SECTION 10605

WIRE MESH PARTITIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Wire mesh fabrications for the following applications:
   a. Standard-duty interior partitions.

B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:

1. Section 08710 - DOOR HARDWARE for lock cylinders and keying.

1.2 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for wire mesh items.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Verification: 12-by-12-inch panel constructed of specified frame members and wire mesh. Show method of finishing members at intersections.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver wire mesh items crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of construction contiguous with wire mesh items by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish location dimensions and proceed with fabricating

wire mesh items without field measurements. Coordinate with adjacent construction to ensure that actual location dimensions correspond to established dimensions.

1.5 COORDINATION

A. Coordinate installation of anchorages for wire mesh items supported or anchored to permanent construction. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Acorn Wire & Iron Works, Inc.
2. Jesco Industries, Inc.
3. King Wire Partitions, Inc.
4. Miller Wire Works, Inc.
5. Standard Wire & Steel Works.
6. Wire Crafters, Inc.

B. Basis of Design: Style 040, by Wire Crafters.

2.2 MATERIALS

A. Steel Wire: ASTM A 510.

B. Steel Plates, Channels, Angles, and Bars: ASTM A 36/A 36M.

C. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.

D. Steel Pipe: ASTM A 53/A 53M, Schedule 40, unless another weight is indicated or required by structural loads.

E. Square Steel Tubing: Cold-formed structural-steel tubing, ASTM A 500.

F. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with G60 (Z180) zinc (galvanized) or A60 (ZF180) zinc-iron-alloy (galvannealed) coating designation.

G. Panel-to-Panel Fasteners: Manufacturer's standard steel bolts.

H. Postinstalled Expansion Anchors in Concrete: With capability to sustain, without failure, load imposed within factors of safety indicated, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.

I. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated and fabricated from corrosion-resistant materials; with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by wire mesh construction, as determined by testing per ASTM E 1190, conducted by a qualified testing and inspecting agency.

2.3 PAINT

A. Shop Primers: Provide primers to comply with applicable requirements in Section 09900 - PAINTING.

2.4 STANDARD-DUTY WIRE MESH PARTITIONS

A. Mesh: 0.135-inch-diameter, intermediate-crimp steel wire woven into 2-inch by 1-inch rectangular mesh.

B. Vertical Panel Framing: 1-1/4-by-5/8-by-0.0966-inch cold-rolled, C-shaped steel channels with 1/4-inch- (6-mm-) diameter bolt holes spaced not more than 18 inches o.c. along center of framing.

C. Horizontal Panel Framing: 1-by-1/2-by-1/8-inch cold-rolled steel channels.

D. Horizontal Panel Stiffeners: 1-by-1/2-by-1/8-inch cold-rolled steel channels with wire woven through, or two 1-by-3/8-by-1/8-inch cold-rolled steel channels bolted or riveted toe to toe through mesh.

E. Top Capping Bars: 2-1/4-by-1-inch cold-rolled steel channels.

F. Posts for 90-Degree Corners: 1-1/4-by-1-1/4-by-1/8-inch steel angles with 1/4-inch-diameter bolt holes aligning with bolt holes in vertical framing; with floor anchor clips.

G. Posts for Other-Than-90-Degree Corners: Manufacturer's standard steel pipe or tubing with 1/4-inch- diameter bolt holes aligning with bolt holes in vertical framing.

H. Floor Shoes: Steel, cast iron, or cast aluminum, 2 inches (50 mm) high; sized to suit vertical framing, drilled for attachment to floor, and with set screws for leveling adjustment.

I. Swinging Doors: Fabricated from same mesh as partitions, with framing fabricated from 1-1/4-by-1/2-by-1/8-inch steel channels or C-channels, banded with 1-1/4-by-1/8-

inch flat steel bar cover plates on 3 sides, and with 1/8-inch-thick angle strike bar and cover on strike jamb.

1. Hinges: Full-surface type, 3-by-3-inch steel, 1-1/2 pairs per door; bolted, riveted, or welded to door and jamb framing.
2. Cylinder Lock: Mortise type with cylinder specified in Section 08710 - DOOR HARDWARE operated by key outside and recessed knob inside.
3. Door size – 4'-0" wide x 7'-3¼" per previous spec.

J. Accessories:

1. Sheet Metal Base: 0.0598-inch- thick, cold-rolled steel sheet.
2. Adjustable Filler Panels: 0.0598-inch- thick, cold-rolled steel sheet; capable of filling openings from 2 to 12 inches.
3. Wall Clips: Manufacturer's standard, cold-rolled steel sheet.

K. Finishes for Interior Locations: Powder-coated finish, color as selected.

2.5 WIRE MESH CEILINGS

A. Ceilings are not required in partitions.

2.6 FABRICATION

A. General: Fabricate wire mesh items from components of sizes not less than those indicated. Use larger-size components as recommended by wire mesh item manufacturer. Provide bolts, hardware, and accessories as required for complete installation.

1. Fabricate wire mesh items to be readily disassembled.
2. Welding: Weld corner joints of framing and grind smooth.

B. Standard Duty Wire Mesh Partitions: Fabricate wire mesh partitions with cutouts for pipes, ducts, beams, and other items indicated. Finish edges of cutouts to provide a neat, protective edge.

1. Mesh: Securely clinch mesh to framing.
2. Framing: Fabricate framing with mortise and tenon corner construction.

    a. Provide horizontal stiffeners as indicated or, if not indicated, as required by panel height and as recommended by wire mesh partition manufacturer. Weld horizontal stiffeners to vertical framing.
    b. Fabricate partition and door framing with slotted holes for connecting adjacent panels.

3. Fabricate wire mesh partitions with 3 inches of clear space between finished floor and bottom horizontal framing.
4. Doors: Align bottom of door with bottom of adjacent panels.

    a. For doors that do not extend full height of partition, provide transom over door, fabricated from same mesh and framing as partition panels.

5. Hardware Preparation: Mortise, reinforce, drill, and tap doors and framing as required to install hardware.

2.7 FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. All components to be pre-finished with one coat gray enamel paint.
2. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
3. Provide appropriate color touch-up paint for repairing damage to paint finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Examine floors for suitable conditions where wire mesh items will be installed.

C. Examine walls to which wire mesh items will be attached for properly located blocking, grounds, and other solid backing for attachment of support fasteners.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ERECTION

A. Wire Mesh Partitions:

1. Anchor wire mesh partitions to floor with 3/8-inch-diameter, postinstalled expansion anchors at 12 inches o.c. through anchor clips located at each post and corner. Shim anchor clips as required to achieve level and plumb installation.

2. Anchor wire mesh partitions to walls at 12 inches o.c. through back corner panel framing.
3. Secure top capping bars to top framing channels with 1/4-inch- diameter "U" bolts spaced not more than 28 inches o.c.
4. Provide line posts at locations indicated.
5. Where standard-width wire mesh partition panels do not fill entire length of run, provide adjustable filler panels to fill openings.
6. Install doors complete with door hardware.
7. Install security windows complete with window hardware.
8. Weld or bolt sheet metal bases.
9. Bolt accessories to wire mesh partition framing.

3.3 ADJUSTING AND CLEANING

A. Adjust doors to operate easily without binding.

B. Check and readjust operating hardware items just before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work including doors and framing that are warped, bowed, or otherwise unacceptable.

C. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint; paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION