ELARA ENGINEERING

Big Picture Thinking. Practical Approach. Sustainable Design.

LUC Cudahy Science Building

Project Highlights and Results

- MEPFP design services for complete interior renovation of 100+ year old historic building that is part of the University's original quad.
- Building houses physics-based student laboratories, classrooms, offices and building support spaces.
- Enhanced energy performance, occupant comfort, and indoor air quality achieved through sustainable systems consistent with previous Elara designs across the LUC campus and the University's climate action commitments.
- Services included schematic design, permit/bid/construction document preparation, bidding, construction services and functional testing.

Project Background

Owner:	**Loyola University Chicago**
Location:	**Chicago, IL**
Team/Team Lead:	**Dustin Langille, Dusty Granger, Bhupendra Tailor**
Elara Role:	**MEPFP Engineer**
Type:	**Retrofit**
Construction Cost:	**Approximately $12,000,000**

Project Overview

Building Type:	**Classroom and Laboratory**
Building Attributes:	**4-Story Physics Science Hall (34,259 SF)**
Initial Construction:	**1910**
MEPFPIT Systems:	**DOAS with fan coils for classrooms and labs, dedicated pressurization control for labs and independent specialized lab exhaust including snorkels and fume hoods, interconnection to campus central plants and fire protection systems, new sprinklers, entire plumbing system, IT infrastructure**

Innovation

- Low energy laboratories with MEP systems suited to individual spaces.
- High performing, optimized heat recovery wheel design installed in lower cost air handler to maximize value.
- BIM coordinated mechanical room allowed for maximum space utilization.
- Optimized fan coil design and low temperature DOAS air delivery allow for utilization of campus dual temperature system without sacrificing comfort.
- Innovative use of neighboring building fire pumps via piping in tunnel and reuse of existing buried pipe allowed for space and cost savings.
- Project included re-insulating walls and reuse of 100+ year old structure.