

GUTHRIE CITY HARBOR MEDICAL OFFICE BUILDING – 100% ELECTRIC



BACKGROUND

Guthrie HealthWorks commissioned IBC Engineering P.C. to design the MEP&FP systems for a 3 story, 60,000 SF Medical Office Building as part of the Ithaca City Harbor Community Development project at a constructed cost of \$30 million dollars. The facility would provide a wide variety of fields including audiology, gastroenterology, endoscopy, breast surgery, orthopedics, radiology, family medicine, sports medicine and more. This project is the 3rd MOB that IBC Engineering has delivered for Guthrie HealthWorks.

This project would be different. The previous buildings were designed with institutional grade HVAC systems with lifecycle based central systems incorporating hot water and chilled mediums including fossil fuel-based boilers. Guthrie was pleased with the previous project's central system approach, however, was interested in going all electric for this site.



APPROACH

IBC was excited about the challenge to help foster a new generation of technologies that would provide for a **Carbon Neutral Building** yet support the central systems using hot/chilled water. Project timing and site location would aid in the solution. The timing was right. Advancement with equipment technology provided an opportunity to incorporate water to water heat pump chillers that could generate both chilled water and hot water simultaneously. Modular scroll chillers were paired together that provided a combined 155 tons of chilled water and 2,500 MBH of hot water. The site was right. The City Harbor project had this new building situated next to the Ithaca Wastewater Treatment Plant. Guthrie and the City negotiated a plan that would incorporate wastewater discharge effluent that could be used to absorb and reject heat utilized for the heat pump plant. This plant supports four (4) central station VAV air handlers and sub systems including chilled beams, fan coils, hot water radiation, cabinet heaters and unit heaters.



RESULTS

IBC Engineering accomplished the goal of providing a Carbon Free building design using institutional grade systems that are highly efficient, flexible, low maintenance with a substantial lifecycle.

