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USACE / NAVFAC / AFCEC / NASA | UFGS-10 22 43 (August 2016)
Change 1 - 08/18

Preparing Activity: USACE | Superseding
UFGS-10 22 43 (May 2011)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2023
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08/16, CHG 1: 08/18

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SECTION 10 22 43

SLIDING PARTITIONS
08/16, CHG 1: 08/18

****
NOTE: This guide specification covers the requirements for sliding partitions.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).
****

PART 1 GENERAL

****
NOTE: Designer should require materials, products, and innovative construction methods and techniques which are environmentally sensitive, take advantage of recycling and conserve natural resources.

Associated work found in other sections includes:

Steel supporting members or hanger rods, Section 08 31 00 ACCESS DOORS AND PANELS.

Wood blocking, rough bucks, and headers, Section 06 10 00 ROUGH CARPENTRY.

Wood trim, wood or hardboard ceiling guard, or soffits, Section 06 20 00 FINISH CARPENTRY.

Lock cylinders, Section 08 71 00 DOOR HARDWARE.

Operator field connections to power sources and inner connection to control switches, Section 26 20 00 INTERIOR DISTRIBUTION SYSTEM.

The following information should be shown on the drawings:

1. Location, size, and pocket area of sliding panel partitions.

2. Direction of operation, header conditions indicating height, track anchorage, track channel, and jamb conditions.

3. Partition supporting structure. The structural support for the partition is not part of this section; it must be indicated and specified separately.

4. A schedule of sliding partitions by type (manually or electrically operated), sizes, and stack space and identified by mark number or letter

5. For electrically operated partitions, show power source and desired switch location.

****

1.1 REFERENCES

****

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

****

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 A653/A653M	(2023) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM B221	(2021) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
ASTM B221M	(2021) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric)
ASTM C423	(2023) Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
ASTM D751	(2006; R 2011) Coated Fabrics
ASTM E84	(2023) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM E90	(2009; R2016) Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
ASTM E336	(2023) Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings
ASTM E413	(2022) Classification for Rating Sound Insulation
ASTM E557	(2012; R 2020) Standard Guide for Architectural Design and Installation Practices for Sound Isolation between Spaces Separated by Operable Partitions

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)

CDPH SECTION 01350	(2017; Version 1.2) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers

CHEMICAL FABRICS AND FILM ASSOCIATION (CFFA)

CFFA-W-101-D	(2002) Quality Standard for Vinyl Coated Fabric Wallcovering

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2023) National Electrical Code
NFPA 101	(2021; TIA 21-1) Life Safety Code

NFPA 252	(2022) Standard Methods of Fire Tests of Door Assemblies
NFPA 286	(2019) Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

SCIENTIFIC CERTIFICATION SYSTEMS (SCS)

SCS	SCS Global Services (SCS) Indoor Advantage

UNDERWRITERS LABORATORIES (UL)

UL 10B	(2008; Reprint May 2020) Fire Tests of Door Assemblies
UL 2818	(2022) GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes And Furnishings

1.2 SUBMITTALS

****

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a “G” to an item, if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

****

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Manufacturer's Qualifications; G[, [_____]]

Manufacturer's Sample Warranty

Statement of Code Compliance; G[, [_____]]

Statement of Standards Conformity; G[, [_____]]

Verification of Field Measurements; G[, [_____]]

[Existing Electrical Data]

SD-02 Shop Drawings

Installation; G[, [_____]]

Wiring Diagrams; G[, [_____]]

Layouts; G[, [_____]]

Fabrication Drawings; G[, [_____]]

SD-03 Product Data

Sliding Partitions; G[, [_____]]

Installation Instructions; G[, [_____]]

Recycled Content for Steel Components; S

Recycled Content for Aluminum Components; S

SD-04 Samples

Sliding Partitions; G[, [_____]]

Finish and Color; G[, [_____]]

SD-06 Test Reports

Acoustical Test

Flame and Smoke Development Tests

SD-07 Certificates

Materials

Sliding Partitions

Indoor Air Quality for Fabrics and Wallcoverings; S

SD-10 Operation and Maintenance Data

Operating Instructions; G[, [_____]]

Maintenance Instructions; G[, [_____]]

Data Package 1; G[, [_____]]

SD-11 Closeout Submittals

Warranty

****
NOTE: The Government's preference is for use of products that have been certified for indoor air quality by a third-party organization such as Greenguard or SCS Global Services. However, it must be verified there is a certified product available that is both cost effective and appropriate for the project. Retain the bracketed Section below when the designer of record confirms local/regional availability of Greenguard or SCS products that does not impact cost effectiveness. In addition, when this Section is retained requiring Greenguard or SCS products, also include the Indoor Air Quality Certificates in SD-07 submittals of this section.
****

[1.3 INDOOR AIR QUALITY CERTIFICATION

1.3.1 Fabrics and Wallcoverings

Provide products certified to meet indoor air quality requirements by UL 2818 (Greenguard) Gold, SCS Global Services Indoor Advantage Gold or provide certification or validation by other third-party program that products meet the requirements of this Section. Provide current product certification documentation from certification body. When product does not have certification, provide validation that product meets the indoor air quality product requirements cited herein.

]1.4 DELIVERY, STORAGE, AND HANDLING

Deliver materials 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. Protect materials from the weather, humidity and temperature variations, dirt and dust, or other contaminants.

1.5 WARRANTY

Provide Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period. In addition, provide guarantee of the pantographs, trolleys and tracks for 10 years from date of acceptance for beneficial use.

PART 2 PRODUCTS

2.1 SYSTEM DESCRIPTION

****
NOTE: The designer will edit this specification for manual or electric operation of sliding panel partitions as required for the project.
****

a. Provide [manual] [and] [electric] operation, acoustical sliding partitions, factory finished, supported from overhead track [without] [with] floor guides, as shown on the drawings including all hardware, seals, track and rollers as needed to close the specified opening.

b. No less than 30 calendar days prior to the scheduled commencement of installation submit the following to the Contracting Officer:

Manufacturer's Qualifications
Manufacturer's Sample Warranty
Statement of Code Compliance
Statement of Standards Conformity
Verification of Field Measurements
Existing Electrical Data
Fabrication Drawings
Installation Instructions

c. Submit drawings to demonstrate that the system has been coordinated and will properly function as a unit. Show layout of the work; track and jamb fastening methods; seal and installation details; and equipment relationship to other parts of the work including clearances for maintenance and operation.

2.1.1 Manual Operation

For the manual operation provide a force no greater than [89] [_____] N [20] [_____] lbf to start movement at the rate of 1.02 m/s 3.33 ft/s (200 ft/min). Use a removable handle to extend and retract the bottom operable seals; vertical movement of seals must be [50] [_____] mm [2] [_____] inches. Use a flexible bulb for closure to the lead wall; accomplish final closing by means of a lever exerting pressure against the wall.

2.1.2 Electric Operation

Design the pressure-sensitive leading edge so that a force of [17.8] [_____] N [4] [_____] lbf will stop the forward motion; system must stop the partition movement if people or objects are in the path of the partition when it is being extended or in the pocket area, when the panels are being folded. Provide a weight-sensitive floor mat in the storage pocket to prevent partition movement with as little as 2.3 kg 5 lbs of weight applied. Wall mount the electric control.

2.1.3 Performance Requirements

2.1.3.1 Fire Endurance

****
NOTE: Select flame spread and smoke developed

criteria to suit project.
****

For partitions more than 5.6 square meters 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 E84. [1 hour fire rating, UL 10B, or NFPA 252.] Submit flame and smoke development tests reports. Door and partition finishes must have a Class A rating when tested in accordance with ASTM E84.

2.1.3.2 Laboratory Acoustical Requirements

****
NOTE: Specify sound transmission class as determined by project requirements. The requested rating should be between 35 and 54 STC. 39 and 40 STC are widely available. If more is required, another type of moveable partition should be used. Specify a panel weight of no less than 14 kg per square meter 3 psf for STC of 35, 24 kg per square meter 5 psf for STC of 45.
****

Provide partitions tested in accordance with ASTM E90, by a laboratory accredited by the U.S. Bureau of Standards, that have attained a sound transmission class (STC) of not less than [39] [40] [_____] in a fully extended position, with a Noise Reduction Coefficient (NRC) of [0.25-0.30 for napped, tufted or looped fabric] [0.65-0.75 for perforated steel in accordance with ASTM C423] [_____]. Partition tested must be of the same construction, materials, and model number as the partition to be provided and be fully operable. Test specimen must be not less than [12 square meters in area] [4200 by 2700 mm] [126 square feet in area] [14 by 9 feet], with a panel weight minimum of 26 kg/square meter 5.5 psf for STC up to 40, 36 kg/square meter 7.5 psf for STC up to 45, and 41 kg/square meter 8.5 psf for STC up to 50, 48 kg/square meter 10.0 psf for STC up to 53. Panel thickness (100 mm 4 inch nominal) and composition designed to provide the required STC rating in accordance with ASTM E90 and ASTM E413.

2.2 MATERIALS

Provide materials and equipment which are the standard products of a manufacturer regularly engaged in the manufacture of such products and that essentially duplicate items that have been in satisfactory use for at least 2 year prior to bid opening. Submit Certificate attesting that the materials meet the requirements specified. Equipment must 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, pulls and latches for all partitions, and partitions with [keyed locks] [privacy latches] [magnetic contact latches] [foot bolts]. Provide [anodized aluminum [clear] [bronze]] [chrome plated] [brass plated metal] [painted] [_____] finish hardware.

2.3 SLIDING PARTITIONS

Provide sliding partitions using top hung ball bearing carriers which support modular panels:

a. Made up of a series of rigid panels, each panel being a one-piece

assembly. Unless otherwise specified, use the least number of panels. Actuate the mechanical seal of the panel with a single operating action.

b. [Paired] [Single] [Omni-directional] [Continuously hinged] type as indicated.

2.3.1 Panels

****
NOTE: Steel skin should be a minimum of 0.6 mm 24 gage for 1200 mm 48 inch panels, and 0.8 mm 22 gage for 1500 mm 60 inches panels.
****

Provide panels of [steel skin,] [reinforced aluminum,] [particleboard,] [wood] [_____] [tackable base,] laminated to appropriate structural acoustical backing, mounted in full perimeter protective frame. Steel for the panel frames must be a minimum of [_____] mm gauge thick steel with minimum 0.80 mm 22 gauge thick face panels spot welded to the frame. Frame must enclose and protect all edges of the surface material. Panels must be less than 1.2 m 4 feet wide, except for end closure panels, and be full height to track. Panels must lock in place to form a stable, rigid partition; low profile hinges may not project more than 6 mm 1/4 inch maximum from panel edge. Wrap panel surfacing around the vertical panel edges without vertical trim.[

****
NOTE: Use materials with recycled content where appropriate for use. Verify suitability, availability within the region, cost effectiveness and adequate competition (including verification of bracketed percentages included in this guide specification) before specifying product recycled content requirements.

Research shows the product is available from US national manufacturers above the minimum recycled content percentages shown below. Some manufacturers and regions have higher percentages. Based on research, select or insert desired minimum percentages into the empty set of brackets.
****

Provide steel components that contain a minimum of [10][_____] percent post-consumer recycled content. Provide data identifying percentage of recycled content for steel components.][

Provide aluminum components that contain a minimum of [30][_____] percent post-consumer recycled content. Provide data identifying percentage of recycled content for aluminum components.]

2.3.2 Finish Covering

****
NOTE: Wood veneer and framed tempered glass are finish options for sliding partitions.
****

Finish material must be minimum [1371 mm 54 inches] [_____] wide, [vertically-ribbed acoustical material of 100 percent polyolefin] [Type II vinyl with a minimum total weight of [441 grams/square m 13 ounces/square yard and 620 grams/linear m 20 ounces/linear yard] [_____] in accordance with CFFA-W-101-D, and conforming to ASTM D751 and NFPA 286.] Provide [vinyl containing a non-mercury based mildewcide and manufactured without the use of cadmium-based stabilizers] [acrylic backed fabric of [100 percent polyolefin] [_____]].[Provide non-allergenic stain and mildew resistant fabric which will not rot or support growth of bacteria]. Fabrics and wallcoverings must meet emissions requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide certification or validation of indoor air quality for fabrics and wallcoverings.

2.3.3 Track

Provide recess [extruded aluminum] [enamel finish steel] track as shown.[Aluminum must conform to [ASTM B221] [ASTM B221M].] [Steel must conform to ASTM A653/A653M.] Use manufacturer's standard track product designed for the weight of the finished partition, including door. Provide track sections in the maximum lengths practicable, and not less than 1.8 m 6 feet long except for narrow doors and at ends of runs where short length is required. Provide suitable joint devices such as interlocking keys at each joint to provide permanent alignment of track.

2.3.4 Suspension System

Provide a suspension system consisting of [steel] [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 5 mm 7 gage minimum, phosphate treated or painted.] [Provide extruded aluminum track with minimum thickness of 3 mm 1/8 inch.] [Provide center hung panel with 1 trolley with four ball bearing nylon or steel tired wheels per panel.] [Provide 2 trolleys per panel with 2 ball bearing polymer or steel tired wheels.]

[2.3.5 Tackboard

Provide tackboard with [steel] [aluminum] frame; a minimum 6 mm 1/4 inch thickness , tacking surface covered with self-sealing decorative vinyl and tacking surfaces laminated to rigid backing substrate.

][2.3.6 Markerboards

Provide markerboards with [aluminum] [steel] frame with writing surface of [cast acrylic plastic with color fused to surface] [porcelain steel]. Markerboard may not protrude more than 3 mm 1/8 inch beyond panel face. Color: [white] [_____].

]2.4 ACCESSORIES

2.4.1 Doors

Provide non-fire rated, manually operated doors with vinyl sweep top seals which compress against the bottom of the top track.

2.4.2 Ceiling Guards

Furnish partitions with ceiling guards or integral track and ceiling

guards as recommended by the manufacturer.

2.4.3 Metal Soffit

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

2.5 SEALS AND SWEEPSTRIPS

****
NOTE: Partitions need a floor and ceiling seal to avoid gaps that will lower the advertised sound transmission rating. For any partition that requires a sound rating, use seals and ceiling guards provided by the manufacturer of the partition. Provide a baffle in the ceiling plenum above the partition with a STC rating equal to the partition. Provide a floor surface that will allow the bottom sweep to make a positive seal. Panels need vertical and end seals.
****

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 seal top and bottom of the fire rated panel.] [Provide mechanical bottom seal that can be raised or lowered for positive control.] Provide manufacturer's vertical seals between panels to ensure acoustical [and fire] rating. Use bottom seals consisting of a vinyl sweep mechanical seal that expands in place, or provide panels that can be lowered by a removable operating device. Vertical seal between panels must be anodized, architectural grade, aluminum extrusion with [vinyl] [_____] sound seal. Provide vinyl sweep strips or other material which will not crack or craze with severe usage. Provide sweep strip STC of the specified rating.

[2.6 ELECTRICAL OPERATORS

****
NOTE: Specify electrical operators for those partitions whose size and weight preclude manual operation. Refer to manufacturers' literature. Indicate those partitions requiring electrical operation on the project drawings. Delete this paragraph when electrically operated partitions are not required in the project.
****

Provide manufacturer's recommended standard electrical operator for [each partition] [partitions indicated]. Provide wiring diagrams.

]2.7 COLOR

****
NOTE: Editing of color reference sentence(s) must be coordinated with the Government. Generally Section 09 06 00 SCHEDULES FOR FINISHES or drawing

is used when the project is designed by an Architect or Interior designer. Color will be selected from manufacturers standard colors or identified in this spec only when the project has minimal finishes.

When the government directs that color be located in the drawings, add a Note stating: "Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

Prior to specifying a custom color finish, research to determine if additional cost and lead time is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

****

Color [in accordance with Section 09 06 00 SCHEDULES FOR FINISHES] [as indicated] [selected from manufacturers standard colors] [_____].[Color listed is not intended to limit selection of equal colors from other manufacturers].

Submit [three] [_____] color samples of specified surfaces and finishes to match those specified. Finish and color requirements are not limited to manufacturer's standard selections in order to meet these requirements. Also submit Certificate attesting that partitions have specified acoustical and flame retardant properties, as determined by test.

PART 3 EXECUTION

3.1 INSTALLATION

Install in accordance with the manufacturer's approved instructions. Do not install building construction materials that show visual evidence of biological growth.

3.1.1 Preparation Work

****

NOTE: Show the structural support necessary to accommodate the size and weight of the partition. ASTM E557 has design as well as installation criteria.

****

Verify dimensions and condition of openings scheduled to receive folding panel partitions. Install partitions in accordance with the approved partition layouts, manufacturer's directions, and ASTM E557. Provide structural support for the track support elements as indicated.

[3.1.2 Electrical Operators

****
NOTE: Delete this paragraph when electrically operated partitions are not required.
****

Conform electrical components and installation to the requirements of NFPA 70 and Section 26 20 00 INTERIOR DISTRIBUTION SYSTEM. Provide the partition manufacturer's standard drive and control components required to operate the partition. Power source is as indicated.

]3.1.3 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.] [Adjust drive components and limit switches of electrically operated partitions to ensure the partitions operate properly upon activation of the control switch.]

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 [and without overloading the drive components]. [Activate the emergency release mechanism and demonstrate proper operation of the partition in the manual mode.] [Activate mechanical seals top and bottom.] Adjust partitions which do not operate properly and retest.

3.2.2 Visual Test

****
NOTE: Delete this paragraph when light leakage will not be objectionable.
****

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. Light leakage from the lighted space to the darkened space is not acceptable. If light leakage does occur, adjust the partition to correct the problem and retest.

3.2.3 Acoustical Test

****
NOTE: Delete this paragraph in projects requiring STC ratings of less than 40. Noise Isolation Class (NIC) is a number that can be measured, and usually runs up to 10 points below laboratory results, i.e. lab STC 40, field NIC 30. This test is expensive and rarely necessary.
****

Field sound performance: provide partition testing by an independent certified acoustical consultant in accordance with ASTM E336, and achieve a Noise Isolation Class (NIC) of [_____] plus or minus two. Adjust or

modify partitions which do not comply, and retest.

3.3 CLEANING

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

3.4 OPERATION AND MAINTENANCE

3.4.1 Operating Instructions

Submit six complete copies of operating instructions outlining the procedures required for electrically operated partitions. The instructions must include the manufacturer's name, model number, service manual, parts list, brief description of all equipment and operating features, 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.

3.4.2 Maintenance

Submit six complete copies of maintenance instructions explaining routine maintenance procedures including inspection, adjustments, lubrication, and cleaning; list possible breakdown, methods of repair, and include a troubleshooting guide. Include instructions for equipment layout and simplified wiring and control diagrams of the system as installed.

Submit Data Package 1 for sliding partitions, and Data Package 5 for electrical operators in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

-- End of Section --