

SECTION 13070 BULLET RESISTANT FIBERGLASS (level 3)

PART 1 GENERAL

1.1 REFERENCE

- A. The publication below forms a part of this specification. UNDERWRITERS LABORATORY UL 752 9th Edition Standard for Bullet Resisting Equipment dated Jan. 27,1995 AMERICAN SOCIETY FOR TESTING AND MATERIALS ASTM E119-00e Standard Test for ONE HOUR FIRE RATING of building construction and materials.

1.2 SUBMITTALS

- A. The following shall be submitted in accordance with Sections 01340 and the SPECIAL CONTRACT REQUIREMENTS: Submit for approval prior to fabrication catalog cuts, brochures, specifications, UL LISTING VERIFICATION, proof of possession of PRODUCT LIABILITY INSURANCE in an amount not less than five million U.S. dollars, and printed data in sufficient detail to indicate compliance with the contract documents and the manufacturer's instructions for the installation of Bullet Resistant Fiberglass. Furnish verification of compliance with ASTM E119-00e ONE HOUR FIRE RATING from a recognized testing laboratory.

1.3 DESIGN

- A. Through the design, manufacturing technique and material application the Bullet Resistant Fiberglass shall be of the " non-ricochet type ". This design is intended to permit the encapture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver the materials to the project with the manufacturer's UL Labels intact and legible. Handle the material with care to prevent damage. Store the materials inside under cover, stack flat and off the floor.

1.5 WARRANTY

- A. All materials and workmanship shall be warranted against defects for a period of two (2) year from the date of receipt at the project site.

PART 2 PRODUCTS

2.1 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 thermoset 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.
- B. Bullet Resistant Fiberglass panels shall be UL Listed Armortex® OF 300 or approved equal, manufactured by Safeguard Security Services, Ltd., San Antonio, Texas. Phone: (210)-661-8306, (800)-880-8306, Fax: (210)-661-8308.
- C. To insure the lowest freight and installation expense, UL Listed Level 3 bullet resistant fiberglass not manufactured with starch – oil ballistic grade cloth will be in excess of 7/16" in thickness and or exceed 4 lbs. per square foot and is not acceptable.

2.2 SECURITY LEVEL

- A. The Bullet Resistant Fiberglass must be **UL LISTED RATED FOR LEVEL 3**

2.3 SUBSTITUTIONS

- A. Other UL Listed bullet resistant fiberglass products are acceptable if in compliance with all requirements of this specification. Alternate products must be submitted to the architect for approval one week prior to bidding.

PART 3 EXECUTION

3.1 SUPPORTING MEMBERS

- A. Prior to installing the bullet resistive material the contractor shall verify that all supports have been installed as required by the contract documents and the architectural drawings.

3.2 JOINTS

- A. All joints shall be reinforced by a back-up layer of bullet resistive 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)

3.3 APPLICATION

- A. Armor shall be installed in accordance with the manufacturer's printed recommendations. Armor panels shall be adhered using an industrial adhesive, mastic, screws or bolts. Method of application shall maintain the bullet resistive rating at junctures with the concrete floor slab and the bullet resistive window frames, and all required penetrations.

END OF SECTION 13070