## Making New Look Old...

## Shenandoah Shakespeare's Blackfriars Playhouse

This recently constructed theater brings the look and feel of the original Blackfriars Playhouse to modern day Staunton, VA. The Architect's (Tom McLaughlin of Richmond, Virginia) challenge was to recreate a sense of Renaissance London, while still conforming to present day building and lifestyle prerequisites. In turn, the structural design (Stroud, Pence & Associates) had to accommodate many different building systems and requirements to mesh the new with the old. The building structural framing is a collaboration of structural steel, metal stud bearing walls, and timber framing all supported by concrete basement walls and interior steel columns.

The main feature of the playhouse is the grand three level theater seating gallery

overlooking the main stage. The main building structure provides a shell in which the gallery is enclosed. Exposed Oak timber framing was used as the structural support for the upper level seating, and as cladding for the remaining structural walls and ceilings throughout the public areas.

Timber framing consisted of locally harvested oak timber, milled and dried for interior finished use. General member sizes, locations, orientations, and architectural details were defined in the contract documents; a specialty contractor (Dreaming Creek Timber Frame Homes, Inc. of Powhatan, Virginia) performed the final member

and connection design, detailed the work and completed the installation.

Theater bench style wooden seats at the elevated gallery level are supported by timber decking on large sculpted timber joists. The timber joists span between conventionally framed interior and exterior metal stud bearing walls and an interior grid of timber girders and intricately detailed timber columns to form an elevated viewing level around three sides of the main stage.

In addition to typical timber framed connections, such as mortise and tenon and





pegged joints, timber framed connections to the structural walls and columns were accomplished using structural steel seats configured in such a way as to conceal most of the steel and leave the look of a traditional timber frame connection. WT seats and welded plates, in which the vertical stems were oriented upward, fit into slots cut in the ends of the timber members. Through-bolts anchored the timber members to the steel stem. The bolt heads were countersunk and plugged to further hide the connection. Timber columns are anchored to the supporting steel columns below with large steel dowels projecting into the base of the timber columns. The dowels provide lateral support but remain hidden from view. Continuous hollow structural steel sections, installed along the tops of metal stud framed bearing walls, allow timber joists to bear directly on the wall and distribute the loads to several wall studs.

Other features of the structure are the main theater entrance lobbies, grand stair, and timber framed exterior canopy all of which follow the Blackfriar's theme.

These elements combine to form a finished product that provides the sensation of attending a 16th century English theatrical performance in the heart of historic downtown Staunton.

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