

# CASE STUDY: VINYL-COMPOSITE TILT TURN WINDOWS FOR THERMAL AND ACOUSTICAL PERFORMANCE

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## CHALLENGE

When designing a six-story apartment complex sitting atop a storefront in Virginia, a client searched for a manufacturer that could fabricate all fenestration for the job to achieve visual consistency across all units. The client requested vinyl-composite fenestration for the material's thermal and acoustical efficiency. While the apartment complex is conveniently located in a bustling community, the surrounding heavily trafficked streets create noise pollution, an unwanted malady in an apartment complex. Vinyl-composite fenestration is a great way to address this noise pollution by improving the acoustical break between the interior and exterior. Solar Innovations® took on this challenge and agreed to fabricate the doors and windows for the job.

## SOLUTION

When taking on the job, Solar Innovations® suggested the installation of its Vinyl-Composite Tilt Turn Window System. This window offers two separate operation functions; turn the handle to the side and open the window as a hopper or turn the handle upward to open as a casement. The hopper position provides additional safety by minimizing the accessible open space, however the casement option allows for larger airflow into a room.



By the end of the project, over 800 units were manufactured and installed by the Solar Innovations® team. Vinyl-composite units require minimal maintenance and make re-painting unnecessary. In addition to great energy efficiency and superior acoustical performance, the vinyl-composite product line offers durability, moisture and rot resistance, and matching sightlines among windows and doors. Vinyl-composite products by Solar Innovations® are also an environmentally sustainable choice — an important consideration for apartment complexes targeting younger clientele.

## PROJECT DETAILS

**SERIES:** SI4500 Insulated Tilt Turn Windows, Fixed Windows, & Terrace Doors

**FINISH:** Clay

**GLAZING:** 1 3/16" Insulated Tempered Argon Filled Glazing

