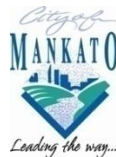


Fire Station 3 Restroom Remodel and HVAC Improvements

Project Feasibility Report

City Project No. 11159

March 23, 2026



Project Feasibility Report

Fire Station 3 Heating, Ventilation and Air Conditioning and Restroom Remodel
City Project #11159
City of Mankato

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II. PROJECT CONTACTS

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Councilor Ward 5	Jessica Hatanpa	507.613.8067	jhatanpa@mankatomn.gov
City Manager	Susan Arntz	507.387.8695	sarntz@mankatomn.gov
Director of Admin. Services	Parker Skophammer	507.387.8739	pskophammer@mankatomn.gov
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Facilities Manager	Dustin Bornholdt	507.387.8576	dbornholdt@mankatomn.gov
Facilities Project Coordinator	Ryan Thormodson	507.387.8437	rthormodson@mankatomn.gov

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III. EXECUTIVE SUMMARY

Fire Station 3 located at 1230 Pohl Rd. is a unique building consisting of not only the Fire Station but an attached living quarters consisting of 12 single bedroom suites. These suites all utilize a shared Jack and Jill style bathroom, meaning 2 units share 1 bathroom. These styles of bathrooms generally see more wear and tear over an independent style due to the increased traffic and more frequent use of storage components and locking mechanisms. They typically have a functional lifespan of 7 to 15 years before requiring a major renovation or update. While the plumbing and structural elements can last much longer, the high-traffic nature of these bathrooms—often used by children or guests—means fixtures, surfaces, and design elements may become outdated or worn within this timeframe.

Fire Station 3 also has an aged Heating, Ventilation and Air Conditioning (HVAC) units in need of replacement. Our current HVAC unit has no “outside air” capabilities. Not having fresh air supply in your HVAC unit, or operating a system without proper ventilation, means your home or building is likely relying on potentially recirculated, stale air. This creates a “sealed box” environment where pollutants, moisture, and odors accumulate, leading to significant health, safety, and structural risks. Not installing fresh, modern HVAC units in multi-housing type structures often creates critical risks, including poor indoor air quality, mold growth, and high energy costs. Lack of ventilation leads to CO2 buildup, triggering health issues like asthma and infections, while also causing structural damage from humidity and increased fire risks from failing equipment. By adding updated systems like energy recovery ventilators (ERV) and variable refrigerant flow (VRF) we enhance core efficiency, increase air transfer and meet indoor quality requirements.

The estimated cost of these necessary improvements is approximately \$725,000

IV. PROJECT INTRODUCTION

The proposed project is to remodel our resident suite restrooms and replace the aging equipment that provides heating, ventilation and air conditioning for our Fire Station 3. The City Council has authorized the preparation of a project feasibility report to define the scope and determine the reasonableness of the project.

The specific objectives of this preliminary feasibility report are to:

- Evaluate the need for this project.
- Determine the necessary improvements.
- Provide information on the estimated costs for the proposed project.
- Determine the project schedule.
- Determine the feasibility of the proposed project.

This project, as proposed, involves remodeling restrooms, replacing heating, ventilation and air conditioning (HVAC) equipment serving Fire Station 3:

- Demolition, removal, and proper disposal of existing heating, ventilation and air conditioning (HVAC) equipment.
- Installation of new HVAC equipment to meet applicable fresh air intake ASHRAE standards.
- Remodel of existing resident restrooms to improve resident experience and updated bath fans to balance air.
- New water heaters and associated components.

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V. EXISTING CONDITIONS

The existing HVAC equipment at Fire Station 3 has reached end-of-life (equipment obsolescence). When our aging equipment reaches equipment obsolescence it can no longer be repaired due to the lack of available replacement parts. When Original Equipment Manufacturers (OEMs) cease production of parts businesses are left with functional, yet unrepairable equipment. The reasons Original Equipment Manufacturers cease production of parts is because they have moved on to new technologies or have gone out of business.

The existing resident restrooms have exceeded their life expectancy as well. When bathrooms meet end-of-life care, they require immediate modifications to ensure safety, dignity, and accessibility.

The current Fire Station HVAC equipment and resident restrooms have limitations which include existing configuration, nonfunctioning equipment, and obsolete equipment. Other limitations include the following:

- Lack of energy conservation capabilities and control of temps in resident spaces.
 - This is our biggest complaint from residents.
- Lack of adequate ventilation systems and no fresh air intake
 - Due to issues with dryer, exhaust fans, stove exhaust hoods and vents.
- Worn out fixtures, showers and lavatory cabinets.
- Aged paint, ceramic tile and lighting fixtures.

VI. PROPOSED IMPROVEMENTS

The areas of proposed improvements associated with the Fire Station 3 restroom remodel project include architectural finish replacement of shower rooms, lavatory cabinets, paint, ceramic tiles, plumbing fixtures and lights in each resident restroom.

The areas of proposed improvements associated with the Fire Station 3 heating, ventilation and air conditioning equipment project include a new HVAC unit to serve the building, a variable refrigerant flow (VRF) system with individual resident room control to improve efficiency and provide zone control to resident spaces. An energy recovery ventilator (ERVs) will be added to provide code required ventilation requirements. Replacement of the existing water heater and condensing boiler is also included in the project.

The proposed improvements for adding variable refrigerant flow (VRF) system improvements focus on enhancing energy efficiency by up to 50% over traditional systems, featuring advancements like variable-speed compressors, vapor injection for cold climates, and smart, centralized controls. Key upgrades include pairing with heat recovery ventilators for better efficiency, improved zonal control, and quieter operation, making them ideal for both residential and commercial applications.

The proposed improvements for adding energy recovery ventilators (ERVs) are being improved with advanced cores for up to 82% efficiency, dual DC motors for quieter operation, and smart, demand-controlled ventilation (VOC/CO2 sensors) to optimize air quality while reducing energy usage

The proposed improvements for the replacement of the existing water heater and condensing boiler HVAC systems focus on air quality and resident safety. The various systems being installed are to ensure we are limiting the risk of CO2 in spaces and venting all toxic gases into the outside air.

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To efficiently complete all the proposed construction products, facilities engineering has developed a phasing schedule for the resident restroom remodel portion of the project. This work is very complex and involves displacing residents to complete the proposed work. Phasing a project breaks large, complex endeavors into smaller, manageable, and sequential stages. Key benefits include improved cash flow management, reduced financial risk, greater flexibility for scope adjustments, minimized operational disruption, and faster partial delivery of key areas. This approach allows for better risk management and stakeholder communication

VII. APPROVALS/PERMITS

Approvals and permits are required from various agencies for the construction of the project. They include:

- Electrical Permit
- Building Permit

VIII. PROJECT COST ESTIMATE AND FINANCING

Estimated projections for the cost of this project are summarized below.

ITEM	COST
Existing HVAC System Removal and Disposal	\$20,000
Existing Bathroom Finish Removal - Common	\$3,000
Existing Resident Bathroom Finish Removal	\$20,000
Existing Ceiling Removal	\$20,000
VRF and Ventilation System	\$233,000
Hot Water Valve Installation	\$35,000
Boiler and Related Component Replacement	\$25,000
New Ceiling Tiles	\$25,000
Common Bathroom Renovation	\$20,000
Resident Bathroom Renovations	\$120,000
Building Automation System	\$50,000
TOTAL CONSTRUCTION	\$571,000
Final Construction Contract	\$571,000
Construction Contingency	\$60,820
Administration	\$37,080
Engineering and Construction Administration	\$56,100
TOTAL PROJECT COST	\$725,000

Funding for the proposed improvements is shown in the table below.

FUNDING SOURCE	AMOUNT	PERCENT
Facilities Capital	\$725,000	100%
TOTAL FUNDS	\$725,000	100%

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IX. POSSIBLE SCHEDULE

The following is a tentative schedule for the proposed heating and ventilation improvements at the Public Works Center:

03/26/2026	Advertise for Bids
04/17/2026	Bid Opening
04/27/2026	Bid Award
04/28/2026	Contractor Purchases Long-Lead Item Equipment
08/03/2026	Project Start Date
10/30/2026	Substantial Completion Date

X. CONCLUSION AND RECOMMENDATIONS

The heating, ventilation and air conditioning systems associated with Fire Station 3 need replacement. The addition of several HVAC systems to help maintain the space and ensure indoor air quality improvements are much needed. This equipment adds more functionality to our daily work and provides an additional layer of safety for our staff. If the proposed replacements and upgrades are not made, we could see unexpected maintenance costs, possible operational downtimes and could have some elevated safety risks for staff.

The restroom remodel is a top priority for residents and staff, they require immediate modifications to ensure safety, dignity, and accessibility.

From an asset management and safety standpoint, this project is both necessary and feasible. Additionally, the best way to accomplish this project is by soliciting competitive bids for the work. The feasibility of the project is contingent upon City Council findings regarding project financing.

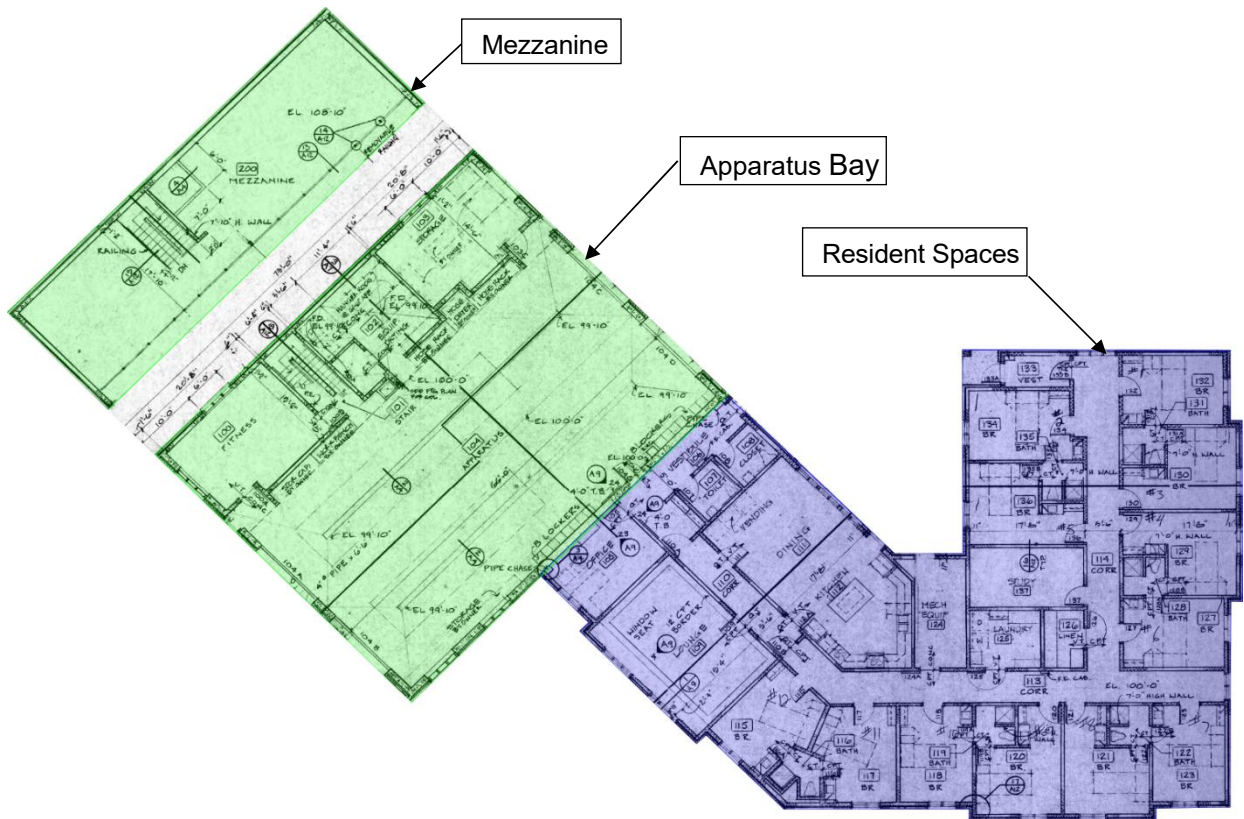
Staff recommend the Council accept this project feasibility report, order the City Manager to prepare final plans and specifications and instruct the City Manager to advertise for bids in accordance with the requirement of law.

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XI. APPENDIX

a. Figure A – Site Plan



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XII. Appendix

a. Figure B – Existing Equipment



Indoor AC Unit



Water Heater



Outdoor AC Condenser



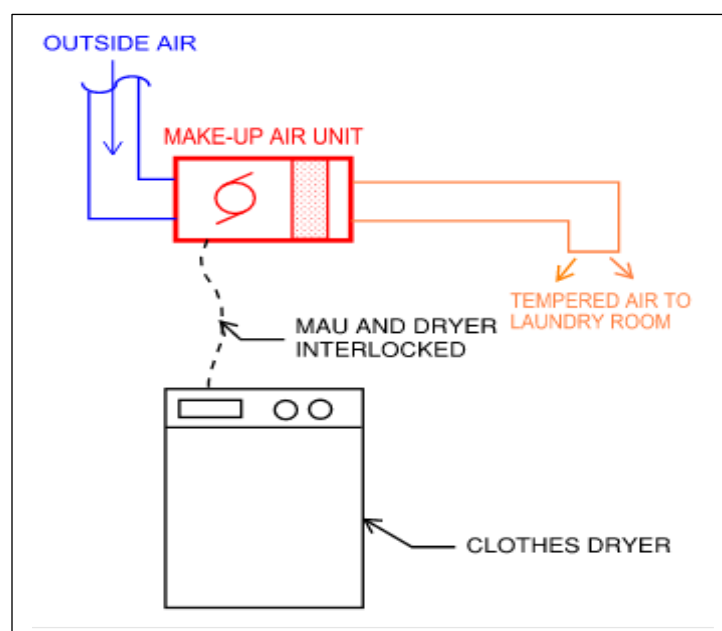
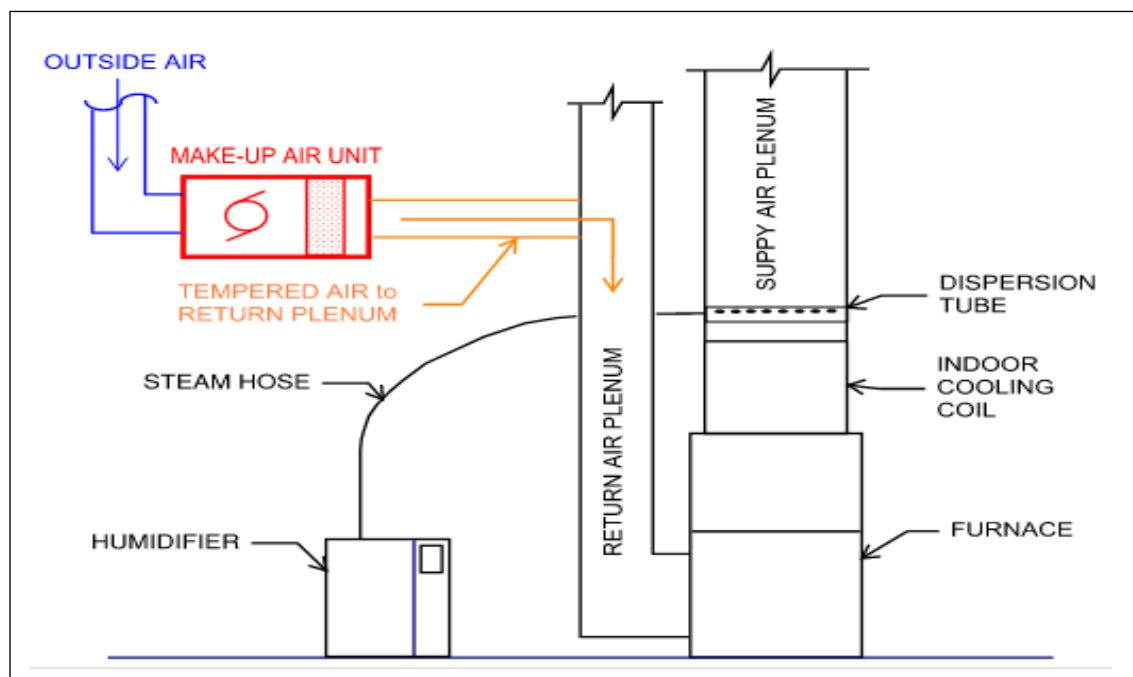
Boiler

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XIII. Appendix

a. Figure C – Proposed New System



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a. Figure D – Proposed Phasing Schedule Restroom Remodel

