

SECTION 10 22 13 - WIRE MESH PARTITIONS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced.
The publications are referred to within the text by the basic designation only.

AMERICAN IRON AND STEEL INSTITUTE (AISI)

AISI SG03-3 (2002; Suppl 2001-2004; R 2008)
Cold-Formed Steel Design Manual Set ASTM

INTERNATIONAL (ASTM)

ASTM A36/A36M	(2019) Standard Specification for Carbon Structural Steel
ASTM A53/A53M	(2024) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A153/A153M	(2023) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A510/A510M	(2020) Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel
ASTM A653/A653M	(2025a) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A1008/A1008M	(2025) Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable
ASTM E488/E488M	(2022) Standard Test Methods for Strength of Anchors in Concrete Elements
ASTM F593	(2024) Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs

ASTM F594 (2024) Standard Specification for
Stainless Steel Nuts

ICC EVALUATION SERVICE, INC. (ICC-ES)

ICC-ES AC70 (2019; R2021) Power-actuated Fasteners
Driven into Concrete, Steel and Masonry
Elements

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.

A. SD-01 Shop Drawings
Wire Mesh Partitions

B. SD-02 Product Data
Wire Mesh Partitions

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver materials in manufacturer's original, unopened containers or packaging with labels intact and legible. Deliver, store, and handle materials so as to prevent damage. Replace damaged or defective materials with new.

1.4 DESCRIPTION OF WORK

Wire mesh partitions must be all wire type, normal duty for normal industrial use. Provide partitions complete with fasteners, capping bars, adjustable floor sockets, seismic bracing, doors, hardware, and other items necessary for a complete, useable, and rigid installation.

Verify field information and any penetration sizes and locations prior to preparing shop drawings. Show layout, details, materials, dimensions, finishes, and all information necessary for fabrication and installation.

PART 2 PRODUCTS

2.1 MATERIALS

Metal post and framing materials listed below must contain a minimum of 15 percent post-consumer recycled content and wire materials must contain a minimum of 50 percent post-industrial recycled content. Provide data identifying percentage of recycled content for metal post and framing materials.

Also provide data identifying percentage of recycled content for wire materials. Submit 12 by 12 inch samples of finished framed, corner, and mesh with hardware for verification. Submit product data for each type of partition, door, and window.

A. Steel Shapes, Plates, and Bars

ASTM A36/A36M and ASTM
A53/A53M.

B. Cold-Formed Steel

AISI SG03-3 and ASTM A1008/A1008M.

C. Wire Mesh

ASTM A510/A510M carbon steel wire, woven diamond mesh, intermediate crimped.

D. Floor Sockets

Cast or forged steel or ductile iron, adjustable, approximately 2-1/2 inches high.

2.2 NORMAL DUTY PARTITIONS

A. Wire Mesh - 10 gage wire, 1-1/2 inch mesh.

B. Vertical Frames - 1-1/4 by 5/8 inch cold-rolled C section channels or 1-1/4 by 5/8 by 1/8 inch channels. Provide only C channels where frames are installed toe to toe without posts.

C. Horizontal Frames - 1 by 5/8 inch channels.

D. Center Reinforcing Bar - One 1 by 1/2 by 1/8 inch channel with all wires woven through, or two 1 by 3/8 by 1/8 inch channels bolted together with mesh in between.

- E. Capping Bar - 2-1/4 by 1 by 1/8 inch channel or 2 by 1/4 inch flat bar.
- F. Corner Posts - Structural steel angles, 1-1/4 by 1-1/4 by 1/8 inch.
- G. Line Posts - Unless otherwise indicated, provide partitions more than 12 feet high with flat bar line posts bolted between vertical frame channels. Sizes of posts must be as follows:

Partition Height	Size of Posts
12 feet to 14 feet 8 inches	1-3/4 by 5/16 inch or 2 by 1/4 inch
14 feet 8 inches to 19 feet 8 inches	2-1/2 by 5/16 inch
19 feet 8 inches to 23 feet 8 inches	3 by 5/16 inch

- H. Hinged Doors - Frames must be 1-1/4 by 1/2 by 1/8 inch channels with 1-1/4 by 1/8 inch flat bar cover on top and bottom rails and on hinge stile and a 1-3/8 by 3/4 by 1/8 inch angle riveted to the lock stile. Provide 1-1/2 pairs of regular weight, wrought steel, non-removable pin, butt hinges riveted or welded to the door and the door opening frame for each door.

2.3 DOOR OPENING FRAMES

Provide frames the same size and shape as the vertical frames for the mesh panels.

2.4 LOCKS

Provide each door with a mortise type lock with a six-pin tumbler lock cylinder on the outside and a recessed knob on the inside.

2.5 FABRICATION

- A. Standard Panels - Wire must be woven into diamond mesh, intermediate crimped, and securely clinched to frames. Joints must be mortised and tenoned. Wire must be continuous at center reinforcing bars, either woven through a single channel or bolted between two channels. Panel vertical frames must have 1/4 inch bolt holes 12 inches o.c. for normal duty partitions.
- B. Doors - Construction must be similar to that specified for panels. Wire mesh must be the same as that used in the adjacent partition panels.
- C. Lateral Supports - Provide lateral bracing.
- D. Penetrations - Provide cut-outs for any penetration (i.e., pipes, ducts, conduit, structural members) of the wire mesh as shown on the drawings and as otherwise required. Frame cut-outs with 1 inch box channel. Fabricate penetration

openings to prevent contact between penetrations and wire mesh partitions.

- E. Post Shoes - Provide manufacturer's standard cast or fabricated metal shoes factory prepared with fastener holes. Provide corrosion protection and finish at shoes to match posts. Provide shoes that allow for vertical adjustability to accommodate floor flatness tolerances.
- F. Fasteners - Manufacturer's standard steel machine bolts, washers, and nuts of type suited to use and strength to withstand required loads between components[and between partitions and adjacent steel framing]. Provide with lock-nuts/lock-washers as required to prevent loosening.

Provide post-installed fasteners suitable to surrounding construction sized to provide no less than six times the required load at masonry and no less than four times the required load at concrete. Provide ASTM E488/E488M metallic coated fasteners at interior locations.

- G. Finish - Thoroughly clean ferrous metal, treat with phosphate, and paint with black enamel over suitable primer in the shop. Provide primer type as directed by the paint manufacturer for each substrate and paint.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Wire Mesh Partitions - Install plumb, level, and true to line, within a tolerance of 1/8 inch in 10 feet or the height or run of the partition, if less than 10 feet. Anchor floor sockets to the floor with expansion bolts. Bolt vertical frames and posts together with 1/4 inch bolts 12 inches o.c. for normal duty partitions. Secure top frames to a continuous capping bar with 1/4 inch diameter U bolts not more than 28 inches o.c.
- B. Doors - Install in accordance with the manufacturers' recommendations. Adjust as required so that doors and hardware operate freely and properly.
- C. bracing - Brace free standing partitions more than 20 feet in length, at intervals not greater than 20 feet with a steel channel brace connected to the capping bar and anchored to the building wall or framing member with a structural steel I section or tube post welded to a 9 by 9 inch steel base plate anchored to the floor with four expansion bolts.
- D. Touch-Up - Clean and paint scratches, abrasions, and other damage to shop painted surfaces to match the shop-applied finish.

Repair minor surface rust areas. Clean and prime with rust inhibitive primer paint. Apply final paint to match shop-applied finishes.

END OF SECTION

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