SECTION 08800

GLAZING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Clear tempered glass.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
   2. ASTM C1036 - Standard Specification for Flat Glass.
   2. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
   3. ASTM D2000 - Standard Classification System for Rubber Products in Automotive Applications.

C. Consumer Product Safety Standards for Architectural Glazing. CPSC 16 CFR, Part 1201.

D. Flat Glass Marketing Association (FGMA):
   1. FGMA - Glazing Manual and Glazing Sealing Systems Manual.

1.3 SUBMITTALS

A. Procedures for submittals.
   1. Product Data:
      a. Glass: Structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
      b. Glazing compound: Provide chemical, functional, and environmental characteristics, limitations, special application requirements.
   2. Samples:
      a Glazing: Submit one sample 12 x 12 inches (300 x 300 mm) in size of each type of glazing, illustrating tinting, and finish of glazing materials. Label each sample indicating kind, quality and manufacturer.
   3. Assurance/Control Submittals:
      a. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
      b. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

1.4 QUALITY ASSURANCE

A. Identification: Each unit of tempered glass shall be permanently identified by the manufacturer. The identification shall be etched or ceramic fired on the glass and be visible when the unit is glazed.

B. Perform Work in accordance with FGMA Glazing Manual.

C. Installer Qualifications: Company specializing in performing the Work of this Section with minimum 5 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Transport, handle, store, and protect Products.

1.6 PROJECT CONDITIONS OR SITE CONDITIONS

A. Environmental Requirements:
   1. Do not install glazing when ambient temperature is less than 40 degrees F.
   2. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.7 WARRANTY

A. Procedures for closeout submittals.

B. Special Warranty:
   1. Include coverage for cracking, breakage, and replacement of same.
      a. Warranty Period: 1 year.
   2. Include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.
      a. Warranty Period: 10 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, manufacturer's offering Products which may be incorporated in the Work include the following:
   1. Falconer Glass Industries.
   2. Libbey-Owens-Ford Company, Toledo, OH (800) 526-6557.
   3. PPG Industries, Pittsburgh, PA (412) 434-2858.
   4. Viracon, Owatonna, MN (800) 533-2080.

C. Product options and substitutions. Substitutions: Permitted.

2.2 GLASS MATERIALS

A. Glass Type 1 - Clear Tempered Insulated Glass Units, Low E: Double pane units of clear tempered glass.
   1. Glass Thickness, Inner: 5/16 inch.
2. Glass Thickness, Outer: 5/16 inch.
   3. Unit Thickness: 1 inch (25 mm) thick units.

B. Glass Type 2 - Clear Tempered Glass Units. Single pane units with clear tempered glass.
   1. Glass Thickness, Inner: 1/4 inch (6 mm).

2.3 GLAZING COMPOUNDS

A. Polysulphide Sealant: Two component, chemical curing, non-sagging type; cured Shore A hardness of 15-25.

B. Silicone Sealant: Single component, chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining; cured Shore A hardness of 15-25.
   1. Color: Clear.

C. Acrylic terpolymer compounded especially for glazing; non-hardening, non-staining, and non-bleeding.

2.4 GLAZING ACCESSORIES

A. Setting Blocks: Resilient blocks of 70 to 90 Shore A durometer hardness; compatible with glazing sealant.

B. Spacers: Resilient blocks of 40 to 50 Shore A durometer hardness; self adhesive on one side; compatible with glazing sealant.

C. Filler Rods: Closed cell or jacketed foam rods of polyethylene, butyl, neoprene, polyurethane, or vinyl; compatible with glazing sealant.

D. Joint Cleaners, Primers, and Sealers: As recommended by glazing sealant manufacturer.

E. Gaskets: ASTM D2000, SBC 415 to 3BC 620; extruded or molded neoprene or EPDM, black.

F. Mastic: Non-solvent type adhesive as recommended by mirrored glass manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01700 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
   1. Verify that openings for glazing are correctly sized and within tolerance.
   2. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

C. Report in writing to Architect prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

3.3 GLAZING

A. Install glazing from interior only. No exterior glazing permitted. No glazing removal permitted from exterior.

B. Locate setting blocks at quarter points of sill; set in sealant if heel or toe bead is required.

C. Install spacers inside and out except where preshimmed tape or glazing gaskets are to be used.

D. Set each piece in a series to other pieces in pattern draw, bow, or other visually perceptible characteristics.

E. Provide glazing sealants and gaskets as required for particular glazing application. Coordinate with other Sections for material compatibility.

F. Gaskets:
   1. Provide adequate anchorage, particularly for driven-in wedge gaskets.
   2. Miter and weld ends of channel gaskets at corners to provide continuous gaskets.
   3. Seal face gaskets at corners with sealant to close opening and prevent withdrawal of gaskets from corners.

G. Do not leave voids in glazing channels except as specifically indicated or recommended by glass manufacturer. Force sealant into channel to eliminate voids. Tool exposed surfaces to slight wash away from joint. Trim and clean promptly.

H. Do not allow sealant to close weeps of aluminum framing.

I. Provide filler rod where sealants are used in the following locations:

1. Head and jamb channels.
2. Colored glass over 75 united inches in size.
3. Clear glass over 125 united inches in size.

3.4 CONSTRUCTION

A. Interface with Other Work: Coordinate glazing with installation of entrances and storefronts specified in Section 08400.

3.5 FIELD QUALITY CONTROL

A. Inspect preparation and installation of glass.

3.6 CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

3.8 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste.

END OF SECTION