

SECTION 102220

FOLDING PANEL PARTITIONS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 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. Manually-operated, single and paired-panel partitions.
- B. Sustainable Design Intent: Refer to Section 018113 - SUSTAINABLE DESIGN REQUIREMENTS for certification level and certification requirements.
- C. Related Work: The following items are not included in this Section and are specified under the designated Sections:
  - 1. Section 055000 - METAL FABRICATIONS for framing and supports.
  - 2. Section 061000 – ROUGH CARPENTRY for concealed blocking.

1.3 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Provide operable panel partitions capable of withstanding the effects of earthquake motions determined according to Code requirements.
- B. Acoustical Performance: Provide operable panel partitions tested by a qualified testing agency for the following acoustical properties according to test methods indicated:
  - 1. Sound Transmission Requirements: Operable panel partition assembly tested in a full-scale opening, 14 by 9 feet for laboratory sound transmission loss performance according to ASTM E 90, determined by ASTM E 413, and rated for not less than the STC indicated.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. Indicate storage and operating clearances. Indicate location and installation requirements for hardware and track, blocking, and direction of travel.
  - 2. Wiring Diagrams: Power, signal, and control wiring.
- C. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:

1. Suspended ceiling components.
  2. Structural members to which suspension systems will be attached.
  3. Size and location of initial access modules for acoustical tile.
  4. Items penetrating finished ceiling, including the following:
    - a. Lighting fixtures.
    - b. Air outlets and inlets.
    - c. Speakers.
    - d. Sprinklers.
    - e. Access panels.
- D. Setting Drawings: For embedded items and cutouts required in other work, including support-beam punching template.
- E. Samples for Verification: For each type of finish, covering, or facing indicated, prepared on Samples of size indicated below.
1. Applied Facing: Full width by not less than 8-inch-long section of fabric from dye lot to be used for the Work, with specified treatments applied. Show complete pattern repeat.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a certified testing agency, for each operable panel partition.
- G. Maintenance Data: For operable panel partitions to include in maintenance manuals.
1. Panel finish facings and finishes for exposed trim and accessories. Include precautions for cleaning materials and methods that could be detrimental to finishes and performance.
  2. Seals, hardware, track, carriers, and other operating components.
  3. For electric operator.
- H. Warranty: Special warranty specified in this Section.
- 1.5 QUALITY ASSURANCE
- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Fire-Test-Response Characteristics: Provide operable panel partitions with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 450 or less.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protectively package and sequence panels in order for installation. Clearly mark packages and panels with numbering system used on Shop Drawings. Do not use permanent markings on panels.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify operable panel partition openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of operable panel partitions that fail in materials or workmanship within specified warranty period.

- 1. Failures include, but are not limited to, the following:
  - a. Faulty operation of operable panel partitions.
  - b. Deterioration of metals, metal finishes, and other materials beyond normal wear.
- 2. Panel Warranty Period: Two years from date of Substantial Completion.
- 3. Track Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Moderco, Inc., Excel Model 742, manually operated, top supported paired panels, Basis of Design
  - 2. Hufcor, Inc.
  - 3. Modernfold.

2.2 MATERIALS

- A. Steel Frame: Steel sheet, manufacturer's standard nominal specified thickness for uncoated steel.
- B. Steel Face/Liner Sheets: Tension-leveled steel sheet, manufacturer's standard thickness.
- C. Gypsum Board: ASTM C 1396.

2.3 OPERABLE PANELS

- A. Panel Construction: Provide top reinforcement as required to support panel from suspension components and provide reinforcement for hardware attachment. Fabricate panels with tight hairline joints and concealed fasteners. Fabricate panels so finished in-place partition is rigid; level; plumb; aligned, with tight joints and uniform appearance; and free of bow, warp, twist, deformation, and surface and finish irregularities.

- B. Dimensions: Fabricate operable panel partitions to form an assembled system of dimensions indicated and verified by field measurements.
- C. STC: Not less than 56.
- D. NRC: Not less than 65.
- E. Panel Closure: Manufacturer's standard.
- F. Hardware: Manufacturer's standard as required to operate operable panel partition and accessories; with decorative, protective finish.

#### 2.4 SEALS

- A. General: Provide types of acoustical seals indicated that produce operable panel partitions complying with acoustical performance requirements and the following:
  - 1. Manufacturer's standard seals.
  - 2. Seals made from materials and in profiles that minimize sound leakage.
  - 3. Seals fitting tight at contact surfaces and sealing continuously between adjacent panels and between operable panel partition perimeter and adjacent surfaces, when operable panel partition is extended and closed.
- B. Vertical Seals: Deep-nesting, interlocking astragals mounted on each edge of panel, with continuous PVC acoustical seal.
- C. Horizontal Bottom Seals: PVC-faced, mechanical, retractable, constant-force-contact seal exerting uniform constant pressure on floor when extended, ensuring horizontal and vertical sealing and resisting panel movement.
  - 1. Automatically Operated: Extension and retraction of bottom seal automatically operated by movement of partition, with operating range not less than 2-inches between retracted seal and floor finish.

#### 2.5 FINISH FACING

- A. General: Provide finish facings that comply with indicated fire-test-response characteristics and that are factory applied to operable panel partitions with appropriate backing, using mildew-resistant nonstaining adhesive as recommended by facing manufacturer's written instructions.
- B. Fabric-covered Tackable Surfaces: 50%, configuration as indicated on the Drawings.
  - 1. Fabric Manufacturers:
    - a. Architex.
    - b. Carnegie.
    - c. C. F. Stinson, LLC.
    - d. Maharam.
- C. Whiteboard: 25%, configuration as indicated on the Drawings.
- D. Trimless Edges: Fabricate exposed panel edges so finish facing wraps uninterrupted around panel, covering edge and resulting in an installed partition with facing visible on vertical panel edges, without trim, for minimal sightlines at panel-to-panel joints.

## 2.6 SUSPENSION SYSTEMS

- A. Suspension Tracks: Steel or aluminum adjustable steel hanger rods for overhead support, designed for type of operation, size, and weight of operable panel partition indicated. Size track to support partition operation and storage without damage to suspension system, operable panel partitions, or adjacent construction. Limit track deflection to no more than 0.10 inch between bracket supports. Provide a continuous system of track sections and accessories to accommodate configuration and layout indicated for partition operation and storage.
- B. Carriers: Trolley system as required for configuration type, size, and weight of partition and for easy operation; with ball-bearing wheels.
- C. Track Intersections, Switches, and Accessories: As required for type of operation, storage, track configuration, and layout indicated for operable panel partitions, and compatible with partition assembly specified. Fabricate track intersections and switches from steel or aluminum.
- D. Aluminum Finish: Mill finish or manufacturer's standard, factory-applied, decorative finish, unless otherwise indicated.
- E. Steel Finish: Factory-applied, corrosion-resistant, protective coating, unless otherwise indicated.

## 2.7 ACCESSORIES

- A. Storage Pocket Door: Full height at end of partition runs to conceal stacked partition; of same materials, finish, construction, thickness, and acoustical qualities as panels; complete with operating hardware and acoustical seals at soffit, floor, and jambs. Hinges in finish to match other exposed hardware.
  - 1. Manufacturer's standard method to secure pocket door in closed position.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable panel partitions.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Comply with operable panel partition manufacturer's written installation instructions.
- B. Install operable panel partitions and accessories after other finishing operations, including painting, have been completed.
- C. Broken, cracked, chipped, deformed, or unmatched panels are not acceptable.

### 3.3 ADJUSTING

- A. Adjust operable panel partitions to operate smoothly, without warping or binding. Lubricate hardware, electric operator, and other moving parts.

- B. Adjust pass doors and pocket doors to operate smoothly and easily, without binding or warping. Check and readjust operating hardware. Confirm that latches and locks engage accurately and securely without forcing or binding.

#### 3.4 FIELD QUALITY CONTROL

- A. Light Leakage Test: Illuminate one side of partition installation and observe vertical joints and top and bottom seals for voids; adjust partitions for acceptable fit.
- B. NIC Testing: The Owner may engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- C. Testing Methodology: Perform testing of installed operable panel partition for noise isolation according to ASTM E 336, determined by ASTM E 413, and rated for not less than the NIC indicated. Adjust and fit partitions to comply with NIC test method requirements.
- D. Testing Extent: Testing agency shall randomly select one operable panel partition installation(s) for testing.
- E. Repair or replace operable panel partitions within areas where test results indicate partitions do not comply with requirements, and retest partitions.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of repaired, replaced, or additional work with specified requirements.

#### 3.5 CLEANING

- A. Clean soiled surfaces of operable panel partitions to remove dust, loose fibers, fingerprints, adhesives, and other foreign materials according to manufacturer's written instructions.

#### 3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train the Owner Project Manager's maintenance personnel to adjust, operate, and maintain operable panel partitions.

END OF SECTION