NORTHEAST OHIO REGIONAL SEWER DISTRICT: PHASE II

CLEVELAND, OH | DISTRICT-WIDE ENERGY CONSERVATION & MANAGEMENT PROJECT

Brewer-Garrett

SIZE
185,142 sq. ft.

COST
$3,439,625

GUARANTEED ENERGY SAVINGS
$4,238,808

GUARANTEED PERIOD
15 Years

DURATION
16 Months

SCOPE

- Hot water boiler installation
- Air/dirt separator upgrades
- Single duct Variable Air Volume (VAV) installation
- Variable Refrigerant Flow (VRF) installation
- Energy recovery ventilator installation
- Electric duct deater installation
- Low ambient mini-split installation
- Interior LED lighting upgrades

The Northeast Ohio Regional Sewer District (NEORSD) manages three (3) wastewater treatment plants and the interceptor sewers in the service area. The three water treatment plants are Easterly, Westerly, and Southerly. After conducting major upgrades at their Environmental and Maintenance Services Center (EMSC), the District requested to perform a campus-wide upgrade for their administrative buildings.

Brewer-Garrett (**BG**) was selected to perform mechanical upgrades at each of the plant's main administrative buildings, but also the Southerly Thermal Conditioning Building and the George J. McMonagle (GJM) Building, which is the administrative headquarters for NEORSD.

$4.2M
IN GUARANTEED ENERGY SAVINGS

SINGLE DUCT VAV SYSTEM
REPLACED 72 VAV BOXES

ZERO
CHANGE ORDERS

BG disconnected, demoed, and disposed of 72 existing fan powered VAV boxes at the GJM Building. A new, single duct VAV was installed and sized to appropriately fit the remaining ductwork. To save on materials costs, BG reconfigured the existing power to the VAV units by utilizing a step-down transformer to provide power to the new controls.

BG replaced the existing RTU located on the top of the Thermal Building and the Southerly Admin Building. New VAV RTUs were installed utilizing an adapter curb to match the existing ductwork layouts. CO2 sensors were installed to measure levels in the buildings to signal the RTU to adequately supply outside air.

BG installed a VRF system to the Easterly Administrative Building that included outdoor condensing units and wall-hung, ceiling indoor units. BG reused as much of the existing ductwork as possible. Energy recovery ventilators (ERV) were provided to ensure proper levels of outside air would be provided to the building.

BG replaced three (3) existing boilers with two (2) new, near-condensing hot water boilers. The existing piping was demoed to install a primary-secondary arrangement with new pumps sized for the new boilers. All equipment was tied into the automation system.



