

SECTION 10651 - OPERABLE PANEL PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Manually operated, continuously hinged panel partition.
- B. Related Sections include the following:
 - 1. Division 9 Section "Gypsum Board Assemblies" for sound barrier construction above the ceiling at track.

1.3 DEFINITIONS

- A. NIC: Noise Isolation Class.
- B. NRC: Noise Reduction Coefficient.
- C. NVLAP: National Voluntary Laboratory Accreditation Program.
- D. STC: Sound Transmission Class.

1.4 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Provide operable panel partitions capable of withstanding the effects of earthquake motions determined according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures."
- 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 (4.2 by 2.7 m), 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.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, numbered panel installation sequence, and attachments to other work.
 - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 2. Indicate storage and operating clearances. Indicate location and installation requirements for hardware and track, blocking, and direction of travel.
 - 3. Wiring Diagrams: Power, signal, and control wiring.
- C. Setting Drawings: For embedded items and cutouts required in other work, including support-beam punching template.
- D. Samples for Initial Selection: For each type of finish, covering, or facing indicated.
 - 1. Include similar Samples of accessories involving color selection.
- E. Samples for Verification: For each type of finish, covering, or facing indicated, prepared on Samples of size indicated below.
 - 1. Fabric: Full width by not less than 36-inch- (914-mm-) long section of fabric from dye lot to be used for the Work, with specified treatments applied. Show complete pattern repeat.
 - 2. Panel Edge Material: Not less than 3 inches (75 mm) long.
 - 3. Hardware: Manufacturer's standard exposed door-operating device.
- F. Product Certificates: For each type of operable panel partition, signed by product manufacturer.
- G. Qualification Data: For Installer.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each operable panel partition.
- I. 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.
- J. Warranty: Special warranty specified in this Section.

1.6 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.

1.7 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.

1.8 PROJECT CONDITIONS

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

1.9 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. Warranty Period: Two years from date of Substantial Completion.
 - 3. to cover both sides of two panels when installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product for Manually Operated, Individual Panel Partition: The design is based on Hufcor Series 632 Omni Directional, Automatic Bottom Seals. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. Modernfold, Inc.
 - 2. Panelfold Inc.

2.2 MATERIALS

- A. Steel Frame: Steel sheet, not less than 0.0508-inch (1.3-mm) nominal specified thickness for uncoated steel.
- B. Steel Face/Liner Sheets: Tension-leveled steel sheet, manufacturer's standard thickness.
- C. Steel Face/Liner Sheets: Tension-leveled steel sheet not less than 0.0359-inch (0.9-mm) nominal specified thickness for uncoated steel.
- D. Gypsum Board: ASTM C 36/C 36M.

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.
 - 1. Panel Width: Equal widths not more than 48 inches.
- C. STC: Not less than 51.
- D. Panel Weight: 10 lb/sq. ft. (50 kg/sq. m) maximum.
- E. Panel Thickness: Not less than 3 inches (75 mm).
- F. Panel Closure: Manufacturer's standard.
- G. 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 Top Seals: Continuous-contact, extruded-PVC constant-force-contact seal exerting uniform constant pressure on track when extended.
- D. 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. Manually Operated.

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.
 - 1. Apply one-piece, seamless facings free of air bubbles, wrinkles, blisters, and other defects, with invisible seams complying with Shop Drawings for location, and with no gaps or overlaps. Horizontal seams are not permitted. Tightly secure and conceal raw and selvage edges of facing for finished appearance.
 - 2. Color/Pattern: As selected by Architect from manufacturer's full range.
- B. Fabric Wall Covering: 100 percent polyolefin woven fabric, from same dye lot, treated to resist stains.
- C. 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 mounted directly to overhead structural support, or with 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 (2.54 mm) between bracket supports. Provide a continuous system of track sections and accessories to accommodate configuration and layout indicated for partition operation and storage.
 - 1. Panel Guide: Aluminum; finished with factory-applied, decorative, protective finish.
 - 2. Head Closure Trim: As required for acoustical performance; with factory-applied, decorative, protective finish.
- B. Carriers: Trolley system as required for configuration type, size, and weight of partition and for easy operation; with ball-bearing wheels.
 - 1. Multidirectional Carriers: For individual panel systems, capable of negotiating 90-degree L, T, and X intersections without track switches.
- C. Aluminum Finish: Mill finish or manufacturer's standard, factory-applied, decorative finish,

unless otherwise indicated.

- D. Steel Finish: Factory-applied, corrosion-resistant, protective coating, unless otherwise indicated.

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. Install panels from marked packages in numbered sequence indicated on Shop Drawings.
- D. 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 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.

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 Owner's maintenance personnel to adjust, operate, and maintain operable panel partitions. Refer to Division 1 Section "Demonstration and Training."

END OF SECTION 10651