

**GENERAL CONTRACTOR
AND INSTALLER**

Davidson Sash and Door
Lexington, North Carolina

FEATURED PRODUCTS

350 Medium Stile Standard Entrances
TR-2100 Flush Casement Outswing Windows
TR-2800 Fixed Windows
NX-8910 Architectural Thermal Aluminum Terrace Doors

The Assembly Inn at Montreat Conference Center

MONTREAT, NORTH CAROLINA

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The Montreat Conference Center enjoys a rich history that dates back to 1897 when a group of church leaders formed the Mountain Retreat Association, later shortened to Montreat. In 1905, the first Presbyterian conference was held at Montreat, and today the conference center is one of three national conference centers affiliated with the Presbyterian Church USA. Located 20 miles east of Asheville, North Carolina in the foothills of the Blue Ridge Mountains, the first structure on the premises was completed in 1922.

Located at the heart of Montreat Conference Center overlooking Lake Susan is the historic Assembly Inn, which provides hotel accommodations for up to 200 guests. In the early 1990s, the owners of the conference center began discussing much-needed renovations for the facility, including the Assembly Inn. Lexington, North Carolina-based Davidson Sash and Door first bid the project to replace the windows at the Assembly Inn in 2000. One of the most complex aspects of the project both from an installation and bidding perspective was the vast array of window sizes. The project included more than 600 windows in approximately 25 different sizes.

The project was completed successfully, and the owners were extremely pleased with the products and the installation. According to the Montreat blog, "Our entire community is responding positively to the beautiful results."

DESIGN HIGHLIGHTS

More than 90 years old, The Assembly Inn at Montreat was constructed with thick, solid stone masonry walls and featured numerous window openings of different sizes. The project included more than 600 windows in approximately 25 different sizes.

CHALLENGES

- One of the most complex aspects of the project both from an installation and bidding perspective was the vast array of window sizes.

- The thick, solid stone masonry walls also presented unusual challenges when fitting the new windows.
- In addition to the challenge of the metal frames, the windows were deeply set from both the interior and exterior as a style feature of the original architecture. Stone openings for every window and door also meant a retrofit with no flat or perfectly square surfaces.
- The historic nature of the building required a great deal of coordination from all project participants on aesthetics, finishes and hardware.
- Thermal performance was one of the most important features to be considered for the project, and the conference center, which originally was not air-conditioned, experienced issues with heat gain in the summer and cold conduction in the winter.
- All of the metal flanges on the original windows were fixed into the masonry and the existing windows had to be cut out of the openings before any replacements could be installed.

SOLUTIONS

- Davidson Sash and Door secured all field measurements for the historic building, including multiple radius dimensions, to ensure that the varied window sizes were accommodated correctly and then provided design drawings for the project.
- To meet the vast array of size and aesthetic requirements, combinations of fixed and outswing casement windows, along with radius transom windows, were used to replicate the appearance of the original windows.
- The design flexibility and thermal properties of the TR-2000 series windows made them an excellent choice for the unique retrofit project.
- To accommodate many different window configurations, TR-2800 Fixed Windows were also specified for the project. The optional curved frame provides an aesthetic match to the original windows, while factory sealing helped to ensure weathertightness, eliminating drafts that conference center visitors often experienced with the original 1920s windows.
- NX-8910 Architectural Thermal Aluminum Terrace Doors and Kawneer 350 Medium Stile Standard Entrances completed the project.

