SECTION 08 32 13

ALUMINUM FRAMED SLIDING GLASS DOOR SYSTEMS

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\*\* NOTE TO SPECIFIER \*\* Solar Innovations Architectural Glazing Systems; folding glass wall systems, stacking glass wall systems. sliding aluminum-framed glass doors, metal framed skylights, pre-engineered glass structures, greenhouse, sunroom, and conservatories.  
This section is based on the products of Solar Innovations Architectural Glazing Systems(r), which is located at:   
31 Roberts Rd.  
Pine Grove, PA 17963  
Toll Free: 800-618-0669  
Phone: 570-915-1500  
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[ [Click Here](https://arcat.com/company/solar-innovations-architectural-glazing-systems-39185) ] for additional information.  
Since 1998, Solar Innovations Architectural Glazing Systems(r) has grown to become a leader in the architectural glazing industry, providing innovative solutions to customers all over the world. With over 25,000 projects completed, our 360,000+ square foot Pine Grove, PA LEED Gold-designed manufacturing facility produces the most complete product line in the industry. With this capability, we provide a cohesive look across the entirety of a project's glazing needs. Our door, window, skylight and structure systems have been recognized to be among the highest in quality and performance for both the commercial and residential markets. As a single-source manufacturer of aluminum, wood and vinyl products, we tailor our systems to meet the project's specific needs. To further stand out, our custom hardware is machined in-house, delivering a level of craftsmanship to our products that is unmatched in the industry. Also, most of our engineering and product testing is done in our state-of-the-art testing facility, providing our customers with exacting standards and specifications.  
Solar Innovations Architectural Glazing Systems(r)' bifold, slide and stack, sliding, and lift-slide door systems allow our customers to open wide spans to the outdoors, while providing excellent air and water performance, ADA compliance, impact certification, and thermally-broken systems to lower energy consumption. Our casement, awning, hopper, pivot and tilt-turn windows, as well as our aluminum and wood curtain walls, meet the same standards as our door systems and allow for excellent daylighting and fresh air, which brings health benefits to the building's inhabitants, reduces heating costs and adds functionality to the space. For more daylight and fresh air, our retractable and operable skylights allow for motorized or manually-operated ventilation. Our pyramid, polygonal, barrel-vault and dome skylights make a bold architectural statement while our walkable skylights allow for more useable space to roofs with foot traffic. Additionally, our greenhouses, conservatories, sunrooms, pool enclosures, and walkways allow our customers to surround themselves with the beauty of the outdoors year-round, all in a climate-controlled environment for both plants and people.  
While we already offer the most comprehensive product line in the architectural glazing industry, we continuously partner with customers to stretch the limits of architectural possibilities. This expands our product offerings and fuels our company's growth. When other manufacturers say no, Solar Innovations Architectural Glazing Systems(r) says yes.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Aluminum framed sliding glass door systems.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 03 41 16 - Precast Concrete Slabs.
    3. Section 04 27 23 - Cavity Wall Unit Masonry.
    4. Section 05 40 00 - Cold-Formed Metal Framing.
    5. Section 06 10 00 - Rough Carpentry.
    6. Section 06 20 00 - Finish Carpentry.
    7. Section 07 21 19 - Foamed-In-Place Insulation.
    8. Section 07 46 16 - Aluminum Siding.
    9. Section 07 60 00 - Flashing and Sheet Metal.
    10. Section 07 90 00 - Joint Protection.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Welding Society (AWS): Structural Welding Code.
    2. ASTM International (ASTM):
       1. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
       2. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wires, Profiles, and Tubes.
       3. ASTM B241 - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tubes.
       4. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
       5. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
       6. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
       7. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
       8. ASTM E547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.
    3. Fenestration and Glazing Industry Alliance (FGIA):
       1. AAMA 611 - Voluntary Specifications for Anodized Architectural Aluminum.
       2. AAMA 1503 - Voluntary Test Method For Thermal Transmittance And Condensation Resistance Of Windows, Doors, And Glazed Wall Sections.
    4. Glass Association of North America (GANA): Glazing manual.
    5. Window and Door Manufacturer's Association (WDMA): AAMA/WDMA/CSA 101/I.S.2/A440 - Windows, Skylights and Glass Doors.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete color selection samples if colors have been pre-selected.

* + 1. Selection Samples: Two complete color chip sets representing manufacturer's full range of stocked colors with a standard size of 2 x 3 inches (50 x 75 mm).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Verification Samples: Two representative units of each type, size, color and finish.
       1. Aluminum Finish: Two samples, minimum size of 2 x 3 inches (50 x 75 mm), representing actual material and color.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Wood Finish: Two samples, minimum size of 2 x 5 inches (50 x 127 mm), representing actual product and color.
      2. Glazing: Two samples, minimum size of 12 x 12 inches (300 x 300 mm), representing specified glass, including coatings and frit patterns.

\*\* NOTE TO SPECIFIER \*\* Assembly sample provided upon request only.

* + - 1. Assembly Sample: One sample demonstrating connection details with a maximum size of 12 x 12 x 12 inches (305 x 305 x 305 mm). Glazing included as offered by glass supplier. Sample developed to best represent the specified product.
    1. Shop Drawings: Detailed drawings prepared specifically for the project by manufacturer. Include information not fully detailed in manufacturer's standard product data, including, but not limited to wall elevations and detail sections of every typical composite member.
       1. Show opening dimensions, framed opening tolerances, profiles, product components, anchorages, and accessories.
       2. Include details of materials, construction, finish, fastener locations, glazing, hardware arrangements and relationship with adjacent construction.
       3. Include schedule identifying each unit, with marks or numbers referencing Drawings.
       4. Show surrounding substrates and relevant conditions.
    2. Maintenance Manuals: Manufacturer's maintenance manuals.
    3. Warranty: Manufacturer's warranty online registry.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum twenty (20) years documented experience in fabrication and erection of glass door systems for projects of similar scope.
        1. Manufacturer must use an extruded aluminum system comprised of domestically produced aluminum and is fabricated and assembled in the USA.
        2. Manufacturer must be recognized by NAMI.
        3. Manufacturer must be a member in good standing of the National Glass Association (NGA).
     2. Installer Qualifications: Company experienced in performing work of this section that has specialized in installation of work similar in scope and complexity required for this project for a minimum of five (5) years.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project. Fill in blank below with approximate size of mockup or delete line.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. Intent of mock-up is to demonstrate surface preparation techniques, quality of workmanship and visual appearance.
       2. Approximate Size: \_\_\_\_\_\_\_\_.
       3. Refinish mock-up area as required to produce acceptable work.
       4. Do not continue with remaining work until workmanship, color, and sheen are approved by Architect.
       5. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       6. Do not alter or remove mock-up until work is completed or removal is authorized.
       7. Retain mock-up during construction as standard for comparison with completed work.
       8. Incorporate accepted mock-up as part of the Work.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference, by phone, approximately two weeks before scheduled commencement of the Work. Attendees to include Architect, Contractor and trades involved. Agenda to include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations. Store products in manufacturer's original unopened packaging, covered to protect factory finishes from damage, precipitation, and construction dirt until ready for installation. Store materials off construction grounds in a secure location that is a dry, covered area and protected from weather conditions.
     2. Inspect and report any freight damages to the manufacturer immediately.
     3. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
     2. Perform structural silicone sealant work when air temperature is between 40 -120 degrees F (4 - 29 degrees C).
  4. WARRANTY

\*\* NOTE TO SPECIFIER \*\* Many components are also warranted by the original manufacturers for greater lengths of time. Reference original component manufacturers' warranties for complete information. Manufacturer offers extended warranties and service contracts on a per project basis.

* + 1. Manufacturer's Warranty: Provide manufacturer's standard limited warranty against defects in materials and workmanship.
       1. Warranty Period for Aluminum Framed Glass Doors: 10 years for cases of normal use.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Warranty Period for Rollers: Stainless steel rollers free from defect for a period of 10 years.
      2. Warranty for Frame Finish:

\*\* NOTE TO SPECIFIER \*\* Delete warranty options below not required.

* + - * 1. Anodized Finishes: Provide a warranty of 5 years.
        2. Stock Color AAMA 2605 Finishes: 2-3 coats powder or liquid dependent on color and/or application, provide paint manufacturer's warranty for color and film integrity for at least 15 years from date of application.
        3. Custom Color AAMA 2605 Finishes: 2-3 coats powder or liquid dependent on color and/or application, provide paint manufacturer's warranty for color and film integrity for at least 15 years from date of application.
        4. Stock Color AAMA 2604 Finishes: 2 coats powder or liquid, provide warranty for color and film integrity for 10 years from date of application.
        5. Custom Color AAMA 2604 Finishes: 2 coats powder or liquid, provide paint manufacturer's warranty for cracking and pulling integrity for 10 years from date of application.
        6. Custom AAMA 2603 Finishes: 1 coat liquid only, thermosetting acrylic resin finishes, provide warranty for cracking and pulling integrity for 5 years from date of application.
        7. Stock Color AAMA 2603 Finishes: 1 coat liquid only, provide paint manufacturer's warranty for cracking and pulling integrity for at least 5 years from date of application.
        8. Custom Warranty Period: \_\_\_\_ years, to be approved and accepted in writing by manufacturer based on project's scope and application.

\*\* NOTE TO SPECIFIER \*\* Under extreme conditions, warranties for glazing may be less than twenty (20) years. Verify conditions with manufacturer. Delete the following paragraph if not required or edit to suit conditions.

* + - 1. Warranty for Flat Glazing: Provide glazing manufacturer's standard warranty against defective materials, delamination, seal failure, and defects in manufacturing for up to 20 years prorated or as otherwise provided in or limited by the glass manufacturer's limited warranty.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Solar Innovations Architectural Glazing Systems(r), which is located at: 31 Roberts Rd.; Pine Grove, PA 17963; ASD Toll Free: 800-618-0669; Phone: 570-915-1500; Fax: 800-618-0743; Fax: 570-915-6083; Email: skylight@solarinnovations.com; Web: www.solarinnovations.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements and the following criteria.
       1. Structural Calculations: For products specified; stamped by a professional engineer licensed in the state in which the Project is located.
  1. PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Edit the following section to suit project requirements. Coordinate with manufacturer for the project location, wall size, and local building code to provide a system tailored to your needs.

* + 1. Air Leakage Performance:
       1. Design, fabricate, assemble, and erect the aluminum glazed system to be permanently free of significant air leakage.
       2. Significant leakage to be defined as a differential test pressure amounting to 20 percent of specified strength performance pressure required with operable windows doors, or joints, if any, sealed to prevent crack leakage.
    2. Structural Performance: Structural performance as tested in accordance with ASTM E330; with no glass breakage or permanent damage to fasteners, anchors, hardware, or actuating mechanisms.
       1. Normal wall deflection not exceeding 1/175 of clear span for span lengths of 162 inches (4115 mm) or less and 1/240 plus 1/4 inch (6 mm) for others. Restrict deflection to 3/4 inch (19 mm) maximum for individual glazing lites.
       2. Parallel to wall deflection not exceeding 175 percent of glass edge clearance. Restrict deflection to L/360 or 1/8 inch (3 mm) maximum. Restrict deflection to 1/16 inch (1.6 mm) maximum above doors and/or windows. Increasing the deflection to 1/8 inch (3 mm) to be permitted if the door operation is not affected.
       3. Deflection of the entire assembly, including, but not limited to, glass, not to exceed 1-1/2 inches (38 mm).
    3. Thermal Performance: Tested values, certifications, and simulation protocols.
       1. Thermal Characteristics:

\*\* NOTE TO SPECIFIER \*\* Fill in blanks below. Thermal characteristics are available with performance values up to a U-Value - 0.33 and CRF - 40 based on glazing choices. Note this is subject to glass availability and project specific requirements. Consult manufacturer for details.

* + - * 1. U-Value: \_\_\_.
        2. CRF: \_\_\_.
      1. U-Value: Unit complies with U-value, NFRC rating, or simulation in accordance with NFRC 100 protocol, shown in manufacturer's published data for glazing and sill specified.
      2. Solar Heat Gain Coefficient: Unit to comply with the Solar Heat Gain Coefficient NFRC rated, or simulation in accordance with NFRC 200 protocol, shown in manufacturers published data for the glazing and sill specified.
    1. Compliance:
       1. Manufacturer's certificates showing door system meets or exceeds SD-HC40 Product Designation conforming to AAMA/WDMA/CSA 101.I.S.2/A440 and/or testing indicated.

\*\* NOTE TO SPECIFIER \*\* Delete door systems and associated test results not required. Coordinate selection of testing results below with selection of options for 'Basis of Design' in the following Article.

* + - 1. Testing Results for Door System: G2 Multi Track Door System, with or without pocket, when tested on a typical four panel door unit size of (W x H) 244 x 100 inches tall (6198 x 2540 mm); panel size of (W x H) 99 x 60.5 inches (2515 x 1537 mm).
         1. Air Infiltration Test per ASTM E283: Force of 0.14 cfm per sq ft (43 L per min per cu m) when tested at 1.57 psf (75 Pa) pressure differential.
         2. Water Penetration Test per ASTM E331: Water pressure of 12.0 psf (575 Pa) and 5.0 gal per hour per sq ft (204 L per hour per sq m).
         3. Uniform Structural Load Test (ASTM E330):

Structural test pressure (overload) positive or negative 97.5 psf (4668 Pa)

Design Pressure: positive or negative 65 psf (3112 Pa).

* + - * 1. Florida Product Approval: Impact FL No. 16028.1.
      1. Testing Results for Door System: G3 Multi-Track Door System, with or without pocket when tested on a typical four panel door unit size of (W x H) 244.5 x 115.815 inches (6210 x 2942 mm); panel size of (W x H) 59.375 x 114.34 inches (1508 x 2904 mm).
         1. Air Infiltration Test per ASTM E283: Force of 0.10 cfm per sq ft (30.5 L per min per sq m) when tested at 1.57 psf (75 Pa) pressure differential.
         2. Water Penetration Test per ASTM E331 and ASTM E547: Water pressure of 7.52 psf (360 Pa) and 5.0 gal per hour per sq ft (204 L per hour per sq m) with 1.5 inch (38 mm) upleg.
         3. Uniform Structural Load Test (ASTM E330):

Structural test pressure (overload): positive or negative 105.26 psf (5040 Pa).

Design Pressure: Positive 50 psf (2394 Pa) to negative 70 psf (negative 3352 Pa).

* + - * 1. Florida Product Approval: Impact FL No. 17268.3.
      1. Testing Results for Door System: G3 Multi-Track Door System, with or without pocket, when tested on a typical four panel door unit size of (W x H) 244.5 x 115.813 inches (6210 x 294 mm); panel size of (W x H) 59.375 x 114.34 inches (1508 x 2904 mm).
         1. Air Infiltration Test per ASTM E283: Force of 0.10 cfm per sq ft (30.5 L per min per sq m) when tested at 1.57 psf (75 Pa) pressure differential.
         2. Water Penetration Test per ASTM E547: Water pressure of 10.56 psf (505.6 Pa) and 5.0 gal per hour per sq ft (204 L per hour per sq m).
         3. Uniform Structural Load Test per ASTM E330:

Structural test pressure (overload): positive or negative 105.26 psf (5040 Pa).

Design Pressure: Positive 70 psf (3352 Pa) to negative 70 psf (negative 3352 Pa).

* + - * 1. Florida Product Approval: Non-Impact FL No. 17268.4.
      1. Testing Results for Door System: G3 Lift Slide - Impact Lift Slide Door System.
         1. Air Infiltration Test per ASTM E283:

Force of 1.6 psf (75 Pa): 0.02 cfm per sq m (6.1 L per min per sq m) infiltration.

Force of 6.2 psf (300 Pa): 0.07 cfm per sq m (21 L per min per sq m infiltration.

* + - * 1. Water Penetration Test per ASTM E547 and ASTM E331: Water pressure of 12.11 psf (580 Pa) and 5.0 gal per hour per sq ft (204 L per hour per sq m), no leakage.
        2. Uniform Structural Load Test per ASTM E330:

Structural test pressure (overload): positive or negative 112.78 psf (5400 Pa)

Design pressure: Positive 75.19 psf (33600 Pa) to negative 75.19 psf (3600 Pa)

* + - * 1. Florida Product Approval: Impact FL Approval No. 17287.1.
  1. ALUMINUM-FRAMED GLASS DOOR SYSTEMS
     1. Aluminum-Framed Glass Door Systems:

\*\* NOTE TO SPECIFIER \*\* Delete basis of design options not required. Consult manufacturer to determine which framing meets project specific requirements.

* + - 1. Basis of Design: SI8200 G2 Sliding Glass Door System - G2 Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      2. Basis of Design: SI8200 G2 Sliding Glass Door System - G2 Hurricane Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      3. Basis of Design: SI8200HP G2 Sliding Glass Door System - G2 Back to Back Hurricane Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      4. Basis of Design: SI8600 G3 Sliding Glass Door System - G3 Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      5. Basis of Design: SI8600 G3 Sliding Glass Door System - G3 Hurricane Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      6. Basis of Design: SI8600 G3 Sliding Glass Door System - Back to Back G3 Hurricane Hook Rail as manufactured by Solar Innovations Architectural Glazing Systems.
      7. Basis of Design: SI8600LS Impact G3 Lift Slide Door System as manufactured by Solar Innovations Architectural Glazing Systems.
      8. Basis of Design: As scheduled and indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete framing member thickness options not required.

* + - 1. Framing Members Thickness: As indicated on Drawings.
      2. Framing Members Thickness: Minimum .080 inch (2 mm) wall thickness for structural members.
      3. Framing Members Thickness: As determined by manufacturer based on design loading, cross sectional configuration, and fabrication requirements.
      4. Load Bearing: Bottom load bearing system.

\*\* NOTE TO SPECIFIER \*\* Delete configuration options not required. Segmented radius configuration not available for SI8600LS G3 Lift Slide Door Systems. Additional configurations are available.

* + - 1. Configuration: As indicated on Drawings.
      2. Configuration: Dual track.
      3. Configuration: Multi-track.
      4. Configuration: Multi-track, pocketing.
      5. Configuration: No post corner.
      6. Configuration: Segmented radius.

\*\* NOTE TO SPECIFIER \*\* Delete operation options not required. Motorized operation not available with SI8600LS G3 Lift Slide Door Systems.

* + - 1. Operation: As indicated on Drawings.
      2. Operation: Manual.
      3. Operation: Motorized system compatible with wireless remote, keypad, motion sensor and infrared sensor controls.

\*\* NOTE TO SPECIFIER \*\* Delete panel size option not required. Minimum panel size for G2 sliding glass doors is 20 inches (508 mm); smaller panels may be available upon engineering approval. Maximum panel size for G2 sliding doors is 5 x 10 ft (1524 x 3048 mm); larger panels may be available depending on application. Minimum panel size for G3 Sliding Glass Doors and G3 Lift Slide Doors is 30 inches (762 mm); smaller panels may be available upon engineering approval. Maximum panel size for G3 sliding doors is 5 x 15 ft (1524 x 4572 mm); larger panels may be available depending on application.

* + - 1. Panel Size: As indicated on Drawings.
      2. Panel Size:
         1. Width \_\_ x \_\_ ft (\_\_ x \_\_ mm).
         2. Height \_\_ x \_\_ ft (\_\_ x \_\_ mm).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Drainage: Factory installed weep holes.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Transoms and Sidelites: Fixed, matching door frame.

\*\* NOTE TO SPECIFIER \*\* Delete glazing accessories if not required.

* + - 1. Glazing Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete glazing accessory type options not required.

* + - * 1. Type: As indicated on Drawings.
        2. Type: Decorative mullions.
        3. Type: Interior grids, 3/16 x 5/8 inch (5x 16 mm).
        4. Type: Simulated divided lites, 3/8 x 5/8 inch (9.5 x 16 mm).
        5. Type: Interior muntin grid on insulated glazing.
        6. Type: Interior and exterior applied grids, 3/4 inch (19 mm) low profile grid.
        7. Type: Interior and exterior applied grids, arched grid.
        8. Type: Interior and exterior applied grids, gothic grid.
        9. Type: Interior and exterior applied grids, double gothic grid.
        10. Type: Interior and exterior applied grids, English grid.
        11. Type: Interior and exterior applied grids, traditional grid.
        12. Type: Interior and exterior applied grids, cross grid.
        13. Type: Decorative raised panels.

\*\* NOTE TO SPECIFIER \*\* Delete screens if not required.

* + - 1. Screens:

\*\* NOTE TO SPECIFIER \*\* Delete screen type options not required.

* + - * 1. Type: As indicated on Drawings.
        2. Type: SI1000 Fixed screens as manufactured by Solar Innovations Architectural Glazing Systems.
        3. Type: SI1000 Operable screens as manufactured by Solar Innovations Architectural Glazing Systems.
        4. Type: SI1000 B-Series Horizontally Retractable Screen System as manufactured by Solar Innovations Architectural Glazing Systems.
        5. Type: SI1000 C-Series Centor SIE Horizontally Retractable Eco-Screen System as manufactured by Solar Innovations Architectural Glazing Systems.
        6. Type: SI1000 S-Series Motorized SC4500 Mastershade Vertically Retractable Screen System as manufactured by Solar Innovations Architectural Glazing Systems.
        7. Framing: Aluminum, 1 x 1 inch (25 x 25 mm).

\*\* NOTE TO SPECIFIER \*\* Delete screen material options not required. Black Tuffscreen mesh only available with S-Series motorized screen systems.

* + - * 1. Screen Materials: As indicated on Drawings.
        2. Screen Materials: Standard gray colored charcoal.
        3. Screen Materials: Fiberglass.
        4. Screen Materials: Aluminum.
        5. Screen Materials: Custom pet screens.
        6. Screen Materials: Black Tuffscreen mesh.

\*\* NOTE TO SPECIFIER \*\* Delete size options not required. Maximum panel size for fixed screens is 5 x 10 ft (1524 x 3048 mm). Maximum panel size for folding screens is 4 x 10 ft (1219 x 3048 mm). Maximum panel size for sliding screens with mullion support is 6 x 12 ft (1829 x 3578 mm). For B-Series screens the maximum double screen size is 32 ft x 10 ft 6 inches (9734 x 3200 mm) and maximum single screen size is 16 ft x 10 ft 6 inches (4877 x 3200 mm). For C-Series screens the maximum size for screen/blind configuration is (WxH) 12 ft x 7 ft 6 inches (3658 x 2286 mm), the maximum size for single screens is (WxH) 12 x 10 ft (3658 x 3048 mm), the maximum size for single blinds is (WxH) 12 ft x 7 ft 6 inches (3658 x 2286 mm), the maximum size for double screens is 24 ft x 10 ft (7315 x 3048 mm) and maximum size for double blinds is 24 ft x 7 ft 6 inches (7315 x 2286 mm). For S-Series screens the maximum height at 14 ft (4267 mm) width is 16 ft (4877 mm), the maximum height at 20 ft (6096 mm) width is 10 ft (3048 mm) and the maximum height at 22 ft (6706 mm) width is 8 ft (2438 mm). Oversized panels available with engineering approval based on manufacturer max sizes.

* + - * 1. Size: As indicated on the Drawings.
        2. Size: \_\_\_\_\_\_\_\_.
        3. Mounting and Configuration: As indicated on Drawings.
      1. Perimeter Weather Gaskets: EPDM with or without solid strand cord.

\*\* NOTE TO SPECIFIER \*\* Delete sill options not required. The first 5 options below are available for all door systems except G3 Lift Slide Systems.

* + - 1. Sills: As indicated on Drawings.
      2. Sills: Tile sill, non-thermal.
      3. Sills: Low profile thermal slider track sill.
      4. Sills: Low profile thermal slider track sill with ramps.

\*\* NOTE TO SPECIFIER \*\* The following sill applies to G2 series only. Delete if not required.

* + - 1. Sills: Slider non-thermal sill (G2 Only)
      2. Sills: High performance thermal slider sill.
      3. Sills: Extra high performance thermal slider sill.

\*\* NOTE TO SPECIFIER \*\* The following sill options are available with G3 Lift Slide Systems. Additional upleg is available upon request.

* + - 1. Sills: G3 High performance thermal lift slide sill with 1-1/2 inches (39 mm) upleg.
      2. Sills: G3 Extra high performance thermal lift slide sill with 2-5/16 inches (59 mm) upleg.
      3. Sills: G3 Low profile thermal slider track sill.
      4. Sills: G3 Low profile thermal slider track sill with ramps.
      5. Sills: G3 Tile sill, non-thermal.
      6. Corners:
         1. Corner Lugs: Extruded aluminum, with thermal break.
         2. Corner Connectors: With thermal break.
      7. End Caps: Do not breech thermal break.

\*\* NOTE TO SPECIFIER \*\* Hardware is subject to vendor availability. Manufacturer reserves the right to discontinue any hardware option at any time.

* + 1. Hardware:

\*\* NOTE TO SPECIFIER \*\* Delete if sliding door systems not specified in paragraph above.

* + - 1. For Sliding Door Systems:

\*\* NOTE TO SPECIFIER \*\* Delete lock set options not required. Contact manufacturer for lock set choices.

* + - * 1. Lock Sets: As scheduled and indicated on Drawings.
        2. Lock Sets: \_\_\_\_\_\_\_\_.
        3. Lock Sets: As specified in Division 8.

\*\* NOTE TO SPECIFIER \*\* Delete handles and associated finish options not required.

* + - * 1. Handles: Type and finish as scheduled and indicated on Drawings.
        2. Handles: Standard ergonomic handle.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Black.

Finish: White.

Finish: Painted aluminum.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Standard recessed handle with lock.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Black.

Finish: Satin nickel.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Standard recessed handle with no lock.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Black.

Finish: Satin nickel.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Pocket door hardware with clear anodized finish.
        2. Handles: Coastal recessed handle.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Dark bronze anodized.

Finish: Clear anodized.

Finish: Custom, \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if lift slide door systems not specified in paragraph above.

* + - 1. For SI8600LS G3 Lift Slide Door Systems:

\*\* NOTE TO SPECIFIER \*\* Delete lock set options not required. Contact manufacturer for lock set choices.

* + - * 1. Lock Sets: As scheduled and indicated on Drawings.
        2. Lock Sets: \_\_\_\_\_\_\_\_.
        3. Lock Sets: As specified in Division 8.

\*\* NOTE TO SPECIFIER \*\* Delete handles and associated finish options not required.

* + - * 1. Handles: Type and finish as scheduled and indicated on Drawings.
        2. Handles: Atlanta style.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Satin nickel.

Finish: Polished brass.

Finish: Antique brass.

Finish: Rustic umber.

Finish: Pure white.

Finish: Dark bronze metallic.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Athinai style.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Polished chrome.

Finish: Stainless steel.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Tokyo style.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Silver.

Finish: Chestnut.

Finish: Pure white.

Finish: Custom, \_\_\_\_\_\_\_\_.

* + - * 1. Handles: Handle and finger grip.

\*\* NOTE TO SPECIFIER \*\* Custom finishes available upon request at additional lead time and/or cost.

Finish: As scheduled and indicated on Drawings.

Finish: Manufacturer's standard finish.

Finish: Custom, \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete roller options not required. 1-13/16 inches (46 mm) bearings are standard for all G2 systems. 3 inches (76 mm) bearings provide for smoother operation of larger panels with longer travel and are standard for G3 Lift Slide Systems.

* + - 1. Rollers: As indicated on Drawings.
      2. Rollers: 1-13/16 inches (46 mm) stainless steel wheels and stainless steel precision bearings.
      3. Rollers: 3 inches (76 mm) stainless steel wheels and stainless steel precision bearings.
      4. Rollers: 3 inches (76 mm) nylon wheels and stainless steel precision bearings.

\*\* NOTE TO SPECIFIER \*\* Delete if not required. Available only with G3 Lift Slide Systems.

* + - 1. Salt Spray Test (ASTM B117): Minimum 100 hrs.
    1. Materials:

\*\* NOTE TO SPECIFIER \*\* Other alloys and tempers may be used for non-structural members provided they do not void the required warranties. Indicate alloys and tempers clearly on Shop Drawings and in structural calculations.

* + - 1. Aluminum Flashing and Closures:
         1. Alloy and Temper: 6063-T52, 6063-T6, or 6061-T6.
         2. Sheet Aluminum Finish: Matching system components.
         3. Thickness: Minimum 0.040 inch (1 mm) thick.
         4. Attachment: Secured with concealed fastening method or fastener with head finished to match system components.
         5. Snap-on Covers and Miscellaneous Non-Structural Trim: Minimum thickness as recommended by manufacturer.
      2. Insulation: Expanded polystyrene insulation at filler panels and sheet metal members.

\*\* NOTE TO SPECIFIER \*\* Delete the following when not required.

* + - 1. Thermal Breaks: Thermal Insulbar Separation, manufacturer's standard system to provide thermal separation between exterior and interior components.

\*\* NOTE TO SPECIFIER \*\* Delete if not required. Verify with manufacturer if internal reinforcing is required based on framing material, structure, size, and configuration.

* + - 1. Internal Reinforcing:
         1. Structural Aluminum Compliance: ASTM B221 and ASTM B241.
         2. Carbon Steel Compliance: ASTM A36.

\*\* NOTE TO SPECIFIER \*\* Delete if G3 Lift Slide system is specified.

* + - * 1. Carbon Steel Finish: Factory primed steel, manufacturer recommended primer.
      1. Structural Glazing Sealant: Manufacturer's standard, black.

\*\* NOTE TO SPECIFIER \*\* Delete perimeter sealant options not required.

* + - 1. Perimeter Sealant: Manufacturer's standard, color to match framing finish.
      2. Perimeter Sealant: Manufacturer's standard, color as selected from manufacturer's standard range.

\*\* NOTE TO SPECIFIER \*\* Delete glazing options not required. Fill in blank below for custom glazing or delete line.

* + - 1. Glazing: Single pane, 3/16 inch (5 mm) float glass.
      2. Glazing: Single pane, 1/4 inch (7 mm) float glass.
      3. Glazing: Single pane, polycarbonate.
      4. Glazing: Custom, single pane, \_\_\_\_\_\_\_\_.
      5. Glazing: Double pane glazing, 1 inch (25 mm) insulated glass unit.

\*\* NOTE TO SPECIFIER \*\* Delete outboard glazing lite options not required. The first three options below are available for all door systems except G3 Lift Slide Systems. Fourth option, for 1/4 inch (6 mm) outboard glazing lites, is required for G3 Lift Slide System.

* + - * 1. Outboard Glazing Lites: 3/16 inch (5 mm) tempered clear glass with LoE 272 low-emissivity coating on surface two.

Visible Light Transmittance: 72 percent.

Solar Heat Gain Coefficient: 0.41.

* + - * 1. Outboard Glazing Lites: 3/16 inch (5 mm) tempered clear glass with LoE 366 low-emissivity coating on surface two.

Visible Light Transmittance: 65 percent.

Solar Heat Gain Coefficient: 0.27.

* + - * 1. Outboard Glazing Lites: 3/16 inch (5 mm) tempered clear glass with LoE 340 low-emissivity coating on surface two.

Visible Light Transmittance: 39 percent.

Solar Heat Gain Coefficient: 0.18.

* + - * 1. Outboard Glazing Lites: 1/4 inch (6 mm) tempered clear glass with LoE 272 low-emissivity coating on surface two.

Visinle Light Transmittance: 70 percent

Solar Heat Gain Coefficient: 0.40.

\*\* NOTE TO SPECIFIER \*\* Delete vertical inboard glazing lit options not required. The first option below is available for all door systems except G3 Lift Slide Systems. Second option is for G3 Lift Slide System.

* + - * 1. Vertical Inboard Glazing Lites: 3/16 inch (5 mm) tempered clear glass.
        2. Vertical Inboard Glazing Lites: 1/4 inch (6 mm) tempered clear glass.
        3. Air Spacers: Stainless steel spacer with dual seals of polyisobutylene/silicone and filled with argon gas.

\*\* NOTE TO SPECIFIER \*\* Discuss specialty glazing options with the manufacturer to determine viability, benefits, and recommended installation locations. Job specification sections can be provided by manufacturer for the following specialty glazing options.

* + - 1. Glazing: Specialty, thermochromic glass.
      2. Glazing: Specialty, Solera light diffusion glazing system.
      3. Glazing: Specialty, Lumira polycarbonate filled polycarbonate panels.

\*\* NOTE TO SPECIFIER \*\* Decorative glazing is a broad category consisting of art glass and other glazing options. Satin etched adds the appearance of a 3-dimensional texture. It should be used on an unexposed surface in an IG unit. Pattern 62 offers an attractive appearance, obscurity, and light transmission capabilities. English reeded glass is a ribbed glass; the ribs of the glass typically run horizontally. Single glue chip or glue chip is a texture that resembles frost on a window pane during the winter cold. Additional custom decorative options are available.

* + - 1. Glazing: Decorative, \_\_\_\_\_\_\_\_.
      2. Glazing: Decorative, Pattern 62.
      3. Glazing: Decorative, single glue chip.
      4. Glazing: Decorative, glue chip.
      5. Glazing: Decorative, English reeded.
      6. Glazing: Decorative, satin/acid etch.
      7. Glazing Gaskets: Compatible with glazing sealant.
         1. Compliance: ASTM C864.
         2. Design Compression type, replaceable, EPDM gaskets; with or without solid strand cord to prevent shrinkage where applicable.
         3. Color: Manufacturer's standard, black.
         4. Corners: Factory molded corners required at interior.
      8. Setting Blocks, Edge Blocks, and Spacers: As recommended by manufacturer and compatible with insulated glass.
      9. Fasteners: Aluminum and stainless steel, not causing electrolytic action or corrosion.

\*\* NOTE TO SPECIFIER \*\* Delete the following option if not applicable to project requirements.

* + - 1. Fasteners: Zinc Cadmium-plated, acceptable in locations as approved by manufacturer.
      2. Finish for Exposed Fasteners: To match finish of aluminum frame.
    1. Finishes:

\*\* NOTE TO SPECIFIER \*\* Delete aluminum door frame finish options not required. Stock/standard anodized finishes available at additional cost. Custom dual color and dual finish options available. If more than one finish is required, indicate locations where each is to be used on the architectural Drawings.

* + - 1. Aluminum Door Frames: As scheduled and indicated on Drawings.
      2. Aluminum Door Frames: Dual color, as indicated on Drawings.
      3. Aluminum Door Frames: Dual finish, as indicated on Drawings.
      4. Aluminum Door Frames: Mill finish, unfinished.
      5. Aluminum Door Frames: Manufacturer's standard white stock finish, AAMA 2603.
      6. Aluminum Door Frames: Manufacturer's standard bronze stock finish, AAMA 2603.
      7. Aluminum Door Frames: Manufacturer's standard clear anodized finish, Class I AAMA 611.
      8. Aluminum Door Frames: Manufacturer's standard dark bronze anodized, Class 1 AAMA 611.
      9. Aluminum Door Frames: Manufacturer's Designer black finish, AAMA 2603.
      10. Aluminum Door Frames: Manufacturer's Designer sandstone finish, AAMA 2603.
      11. Aluminum Door Frames: Manufacturer's Designer natural clay finish, AAMA 2603.
      12. Aluminum Door Frames: Manufacturer's Designer Hartford green finish, AAMA 2603.
      13. Aluminum Door Frames: Copper cladding.
      14. Aluminum Door Frames: Lead coated copper cladding.
      15. Aluminum Door Frames: 304 stainless steel cladding with No. 4 satin finish.
      16. Aluminum Door Frames: 304 stainless steel cladding with No. 8 mirror finish.
      17. Aluminum Door Frames: Powder coating solids finish, bone white, AAMA 2604.
      18. Aluminum Door Frames: Powder coating solids finish, fashion gray, AAMA 2604.
      19. Aluminum Door Frames: Powder coating solids finish, colonial gray, AAMA 2604.
      20. Aluminum Door Frames: Powder coating solids finish, military light blue, AAMA 2604.
      21. Aluminum Door Frames: Powder coating solids finish, burgundy, AAMA 2604.
      22. Aluminum Door Frames: Powder coating solids finish, charcoal, AAMA 2604.
      23. Aluminum Door Frames: Powder coating solids finish, bone white, AAMA 2605.
      24. Aluminum Door Frames: Powder coating solids finish, fashion gray, AAMA 2605.
      25. Aluminum Door Frames: Powder coating solids finish, colonial gray, AAMA 2605.
      26. Aluminum Door Frames: Powder coating solids finish, military light blue, AAMA 2605.
      27. Aluminum Door Frames: Powder coating solids finish, burgundy, AAMA 2605.
      28. Aluminum Door Frames: Powder coating solids finish, charcoal, AAMA 2605.
      29. Aluminum Door Frames: Powder coating metallics finish, champagne, AAMA 2604.
      30. Aluminum Door Frames: Powder coating metallics finish, cosmic gray, AAMA 2604.
      31. Aluminum Door Frames: Powder coating metallics finish, light bronze, AAMA 2604.
      32. Aluminum Door Frames: Powder coating metallics finish, copper, AAMA 2604.
      33. Aluminum Door Frames: Powder coating metallics finish, champagne, AAMA 2605.
      34. Aluminum Door Frames: Powder coating metallics finish, cosmic gray, AAMA 2605.
      35. Aluminum Door Frames: Powder coating metallics finish, light bronze, AAMA 2605.
      36. Aluminum Door Frames: Powder coating metallics finish, copper, AAMA 2605.
      37. Aluminum Door Frames: Acacia 1001, Light DS 716 textured faux wood finish.
      38. Aluminum Door Frames: Acacia 1001, Light DS 402 smooth faux wood finish.
      39. Aluminum Door Frames: Acacia 1001, Dark DS 733 textured faux wood finish.
      40. Aluminum Door Frames: Acacia 1001, Dark DS 403 smooth faux wood finish.
      41. Aluminum Door Frames: Douglas fir 1501 DS 716 textured faux wood finish.
      42. Aluminum Door Frames: Douglas fir 1501 DS 402 smooth faux wood finish.
      43. Aluminum Door Frames: Cherry 1402 DS 716 textured faux wood finish.
      44. Aluminum Door Frames: Cherry 1402 DS 402 smooth faux wood finish.
      45. Aluminum Door Frames: Knotty pine 2103 DS 716 textured faux wood finish.
      46. Aluminum Door Frames: Knotty pine 2103 DS 402 smooth faux wood finish.
      47. Aluminum Door Frames: Cherry 1402 DS 733 textured faux wood finish.
      48. Aluminum Door Frames: Cherry 1402 DS 403 smooth faux wood finish.
      49. Aluminum Door Frames: Oak assi 2501 DS 733 textured faux wood finish.
      50. Aluminum Door Frames: Oak assi 2501 DS 403 smooth faux wood finish.
      51. Aluminum Door Frames: Dark walnut 1802 DS 733 textured faux wood finish.
      52. Aluminum Door Frames: Dark walnut 1802 DS 403 smooth faux wood finish.
      53. Aluminum Door Frames: Teak 2601 DS 706 textured mahogany faux wood finish.
      54. Aluminum Door Frames: National walnut 1806 DS 706 textured mahogany faux wood finish.
      55. Aluminum Door Frames: White oak wood veneering.
      56. Aluminum Door Frames: Red oak wood veneering.
      57. Aluminum Door Frames: Birch wood veneering.
      58. Aluminum Door Frames: Hard maple wood veneering.
      59. Aluminum Door Frames: White ash wood veneering.
      60. Aluminum Door Frames: Cherry wood veneering.
      61. Aluminum Door Frames: Walnut wood veneering.
      62. Aluminum Door Frames: Sapele Mahogany wood veneering.
      63. Aluminum Door Frames: Southern yellow pine wood veneering.
      64. Aluminum Door Frames: Northern white pine wood veneering.
      65. Aluminum Door Frames: Spanish cedar wood veneering.
      66. Aluminum Door Frames: Western red cedar wood veneering.
      67. Aluminum Door Frames: Douglas fir wood veneering.
      68. Aluminum Door Frames: White maple wood veneering.

\*\* NOTE TO SPECIFIER \*\* Delete aluminum screen frame finish options not required.

* + - 1. Aluminum Screen Frames: Finish as indicated on Drawings.
      2. Aluminum Screen Frames: \_\_\_\_\_\_\_\_.
      3. Aluminum Screen Frames: Finish to match frames.

\*\* NOTE TO SPECIFIER \*\* Delete wood veneer finish options not required. Final sanding and finishing is by others. It is the customer's responsibility to properly maintain the finish on the wood to preserve any warranty. If wood veneering not selected above, delete all options for wood veneer finish listed below.

* + - 1. Wood Veneer Finish: As indicated on Drawings.
      2. Wood Veneer Finish: Unfinished.
      3. Wood Veneer Finish: Manufacturer's standard water based sealer, ICA 3-coat clear, consisting of impregnating agent, base coat, and top coat.
    1. Fabrication:
       1. Fabricate components in accordance with approved Shop Drawings.
       2. Major fabrication must done at the manufacturing location.
       3. Install gaskets and tapes at factory.
       4. Disassemble only to the extent necessary for shipping and handling limitations.
       5. Manufacturer is to be notified of any field modification prior to the activity commencing.
       6. Welding is to comply with standards set forth by the American Welding Society.
       7. Factory-grind exposed welds smooth and flush with adjacent surfaces prior to finish application; restore mechanical finish.
       8. Isolation membrane materials to be used to separate dissimilar metals to prevent galvanic corrosion/action between materials.
       9. Fabricate components to allow for accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections will be flush and weather tight. Ensure slip joints make full, tight contact and are weathertight.
       10. Fabricate components true to detail and free from defects impairing appearance, strength or durability.
       11. Provide contoured exterior horizontal or purlin glazing retainers to minimize water, ice, and snow buildup.
       12. Fabricate with removable sill and head stop.
       13. Reinforce components at anchorage and support points, joints, and attachment points for interfacing work.
       14. Accurately size glazing to fit openings allowing for clearances as set forth by the "Glazing Manual" published by the Glass Association of North America (GANA).
       15. Cut glass clean and carefully. Nicks and damaged edges will not be accepted. Replace glass with damaged edges.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Prepare substrates in strict accordance with the approved Shop Drawings, using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions. Thoroughly clean surfaces and substrates prior to installation.
      2. Do not proceed with installation until substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
      3. Verify the structural integrity or the header such that the maximum deflection with both the live and dead loads is limited to be less than 1/8 inch (3 mm). Provide structural support for lateral wind loading. A maximum vertical deflection of greater than 1/8 inch (3 mm) per request may be allowable if accepted by manufacturer. Any deflections larger than 1/8 (3 mm) that is requested must be reevaluated and analyzed for engineering approval.
      4. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
   2. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction.
         1. Separate dissimilar materials using nonconductive tape, paint, or other material not visible in finished work.
         2. Provide attachments and shims to permanently fasten system to building structure.
         3. Maintain dimensional tolerances and alignment with adjacent work.
         4. Anchor securely in place, allowing for required movement, including but limited to expansion and contraction.
         5. Install glazing sealants in accordance with manufacturer's instructions, including but not limited to surface preparations.
         6. Set sill members in bed of sealant. Set other members with internal sealants to provide weather tight construction.
         7. Install flashings, bent metal closures, corners, gutters, and other accessories as detailed on Shop Drawings and required for complete installation.
         8. Clean surfaces and install sealant in accordance with sealant manufacturer's instructions and guidelines.
   3. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. TESTING AND ADJUSTING
     1. Adjust hinge set, locksets, and other hardware for proper operation.
     2. Lubricate using a manufacturer approved lubricant compatible with door and frame coatings.
  2. CLEANING AND PROTECTION
     1. Clean and protect products in accordance with the manufacturer's recommendations.
        1. Remove temporary coverings and protection of adjacent work areas.
        2. Clean and dress sealant prior to installation completion.
        3. Clean glass prior to installation completion.
        4. Clean the entire enclosure one time at the completion of the installation. Cleaning to include surface cleaning of aluminum framing and glass and clean up of construction debris.
     2. Touch-up, repair or replace damaged products before Substantial Completion.
        1. Areas with Abraded Surface Finish: Clean and touch-up with air dry paint, as approved and furnished by window manufacturer, color to match factory applied finish.

END OF SECTION