SECTION 088853 SECURITY GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes

1. Shooter Attack Certified Security Glazing

1.3 CODES AND REFERENCES:

A. FTD-SA – Filti Testing and Development, Standard for Shooter Attack certification.

B. 16 CFR 1201 – Safety Standard for Architectural Glazing Materials; Consumer Products Commission; current edition.

C. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Building, Safety Performance Specifications and Methods of Test; 2010.

D. ASTM C 1036-06 – Standard Specification for Flat Glass

E. State Building Codes, Local Amendments.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Provide glazing systems produced by a manufacturer with not less than 5-years successful experience in the fabrication of assemblies of the type and quality required.

B. Installer’s Qualifications: Glazed systems shall be installed by a firm that has not less than 5-years successful experience in the installation of systems like those required.

C. Source Limitations for Glass: Obtain all glass products from a single manufacturer.

D. Glass Product Testing: Obtain glass test results for product test reports in “Submittals” Article from a qualified independent agency.

1.5 SUBMITTALS

A. Submit under provisions of Division 1

B. Product Data: Manufacturers data sheets of each product to be used, including:

1. Preparation instructions and recommendation

2. Storage and handling requirements and recommendations

3. Installation methods.

C. Glazing Schedule:

1. Use same designations indicated on Drawings.

2. Listing types and thicknesses for each size, opening and location.

3. Samples:

a. Submit one 12” x 12” sample of each glass type specified

b. Submit one sample of each glazing sealant and/or glazing tape for color review.

4. Warranty: Warranty documents specified herein.

D. Certifications:

1. Certification that all sealants are fully compatible with the surfaces and finishes with which they are in applied.

2. Certification that all products comply with the test methods listed under Paragraph 1.3 Codes and References.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer’s unopened and undamaged packaging, with manufacturer’s labels intact.

B. Protect glass and glazing materials from damage in ordinance with manufacturer’s recommendations.

3.2 WARRANTIES

A. Non-Rated Glass Units: Warrant for 10 years from date of Delivery to be free from delamination and failure of seals and not to develop material obstruction of vision, as a result of dust, moisture or film formation on internal glass surfaces.

B. Glazing Sealants: Warrant for 10 years per sealant manufacturer's standard warranty of merchantable quality. Warranty shall certify that cured sealants:

1. Will perform as a watertight weather-seal.

2. Will not become brittle or crack due to weathering or normal expansion and contraction of adjacent surfaces.

3. Will not harden beyond a Shore A durometer of 50, nor soften below a durometer of 10.

4. Will not change color when used with compatible back-up materials.

5. Will not bleed.

PART 2– PRODUCTS

2.1 MANUFACTURER'S

A. Acceptable Manufacturer: Armoured One, LLC., Which is located at: 386 North Midler Ave. Syracuse, NY 13206. Tel: 315-720-4186; Email: info@armouredone.com; Web: www.armouredone.com.

B. Substitutions: Not Permitted

C. Requests for substitutions will be considered in accordance with provisions in Division 1.

2.2 MATERIALS

A. Shooter/Attack Resistant Security Glass, Non-Rated: AOTSG516

1. Thickness: 5/16"

2. FTD-SA – Standard for Shooter Attack certification Class 6.

3. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Consumer Products Safety Commission; current edition.

4. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.

B. GLAZING MATERIAL

1. General: Comply with manufacturer's recommendations for applications and conditions at time of installation.

2. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.

3. Setting Blocks: Neoprene, silicone or EPDM, 70-90 durometer hardness, with proven compatibility with glazing materials used.

4. Spacers: Neoprene, silicone or EPDM, 40-50 durometer hardness with proven compatibility with glazing materials used.

5. Compressible Fillers: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, proven to be compatible with sealants used, flexible and resilient, with 5-10 psi compression strength for 25% deflection.

C. FABRICATION

1. Cut glass to full fit and play, consistent with glass and glazing material manufacturers' recommendations and the requirements of the Drawings and References, Codes and Standards Article.

2. Follow code requirements and glass manufacturer's recommendations for minimum bite and edge and face clearances.

3. Cut lights to smooth straight edges, clean, free of nicks and flares; nipping not permitted. Follow glass manufacturer's directions exactly for tinted and Low-E glass

4. Glass Identification:
   a. Manufacturer's and UL identifications for glazing shall be permanently etched to be visible after glass has been set in place and glazed.

PART 3 EXECUTION

3.3 GENERAL

A. Each glazing installation must withstand normal temperature changes, and impact loading without failure of glass, failure of sealants or gaskets, deterioration of glazing materials and other defects in the work.

B. Protect glass from damage during handling and installation, and subsequent operation of glazed components of the work. Discard units with edge damage or other imperfections.

C. Glazing channel dimensions are intended to provide for necessary bite on glass, minimum edge clearance, and adequate tape or sealant thicknesses, with reasonable tolerances.

D. Comply with recommendations by manufacturers of glass and glazing products, except where more stringent requirements are indicated, including those of referenced glazing standards.

3.4 PREPARATION

A. Clean glazing channel and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to substrate.

B. Where sealants are used, apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

3.5 INSTALLATION

A. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.

B. Where sealants are used at butt joints, apply sealant in thin continuous clear bead. Tool sealant to a uniform, continuous, even profile.

C. Apply glazing stops and clean up any excess structural sealants from finished surfaces.

D. Conform to recommendations of glass manufacturer where such covers points not shown on Drawings or specified herein.

E. Remove "loose" stops furnished with the units and reinstall as a part of the glazing operation.

F. Handle glass so as to prevent nicks and flares on glass edges.

G. Install glass exceeding 1/8" thickness on identical setting blocks permanently mounted and centered at 1/4 points. If necessary to reduce deflection of horizontal supporting member, blocks may be placed at 1/8 points or with the nearest end 6" (whichever is greater) from edge of glass unit. Ensure that blocks are equidistant from centerline of glass. Do not obstruct weep holes.

H. Provide permanently mounted edge blocks at head and jambs of dry-glazed lights to prevent damage to glass edges during installation and lateral shifting of glass due to thermal and seismic loads and vibrations. Follow recommendations of Flat Glass Marketing Assn. Glazing Manual.

I. Set glass to maintain bite, edge and face clearance stipulated by code and the glass manufacturer.

J. Take special precautions to protect laminated glass edges from deterioration of vinyl interlayer by moisture.

K. Glaze dry-glazed aluminum doors and frames as per manufacturer's directions using glazing gaskets and seals furnished with the units.

L. Miter gaskets at corners and install so as to prevent pulling away at corners. Gaskets with gaps or other visible irregularities on door and window units shall be corrected by manufacturer or fabricator at no additional cost to University.

3.6 PROTECTION AND CLEANING

A. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.

B. Wash and polish glass on both faces, not more than 4 days prior to date scheduled for inspections intended to establish Date of Substantial Completion in each area of project. Comply with glass manufacturer's recommendations for final cleaning.

END OF SECTION 088853