



CASE STUDY

Chilton Medical Center

Concord Supports NJ's Critical Infrastructure During Pandemic

In response to the COVID-19 pandemic, a leading NJ health system has retained Concord Engineering to re-engineer the MEP infrastructure for its existing Emergency Department, including new HVAC systems, upgraded plumbing and medical gas systems, and expansion of the hospital's essential electrical and emergency power systems. The intent is to re-imagine best practices for the ED and begin redefining the minimum design standards and performance criteria of the entire industry. A natural outgrowth of this process is to address Adaptability & Flexibility – not just Reliability and Serviceability -- as part of the overall facility Resiliency and Emergency Preparedness Plans, but specifically in the Emergency Department.

For this project, the functional clinical plan creates multiple treatment/care zones that can be physically separated from and function independently of the other ED zones. Entering patients are triaged and assigned to ED zone appropriate for his/her level of acuity and infection status. Patients triaged with possible or likely infectious disease are evaluated and treated in the zone(s) with dedicated MEP infrastructure designed to mitigate airborne infectious disease transmission, such as COVID-19. Dedicated HVAC systems have the ability to operate at increased room air change rates with 100% clean and filtered outdoor air with contaminated indoor air fully exhausted to outside. Upgraded medical gas and emergency power systems are provided to accommodate the treatment of high-acuity patients (such as those requiring ventilators and extensive telemetry) in the ED during surge conditions. HVAC zones will match physical treatment/care zones and will each have pressurization controls to contain air within infectious disease zone(s) and to protect non-infected patients and clinicians in clean care zone(s). Electrical systems were upgraded with a new emergency power generator, and new high-pressure steam lines were extended to the penthouse.

+ LOCATION
New Jersey, USA

+ SERVICES
MEP Engineering

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