

Pleasantdale Elementary School
8100 School Street
La Grange, IL 60525
708.246.4700 Fax: 708.246.4625



Pleasantdale Middle School
7450 S. Wolf Road
Burr Ridge, IL 60527
708.246.3210 Fax: 708.352.0092

Pleasantdale School District 107 | 7450 S. Wolf Road | Burr Ridge, IL 60527 | 708.784.2013 | Fax: 708.246.0161 | www.d107.org

To: Dr. Dave Palzet, Superintendent

From: Mr. Griffin Sonntag, Business Manager/CSBO/Director of Transportation

Re: Proposed Summer 2024 Project: UniVent Replacement Alternative, New HVAC Units, and New District-Wide HVAC Controls

Date: August 16, 2023

In 2022, the district commissioned a facilities study by our architect firm, STR Partners. This study aimed to determine the highest priority facility needs and develop a five-year plan to ensure the upkeep of the district's physical assets. The study results showed that many of the district's aging mechanicals must be repaired or replaced. To that end, the district developed a funding strategy that would allow the district to complete these projects without increasing taxpayer burden. The district's three-pronged approach includes the sale of debt service extension bonds, using operational dollars from the district levy, and using district reserves. The district has completed roofing projects at both schools and has replaced one HVAC unit at each school. These projects have been completed on time and on budget.

As we plan for our second year of the five-year facility plan, we look to improve the HVAC system at Pleasantdale Elementary School. The current HVAC system, comprised of a unit ventilator system (UniVents), is well past its 20-year life expectancy. Additionally, the current UniVents create noise and do not regulate the temperature of the classrooms well. These aging systems are not energy efficient and are costly to maintain. Also, because of the age of the system and the increasing mechanical issues, we cannot accurately control the amount of fresh air coming into the classrooms. Furthermore, both schools' Building Automation Systems (BAS) are outdated and ineffective. Finally, we have three roof top HVAC units (RTUs) that are at their end of life and need to be replaced. While the district's maintenance team has done a remarkable job keeping our systems running and implementing a deferred maintenance plan, a change is necessary.

The fact that the entire HVAC system at the elementary school is at end-of-life and obsolete, we have a unique opportunity to implement something different. The administration is recommending that the district install new Dedicated Outdoor Air Systems (DOAS) on the rooftops and Inductions Units instead of UniVents in the classrooms. This new system has significant advantages over traditional UniVents.

These advantages include:

- Low Noise - No fans or air blowing due to the use of induction air displacement technology
- Better temperature control throughout the classroom - no more hot/cold spots in our classrooms
- 100% fresh air entering classrooms
- Humidity control
- Zero maintenance in classrooms (all filter replacements and maintenance would occur on the roof top)
- 30+ year lifespan

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However, the most significant benefit to our students is that these units will allow for a better learning environment with no ambient noise and consistent temperatures within our classrooms.

The cost of implementing Induction Units is similar to that of a UniVent replacement, with a UniVent replacement costing an estimated \$3,180,197. However, based on the new system's increased efficiency, we expect to recoup nearly a third of our costs in the first 12 years and could recoup the entire cost of the system over the system's lifespan (see table below). Additionally, installation of this system qualifies for at least \$25,000 in one-time ComEd rebates. The total cost of this project is \$3,487,864 and Midwest Mechanical would perform the service. Midwest Mechanical is a privately held commercial HVAC services and facility management company focused on energy efficiency for building owners and operators throughout Chicago and Illinois. Established in 1974, Midwest Mechanical partners with clients to help control the cost of HVAC system operations through maintenance programs, operations, and retrofit projects. Every aspect of our mechanical services solutions is tied to the core goal of making mechanical systems function more efficiently, reliably, and effectively. From feasibility studies to planned maintenance and energy optimization programs, our team always takes the extra step to ensure your building operates at its best. The district currently uses Midwest Mechanical for HVAC repairs and maintenance.

Year	Energy Savings	Op Savings	Total
1	\$ 14,288.00	\$ 54,049.00	\$ 68,337.00
2	\$ 14,716.64	\$ 55,670.47	\$ 70,387.11
3	\$ 15,158.14	\$ 57,340.58	\$ 72,498.72
4	\$ 15,612.88	\$ 59,060.80	\$ 74,673.68
5	\$ 16,081.27	\$ 60,832.63	\$ 76,913.90
6	\$ 16,563.71	\$ 62,657.60	\$ 79,221.31
7	\$ 17,060.62	\$ 64,537.33	\$ 81,597.95
8	\$ 17,572.44	\$ 66,473.45	\$ 84,045.89
9	\$ 18,099.61	\$ 68,467.66	\$ 86,567.27
10	\$ 18,642.60	\$ 70,521.69	\$ 89,164.29
11	\$ 19,201.88	\$ 72,637.34	\$ 91,839.21
12	\$ 19,777.93	\$ 74,816.46	\$ 94,594.39
Grand Totals	\$ 127,053.70	\$ 480,621.87	\$969,840.72

To pay for this project, we could use the Board approved strategy of using proceeds from our bond sale, operational funds, and reserves to cover the cost. The breakdown of funding can be found below.

- \$700,000 Bond Proceeds
- \$500,000 Working Cash
- \$600,000 Operating Funds
- \$1,700,000 Reserves
 - Total: \$3,500,000

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It is the recommendation of the administration to approve an agreement with Midwest Mechanical for the operational improvements described above at the September 20, 2023 BOE meeting so they can begin securing the materials necessary to complete the project over the 2024 summer.