



911 DISPATCH CENTER

WYANDOTTE, MI

CHALLENGE:

Tight space constraints and limited building documentation created significant uncertainty during early design. With new HVAC systems required for the renovated first and third floors, the project demanded a solution that could fit within restricted roof and exterior clearances while still meeting the performance needs of a modern dispatch center, offices and conference rooms.

SOLUTION: Varix™ VRF Systems

- Fits tight building footprints
- Clean 360° cassette indoor unit look
- Smooth phased installation support
- Zoning tailored by space
- Reliable comfort, nonstop operations



PROJECT OVERVIEW

When a three-story municipal building in Wyandotte, Michigan was repurposed into a 911 dispatch center serving six surrounding cities; the HVAC system had to deliver far more than basic comfort. The facility required a solution capable of supporting continuous, mission-critical operations while overcoming significant space limitations, uncertain building conditions and cold-climate performance demands.

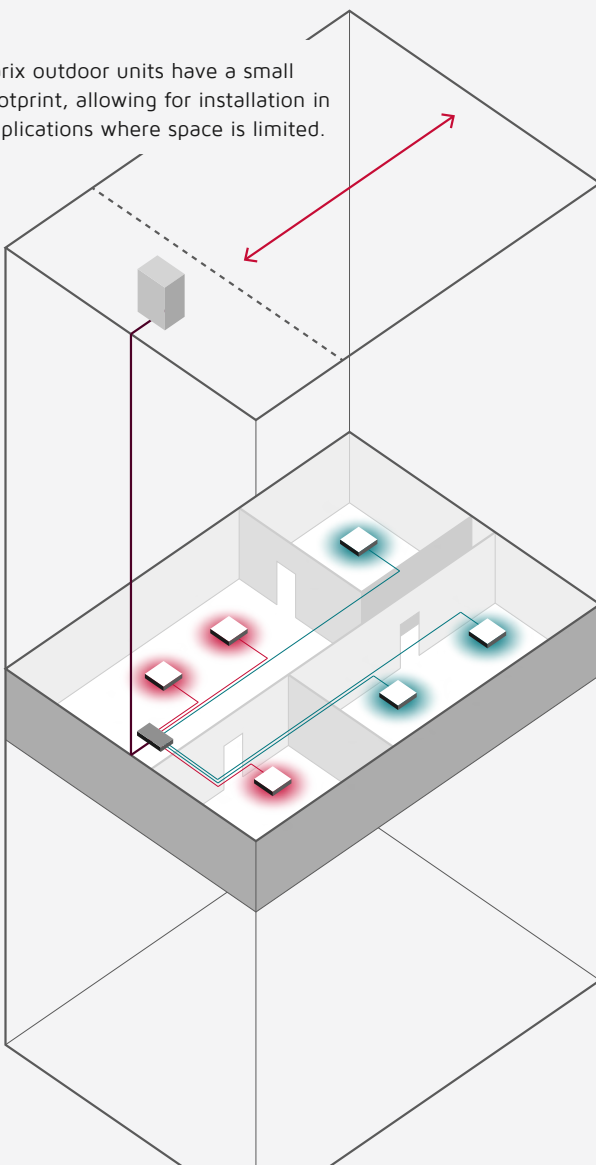
To meet these challenges, the project team selected Varix™ VRF, a system engineered for flexibility, efficiency and dependable performance in complex retrofit environments.



LIMITED SPACE, HIGH EXPECTATIONS

The remodel project converted portions of the building into a dispatch center, city offices and conference rooms. While the second floor was excluded from renovation, both the first and third floors required entirely new HVAC systems to support the updated space.

Varix outdoor units have a small footprint, allowing for installation in applications where space is limited.



From the beginning, space presented a challenge. Existing documentation offered limited insight into structural clearances and ceiling space, adding uncertainty during early design stages.

"We had so much limited space — on the roof and outside the building — and not full documentation on construction. VRF was going to be the way to do it.", said Ruben Cabello, Vice President of Mechanical Engineering at JRED Engineering.

CHALLENGES INCLUDED:

- Limited rooftop and mechanical space
- Tight ceiling clearances
- Architectural and aesthetic requirements
- Cold-climate performance needs
- Mission-critical reliability expectations

A FLEXIBLE, PHASED VRF DESIGN SOLUTION

Varix™ VRF was selected early as the basis of design, providing the adaptability needed to address unknown structural conditions while eliminating the need for large rooftop equipment. The final system design incorporated a combination of single phase and three phase outdoor units, allowing the engineering team to match capacity and electrical requirements to specific zones throughout the building. This mixed configuration optimized performance while maintaining design flexibility.

Installation was executed in two distinct phases:

PHASE ONE – THIRD FLOOR

The third floor underwent a complete demolition, including removal of ceilings and floors from former apartment spaces. Six VRF air handlers were installed to support the newly configured areas. Tight plenum conditions required close coordination between the engineering and contracting teams to validate feasibility prior to bidding.

PHASE TWO – FIRST FLOOR

The first floor included offices and conference rooms where architectural aesthetics were a priority. In areas with exposed ceilings, traditional 4-way cassette units would have been visually intrusive. Instead, the team selected 360° cassette indoor units, which delivered a cleaner appearance while maintaining comfort performance and offering greater design flexibility. The solution integrated seamlessly into the open ceiling concept and was well received by the project stakeholders.



Varix VRF outdoor unit



360° cassette indoor unit

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RUBEN CABELLO

VP of Mechanical Engineering, JRED Engineering

STRONG SUPPORT, CONFIDENT EXECUTION

Expert Mechanical Services, Inc. was awarded the project after receiving the VRF specifications in the construction documents. This marked their first complete project using the Lennox Powered by Samsung Varix™ VRF system.

"We had a really good impression of the equipment," said Sean McGinty, Mechanical Contractor. "The engineering and installation information was readily available, and the installation and startup experience was very positive."

Throughout the project lifecycle, from design support to commissioning, Lennox Commercial worked closely with both the engineering and contracting teams, providing responsive technical support and project coordination.

"It was smooth, fast, and easy," Cabello added. "We'll definitely be calling again."

"That kind of support makes or breaks projects," McGinty noted. "The responsiveness and interest in seeing the job succeed really made a difference."

CONCLUSION

For facilities where space is constrained, aesthetics matter and reliability is non-negotiable, Varix™ VRF provides a proven, adaptable solution. This project highlights how thoughtful system design, supported by responsive engineering and contractor collaboration, can deliver dependable comfort, even in the most demanding environments.

More speed, service and control from start to finish.

THAT'S THE DIRECT EFFECT OF LENNOX.



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