

## SECTION 08 39 19

### WATERTIGHT DOORS AND FRAMES

#### PART 1 – GENERAL

##### 1.1 PURPOSE

- A. This guideline is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. PSP is to apply the principles of this section such that the University of Texas at Arlington (UTA) may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be approved by UTA and may require justification through Life Cycle Cost (LCC) analysis and submitted to UTA for approval.

##### 1.2 LESSONS LEARNED AND DESIGN CONSIDERATIONS

- A. X

##### 1.3 WORK INCLUDED

- A. Watertight steel doors and frames.
- B. Product engineering, fabrication, shop drawings, and structural calculations.
- C. Installation of watertight doors and frames.

##### 1.4 RELATED WORK

- A. Section 07 60 00 – Flashing and Sheet Metal.
- B. Section 07 90 00 – Joint Sealers.

##### 1.5 REFERENCES

- A. FEMA Technical Bulletin 3-93 Non-Residential Flood proofing
- B. ASCE 24-98, ASCE/SEI 24-05
- C. U.S. Army Corps of Engineers, EP 1165-2-314

##### 1.6 QUALITY ASSURANCE

- A. Provide watertight steel doors and frames that are structurally sound, impact resistant and conforming to applicable performance requirements described herein

##### 1.7 PERFORMANCE REQUIREMENTS

- A. Provide Design Criteria
  - 1. Except as otherwise indicated, requirements for watertight steel doors and frames, terminology, tolerances, standards of performance and workmanship are those specified as Type 2 Closures in Chapter 7, Section 701.1.2 of the U.S. Army Corps of Engineers, EP 1165-2-314, December 1995.
  - 2. Uniformly increasing fluid pressure (hydrostatic pressure loading of water at 62.5 pcf) with a 2:1 design safety factor based upon material yield strengths

##### 1.8 SUBMITTALS

- A. Shop Drawings.
  - 1. Submit scaled shop drawings including all conditions of construction, location diagrams including identification of and spacing of anchorage, framing members, joinery and sealant details.
- B. Structural Calculations
- C. Provide structural calculations by a licensed structural engineer in the state the project is located in demonstrating structural compatibility with project requirements.
- D. Warranties.
  - 1. Manufacturer's warranty in accordance with the contract documents.
  - 2. Provide installation warranty in accordance with the contract documents.

#### PART 2 – PRODUCTS

##### 2.1 MANUFACTURERS

- A. Basis of Design: Flood Control International, Secure Flood Proof Doors and Frames.

- B. Architecture Metals Ltd. Co., Flood Barrier PS Doors and Frames.
- C. Substitutions: See Section 01 6000 - Product Requirements.

## 2.2 MATERIALS

- A. Non- All Steel: ASTM A36 mild carbon steel.
- B. Gaskets: 20 durometer rubber. Neoprene unacceptable
- C. Fasteners: All anchor bolts, 304 Series Stainless Steel.
- D. Sealants: Compatible with all substrates and field applied in accordance with the manufacturer's recommendations.
- E. Hardware:
  - 1. Exit Device: Von Duprin 98F Series, US28.
  - 2. Keyed Lever Latch: Von Duprin 996L-R/V.
  - 3. Closer: LCN 4111.
  - 4. Strike: PS 299.
  - 5. Mullion: Removable on pair of doors.
  - 6. Finish:
    - a. Primer: SW Kemflash Primer E61-R-26.
    - b. Finish: 2 coats, SW Industrial and Marine Coating B54 Series.
    - c. Color: To be selected by Architect.

## 2.3 FABRICATIONS

- A. Fabricate watertight steel doors and frames to comply with requirements indicated for design, dimensions, materials joinery, and performance.
- B. Assemble watertight steel doors and frames at manufacturer's factory where feasible. Assemble in the largest possible sections according to job site conditions and clearly mark units for reassembly assuring a coordinated installation.
- C. All welds to be continuous and ground smooth.
- D. Fire Rating: Refer to Door Schedule

## **PART 3 – EXECUTION**

### 3.1 INSTALLATION

- A. Install watertight doors and frames in accordance with approved submittal drawings.
- B. Attach only to smooth surfaces providing for proper and compatible infill for gaps in substrate.
- C. Protect all dissimilar metals with a heavy coat of zinc chromate or bituminous paint.
- D. Install true and plumb without warping or racking.
- E. Apply appropriate sealants where indicated on shop drawings and in accordance with manufacturers recommendations.

### 3.2 CLEANING, PROTECTION AND STORAGE

- A. Clean all exposed surfaces and remove all labels from doors and frames.

END OF SECTION