



*Mason Structure of Lexington, KY was recognized with an Award for Excellence in Architectural Design in the 2006 AIA Kentucky Honor Awards Program. The Citation Award was presented for the Mason Structure Office and Warehouse.*

*Mason Structure Office & Warehouses, Lexington, KY*

Standing as evidence to the joy of working with masonry is the Mason Structure Office and Warehouse near downtown Lexington, Kentucky. Situated on six acres of an abandoned stockyard and surrounded by tobacco warehouses, the building was the first new structure in an area that will most likely experience intense revitalization in the near future. The facility was constructed to serve multiple purposes: sustain the business requirements of a commercial masonry construction contracting office, facilitate a mason apprenticeship training program, and house a masonry equipment retail division.

The design of this functional multipurpose building was a collaborative effort between the architects and the owner/builder, a well established masonry contractor. Charles Barnhart and Ken Gray of Sherman Carter Barnhart Architects in Lexington developed the site for other related structures as well as the main building. Charlie Clarey of Poage Engineers & Associates led the Structural Engineering team. Design parameters included 1) a strong masonry appearance, both figuratively and literally, 2) exemplify a level of flexibility and creativity with a masonry system, 3) create an accentuated entry experience, and 4) provide opportunities for the owner to express and display his knowledge, creativity and skill of masonry within the structure.

The structure distinguishes itself by the relationship between the masonry shell and the interior. This is uniquely announced through a freestanding structural archway connected to the building by a skylight that serves both as an exterior cover and for interior natural lighting. Brickwork is strong in compression, but weak in tension; and since arches are designed to resist compressive forces, brick is an excellent material for arch construction. Simple masonry arches can achieve considerable spans depending upon the abutments, as the reaction to the compressive thrust is provided at the abutments. The downward load of the arch creates lateral and compressive thrust which pushes the brick against one another in compression. The mortar joints serve only to provide more uniform contact; they are not necessary for any of their adhesive properties. Though the brick arches of the Mason Structure Office & Warehouse work on their own compression, they are embedded with reinforcing steel and 4,000psi concrete.

The front and side elevations' large structural masonry arches were inspired by a building constructed in Italy in 1990 by architect Mario Botta. The

thickness of the arches implies a load-bearing order inherent in the strength of masonry, but rarely used in today's single-wythe veneers. These strong masonry arches serve as fenestration for both entry and visual display of larger equipment within the showroom. The fenestration was dictated by the brick bond patterns; English bond below the water-table, Norman brick above with every sixth course a dark header, and eight inch stretchers. The windows are inset into the wall, providing the shadow lines that showcase the multi-wythe construction of the walls. The use of header courses in contrasting slate-colored brick breaks up an otherwise tremendous façade. The corbelling at the roof completes the initial strong plinth at the base of the building – resolving the large planar walls without the need for superficial ornament or out-of-plane moves common in buildings today. Much of the interior also features exposed masonry work in the aforementioned patterns. In addition, a large radial ground face CMU wall serves as a focal point in the retail showroom. The building is load bearing masonry with ground face CMU which further echoes the actual and perceived durability and solid appearance of the masonry facades. ■



*The skylight provides a covered entry while allowing natural light to fall upon the masonry detail.*