SECTION 10 22 23.23 – operable glass panel systems

1. General
   1. summary
      1. Supply and installation of sliding, operable glass panel partitions. Provide all labor, materials, tools, equipment, and services for operable glass panel partitions in accordance with provisions of contract documents.
      2. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details.
   2. REFERENCE STANDARDS
      1. American Society for Testing and Materials (ASTM):
         1. ASTM C1048-18, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
         2. ASTM E90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
         3. ASTM E336-20, Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings.
         4. ASTM E413-10, Classification for Rating Sound Insulation.
      2. Underwriters Laboratories of Canada (ULC):
         1. CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies.
   3. 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 of the operable glass panel partitions.
      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 operable glass panel partitions with electrical, and communications installation Sections where required.
      3. Sequencing: Install operable glass panel partitions after installation of floor coverings and ceiling systems,
   4. 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.
         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.
      3. STC Rating Certificate:
         1. Submit a duly authorized and dated certificate by an independent acoustical testing laboratory that the folding panel partitions achieve the STC rating specified in this Section, when tested in accordance with ASTM E90.
   5. Project Closeout Submissions
      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.
   6. Quality Assurance
      1. Qualifications: Provide proof of qualifications when requested by Consultant:
         1. Manufacturer: Obtain operable glass panel 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 operable glass panel partitions in accordance with manufacturer’s written requirements.
      2. Acoustical performance of the operable glass panel partitions shall have attained an STC rating of 38 when tested in accordance with ASTM E90-09.
   7. Delivery, Storage and Handling
      1. Delivery and Acceptance Requirements: Deliver operable glass panel partitions with protective wrapping on perimeters of panels, glass and exposed framing components designed to prevent damage to materials during transit and on-site storage.
      2. Storage and Handling Requirements:
         1. Inventory operable glass panel partition components when delivered to project site and confirm that materials required for installation are accounted for on the delivery manifest.
   8. Site Conditions
      1. Site Measurements: Verify dimensions by site measurements before fabrication and indicate measurements on shop drawings where operable glass panel partition 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 operable glass panel partitions 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.
2. Products
   1. MANUFACTURERS
      1. Additional manufacturers offering similar Products may be incorporated into the work 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. Corflex.
         2. Modernfold Inc.
         3. Moderco Inc.
   2. MATERIALS
      1. Operable Glass Panel Partitions:
         1. Manually operated, sliding panel type partition, operating on separate tracks, and consisting of the following:
            1. Minimum STC rating of 38.
            2. Suspension system.
            3. Basis of Design Materials: Parallel Glass Panels, Manually Operated, Series G-500P by Corflex..
      2. Panel Characteristics:
         1. Nominal panels thickness of 50mm (2”) thick.
         2. Full perimeter extruded aluminum frame, 54mm (2-1/8”) maximum sightline width.
         3. Interlocking construction reinforced by means of concealed steel corner brackets.
         4. Glass Panel Insert: 13mm (1/2”) tempered glass, meeting ASTM C1048.
         5. Each panel shall be complete with vertical hooking trim on the face of its trail frame section which will grab on to the adjacent panel while moving forward and carry it along in its path.
         6. Guide Trim: Manufacturer’s standard horizontal guide trim at the bottom of each panel avoids separation of the panels during wall deployment.
         7. Horizontal Seals:
            1. Seals must not exceed the panel width to prevent damage while handling.
            2. Top and bottom seals shall be continuous contact flexible PVC sweeps.

Top sweeps maintain contact with the track and the bottom sweeps maintain contact with the floor or other surface along the path of the movable panels.

* + - * 1. Colour: Black.
      1. No floor track will be permitted.
    1. Suspension System:
       1. Track:
          1. Constructed of multiple rows (2 to 5) of tracks made of clear anodized architectural grade extruded 6063-T6 aluminum alloy.
          2. Connected to the structural support by steel threaded hanger rods supplied by the manufacturer.
          3. A section of track will be removable on each row of tracks in order to make it possible for a panel to be removed from the track for later maintenance.
       2. Trolley: Each panel shall be supported by two (2) trolley assemblies consisting of four (4) steel ball bearing nylon coated wheels.
    2. Trims: Built-in ceiling trims shall be of anodized aluminum finish.
  1. FABRICATION AND MANUFACTURE
     1. Fabricate operable glass panel partitions in accordance with shop drawings, rigid, without waves or imperfections. Components shall not swell, shrink, warp or crack.
     2. Suspension System Support:
        1. Support brackets using pairs of threaded hanger rods. Fasten trolley assembly to panels with adjustable pendant bolts. Sizes to each type of partition.
        2. Provide steel support framing, concealed in ceiling, as required, and indicated on drawings, having all welded construction. Framing shall be designed to provide a rigid trouble-free support. Coordinate with Section 05 70 00 – Decorative Metal.
  2. FINISHES
     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.
     3. Concealed Aluminum Track and Threaded Rod - Clear Anodized Finish:
        1. Class II Finish: Architectural Class II, clear coating 0.010 mm or thicker in accordance with AAMA 611.
     4. Exposed Aluminum Panel Framing - 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.
     5. Steel (Concealed):
        1. Hot-dip galvanized in accordance with CAN/CSA-G164, with minimum coating of 2 oz./sq.ft., or zinc rich paint.
     6. 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.

1. Execution
   1. EXAMINATION
      1. Examine flooring, structural support, and opening, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable glass panel partitions.
      2. Proceed with installation only after unsatisfactory conditions have been corrected.
   2. INSTALLATION
      1. Install operable glass panel partitions in locations shown on drawings, in accordance with the following:
         1. Approved shop drawings.
         2. ASTM E557 installation procedures.
         3. Manufacturer's written recommendations.
      2. Install operable glass panel partitions and accessories after other finishing operations, including painting have been completed.
      3. Match operable glass panel partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
      4. Broken, cracked, chipped, deformed, or unmatched panels are not acceptable.
   3. CLEANING, PROTECTION AND ADJUSTING
      1. Clean operable glass panel partition surfaces upon completing installation, to remove dust, dirt, adhesives, and other foreign materials according to manufacturer’s written instructions.
      2. Adjust and lubricate operable glass panel partitions and accessories as required for smooth and efficient operation.
   4. DEMONSTRATION
      1. Demonstrate proper operation and maintenance procedures to Owner’s representative.

END OF SECTION