

# SPECIFICATION

## Blast Resistant Door and Frame Assemblies

### Part 1 - General

#### 1.1 Scope

- a) **Scope of work:** Furnish all blast resistant security assemblies as required.
- b) **Projected Blast Conditions:** The door and frame assembly must withstand a peak blast overpressure of \_\_\_\_\_ (*specify 0.5 to 50.0 psi*) a blast duration of \_\_\_\_\_ ms (*or specify blast impulse of \_\_\_\_\_ psi-ms*), loaded in the seated or unseated direction, and with a rebound response of \_\_\_\_\_ (*specify 0%, 50% or 100%. If loaded in the unseated direction, rebound response is not relevant, enter 0%.*). (*if static blast loading is required, omit the duration and impulse part of this statement and just state static blast loading*).
- c) **UL Fire Rating Requirements:** The door and frame assemblies can be UL fire rated for 20 minutes to 3 hours. The rating is subject to the size of the door assembly, the blast conditions, and any glazing requirements of the door assemblies.

#### 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.
- b) **Blast Resistance Requirements:** The door and frame assemblies shall provide a Category \_\_\_\_ (*specify I, II or III performance*) based on the ASTM F2247-03 criteria. Any glazing in the doors must provide a Performance Criteria of \_\_\_\_ (*specify 1, 2, 3a*) per GSA-TS01-2003. The performance against the projected blast event must be established either by independent third-party engineering analysis by a recognized authority or by blast or shock tube testing of prototype units.
- c) **Fire Rating Test Requirements:** Prototypes of the door and frame assemblies shall have been satisfactorily tested and must meet the level of protection specified in section 1.1.c UL Fire Rating Requirements by an independent laboratory to UL 10c requirements.

#### 1.3 Submittals

- a) **Submittal Drawings:** Shall include a Door and Frame Schedule identifying the location of each door & 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

submitted to the architect/owner for approval prior to fabrication of the door and frame assemblies.

- b) **Blast Safety Compliance:** The manufacturer of the door and frame assemblies shall submit a report from an accredited engineering firm that specializes in blast analysis and testing. The report must specify compliance with the protection level specified under section 1.1.b Projected Blast Conditions.
- c) **UL Fire Rating Compliance:** The manufacturer of the door and frame assembly must have a test report from an accredited, licensed agency. The test report information must specify compliance with the protection level specified under section 1.1.c. UL Fire Rating Compliance.
- d) **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 shall be warranted by the manufacturer against any defects for a period of one (1) year from date of delivery to the job site.

### Part 2 – Products

#### 2.1 Materials

Blast resistant door/frame assemblies shall be manufactured with materials consistent with the blast threat level specified by the architect or the end user. The door and frame construction shall be based on the blast pressure and impulse requirements established on section 1.1.b Projected Blast Conditions.

#### 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 doors and frames are to be thoroughly cleaned and phosphatized to inhibit corrosion.
- d) Doors and frames are to receive one coat of gray rust inhibiting primer.
- e) Door and frame assemblies will be manufactured in strict accordance with designs and specifications used to fabricate units analyzed and/or tested by independent laboratories as required under the Quality Assurance portion of this section.

## 2.3 Glazing

- a) Blast resistant glazing shall be specified by the manufacturer and shall be consistent with the blast threat level.
- b) Glazing sealants, and setting blocks shall be provided by the manufacturer.
- c) All required glazing shall be installed in the door panels by the manufacturer.

## Part 3 – Shipping and Handling

- a) Door and frames will be crated for shipment as per standard domestic shipping procedures.
- b) Doors and 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) Doors and 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.
  - o Doors and frames must be protected from weather and humidity by well ventilated canvas or plastic covering.
  - o Any cardboard wrapper that becomes damp or wet must be removed.