



## SECTION 08 51 13

### ALUMINUM WINDOWS - G2 INTERNATIONAL WINDOW SYSTEM

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. G2 International Window System.

##### 1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 03 45 13 - Faced Architectural Precast Concrete.
- C. Section 04 27 23 - Cavity Wall Unit Masonry.
- D. Section 05 40 00 - Cold-Formed Metal Framing.
- E. Section 06 10 00 - Rough Carpentry.
- F. Section 06 20 00 - Finish Carpentry.
- G. Section 07 21 19 - Foamed-In-Place Insulation.
- H. Section 07 46 16 - Aluminum Siding.
- I. Section 07 62 00 - Sheet Metal Flashing and Trim.
- J. Section 07 91 23 - Backer Rods.

##### 1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
  - 1. AAMA 611 - Voluntary specifications for anodized architectural aluminum (revised).

2. AAMA 1503 - Voluntary test method for thermal transmittance and condensation resistance of windows, doors, and glazed wall sections.
- B. ASTM International (ASTM):
1. ASTM A36/A36M - Standard specification for carbon structural steel.
  2. ASTM B221/B221M - Standard specification for aluminum and aluminum-alloy extruded bars, rods, wire, profiles, and tubes.
  3. ASTM B241/B241M - Standard specification for aluminum and aluminum-alloy seamless pipe and seamless tubes.
  4. ASTM C1115 - Standard specification for dense elastomeric silicone rubber gaskets and accessories.
  5. ASTM C864 - Standard specification for dense elastomeric compression seal gaskets, setting blocks, and spacers.
  6. ASTM E283 - Standard test method for structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
  7. ASTM E330 - Standard test method for structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
  8. ASTM E331 - Standard test method for water penetration of exterior windows, curtain walls, and doors by uniform static air pressure difference.
  9. ASTM E547 - Water penetration of exterior windows, curtain walls, and doors.
  10. ASTM E1886 - Standard test method for performance of exterior windows, curtain walls, doors, and impact protective systems impacted by missiles and exposed to cyclic pressure differentials.
  11. ASTM E1996 - Standard specification for performance of exterior windows, curtain walls, doors, and impact protective systems impacted by windborne debris in hurricanes.
- C. American Welding Society (AWS):
1. AWS D1 - Structural welding code.
- D. Flat Glass Marketing Association (FGMA):
1. Glazing manual.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. 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. Typica installation methods
- C. 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. Show opening dimensions, framed opening tolerances, profiles, product components, anchorages, and accessories.
1. Indicate fastener locations, glazing, and hardware arrangements.
  2. Include schedule identifying each unit, with marks or numbers referencing drawings.
  3. Must show all surrounding substrates and relevant conditions
  4. Must be drawn in the domestic USA, by the manufacturer of the system
- D. Color Samples: Two complete color chip sets representing manufacturer's full range of stocked colors with a standard size of 2 x 3 inch (50 x 75 mm).

- E. Verification Samples: Required samples for verification of system.
  - 1. Aluminum Finish: Two samples, minimum size of 2 x 3 inches (50 x 75 mm), representing actual material and color.
  - 2. Wood Finish: Two samples, minimum size of 2 x 5 inch (50 x 127 mm), representing actual product and color.
  - 3. Glazing: Two samples, minimum size of 12 x 12 inches (300 x 300 mm), representing specified glass, including coatings and/or frit patterns.
  - 4. Assembly Sample: One sample illustration connection details with a maximum size of 12 x 12 x 12 inch (300 x 300 x 300 mm). Glazing included as offered by glass supplier. Sample developed to best represent the specified product.

## 1.5 QUALITY ASSURANCE

- A. Manufacturer qualifications - company shall be a company specializing in the manufacturing of products specified in this section, including, but not limited to, greenhouses, doors, and operable vent systems. Manufacturer shall have at least twenty (20) years of experience in fabrication and erection of window systems for projects of similar scope.
  - 1. Manufacturer must use an extruded aluminum system comprised of domestically produced aluminum and is fabricated/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).
- B. Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project for a minimum of ten years.
- C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
- D. 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. Approximate size: \_\_\_ inches x (\_\_\_ mm)
  - 2. Finish areas designated by Architect
  - 3. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
  - 4. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
  - 5. Retain mock-up during construction as a standard for comparison with completed work.
  - 6. Do not alter or remove mock-up until work is completed or removal is authorized.
  - 7. Incorporate accepted mock-up as part of the Work.

## 1.6 PRE-INSTALLATION CONFERENCE

- A. Convene a phone conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to the jobsite freight prepaid.

- B. Store products in manufacturer's original unopened packaging, covered to protect factory finishes from damage, precipitation, and construction dirt until ready for installation.
- C. Store materials off construction grounds in a secure location that is a dry, covered area and protected from weather conditions.
- D. Inspect and report any freight damages to the manufacturer immediately.

## 1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimal results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Perform structural silicone sealant work when air temperature is above 10 degrees F (minus 12 degrees C).

## 1.9 WARRANTY

- A. Provide manufacturer's limited warranty that all components are warranted for one (1) year for cases of normal use. Many components are also warranted by the original manufacturers for greater lengths of time. Reference original component manufacturers' warranties for complete information.
- B. Warranty Addendum: Manufacturer offers extended warranties and service contracts on a per job basis.
- C. Frame Finish:
  - 1. Anodized Finishes: Warranty of two-five years.
  - 2. Stock Color: Paint manufacturer's warranties for color and film integrity.
    - a. AAMA 2605 finishes with 2-3 coats powder or liquid dependent on color and/or application. Ten years from date of application.
    - b. AAMA 2604 finishes with 2 coats powder or liquid. Five years from date of application.
    - c. AAMA 2603 finishes with 1 coat liquid only. Five years from date of application.
  - 3. Custom Color: Paint manufacturer's warranties for color and film integrity.
    - a. AAMA 2605 finishes with 2-3 coats powder or liquid dependent on color and/or application. Fifteen years from date of application.
    - b. AAMA 2604 with 2 coats powder or liquid dependent on color and/or application. Five years from date of application.
  - 4. Custom Warranty Period: \_\_\_ years, to be approved and accepted in writing by Solar Innovations, Inc. based on project's scope and application.
- D. Flat Glazing: Glazing Manufacturer's standard warranty against defective materials, delamination, seal failure, and defects in manufacturing for 5 to 20 years prorated or as otherwise provided in or limited by the glass manufacturer's limited warranty.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Solar Innovations Architectural Glazing Systems, which is located at: 31 Roberts Rd.; Pine Grove, PA 17963; Toll Free Tel: 800-618-0669; Tel: 570-915-1500; Fax: 800-618-0743; Email: [request info \(skylight@solarinnovations.com\)](mailto:requestinfo@skylight@solarinnovations.com); Web: <http://www.solarinnovations.com>

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- D. Basis of Design: G2 International Windows Systems as manufactured by Solar Innovations Inc.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Air Performance: Design, fabricate, assemble, and erect aluminum glazed system to be permanently free of significant air leakage.
  - 1. Significant Leakage: Infiltration greater than .30 cfm per sq ft at 1.57 psf per ASTM E283.
- B. Structural Performance: As tested in accordance with ASTM-E330. No glass breakage or permanent damage to fasteners, anchors, hardware, or actuating mechanisms.
  - 1. Normal Wall Deflection:
    - a. Span Lengths of 13 ft 6 inches (4.115 m) or Less: 1/175 of clear span or less.
    - b. All Other Spans: 1/240 + 1/4 inch (6 mm) for all others.
    - c. Restrict deflection to 3/4 inch (19 mm) maximum for individual glazing lites.
  - 2. Parallel to Wall Deflection:
    - a. Not to exceed 175 percent of glass edge clearance.
    - b. Restrict deflection to L/360 or 1/8 inch (3 mm) maximum.
    - c. Restrict deflection to 1/16 inch (1.5 mm) maximum above doors and windows.
      - 1) Deflection of 1/8 inches (3 mm) is acceptable if door operation is not affected.
  - 3. Deflection of Entire Assembly Including, but not Limited to Glass: Not to exceed 1-1/2 inches (38 mm).
- C. Thermal Performance: Tested values, certifications, and simulation protocols.
  - 1. Thermal Characteristics:
    - a. U-Value: \_\_\_\_\_.
    - b. CRF: \_\_\_\_\_.
  - 2. U-Value: Comply with U-value NFRC rated, or simulated in accordance with NFRC 100 protocol, shown in manufacturers latest published data for the glazing and sill specified.
  - 3. Solar Heat Gain Coefficient: Comply with Solar Heat Gain Coefficient NFRC rated, or simulated in accordance with NFRC 200 protocol, shown in manufacturers latest published data for the glazing and sill specified.
- D. Manufacturer's Certificates:
  - 1. SI7000HP Impact G2 International project out at bottom awning window system when tested on a typical size window frame unit.
    - a. Unit Size (WxH): 36-1/8 x 72 inch (918 x 1832 mm).
    - b. Panel Size (WxH): 34 x 70-1/8 inch (871 x 1786 mm)
    - c. Must meet or exceed the following performance tests per NCTL 110-17214-1:
      - 1) Air Infiltration Test per ASTM E283:
        - a) Force of 1.57 psf: 0.01cfm per sq ft or less infiltration.
        - b) Force of 6.24 psf: 0.01cfm per sq ft or less infiltration.
      - 2) Water Penetration Test per ASTM E331 and ASTM E547:
        - a) Water pressure of 15.0 psf 5.0 gph per sq ft: No leakage.

- 3) Cycle Pressure Loading Test per ASTM E1886 and ASTM E1996:
  - a) Design pressure: Plus or minus 65 psf.
- 4) Florida Approval No. 17265.1: Impact
2. SI7000HP Impact G2 International out-swing casement window when tested on a typical size frame unit.
  - a. Unit Size (WxH): 36 x 72 inches (914 x 1829 mm).
  - b. Panel Size (WxH): 34.25 x 70.19 inches (870 x 1783 mm).
  - c. Must meet or exceed the following performance tests per NCTL 110-17182-1:
    - 1) Air Infiltration Test per ASTM E283:
      - a) Force of 1.57 psf: 0.10 cfm per sq ft or less infiltration.
      - b) Force of 6.24 psf: 0.01 cfm per sq ft or less infiltration.
    - 2) Water Penetration Test per ASTM E331 and ASTM E547:
      - a) Water Pressure of 12.0 psf 5.0 gph per sq ft: No leakage.
    - 3) Cycle Pressure Loading Test per ASTM E1886 and ASTM E1996:
      - a) Design Pressure: Plus or minus 65 psf.
    - 4) Florida Approval No. 17266.1: Impact.
3. SI7000HP Impact G2 International fixed window when tested on a typical size frame unit.
  - a. Unit Size (WxH): 36 x 72 inches (914 x 1829 mm).
  - b. Must meet or exceed the following performance tests per NCTL 110-17366-1:
    - 1) Air Infiltration Test per ASTM E283:
      - a) Force of 1.57psf: 0.01 cfm per sq ft or less infiltration.
      - b) Force of 6.24psf: 0.01 cfm per sq ft or less infiltration.
    - 2) Water Penetration Test per ASTM E331 and ASTM E547:
      - a) Water Pressure of 15.0 psf 5.0 gph per sq ft: No leakage.
    - 3) Cycle Pressure Loading Test per ASTM E1886 and ASTM E1996:
      - a) Design Pressure: Plus or minus 65 psf.
    - 4) Florida Approval No. 17267.1: Impact.
4. SI7000 HP Tilt and Turn window when tested on a typical size frame unit.
  - a. Unit Size (WxH): 60 x 99 inches (1524 x 2515 mm).
  - b. Must meet or exceed the following performance tests per NCTL 110-17587-1 and NCTL 110-17587-2:
    - 1) Air Infiltration Test per ASTM E283:
      - a) Force of 1.57psf: 0.03 cfm per sq ft or less infiltration.
      - b) Force of 6.24psf: 0.07 cfm per sq ft or less infiltration.
    - 2) Water Penetration Test per ASTM E331 and ASTM E547:
      - a) Water Pressure of 30.0 psf 5.0 gph per sq ft: No leakage.
    - 3) Cycle Pressure Loading Test per ASTM E1886 and ASTM E1996:
      - a) Design Pressure: Plus or minus 60 psf.
    - 4) Florida Approval No. 22640.1: Impact.
5. SI7000 Hopper window when tested on a typical size frame unit.
  - a. Unit Size (WxH): 48 x 32 inches (1219 x 813 mm).
  - b. Must meet or exceed the following performance tests per NCTL 110-17634-1 and NCTL 110-17634-2:
    - 1) Air Infiltration Test per ASTM E283:
      - a) Force of 1.57psf: 0.07 cfm per sq ft or less infiltration.
    - 2) Water Penetration Test per ASTM E547:
      - a) Water Pressure of 9.8 psf 5.0 gph per sq ft: No leakage.
    - 3) Cycle Pressure Loading Test per ASTM E1886 and ASTM E1996:

- a) Design Pressure: Plus or minus 65 psf.
- 4) Florida Approval No. 17265.2: Impact.

### 2.3 G2 INTERNATIONAL WINDOW SYSTEM

- A. Window Size (WxH): \_\_\_ x \_\_\_ inches (\_\_\_ x \_\_\_ mm).
- B. Window Size: As indicated on the Drawings.
- C. Operation and Configuration:
  - 1. Awning.
  - 2. Out-swing casement.
  - 3. In-swing casement.
  - 4. Fixed.
  - 5. Tilt turn.
  - 6. Hopper.
- D. Glazing:
  - 1. Double Pane Glazing: 1 inch (25 mm) insulated glass unit.
  - 2. Triple Pane Glazing: 1-3/8" insulated glass unit.
  - 3. Specialty Glazing Options:
    - a. Thermo-chromic Glass: Glazing system 'tinted' via natural heat.
    - b. Solera Glass: Solera light diffusion glazing system.
    - c. Lumira Polycarbonate: Lumira filled polycarbonate panels to control light diffusion and insulation characteristics.
  - 4. Glazing Accessories:
    - a. Decorative mullions.
    - b. Interior Grids: 3/16 x 5/8 inch (5 x 16 mm).
    - c. Simulated Divided Lites: 3/8 x 5/8 inches (9.5 x 16 mm),
    - d. Decorative raised panels.
- E. Framing Members: Minimum 0.1 inch(3 mm) wall thickness for structural members.
  - 1. SI7000: Awning window with extruded aluminum 2.5168 inch (64.18 mm) width
  - 2. SI7000: Out-swing casement window with extruded aluminum frame with a thermal isolation separation 2.625 inch (66.675 mm) width
  - 3. SI7000: Fixed window with extruded aluminum frame with a thermal isolation separation 2.625 inch (66.675 mm) width
  - 4. SI7000: In-swing casement window with extruded aluminum frame with a thermal isolation separation 2.625 inch (66.675 mm) width
  - 5. SI7000: Tilt turn window with extruded aluminum frame with a thermal isolation separation 2.911 inch (73.9394 mm) width
  - 6. SI7000: Hopper window with extruded aluminum frame with a thermal isolation separation 2.625 inch (66.675 mm) width
- F. Perimeter Weather Gaskets: EPDM.
- G. Hardware:
  - 1. Handles and Lock Sets:
    - a. Handle sets: \_\_\_\_\_.

### 2.4 MATERIALS

- A. Aluminum: 6063-T5, 6063-T6, or alloy and temper.
  - 1. Other alloys and tempers may be used for non-structural members provided they do not void the required warranties.
  - 2. Indicate alloys and tempers clearly on shop drawings and in structural

- calculations.
    - 3. Framing Members: Thickness based on design loading, cross sectional configuration, and fabrication requirements.
    - 4. Aluminum Flashing and Closures: 0.040 inches thick, minimum.
    - 5. Snap-on Covers and Miscellaneous Non-structural trim: Minimum thickness as recommended by the manufacturer.
- B. Insulated Panels: Expanded polystyrene. Provide at filler panels and sheet metal members.
- C. Glazing: See product section.
- D. Flashings: Sheet aluminum.
  - 1. Finish: Same as system components.
  - 2. Secured with concealed fastening method or fastener with head finished to match.
  - 3. Thickness: As required for conditions encountered.
- E. Manufacturer's standard system to provide thermal separation between exterior and interior components.
- F. Internal Reinforcing
  - 1. Carbon Steel: ASTM A 36/A 36M
  - 2. Structured Aluminum: ASTM B 221/B 221M and ASTM B 241/B 241M
  - 3. Shapes and Sizes: To suit installation.
- G. Glazing Gaskets Complying with ASTM C864: EPDM compression type. Replaceable.
  - 1. Compatible with glazing sealant used.
  - 2. Profile and Hardness: As necessary. Maintain uniform pressure for watertight seal.
  - 3. Color: Black.
  - 4. Factory molded corners required at interior.
- H. Setting Blocks, Edge Blocks, and Spacers: As required by manufacturer and compatible with insulated glass where required.
- I. Structural Glazing Sealant: Manufacturer's Standard. Color: Black.
- J. Perimeter Sealant: Manufacturer's standard.
  - 1. Color: Match framing finish if available, otherwise as selected by Architect from manufacturer's standard range.
- K. Anchors and Fasteners:
  - 1. Aluminum and stainless steel of type which will not cause electrolytic action or corrosion.
  - 2. Zinc cadmium-plated fasteners may be used if acceptable to manufacturer.
  - 3. Exposed Fasteners: Finish to match aluminum frame.

## 2.5 FRAME FINISH

- A. Unfinished Aluminum: Mill.
- B. Aluminum Finish: Anodized complying with AAMA 611.
  - 1. Color: Clear (Class I).
  - 2. Color: Dark Bronze.
- C. Aluminum Finish: AAMA 2605.



1. Color: Manufacturer's standard bronze.
  2. Color: Manufacturer's standard Hartford green.
  3. Color: Manufacturer's standard white.
  4. Color: Manufacturer's standard sandstone.
  5. Color: Manufacturer's standard black.
  6. Color: Manufacturer's standard natural clay.
- D. Aluminum Finish: AAMA 2604.
1. Color: Manufacturer's standard bronze.
  2. Color: Manufacturer's standard Hartford green.
  3. Color: Manufacturer's standard white.
  4. Color: Manufacturer's standard sandstone.
  5. Color: Manufacturer's standard black.
  6. Color: Manufacturer's standard natural clay.
- E. Aluminum Finish: AAMA 2603.
1. Color: Manufacturer's standard bronze.
  2. Color: Manufacturer's standard Hartford green.
  3. Color: Manufacturer's standard white.
  4. Color: Manufacturer's standard sandstone.
  5. Color: Manufacturer's standard black.
  6. Color: Manufacturer's standard natural clay.
- F. Aluminum Liquid Finish: \_\_\_\_\_.
- G. Aluminum Powder Finish: \_\_\_\_\_.
- H. Aluminum Anodized Finish: \_\_\_\_\_.
- I. Metal Cladding: \_\_\_\_\_.
- J. Wood Veneering: \_\_\_\_\_.
1. Manufacturer's standard water based sealer applied to minimize damage and discoloration during installation. Final sanding and finishing is by others. It is the customer's responsibility to properly maintain finish on the wood to preserve any warranty. Wood veneering is only available on the interior side of the panel.
  2. ICA 3-coat clear sealer consisting of impregnating agent, base coat, and topcoat.

## 2.6 FABRICATION

- A. Fabricate components in accordance with shop drawings approved by the Architect.
- B. All major fabrication to be done at the manufacturing location and not onsite.
- C. Manufacturer must remove burrs and rough edges prior to finish application.
- D. Install gaskets and tapes at factory, as reasonable.
- E. Disassemble only to extent necessary for shipping and handling limitations.
- F. Notify Manufacturer of any field modification prior to activity commencing.
- G. Welding shall comply with standards set forth by the American Welding Society.
  1. Grind exposed welds smooth and flush with adjacent surfaces before finishing.
  2. Restore mechanical finish.

- H. Perform all work in a method that will meet or exceed industry standards.
- I. Isolation membrane materials must be used to separate dissimilar metals to prevent galvanic corrosion action between materials.
- J. Fabricate components to allow accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections are flush and weather tight. Ensure slip joints make full, tight contact and are weather tight.
- K. Fabricate components true to detail and free from defects impairing appearance, strength, or durability.
- L. Provide contoured exterior horizontal or purlin glazing retainers to minimize water, ice, and snow buildup.
- M. Reinforce components at anchorage and support points, joints, and attachment points for interfacing work.
- N. Accurately size glazing to fit openings allowing for clearances as set forth by the "Glazing Manual" published by the Flat Glass Marketing Association (FGMA).
- O. Cut glass clean and carefully. Nicks and damaged edges will not be accepted. Replace all glass with damaged edges.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed and prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. General contractor shall direct, supervise, and inspect all site work related to the modular terrace door system.
- B. Clean surfaces thoroughly prior to installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Installation of the G2 International Window System shall be done in accordance with approved shop drawings and manufacturer's instruction and installation manuals.
- B. Separate dissimilar materials using nonconductive tape, paint, or other material not visible in finished work.
- C. Provide attachments and shims to permanently fasten system to building structure.
- D. Maintain dimensional tolerances and alignment with adjacent work.
- E. Anchor securely in place, allowing for required movement, including expansion and contraction.

- F. Install glazing sealants in accordance with manufacturer's instructions without exception, including surface preparations.
- G. Set sill members in bed of sealant. Set other members with internal sealants to provide weather tight construction.
- H. Install flashings, bent metal closures, corners, gutters, and other accessories as required or detailed.
- I. Clean surfaces and install sealant in accordance with sealant manufacturer's instructions and guidelines.

#### 3.4 ADJUSTING AND CLEANING

- A. Adjust hinge set, locksets, and other hardware for proper operation. Lubricate using a suitable lubricant compatible with door and frame coatings.
- B. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions before owner's acceptance.
- C. Any abraded surface of the finish shall be cleaned and touched up with air dry paint, as approved and furnished by the window manufacture, in a color to match factory applied finish.
- D. Remove from project site, and legally dispose of construction debris associated with this work.

#### 3.5 HOUSEKEEPING

- A. Manufacturer shall deliver all related operating instructions, maintenance manuals, and warranty registration cards to the general contractor during the completion of the project.
- B. Installer shall protect installed products until completion of the installation from all construction debris and natural elements.
- C. Manufacturer is responsible for all touch-up repair or replace damaged products during the installation.
- D. Installer shall keep area tidy and safe at all times.
- E. Clean and dress all sealant prior to installation completion.
- F. Clean all glass prior to installation completion.
- G. Installer shall clean the entire enclosure one time at the completion of the installation. Cleaning shall include surface cleaning of aluminum framing and glass and cleanup of construction debris. All subsequent cleaning shall be the responsibility of the general contractor.

#### 3.6 FIELD QUALITY CONTROL

- A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.
- B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.7 CLEANING AND PROTECTION

- A. Clean products in accordance with the manufacturer's recommendations.
- B. Protect installed products until completion of project.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION