

COURTNEY MILLETT | MECHANICAL

MORTON HOSPITAL EXPANSION

TAUNTON, MA

DESIGN AND CONSTRUCTION TEAM:

Owner	Steward Healthcare
Construction Manager	Suffolk Construction Company
Architect	Steffian Bradley Architects
MEP Engineer	Bard, Rao + Athanas Consulting Engineers
Structural Engineer	Goldstein-Milano LLC
Civil Engineer	Stantec

GENERAL INFORMATION:

Occupancy	Hospital
Size	A one story addition connected to a two story 100,000 SF existing hospital
Cost	\$23.1 Million GMP
Schedule	Phase One: 16 week duration Phase Two: 40 week duration
Project Delivery	Design-Build



(Image courtesy of Steffian Bradley Architects)

MECHANICAL SYSTEMS:

Heating | The existing hospital low pressure steam system supplies the addition, using the steam to provide heat via heat exchangers.

Chilled Water | Existing hospital distributed chiller plant, as well as an additional 155 ton air cooled chiller, supply the chilled water to the addition.

AHUs | Two modular AHUs will be utilized. Phase 1 will use a 2500 CFM rooftop packaged DX unit, while phase 2 will be provided by a 35000 CFM roof mounted chilled water AHU.

ARCHITECTURAL:

Spaces | Expansion will include an Emergency Department, Psych Ward, MRI, treatment and triage rooms, decontamination and isolation rooms.

Facade | Exterior walls will be a brick veneer and composite metal panels. Windows will utilize a aluminum storefront system with insulated spandrel glass.

STRUCTURAL SYSTEMS:

Floor Slab | 5 inch normal weight concrete slab on grade with 8 inch thick crushed stone based

Lateral | The lateral force resisting system is steel moment frames on the exterior of the building.

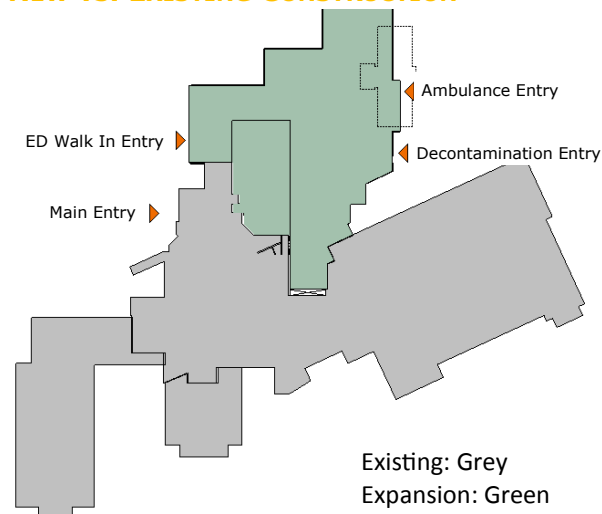
Roofing | A 2-1/2 inch light weight concrete fill on 3" 20 GA. metal deck is used for roof slab construction, and was design to be utilized as a floor slab for future expansion.

LIGHTING/ELECTRICAL SYSTEMS:

Distribution | One 480/277 V transformer distributes power to two 3 phase, 4 wire distribution panels. The distribution panels supply the air handling units, exhaust fans, pumps, and motors.

Lighting | Both fluorescent and LED lighting is used. An inverter is used to convert AC to DC power, in order for LED lights to utilize an electronic dimming driver.

NEW VS. EXISTING CONSTRUCTION



(Image courtesy of Steffian Bradley Architects)

Contact: Courtney.n.millett@gmail.com | Advisor: Dr. Bahnfleth

<http://www.engr.psu.edu/ae/thesis/portfolios/2015/cnm5133/index.html>