

# MAKING BUILDINGS BETTER



## RIDGEWOOD HIGH SCHOOL

**Architect:** Dahlquist & Lutzow

**Owner:** Ridgewood High School District 234

**Mechanical Engineer:** Consolidated Consulting Engineers

**Mechanical Contractor:** Amber Mechanical

### Customer Challenges:

In 2005 Ridgewood High school celebrated its 45<sup>th</sup> Anniversary. The building served the community well during that time, but like all buildings its age it was not equipped to handle the new demands of a 21<sup>st</sup> Century education. Around that time the Board of Education put together a long range facilities plan to update the educational facility. The objective of the project was to maintain a quality learning environment that the entire community would be proud of.

### Trane Solutions to the Challenges of the Project:

The Trane air-cooled chiller and outdoor air handling units helped Ridgewood update their aging building. Locating the air handlers on the roof allowed the school to save valuable space inside of the building. The improved comfort and ventilation provided by the system improved productivity and ensured the school complied with local codes.

Trane was able to directly measure the air flows through the air handlers to document the ventilation to the building. Additionally, the control system utilized CO<sub>2</sub> sensors in some spaces to adjust the ventilation based on occupancy. Supplying the correct amount of ventilation provides excellent indoor air quality, and saves energy. Another energy saving measure was to design the system with variable speed drives on the supply fans and chiller pumps. Trane's Tracer Summit Control system automated all the components of the system including chillers, pumps, air handlers, VAV boxes, and exhaust fans. The equipment came with factory mounted controls to simplify the installation process for Ridgewood's construction team. The Trane system uses low supply air temperature to reduce the required duct size.

**Trane Equipment/Controls:** Air-Cooled Chiller, Outdoor T-Series Air Handling Units, Tracer Summit Building Automation System.



EDUCATION