

Sabathani Senior Housing Project

Project Background

Center for Energy and Environment's New Homes team began working on the Sabathani Senior Housing project in March 2020. The team reviewed building plans, created energy models, and made recommendations to ensure energy efficiency was built into the building's design. These recommendations included revisions to insulation levels, air sealing details, and mechanical systems. Special attention was paid to the heating and cooling efficiency and ventilation systems. The key energy efficiency features recommended included an exterior rigid foam insulation on the entire building and a 95% AFUE in-unit heating system. These revisions were necessary for the building to meet the efficiency requirements of the **EPA's ENERGY STAR Residential New Construction program**.

Inspection/Testing

All units were inspected for quality install of insulation and air sealing details per Energy Star requirements. Testing for this project included blower door tests, duct leakage tests, and performance tests on exhaust and ventilation systems. Testing was critical to make sure the building met minimum standards that were consistent with the intended design of the units.

The team tested approximately 25% of the units. Units were selected based on size, location, and unit type in order to test a representative mix of the building. If any units didn't initially meet the requirements, the construction partners made the necessary corrections and the units were retested.

Results

Once all sample units successfully met ENERGY STAR standards, the team updated the energy models. The results were submitted to a third-party quality assurance provider for final certification approval. At the end of this process, all units were HERS and Energy Star certified with an overall average HERS score of 48. Each unit is predicted to receive an average annual savings of \$523.

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Home Certifications, Ratings, and Potential Savings

- RESNET HERS
- Energy Star New Construction (version 3.1)
- Average HERS score: **48**
- Average annual savings per unit: **\$523**
- Total predicted CO2 reductions: **20.9 tons/year**
- Air tightness: **46% tighter on average than Energy Star reference of 0.3CFM50/Sq.**

Energy Efficient Features

- Exterior rigid foam insulation on the entire building
- **95% AFUE** in unit heating system

Partners

- Watson-Forsberg
- Tri Construction
- Homeco Insulation, Inc.
- Go Fetsch Mechanical

Contact

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