PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Aluminum-Clad Wood Framed Folding Gass System, including perimeter trims, and accessories.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are located in Division 01 of the Specifications.

1.03 PERFORMANCE.DESIGN REQUIREMENTS

A. General Performance: Provide aluminum folding glass systems which have been manufactured, fabricated and installed to withstand the specified uniform loads and to maintain the manufacturer's performance criteria without defects, damage or failure.

B. Performance Criteria (Lab Tested): Low Profile Saddle Sill:
   1. Folding Glass Door Units tested to AAMA/WDMA/CSA 101/I.S.2/A440-17:
      a. Class CW-PG35 - FLD 157-1/2 inch x 102-3/8 inch (4000 mm x 2600 mm) with 1L3R configuration for outward opening units
   2. Structural Load Deflection (ASTM E330):
      a. Design Pressure - Positive: 45 psf (2150 Pa)
      b. Design Pressure - Negative: 40 psf (1945 Pa)
      c. Uniform Load Deflection, L/175: Pass 45 psf (2150 Pa)
   3. Air Infiltration (ASTM E283):
      a. 0.12 cfm/ft^2 (0.61 L/s/m^2) at a static air pressure difference of 1.57 psf (75 Pa)
      b. 0.30 cfm/ft^2 (1.52 L/s/m^2) at a static air pressure difference of 6.24 psf (300 Pa)
      c. Canadian Air Infiltration/Exfiltration Level: A2
   4. Water Penetration (ASTM E331, ASTM E547):
      a. No uncontrolled water leakage at a static (with weeps) test pressure of 5.43 psf (260 Pa). (Not applicable for even-even configurations)

1.04 SUBMITTALS AND SUBSTITUTIONS

A. In accordance with Section 01 3000.

B. Substitutions will not be considered prior to the award of the General Contract.

C. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, hardware, finishes, and installation instructions for each type of folding glass systems indicated.

D. Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details.

E. Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.

F. Samples for Verification: For folding glass systems and components required.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each type, class, grade, and size of folding glass systems. Test results based on use of downsized test units will not be accepted.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: An installer which has had successful experience with installation of the same or similar units required for the project and other projects of similar size and scope.

B. Manufacturer Qualifications: A manufacturer capable of fabricating folding glass systems that meet or exceed performance requirements indicated and of documenting this performance by inclusion of test reports, and calculations.

C. Source Limitations: Obtain folding glass system through one source from a single manufacturer.

D. Product Options: Drawings indicate size, profiles, and dimensional requirements of folding glass systems and are based on the specific system indicated. Refer to Division 01 Section “Product Requirements”. Do not modify size and dimensional requirements.

1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

1.06 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of folding glass system openings by field measurements before fabrication and indicate field measurements on Shop Drawings.

1.07 WARRANTY

A. Manufacturer’s Warranty: Provide Folding Glass Door manufacturer’s standard limited warranty as per manufacturer’s published warranty document in force at time of purchase, subject to change, against defects in materials and workmanship.

1. Warranty Period beginning with the Date of Substantial Completion:
   a) Rollers and Insulated Glass Seal Failure: Ten (10) years.
   b) All Other Components Except Screens: Ten (10) years.

PART 2 - PRODUCTS

2.01 FOLDING GLASS WALLS

A. Basis-of-Design Product: Generation 4 Folding Glass Walls by NanaWall NW CLAD 740; Nana Wall Systems, Inc., 100 Meadow Creek Dr., Corte Madera, CA 94925 800.873.5673 (www.nanawall.com).
   1. Configuration: 01L, 06LR, 01R
   2. Glazing: Standard Low-E Insulated, Tempered SKN 176
      a) Grid Pattern: SDL Grid; 2 wide x 5 high
      b) Glass Spacer Bar Finish: Black

   3. Profile Finishes:
      a) Interior Wood: Sapeli Mahogany
         1) Water-based clear sanding sealer with final field finish by others
      b) Exterior Aluminum: Manufacturer's standard powder coating; custom color as selected by Architect.

   4. Hardware:
      a) Panel 1: Multi-point locking with latch, deadbolt, and lever handles on both sides on swing panel (does not unlock with one motion). Thumbturn on inside and key cylinder on outside.
         1) Hardware Finish: Black Titanium
      b) Hardware on Secondary Panels: 2-point locking with flat handle stainless steel with Black Titanium finish.
      c) Hinge Finish: Black Anodized

   5. Sill Type: Thermally broken low profile saddle
      a) Finish: Black Anodized

2.02 MATERIALS

A. Aluminum Extrusions: Alloy and temper recommended by folding glass system manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" (1.8 mm) wall thickness at any location for the main frame and sash members.

B. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with folding glass system members, trim hardware, anchors, and other components.

C. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

D. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or

other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

E. Sealant: For sealants required within fabricated folding glass system, provide folding glass system manufacturer's standard, permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

2.05 FABRICATION

A. General:
1. Fabricate Components per the Manufacturer's most current Installation Instruction manuals with minimum suggested clearances and shim spacing around the perimeter of the assembly while enabling installation and dynamic movement of the perimeter seal.
2. Accurately fit and secure all joints and corners. Make joints flush, hairline and waterproof.
3. Prepare frames to receive anchor devices as required.
4. When possible, arrange fasteners and attachments to conceal from view.
5. Shop-assemble frames to the greatest extent possible and shop seal all horizontal to vertical joints.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight folding glass system installation.
1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing folding glass systems, hardware, accessories, and other components.

B. Install folding glass systems level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.

C. Set sill members in bed of sealant or with gaskets, as indicated, for weather tight construction.

D. Install folding glass systems and components to drain condensation, water penetrating joints, and moisture migrating within folding glass system to the exterior.

E. Separate aluminum from dissimilar materials to prevent corrosion or electrolytic action at points of contact.

3.03 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Upon Owner’s written request, provide periodic site visit by manufacturer’s field service representative.

3.04 ADJUSTING, CLEANING, AND PROTECTION

A. Adjust operating door panels, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather tight closure. Lubricate hardware and moving parts.

B. Clean aluminum surfaces immediately after installing folding glass systems. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

C. Clean factory-glazed glass immediately after installing folding glass systems. Comply with glass manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.

D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

E. Protect folding glass system surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor folding glass system surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, mortar, alkaline deposits, stains, or other contaminants. If contaminating substances do contact folding glass system surfaces, remove contaminants immediately according to manufacturer's written recommendations.

END OF SECTION