



After



Located on a tiny, hilly site in the heart of Virginia's rolling horse country, the 35-year-old Middleburg Volunteer Fire Station was a severely undersized and outdated facility compromised by a structurally failing roof and regular water damage in the apparatus bays. A complete overhaul and expansion was needed while the station remained in operation.

The compact 16,000-square-foot design demolished the cramped residential wing and replaced it with a new two-story wing, providing expanded staffing for 14 using semi-private bunk-



rooms. Direct and efficient, the travel paths deliver responders into the bays at the front, rear and middle, allowing swift movement among the pieces within the bays. With the bunkrooms on the second floor, the main level is dedicated to operational spaces and a shared training/community room. The apparatus bays were retained and expanded with new bay support spaces and a training mezzanine. The exterior character of the building benefits from a simple, yet carefully considered palette of residential materials intended to blend into the neighborhood, while subtly announcing its presence as a civic building.





Secure all-weather protection of the apparatus was needed throughout the construction period. To do so, new roof framing (columns and beams) were inserted through the existing bay roof and tied to the existing masonry wall piers. New roof trusses could then clearspan the bays above the existing roof and provide new watertight closure for the apparatus. Additionally, bay height was increased to 18 feet by carefully removing the existing roof structure from below once the new roof was in place.

The building is LEED-certified. Sustainable design strategies include low Solar Reflectance Index (SRI) roof, water use reduction/native plant species, cistern capture tanks to recycle water for training exercises/engine fill, regional materials, and recycled content materials.



**Official Project Name:** Middleburg Volunteer Fire Station  
**Project City/State:** Middleburg, VA  
**Date Completed:** May 15, 2014  
**Fire Chief:** W. Keith Brower, Jr.  
**Project Area (sq.ft.):** 16,000  
**Total Cost:** \$4,306,000  
**Cost Per Square Foot:** \$269  
**Architect/Firm Name:** Paul R. Erickson/LeMay Erickson Willcox Architects  
**Website:** lewarchitects.com  
**Design Team:** **Civil Engineer:** Bowman Consulting Group, Ltd.; **Structural Engineer:** Ehlert Bryan, Inc.; **MEP Engineer:** Brinjac Engineering, Inc.; **Cost Estimators:** Downey & Scott, LLC



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The renovation and addition to Station No. 2 came as a result of a comprehensive cost-benefit analysis conducted jointly among the design team, The Woodlands Township and its fire department. Options in the analysis included a minor renovation, two schemes of major renovation and an addition, as well as a site and building re-design. Each option was thoroughly explored through detailed cost estimates, programming and staffing studies, site drawings, building layout variations and 3D computer modeling.

The facility's final design included complete renovation of interior living spaces, as well as new construction building area for additional dorms, updated and enlarged restroom facilities, an open-



concept day room and kitchen area, and naturally day-lit exercise area. The storage and utility aspects of the apparatus bay area were also redesigned for functionality to meet the changing needs of the station's personnel.

Key aspects of site development include:

- Dramatic overall aesthetic improvement to the existing structure including a new entrance tower, increased glazing area and introduction of new but complementing building materials.
- Improved site circulation.
- Cooperative compliance with The Woodlands Township's high standard of design guidelines, including its vegetation preservation program.

Enhancing features include:

- Renovated restroom areas provide gender-equal single-use facilities for flexibility in staffing and privacy for staff.

**Official Project Name:** The Woodlands Fire Station No. 2  
**Project City/State:** The Woodlands, TX  
**Fire Chief:** Alan Benson  
**Project Area (sq.ft.):** 9,576  
**Total Cost:** \$1,804,261  
**Cost Per Square Foot:** \$188  
**Architect/Firm Name:** Joiner Architects  
**Website:** [joinerarchitects.com](http://joinerarchitects.com)  
**Design Team:** Carl Joiner, AIA; Ricardo Martinez, AIA; **Construction Administration:** Chad Joiner; **General Contractor:** Durotech; **Structural:** Matrix Structural; **Civil:** Jones and Carter

- State-of-the-art vehicle bay exhaust system, emergency generator and hurricane force rating.
- Sustainable building strategies, including building mechanical automation systems, site and building re-use, and natural day-lighting.

The Woodlands Fire Department's new Station No. 2 makes a lasting statement to the community that the Township and the fire department are committed to being trusted stewards of public funds by choosing to renovate an existing structure—reducing project costs while improving the community's visual landscape and ability to respond to local emergencies.





The Lutherville Volunteer Fire Company consists of a 9,000-square-foot addition to its existing fire station, and complete renovation to the existing 15,000 square feet. The addition provides two additional apparatus bays, additional gear storage and interior training features that satisfy the growing demands of the fire company. The dayroom, kitchen, office and administrative areas were renovated and reorganized to improve response efficiency while also allowing connection to a new conference room and fitness area that overlook the new apparatus bays. Adjacent to and overlooking the new bays is a new training center containing a large assembly space with associated support spaces, such as a warming kitchen, storage and restrooms.

The existing site presented significant grade, ADA accessibility, and visitor access issues. As such, the public entrance was

clearly re-defined at the rear of the building near existing parking. Because the first-floor elevation is significantly below grade, a terraced sunken courtyard was created to provide an identifiable approach and communal space. This strategy defines a unique outdoor space for the station personnel by creating an amphitheater-like setting inclusive of a built-in grill and firepit, which are



clerestory windows, giving rhythm to a challengingly long façade comprised of many different floor elevations. The training wing steps back subtly, and the landscaping is allowed to curl into the building's base. Metallic accents of white and dark grey blend with the masonry and engage the cooler gray splitface of the courtyard, bringing unity to a complex composition.

**Official Project Name:**

**Lutherville Volunteer Fire Company**

**Project City/State:** Lutherville-Timonium, MD

**Date Completed:** May 31, 2015

**Fire Chief:** Mike Huber

**Project Area (sq.ft.):** 24,000

**Total Cost:** \$4,200,000

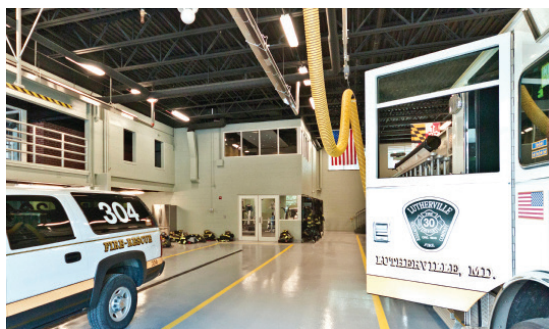
**Cost Per Square Foot:** \$175

**Architect/Firm Name:** Manns Woodward Studios, Inc.

**Website:** mwsarch.com

**Design Team:** Principal Architect & Lead Designer: Robert Manns/Manns Woodward Studios; Principal Architect & Lead Construction Administrator:

David Woodward/Manns Woodward Studios; Project Architect: Eric Bond/Manns Woodward Studios; Project Manager: Pete Sutcliffe/Mullan Contracting Co.



immediately adjacent to the newly renovated dayroom and kitchen. The street side façade was completely overhauled to better blend into the context of the historic masonry community.

The central stair tower provides a focal point with a standing seam roof and