

**SECTION 10 22 26
OPERABLE 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.

ASTM INTERNATIONAL (ASTM)

ASTM E 413 (2004) Rating Sound Insulation

ASTM E 557 (2000) Installation of Operable Partitions

ASTM E 84 (2005) Surface Burning Characteristics of Building Materials

ASTM E 90 (2004) Laboratory Measurement of Airborne
Sound Transmission Loss of Building

Partitions and Elements

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 101 (2006) Life Safety Code

1.2 GENERAL REQUIREMENTS

The Contractor shall supply and install manual operation, acoustical operable partitions, factory finished, supported from overhead track without floor guides, as shown on the drawings including all hardware, seals, track and rollers as needed to close the specified opening. This operable partition specification covers wall panel partitions.

1.2.1 Manual Operation

The manual operation shall be accomplished with less than 20 lbf force to start movement at the rate of 3.33 ft/s (200 ft/min). A removable handle shall be used to extend and retract the bottom operable seals; vertical movement of seals shall be 2 inches. Closure to the lead wall shall be by use of a flexible bulb; final closing shall be accomplished by means of a lever exerting pressure against wall.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Installation; G

Layouts; G

Drawings containing complete schematic diagrams and details required to demonstrate that the system has been coordinated and will properly function as a unit. Drawings shall show dimensions and weight of stacked partition; layout of the work, track and jamb fastening methods; seal details and installation details; proposed layout and anchorage of equipment and appurtenances, and equipment relationship to other parts of the work including clearances for maintenance and operation.

SD-03 Product Data

Operable Partitions; G

Manufacturer's descriptive data, performance charts, catalog cuts, and installation instructions for framework, suspension system, covering, accessories, and electrical operators.

SD-04 Samples

Operable Partitions; G

Three Color samples of specified surfaces and finishes to match those specified. Finish and color requirements shall not be limited to manufacturer's standard selections in order to meet these requirements.

SD-06 Test Reports

Flame and Smoke Development Tests; G

Reports on laboratory acoustical requirements and acoustical test. Reports on flame and smoke development tests.

SD-07 Certificates

Materials; G

Operable Partitions; G

Certificate attesting that the materials meet the requirements specified and that partitions have specified acoustical and flame retardant properties, as determined by test.

SD-10 Operation and Maintenance Data

Operable Partitions

Data Package 1 for wall panel partitions, and in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA. The instructions shall include the manufacturer's name, model number, service manual, parts list, and brief description of all equipment and operating features. Data shall include a complete list of parts and supplies, with current unit prices and source of supply, and a list of the parts recommended by the manufacturer to be replaced

after 1 year and 3 years of service. Six complete copies of maintenance instructions explaining routine maintenance procedures including inspection, adjustments, lubrication, and cleaning. The instructions shall list possible breakdown, methods of repair, and a troubleshooting guide. The instructions shall include equipment layout and simplified wiring and control diagrams of the system as installed.

1.4 DELIVERY AND STORAGE

Materials shall be delivered to the jobsite in the manufacturer's original, unopened, and undamaged packages with labels legible and intact. Provide labels to indicate the manufacturer, brand name, size, finish, and placement location. Store partitions and accessories in unopened packages in a manner that will prevent damage. Handle partition materials in accordance with manufacturer's instructions. Materials shall be protected from the weather, humidity and temperature variations, dirt and dust, or other contaminants.

1.5 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period shall be provided. In addition, trolleys and tracks shall be guaranteed for 10 years from date of acceptance for beneficial use.

PART 2 PRODUCTS

2.1 MATERIALS

Material and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture of such products and shall essentially duplicate items that have been in satisfactory use for at least 2 year prior to bid opening. Equipment shall be supported by a service organization that is, in the opinion of the Contracting Officer, reasonably convenient to the site. Provide heavy-duty type hardware standard with the manufacturer. Provide pulls and latches for all partitions. Provide partitions with magnetic contact latches. Hardware shall be anodized aluminum clear finish.

2.2 OPERABLE WALL PANEL PARTITIONS

Operable wall panel partitions shall consist of top hung ball bearing carriers which support modular panels.

a. Provide partitions made up of a series of rigid panels, each panel being a one-piece assembly. Unless otherwise specified, the wall shall comprise the least number of panels. The mechanical seal of the panel shall actuate with a single operating action.

b. Provide panels single type as indicated.

2.2.1 Panels

Provide panels of steel skin, laminated to appropriate structural acoustical backing, mounted in full perimeter protective frame. Steel for the panel frames shall be a minimum of 24 gauge thick steel with minimum 22 gauge thick face panels spot welded to the frame. Frame shall enclose and

protect all edges of the surface material. Panels shall be not more than 4 feet wide, except for end closure panels, and shall be full height to track. Panels shall lock in place to form a stable, rigid partition; low profile hinges shall project 1/4 inch maximum from panel edge. Panel surfacing shall wrap around the vertical panel edges without vertical trim.

2.2.2 Finish Covering

Finish material shall be minimum 54 inches wide, 100 percent nylon. Fabric shall be stain-resistant, shall not mildew, rot or support growth of bacteria and shall be non-allergenic. Color and pattern shall be as indicated on the drawings.

2.2.3 Track

Track shall be recessed as shown and shall be of extruded aluminum or enamel finish steel. Track shall be manufacturer's standard product designed for the weight of the finished partition, including door. Track sections shall be provided in the maximum lengths practicable, not less than 6 feet long except for narrow doors and at ends of runs where short length is required. Suitable joint devices such as interlocking keys shall be provided at each joint to provide permanent alignment of track.

2.2.4 Suspension System

Provide a suspension system consisting of steel or heavy duty extruded aluminum track connected to the structural support by threaded rods, and trolleys designed to support the weight of the partition. Provide steel track of 7 gage minimum, phosphate treated or painted. Provide extruded aluminum track with minimum thickness of 1/8 inch.

2.3 ACCESSORIES

2.3.1 Doors

Doors shall have vinyl sweep top seals which compress against the bottom of the top track. Doors shall be nonfire rated and shall be manually operated.

2.3.2 Ceiling Guards

Furnish partitions with ceiling guards or integral track and ceiling guards as recommended by the manufacturer.

2.3.3 Metal Soffit

Soffit shall be provided when steel track is recessed. Soffit shall be of metal of adequate thickness to protect the ceiling from damage by door operation and shall be provided with the door manufacturer's standard neutral-color applied finish. Soffit on aluminum track shall be an integral part of the track

2.4 SEALS AND SWEEPSTRIPS

Provide perimeter seals or sound insulation, of manufacturer's standard product, to achieve the sound transmission class specified and to pass the visual field test specified, without crack or craze when subjected to severe usage. Provide mechanical bottom seal that can be raised or lowered

for positive control. Provide manufacturer's vertical seals between panels to ensure acoustical rating. Bottom seals shall consist of a vinyl sweep mechanical seal which will expand in place or shall be accomplished by using panels which can be lowered by a removable operating device. Vertical seal between panels shall be anodized, architectural grade, aluminum extrusion with vinyl sound seal. Sweep strips shall be vinyl or other material which will not crack or craze with severe usage. Sweep strip shall control STC to the specified rating.

2.5 PERFORMANCE REQUIREMENTS

2.5.1 Fire Endurance

For partitions more than 60 square feet in area, provide covering and lining with flame spread rating of 25 or less, fuel contribution rating of 15 or less, smoke generation of 50 or less in accordance with NFPA 101 when tested in accordance with ASTM E 84. The Contractor shall submit flame and smoke development tests reports. Door and partition finishes shall have a Class A rating when tested in accordance with ASTM E 84.

2.5.2 Laboratory Acoustical Requirements

Partitions shall have been tested in accordance with ASTM E 90 by a laboratory accredited by the U.S. Bureau of Standards and have attained a sound transmission class (STC) of not less than 40 in a fully extended position, with a Noise Reduction Coefficient (NRC) of 0.25-0.30 for napped, tufted or looped fabric. Partition tested shall be of the same construction, materials, and model number as the partition to be provided and shall be fully operable. Test specimen shall be not less than 126 square feet in area. Panel weight shall be a minimum of 5.5 psf for STC up to 40, 7.5 psf for STC up to 45, and 8.5 psf for STC up to 50, 10.0 psf for STC up to 53. Panel thickness (4 inch nominal) and composition shall be designed to provide the required STC rating in accordance with ASTM E 90 and ASTM E 413.

2.6 COLOR

Color shall be as indicated on the drawings. Color listed is not intended to limit selection of equal colors from other manufacturers.

PART 3 EXECUTION

3.1 INSTALLATION

Installation shall be in accordance with the manufacturer's approved instructions.

3.1.1 Preparation Work

Check openings scheduled to receive operable partitions for correct dimensions. Install partitions in accordance with the approved partition layouts, manufacturer's directions, and ASTM E 557. Structural support for the track support elements shall be as indicated.

3.1.2 Adjustment

Adjust manually operated partitions to open and close from any position

with a maximum horizontal force as specified in paragraph Manual Operation applied to pendant pull, box or handle.

3.2 FIELD TESTS

3.2.1 Operational Test

In the presence of the Contracting Officer, operate partition at least three times to demonstrate that partition is capable of being moved from the stored position to the fully extended position smoothly and quietly. Activate mechanical seals top and bottom. Adjust partitions which do not operate properly and retest.

3.2.2 Visual Test

Conduct visual field tests for light leakage with all room lights turned on in the space on one side of the partition. Darken space on the other side of the partition. There shall be no light leakage from the lighted space to the darkened space. If light leakage does occur, adjust the partition to correct the problem and retest.

3.3 CLEANING

Clean any soiled parts of the partition in accordance with manufacturer's printed instructions.

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