SPECIFICATION
Blast Resistant Window Assemblies

Part 1 - General

1.1 Scope

a) **Scope of work:** Furnish all blast resistant security assemblies as required.

b) **Projected Blast Conditions:** The window frame and glazing assemblies must provide protection when exposed to the following projected blast conditions: peak blast pressure _____ psi with a positive phase blast wave duration of _____ milliseconds (or a positive blast wave impulse of _____ psi-msec).

c) **Blast Resistance Requirements:** The window frame assembly design, recommended anchorage and glazing for the specified window sizes shall provide a level of protection to building occupants as set forth in GSA TS-01-2003 by meeting Performance Criteria ____ ( __________ Hazard Level) or ASTM F1642-04 (2010) “_______________ Hazard” rating. The assemblies' performance against the projected blast event must be established either by independent third-party engineering analyses by a recognized authority or by actual blast or shock tube testing of prototype units.

1.2 Quality Assurance

a) **Experience:** Work provided for this section shall be designed and furnished by one manufacturer with at least five years of documented production of similar blast resistant units.

1.3 Submittals

a) **Submittal Drawings:** Shall include a window Schedule identifying the location of each window frame opening in relation to the floor plan/layout provided. Elevation drawings shall illustrate the frame profiles, sizes, anchor type, glazing thickness and glazing type. The submittal drawings must be approved by the architect/owner prior to fabrication of the window assemblies.

b) **Blast Safety Compliance:** The manufacturer of the window assemblies shall submit a report from an accredited engineering firm that specializes in blast analysis and testing. The test report information must specify compliance with the protection level specified under section 1.1.b Projected Blast Conditions.

c) **Installation Manuals:** One (1) copy will be sent with first shipment.

1.4 Steel Standards

a) **ASTM A1008:** Steel Sheet, Cold Rolled, Commercial Quality.
b) **ASTM A653:** Galvannealed Steel
c) **ASTM A666:** Stainless Steel Type 304 or 316
1.5 Warranty

All materials and workmanship must have a limited warranty against any defects for a period of one (1) year from date the shipment.

Part 2 – Products

2.1 Materials

Blast Resistant window frame assemblies shall manufactured with material of sufficient thickness, shape and profile to adequately resist the maximum anticipated blast loading transferred by the glazing. Glass pocket depth and design shall be such to accommodate the appropriate glass thickness and glazing combination.

2.2 Construction

a) All work shall be strong, rigid and neat in appearance; square, true, and free of defects, warp, or buckle.
b) Frames shall have trim faces welded and finished smooth.
c) All window frames are to be thoroughly cleaned and phosphatized to inhibit corrosion.
d) Window frames are to receive one coat of gray rust inhibiting primer.
e) Window frame assemblies will be manufactured in strict accordance with designs and specifications used to fabricate units analyzed by an independent laboratory as required under the Quality Assurance portion of this section.

2.3 Glazing

a) Blast resistant glazing shall be specified by the architect or end user and shall be consistent with the blast threat level.
b) Glazing material shall comply with UFC 4-010-01 Section B-3.1. and Section B-3.1.2.
c) Glazing sealants, neoprene or silicone, and setting blocks shall be provided by the supplier of the blast resistant glazing.

Part 3 – Shipping and Handling

a) Window frames will be crated for shipment as per standard domestic shipping procedures.
b) Window frames shall be received by the contractor at the job site and inspected upon delivery for any damage. Any minor damages may be field repaired provided it meets the acceptance of the owner/architect.
c) Window frames shall be stored upright in a protected area on wood runners or skids in a cool dry place.
   o Wood runners must be a minimum of 4” in height in case of any standing water.
   o Place a ¼” spacer between stacked doors and frames to allow for proper air circulation.
- Window frames must be protected from weather and humidity by well ventilated canvas or plastic covering.
- Please remove any cardboard wrapper that has become wet or humid.