*Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including MasterFormat (1995 / 2004 Editions), SectionFormat, and PageFormat, contained in the CSI Manual of Practice. The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings. Delete all "Specifier Notes" when editing this section.*

# SECTION 08950 / 08 45 00

# TRANSLUCENT WALL AND ROOF ASSEMBLIES

*Specifier Notes: This section covers Major Industries "Guardian 275®" Translucent Curtainwall Systems. The wall systems are self-supporting, structural composite sandwich panels with translucent skins and aluminum interlocking grid framework. Consult Major Industries for assistance in editing this section for the specific application.*

## PART 1 GENERAL

1.1 SECTION INCLUDES

A. Translucent wall systems.

1.2 RELATED SECTIONS

*Specifier Notes: Edit the following list as required for the project. List other sections with work directly related to the translucent wall systems.*

A. Section 05120 - Structural Steel: Structural support framing for system.

B. Section 05500 - Metal Fabrications: Fabricated steel framed opening.

C. Section 06100 - Rough Carpentry: Wood blocking.

D. Section 07620 - Sheet Metal Flashing and Trim.

E. Section 07720 - Roof Accessories: Manufactured curbs.

F. Section 07920 - Joint Sealants.

1.3 REFERENCES

*Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.*

A. AAMA 603.8 - Pigmented Organic Coatings on Extruded Aluminum.

B. AAMA 605.2 - High Performance Organic Coatings on Architectural Aluminum Extrusions and Panels.

C. AAMA 1503.1 - Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.

D. AAMA 2604 – High Performance Organic Coatings on Aluminum Extrusions and Panels.

E. AAMA 2605 - Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

F. ASCA 96 - Superior Performance of Organic Coatings on Architectural Aluminum Curtainwall,

Extrusions and Miscellaneous Aluminum Components.

G. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.

H. ASTM B 221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

I. ASTM C 236 - Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.

J. ASTM C 297 - Tensile Strength of Flat Sandwich Constructions in Flatwise Plane.

K. ASTM D 395 - Rubber Property - Compression Set.

L. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position.

M. ASTM D 865 - Rubber - Deterioration by Heating in Air (Test Tube Enclosure).

N. ASTM D 925 - Rubber Property - Staining of Surfaces (Contact, Migration, and Diffusion).

O. ASTM D 1002 - Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-To-Metal).

P. ASTM D 1037 - Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.

Q. ASTM D 1044-99 – Resistance of Transparent Plastics to Surface Abrasion

R. ASTM D 1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

S. ASTM D 1149 - Rubber Deterioration - Surface Ozone Cracking in a Chamber.

T. ASTM D 1435 - Outdoor Weathering of Plastics.

U. ASTM D 1929 - Ignition Properties of Plastics.

V. ASTM D 2244 - Calculation of Color Differences from Instrumentally Measured Color Coordinates.

W. ASTM D 3841 - Glass-Fiber-Reinforced Polyester Plastic Panels.

X. ASTM E 72 - Conducting Strength Tests of Panels for Building Construction.

Y. ASTM E 84 - Surface Burning Characteristics of Building Materials.

Z. ASTM E 108 - Fire Tests of Roof Coverings.

AA. ASTM E 283 - Determining the Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

BB. ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

CC. ASTM E 331 - Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

DD. ASTM E 1886-05 – Performance of Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials

EE. ASTM E 1996-05 – Performance of Systems Impacted by Windborne Debris in Hurricanes

FF. NFRC 100-2004 - Determining Fenestration Product U-Factors

GG. NFRC 200-2004 – Determining Fenestration Product Solar Heat Gain

HH. ICC-ES Listed FRP Sheet Component (ER 2026)

II. ICC-ES Listed Translucent Wall, Skylight and Roof Panels (ICC-ES PFC 5620).

JJ. UL 790 - Fire Resistance of Roof Covering Materials.

KK. UL 972 - Burglary - Resisting Glazing Material.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

A. Performance Requirements:
   1. Framing Members: Sufficient sizes as required to support design loads.

*Specifier Notes: Provide project design data as required.*

B. Design Loads: Framing components shall be designed to support following loads:
   1. Live Load:
      a. _____ psf.
      b. As indicated on the Drawings.
   2. Wind Load:
      a. _____ psf.
      b. As indicated on the Drawings.
   3. Alternate Design Loads: Conform to applicable state and local codes.

C. Deflection of a Framing Member in a Direction Normal to Plane of Glazing: Shall not exceed L/100.

D. Safety Factors: Allowable stresses shall incorporate following safety factors, unless otherwise specified:
   1. Load Carrying Members: 1.65.
   2. Load Carrying Fasteners: 2.0.

E. Expansion and Contraction: Design and install components with provisions for expansion and contraction due to a 100 degree F ($56^{o}$ C) temperature variation.

1.5 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Maintenance instructions.

C. Shop Drawings: Include plans, elevations, sections, and details, indicating dimensions, tolerances, profiles, anchorage, connections, fasteners, provisions for expansion and contraction, drainage, flashing, finish, glazing, and attachments to other Work.

D. Design Data:
   1. Submit manufacturer's structural calculations showing sizes of framing members and loads applied to supporting structure based on design loads.
   2. Structural calculations shall be prepared in accordance with Aluminum Association Specifications for Aluminum Structures SAS30 by a professional engineer qualified in

design of curtainwall systems and licensed in state where wall systems are to be installed.

E. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
   1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
   2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.

F. Test Reports: Submit certified test reports from a qualified independent testing agency, indicating skylights and wall systems comply with specified requirements, based on testing of current products. Submit results from the following tests:
   1. Flame spread and smoke development, ASTM E 84.
   2. Burn extent, ASTM D 635.
   3. Color change, ASTM D 2244 in accordance with ASTM D 1435.
   4. Impact strength, exterior face sheets, UL 972.
   5. Accelerated aging, ASTM D 1037.
   6. Bond strength, ASTM C 297.
   7. Insulating U-factor, ASTM C 236.
   8. Self-ignition, ASTM D 1929.
   9. Class A burning brand, ASTM E 108.
   10. Air infiltration, ASTM E 283.
   11. Water penetration, ASTM E 331.
   12. Uniform load deflection, ASTM E 72 and E 330.
   13. Concentrated and Impact, ASTM E 661.
   14. Certification authorization under the NFRC PCP (Framing and Panel).

G. Selection Samples: For each finish product and glazing material specified, submit sets of color chips representing manufacturer's full range of available colors and finishes.

H. Verification Samples: For each finish product and glazing material specified, submit one sample, minimum 12 inches (150 mm) wide, representing actual product and color(s).

I. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer to have minimum ten years documented experience in the fabrication of wall systems of the type required for this project and be capable of providing field service representation during installation.

B. Installer Qualifications: Installer to have minimum five years documented experience in the work of this section who has specialized in the installation of work similar to that required for this project and is approved by the manufacturer.

*Specifier Notes: Describe requirements for a preinstallation meeting to coordinate the installation of the translucent wall systems. Edit the paragraph as required for the project.*

C. Preinstallation Meeting: Convene a Preinstallation meeting 2 weeks before start of installation of wall systems. Require attendance of parties directly affecting work of this section, including Contractor, Architect, installer, and manufacturer's representative. Review requirements for preparation, installation, cleaning, protection, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, and location of installation.

B. Storage: Store products above the floor and under cover in a clean, dry area until ready for installation.

C. Handling: Protect materials and finish from damage during handling and installation.

1.8 SEQUENCING

A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 PROJECT CONDITIONS

A. 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 absolute limits.

1.10 WARRANTY

A. Exterior Fiberglass: Provide manufacturer’s standard warranty unless otherwise specified.

## PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Major Industries Inc., which is located at: P. O. Box 306; Wausau, WI 54402-0306; Toll Free Tel: 888-759-2678; Tel: 715-842-4616;
Fax: 715-848-3336; Email: info@majorskylights.com; Web: www.majorskylights.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 TRANSLUCENT WALL SYSTEMS

*Specifier Notes: Consult Major Industries for assistance in determining required wall systems for the specific application.*

A. Translucent Wall Systems:
   1. Model: Guardian 275® Translucent Wall Panel Systems.
   2. Skylight Design Wind Load: 20 psf.
   3. Panel Height:
      a. 4 feet (1.22 m).
      b. 5 feet (1.52 m).
   4. Panel Width: 14 feet (4.27 m).

2.3 MATERIALS

A. Translucent Panel Units:

1. Construction: Translucent facings of ICC ES Listed architectural-grade fiberglass reinforced polymer sheets bonded under controlled heat and pressure to a mechanically-interlocked
aluminum I-beam grid core framework to form double-faced, self-supporting, structural composite, sandwich panels.

*Specifier Notes: Specify one of the following panel thicknesses. 2-3/4 inch thickness is standard. 4 inch thickness available for wall systems. Consult Major Industries for assistance in determining required panel thickness for the specific application.*

a. Thickness:
   1) 2-3/4 inches (Standard)
   2) 1-1/2 inches
   3) 4 inches

b. Overall Dimensions: _____ width x _____ length.

*Specifier Notes: Specify one of the following insulating U-factors. Consult Major Industries for assistance in determining required U-factor for the specific application. NFRC 100-2004 equivalent values are available for standard configurations. Test sample 80 inches x 80 inches, 15 mph wind at 70-degrees F. temperature difference. Consult Major Industries for certified U-factors related to your specific project.*

c. U-Factor: NFRC 100-2004 certified system values (including internal grid and perimeter framing - thermally broken)
   1) 2-3/4 inches: [0.54] [0.25] [0.22] [0.15].
   2) 4 inches: [0.54] [0.17] [0.13].
   3) 1-1/2 inches*: [0.70] [0.44] [0.28].
   (*Insulating U-Factor, ASTM C 236 and AAMA 1503.1, 2 mph:)

*Specifier Notes: Specify required grid pattern and nominal grid size. Consult Major Industries for availability of custom grid patterns and nominal grid sizes.*

d. Grid Pattern:
   1) In-line Shoji.
   2) Staggered Shoji.
   3) Tuckerman.
   4) Verti-Lite™
   5) Custom _____.

e. Nominal Grid Size:
   1) 12 inches by 24 inches (304 mm by 610 mm).
   2) 12 inches by 12 inches (304 mm by 305 mm).
   3) 8 inches by 20 inches (203 mm by 508 mm).
   4) 8 inches by 8 inches (203 mm by 203 mm).
   5) 6 inches by 6 inches (152 mm by 152 mm).
   6) Custom _____.

f. Unbonded Areas: Maximum of 4 unbonded areas, a maximum of 3/64 inch (.11 mm) in diameter, in an area a maximum of 40 square feet (3.7 sm) of panel surface.

g. Panel Weeps: Weep holes provided on down slope side for skylights or bottom side of wall systems of installed panels to permit condensation to leave panel interior.

h. Panel Corners: Notch and interlock or reinforce with aluminum angle for radius conditions.

i. Assembly: Factory assembled and factory sealed when allowable. Field assembly of major components will not be allowed.

2. Physical Properties:
    a. Burning Brand, ASTM E 108: Class A rating.
    b. Aged Adhesive Bond Strength, ASTM D 1037:
        1) Shear Strength, ASTM D 1002: 1212 psi.
        2) Tensile Strength, ASTM C 297: 914 psi.
    c. Uniform Load Deflection, ASTM E 72 and E 330: Maximum deflection of L/100.
    d. Concentrated and Impact, ASTM E 661.
    e. Air Infiltration through Fixed Panel System and Perimeter Framing, ASTM E 283: 0.04 cfm/ft of panel perimeter at 15 psf air pressure (77 mph constant wind).
    f. Water Penetration Through Fixed Panel System and Perimeter Framing, ASTM E 331: No leakage when water is applied to entire panel surface at rate of 5 gal/hr/sq ft for 15 minutes (8 inch per hour rainfall) at 15 psf air pressure (77 mph constant wind).
3. I-Beam Grid Core:
    a. Material: Aluminum Alloy 6061-T6 or equivalent.
    b. Flange Width: 7/16 inch (11 mm) minimum.
    c. Web Thickness: 0.050 inch (1.27 mm).
    d. Mechanically interlocked.
    e. Full surface contact with face sheets.
    f. Welded or web interlock grid system will not be acceptable.

*Specifier Notes: The following thermal break is available as an option on 2-3/4 inch and 4 inch thick panels. Delete if not required. Consult Major Industries for assistance in determining if thermal break is required for the specific application.*

    g. Thermal Break (Optional):
        1) Located in panel grid core.
        2) Poured and debridged structural polyurethane, insulating U-Factor of 0.5.
        3) FRP thermal breaks will not be acceptable.
4. Adhesive:
    a. Laminate Adhesive: Waterproof resin for use in laminating polyester sheet to aluminum grid core.
    b. Impact and Thermal Shock: Adhesive capable of withstanding impact and thermal shock normally encountered in exterior construction.
    c. Adhesive Bond Line: Straight, black, cover entire width of I-beam, with neat, sharp edge.
    d. Initial Bond Strength between Face Sheet and Grid Core, ASTM C 297: 557 psi minimum.
    e. After Accelerated Aging, ASTM D 1037: No significant change in bond strength, ASTM C 297.

*Specifier Notes: Thermal barriers are optional. Delete if not required. Consult Major Industries for assistance in determining if thermal barriers are required for the specific application.*

5. Thermal Barriers:
    a. Perimeter Framing System: Cast-in-place rigid polyurethane, insulating U-Factor of 0.5.
    b. Screw-applied thermal barriers will not be acceptable.
6. Translucent Face Sheets
    a. Appearance of Face Sheets:
        1) Uniform in color to prevent splotchy appearance.
        2) Free of ridges and wrinkles that prevent proper surface contact for bonding to grid core.
        3) Free of clusters of air bubbles and pinholes that collect moisture and dirt.

4) ICC-ES listed face sheet (ER 2026).

b. Exterior Face Sheet:
   1) Darkening, ASTM D 2244: Color change on exterior sheet shall not exceed 3.0 Delta E units after 5 years of South Florida (or accelerated test equivalent) weathering.
   2) Protective Weathering Surface:
      a) Material: "State-of-the-art" surface protection.
      b) Application: Factory-applied.
      c) Minimum Thickness: 1.0 mil.
      d) Repairs: Fully field repairable.

*Specifier Notes: Optional high-impact strengths to a maximum of 360 foot-pounds are available. Consult Major Industries for assistance in determining the required impact strength for the specific application.*

   3) Impact Strength, UL 972:
      a) 60 foot-pounds.
      b) _____ foot-pounds.

*Specifier Notes: Standard thickness is 0.070 inches. Optional thickness for high-impact strengths is 0.060 inches. Consult Major Industries for assistance in determining the required thickness for the specific application.*4) Thickness:
      a) 0.070 inches (1.77 mm).
      b) 0.060 inches (1.52 mm).

*Specifier Notes: Specify the color for the exterior face sheet. Consult Major Industries for availability of custom colors.*

   5) Color:
      a) White.
      b) Crystal.
      c) Ice Blue.
      d) Aqua.
      e) Tan.
      f) Desert Rose.

c. Interior Face Sheet:
   1) Flame Spread, ASTM E 84: 20 maximum.
   2) Smoke Development, ASTM E 84: 150 maximum.
   3) Burn Rate, ASTM D 635: 1.0 inch per minute maximum.
   4) Self-Ignition, ASTM D 1929: Greater than 650 degrees F.

*Specifier Notes: Standard thickness is 0.045 inches. Optional thickness for high-impact strengths is 0.060 inches. Consult Major Industries for assistance in determining the required thickness for the specific application.*

   5) Thickness:
      a) 0.045 inches.
      b) 0.060 inches.

*Specifier Notes: Specify the color for the interior face sheet. Consult Major Industries for availability of custom colors.*

   6) Color:
      a) White.
      b) Crystal.
      c) Custom _____.

B. Framing Materials
   1. Aluminum:
      a. Extruded Aluminum: ASTM B 221, Alloy 6063-T5/T6, 6061-T5/T6, or equivalent.
      b. Formed Aluminum Components and Flashing: ASTM B 209, Alloy 5005-H34 or equivalent.
      c. Minimum Thickness: 0.040 inch.
      d. Construct wall system of extruded aluminum shapes similar to sections indicated on the Drawings.
   2. Interior Glazing Gaskets:
      a. Extruded closed cell sponge neoprene hybrid, 9/16 inch wide.
      b. Factory installed in extruded dovetail slots.
      c. Compression Deflection, 25 Percent Deflection Limits, ASTM D 1056 13 to 24 psi.
      d. Compression Set, 22 Hours at 158 Degrees F, Maximum Percent, ASTM D 395, Method B: 30 psi.
      e. Heat Aging, 70 Hours at 212 Degrees F, Change in Compression Values, ASTM D 865 and D 1056: 0 to 10 psi.
      f. Dimensional Stability, Change Maximum Percent After Heat Aging, 70 Hours at 212 Degrees F, 4 Psi: 11.4 percent.
      g. Ozone Resistance at 40 Percent Elongation, 100 Hours at 104 Degrees F, ASTM D 1149:
         1) Type I, 1 Ppm Ozone: No cracks.
         2) Type II, 3 Ppm Ozone: No cracks.
      h. Water Absorption, Percent of Weight:
         1) Option I: 5.0 percent.
         2) Option II: 11.7 percent.
      i. Flame Propagation:
         1) Option I, 4 Inch Maximum: 11.7 percent.
         2) Option II, No Limit: 11.8 percent.
      j. Straining of Surface, ASTM D 925: Nonstraining, no migratory strain.

C. Condensation Control System:
   1. Mechanically design entire condensation control system to function properly with minimal dependency upon sealants.
   2. Skylight system provided with an integral gutter system on all framing members, including rafters.

D. Custom Designs:
   1. Perform fitting and assembly of custom designs at factory, insofar as practicable.
   2. Completely assemble, mark, and disassemble components which cannot be permanently factory assembled, before delivery to site to ensure proper assembly in field.

E. Expansion and Contraction: Design and install components with provisions for expansion and contraction due to a 100 degree F temperature variation.

F. Glazing Caps:
   1. Extruded aluminum.
   2. Attach glazing caps with glazing cap fasteners located at a maximum of 9 inches on center or as required to resist negative loading.

G. Fasteners:
   1. Clips for Attachment of Rafter Bars:
      a. Aluminum.
      b. Attach using bolted fastening methods.

2. Construction and Glazing Cap Fasteners:
   a. 18-8 stainless steel.
   b. Include gasketed sealing washers.
3. Field Anchors: Cadmium plated, unless otherwise specified.
4. Exposed Fasteners: Finish to match aluminum.

H. Welding: Heliarc welding process.

I. Weep Holes in Sill Components: Located as required to control condensation that may enter system by allowing it to pass to exterior.

J. Wall System Baffles: Provide with baffled weep holes to prevent water infiltration due to unequal pressures.

2.4 ALUMINUM FINISHES

*Specifier Notes: Specify one of the following aluminum finishes. Consult Major Industries for assistance in determining required finish for the specific application.*

A. Anodized Coating: Architectural Class I clear anodized, Type AA-M10C22A41.

B. Anodized Coating: Architectural Class II clear anodized, Type AA-M10C22A31.

C. Anodized Coating: Architectural Class I pigmented anodized, Type AA-M10C22A42/A44.
   1. Color: _____.
   2. Color: As selected by Architect from manufacturer's standard colors.
   3. Color: As indicated on the Drawings.

D. Pigmented Organic Coating: AAMA 2604.
   1. Color: _____.
   2. Color: As selected by Architect from manufacturer's standard colors.
   3. Color: As indicated on the Drawings.

E. High-Performance Pigmented Organic Coating: AAMA 2605.
   1. Color: _____.
   2. Color: As selected by Architect from manufacturer's standard colors.
   3. Color: As indicated on the Drawings.

## PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Examine areas to receive translucent wall systems, with installer and manufacturer's representative present, including supporting structure and substrate for dimensions, tolerances, material conditions, and support.

C. Notify Architect of conditions that would adversely affect installation or subsequent utilization of wall systems. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Ensure supports to receive wall systems are clean, flat, level, plumb, and square.

C. Aluminum Protection: Apply a protective coating of bituminous paint or other neutral material to dissimilar materials coming in contact with aluminum or separate with a nonabsorbent isolator.

3.3 INSTALLATION

A. Install translucent wall systems in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Install wall systems level, plumb, square, accurately aligned, correctly located, and without warp or rack.

C. Do not install components with deficiencies or dimensional errors. Do not proceed with installation until unsatisfactory components are replaced.

D. Anchor wall systems securely in place to supports. Use attachment methods permitting adjustment for construction tolerances, irregularities, alignment, and expansion and contraction.

E. Install wall systems including flashings, fasteners, hardware, sealants, and glazing materials required for a complete, weatherproof installation.

F. Sheet Metal Flashing: Install sheet metal flashing at wall systems perimeter as specified in Section 07620.

G. Sealants: Install sealants at sill flashing and perimeter framing as required to prevent air and water intrusion as specified in Section 07920.

H. Repair damages to protective weathering surface of exterior face sheet in accordance with manufacturer's instructions and as approved by the Architect.

3.4 FIELD QUALITY CONTROL

A. Water Test: Test wall systems according to procedures in AAMA 501.2.

B. Repair or replace work that does not pass testing or that is damaged by testing and retest work.

C. Inspect installation of sheet metal flashing and sealants.

D. Inspect face sheets for cracks, deep scratches, and other damage.

3.5 CLEANING

A. Clean installed wall systems in accordance with manufacturer's instructions.

B. Clean wall systems inside and outside, including member connections and inside corners, immediately after installation and after sealants have cured.

C. Remove temporary protective coverings and strippable coatings from prefinished metal surfaces.

D. Remove labels and part number markings from components.

E. Do not use harsh cleaning materials or methods that would damage metal finishes or glazing.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

3.7 SCHEDULES

A. :

B. :

END OF SECTION