SECTION  – demountable glass partitions

This section has been edited to include Gensler's Product Sustainability Standards ("GPS Standards") criteria, providing language for only the "Gensler Standard" tier of performance - the required minimum level of performance for sustainable attributes of the product. To include "Market Differentiator" level of performance or for any other questions, please contact your regional specification leader, Tim Taylor, or Kaley Blackstock.

1. GENERAL
   1. summary
      1. This Section includes requirements for supply and installation of a proprietary, premanufactured demountable glass partition system comprised of glazed wall panels, inset into an aluminum frame, complete with trim, doors and hardware, and other components required for a complete installation.
   2. DEFINITIONS
      1. Proprietary Demountable Partition System: Basis of Design materials are specified as complete partitions supplied and installed by this Section including materials specified in other Sections; other Sections are referenced as a central location for common material requirements and are not intended to establish work results outside of this Section.
   3. REFERENCE STANDARDS
      1. American National Standards Institute (ANSI):
         1. ANSI H35.1-2004, Standard Alloy and Temper Designation Systems for Aluminum.
      2. American Society for Testing and Materials (ASTM):
         1. ASTM A 653/A 653M-17, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
         2. ASTM B 429/B 429M-10e1, Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
         3. ASTM E 90-09(2016), Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
      3. Canadian Standards Association (CSA):
         1. CAN/CSA S136-16, North American Specification for the Design of Cold-Formed Steel Structural Members.
      4. Underwriters Laboratories of Canada (ULC):
         1. CAN/ULC-S102 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
   4. ADMINISTRATIVE REQUIREMENTS
      1. Pre-Construction Meeting: Arrange a meeting with Contractor, Subcontractor, other subcontractors affected by work of this Section, Consultant and Owner in accordance with Section 01 31 19 – Project Meetings, to discuss installation and coordination of electrical wiring, and communications cabling forming a part of the completed demountable partition system.
      2. Coordination:
         1. Coordinate anchorage and fixing requirements for items supported by or anchored to permanent construction; provide attachment devices applicable to materials being fastened to permanent construction.
         2. Coordinate erection of demountable partition system with electrical, and communications installation Sections.
      3. Sequencing: Install demountable partition system after installation of floor coverings and ceiling systems.
   5. submittals
      1. Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
      2. Action Submittals: Provide the following submittals before starting any work of this Section:
         1. Product Data: Submit standard construction details, material descriptions, dimensions of individual components and finishes.
         2. Shop Drawings: Submit plans, elevations, sections, details and attachments to other work.
            1. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which penetrations and ceiling-mounted items are shown and coordinated with demountable partitions.
         3. Samples:
            1. Submit samples for initial selection of factory applied colours and finishes to Consultant.
            2. Submit 305mm x 305mm (12" x 12") samples of specified panel materials and 305mm (12") long sections of frame and trim items to Consultant for confirmation of material selection.
   6. Informational Submittals

The paragraph below aligns with edits made in January of 2023 to Gensler's master specifications for our GC3 initiative. This requires that contractors complete an EPD Reporting Form, referenced in 018133 "Sustainable Design Requirements - Embodied Carbon" disclosing (checking a box) if an EPD exists for the product, and to provide the EPD.

* + 1. Environmental Product Declaration (EPD) Disclosure Submittals: Completed Environmental Product Declaration Reporting Form in accordance with Section 01 81 33 "Sustainable Design Requirements - Embodied Carbon" for the following product types in this Section:
       1. Demountable glass partitions and door assemblies.

The following requirement is a part of the GPS standards and is required for all projects. This relates to TVOC emissions testing reports or certificates listed under 'Quality Assurance' for select product types.

* + 1. TVOC Emissions: Laboratory test reports or third-party certificates or manufacturer letter of assurance demonstrating compliance for products listed under "TVOC Emissions" in Article "Quality Assurance."

The following requirement is a part of the GPS standards and is required for all projects. This relates to RoHS documentation under 'Quality Assurance' for select product types.

* + 1. RoHS: Product data or third-party certificates showing compliance with RoHS 3 for products listed under "RoHS" in Article "Quality Assurance."

The following requirement is a part of the GPS Standards and is required for all projects. FSC certification is optional for wood components of demountable partitions.

* + 1. Sustainability Reporting: Provide the following for glass demountable partition products.
       1. Recycled content, including pre-consumer and post-consumer percentages.
       2. Manufacturing location.
       3. End of Life: Documentation showing design for disassembly, reuse, and recycling.
       4. **[FSC Certification for wood components.]**
  1. project closeout SUBMITTALS
     1. Operation and Maintenance Data: Submit manufacturer's written instructions for maintenance of operable components and cleaning procedures, include name of original installer and contact information in accordance with Section 01 33 00 – Submittal Procedures.
  2. performance requirements
     1. 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 Glass Partitions: Lateral deflection of glass framing members not to exceed the lesser of L/175 of length or 19mm (¾"), when subjected to a uniformly distributed load of 240 Pa in accordance with ASTM E72.

SPEC NOTE: Delete the following paragraph if Seismic Design is not required on this Project.

* + - 1. Provide non-structural components identified in this Section, designed and installed to withstand the effects of earthquake motions for the seismic design category of the Project according to the requirements of the Building Code, CSA S832 and ASTM E580 [Seismic Design Category C][Seismic Design Category D, E, F.], and as indicated in Section 13 48 13 Seismic Control Assemblies for Non-Structural Components.
    1. Sound Transmission Characteristics: Where STC ratings are indicated, provide partitions with STC rating that was determined by testing a representative sample according to ASTM E 90 and classified according to ASTM E 413 by an accredited independent testing agency.
    2. Surface Burning Classification: Provide demountable partitions complying with the following requirements:
       1. Surface-Burning Classification: Provide demountable partitions per CAN/ULC- S114:
          1. Flame-Spread Index: 25 or less.
          2. Smoke-Developed Index: 450 or less.
       2. Combustibility: Provide demountable partitions constructed in a manner and of materials suitable for installation in non-combustible (Type I or Type II) building.
  1. QUALITY ASSURANCE
     1. Qualifications: Provide proof of qualifications when requested by Consultant:
        1. Manufacturer: Obtain prefabricated demountable partition components from one source from a single manufacturer.
        2. Installer: Use an installer trained and approved by manufacturer who is responsible for assembling and installing demountable partition system in accordance with manufacturer's written requirements.
     2. Mockups: Before installing demountable partitions, build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
        1. Remove mockups when directed; Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

The following requirement is a part of the GPS Standards and is required for all projects. This corresponds to the GPS Standards requiring that electronic components have reports or certificates demonstrating compliance with RoHS 3 for restricted substances.

* + 1. RoHS: Obtain products with electrical components in compliance with RoHS 3 for restricted substances.

The following requirement has been included as part of the GPS Standards and is required for all projects. This corresponds to the GPS Standards requiring that select products have testing reports or certificates for the California Department of Public Health (CDPH) Standard Method v1.2-2017 emissions testing ("TVOC emissions"). Product may qualify as "inherently non-emitting" and thus not requiring emissions testing if they are primarily composed of powder-coated metals, plated, or anodized metal, glass, and/or unfinished or untreated solid wood with no binders, surface coatings, or sealants that include organic chemicals. Manufacturers will need to provide a letter of assurance confirming that the product is inherently non-emitting. This documentation and/or emissions tests and certificates correspond with an informational submittal requirement in this section.

* + 1. TVOC Emissions: Obtain demountable glass partitions and door assemblies with publicly available reports or certificates verifying compliance with ANSI/BIFMA M7.1-2011 or California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" version 1.2-2017, following the private office scenario or provide letter of assurance from manufacturer that product is inherently non-emitting without binders, surface coatings, or sealants that include organic chemicals.
  1. DELIVERY, STORAGE AND HANDLING
     1. Delivery and Acceptance Requirements: Deliver demountable partition system with protective wrapping on perimeters of panels, doors, glass and exposed framing components designed to prevent damage to materials during transit and on-site storage.
     2. Storage and Handling Requirements:
        1. Inventory demountable partition system components when delivered to project site and confirm that materials required for installation are accounted for on the delivery manifest.
        2. Deliver keys to Owner by registered mail or confirmed courier service to Owner's address identified in Contract Documents.
  2. site CONDITIONS
     1. Site Measurements: Verify dimensions by site measurements before fabrication and indicate measurements on shop drawings where demountable partition system components are indicated to fit between or around other construction; coordinate fabrication schedule with construction progress to avoid delaying the Work.
     2. Established Dimensions: Establish dimensions and proceed with fabricating demountable partition system without site measurements where site measurements cannot be made without delaying the Work; coordinate construction to ensure that actual site dimensions correspond to established dimensions; allow for trimming and fitting.

1. products
   1. maNUfacturers
      1. Basis of Design Products: Products named in this Section were used as the basis of design for the project; additional manufacturers offering similar products may be incorporated into the work of this Section provided they meet the performance requirements established by the named products and provided they submit requests for substitution a minimum of five (5) days in advance of Bid Closing.
      2. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include but are not limited to, the following:
         1. Enclose - 2 Channel Frameless Glass by Haworth.
   2. materials
      1. Premanufactured wall system consisting of framing members, wall panels and glazing, floor, wall and ceiling mounting materials, acoustic fillers, doors, and hardware; fully demountable and reusable in reconfigured layouts and spaces.

The following requirement is a part of the GPS Standards and is required for all projects.

* + - 1. Adhesives: Adhesives shall be or type(s) as recommended by the partition manufacturer for the application indicated and shall also comply with the more stringent VOC content limits of Federal, State, or local authorities having jurisdiction, including California Air Resources Board (CARB), South Coast air Quality Management District Rule 1168 (effective date January 1, 2023).

SPEC NOTE: Modify the following paragraphs to reflect product characteristics of the selected system.

* + 1. Core Framing Components: Manufacturer’s standard extruded aluminum 6063-T6 within manufacturer's tolerance and free from defects impairing strength and/or durability.
       1. Finishes - Visible Components: Factory-applied powder-coat finish.

SPEC NOTE: Select one of the following finish options below and delete the items not required.

* + - * 1. Frame / Rail Finish Colour: [As selected by the Consultant from manufacturer's full range] [Black][As indicated in Section 09 06 05 Product and Finish Schedule].
      1. Thickness: 100mm (4").
      2. Length: Pre-Cut in Factory per dimensioned drawings.
      3. Insert Type: Glass.
      4. Insert Glass Configurations: Single glazed offset.
      5. Top Rail:
         1. Thickness: 100mm (4").
         2. Vertical Dimension: 63.5mm (2-1/2")
      6. Bottom Rail:
         1. Thickness: 100mm (4").
         2. Vertical Dimension: 31.8mm (1-1/4")
    1. Glazing Transitions: Inline.
       1. Inline Glass Transition Type: Tape glazing connector.
    2. Seals: Manufacturer's standard.
    3. Pivot Doors: Manufacturer's standard 10mm (3/8") thick glass slab.
       1. Door Finishes: Clear, fully tempered clear float glass.

SPEC NOTE: Select one or more of the following door types. Delete what is not required on the Project.

* + 1. **[Butt Hinge Doors] [Sliding Doors]**: Manufacturer's standard 1-3/4" (45mm) thick **[aluminum glazed] [wood glazed] [solid wood]** or **[10mm (3/8") thick, clear glass slab]**.
    2. Door Frames: Manufacturer's standard aluminum frames for 1-3/4" (45mm) thick doors, factory prepared to receive hardware.
       1. Thickness: 100mm (4").
       2. Finish: Factory-applied powder-coat finish.

SPEC NOTE: Select one of the following Finish Options below.

* + - 1. Colour: [As selected by the Consultant from manufacturer's full range] [Black][As indicated in Section 09 06 05 Product and Finish Schedule].
    1. Hardware: As specified in the hardware schedule.
    2. Accessory Hardware:

SPEC NOTE: Select Door Hardware for the door type selected above. Delete those not required on the Project.

* + - 1. Pivot Doors:
         1. Glass Slab Doors - No Plinth, **[Electric strike]**.
      2. Butt Hinge Doors:
         1. Aluminum Glazed Doors - Adjustable bottom plinth, **[Electric Strike]**.
         2. Wood Glazed Doors - **[Adjustable bottom plinth] [No plinth] [Electric Strike]**.
         3. Solid Wood Doors - **[Adjustable bottom plinth] [No plinth] [Electric Strike]**.
         4. Glass Slab Doors - No Plinth, **[Electric Strike]**.
      3. Sliding Doors:
         1. Aluminum Glazed Doors - Adjustable bottom plinth **[Soft close track] [C-Channel track]**.
         2. Wood Glazed Doors - Adjustable bottom plinth **[Soft close track] [C-Channel track]**.
         3. Solid Wood Doors - Adjustable bottom plinth **[Soft close track] [C-Channel track]**.
         4. Glass Slab Doors - **[Adjustable bottom plinth] [No plinth] [Soft close track] [C-Channel track]**.
    1. Glazing: Fully tempered clear float glass.

SPEC NOTE: Modify the GL#'s to reflect the Finish Schedule. Delete if not required.

* + - 1. Glazing Wall Panels (GL-#): Tempered clear glass, 10mm thick, as indicated in Section 09 06 05 Product and Finish Schedule, and meeting manufacturer's requirements for complete system installation.
      2. Glazing Door Panels (GL-#): Tempered clear glass, 13mm thick, as indicated in Section 09 06 05 Product and Finish Schedule, and meeting manufacturer's requirements for complete system installation.
    1. Performance:
       1. Structural: Fabricated as a self supporting, structurally stable and vibration free system when subject to impact loads occurring as a result of normal usage.
  1. finish
     1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
     2. Protect finish with strippable protective film.

SPEC NOTE: Select one of the following finish options below and delete ones not required.

* + 1. Clear Anodized Finish:
       1. Class II Finish: Architectural Class II, clear coating 0.010 mm or thicker in accordance with AAMA 611.
    2. **[Light Bronze] [Medium Bronze] [Dark Bronze] [Black]** Coloured Anodized Finish:
       1. Class II Finish: Architectural Class II, integrally coloured or electrolytically deposited colour coating 0.010 mm or thicker in accordance with AAMA 611.

SPEC NOTE: Select 2 coat for standard exterior projects; 3 coat for high end finish, corrosive exterior environments; acrylic enamel for interior projects.

* + 1. Acrylic Enamel Finish:
       1. One (1) Coat Acrylic Extrusion Coating:
          1. AA C12 Chemical Finish, cleaned with inhibited chemicals; C40 Chemical Finish, conversion coating; Rx Acrylic Coating, manufacturer's standard single coat factory spray applied acrylic coating; prepare, pretreat, and apply coating to exposed metal surfaces to 0.020 mm or thicker in accordance with AAMA 2603 and with coating manufacturer's written instructions.
          2. Colour: **[As indicated in Section 09 06 05 – Product and Finish Schedule.] [As selected by Consultant from manufacturer's full product range.]**
          3. Basis of Design Materials: PPG Duracron.
    2. Steel (Concealed):
       1. Hot-dip galvanized in accordance with CAN/CSA-G164, with minimum coating of 2 oz./sq.ft., or zinc rich paint.
    3. Isolate where necessary to prevent electrolysis due to dissimilar metal-to-metal contact or metal-to-masonry and concrete contact. Use bituminous paint, butyl tape or other approved divorcing material.
    4. Shop Fabrication:
       1. Fabricate demountable partition components at manufacturer's shop facilities to the greatest extent possible using components of sizes not less than those specified and in modules as recommended by demountable partition manufacturer.
       2. Coordinate requirements for electrical and communication services, preinstall conduit, outlet boxes and covers ready for installation of wiring by Electrical Drawings.

1. execution
   1. examination
      1. Verification of Conditions: Verify that substrates and services required for demountable partition systems are in place, and that installation tolerances are acceptable before beginning of installation of products specified in this Section.
      2. Installation of products specified in this Section will denote acceptance of site conditions.
   2. installation
      1. Manufacturer's Instructions: Install demountable partitions in accordance with manufacturer's written instructions and shop drawing requirements; braced and supported to meet requirements of local Authority Having Jurisdiction using fasteners and anchorages that will not permanently damage ceiling, wall and floor materials installed by other Sections.
      2. Erect partitions plumb, square and level; accurately fitted and fastened to adjacent construction; adjust for floor irregularities and maintain level lines relative to ceiling construction.
      3. Erect partition systems conforming to acoustical requirements for the project; do not modify wall systems that have an effect on acoustical performance of installed system; install closed cell foam tape at perimeter of each partition; excluding carpeted floor, as a continuous strip compressed between partition materials and adjacent construction.
         1. Installation Tolerance: Install each demountable partition so surfaces vary not more than 3mm (1/8") from the plane formed by the faces of adjacent partitions.
   3. closeout activities
      1. Adjusting:
         1. Adjust doors and operating hardware to operate easily without binding; leave work in complete and proper operating condition; remove and replace defective work including doors and framing that are warped, bowed or otherwise unacceptable.
         2. Adjust misaligned trim and base materials.
      2. Touch Up Finishing: Repair or replace abraded or damaged finishes to match adjacent materials; remove and replace panels and other components that are damaged, improperly installed or soiled beyond satisfactory cleaning.
      3. Cleaning:
         1. Perform cleaning of soiled panels and trim, and glass and other finished surfaces as required by Section 01 77 19 – Closeout Requirements.
         2. Clean floor, ceiling and wall surfaces soiled as a result of work of this Section.

end of section