

A Timber Frame Addition



All photos Frazier Associates

Fig. 1. March of buildings continues with completion of addition. Original log structure at front, two 19th-century additions next, compound 21st-century timber frame last, terminating in masonry chimney at far right, the end of the conference room.

NESTLED in the Shenandoah Valley, the historic community of Staunton, Virginia (population 24,000), has an architectural advantage over most other small towns in the region because it escaped damage during the Civil War and retains an extensive stock of 19th-century buildings. The National Trust for Historic Preservation has recognized Staunton twice. One of the city's oldest surviving structures is the Trotter Tavern, built in 1802. During the last 200 years, Trotter Tavern has served as residence, tavern, stagecoach stop, school and office. The rectangular log structure is covered with lapped weatherboard and sits on a stone and brick foundation. The building fronts on a busy street in a National Register historic district, surrounded by residential-scale uses.

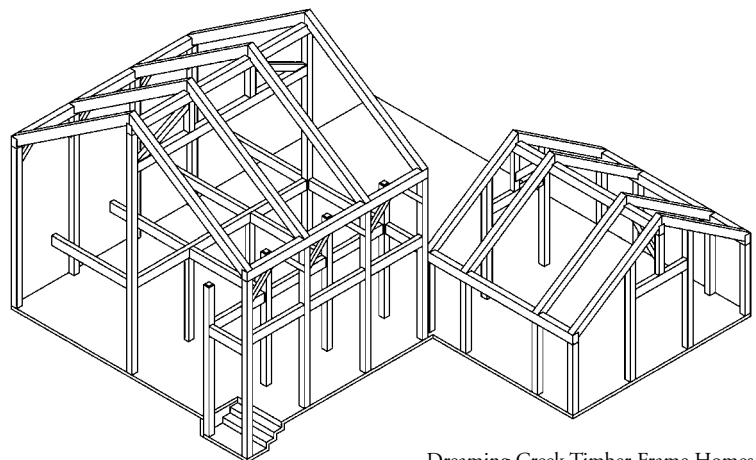
In 1988, our architectural firm rehabilitated Trotter Tavern to house its offices, faithfully adhering to the Secretary of the Interior's *Standards for Historic Preservation Projects* (1976, 1983). Approximately 3,500 sq. ft. of office space was spread out over two levels plus the garret, with its additional two offices tucked under dormers. While quarters were tight, the staff managed to squeeze companionably into the historic building for more than ten years. Eventually, however, as the firm continued to grow, it became clear that the building would require a major addition to accommodate increases in staff and technology. The challenge was to create an appropriate design for our historically inclined architectural practice, to create an exceptional and functional contemporary workspace, yet walk a fine line so that the firm could still secure design review approval within the historic downtown.

In 2002, two centuries after the original building was constructed, the firm began brainstorming ideas for the addition. Philosophically, the designers agreed that the addition should acknowledge the history of the site, meet local historic design guidelines and achieve compatibility in form and material without being a copy of the original. It was critical that the new addition provide for increased flexibility, by opening up space to encourage collaboration and communication across project teams. In its

existing space, the firm had very limited opportunity to group project teams given the small spaces and limited configuration of the historic building.

A timber frame structure quickly emerged as the ideal solution because it would be compatible with the original log structure, plus it would be visually exciting and allow for expansive spaces. Conceptually, the idea of a "barn" or an "outbuilding" at the rear of the original residence and tavern seemed appropriate. Trotter Tavern had already been growing backward with multiple single space additions (in 1823 and 1854), and it seemed obvious that the building would continue to march backward into the steep lot.

The architects drew their inspiration for the expansion from the site's immediate qualities. The vernacular, rambling precedent set by the existing structure already had great charm and visual appeal. Continuing the building's natural evolution away from the street,



Dreaming Creek Timber Frame Homes

Fig. 2. Intermediate space exposed by articulated frame is occupied by composite structure with light-framed and load-bearing panel walls and timber roof trusses. New work adds about 3100 sq. ft.



Fig. 3. Fitting the white oak rafters. Support is at ledge in plate and combines with support at underslung ridge to eliminate rafter thrust.

the architects broke down the mass of the project (3,085 sq. ft., almost double the existing building) to appear relatively less massive in size and scale.

Once the design was close to completion, we contacted Dreaming Creek Timber Frame Homes in Powhatan, who used our floor plans to draw up corresponding timber frame plans. The oak timber was harvested in Virginia and processed at the company's sawmill and workshop. We requested a distressed finish for the timber to blend more appealingly with the chinked log work in the oldest sections of the building.

The frame of the addition was raised in three days. Structural insulated panels, recommended by Dreaming Creek for their energy efficiency, were fastened to the outside of the frame and the building was under roof and walls within two weeks. Fred Neurohr, Dreaming Creek's project manager, recalls that one of their biggest challenges was not the framing, but rather figuring out how to get a crane into the site, hemmed in by Staunton's historic district. Local contractor Ted Jordan continued the buildout and interior detailing of the space.

Now complete, the addition is a harmonious blend of old and new. The exterior fits snugly into its historic context and is modulated so it doesn't appear to be a monolith behind the 1802 log structure. The addition respects the historic integrity of the existing building and responds to the residential scale of its historic district. The addition's simple lines are a nod to the enduring appeal of appropriately sized domestic architecture.

The interior of the new timber frame addition (which one encounters only after moving through the historic reception area) is unexpectedly open, filled with light and exposed construction elements and a modern interpretation of the original building's detailing, the exposed timbers lending character, texture and unity with the original log structure.

The expansive interior enabled by the timber framing allowed the firm to achieve its spatial goals for project team flexibility. Workstations on both levels are congregated by project type, but separated by 4-ft.-high beaded-board partitions to allow some privacy. A wall of south-facing windows floods the space with light



Fig. 4. Wood from a walnut tree removed from the site is used as detailing in the floor of the open-roofed conference room.

and warmth, while operable windows and wide-open spaces allow for natural ventilation. The beams over the second floor of the addition were left open to the roof. The volume of the second floor space offers drama yet is still an informal and pleasant work environment.

The two-story light well fosters communication between the two floors of architecture teams. Stairs were relegated to the back of the space so that building circulation wouldn't interfere with the atrium-like walkway to the conference room. Interior detailing takes its cues from the original building's beaded boards, reeded mantels and recessed panels. Eighteenth-century colors inspired the paint scheme.

The iron details were designed by Kathy Frazier, a principal of our firm, and fabricated by a local craftsman, William Ferguson. The gentle curve of the handrails and the balusters recalls the 18th-century hardware found in the original building. The black iron motif is reinforced by the tie rods, and further echoed in the hanging mechanism of the light fixtures.

While the firm chose to go with a timber frame addition for its aesthetic appeal, there were also great gains in energy performance by choosing this building method. A double-height wall of windows faces south, enhancing the building's natural compatibility with passive solar heating. During the warmer months, operable windows are opened to allow fresh air to circulate freely through the space. Energy consumption is low relative to other new conventional buildings of the addition's size.



Fig. 5. Two-story light well has double-height south-facing windows. Curved iron balusters were forged by local blacksmith.

While there has been some movement in the structure since it was completed in 2004, we find the aging, twisting and cracking of the wood all contribute to the material's inherent beauty. The firm's clients, who progress through the original building before being guided into the conference room at the terminus of the new addition, almost always glide to a stop in the exact same spot, about ten feet into the addition. They admire the character of the wood, the craftsmanship of the framers, and the addition's sense of connection to the original building. The architects who work in the space enjoy the visibility of the construction process, the appropriateness of the materials, and the wide-open spaces and corresponding spirit of collaboration that timber framing makes possible.

—KATHY MOORE

Kathy Moore is an associate at Frazier Associates, a busy architectural firm in Staunton, Virginia, specializing in new work in historic styles, historic conservation and preservation, landscape architecture and community revitalization.

An advertisement for Timberwolf Tools. At the top is the Timberwolf logo, a stylized 'T' with a wolf's head. Below it, the text reads "TIMBERWOLF TOOLS" in red. A large phone number "1-800-869-4169" is prominently displayed. Below the phone number, it says "Call today to request a FREE CD-ROM featuring the PROTOOL Line!" and "www.timberwolftools.com". The central image shows a PROTOOL SBP 285 Band Saw, a large industrial-grade tool with a silver and black finish. At the bottom, the text reads "PROTOOL SBP 285 Band Saw" in orange and black, followed by "Mortisers, planers, circular saws and more..." and "Your best source for specialty power tools" in a cursive font.