PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Manual automatic closing rolling counter fire doors with SmokeShield® UL leakage rated assembly label.

B. Related Sections:
1. 05 50 00 Metal Fabrications. Door opening jamb and head members.
2. 06 10 00 Rough Carpentry. Door opening jamb and head members.
3. 08 31 00 Access Doors and Panels. Access doors.
4. 08 70 00 Hardware. Padlocks. Masterkeyed cylinder.
5. 09 91 00 Painting. Field painting.
6. Division 26. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, installation of control station and wiring, and connection to alarm system.

C. Products That May Be Supplied, But Are Not Installed Under This Section:
1. Control station.
2. Smoke/heat detectors.
3. Annunciator.

1.2 SYSTEM DESCRIPTION

Performance Requirements:

1. Provide doors with Underwriters' Laboratories, Inc. label for the fire rating classification, 1 1/2 hr.
2. Provide doors with Underwriters' Laboratories, Inc. label for "Leakage Rated Assembly" or "S" label.

Comply with NFPA 105 air leakage requirements.
Pass UL test procedure 1784.

1.3 SUBMITTALS

A. Reference Section 01 33 00 Submittal Procedures; submit the following items:
1. Product Data.
2. Shop Drawings: Include special conditions not detailed in Product Data. Show interface with adjacent work.
3. Quality Assurance/Control Submittals:
   a. Provide proof of manufacturer ISO 9001:2008 registration.
   b. Provide proof of manufacturer and installer qualifications - see 1.4 below.
   c. Provide manufacturer's installation instructions.
4. Closeout Submittals:
   a. Operation and Maintenance Manual.
   b. Certificate stating that installed materials comply with this specification.

1.4 QUALITY ASSURANCE

A. Qualifications:
1. Manufacturer Qualifications: ISO 9001:2008 registered and a minimum of five years experience in producing counter fire doors [and smoke control] units of the type specified.
2. Installer Qualifications: Manufacturer's approval.

1.5 DELIVERY STORAGE AND HANDLING

A. Reference Section 01 66 00 - Product Storage and Handling Requirements.

B. Follow manufacturer's instructions.

1.6 WARRANTY

A. Standard Warranty: Two years from date of shipment against defects in material and workmanship.

B. Maintenance: Submit for owner's consideration and acceptance of a maintenance service agreement for installed products.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Cornell Iron Works, Inc., Crestwood Industrial Park, Mountaintop, PA 18707. Telephone: (800) 233-8366 Ext 593 (John Kehl), Fax: (800) 526-0841. Underwriters Laboratories, Inc. (UL), ISO 9001:2008 Registered.

1. Distributor: Contact Cornell Iron Works for list of authorized dealers.

B. Model: ERC11

2.2 MATERIALS

A. Curtain:
1. Slats: No. 1F, interlocked flat-faced slats, 1-1/2 inches (38 mm) high by 1/2 inch (13 mm) deep, 22 gauge ASTM A 653, Commercial Quality, galvanized steel with plain steel bottom bar and vinyl astragal.
2. Fabricate continuous interlocking slat sections with high strength galvanized steel endlocks riveted to slats per UL requirements.
3. Slat Finish:
a. GalvaNex™ Coating System to include an ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation of a chemical bonding, ~~light gray~~ [tan] baked-on polyester base coat and a [~~light gray~~] [tan] baked-on polyester finish coat. The scientific organic material composition and chemical bonding process of GalvaNex™ produces a superior finish against corrosion and abrasion. GalvaNex™ components include a limited two year finish warranty.
4. Bottom Bar Finish:
a. Steel: Phosphate treatment followed by a [~~light gray~~] [tan] baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness.

B. Guides:
1. Steel: 12 gauge formed shapes.
2. Finish:
a. Steel: Phosphate treatment followed by a [~~light gray~~] [tan] baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness.

C. Counterbalance Shaft Assembly:
1. Barrel: Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width.
2. Spring Balance: Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.

D. Brackets: Fabricate from reinforced steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and

form end closures.
1. Finish:
a. Steel: Phosphate treatment followed by a ~~[light gray]~~ [tan] baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness.

E. Hood and mechanism covers: 24 gauge galvanized steel with reinforced top and bottom edges. Provide minimum 1/4 inch (6.35 mm) steel intermediate support brackets as required to prevent excessive sag.
1. Finish:
a. GalvaNex™ Coating System to include an ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation of a chemical bonding, ~~[light gray]~~ [tan] baked-on polyester base coat and a ~~[light gray]~~ [tan] baked-on polyester finish coat. The scientific organic material composition and chemical bonding process of GalvaNex™ produces a superior finish against corrosion and abrasion. GalvaNex™ components include a limited two year finish warranty.

F. Smoke Seals:
1. Bottom Bar: UL Tested PVC double bulb seal.
2. Guides and Head: Replaceable, UL Listed, nylon pile smoke seals sealing against fascia side of curtain.

2.3 ACCESSORIES

A. Locking:
1. Manual Crank Hoist: Padlockable slide bolt on coil side of bottom bar at each jamb extending into slots in guides.

2.4 OPERATION

A. Manual M100 Chain Hoist: Provide combination chain / controlled closing system operator including endless steel chain, geared reduction unit, chain keeper and an electric wall mounted close control station. Integral to the unit is a releasing device for connection to a central alarm system or local smoke detectors and a governor to control automatic closing speed.
Automatic closure shall be activated by [a central smoke/fire alarm system] ~~[a local smoke/fire detector]~~.
Doors shall maintain an average closing speed of not more than 12" (305 mm) per second during automatic closing.
Resetting of spring tension or mechanical dropouts shall not be required.

1. Control Station: Flush mounted Close key control station.

C. Automatic Closing and Speed Governor Mechanism:

1. M100 FireGard Chain System:
a. Activation: Alarm signal or power outage in excess of 10 seconds.
b. Operation: Hand chain open/close or use of a wall mounted close control station. When automatic closing is activated, integral brake and chain operator shall disengage. Integral governor controls closing speed.
c. Average Closing Speed: Not more than 12 inches (305 mm) per second.
d. Reset Procedure: Resetting of spring tension or mechanical dropouts shall not be required. Simply open door by use of chain operator after alarm is cleared and/or power

is restored.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

A. General: Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports.

B. Comply with NFPA 80 and NFPA 105 and follow manufacturer's installation instructions.

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion.

3.4 FIELD QUALITY CONTROL

A. Site Test: Test doors for normal operation and automatic closing. Coordinate with authorities having jurisdiction to witness test and sign Drop Test Form.

3.5 CLEANING

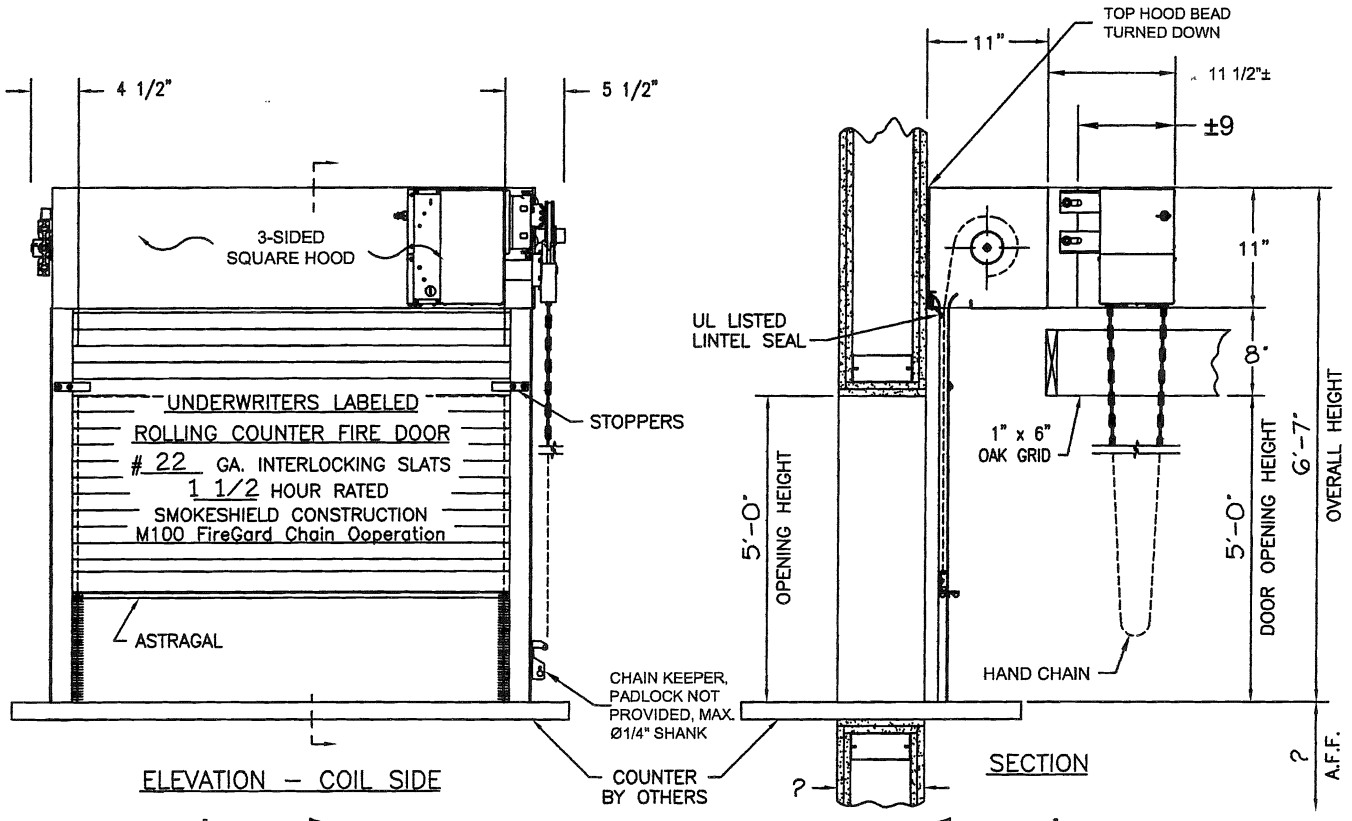
A. Clean surfaces soiled by work as recommended by manufacturer.

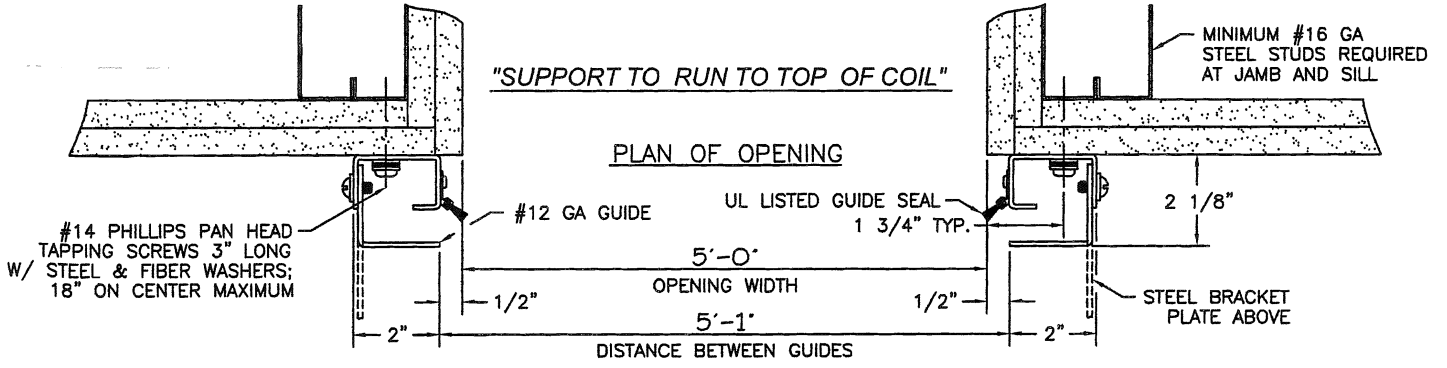
B. Remove surplus materials and debris from the site.

3.6 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative.

B. Instruct Owner's Representative in maintenance procedures.





QUANTITY & SIZE:

(8)	D.B.G. 5'-1"	X	D.O.H. 5'-0"	MARK

WALL CONSTRUCTION:

☐ Steel ☐ Masonry ☒ Other DRYWALL W/ STEEL STUDS

MATERIAL & FINISH:

CURTAIN - GALVANIZED STEEL, GALVANEX FINISH CORNELL GRAY
BOTTOM BAR - PLAIN STEEL, POWDER COATED CORNELL GRAY
GUIDES - PLAIN STEEL, POWDER COATED CORNELL GRAY
HOOD - GALVANIZED STEEL, GALVANEX FINISH CORNELL GRAY
PLAIN STEEL - POWDER COATED CORNELL GRAY

1-auto reset release device integral to m100 operator
- accepts 24 vdc, 115 or 24 vac input power
1 - Key switch close control, flush mounted.

09/15/2011
BSE_UL9R

M100 FireGard Chain Operated(FCA)Rolling Counter Fire Door

MARRAKECH INC 450 ISLAND LANE
NEW HAVEN CT

DRAWN BY: JOHNK
DATE 10/07/11

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