SECTION 12 56 53
LABORATORY FURNITURE

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies laboratory furniture and related accessories.

1.2 RELATED WORK

A. Electrical Components: Division 26, ELECTRICAL.

1.3 QUALITY ASSURANCE

A. Approval by Contracting Officer of proposed manufacturer, or suppliers, will be based upon submission by Contractor certification that, manufacturer regularly and presently manufactures furniture specified as one of their principal products.

B. Installer has technical qualifications, experience, trained personnel, and facilities to install specified items.

C. Furnish supervision of installation at construction site by a qualified technician regularly employed by furniture installer.

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Brochures showing name and address of manufacturer, and catalog or model number of each item incorporated into the work.
2. Manufacturer's illustration and detailed description.
3. List of deviations from contract specifications.

C. Shop Drawings:

1. Provide complete shop and installation drawings, giving all dimensioning, details of construction, and accessory items..

1.5 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.

B. American Society for Testing and Materials (ASTM):

A36/A36M-08.....Carbon Structural Steel

A167-99(R 2009).....Stainless and Heat-Resisting Chromium Steel Plate Sheet and Strip

A283/A283M-03(R 2007)...Low and Intermediate Tensile Strength Carbon Steel Plates

A568/A568M-09.....Steel, Sheet, Carbon and High-Strength, Low-Alloy Hot-Rolled and Cold-Rolled, General Requirements

A794/A794M-09.....Standard Specification for Commercial Steel (CS), Sheet, Carbon (0.16% Maximum to 0.25% Maximum) Cold Rolled

B456-03(R2009).....Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium

C1036-06.....Flat Glass

C. American National Standard Institute:

Z97.1-09.....Safety Glazing Material used In Buildings

D. Builders Hardware Manufacturers Association (BHMA):

A156.1-06.....Butts and Hinges

A156.9-10.....Cabinet Hardware

A156.5-10.....Auxiliary Locks and Associated Products

A156.11-10.....Cabinet Locks

A156.16-02.....Auxiliary Hardware

E. American Welding Society (AWS):

D1.1-10.....Structural Welding Code Steel

D1.3-08.....Structural Welding Code Sheet Steel

F. National Association of Architectural Metal Manufacturers (NAAMM):

AMP 500-505-06 Series...Metal Finishes Manual

G. U.S. Department of Commerce, Product Standard (PS):

PS 1-95.....Construction and Industrial Plywood

H. Federal Specifications (Fed. Spec.):

FF-N-836D.....Nut, Square, Hexagon Cap, Slotted, Castle Knurled, Welding and Single Ball Seat

A-A-55615.....Shield, Expansion; Nail Expansion (Wood Screw and Lag Bolt Self-Threading Anchors)

PART 2 - PRODUCTS

2.1 MANUFACTURED PRODUCTS

A. When two or more units are required, use products of one manufacturer.

B. Manufacturer of equipment assemblies, which include components made by other, shall assume complete responsibility for the final assembled unit.

C. Constituent parts which are alike, use products of a single manufacturer.

2.2 WORKSTATION BASE FRAMES

A. Cantilevered base frames with leveling glides.

B. Rear fixing frame for support of uprights.

C. Manually height adjustable from 27" to 39" to top of frame.

D. Width as shown on drawings, nominally 36", 48", 60", 72" and 96" wide.

2.3 WORK SURFACE

A. Chemical resistant plastic laminate surface over 1 1/8" minimum particle board core.

B. Provide radiused edge treatment on front edge of work surface.

2.4 ACCESSORIES

A. Uprights:

1. Fabricate of epoxy powder coated steel with slotted holes to match accessories.
2. Provide as required to support accessories shown on drawings.

B. Shelving and Drawers:

1. 12 inch deep steel shelving with end panels for mounting to uprights.
2. 18 inch deep steel shelving for mounting under work surface.
3. 18 inch deep steel drawers for mounting under work surface with roller drawer slides. Height of drawers as shown on drawings.

C. Flipper Cabinets

1. 16" high x 30" wide x 14" deep cabinets with flip up door.
2. Mount flipper cabinets to uprights where indicated.

D. CPU Holder

1. Mounted under work surface.
2. Wraparound design, adjustable to fit 4.75" to 8.5" by 15" to 23" CPU.
3. 16 inch sliding track with swivel.

E. Flat Panel Display Arm

1. Mounted to uprights.
2. 18" adjustable extension arm.

2.6 FINISHES

A. Steel: Gray epoxy powder coat. Black epoxy powder coat on uprights and CPU holders.

B. Work Surfaces: Chemical resistant plastic laminate in color selected from manufacturers full color range.

PART 3 - EXECUTION

3.1 COORDINATION

A. Before furniture, verify wall and floor surfaces covered by furniture have been finished.

B. Verify location and size of electrical services as required.

3.2 INSTALLATION

A. Assemble and install all items in strict accord with manufacturer's printed instructions.

1. Anchor all fixed components firmly, square, level, plumb.

B. Horizontal support elements.

1. Install at heights indicated with all tops, shelves, and writing surfaces level within 1/8" across width.

C. Vertical support elements.

1. Install plumb, spaced as indicated on shop drawings.
2. Align slots to assure hanging units are level.

3.3 FIELD QUALITY CONTROL

A. Adjust components to assure proper alignment and operation.

B. Repair, if acceptable, or replace all damaged or improperly operating items.

3.4 CLEANING

A. Immediately after installation and adjustment; clean all surfaces to remove all marks, soil, and foreign matter.

B. Just prior to Substantial Completion, recheck all components and perform all required additional cleaning.

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