



Case Study

COMMUNITY:

Village at Riverside
Pittsburgh, PA

CONTRACTOR:

Premier Heating & Cooling
Pittsburgh, PA

2.2 deg. F

Average heating mode air temperature delta room-to-room (Sept 13 - Oct 10)

2.0 deg. F

Average cooling mode air temperature delta room-to-room (Aug 22 - Sept 12)

9.1 CFM

Average CFM delta across all supply ducts measured at commissioning

Situation/Overview

In July 2021 Rheia began working with NVR with a pilot program for Village at Riverside, a townhome community in Pittsburgh, PA. The garage was located under the living space and included a ground floor mechanical unit.

Install

Using a two-man crew, the system was installed in 90 man hours for three units. Commissioning of the home followed Rheia's standard procedures. In collaboration with the contractor's technician, at system start, the home was balanced using Rheia's Verify process. Measurements showed the balanced airflows corresponded to the Manual J design to industry standards, measuring an average 9.1 CFM delta for the installed ducts at commissioning.

A thermostat and sensor network was installed for long-term monitoring to assess the system's performance.

Results

There was an installation time savings of 45% when compared to conventional which took 126 hours (versus 90 hours with Rheia).

ACCA Manual RS specifies the maximum acceptable room-to-room temperature difference

as 4 degrees F for heating and 6 degrees F for cooling. The pilot home achieved 1.9 deg. F in heating mode and 2.2 deg. F in cooling mode during the monitoring period.

ACCA standard 5 allows no more than 25 CFM or 20% difference per duct versus the Manual J design estimates.

