UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2020

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DIVISION 10 - SPECIALTIES

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DEMOUNTABLE AND MOVABLE PARTITIONS

08/17

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-- End of Section Table of Contents --
NOTE: This guide specification covers the requirements for demountable and movable 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: Partition layouts on the drawings must show partition dimensions, nominal sizes for doors, glazing panels, sound-resistance when required, details and any other information pertinent to partition layouts. Partition layout should be designed to allow for maximum reusability. Minimize the number of panel sizes specified on a project to increase flexibility of panel re-use.

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)


ASTM INTERNATIONAL (ASTM)


ASTM E413 (2016) Classification for Rating Sound Insulation
1.2 SUBMITTALS

**************************************************************************

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project.

The Guide Specification technical editors have designated 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 submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation 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" following a submittal item indicates that the submittal is required for the Sustainability eNotebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REPORTING. Locate the "S" submittal under the SD number that best describes the submittal item.

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" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.] [information only.  When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Installation

SD-03 Product Data

Warranty; G[, [_____]]

Partition System; G[, [_____]]

[ Recycled content for gypsum board; S]

[ Recycled content for paper facing; S]

[ Recycled content for gypsum cores; S]

SD-04 Samples

Partition System Samples; G[, [_____]]

Mock-Up; G[, [_____]]

SD-07 Certificates

Burning Characteristics

Acoustical Performance
1.3 CERTIFICATIONS

1.3.1 Indoor Air Quality Certifications

1.3.1.1 Gypsum Wall Systems

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. The requirements of this paragraph are invoked when the designer of record confirms local/regional availability of Greenguard or SCS products and includes the bracketed requirements for indoor air quality certified products in Part 2 of this Section.

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.

1.3.1.2 Adhesives and Sealants

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 QUALITY ASSURANCE

Manufacturer must have a minimum of [10] years of documented successful experience in designing and manufacturing partitions conforming to the requirements in this section. Provide product from a single manufacturer.
Partition installer must have a minimum of [5] [_____] years of documented successful experience in the installation of partitions similar to the requirements in this section. When required by the manufacturer, partitions must be installed by an authorized dealer with a certified installation crew.

1.5 DELIVERY, STORAGE, AND HANDLING

Deliver materials to project site in accordance with manufacturer's instructions in original unopened and undamaged packages. Store in a clean, dry, and secure place free from damage during construction activities. Packages must contain labels indicating the manufacturer's name, brand name, size, finish and placement location.

1.6 PROJECT/SITE CONDITIONS

Temperature and humidity conditions within the area to receive partitions must be maintained as close as possible to the final occupancy standards. Maintain a minimum of 16 degrees C 60 degrees F and a relative humidity level of no higher than 70% continuously. Do not begin installation until the building envelope provides complete protection from the weather.

1.7 WARRANTY

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NOTE: When site assembled demountable partitions are specified, the following warranty paragraph may be deleted in lieu of being covered under the one year standard construction warranty.

*****************************************************************************

Warrant the partition system for a period of [10] [_____] years, and warrant fabrics and other covering materials for 3 years. Warranties must be signed by the authorized representative of the manufacturer. Warranties accompanied by document authenticating the signer as an authorized representative of the guarantor must be presented to the Contracting Officer upon the completion of the project. Guarantee that the partition system and installation are free from any defects in material and workmanship from the date of delivery.

PART 2 PRODUCTS

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NOTE: Demountable and movable partitions should be used in areas susceptible to future partition rearrangement and substitution. Compared to traditional drywall construction, installation of these partitions are faster and eliminate the cost and mess of cutting and fitting flooring and ceilings around fixed walls. They offer maximum flexibility and reusability to accommodate frequent and quick relocation with minimal downtime, loss of materials, and damage or modification to panels or to adjoining structures such as ceilings, fixed walls and floors. These partitions can be specified as non-progressive allowing the removal of individual panels from any location without disturbing adjoining units. The partitions are point accessible meaning instant access of panels.
allows for electrical, telephone and communication lines to be installed quickly and easily. Furniture support is an optional added feature that makes these partition systems similar to systems furniture panels.

Terminology of partition systems within industry varies greatly including the terms "demountable", "movable", "modular", and "relocatable". For the purpose of this specification the terms demountable" and "movable" are used.

Demountable partitions are site assembled and are often used for aesthetic purposes with finishes other than paint and glazing. Panels are easy to change out when a different finish is desired, but more effort is required to relocate partitions than movable partitions. Also, electrical and communications are site installed.

Movable partitions are factory assembled, also known as unitized. They provide better quality control and a more uniform appearance. They can be installed and relocated very quickly and require less labor by an electrician because the partitions can be prewired with boxes.

**************************************************************************

2.1 SYSTEM DESCRIPTION

2.1.1 Burning Characteristics

Submit certification attesting that partition system has a Class A (under 25) Flame Spread Rating in conformance with ASTM E84.

**************************************************************************

NOTE: Performance requirements listed below are optional choices for designer; edit accordingly.

**************************************************************************

2.1.2 Acoustical Performance

Submit certification attesting that sound-rated partition assemblies have a minimum Sound Transmission Coefficient (STC) of [[36] [42] [44] [_____] for solid panel] [[30] [_____] for glass panel]. Determine STC range in accordance with Sound Transmission Test by Two-Room Method and reported in accordance with ASTM E90 and ASTM E413 for frequency data. Tested assembly must have been assembled in the same manner that the partitions will be installed on the project.

2.1.3 Structural Performance

Submit test results from an independent laboratory certifying the following results.

2.1.3.1 Transverse-Load Capacity

Provide partitions capable of [sustaining 24.4 kg/sq. m 5 psf minimum transverse load] [supporting furniture systems components] with lateral
panel deflection no greater than [(1/120) [(1/240) for solid panel][(1/175] for glass panel] when tested in accordance with ASTM E72.

2.1.3.2 Load-Bearing Capability

Provide proof load of not less than [136 kg 300 lb concentrated] [0.041 kg/linear mm 3.2 lb/linear inch distributed] [_____] when tested according to ANSI/BIFMA X5.6.

2.1.3.3 Non-Load Bearing Capability

Wall system is designed for non-load bearing capability.

2.1.4 Electrical and Communication Capability

Electrical components, devices, systems and accessories must meet requirements of NFPA 70. Provide a partition system that accommodates electrical switches, outlets, voice/data cabling and jacks, and other components [at multiple heights in the panel] within the internal panel cavity. Surface mounted components will not be accepted. Provide [standard] [_____] size light switch boxes, electrical boxes, double gang outlet boxes for voice/data jacks, switches, outlets, faceplates, and conduit at mounting heights and locations as indicated on the electrical drawings. Coordinate finish of switches, outlets, and faceplates with building and other componentry finishes. [Factory install all electrical components and accessories for partitions. Panels with factory installed electrical wiring must be UL listed or labeled and meet the requirements of UL 183. The label or listing of Underwriter's Laboratories, Inc. will be accepted as evidence that the material or equipment conforms to the applicable standards, and must be marked for intended use. In lieu of this label or listing, submit a statement from a nationally recognized, adequately equipped testing agency indicating that the items have been tested in accordance with the required procedures of UL and that the material and equipment comply with contract requirements.] Building electrical power will be [ceiling] [wall] [base] [access floor] [_____] fed. Coordinate the building and partition system electrical power. Electrical work must conform to the requirements of Section 26 20 00 INTERIOR DISTRIBUTION SYSTEM.

2.2 PARTITION SYSTEM

Provide a partition system consisting of a series of individual, floor-supported, [[floor-to-ceiling] [partial height]] [[site assembled] [factory assembled]] panels as shown. [Provide a system that is non-progressive, allowing for removal and re-installation of panels, including door frames, at any position, without disturbing adjacent panels]. Provide panel faces that are removable, reusable, and attached to the panel frame without the use of screws or other mechanical fasteners. Provide a top channel that holds panels in place and accommodates floor-to-ceiling variations. System must be capable of attaching to multiple standard ceiling types in a non-marring manner. Provide floor attachment without mechanical fastening. Installation, modifications, and removal of the system must not damage adjacent building surfaces and elements, including floors, walls, ceilings, columns and window mullions. All system connectors to fixed building components must be removable, and reusable, and non-marring. Solid panels must be capable of field cutting to accommodate variations in floor and ceiling levels, end filler conditions, and other existing building conditions. The partition system must be complete with accessories to meet performance requirements.
Construct a **Mock-up** on site minimum **2430 x 2430 mm 8 x 8 foot [____] in size** for each color and type of panel specified after finish samples are approved, and prior to installation of partitions. Show partition construction and method of attachment to walls, floor, and ceiling. Review of the mock-up may result in adjustments to the product, layout and finishes. Once approved, use the mock-up as a standard of workmanship within the facility. Remove mock-ups when directed. Approved mock-ups may become part of the completed work if approved by the Contracting Officer.

Submit product data for **partition system**, to include catalog cuts, brochures, product information, and other necessary literature to indicate compliance with specifications.

### 2.3 MATERIALS AND COMPONENTS

#### 2.3.1 Panels

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**NOTE:** Use materials with recycled content, calculated on the basis of post-industrial or post-consumer percentage 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. A resource that can be used to identify products with recycled content is the "Comprehensive Procurement Guidelines (CPG)" page within the EPA's website at http://www.epa.gov. Other products with recycled content are also acceptable when meeting all requirements of this specification.

Section allows establishing recycled content requirements based on either the gypsum board product in its entirety, or on the paper facing and gypsum core separately. Research shows the product is available among US national manufacturers above the minimum recycled content percentages stated.

Choose first 2 sentences in the second paragraph below when using panels with recycled gypsum products.

Only choose the second set of optional sentences of the second paragraph if the desire is only to use gypsum products that contain recycled paper faces.

Only choose the third set of optional sentence of the second paragraph if the desire is only to use gypsum products that contain recycled gypsum cores.

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Provide panel faces constructed of [steel] [gypsum board [minimum 13 mm 1/2 inch] [____] thick conforming to ASTM C1396/C1396M, gypsum backing board conforming to ASTM C1396/C1396M] [wood composite] [fiber
composite]. Include panels with [tongue-and-groove] [panel clips] [panel connectors] at joints to align panels. Provide concealed integrated slots to mount furniture components, accessories and equipment at multiple elevations. Maximum total load for bracket supports on one or both wall surfaces must not exceed 5500 N 1240 lb. Provide panels that are manufacturer's standard construction with fillers and bracing as required. Provide panel thickness of minimum[ 57 mm 2 1/4 inch] [ 88.90 mm 3 1/2 inches] [ 101.60 mm 4 inches] [______]. [Provide panel face thickness of minimum[ 38 mm 1/2 inch] [______].] Submit three sets of Assembly Manuals describing assembly and reconfiguration procedures.

[Provide gypsum board with a minimum of 5 percent post-consumer recycled content, or a minimum of 20 percent post-industrial recycled content. Provide data identifying percentage of recycled content for gypsum board.]
[Provide gypsum products with paper facings that contain a minimum of 100 percent post-consumer recycled paper content. Provide data identifying percentage of recycled content for paper facing.]
[Provide gypsum cores containing a minimum of 95 percent post-industrial recycled gypsum content. Provide data identifying percentage of recycled content for gypsum cores.]

Provide gypsum wall board and panels that the 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 gypsum board.

2.3.1.1 Adhesives

Provide sealants and non-aerosol adhesive products used on the interior of the building (defined as inside of the weatherproofing system) that meet either emissions requirements of CDPH SECTION 01350 (use the office or classroom requirements, regardless of space type) or VOC content requirements of SCAQMD Rule 1168 or GS-36. Provide certification or validation of indoor air quality for aerosol adhesives used on the interior of the building (inside of the weatherproofing system).

2.3.2 Framing System

Provide framing system that consists of extruded aluminum or roll-formed steel components which include ceiling runners, floor track, [studs or posts,] bracing, and suitable treated fasteners to prevent corrosion. Provide a rigid, stable partition system when the frame is assembled with the panels.

2.3.3 Glass and Glazing

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** NOTE: Coordinate glass requirements with Section 08 81 00 GLAZING. **
**************************************************************************

Provide glass and glazing for partitions that are fully contained within the partition system and in locations as shown on the drawings. Provide [tempered] [laminated] glass that is [clear] [patterned] and complies with ANSI Z97.1 and ASTM C1048. [Provide [wood] [metal] mullions (muntins).][All glass must be factory installed.] No protruding glazing beads or removable stops will be visible. [Provide glass and glazing in accordance with Section 08 81 00 GLAZING.]

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2.3.4 Doors and Frames

**************************************************************************
NOTE: Single doors are normally available 910 mm wide x 2030 mm or 2135 mm high 3 feet wide x 6 feet 8 inches or 7 feet high. Some manufacturers offer other sizes.
**************************************************************************

Provide demountable partitions complete with [[single] [double]] [[sliding] [butt-hinged] [pivot-hinged]] doors and frames as shown on the drawings. Provide doors and frames that are fully contained with the panels and use standard panel connection methods. Provide 45 mm 1-3/4 inch thick flush type [hollow metal] [solid core] [wood veneer] [plastic laminate] [[tempered] [laminated] glass slab] [[tempered] [laminated] combination glass with [[wood]] [_____] doors of manufacturer's standard construction. Door frames must be compatible in appearance with other trim components and allow for variations in floor level. [Provide doors in accordance with Section 08 14 16 FLUSH WOOD DOORS.]

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NOTE: Verify keying requirements with the owner/tenant and include in specification if applicable.
**************************************************************************

2.3.5 Door Hardware

Door hardware to be [supplied and installed by partition manufacturer] [supplied by others and installed by partition manufacturer] [______]. Provide hardware for doors in accordance with Section 08 71 00 DOOR HARDWARE. Provide hardware cutouts and reinforcement as required in doors and frames for hardware furnished.

2.3.6 Glazing Frames

Assemble glazing frames from minimum 1.7 mm 0.065 inch thick extruded anodized aluminum parts or minimum 1.2 mm 0.0478 inch cold-rolled steel and vinyl components. Indicate sizes and configurations of glazed openings on the drawings.

2.3.7 Trim

Provide [base] [ceiling] [panel] trim without exposed fasteners nominal [ 100 mm 4 inch] [_____] high, with [recessed] [projected] [flush] [_____] profile.

2.4 FINISHES

**************************************************************************
NOTE: Coordinate the editing of color reference sentence(s) 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. Select color from manufacturers standard colors or identified as a manufacturers color in this specification only when the project is very simple and has minimal finishes.
**************************************************************************
When the Government directs that color be located in the drawings, add a note that states: "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 acceptable. Note there is often a minimum order requirement which will affect future orders.

*************************************************************************

Provide panel finish of [factory-applied powder coat steel] [factory-applied vinyl wallcovering finish, Type II (Medium Duty), UL Class A conforming to ASTM E84] [fabric] [tackable fabric] [high pressure laminate] [wood veneer] [factory primed gypsum board for field paint] [factory painted gypsum board] [tackable wallboard] [magnetic marker board] [marker board] [back painted glass] [______]. Provide exposed metal trim finish of [aluminum [satin clear] [light] [medium] [dark] bronze] [factory-applied powder coat] [factory primed for field paint] [steel] [______]. Non-metal panel trim to [match panel] [match exposed trim] [______]. Non-metal base and ceiling trim to [match exposed trim] [match panel] [______]. Provide [factory-applied powder coat] [factory primed for field paint] [factory-applied powder coat] [wood veneer] [plastic laminate] [______] doors. Painting must conform to the requirements of Section 09 90 00 PAINTS AND COATINGS. Provide color of all partition component finishes [in accordance with Section 09 06 00 SCHEDULE FOR FINISHES] [as indicated on the drawings] [______]. Submit all exposed Partition System Samples to include panel and component finishes and electrical components such as faceplates. Samples must be actual samples and a minimum of 75 by 75 mm 3 by 3 inches in size.

PART 3   EXECUTION

3.1   EXAMINATION

Verify field dimensions before fabrication of partition system and record on installation drawings. Coordinate fabrication and installation schedule with construction schedule to avoid delay in the work. Examine and verify that site conditions are in agreement with the design package and manufacturer's requirements.

3.2   PREPARATION

Verify floor and ceiling dimensions in accordance with approved shop drawings prior to starting the work. Floor under partitions must be level to within 3 mm in 3048 mm 1/8 inch in 10 feet, non-accumulative. Correct conditions which may adversely affect the partition installation before installing partitions. Finishing operations, such as painting, carpeting, and ceiling grid installation, must be completed prior to partition installation.

3.3   INSTALLATION

Do not install items that show visual evidence of biological growth. Install partitions using certified installers in accordance with
manufacturer's recommended installation instructions. Install partitions in conformance with details in the drawings and approved installation drawings. Assemble and erect the system with the least possible drilling and cutting of existing construction. Provide a complete partition installation with accessories to meet specified requirements and the capability of disassembly by means of ordinary tools. Provide concealed fastening devices and pressure-fit components that will not mar the floor, wall and ceiling surfaces and are free of exposed screws, nuts, rivets or bolts. Install panels rigid, straight and plumb, with horizontal lines level and aligned. Provide a complete installation with continuous light and sound seals at connections to ceilings, floors, fixed walls and abutting surfaces. Coordinate the partition system installation with the work of other trades that are affected. Provide dimensions on drawings verifying conformance to life safety code and electrical switch, outlet, infeed and jumper placements.

3.3.1 Doors and Windows

Hang doors to [swing] [slide] freely and fit hardware precisely. Install glass for glazed openings on shims in a vinyl or polyurethane foam gasket. Install glass stops without exposed fastenings.

3.3.2 Trim

Install trim in accordance with manufacturer's recommendations. [For site assembled partitions install wall base in the longest lengths possible. Joints must be fitted tight. Miter internal corners and scribe base to fit to door frames and other obstructions.] [Provide partition base covers that snap on.] Base must tightly adhere to wall surfaces.

3.4 ADJUSTMENTS

Repair or replace damaged partition finishes and components and damaged floor, wall and ceiling finishes to the original conditions.

3.5 CLEANING

Upon completion of installation, clean partition components and finishes in accordance with partition manufacturer's recommendations. Do not use alkaline or abrasive agents. Avoid scratching or marring partition finish surfaces. Submit three sets of Maintenance Manuals describing proper cleaning and minor repair procedures.

3.6 PROTECTION

Protect partitions from damage through the duration of construction activities.

-- End of Section --