



ST. JOHNSBURY SCHOOL DISTRICT

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St. Johnsbury School Facilities- Assessment and Findings

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Introduction

A safe, comfortable, and well-maintained school facility is essential to supporting student learning. [Studies](#) from the National Center on School Infrastructure (NCSI) show that schools with higher facilities investments and planned maintenance programs perform significantly better, averaging 15% higher test scores, than those in underfunded districts.

This five-year plan outlines St. Johnsbury School's facility needs, priorities, and proposed projects based on findings from the following sources:

- [Vermont Agency of Education – Facility Condition Assessment](#) (2023)
- Black River Design
- Efficiency Vermont
- Contractor evaluations
- Internal assessments conducted by the Facilities Manager

Participating Contractors and Partners

The following contractors and agencies have contributed assessments or recommendations:

- Vermont Heating and Ventilation (VHV)
- Fred's Energy
- Temperature Controls of Vermont (TCV)

- Fallbrook Electric
- Vermont Life Safety
- Otis Elevator
- Rodd Roofing
- Blake Jenkins Painting
- Sherwin Williams Representative
- Tri-State Folding Partitions
- Vermont Department of Public Safety

These professionals completed walkthroughs, reviewed blueprints, and provided expertise on mechanical, safety, and compliance issues across the facility.

Overview of Findings

Over the past 25 years, the St. Johnsbury School has made several improvements related to the learning environment, safety, and accessibility. However, deferred maintenance, largely due to funding limitations, has created a backlog of essential repairs and replacements. The result is that many systems are at or beyond their useful life, requiring either modernization or complete replacement.

This report summarizes the current condition, identified needs, project types, estimated costs, and timelines for major facility projects at the St. Johnsbury School. Given current market volatility for materials and labor, cost projections may vary in future years.

Preventative Maintenance Program

Our new Preventative Maintenance Program has already proven to be a valuable investment. It enables the early detection of mechanical and safety issues, allowing repairs before they escalate into costly emergencies. According to the International Facility Managers Association (IFMA) and NCSI, emergency repairs typically cost 30–40% more than planned maintenance. At an annual cost of about \$15,000, the Preventative Maintenance Program will quickly pay for itself. In contrast, last summer’s emergency repairs totaled over \$100,000 due to water leaks

from aging roofs, corroded pipes, and deteriorating system components. Proactive maintenance also prevents disruptions to learning caused by equipment failures and uncomfortable classroom conditions.

Heating System Findings

Leaks and Corrosion

Most heating system leaks result from pipe and valve corrosion caused by age and glycol exposure. Many pipes and roof drain lines are between 25 and 40 years old, and numerous internal gaskets are not rated for glycol use.

As these gaskets degrade, they corrode the surrounding pipes, valves, and pump casings. Roughly 10% of fittings and valves showing corrosion have been replaced to date. A glycol mixture test has been scheduled to verify appropriate ratios and identify contributing factors.

Classroom Unit Ventilators

The classroom unit ventilators, which provide both heat and ventilation, are 25–35 years old. Most:

- Lack sealed fresh air louvers
- Contain corroded lines and valves
- Operate at full fan speed continuously rather than modulating based on need

Proposal: Replace or refurbish 10 units per year with modern systems featuring:

- Modulating dampers for improved air quality control
- Variable-speed motors for energy efficiency
- Updated high-flow fans
- New louvers, valves, and piping

These upgrades would improve comfort, efficiency, and reduce boiler demand.

Roofing and Drainage Findings

The most problematic roofs are on the south side of the building. These are older “ballasted” systems, not fully adhered, and are now prone to cracking under the stone layer.

Installed 25–30 years ago, these roofs have minimal insulation and aging drain systems. Roof drain gaskets, estimated to be 30–40 years old, are failing and extremely labor-intensive to replace. Because trapped water can travel between insulation layers, leaks are difficult to pinpoint and often years old.

Next Step: Continue collaboration with Black River Design to develop replacement options, including higher insulation value and improved drainage design. These replacements should be prioritized in phases over the next three summers.

Safety and Compliance Needs

Several critical safety issues have been identified by both state and private inspections. Some have temporary fixes but remain beyond useful life:

- **Fire Alarm System:** Functional but obsolete; parts are difficult to obtain, creating risk for costly downtime or mandated fire watches.
- **Gymnasium:** Bleachers must be replaced due to age and parts availability.
- **Elevators and Sprinkler Systems:** Require upgrades per inspection reports.
- **Locks and Panic Hardware:** Many are outdated and cannot be secured from the occupied side and hardware is worn.
- **Water System Monitoring:** An automatic shutoff valve integrated with the Building Management System is proposed to prevent damage from major leaks.
- **Science Lab:** Installation of a fume hood exhaust system is required for safety and compliance for instructional use.

Addressing these safety issues will improve regulatory compliance and reduce operational risks.

Building Management System (BMS)

A joint assessment by **Efficiency Vermont, VHV, TCV**, and the Facilities Department identified numerous improvements for efficiency and reliability. The existing system is outdated and inconsistent across zones. Efficiency Vermont will provide partial funding for approved upgrades. The assessment itself was fully funded by Efficiency Vermont.

Upgrading the BMS will allow for improved automation, energy tracking, and integration with leak detection, HVAC controls, and occupancy monitoring, reducing both cost and energy use over time.

Maintenance Infrastructure and Storage

Current maintenance facilities are insufficient for equipment storage and protection. Exposure to weather reduces equipment lifespan by up to 30% (American Agriculture Association). There is also limited storage for furniture, resulting in mold, rust, and damage over time.

A new maintenance garage is proposed to:

- Store tractors, implements, and seasonal equipment
- Provide space for furniture storage to prevent mold and deterioration
- Serve as a workspace for maintenance operations year-round

We are exploring a collaboration with St. Johnsbury Academy's Trades Program to help construct the building, reducing costs and supporting student learning opportunities.

Interior and Exterior Surfaces

During 2025, many interior rooms received new flooring; however, the hallways, cafeteria, gymnasium, and bathrooms still have original surfaces. Older flooring is difficult to maintain and prone to damage. These areas should be considered for replacement if additional funding or grants become available.

- Many interior rooms received new flooring in 2025, but halls, cafeterias, gyms, and bathrooms still have original floors. These should be prioritized if funding becomes available.

- Pavement and concrete walkways show cracking and frost heaving, posing safety hazards.
- Floor-cleaning equipment is aging; replacement with a smaller, efficient model is recommended to reduce downtime and maintenance costs.
- Repaint exterior sections of the building to prevent water infiltration and concrete spalling.

General Building Conditions

Several replacements should be prioritized to maintain safety, efficiency, and aesthetics:

- **Exterior Paint:** Deterioration of exterior paint on older building sections could lead to water infiltration and concrete spalling.
- Replace deteriorating countertops.

Future Considerations:

- **Air Conditioning:** With warmer seasons extending, cooling is increasingly important for classroom comfort and extended learning during summer months. Currently we open the outside dampers 100% at 5:00am when the temperature is expected to be over 75 degrees. This allows the spaces to be comfortable until about 11:00am.
- **Exterior Restrooms and Concession Stand:** These additions would reduce student travel time and enhance community events.

These projects not only improve the facility's appearance but also support safety, comfort, and community engagement. By addressing these and some other needs, over the next five years we can get much closer to building our facilities sustainability plan that helps allow us to provide a sustainable budget, sustainable operations and a sustainable learning and work environment.

Conclusion: Building Toward Sustainability

By addressing these needs over the next five years, St. Johnsbury School can build a sustainable facilities plan that supports:

- A predictable, efficient budget
- Reliable daily operations
- A safe and healthy learning environment
- Long-term stewardship of district assets

Next Steps

If funding is approved:

- Scopes of Work and RFPs will be developed using current data and professional input.
- Bidding will begin by December 2025.
- Work will be scheduled for Summer 2026, coordinated with summer school operations.
- The Facilities Director will oversee all bids and implementation to ensure fiscal responsibility and minimal disruption to learning.

St. Johnsbury School District - Five Year Facility Improvement Plan 10/16/2025

Project Name	Need	Priority	Budget	Requested Scope	Year
Roof Replacement Design			\$6,500	Design and spec insulation and rubber	2026
Roof Replacement	Safety	1	\$280,000	Over 25 years old	2026
Roof Drain Pipe Repairs	Safety	1	\$15,000	Leaking gaskets between sections of steel pipe	2026
Gym Repairs	Safety	1	\$31,575	Repairs to equipment in both gyms per inspections	2026
Replace Gym Bleachers	Safety	1	\$165,000	Includes electrical cost for Fallbrook electric per inspections	2026
Paint Building Exterior	Deferred	1	\$65,000	Front and back as noted on RFP. To prevent spalling	2026
Controls Upgrade		1	\$50,000	Includes repairs and upgrades to better regulate heating	2026
Shower Repairs	Deferred	1	\$60,000	Rebuild old showers that leak in gym baths and nurse area	2026
Replace Roof and Paint Dugouts		2	\$5,000	Upgrade dugouts	2026
Sprinkler Head Inspections	Safety	1	\$35,000	Past due inspections	2026
Door Locks and Other Hardware	Safety	1	\$80,000	Install new locks and some panic hardware and few doors	2026
Replace Floor Machine		2	\$14,000	Replaces 10 year old machine	2026
Install Water Monitoring System		1	\$7,500	Reports and blocks the main lines from running continuous	2026
2026 Estimated Total			\$814,575		
Replace South Roof		2	\$400,000	Replace roof and add insulation	2027
Replace Fire Alarm System	Safety	1	\$600,000	Replace equipment with code compliant equipment	2027
2027 Estimated Total			\$1,000,000		
Upgrade Elevators	Safety	1	\$130,000	Parts are getting obsolete and repair costs are rising	2028
Replace Classroom Counters	Deferred	3	\$80,000	Damaged and worn out counters and faucets	2028
Install Shade for Big Windows		3	\$10,000	To keep the building cooler/warmer (facing south)	2028
Replace 3rd Floor A/C Units	Safety	2	\$50,000	Units past their useful life and maintenance costs are high	2028
Upgrade Classroom Heaters (20)		3	\$140,000	New louvers and gaskets, new eci motors, Insulate	2028
Replace Cafeteria Floor	Deferred	3	\$75,000	Sub surface cement loose and cracking tile, repaired yearly	2028
Install Hood in Upper Science	Safety	2	\$50,000	No hood present	2028
2028 Estimated Total			\$535,000		
Replace Classroom Heaters (20)		3	\$145,000	New louvers and gaskets, new eci motors, Insulate	2029
Build Maintenance Shop/Storage		4	\$200,000	Store tractors, implements, mowers and supplies	2029
Replace Walk in Freezer/Fridge		3	\$35,000	Will be due for replacement, needs upgrade	2029
Repair Walkways and Parking	Deferred	3	\$100,000	Cement walkways and pavement are past due for repairs	2029
2029 Estimated Total			\$480,000		
Replace Classroom Heaters (20)		3	\$150,000	New louvers and gaskets, new ECI motors, insulate	2030
Replace Heating Pumps (6)		4	\$40,000	Older pumps that are outdated	2030
Building Management Upgrade		4	\$30,000	Will need to upgrade system for compatibility	2030
New Roof on West Wing		4	\$350,000	No current leaks or signs of aging	2030
2030 Estimated Total			\$570,000		
Total Estimated (5) Year Cost			\$3,399,575		
Future Projects					
Central AC		4	\$1,500,000		2031+

Notes:

Estimated costs are based on discussions with contractors, general contractor estimates, standard square-foot pricing, and professional construction knowledge. Projects were identified through deferred maintenance records, the Facility Condition Assessment (FCA), the Facility Condition Index (FCI), and evaluations of remaining useful life. This facility improvement plan also considers life safety requirements and the current needs of the school. Priorities reflect present needs and may evolve over time.