



SAINT MARY'S CHURCH | MAGNIFICENCE WORTHY FOR WORSHIP



“It was only 12 minutes from the time the crane lifted the 2100 lb. window into the frame to the time the first screw was put in – it fit that perfectly.”

– Jerry MacNeil, Jerry MacNeil Architects Limited

SAINT MARY'S CATHOLIC CHURCH | *Potsdam, New York*

After 100 years of serving as a place of worship and community, St. Mary's Catholic Church in Potsdam, N.Y, was in need of renovation. “The windows had deteriorated a fair amount,” commented architect Jerry MacNeil of Jerry MacNeil Architects Limited. As specialists in the replacement of historical architectural millwork, his firm was the ideal choice to take on the large Gothic Revival window replacements; partnering with them was Marvin® Signature Services. “We have worked with Marvin for over 16 years, and we've found that they're not afraid to take on projects that others will shy away from doing.”

St. Mary's originally intended to only refurbish and reglaze stained glass – in particular, the glass in a 23-foot-high Gothic unit with a 14-ft. rose window above the main entrance. Ben Wakefield, sales representative at Marvin Windows of New York, carefully examined the original window construction. “The original church windows were built in three layers of old-growth pine; we took the Marvin methodology and applied it to the replacement design, with six layers of Honduran mahogany for an enduring layered profile, plus staggered fingerjointing to make it even stronger.”

Absolutely precise measurements were essential to the success of the project. “By the time we started measuring, the stained glass had already been removed to be refurbished,” said Wakefield. “So each of the new authentic muntins had to create exact openings to fit the pre-existing stained glass. We couldn't deviate by even a sixteenth of an inch.” The final component count: 816 precisely cut and joined components for the large Gothic window; up to 103 for each of the smaller windows.

MacNeil credits a high-tech approach for solving the problem. “Because we used tacheometric survey software in combination with rectified photography to capture measurements digitally, it was incredibly efficient. Plus the process was completely paperless, since the measurements were input directly into a CAD environment and forwarded to Marvin's CNC routing system for accurate cutting.” Since every window in the project was slightly out-of-line due to the age of the church, this process offered the best assurance that all the windows would fit correctly in their openings.

The true test came on the day of installation. Because of its size, the large rose window was shipped in two pieces and assembled onsite. The showcase window was lifted and neatly tucked into its opening. Just a few hours later it was fully installed. It fit perfectly!

PROJECT HIGHLIGHTS

- Originally constructed in 1900, the Gothic Revival church's windows were in dire need of repair.
- No two openings were alike, so a variety of state-of-the-art digital measuring techniques were used to create a precise fit – as well as full-size frame rubbings and glass tracings.
- The showcase window consisted of 816 individual pieces, each engineered to micro-accuracy to accommodate reglazing.
- Honduran mahogany was used in all windows for longevity and stability.
- A spirit of collaboration and pride filled the project, with workers signing the concealed edge of the windows per an old carpentry tradition from Europe.

SPECS

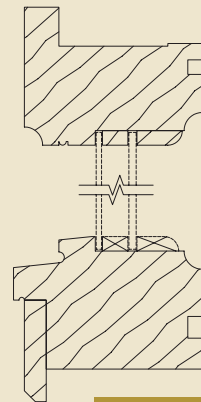
Building Type: Church

Units and Applications: 14 custom mahogany exterior and interior Gothic Revival wood window units, 3 at 70" x 216 1/2", 11 at 58" x 195". One 171" x 276 1/2" unit integrating a 14-ft.-diameter Rose Window set in a Gothic frame

Architect: Jerry MacNeil Architects Limited

Contractor: J.T. Erectors

Dealer: Malone Lumber



VERTICAL SECTION

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