SECTION 088000 - GLAZING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Glass and glazing for storefront windows and doors and fixed glass windows.

1.2 RELATED SECTIONS

A. Section 08 13 13 – Hollow Metal Doors.
B. Section 08 14 16 - Flush Wood Doors.
C. Section 08 41 13 – Aluminum Entrances and Storefronts.
D. Section 08 56 53 – Bullet Resistant Window (for glazing at interior transaction window).
E. Section 10 28 13 - Toilet Accessories: Mirrors.

1.3 REFERENCES

A. ANSI/ASTM E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
B. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Used in Buildings.
C. ASTM C1036 - Flat Glass.
D. ASTM C1048 - Heat-Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass.
E. FGMA - Glazing Manual.
F. FGMA - Sealant Manual.
G. Laminators Safety Glass Association - Standards Manual.

1.4 PERFORMANCE REQUIREMENTS

A. Glass and glazing materials of this Section shall provide continuity of building enclosure vapor and air barrier:
   1. In conjunction with materials described in Section 07 90 00.
   2. Maintain continuous air and vapor barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.
B. Size glass to withstand dead loads and positive and negative wind loads, as determined & documented by Structural Engineer of Record.
C. Limit glass deflection to 1/200 or flexure limit of glass with full recovery of glazing materials, whichever is less.
D. Impact resistance: Large Missile.

1.5 SUBMITTALS

A. Submit under Special Provisions requirements.
B. Product Data on Glass Types Specified: Provide structural, physical and environmental characteristics, size limitations and special handling or installation requirements.
C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
D. Manufacturer's Installation Instructions: Indicate special precautions required.
E. Manufacturer's Certificate: Certify that glass, meets or exceeds specified requirements.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with FGMA Glazing Manual, FGMA Sealant Manual, and Laminators Safety Glass Association - Standards Manual for glazing installation methods.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Do not install glazing when ambient temperature is less than 50 degrees F.
B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.8 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.

1.9 COORDINATION

A. Coordinate Work under Division 1 requirements.
B. Coordinate the Work with glazing frames, wall openings, and perimeter air and vapor seal to adjacent Work.

1.10 WARRANTY

A. Provide five year manufacturer's warranty under Division1 requirements.
B. Warranty: Include coverage for reflective coating on mirrors and replacement of same.

PART 2 – PRODUCTS

2.1 FLAT GLASS MATERIALS

A. Safety Glass (Type FG-B): ASTM C1048, Kind FT fully tempered with horizontal tempering. Condition A uncoated, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select; conforming to ANSI Z97.1; 1/4 inch. Located where required by Code at or adjacent to doorways.
B. Wire Glass (Type FG-G): Clear, polished both sides, square mesh of woven stainless steel wire of 1/2 inch grid size; 1/4 inch.
C. Insulating Glass: See Section 08 51 13 – Aluminum Windows.
D. Bullet Resistant Glass: See Section 08 56 53 – Bullet Resistant Window.
E. Mirror Glass: See Section 10 28 13 – Toilet Accessories.

2.2 GLAZING COMPOUNDS

A. Silicone Sealant (Type GC-F): FS TT-S-01543, Class A; single component; solvent curing; capable of water immersion without loss of properties; cured Shore A hardness of 15-25; color as selected.

2.3 GLAZING ACCESSORIES

A. Setting Blocks: Neoprene, 80 - 90 Shore A durometer hardness, length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
B. Spacer Shims: Neoprene, 50 - 60 Shore A durometer hardness, minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
C. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 - 15 Shore A durometer hardness; coiled on release paper, black color.
D. Glazing Splines: Resilient polyvinyl chloride extruded shape to suit glazing channel retaining slot.
E. Glazing Clips: Manufacturer's standard type.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify prepared openings under provisions of Section 01 45 00.
B. Verify that openings for glazing are correctly sized and within tolerance.
C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

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 EXTERIOR - DRY METHOD (PREFORMED GLAZING)

A. Cut glazing spline to length; install on glazing pane. Seal corners by butting spline and sealing junctions with butyl sealant.
B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
D. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.

3.4 INTERIOR - DRY METHOD (TAPE AND TAPE)

A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.
B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.
D. Place glazing tape on free perimeter of glazing in same manner described above.
E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.
F. Knife trim protruding tape.

3.5 INSTALLATION – MIRRORS (See Section 10 28 13 – Toilet Accessories)

3.6 QUALITY CONTROL

A. Field inspection will be performed under Section 01 45 00 requirements.
B. Inspection will monitor quality of glazing.

3.7 CLEANING

A. Clean work under Special Provisions Requirements.
B. Remove glazing materials from finish surfaces.
C. Remove labels after work is complete.
D. Clean glass and mirrors.

3.8 PROTECTION OF FINISHED WORK

A. Protect finished Work under Division 1 requirements.
B. After installation, mark pane with an 'X' by using removable plastic tape or paste.

END OF SECTION 088000