

Project

Name
City of Marshall

Location
City Hall, 201 S. Michigan
Marshall, IL 62441

Completion Date
January 23, 2015

The Team

HVAC Contractor
Morgan Plumbing & Heating Inc.
Marshall, IL

HVAC Distributor
Benoist Brothers Supply

Fujitsu Equipment

- (8) AUU7RLF Compact Cassettes
- (7) AUU9RLF Compact Cassettes
- (7) AUU12RLF Compact Cassettes
- (4) AUU18RLF Compact Cassettes
- (2) ASU15RLS2 Wall Mounts
- (6) UTP-PU03A Branch Boxes
- (5) UTP-PU03B Branch Boxes
- (6) AOU48RLXFZ1 Condensing Units
- (1) AOU18RLFC Condensing Unit



Individual Temperature Control Achieved

Marshall City Hall was built in 1996, under Mayor Dick Smitley and city council. The building would house the police department, utility office, city officials and council meeting room. The building has a central area with a raised ceiling, and is approximately 90' x 90' octagon. The mayor thought, the square dome look would create the flow of citizens into the city hall. Building was designed by Garmong Engineering.



Above is a wall mounted ASU15RLS2 indoor model shown in a common area.

Design Challenge

The police and council side of the building was discovered to have mold in the units and throughout parts of the ductwork. No return air duct was installed, therefore, allowing air to draw wild from the mechanical room. On the utility office side the condensing unit had a failed compressor and the same issue of no return air. Neither system would really maintain the comfort that city employees wanted.



Shown is a compact cassette which is recessed into the ceiling, showing only the grille.

Solution

The city, not knowing for sure what they wanted, or how to fix the problem, took recommendations from local and nearby contractors. After using Fujitsu mini-splits in homes, and a flower shop, resident HVAC contractor Morgan Plumbing & Heating spoke with their distributor Benoist Brothers and decided that Fujitsu would make a good fit for City Hall. The previous 2013-2014 winter, had cleared any of the contractor's doubt that Fujitsu systems would heat at minus zero temperatures.

Benoist Brothers contacted the Fujitsu rep. and he agreed to look at the job.

Together, they all met with City Hall officials and explained their ideas, and how they'd go about solving the task at hand. By using mini-splits, there would be no ductwork in the attic. Every office would be zoned, and equipped with its own thermostat. After explaining how the equipment would operate, and how the efficiency would save on energy cost, the Fujitsu rep. designed the system layout, and the City Council accepted the bid proposal.

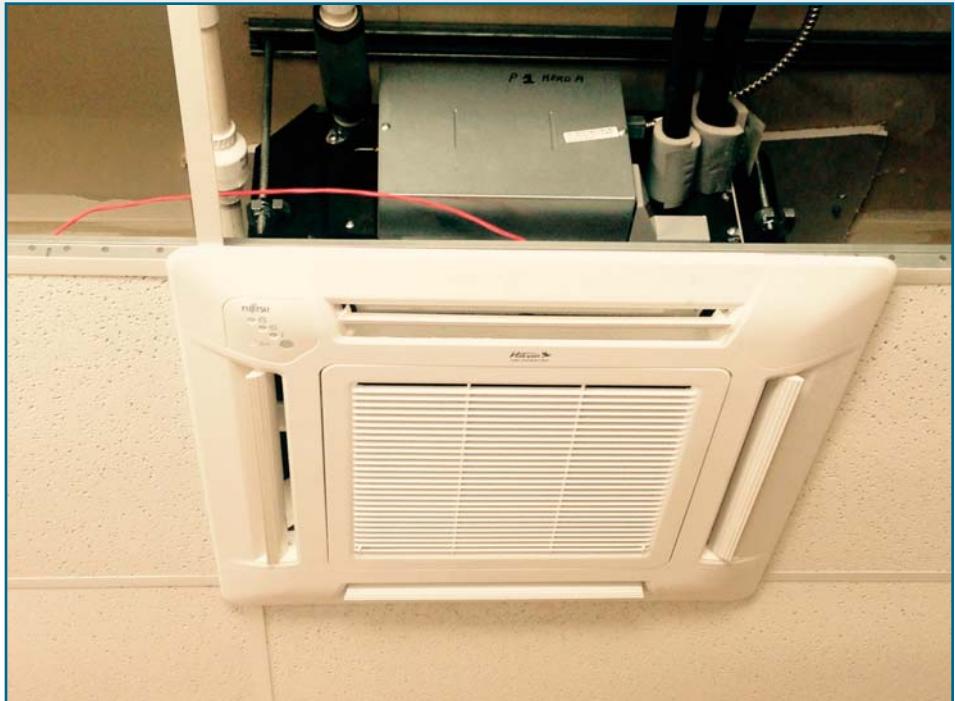


Results

By using Fujitsu mini splits, the contractors were able to stay out of the attic. All piping and equipment was installed between the suspended ceiling, where easily accessed for service and maintenance. To the delight of city employees, each office was able to set their own temperatures. All units were started on approximately November 23, 2014. In the first month of heating, the city records showed, they saved an approximate \$200. The units are so quiet, the employees don't even know they are running. Almost all electric heaters under desks, have been unplugged.



Above: A branch box is required as part of Fujitsu's Hybrid Flex Inverter (HFI) system AOU48RLXFZ1 which can connect from 2 to 8 indoor units.



Above: The compact cassette fits perfectly into a 2' x 2' drop ceiling with only the grill showing. This system is ductless, providing high efficiencies and eliminating the need to lose closet space and carve up walls for ductwork.

"The building has never been this warm!"

Below: Two 15,000 BTU/h RLS2-Series wall mounts were installed in the main area of the City Hall. These systems are extremely energy efficient due to their high SEER ratings and ductless technology.

