

## SAFE ROOM INSTALLATION

### Step 1: Choose Your Safe Room

A common choice for a safe room is the master closet. For an average family of four the closet dimensions should be at least 6-feet by 8-feet. After framing the closet with steel or wood studs @ 16-inch on-center, the next step will be to install a heavy-gauge steel mesh system known as Secura Room® on the walls and ceilings of the safe room. This system is specifically designed to delay or defeat attempts at forced entry to intrusion using axes, sledge hammer, chainsaws, or wrecking bars. These steel mesh panels are attached to the studs using diamond shaped steel fasteners at 12-inch intervals. This will help to further stiffen the walls and increase to resistance to intrusion. Eventually, drywall will cover the expanded steel mesh. This security mesh is available from AMICO Security Products, a division of Alabama Metal Industries Corporation

### Step 2: Add Bullet Resistance

The next layer of security to install in the safe room is designed to withstand more than an attempt at forced physical entry. After the steel mesh system has been installed, and before the drywall goes up, our bullet resistant fiberglass panels will be fastened to the stud walls on top of the steel mesh. These are dense 4-foot by 8-foot fiberglass panels that weigh 160 pounds per sheet and are 7/16-inch thick. They are fastened to the studs using 1-5/8-inch self drilling wafer head Phillips screws that are designed to attach dense sheathings to steel or wood

studs. Ribs beneath the screw head countersink the head and prevent strip-out. These specialty screws are available from McMaster-Carr Supply Company and cost \$8.00 per 100 pieces. Screws are applied at 16-inch intervals. All butt-joints of the ArmorCore panels will need to be backed with 4-inch-wide batten with the same level 3 material. Butt joints should occur between stud centers so that the battens occur within the stud cavities. The armor wall panels will be covered with ½ -inch Type-X drywall to insure the ASTM E119-98 One-Hour Fire-Rated wall assembly. Self-tapping drywall screws can be used to fasten the drywall to the bullet resistant fiberglass panels.

### Step 3: Safe Room Doors

A variety of door and frame products can be installed that must also provide the same degree of resistance to forced entry and firearms as the walls and ceiling. This will take the expertise of a door company that specializes in safe room doors. The frame, the lock, and the hinges are an extremely important element in the design of a safe room door. Electromagnetic lock systems insure top security with the ability to withstand tremendous forces. Continuous geared hinges made by PEMKO are recommended for swing doors to ensure maximum strength. Safe room doors can be customized to match existing raised panel or other custom doors used in the home. Sun-Dor-Co of Newton, Kansas specializes in raised panel pre-hung bullet resistant doors with European style multipoint locks that cost between \$3,000 and \$4,000 with flush type safe room doors made with wood or steel. Any light opening for the door will need to be made of bullet resistant glazing in the form of glass-clad polycarbonate, polycarbonate or bullet resistant acrylic. Any glazing must be within frames made with the same level of ballistic protection as the door and the walls.

The safe room will also provide the securities families need to have in today's world.