

## SECTION 134000 – BULLET RESISTANT PROTECTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Bullet resistant fiberglass panels.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
  - 1. Division 9 Section "Non-Load-Bearing Steel Framing" for metal support of bullet resistant fiberglass panels.
  - 2. Division 9 Section "Gypsum Board" for finish material over bullet resistant fiberglass panels.

#### 1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each bullet resistant fiberglass panel, including type of materials, thickness, method of test, and performance.
- C. Test reports showing compliance with specified requirements with UL listing verification.
- D. Samples of bullet-resistant fiberglass panels in 4" x 4" sizes.

#### 1.4 QUALITY ASSURANCE

- A. Ballistics-Resistant and Forced-Entry Resistant Performance: Provide products identical to those tested for compliance with requirements indicated per tests specified for specific bullet-resistant fiberglass panels.
  - 1. Have tests performed by qualified independent testing agency.
  - 2. Testing Agency Qualifications: Demonstrate to Architect's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- B. UL Test: Underwriters Laboratories, Inc., UL Level 3 (HPSA).
- C. Installer Qualifications: Engage an experienced Installer who has specialized in installing products similar to that required for this Project.

#### 1.5 PROJECT CONDITIONS

- A. Keep at the Project site, for the duration of installation, a copy of the each referenced document that applies to installation and each manufacturer's installation instructions.

## 1.6 WARRANTY - MODIFIED IONOMER PRODUCTS

- A. Bullet Resistant Fiberglass Panel Warranty: All materials and workmanship shall be warranted against defects for a period of two (2) years from the date of receipt at the project site.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may meet requirements and be incorporated in the Work include, but are not limited to, the following:
  - 1. Bullet-resistant fiberglass panels:
    - a. Armortex, Safeguard Security Services, Inc.
    - b. Total Security Solution.
    - c. ArmorCore, Waco Composites Ltd.

### 2.2 BULLET RESISTANT FIBERGLASS MATERIAL

- A. The panels shall be made of multiple layers of starch-oil woven roving ballistic grade fiberglass cloth impregnated with a thremoset polyester resin and compressed into flat rigid sheets. The production technique and materials used shall provide the controlled internal delamination to permit the encapture of a penetrating projectile. Bullet Resistant fiberglass panel meeting requirements of not less than 7/16" thickness, and not exceeding 5.0 pounds per square foot maximum weight.
- B. The Bullet Resistant Fiberglass Panels must be not less than UL Listed Rated for Level 3 (HPSA).
- C. Cut or drill holes in laminated units.
- D. Grind exposed edges smooth, using methods recommended by manufacturer.

### 2.3 FABRICATION

- A. Prior to installing the bullet resistant fiberglass material the contractor shall verify that all supports have been installed and/or reinforced as required, to support the type and weight of installation.
- B. All joints shall be reinforced by a back-up layer of bullet resistant fiberglass material. The bullet resistance of the joint, as reinforced, shall be at least equal to that of the panel. Minimum width of reinforcing layer at joint shall be 4" (2" on each panel or a 2" minimum overlap).
- C. Armor shall be installed in accordance with the manufacturer's printed recommendations. Bullet Resistant Fiberglass panels shall be adhered using an industrial adhesive, mastic, screws or bolts. Method of application shall maintain the bullet resistant rating at junctures, and all required penetrations.

## PART 3 - EXECUTION

### 3.1 PROTECTION AND CLEANING

- A. Provide final protection and maintain conditions in a manner acceptable to manufacturer and Installer that ensures that fiberglass panels are without damage or deterioration at the time of Substantial Completion.

### 3.2 OWNER PERSONNEL INSTRUCTION

- A. Have manufacturers' maintenance instructions on hand at time of instruction.

END OF SECTION 134000

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