

Ripon Area School District
Office of Director of Facilities

Memo

To: Dr. Mary Whitrock, Board of Education

From: Brian Appleman, Director of Facilities; Jonah Adams, Business Manager

Date: April 17, 2025

Re: Fund 46 Capital Project: HVAC Controllers at Middle/High School

Introduction

This memo outlines a proposed capital improvement project to replace two outdated HVAC automated network controllers for the middle/high school building. We seek the Board's approval to proceed with this project, which would be funded from the Long-Term Capital Improvement Trust Fund (Fund 46).

Background

In the 2018-2019 school year, RASD established Fund 46 to finance significant facilities projects. Over the past six years, savings have been directed to this fund to boost General Fund (Fund 10) expenditures, maximizing state aid and reducing property taxes. A key restriction of Fund 46 is that deposits remain inaccessible for five years. In April 2024, the fund matured and was first utilized for a middle school roofing project. The current balance stands at \$2,195,259 - though approved projects awaiting completion will reduce this amount. A detailed revenue and expenditure summary is attached on the final page.

Middle/High School HVAC Automation Controllers Replacement

The Middle/High School's HVAC system is managed by Java Application Control Engine (JACE) controllers, installed around 2010. These devices serve as the brain of the building's automation system, collecting data from sensors (thermostats, valves) and issuing commands to regulate conditions like temperature and airflow. Running on a web-based platform, JACE controllers allow customizable programming and remote monitoring by staff. However, the

current units no longer receive software updates or security patches and were designated "end of life" by the manufacturer in 2021.

Currently, the controllers intermittently restart, causing temporary outages in HVAC automation. Built-in safeties have minimized disruptions to heating and cooling, but there is some risk of failure. The proprietary software system relies on an outdated PUPnet protocol and lacks an open BACnet standard, which restricts vendor options due to software licensing and compatibility issues.

Replacing both controllers and updating the software will:

- Prevent unexpected HVAC restarts and outages
- Maintain compatibility with existing older controllers throughout the building
- Transition to an open BACnet software protocol for easier future servicing
- Provide security updates for this critical building system

To control costs, the district will retain the current graphic system. The estimated budget for new controllers, software, and staff training is roughly \$30,000.

Next Steps

Finding additional vendors for this project was difficult due to the proprietary nature of the current system and the use of older controllers needing a PUP driver to communicate with the new JACE controllers. Administrators consulted with other school districts for advice on additional vendors capable of providing the necessary components for this update though we were unable to secure additional proposals. Quality Controls and Solutions, the district's other HVAC provider, declined to bid due to the proprietary nature of the current system but offered future assistance with any proposed control changes.

Administrators recommend approving this project with J and H Controls for this necessary update. Approval now will lock in the current proposed pricing and the district will avoid possible increased costs due to tariffs. We look forward to discussing this project further at your convenience.

LONG-TERM CAPITAL IMPROVEMENT TRUST FUND - 46

as of April 17, 2025

	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
BEGINNING FUND BALANCE	-	\$ 296,004	\$ 1,239,157	\$ 2,128,134	\$ 2,561,950	\$ 2,956,248	\$ 2,831,663
REVENUE:							
Transfer from General Fund - 10.....	\$ 296,000	\$ 935,297	\$ 886,376	\$ 425,009	\$ 374,947	-	-
Interest.....	4	7,856	2,601	9,809	19,351	207,570	87,060
TOTAL REVENUE.....	\$ 296,004	\$ 943,153	\$ 888,977	\$ 434,818	\$ 394,298	\$ 207,570	\$ 87,060
EXPENDITURES:							
Realized Loss on Investments.....	-	-	-	\$ 1,003	-	-	-
Middle School Roof Restoration	-	-	-	-	-	332,155	375,981
John Deere Lawn Mower.....	-	-	-	-	-	-	44,015
Air Conditioner Replacement (MPQ).....	-	-	-	-	-	-	105,525
Construction - Interior Door (RHS).....	-	-	-	-	-	-	6,885
Carpet & Vinyl Flooring (BP).....	-	-	-	-	-	-	30,200
St. Wenceslaus St. Sidewalks.....	-	-	-	-	-	-	55,132
Cafeteria Table Replacement (MPQ).....	-	-	-	-	-	-	47,403
Electrical Installation - Batting Cage (RHS).....	-	-	-	-	-	-	15,115
Furniture Replacement (BP).....	-	-	-	-	-	-	43,208
TOTAL EXPENDITURES.....	-	-	-	\$ 1,003	-	\$ 332,155	\$ 723,464
NET REVENUE (LOSS).....	\$ 296,004	\$ 943,153	\$ 888,977	\$ 433,815	\$ 394,298	\$ (124,585)	\$ (636,404)

Notes: Some costs shown have been encumbered, but not fully paid. An additional air conditioning replacement at Murray Park/ Quest has been approved by the School Board.