



SECTION 08350

COMBINED THREAT RESISTANT (CTR) DOUBLE SWING DOORS **BALLISTIC – FORCED ENTRY – FIRE RATED** **MANUAL OPERATED**

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This section describes the requirements for providing Manually Operated, Combined Threat Resistant Double Swing Doors with Ballistic, Forced Entry, and Fire Resistance as shown on the drawings and as specified. Double swing doors will be 6'-0" wide by 7'-0" high.
- B. Provide complete door assemblies including door panels, hardware, opening frames, and installation accessories.
- C. Concrete or grout work is specified in Division 3 and is by others.
- D. Embedded steel frames are specified in Division 5 and are by others. As an option, embedded steel frames can be provided by the door manufacturer.
- E. Finish painting is specified in Division 9 and is by others. As an option, finish painting can be provided by the door manufacturer.

1.03 SUBMITTAL

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product Data: Submit manufacturer's product data, roughing-in diagrams, and installation instructions for each type and size of swing doors. Provide operating instructions and maintenance information.
- C. Shop Drawings: Show construction details; clearance requirements, metal gauges, finish, design data, and interface requirements for Work of other Sections of the Specification.

- D. Product Data: Door manufacturer to provide detailed calculations, independent test reports for Level 8 ballistic resistance (UL 752), 60 minute forced entry (DOS STD 01-01 Rev. G), and fire label for 180 minute fire rating (UL10 C), which proves that the door and door components meet the specified requirements and loads.

1.04 QUALITY ASSURANCE

- A. Furnish each swing door as a complete unit produced by one manufacturer, including hardware, accessories, mounting and installation components.
- B. Door manufacturer shall have at least 10 years experience in manufacturing protective doors and operating systems of a similar type.
- C. Single Source: Furnish each swing door unit by one manufacturer for the entire Project.
- D. Insert and Anchorages: Provide setting drawings, templates, instructions and directions for installation of anchorage devices. Coordinate delivery with other Work to avoid delays.
- E. See concrete and masonry Sections of these Specifications for installation of inserts and anchorage devices.

1.05 WARRANTY

- A. The door manufacturer shall provide a written standard limited one (1) year warranty for material and workmanship.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Project design is based on materials and systems of:
Electric Power Door
522 West 27th Street
Hibbing, MN 55746
800-346-5760 / www.electricpowerdoor.com

2.02 MATERIAL AND FABRICATION

- A. General: Comply with the following standards for forms and type of materials for required items of work. All steel to be US made.
 - 1. Structural Shapes and Plates----- ASTM A36
 - 2. Steel Sheet, Hot Rolled----- ASTM A1011
 - 3. Steel Tubing, Structural----- ASTM A500 GR. B
 - 4. Castings, Cast Iron----- ASTM A48
 - 5. Ballistic Rated Plate----- UL 752 Level 8

- B. Ballistic Resistance: The doors shall be independently tested and designed for Level 8 ballistic resistance as per UL 752 11th Edition.
- C. Forced Entry Resistance: The doors shall be independently tested and designed for 60 minute delay as per DOS STD 01.01 Rev. G.
- D. Fire Resistance: The doors shall be independently tested and designed for 180 minute fire resistance as per UL 10 C. Provide fire label.
- C. Door Panel Construction
 - 1. Door panels will have both horizontal and vertical structural framing and shall be constructed of standard structural steel tubing. Intermediate door panel members shall run horizontally.
 - 2. Door panels shall be of welded construction and all joints shall develop the full strength of the framing members. Door panels shall be true to dimension, square in all directions, and shall not be bowed, warped, or out of line by more than 1/8" in 20 feet. Exposed welds and welds which interfere with the installation of various parts shall be ground smooth. All welding to be per AWS D1.1.
 - 3. Door panels shall be sheeted on the threat side with a continuous piece of ballistic plate and on the other side with ASTM A1011 flat steel sheet. Sheetting to be welded to the door panel frame.
 - 4. Insulation: Door panels shall be insulated with mineral wool insulation. The insulation material shall be fitted to cover the entire interior surface of the door panels between and inside the structural tubing members.
 - 5. The opening frame shall be constructed of ASTM A36 structural steel channels and shall consist of jambs, head, sill plate, stops, and all necessary weld bars. The opening frame members shall be of ample size and strength for loads and stresses imposed under the specified conditions. Opening frame shall be of welded construction and all joints shall develop the full strength of the framing members. Welds to be as shown on the contract drawings. Opening frame shall be true to dimension, square in all directions, and shall not be bowed, warped, or out of line by more than 1/8" in 20 feet. Exposed welds and welds which interfere with the installation of various parts shall be ground smooth. Provide all door stops, sill, plates and weld bars for welding opening frames to embedded steel sub-frames which are furnished and installed by others. As an option, cast-in-place embedded steel frames can be provided by the door manufacturer. Embeds will be designed to maintain a clear opening dimension of 6'-7" (width) by 7'-4" (height). Factory-installed embed bracing will be supplied to ensure dimensional stability during placement and concrete curing. Embeds shall be delivered to the project site in advance of door shipment to allow for proper installation and coordination.

2.03 HARDWARE

- A. Provide hardware necessary for complete installation. Hardware shall be surface mounted and shall be heavy duty type, including all bolts and fittings for the hardware as follows:
1. Hinges: Each door panel shall be provided with two (2) shop-applied adjustable precision hinges with roller bearings. Provide zerK grease fittings in each hinge.
 2. Latches: The active door panel shall be provided with a manual operated vertical rod latch set with three-point latching (head, sill, and center) and the inactive door panel with two-point latching (head and sill). Lever handles will be provided on both sides of both door panels. Latching pins, rods, and handles to be stainless steel. Latch assemblies will be surface mounted and will be provided with removable covers.
 - a. Option: Electric operated latching with prewired NEMA 4 control panel and SO cord can be provided for the active door panel. The inactive door panel would have manual latching.
 3. Threshold: Each door shall be provided with an ASTM A36 steel plate threshold
 4. Door Seals: Provide smoke and fire resistant seals at the head, jambs, and leading edges of the door panels.
 5. Automatic Door Bottom: Provided on each door panel for fire resistance.
 6. Astragals: Provide protective steel bar astragals on the leading and bottom edges of the door panels.
 7. Optional Hardware:
 - a. Lock: Manual operated with ballistic resistant guard, provided on the active door panel.
 - b. Door Closers: Provided for each door panel on the interior side of the door.
 - c. Door Coordinator: Provided to ensure proper door closing sequence.
 - d. Panic Hardware: Provided on the interior side of the active door panel, material to be stainless steel.
 - e. Gun Port Assembly: 3-1/2" diameter opening with manual operated sliding ballistic resistant cover plate with latches and spring-assist.

2.04 SHOP FINISHING

- A. General: Thoroughly clean, pre-treat and prime surfaces of door assembly including fixed panels trim, support, and closure pieces.
1. Pre-treatment: As required by primer manufacturer.
 2. Steel surfaces will be shop painted with manufacturer's standard primer.

- B. Finish painting will be in the field by others. As an option, finish painting can be provided by the door manufacturer.

2.05 OPERATIONAL TESTING

- A. All doors shall be shop assembled and tested for operation prior to shipping. Provide operational test reports as required.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verify that conditions are satisfactory for installation of the swing doors.
- B. Do not proceed with the Work of this Section until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. The installation of the doors shall be by a certified company of the door manufacturer or supervised by an authorized representative of the door manufacturer.
- B. Install doors and operating equipment complete with necessary hardware, jamb and head weather strips, anchors, inserts, and equipment supports in accordance with final Shop Drawings, manufacturer's instructions, field welding details, and as specified herein.
- C. Upon completion of installation including work by other trades, lubricate, test and adjust doors to operate easily, free from warp, twist, or distortion and fitting weather tight for entire perimeter.