

SECTION 10 22 19.13
DEMOUNTABLE METAL PARTITIONS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies movable partitions, inclusive of frames, glass, doors, door hardware, and electrical components were specified.
- C. Moveable partitions includes doors and glazing, manufactured and installed with demountable partitions.
- D. Supply and coordination of conduit, boxes and electrical duplexes into electrical and communication components where specified.
- E. Integration of voice data and security system components (supplied by others) into demountable partitions.

1.2 RELATED WORK

- A. Electrical Work: Division 26, ELECTRICAL.
- B. Section 08 14 00 INTERIOR WOOD DOORS.
- C. Door Hardware: Section 08 71 00, DOOR HARDWARE.
- D. Section 08 80 00 GLAZING
- G. Color of Finish: See Finish/Material Schedule and Room Finish Schedule on drawing A-603.

1.3 DESIGN CRITERIA

- A. Floor fastenings:
Concealed and adjustable to variations in floor level and finish.
- B. Door and panel units:
Interchangeable and not less than 1000 mm (40 inches) wide unless otherwise shown.
- C. Partition units containing doors:
Adjustable vertically and capable of assembly on floors having normal deviations from a plane surface, without cutting the doors.
- D. Provide for installation of electrical wiring through vertical and horizontal frame members.
- E. Structural Performance: Provide demountable partitions capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Transverse-Load Capacity of Wall System: Lateral deflection of not more than 1/120 (solid Wall) and 1/175 (glass wall) of the overall span when tested under a uniformly distributed load of 0.24 kN/m² (5 psf) in accordance with ASTM E72 or calculated by registered engineer.

- F. Seismic Performance: Provide demountable partitions capable of withstanding effects of earthquake motions determined according to ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
 - 1. Spectral Accelerations for Short Periods (S_s): Site specific.
 - 2. Spectral Accelerations for a 1-Second Period (S_1): Site specific.
 - 3. Provide miscellaneous bracing not shown on drawings which is required to satisfy seismic criteria.
- G. Sound Transmission Loss for Moveable Solid Wall: ASTM E90, STC 44.
- H. Fire-Test-Response Characteristics:
 - 1. Surface-Burning Characteristics: Provide demountable partitions in accordance with ASTM E84, with the following maximum characteristics:
 - a. Chromacoat MDF Panels: Meets Class B.
 - b. Pre-Finished Veneer on MDF: Meets Class B.
 - c. Fabric Wrapped MDF: Meets Class B.

1.4 COORDINATION

- A. Coordinate other work having a direct bearing on work of this section, including other work required to be installed within or next to Work of this section.
- B. Coordinate delivery of product in accordance with construction schedule to avoid storage and double handling of the wall system.
- C. Installation of wall system in conjunction with other trades after completion of HVAC equipment, fire suppression, ceiling grid, finished drywall ceiling, floor covering, and lighting fixtures. Final electrical connection, voice data/communications, ceiling tiles, can be completed during or after installation of the wall systems.

1.5 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Product Data: Provide product information for each type of product indicated in this specification.
- C. Samples: Provide samples for verification of each type of exposed finish required, in sample size indicated below.
 - 1. Panel Finish Face and Extrusion Components: Manufacturer's standard size unit, but not less than 75 mm (3 inches) square.
 - 2. Linear Trim: 300 mm (12 inches) long.

3. Door Face Finish: Manufacturer's standard sized unit, but not less than 75 mm (3 inches) square.

4. Glazing: Manufacturer's standard sized unit, but not less than 75 mm (3 inches) square.

D. Shop Drawings:

1. Include plans, elevations, sections, connection details, and attachment details to other work.

2. Include critical field measurements for standard modular installation, including finished width and height of partitions.

3. Provide structural analysis data for installed products indicated to comply with design loads, signed and sealed by licensed professional engineer responsible for their preparation. 4. Provide all final engineered drawings relevant to material inclusions within, or connections to the moveable wall product. 5. Provide architectural plans locating movable wall products, including wall finishes and construction of surfaces with which the moveable wall system interfaces with or connects to. 6. Provide reflected ceiling plans, drawn to scale, on which penetrations and ceiling mounted items are shown and coordinated with demountable partitions. 7. Electrical Drawings: Coordinate electrical provisions to be included in moveable partitions with final circuited electrical engineering drawings and schedules. E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of demountable partition.

F. Evaluation/Certification Reports:

1. LARR (Los Angeles Research Report) - 25604, based on ICC ESR (Evaluation Service Report).

2. ESR-1947 (reissued 2007): Provide evidence of compliance with structural performance requirements and the building code.

3. Limited Production Certification (LPC), Report No. LPCE 75090-1: Provide evidence of compliance with CAN/CSA-C22.2 No. 203 and UL 1286 for modular wiring systems for office furniture.

G. Maintenance Data: Provide maintenance data for demountable partitions for incorporation into operation and maintenance manuals.

1.6 APPLICABLE PUBLICATIONS

A. American Society for Testing and Material (ASTM):

- A1008/A1008M-12.....Steel, Sheet, Cold Rolled, Carbon, Structural,
High-Strengthen Low Alloy with Improved
Formability, Solution Hardened and Bake Hardened
- C665-11.....Mineral-Fiber Blanket Thermal Insulation for
Light Frame Construction and Manufactured
Housing
- C920-11.....Elastomeric Joint Sealants
- C1036-11.....Flat Glass
- C1048-04.....Heat-Treated Flat Glass
- AAMA 611-98Voluntary Standards for Anodized Architectural
Aluminum.
- ANSI/BIFMA X5.6-2003 ...American National Standard for Office
Furnishings.
- ASCE 7-05Minimum Design Loads for Buildings and Other
Structures.
- ASTM E72-04.....Method for Conducting Strength Tests of Panels
for Building Construction.
- ASTM E84-05Test Method for Surface Burning Characteristics
of Building Materials.
- ASTM E90-97.....Method for Laboratory Measurement of Airborne
Sound Transmission Loss of Building Partitions
and Elements.
- ASTM E413-87.....Classification for Rating Sound Insulation.

CAN/CSA-C22.2 No. 203-M91 (R2005 - Modular Wiring Systems for Office Furniture.

Limited Production Certification (LPC), Report No. LPCE 75090-1.

NFPA 70 - National Electrical Code, 2008 Edition.

UL 1286-2008 - Office Furnishings.

1.7 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labelled in accordance with NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Mechanical Strength of Demountable Partitions: Provide demountable partitions capable of withstanding static loads in accordance with ANSI/BIFMA X5.6.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Solid Panels:

1. Aluminum Framing: Aluminum extrusions, 6063-T54 or 6061-T6 aluminum alloy.
2. Face Mounted Tile Attachment: Provide unitized frame assembly to accept face mounted tiles with orientation and module increments as specified.
3. Frame Accessibility: Provide up to 75 mm (3 inches) clear wall cavity for distribution of utilities accessible from either side of wall by removable face panels.
4. Face Panels:
 1. Thickness: 13mm (1/2")
 2. Width and Height: As indicated
 3. Face Tile Type: As indicated in the Finish/Materials Schedule(drawing A-603), Room Finish Schedule (drawing A-603) and Interior Elevations (drawings A-501, a-502 and A-503).
5. Electrical, Communications, and Security System Requirements: Provide for installation of electrical, communications, and security system items arranged so that wiring can be readily removed and replaced.

1. Conduit: Provide option for metal conduit in cavity of demountable partitions, from outlet and device boxes to top or bottom of demountable partitions to permit wiring installation and connections as specified in Division 26, 27, and 28. Refer to Division 26, 27, and 28 Sections for metal conduit raceway and pull wire requirements.
 2. Boxes: Provide outlet and device boxes in cavity of demountable partitions for all outlets and devices indicated. Provide metal junction and pull boxes where indicated or required.
 3. Electrical, Communications, and Security System Components: Provide all cutouts and reinforcements required for demountable partitions to accept electrical, communications, and security system components.
6. Glass Panels:
1. Aluminum Glazing Framing: Aluminum extrusions, 6063-T54 or 6061-T6 aluminum alloy. Finish - clear anodized aluminum.
 2. Glazing: Glass type indicated complying with Section 08 80 00 Glazing.
 7. Frame Base:
 1. Provide frame bases with provisions for height adjustment to accommodate floor slab variances.
 2. Provide a leveling mechanism for making fine adjustment in height over adjustment range of the product.
 3. Connections and Supports: Manufacturer's standard connections and supports that connect and release from floor and ceiling without damage using carpet grippers and ceiling track clips, with exception of the following conditions: bulkhead (drywall ceiling), seismic conditions, electrical or service feeds, physical connections to base building (where required)..

9. Panel Joint Closure: Manufacturer's standard, capable of closing up to a 25 mm (1 inch) gap between demountable partitions and base building elements.
10. Trim: Continuous and modular, factory-finished, snap-on type; adjustable for variations in floor and ceiling levels.
 - a. Base Trim Profiles: Recessed; removable to access leveling mechanisms.
 - b. Ceiling Trim Profile: Recessed; adjustable to accommodate up to a 12 mm (1/2 inch) gap between demountable partitions and base building elements.
 - c. Wall Trim Profile: Recessed; adjustable to accommodate up to a 12 mm (1/2 inch) up to 25 mm (1 inch) gap between demountable partitions and base building elements.
11. Doors:
 - a. Flush Wood Doors: Manufacture's standard solid core door with hinge operation and glazing vision light.
 1. Flush Wood Door: Manufacturer's standard door as described in Section 08 14 00 Interior Wood Doors.
 2. Glazing: Manufacturer's standard Safety glazing as described in Section 08 80 00 Glazing.
 3. Coordination: Manufacturer shall coordinated door, glazing and hardware items with other disciplines to provide a product that visually matches similar items in the project.
 - b. Door Frames: Manufacturer's standard aluminum frame single door, reversible, factory milled to receive hardware, for 43 mm (1-11/16 inch) [+/- 1.5mm (1/16inch)] doors. Door frames capable of reconfiguration without part replacement or damage to wall components.
 1. Frame Finish: Clear anodized Aluminum.
 2. Frame Size: To meet door size as indicated in Door Schedule.
 3. Hardware Reinforcement: milled, reinforce, drill and tap frames at factory to receive specified hardware in

accordance with the contract hardware schedule and templates.

4. Frame Height: Jambs shipped over length (height) by 50 mm (2 inches), for field cutting to suit opening height for proper alignment with adjacent frames.
 5. Frame Preparation: Factory installed top plate.
 6. Factory notched and drilled jambs for ceiling track and manufacturers standard header attachment.
 7. Extrusion Profile: Curvilinear profile.
 8. Seals: Manufacturer's standard.
- c. Hardware: Manufactures standard hardware as described in Section 08 71 00 Door Hardware to provide a product that visually matches similar items in the project.

B. Accessories:

1. Manufacture's brackets, support and accessories for complete installation of system components.

C. Fabrication:

1. Demountable Unitized Panels:
 - a. Factory Assembled frames with 25 mm (1inch) insulation, base track and levelers; face mounted tiles installed to frames on site.
 - b. Fabricate panels for installation with concealed fastening devices and pressure-fit components that will not damage ceiling or floor covering exceptions.
 - c. Fabricate panels with continuous light-and-sound seals at floor, ceiling, and other locations where panels abut fixed construction.
 - d. Factory glaze panels to the greatest extent possible.
2. Components:
 - a. Fabricate components for installation with concealed fastening devices and pressure-fit members that will not damage ceiling or floor coverings. Exceptions: Drywall ceiling, seismic applications and doors against base

building require screw holes in base building for proper fastening.

- b. Fabricate for installation with continuous seals at floor and other locations where partition assemblies abut fixed construction and for installation of sound attenuation insulation in partition cavities.

- 3. Electrical and Communications: Fabricate demountable partitions to accept electrical, communication components specified in Division 26,27,and 28.

D. Finish:

- 1. Clean exposed metal surfaces (except stainless steel, non-ferrous and plated metal) of movable partitions free of scale, rust, oil and grease and apply two coats of baked-on enamel finish.
- 2. Protect finishes on exposed surfaces from damage during shipping.
- 3. Appearance of Finished Work:
 - a. Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved samples.
 - b. Noticeable variations in the same piece are not acceptable.
 - c. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install partitions so as to be straight, rigid, securely anchored, plumb and level.
- B. All fastening devices are to be as shown on shop drawings.
- C. Install demountable partition systems to manufacturer's written instructions.
- D. Apply finished face mounted tiles to framing.
- E. Install continuous insulation in base trim cavity.
- F. Install seals to prevent light and sound transmission at connections to floors, ceilings, fixed walls, and abutting surfaces.
- G. Install doors and frames, glazing, and glazing frame assemblies securely anchored to partitions and with doors aligned and fitted.
- H. Install and adjust door hardware for proper operation.

3.2 FIELD PAINTING

Touch-up all nicks and scratches with paint, matching color and texture of baked-on enamel finish, furnished by partition manufacturer.

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