

ARCHITECTURE

SECTION 08800

GLAZING

PART 1-GENERAL

1.1 SECTION REQUIREMENTS

- A. Float Glass
- B. Tempered Glass
- C. Insulated Units – Clear and Tinted
- D. Laminated glass and support system - Exterior Glass Canopy
- D. Polished Wire Glass
- E. Mirrors
- F. Glazing Accessories
- G. All glass in related area shall be from one manufacturer.

1.2 Submittals

- A. Procedures for Submittals.
 - 1. Product Data:
 - a. Submit "Letter of Conformance" with manufacturers product data (cut sheets) attached, indicating specified items selected for use in project. Submit for Architect's review and/or information as contract administrator or for the Owner.
 - b. Mark each copy to identify applicable products, characteristics, models, options and other supplemental data to clearly communicate information specific to this project.
 - c. Submit separate "Letter of Conformance" for each specified items.

1.3 QUALITY ASSURANCE

- A. Glazing Standards: Comply with recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this section or other referenced standards.
- B. Single Source Responsibility for Glass: To ensure consistent quality of appearance and performance, provide materials produced by a single manufacturer or fabricator for each kind and condition of glass indicated and composed of primary glass obtained from a single source for each type and class required. All glass in related area shall be from one manufacturer.
- C. All glass shall be new material, graded under Federal Specifications DD-G-451-D-451D
- D. Warranty: Provide manufacturer's limited warranty for a period of five years.

PART 2-PRODUCTS

2.1 Glass

- A. Clear Float Glass
 - 1. Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), as manufactured by one of the following:
 - PPG Industries, Inc. (800-377-5267)
 - Pilkington Libbey-Owens-Ford, Building Products (419-247-3733)
 - AFG Industries, Inc. (800-251-0441)
- B. Tempered Glass
 - 1. 1/4" thick, Condition A (uncoated surfaces), Type 1 (transparent glass, flat), Class 1 (clear), Quality q3, clear, fully tempered safety glass (meet requirements of ANSI Z97.1).
 - 2. All tempered glass shall conform to ANSI Z97.1, ASTM C1048, and Federal Standard

ARCHITECTURE

CPSC 16 SFR 1201. Tempered glass shall bear permanent monogram indicating tempered quality. Fabrication marks on tempered glass shall be located to be concealed in completed installation.

3. Color: Refer to Exterior Finish Index.
- C. Ceramic-Coated Spandrel Glass: ASTM C 1048, Condition B (spandrel glass, one surface ceramic coated), Type I (transparent flat glass), Quality-Q3, and complying with other requirements specified.
1. Fallout Resistance: Provide spandrel units identical to those passing the fallout-resistance test for spandrel glass specified in ASTM C 1048.
- D. Coated Low Emissivity Glass
1. 1/4" thick, Condition C (other coated glass), Type I (transparent glass, flat), Class I (clear), Quality q3 (glazing select), with coating type and performance characteristics complying with requirements specified below
 2. Low E Coating: Side [3] on insulated units
 3. APPROVED MANUFACTURERS:
"Sungate 500"; PPG Industries (800-774-7732)
"Advantage Low-E"; Pilkington Libbey-Owens-Ford, Building Products (419-247-3733)
"Comfort E"; AFG (800-251-0441)
- E. Sealed Insulating Glass Units:
1. Provide preassembled units consisting of organically sealed panes of glass enclosing a hermetically sealed dehydrated air space and complying with ASTM E 774 for performance classification indicated as well as with other requirements specified for glass characteristics, air, space, sealing system, sealant, space material, and desiccants.
 2. Properties:
Thickness of Each Pane: 1/4" minimum unless noted otherwise.
Air Space Thickness: 1/2"
Sealing System: Manufacturer's Standard Dual Seal
Desiccant: Manufacturer's Standard - Molecular Sieve or Silica Gel or Blend of Both
Spacer Material: Manufacturer's Standard Metal, with Bronze Anodized Finish
Exterior Pane of Glass: Glass Type II - tempered
Interior Pane of Glass: Glass Type III – Clear Float except where tempered
 3. Provide 5/8" total thickness units at doors as required to work with glass lite trim kits.
- F. Tinted Sealed Insulating Glass Units: Tinted units to match existing.
1. Blue-Green Tint as manufactured by Solar Seal Company
 2. Low-E float glass inner light
 3. Sealed Air space – No Argon.
- G. Laminated Glass and support system for Exterior Canopy - ASTM C 1172, and complying with other requirements specified and with the following:
1. 3/4" total thickness with 2 layers of 3/8" tempered glass (meeting requirements listed above) with a "cool-white" interlayer.
 2. Provide interlayer with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.
 3. Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets.
 4. Provide brushed stainless steel brackets, spiders, retainers, gaskets, etc. as required to attach glass canopy sections to structural frame system.
 - a. Manufacturer: Pilkington Planar
SFS intec Limited
Architect approved equal.

ARCHITECTURE

5. Glass manufacturer to provide design data on glass assembly to verify assembly meets structural requirements for canopy.
- H. Wire Glass
1. Type II, Class I (translucent), Quality q8 (glazing), complying with ANSI Z97.1, 1/4" thick; Form I (wired, polished both sides), mesh M2 (square).
- I. Mirrors
1. Mirror glazing "select" quality float glass complying with ASTM C1036 and CPSC 16 CFR 1201, 1/4" thick.
 2. Silvering: Provide electro-deposited silvering in two coats
 3. Exposed edges ground smooth and polished.
 4. Mirror sizes indicated on the drawings. Extend mirror to within 1" of adjacent walls, on each end, in one piece.
 5. APPROVED MANUFACTURERS
Binswanger Mirror Co. (800-238-6057)
Gardner Mirror Corporation, (800-334-7267)
Falconer Glass Industries, (800-828-2210)
 6. Mirror Adhesive System:
Edge Seal: "UC-4401"; PPG Industries, Inc., Glass Div., (800-774-7732), or as recommended by mirror glass manufacturer.
Adhesive: "Mirror-Mastic"; Palmer Products Corp. (800-431-6151)
NO SUBSTITUTIONS PERMITTED
 7. Exposed Mirror Clips
Top Clip: Model No. 318; Knappe & Vogt (616-459-3311) - 9/16" wide x 1-1/4" long
Bottom Clip: Continuous low profile clip at base
- J. ELASTOMERIC GLAZING SEALANTS AND PREFORMED GLAZING TAPES
- 1 General: Provide products of type indicated and complying with the following requirements
Compatibility: Select glazing sealants and tapes of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants and tapes which have performance characteristics suitable for applications indicated and conditions at time of installation.
Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.
Colors: Provide color of exposed sealants indicated or, if not otherwise indicated, as selected by Owner's Representative from manufacturer's standard colors.
 2. Preformed Butyl-Polyisobutylene Glazing Tape: Provide manufacturer's standard solvent-free butyl-polyisobutylene formulation with a solids content of 100 percent; complying with AAMA A 804.1; in extruded tape form; non-staining and non-migrating in contact with nonporous surfaces; packaged on rolls with a release paper on one side; with or without continuous spacer rod as recommended by manufacturers of tape and glass for application indicated.
 3. Sealants: Provide structural and weather seal sealants recommended by the manufacturer of the structural sealant glazed curtain wall system. As manufactured by one of the following:
General Electric (216-266-2121)
Tremco (800-562-2728)
Refer to Section 07920 for requirements.

ARCHITECTURE

4. Spacers, Setting Blocks, Gaskets, and Bond Breakers: Provide the curtain wall manufacturer's permanent non-migrating types compatible with sealants and suitable for joint movement and sealing requirements.
- K. MISCELLANEOUS GLAZING MATERIALS
1. Performance criteria
 - Compatibility: Provide materials with proven record of compatibility with surfaces contacted in installation.
 - Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
 - Setting Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealants, 80 to 90 Shore A durometer hardness
 - Spacers: Neoprene, EPDM or silicone blocks, or continuous extrusions, as required for compatibility with glazing sealant, of size, shape and hardness recommended by glass and sealant manufacturers for application indicated.
 - Edge Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealant, of size and hardness required to limit lateral movement (side-walking) of glass.
 - Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, flexible and resilient, with 5-10 psi compression strength for 25 percent deflection.

PART 3-EXECUTION

3.1 Installation

- A. Glazing: Comply with combined printed recommendations of glass manufacturers, of manufacturers of sealants, gaskets and other glazing materials, except where more stringent requirements are indicated, including those of referenced glazing standards.
1. Exterior:
 - a. Measure openings to be glazed at job site before cutting glass or fabricating sealed insulating glass.
 - b. Clean glass and rabbets free of dirt, dust, moisture, oil and foreign materials.
 - c. Meet the requirements of FGMA Glazing Manual.
 - d. Use setting blocks and spacer shims to center glass in rabbets and maintain proper edge clearances.
 - e. Apply vinyl gaskets in accordance with framing system manufacturer's instructions.
 2. Interior:
 - a. Remove stops: Countersunk flat head screws spaced not more than 8" on center.
 1. Cadmium plate at steel frames.
 2. Stainless steel at aluminum frames.
 3. Glass at Wood Frames
 - a. Steel and wood frames shall be glazed after prime painting and before finish painting. Do not glaze in rabbets or stops that have not been prime painted.
 - b. Place setting blocks at quarter points.
 - c. Apply glazing tape and set glass in accordance with tape manufacturers instructions.
- B. Mirrors:
1. Do not install mirrors on new plaster, freshly painted walls or where airborne solvents, heavy-duty cleaners, etc., are in the air. Sub-surface shall be allowed to "cure" for a minimum of 72 hours.
 2. Use both exposed clips at top and bottom and adhesive.
 3. Seal back and edges of mirrors; allow to dry.
 4. Apply adhesive to 60% of back of mirror.

ARCHITECTURE

5. Set mirror supported by setting blocks and press against substrate to ensure bond of adhesive.
6. Hold mirror in place until adhesive fully sets.
7. Exposed edges in wet areas and at vanity tops to be sealed with clear sanitary sealant specified in Section 07900 - Joint Sealers.

END OF SECTION