Dayton Avenue Educational Campus
NJSDA
Engineer of Record

PROJECT INFORMATION

CONCORD DIVISION
Commercial

PROJECT LOCATION
Passaic, NJ

MARKET
K-12 Schools

SERVICES
Engineer of Record

CONSTRUCTION COST
$240.9 Million

ABOUT THE CLIENT

The New Jersey Schools Development Authority (NJSDA) is the State agency responsible for fully funding and managing the new construction, modernization and renovation of school facilities projects in 31 New Jersey school districts known as the "SDA Districts".

REFERENCE

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PROJECT SUMMARY

The Dayton Avenue Educational Campus is one of the largest Design-Build projects undertaken by the New Jersey School Development Authority. Concord Engineering is Engineer of Record providing the mechanical, electrical, plumbing and fire protection engineering services in support of the Design Build Contractor (Terminal Construction Corporation) and Architect (RSC Architects). The Dayton Avenue Educational Campus will include an Early Childhood Center, Elementary School, Magnet School and Middle School on a 12-acre site. The new 448,000 square-foot school will educate approximately 3,000 students in grades Pre-Kindergarten to 8th grade.

PROJECT HIGHLIGHTS

- Concord Engineering developed high performance design documentation for the mechanical, electrical, plumbing and fire protection systems in coordination with all disciplines using Revit design software. All trades were fully coordinated using Building Information Modeling (BIM) software in coordination with the contractors.
- The mechanical, electrical, plumbing and fire protection systems are a mix of traditional systems typically applied in educational facilities with increased energy efficiency and state-of-the-art direct digital controls. The mechanical systems consist of 4-pipe, chilled water cooling and hot water heating systems that serve the entire facility. Airside systems are a mix of constant volume, variable air volume and single zone variable air volume. Classroom spaces have Dedicated Outdoor Air Systems (DOAS) to provide tempered ventilation air direct to the educational spaces. Electrical systems consist of a 13.2 kV electric service feeding multiple transformers that feed switchboards that then distribute power to branch panels throughout the facility. Natural Gas Generators are utilized to provide reliable power to required areas of the building during power outages. High efficiency LED lighting and lighting controls were utilized throughout the school. Plumbing systems consist of zoned, high efficiency domestic water heating systems and water-sense fixtures. Fire Protection systems are a mix of standard wet sprinkler systems with pre-action systems for specific areas.
- The Dayton Avenue Education Campus is being designed and constructed in accordance with the "green guidelines" of the United States Green Building Council (USCGBC) LEED Version 4.0 requirements. The project is projected to achieve LEED Certification (pending).