SECTION 08450
GLASS DOOR AND SIDELIGHT ASSEMBLIES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Tempered glass doors complete with metal fittings and matching hardware.
B. Adjacent fixed glass with metal frames matching door fittings.

1.2 QUALITY ASSURANCE

A. Manufacturer qualifications: Single firm with minimum 5 years successful experience in the fabrication of glass doors with adjacent fixed glass of type required for this project. Glass of type required for this project must be a certified safety glazing product listed with the Safety Glazing Certification Council by firm manufacturing doors.
B. Installer qualifications: Authorized or approved by manufacturer for installation of glass doors with adjacent fixed glass of type required for this project.
C. Glass standards:
   1. ASTM specification C1048 for glass.
   2. ASTM specification C1036 for glass.
   3. American National Standards Institute (ANSI) Z-97.1 for safety glazing standards.
   4. Consumer Products Safety Commission (CPSC) 16 CFR Part 1201 category II for safety glazing standards.

1.3 SUBMITTALS

A. Shop drawings:
   1. Glass doors elevations and details.
   2. Door hardware schedule.
   3. Fixed glass plans, elevations, and details.

B. Product data:
   1. Manufacturer's product literature and applicable technical bulletins.
   2. Manufacturer's installation instructions and glazing details.
   3. Safety glazing certification report.

C. Samples: Submit sample of glass for thickness and color and of door rail in specified metal finish.

1.4 WARRANTY

A. Manufacturer's standard warranty agreeing to repair, replace, or credit materials that do not conform to the applicable specifications in 1.2.C above.

1.5 JOB CONDITIONS

A. Actual dimensions shall be determined by field measurement before fabrication of glass door assemblies or, where field measurements would delay project work, fabrication and adjacent work shall be coordinated to include tolerances to ensure proper fit of glass door assemblies complete with fittings, framing, hardware and adjacent work.
B. Provide openings, embeds, built-ins, and other provisions in adjacent work for timely installation of glass door assembly.
C. Following installation take adequate measures to insure that glass and door assemblies are protected from damaging corrosives or abuse by other jobsite trades until such time as work on project is complete. Cleaning of glass and metal shall be in compliance with manufacturer's instructions.

PART 2 – PRODUCT

2.1 MATERIALS

A. Acceptable manufacturers:
   1. Glass door assemblies:
      a. Virginia Glass Products Corporation

   2. Accessory hardware compatible with glass door assemblies.

B. Tempered glass:
   1. ASTM C1048, Kind FT, Condition A (uncoated surfaces), Type I (transparent, flat), Quality q^3 (glazing select).
      a. Class 1-Clear (or) Class 2-Tinted
      b. Thickness: 3/8" (or) 1/2" (or) 3/4"

   2. Shall be certified by the Safety Glazing Certification Council in compliance with:
      a. ANSI Z97.1
      b. CPSC 16 CFR Part 1201 Category II

C. Fitting, frames and cladding:
   1. Door type:
      P (full width rail bottom and top)

      (or) B/P (full width rail bottom, corner patch fitting top)
      (or) AGA (corner patch fitting top and bottom)
      (or) N/S (narrow stiles at vertical edges and full width rail bottom and top)
      (or) P-Slider (P type door on rollers)
   2. Full-width rail height: 3-5/8" high rail (or) 6" high rail (or) Specified custom height rail.
   3. Aluminum extrusions:
      a. Alloy and temper not less than the strength and durability of 6063-T5.
      b. Type required for installation and mounting of doors and glass, and for operation of doors.

c. Finish: Clear anodized aluminum (or) Dark bronze anodized (or) Specified anodized finish (or) Polished #8 stainless steel clad (or) Satin #4 stainless steel clad (or) Polished #8 Brass clad (or) Satin #4 Brass clad (or) Specified clad.

D. Door hardware:
   1. Floor closer: Dorma BTS-80
   (or)
   1. Concealed overhead closer: Dorma RTS-88 (or) Jackson 20-330
   2. Opposite pivot compatible with closer.
   3. Locking devices:
      a. VIR-58 straight throw, round bolt lock concealed in full width door rail and engaging into dust-proof strike in floor, inclusive of dust-proof strike. Cylinders able to be exchanged while door is installed in opening.
      (or)
      a. VIR-351.2 patch fitting, straight throw, round bolt lock mounted to bottom edge of glass door on non-pivot corner, inclusive of dust-proof strike. Cylinders able to be exchanged while door is installed in opening. (AGA door only)
   4. Push-pull hardware of compatible design with back-to-back through-glass concealed end fastenings.

E. Fasteners and anchors: Concealed where practical or, where exposed, with fastening heads finished to match adjacent metal finish.

2.2 FABRICATION

A. Door assemblies shall be fabricated of tempered glass, complete with factory assembled metal fittings, accessories, and fasteners.
   1. Sizes and dimensions, shapes and profiles shall be of manufacturer's standard design and comply with guidelines set forth by the manufacturer and the Glass Association of North America's Fully Tempered Heavy Glass Door and Entrance Systems Design Guide.
   2. Holes and other cutouts in glass for fittings, hardware, or fastenings shall be fabricated prior to tempering.

PART 3 – EXECUTION

3.1 EXAMINATION AND PREPERATION

A. General contractor and glazing contractor shall examine all areas, substrates and conditions where glass door assemblies are to be installed. Do not proceed with any work until satisfactory conditions exist for proper installation of all materials.

3.2 INSTALLATION

A. Comply with manufacturer's installation recommendations.
B. Set assemblies and glass plumb, level and true to line.
   1. Anchor securely in place. Separate corrodible metal surfaces from sources of corrosion or electrolytic action at points of contact.
   2. Set fixed glass accurately with uniform butt joints.