

2004 MASTER FORMAT™ SECTION
Glass Façade Panels

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, and Technical Specification Division 2 through 16 apply to this Section.

1.2 SUMMARY

- A. Panel system requirements:
 - 1. Glass façade panels with mounting system. Panel mounting system including wall brackets, support rails, fixing plates, and fasteners for a complete back ventilated façade.
- B. Related Sections include the following
 - 1. Section 05 14 00 Structural Aluminum Framing
 - 2. Section 08 Windows.
 - 3. Section 08 Doors
 - 4. Section 08 Storefront

1.3 DESIGN REQUIREMENTS

- A. General: Provide systems capable of withstanding normal thermal movements, wind and impact loads without failure, including loss or glass breakage due to defective manufacture, fabrication, and installation, deterioration of glazing materials and other defects in construction.
- B. Glass Design: Provide glass lites in the thickness and strengths (heat strengthened) to meet or exceed the following criteria based on analysis of project loads and in-service conditions.
 - 1. Minimum glass thickness of lites composed of heat strengthened glass are selected so the worst-case probability of failure does not exceed the following:
 - a. Specified Design Wind Loads: As indicated on the Structural Drawings
 - b. Drawings
 - c. Specified Design Snow Loads: As indicated on the Structural Drawings, but not less than snow loads applicable to Project,
 - d. Drawings, but not less than snow loads applicable to Project,
 - e. required by ASCE 7, “Minimum Design Loads for Buildings and Other Structures”. Section 7, Snow Loads.
 - f. c. Minimum Glass Thickness for Exterior Lites: Not less than 6mm

1.4 SUBMITTALS

- A. General: Submit the following in accordance with conditions of contract and Division 1 specification section 01 34 00 – Shop Drawings, Product Data, and Samples.
- B. Shop Drawings: Submit shop drawings showing the project layout, elevations, sections, panel dimensions, details, and attachments to other work.
- C. Product conformance:
 - 1. NEN-EN 12150
 - 2. NEN-EN 12543
- D. Product Data: Submit manufacturer's product data; including product description, fabrication information, and compliance with specified performance requirements.
- E. Samples for Initial Selection:
 - i. 1. Submit minimum 4-inch by 4-inch samples. Indicate full color.
- F. Samples for Verification:
 - i. Submit minimum 4-inch by 4-inch sample for each type and color.
- G. Mockups – as requested:
 - i. Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects.
 - ii. Approved mockups may become part of the completed work if undistributed at time of Substantial Completion.
- H. Maintenance Data: Submit manufacturer's care and maintenance data, including care, repair and cleaning instructions. Include in Project closeout documents.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for terms not otherwise defined in this section or in referenced standards.
 - 1. GANA Publications
 - a. GANA Glazing Manual
 - b. Tempering Division – Engineering Standards Manual
 - c. Laminating Division – Laminated Glass Design Guide
 - 1. LSGA Publications
- B. Safety glass products are to comply with ANZI Z97.1 requirements of 16 CFR Part 1201 for Category II materials.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect glass panels according to manufacturer's written instructions and as needed to prevent damage to glass and other façade system materials.
- B. Store materials in a flat orientation in a dry place that is not exposed to exterior elements.
- C. Handle materials to prevent damage to finished surfaces.
- D. Before installing glass façade panels, permit them to reach room temperature.

1.7 WARRANTY

- A. Manufacturer's Special Warranty on Glass panels: Manufacturer's standard form agreeing to repair or replace units that fail in material or workmanship within the specified warranty period.
- B. Warranty Period: 5 years from ship date.

Part 2 – PRODUCTS

2.1 MANUFACTURER

- A. QC Facades US Distributor of Hunter Douglas Façades, Salt Lake City, Utah, USA / Telephone 877-994-6248
- B. Experience – no less than 10 years experience in developing and producing glass rainscreen façade system

2.2 GLASS PRODUCTS

- A. Flat Glass
 - 1. ASTM C 1036, Type 1, Class 1 (clear) or Class 2 (tinted), and Quality q3.1.
 - 2. ASTM C 1048 Heat Strengthened (Heat Treated - HT) Flat Glass
 - i. Kind heat-strengthened (HS)
 - 1. Back coated with enamel color to match
 - ii. Kind fully tempered (FT)
 - 1. Heat Treated flat glass to be by horizontal (roller hearth) process with inherent rollerwave distortion
- B. Laminated Glass
 - 1. ASTM C 1172 – Laminated Architectural Flat Glass
 - 2. Laminated Process: Autoclave with heat plus pressure
 - 3. Tie Layer Material
 - 4. Decorative interlayer
 - 5. Color:
 - A. As specified
 - 6. Glass:
 - A. KristalBond 6.6.2 Laminated glass with one layer of heat-strengthened float glass (position two enamelled) and back layer heat-strengthened float glass
 - B. PVB interlayer .76mm

- C. 12mm glass: 6mm + .76mm + 6mm,
yield thickness - 12mm glass at lower
pedestrian base conditions

C. SI-GLASS SYSTEM

- 1. Engineered Aluminum Façade Systems
- 2. Basis of Design Product: The design of System Fabrications is based on SI-GLASS system by QC Facades.

2.3 ACCESSORIES

A. Extrusions, brackets, and plates shall conform with ASTM B 209 and the recommendations of the manufacturer.

- 1. Vertical fixing members with locking slide clips to retain glass brackets
- 3. Glass extrusion with zirconisation for concealed capture and corrosion resistance
- 4. Fixing Brackets to capture and retain glass lites at intermittent intervals – dense gasket to allow for noise free thermal movement between hardware components.
- 5. system to have 3/8" (10mm) joints between glass unites

2.4 MISCELLANEOUS MATTERIALS

- A. General: Select glazing sealants, tapes, gaskets, and other glazing materials of proven compatibility with other materials they will contact, including glass products, seals of insulating glass units, glazing channel substrates, and lamination inserts, under conditions of installation and service, as demonstrated by testing and field experience.
- B. Cleaner: Type recommended by manufacturer.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where installation of Façade Systems will occur, with Installer present, for compliance with manufacturer's requirements. Verify that substrates and conditions are satisfactory for installation and comply with requirements specified.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written instructions for the installation of Façade System.
- B. Manufacturer's shop to fabricate items to the greatest degree possible.
- C. Utilize all fasteners recommended by manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication methods will be rejected.
- D. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.

3.3 CLEANING AND PROTECTION

- A. Protect surfaces from damage until date of substantial completion.
Repair work or replace damaged work, which cannot be repaired to
Architect's satisfaction.

End of Section 07 44 00
END OF SECTION 07 415