

CASE STUDY

Fort Drum Army Base

Fort Drum Army Base Achieves Energy Star Certification Using Aroseal

Aroseal duct sealing was added in the scope of work (SOW) to meet 5% duct leakage in order to achieve ENERGY STAR certification for 3,600 new and existing homes.

Lend Lease was on a mission: To get 3,600 new and existing homes in the Fort Drum Mountain Community certified by ENERGY STAR. One of the requirements was to reduce air duct system leakage of each home from an average of 20-30% down to 5% or less. After several attempts with hand sealing methods of duct sealing (e.g. mastic, tape), the contractors added Aroseal in the SOW. As a result, the Fort Drum Mountain Community became the largest ENERGY STAR certified community in New York State at the time.

Lend Lease knew that saving energy costs would be a critical factor in their bottom line profits for managing the 3,600 homes under their care in the Fort Drum Mountain Community. Lend Lease called on the HVAC professionals at TAG

Mechanical Systems of Syracuse New York to test for air duct leakage in each new home being built. ENERGY STAR certification demanded no more than 5 percent leakage. After each house received a failing grade, TAG sealed the air ducts using Aroseal to meet the 5% duct leakage requirement.

At first, TAG took painstaking measures to properly install and manually seal each of the new duct systems with mastic and tape. Initial tests were positive in the Fall of 2005 when the weather was fair. Three months later, the temperatures began to drop, and the newly installed ductwork was not properly delivering heated air during the Winter due to duct leakage. The only permanent solution was to properly seal the air ducts using Aroseal.

TAG used Aroseal to seal the air duct systems of 3,600 new and existing homes, including standalone homes, apartments, and multi-unit dwellings. The HVAC contractor was able to adapt the sealing process in a manner that reduce installation time and allowed them to complete on average, four to six homes per day. Best of all, each home was tested before, during and after the sealing process. This allowed Land Lease to measure the effectiveness of Aroseal duct sealing and ultimately achieve ENERGY STAR certification for every home in the military housing community.



PROJECT OVERVIEW

BUILDING

Fort Drum Army Base Housing Development, New York

PROPERTY MANAGERS

Lend Lease

AEROSEAL CONTRACTORS

TAG Mechanical Systems

GOAL

Achieve ENERGY STAR certification for 1,400 new construction homes and 2,200 existing homes

BEFORE AEROSEAL

30% average new home air duct leakage

AFTER AEROSEAL

5% or less average new home air duct leakage

RESULTS

Sealed ductwork in 3,600 homes to meet 5% duct leakage requirement; Reduced average gas use in each home by 47%; Achieved ENERGY STAR certification

To Learn More About Improving The Comfort, Indoor Air Quality, And Energy Efficiency Of Your Building

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