

# 1122 North Clark Street (The Elm at Clark)

**FIRST PLACE**

ASHRAE Excellence in Engineering Award  
*Chapter Level*

## Project Highlights and Results

- \$82,539 received from utility incentive programs to offset equipment installation costs
- Completed studies and assessments include: Dual Temperature System Study, Boiler & Chiller Plant Schematic Design Report, DHW Plant Replacement Report
- Design projects completed for New Generator, MUA Replacement, FACP Upgrade, Chiller Replacement, Boiler Plant Replacement & Expansion Joint Replacement
- New open protocol expandable building automation system and front end installed as part of the boiler and chiller replacement projects

## Project Background

<b>Owner:</b>	Elm at Clark Condominium Association
<b>Location:</b>	Chicago, IL
<b>Team/Team Lead:</b>	Steve Maze, Bhupendra Tailor, Cem Diniz
<b>Elara Role:</b>	MEP Engineer
<b>Type:</b>	MEPFP Infrastructure Retrofit
<b>Construction Cost:</b>	\$2,100,000

## Project Overview

<b>Building Type:</b>	High-Rise Condominium
<b>Building Attributes:</b>	39-Stories with 6-Level Parking Garage, Sundeck, Outdoor Pool, Hospitality Room; 396,000 SF
<b>Initial Construction:</b>	1989
<b>MEPFPIT Systems:</b>	2-Pipe Dual Temperature FCUs, Chillers, Cooling Tower, Hot Water Boilers, MAU, AHUs, BAS, Generator

## Innovation

- Completed several studies and assessments including: Dual Temperature System Study, Boiler & Chiller Plant Schematic Design Report, DHW Plant Replacement Report.
- With approved recommendations from previous studies, completed design projects for New Generator, MUA Replacement, FACP Upgrade, Chiller Replacement, Boiler Plant Replacement, Expansion Joint Replacement, and a new Building Automation System.
- New chiller plant, condensing boiler plant, and MUA increased operational flexibility, improved occupant comfort, and enhanced system performance, reliability, and efficiency.
- New MUA design incorporates a summer dehumidification mode.
- Created project implementation prioritization plan that resulted in reduced overall projects cost.
- Proactively replaced expansion joints on building's 25th floor that had begun to fail and were at the end of their useful lives.
- Replaced the building's central fire alarm control panel (FACP) and all devices with non-proprietary manufacturer for less cost than replacing proprietary manufacturer's FACP alone.
- New chiller plant, condensing boiler plant, and building automation system improved dual temperature changeover control by significantly reducing changeover time between heating and cooling modes (from days to hours) resulting in improved occupant comfort while maintaining protection of new equipment.

