



## PROJECT HIGHLIGHT

### QLCI - Displacement Induction Ventilation

## OVERVIEW

At roughly 300,000 square feet, Tremper High School in Kenosha, WI had a two year, multi-phased renovation. Starting in 2018, approximately half of the 70 classrooms were retrofitted with the QLCI displacement induction ventilation. The remainder of the QLCI units and system components were installed in 2019 to complete the renovation work. Across all the classrooms, just under 200 QLCI diffusers were applied to deliver better indoor air quality (IAQ), improved thermal comfort, quieter operation, reduced maintenance, and increased system efficiencies.

## SOLUTION

The system operation is driven by several rooftop energy recovery DOAS units supplying the properly dehumidified 100% OA to the QLCI units for quantifiable ventilation air to the classrooms. Coupled with the energy recovery DOAS units, a chiller and boiler were applied to deliver comfort cooling in the classrooms.

One of the hurdles addressed during the design, one very common item in many renovation projects this system helps address, is the routing of OA to the classrooms. Due to the extremely low plenum spaces in the corridors, the design team applied a system of soffits along the interior walls in the classrooms to allow for ductwork without compromising overhead spaces in hallways.

## BENEFITS

The students, teachers, and maintenance staff are all benefiting from district's decision to apply a technology with no moving parts in the classroom to deliver classrooms focused on total indoor environmental quality.

Apply the proven science of better ventilation for your schools and classrooms!

### PROJECT NAME:

Tremper High School  
Kenosha School District

### LOCATION:

Kenosha, Wisconsin

### PROJECT TEAM:

Masters Building Solutions  
Carson Solutions

### EQUIPMENT:

- QLCI Displacement Induction Ventilation
- Dedicated Outdoor Air System
- Air-Cooled Chillers

