



CASE STUDY

Overview:

The middle and elementary schools in a New Jersey public school district needed updated HVAC equipment with a quick turnaround. The existing equipment was nearing the end of its useful life. The district's challenge was not unusual. Across the U.S., school district buildings and grounds management face increasing challenges in terms of maintaining facility infrastructure, e.g. heating, ventilation, and air conditioning (HVAC). Maintenance budgets often remain static or increase only marginally from year-to-year — even though a facility's appearance and its apparent state of repair are often used by the public as a barometer of a district's prudent use of its budget. The result is increased pressure on facilities management to essentially do more with less.

The facilities department of the New Jersey school district is similar to many other school districts. Its budget for service and equipment replacement is limited — in this case to \$50,000 per year — not enough to replace the HVAC infrastructure across six school buildings. Moreover, public schools are typically required to enter into a competitive bidding process for HVAC equipment which can be time-consuming and costly.



LOCATION:

New Jersey, USA



AREA SERVED:

Six buildings (489,000 square feet)



CHALLENGE:

Update aging HVAC infrastructure given facilities department budget limitation of \$50,000 per year for service and equipment



SOLUTION:

Maverick® packaged rooftop systems, Vision® air handlers, variable-refrigerant volume (VRV) condensing units, Daikin unit ventilators, and air- and water-source heat pumps

SCHOOL DISTRICT MODERNIZES HVAC INFRASTRUCTURE FOR A HEALTHIER,



QUIETER, AND MORE COMFORTABLE LEARNING ENVIRONMENT

Solution:

The answers became apparent when the school district's facility manager approached their Daikin Sales Representative, Ed Ciechon, who had recently attended the Daikin Applied Cooperative Training Session. They realized they could not afford to update the HVAC systems in their schools using their annual maintenance budget as the vehicle. Waiting to accumulate the required funding would simply take too long and posed the risk of a catastrophic failure in one building or another. Yet, a funding alternative that would work was to make the update a capital expenditure. Further, they could expedite the entire process by processing their equipment orders through Daikin's National Cooperative Offering, made available through OMNIA Partners. The latter program assists government and public entities in the procurement of HVAC solutions, and other advanced technological equipment and related services. In turn, the school district would enjoy the benefits of national-leveraged pricing. In addition to leveraging Daikin's National Cooperative Offering, the district also further capitalized on savings through participation in several federal incentive programs. This included several

state and local clean energy rebates, as well as the Federal 179D Tax Deduction Allocation, a federal program that incentivizes design teams to promote and select equipment to optimize energy efficiency. By using this approach, the district could get the solutions it wanted, when it needed them — with no reliance on a drawn-out bid process. Moreover, the pre-purchase would help expedite the equipment order, allowing the district time to bid the installation, while paralleling equipment production.

OMNIA Partners serves as a cooperative purchasing organization for state and local government, K-12 education, and colleges and universities. It also specializes in supply chain management. Daikin Applied is one of its 310,000 members, whose \$13 billion in annual purchasing volume allows OMNIA to source and supply products at a competitive price, and then expedite their delivery. Hallmarks of the program, then, are economies of scale that yield transparent and value-driven pricing.

The Daikin equipment solutions included Maverick® packaged rooftop units, Vision® air handlers, variable-refrigerant volume (VRV) condensing units and air- and water-source heat pumps. The Maverick series is one of Daikin's most energy efficient packaged rooftop units. Its design makes

it ideal for one- to three-story buildings, like schools, and is suited for remodel and replacement applications which made it an effective pairing for this project. The Maverick provides owners with efficient operation and easy installation — facilitating quick payback. Key features of the Maverick include scroll compressors for efficient cooling and dependability and enclosed condenser fan motors for reliable, quiet operation.

Most K-12 facilities are mandated to meet indoor air quality and volume standards, partially based on occupancy count. Given these environmental qualifications, Vision air handlers were selected as an effective solution for this project, as they provide high indoor air quality efficiently and with little noise. Additional features designed to combat air contamination, such as micro-filtration, bacteria-defeating UV lights, mold-resistant drain pans, and anti-microbial liners further served to provide a healthier and conducive learning environment.

Outcome:

By leveraging Daikin's National Cooperative Offering, made available through OMNIA Partners, the New Jersey school district avoided the frustrating aspects of the equipment bid process. With this approach, the district vastly reduced equipment delivery and installation times to successfully meet time-sensitive project requirements. The district was also able to overcome tight-budget restrictions through reduced equipment and installation costs. By its own estimation, the district saved over \$400,000 in overall construction savings.







Daikin products and services are available on a competitively solicited and publicly awarded cooperative contract, available nationwide through OMNIA Partners. Visit https://www.omniapartners.com/publicsector/suppliers/daikin-applied/contract-documentation for full contract documentation.