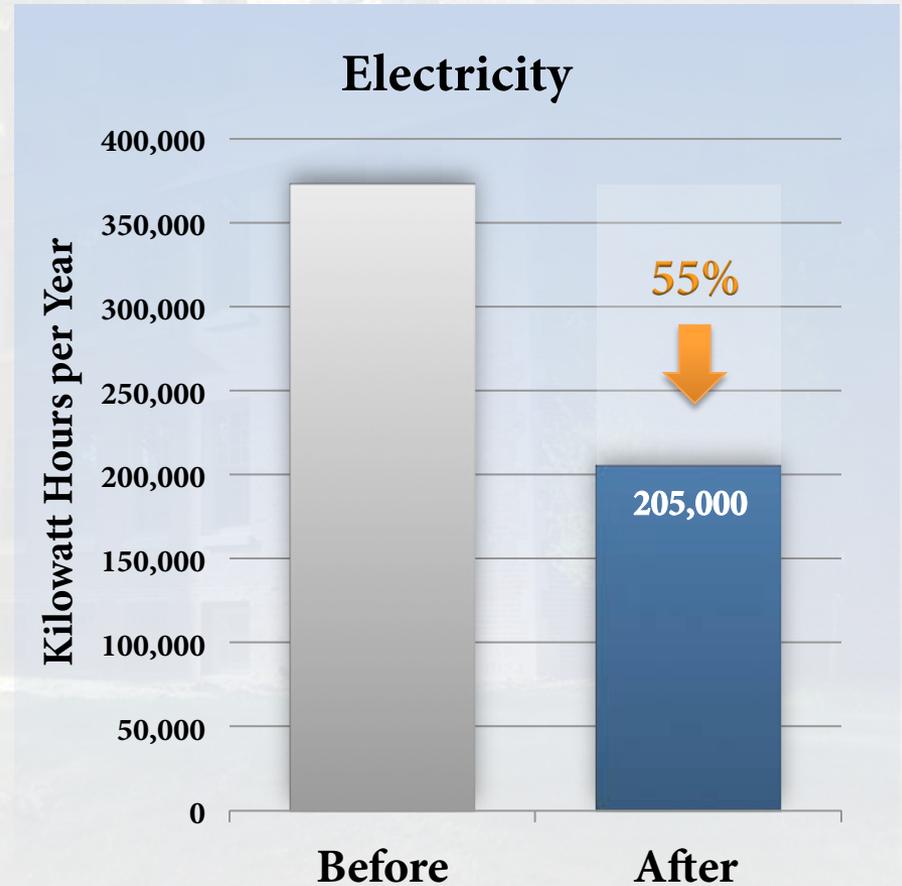
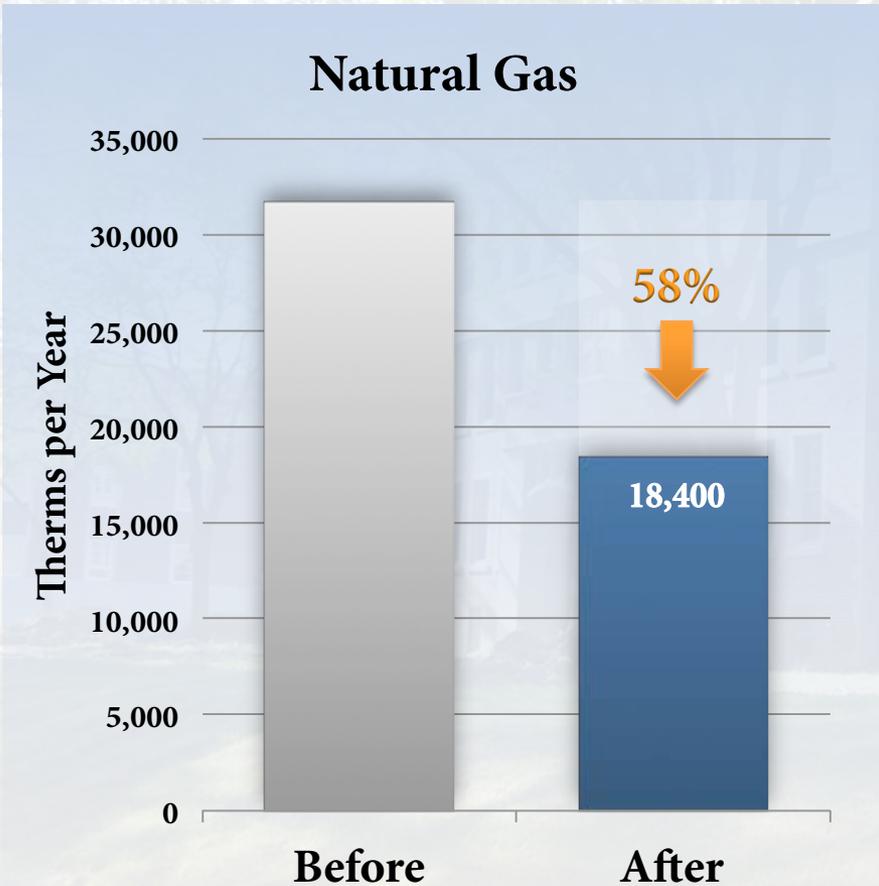
- Rehab the exterior façade to its original design
- Maintain the interior integrity of the building
- Balance the rehab with today's operation needs, examples being:
 - ▶ Lighting
 - ▶ Quality of the windows
 - ▶ Floor plan layout





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Anticipated total energy savings resulting from the implementation of this project are projected to be:





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As more historic buildings are rehabbed and converted into new uses, the tension created by following both sustainability guidelines and NPS guidelines will increase. Finding balance between the NPS and DOE will be critical for ensuring that both these worthy goals are met. Some historic buildings were never energy efficient, requiring rehabilitation to an updated energy inefficient building means more of these historic properties will continue to deteriorate.