



NORTHFIELD MENTAL HEALTHCARE CENTER NORTHFIELD, OHIO

JI WON PARK

MECHANICAL OPTION

GENERAL INFORMATION:

Function: Mental Clinic

Size: ~300,000 SF

Overall Cost: ~62.5 Million

Delivery Method: Design-Bid-Build (Multiple Prime)

Construction Date: Approx. April, 2012 – January, 2013

ARCHITECTURE:

Additional 200,000 ft² to existing 100,000 ft²

Quality of care for mental health patients and safety of patients and staff

Designed respect to surrounding facilities

Outdoor recreating areas and therapeutic spaces

Face brick for the exterior wall to match existing building

Smooth CMU, textured CMU, and curtain walls to highlight the new design

MECHANICAL:

2 custom AHU's (65,000 CFM each)

1 Constant Volume AHU (3,700 CFM)

6 Variable Air Volume AHU's (32,350 CFM)

2 Existing AHU's

6 Gas Fired Boilers (113.5 HP each)

2 Centrifugal Chillers (450 Tons each)

Variable Frequency Drive for supply and return fan for each Air Handling Unit

Centrifugal Upblast Fans for Patient Room Exhaust and General Exhaust

Centrifugal In-Line Fans for Emergency Exhaust

Centrifugal Upblast Grease Fans for Kitchen Exhaust Hoods

PROJECT TEAM:

Owner: Ohio Department of Mental Health

Architects: Hasenstab Architects, Inc.

Landscape: Bedell-Tucci, LLC (N/A)

MEP and Fire Protection Engineers: Scheeser Buckley Mayfield, LLC

Structural Engineers: Thorson Baker & Associates

ELECTRICAL:

Two of 1500 / 2000KVA Dry Type Transformer (Primary: 12.47KVA, Secondary: 480/277V, 3 Phase) for the Energy Center

500 KVA Liquid Filled Pad-mount Transformer (Primary: 12.47KVA, Secondary: 480/277V, 3 Phase) for the North Patient Wing

500 KVA Liquid Filled Pad-mount Transformer (Primary: 12.47KVA, Secondary: 480/277V, 3 Phase) for the South Patient Wing

Two of 1500KW, 480/277V, 3Phase Emergency Generators

STRUCTURAL:

Floor System for Patient Wings: 4 1/2" Normal weight concrete slab on 3"x18GA

Roof System for Patient Wings: Wide rib deck welded to support on 3"x22GA

Typical Beam to Column Connections: Full capacity moment connections

