



Designation: F 1592 – 01

Standard Test Methods for Detention Hollow Metal Vision Systems¹

This standard is issued under the fixed designation F 1592; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 These test methods cover fixed detention hollow metal vision systems of various materials and types of construction. These fixed hollow metal vision systems are used in wall openings in detention and correctional institutions designed to incarcerate inmates.

1.2 Frame assemblies investigated under these test methods include individual components including detention security hollow metal frames, frame anchoring, security glazing, panels, and removable glazing stops.

1.3 These test methods are designed to test the capability of a fixed detention hollow metal vision system to prevent, delay, and frustrate escape; to limit or control access to unauthorized or secured areas; and prevent passage of contraband.

1.4 These test methods apply primarily to detention hollow metal vision systems between secure areas generally found inside a detention/correctional facility such as: day rooms, control rooms, cells, and sally ports. These test methods are applicable to vision systems other than hollow metal, provided testing and reporting procedures are followed.

1.5 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

E 2074 Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies²

2.2 NAAMM/HMMA Standard:³

ANSI/HMMA 863-98 Guide Specifications for Detention

Security Hollow Metal Doors and Frames

2.3 NFPA Standard:⁴

252 Methods of Fire Tests of Door Assemblies

2.4 UL Standards:⁵

UL-10 (C) Fire Tests of Door Assemblies

UL-752 Bullet Resisting Equipment

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *borrowed light, n*—a fixed window frame for use in an interior partition.

3.1.1.1 *Discussion*—This term is derived from the concept of borrowing light from one room or space to help illuminate another.

3.1.2 *butt joint, n*—the corner or mullion joint of a frame in which the stop of either member is notched to fit the other, resulting in a perpendicular joint.

3.1.3 *component, n*—a subassembly, as distinguished from a part, that combines with other components to make up a total frame assembly.

3.1.3.1 *Discussion*—The prime components of a fixed vision system assembly are frame, wall, glazing, and panels.

3.1.4 *contraband breach, n*—any through opening created such that a 0.060-in.-diameter wire can be passed completely through the assembly at any location constitutes a contraband breach.

3.1.5 *detention security, n*—ensurance of the restriction of mobility of inmates to designated areas within a correctional or detention facility.

3.1.6 *forcible egress, n*—the ability to pass a 5 × 8 × 8-in. rigid rectangular box through an opening in the test sample created by destructive testing procedures.

3.1.7 *glazing stop, n*—a formed metal section used to secure glazing or panel in a frame either by application to the glazing material or as an integral part of the frame.

3.1.8 *head or header, n*—the horizontal member that forms the top of a frame.

3.1.9 *hollow metal, n*—a term used in reference to such items as doors, frames, partitions, enclosures, and other items that are fabricated from metal sheet, usually carbon steel.

¹ These test methods are under the jurisdiction of ASTM Committee F33 on Detention and Correctional Facilities and are the direct responsibility of Subcommittee F33.02 on Physical Barriers.

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² *Annual Book of ASTM Standards*, Vol 04.07.

³ Available from Hollow Metal Manufacturer's Association, A Division of NAAMM, 600 S. Federal St., Chicago, IL 60605.

⁴ Available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

⁵ Available from Underwriters Laboratories, 333 Pfingsten Road, Northbrook, IL 60062.

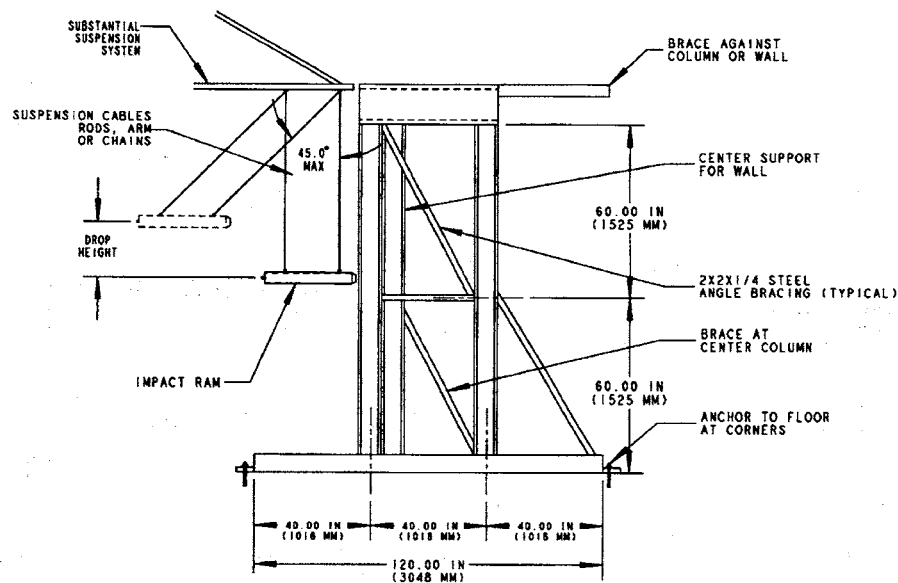
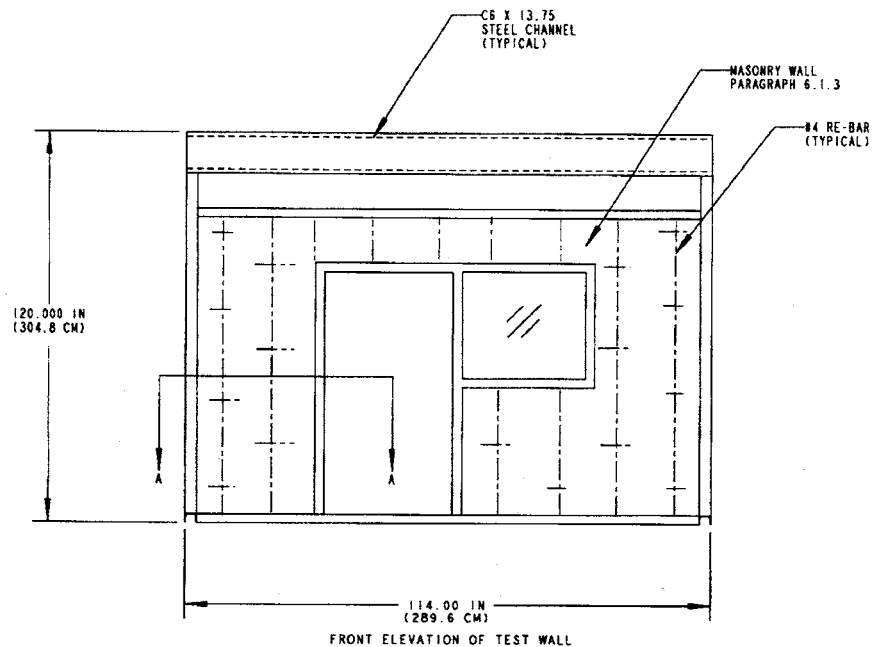


FIG. 1 a Test Wall Detention Hollow Metal Vision Systems

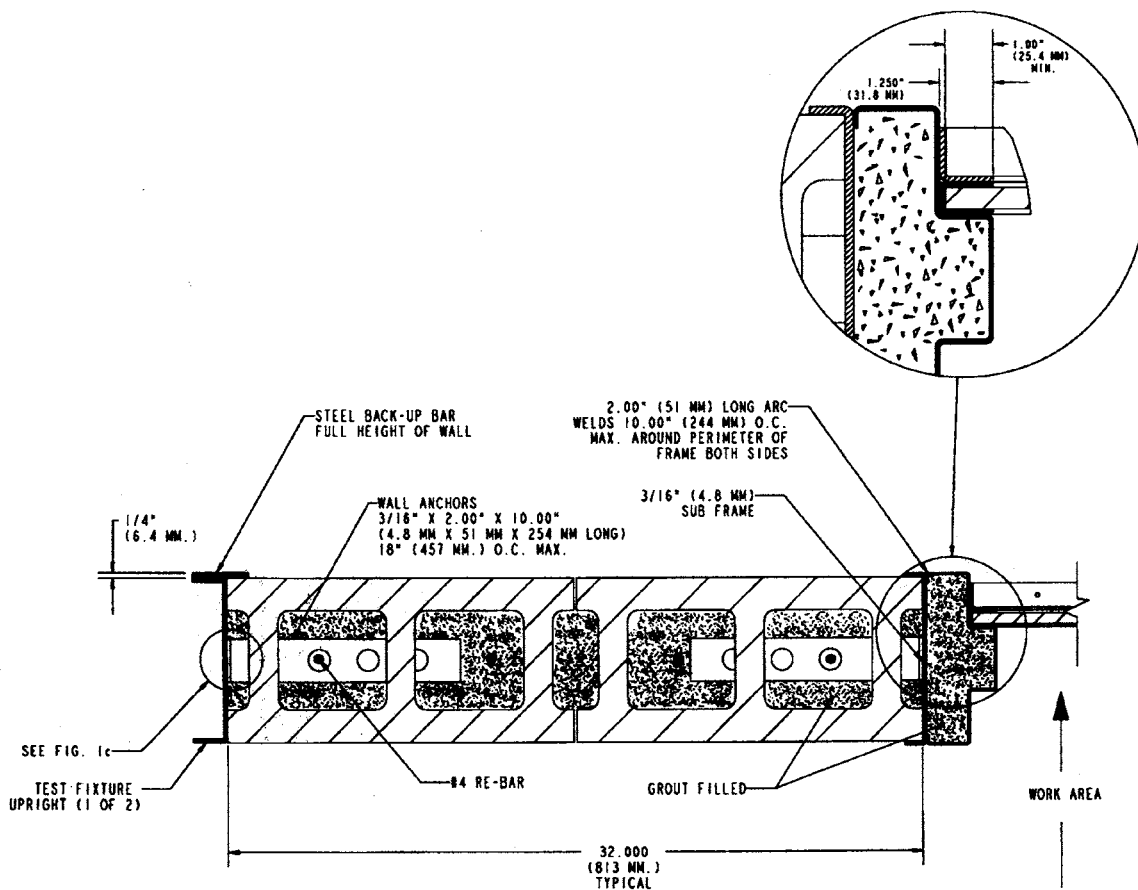


FIG. 1 b Section A-A (continued)

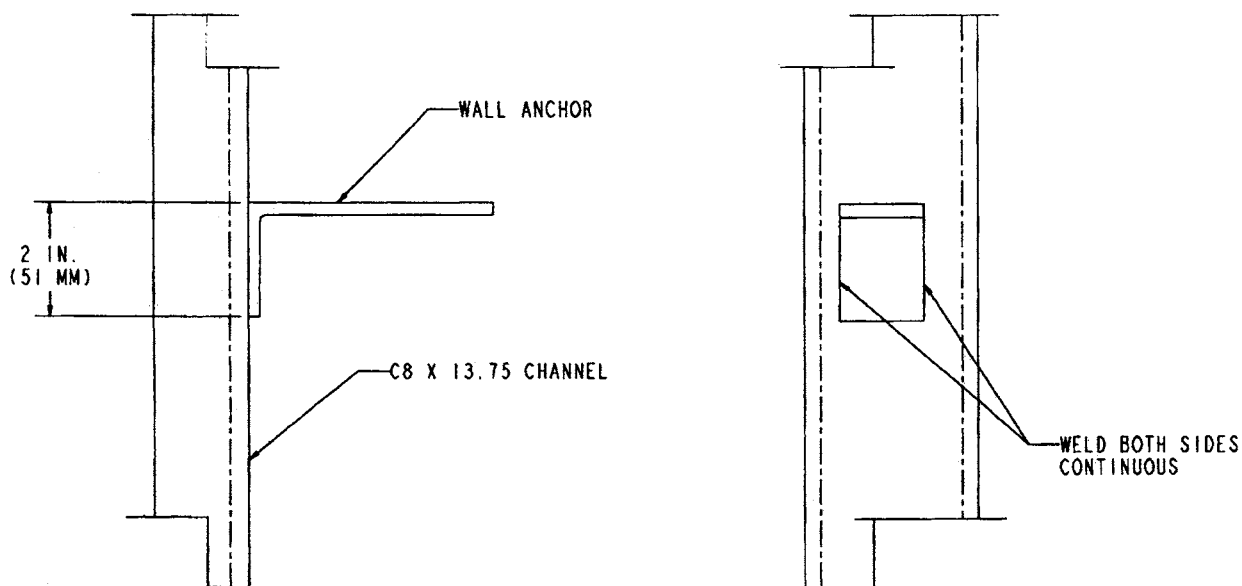


FIG. 1 c Wall Anchor Welding Detention Hollow Metal Vision Systems (continued)

3.1.9.1 Discussion—These products are usually internally reinforced but hollow, hence the term hollow metal. In doors

and partitions, the voids are normally filled with insulation. In frames, the jambs and sometimes heads are grouted when