

St. Clair Hospital Ambulatory Care Center

DESIGN / CONSTRUCTION TIMELINE:

July 2017 – May 2021

CLIENT:

IKM Architects

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CEA provided the mechanical, electrical, plumbing, and fire protection engineering services for the new St. Clair Hospital's 290,000 sq. ft. Ambulatory Care Center (ACC). The new building consisted of 6 floors the lower level for mechanical equipment and support spaces, two floors of parking and one floor for imaging suites, one floor for procedures and operating rooms, and one floor of doctor's suites.

The mechanical systems for the ACC include the chilled water from the Central Utility Building (CUB), four high pressure steam boilers, steam to hot water heat exchangers, a clean steam generator, twelve air handling units, VAV boxes with hot water reheat coils and air valves in the Operating Rooms and eighteen in line type air moving fans that move air in the garage levels.

Electrical systems included both normal and emergency power, supplied from the newly constructed Central Utility Building along with the installation of a full power distribution system, including panelboards throughout the new building. Isolated power panels were provided for the OR's, Endoscopy, and procedure rooms and a UPS system installed to serve the various imaging equipment. All new lighting systems are 277v LED and include specialized systems for operating rooms and radiology suites. Electrical design included new nurse call, data systems, a distributed antenna system for first responders, security and building access, CCTV, and fire alarm systems.

Plumbing systems consisted of the installation of new water supplies for both domestic and fire protection systems. New domestic cold and hot water distribution systems which included new steam fired instantaneous water heaters. Medical gas systems which included oxygen, nitrogen, nitrous oxide, medical vacuum and compressed air, and CO2. Storm and Sanitary drainage system throughout with a separate garage drainage system.

Fire protection systems included new a new standpipe system installed in stair well and a complete wet sprinkler system throughout the building with a dry pipe system installed for the garage spaces. Specialized spaces were protected with pre-action systems.