SECTION 085653

SECURITY WINDOWS (BR250 Exterior Horizontal Slide Window)

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Aluminum bullet and blast resistant exterior horizontal sliding window frames.

1.2 RELATED DOCUMENTS

A. Drawings, and general provisions of the Contract.

1.3 RELATED SECTIONS

A. Section 088856 – Ballistic-Resistant Glazing

B. Section 013300 – Submittal Procedures

1.4 DEFINITIONS

A. AAMA: American Architectural Manufactures Association

B. ASTM: American Society for Testing and Materials.

C. UL: Underwriters Laboratory

1.5 PERFORMANCE REQUIRMENTS

A. Ballistics-Resistance Performance Requirements: Provide security window frames identical to those tested for compliance with requirements indicated, and as follows.

1. Security window will meet or exceed the requirements of UL 752 Level III.
2. Testing is conducted by H.P. White Laboratory or an approved equivalent independent testing laboratory.
4. Proof of certification is available upon request.
5. Testing conforms to Underwriters Laboratory UL 752 Ballistic Standards.

B. Blast Resistant Performance and Design Requirements: Provide window frame and the anchorage analysis that comply with requirements indicated and as follows.

1. Security windows will be calculated to meet: _____
2. Security window will comply with design build blast drawings and calculations.
3. A detailed engineered blast calculations by a qualified blast engineer to substantiate that the system design and anchorage meets or exceeds the minimum performance required.

C. Structural Performance and Design Requirements: Provide security aluminum windows capable of withstanding wind loads determined as follows, with no permanent deformation or breakage within the assembly when tested according to ASTM E 330-97.

D. Air Infiltration and Design Requirements: Provide security aluminum windows tested under a pressure differential of 6.24 psf when tested according to ASTM E 283-91.

E. Water Infiltration and Design Requirements: Provide security aluminum windows tested under a pressure differential of 9.75 psf when tested according to ASTM E 331-00.

1.6 SUBMITTALS

A. Design Calculations: Submit design analysis and calculations verifying conformance to specified blast criteria.

B. Shop Drawings: Provide elevations indicating rough openings requirements and details for field installed assemblies.

C. Qualification Data: Submit qualifications verifying years of experience; include list of completed jobs having similar scope of work, identified by name, location, date contact names and phone numbers.

D. Product Data: Provide manufacture’s data sheets on all products used.

E. Selection Samples: Provide two product samples for each finish specified.

F. Verification Samples: Provide sample for product specified, minimum size 6 inches (150 mm) square, and representing actual product.

1.7 QUALITY ASSURANCE

A. Provide test reports from a nationally recognized testing laboratory certifying the UL rating on product.

B. Drawings and specifications are based on Action Bullet Resistant’s Model BR 250 ESW Level III (Exterior Sliding Window).

C. Installer Qualifications: An experienced installer who has completed similar design, material and extent to this project.

D. Manufacture’s facility will be made available during production for inspection of windows by customer’s representative to ensure compliance of products with drawings and specifications.

1.8 DELIVERY, STORAGE AND HANDLING

A. Product will be securely crated to prevent damage during shipping. Each crate will be identified by window number and / or elevation. Packing list will identify all contents of crate.

B. Verify contents of crate within five days of receipt. If crates are to be stored for long periods due to construction delays, place in a dry warehouse with moderate temperatures.

C. When handling crates use forklift or pallet jack.

1.9 PROJECT CONDITIONS

A. Field Measurements: Verify security window openings by field measurements before fabrication and indicate measurements on Shop Drawings.

B. Established Dimensions: Where field measurements cannot be made without delaying the work, establish openings and proceed with fabrication without field measurements using held dimensions. Coordinate wall construction to ensure that actual openings dimensions correspond with held dimensions.

1.10 WARRANTY

A. Contractor warrants installation for a period of one year and assumes full responsibility for installation of the system, which includes the window system, glass, anchorage, setting, sealing, flashing, etc, as it relates to air, water and structural adequacy as required in the shop drawings and specifications.

B. Manufacture warrants products for period of one year from the date of customer receipt.

PART 2 – PRODUCTS

2.1 MANUFACTURE

A. Acceptable Manufacturer: Action Bullet Resistant, Inc., located at 263 Union Blvd. West Islip, NY 11795: Toll Free Tel. 800-962-8088; Tel 631-422-0888; Fax Tel 631-422-4498; Email info@actionbullet.com: Web www.actionbullet.com

2.2 PRODUCT TYPE

A. Security windows available in an exterior horizontal sliding window.
B. Security window is thermally broke.

2.3 MATERIAL

A. Aluminum Extrusions: Aluminum alloy and temper – 6005-T5. Ultimate tensile strength of 37.7 ksi, and shear strength of 29.7 ksi.
B. Thermal break is a two-part solid urethane plastic.

C. Steel Blast Reinforcement: (Steel straps and anchors)

1. Steel plates, shapes and bars ASTM A-36
2. Seamless steel structural tubing ASTM A-500.

D. Silicone: Structural silicone GE SCS 1000 complies with ASTM-C-920-05.

E. Glass and Glazing: See Section 088856.

F. Setting blocks – Neoprene 80-85 durometer ASTM-D-2000

G. Hardware:

1. Adams Rite 1850 M/S deadlock 1 ½" backset with hook bolt, thumb turn on interior.
2. Rockwood ¾ diameter straight wire pull.
3. Starline stainless steel track cover.
4. Builders Hardware roller housing TA-36 series.

2.4 FABRICATION

A. Frames are fully fabricated and shipped to customer for field installation.

B. Fasteners where exposed will be stainless or other non-corrosive material.

C. Horizontal slide panel to be 2 1/8" thick with a minimum combined with ½" wall thickness.

D. Horizontal head rails to be nominal 5 ½" wide.

E. Vertical stiles to be nominal 2 1/8" wide, screw spline system for reglazing.

F. Horizontal slide window to have tight hairline joints where rails are fitted against stiles.

G. Windows have a screw spline system with tight hairline joints where the horizontal mullion meets with vertical mullions.

H. Glazing pocket to be 15/16" deep for proper bite.

2.5 FINISH

B. Exposed surfaces to be free of scratches and other serious blemishes. Anodic finishes are electrolytically deposited Class II finish. Manufactures standard finish:

1. Clear Anodize – ASTM-B-137-95
   AAMA 608.1

2. Dark Bronze Anodize - ASTM-B-137-95
   AAMA 608.1

C. Painted Finishes:

1. 70% Kynar-Base AA-M10- AAMA 2605

Duranar or Fluropon C41-RX ASCA 96

PART 3 – EXECUTION

3.1 EXAMINATION

A. With Installer examine substrates, areas, and conditions for compliance with the requirements for installation tolerances and other conditions affecting functionality and performance of security entrances window systems.

1. Examine rough-in opening for built-in and embedded anchors to verify actual locations of connections before installation.
2. Prepare a written report, endorsed by the installer, listing conditions detrimental to the functionality and performance of security window systems.
3. Examine and inspect built-in and cast-in anchors installations to verify that they comply with requirements. Prepare inspection reports. If removal and replacement is required by inspection, re-inspect after repairs are made and document in inspection report.
4. Clean surfaces thoroughly prior to installation.

3.2 INSTALLATION

A. Window systems shall be installed in their correct locations, set level, square and plumb in alignment with other work and substrates, in accordance with manufactures instructions, approved shop drawings and accepted industry standards. All joints between windows and rough opening shall be sealed using sealant to ensure a weather tight installation.

B. Installer shall take special care to ensure that impact side of glass faces the threat axis.

3.3 FIELD QUALITY CONTROL

A. Inspect installed items to ensure compliance with requirements.

B. Protect installed items until completion of project.

END OF SECTION 085653