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USACE / NAVFAC / AFCEA UFGS-08331A (December 2003)  
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Preparing Activity: USACE Superseding  
UFGS-08331A (September 1998)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated 25 June 2004

Latest change indicated by CHG tags

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### SECTION 08331A

#### METAL ROLLING COUNTER DOORS 12/03

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NOTE: This guide specification covers the requirements for metal rolling counter doors.

Comments and suggestions on this guide specification are welcome and should be directed to the technical proponent of the specification. A listing of technical proponents, including their organization designation and telephone number, is on the Internet.

Recommended changes to a UFGS should be submitted as a Criteria Change Request (CCR).

Use of electronic communication is encouraged.

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.

This guide specification includes tailoring options for rolling counter door (non-rated), fire-rated rolling counter door, integral frame rolling counter door, and automatic closing device. Selection or deselection of a tailoring option will include or exclude that option in the section, but editing the resulting section to fit the project is still required.

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## PART 1 GENERAL

### 1.1 REFERENCES

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NOTE: Issue (date) of references included in project specifications need not be more current than provided by the latest guide specification. Use of SpecsIntact automated reference checking is recommended for projects based on older guide

**specifications.**

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The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM A 240/A 240M	(2003c) Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels for General Applications
ASTM A 653/A 653M	(2003) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM B 209	(2002a) Aluminum and Aluminum-Alloy Sheet and Plate
ASTM B 209M	(2002a) Aluminum and Aluminum-Alloy Sheet and Plate (Metric)
ASTM B 221	(2002) Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
ASTM B 221M	(2002) Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 80	(1999) Fire Doors and Fire Windows
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1.2 SUBMITTALS

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**NOTE:** Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident

Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy projects.

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Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.] [for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

#### SD-02 Shop Drawings

Approved Detail Drawings[; G][; G, [\_\_\_\_\_]]

Drawings showing elevations of each door type, details of anchorage, details of construction, location and description of hardware, shape and thickness of materials, details of joints and connections, and details of guides and fittings. A schedule showing the location of each counter door shall be included with the drawings.

#### SD-03 Product Data

##### Rolling Counter Doors

Manufacturer's descriptive data and catalog cuts.

Installation  
Cleaning

Manufacturer's preprinted installation and cleaning instructions.

#### SD-10 Operation and Maintenance Data

##### Operation

[Six] [\_\_\_\_\_] complete copies of maintenance instructions listing routine maintenance procedures, possible breakdowns and repairs, troubleshooting guides, and simplified diagrams for the equipment as installed. Spare parts data for each different item of material and equipment specified shall be supplied not later than [\_\_\_\_\_] [months] [days] prior to the date of beneficial occupancy. The data shall include a complete list of parts and supplies, with current unit prices and source of supply, and a list of the parts recommended by the manufacturer to be replaced after [1 year] [and] [3 years] of service.

### 1.3 GENERAL REQUIREMENTS

Rolling counter doors shall be of the type, size, and design indicated on the drawings, and shall be the standard product of a manufacturer regularly engaged in the production of rolling counter doors. Each door shall be provided with a permanent label showing the manufacturer's name and address and the model number of the door.

### 1.4 DELIVERY AND STORAGE

Rolling counter doors shall be delivered to the jobsite wrapped in a protective covering with the brands and names clearly marked thereon. Rolling counter doors shall be stored in accordance with the manufacturer's instructions in a dry location that is adequately ventilated and free from dust, water, or other contaminants, and in a manner that permits easy access for inspecting and handling. Doors shall be handled carefully to prevent damage. Damaged items that cannot be restored to like-new condition shall be replaced.

### 1.5 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period shall be provided.

## PART 2 PRODUCTS

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**NOTE:** These paragraphs will be edited to retain only the materials and finishes for the type of rolling counter door required for the project. If finishes other than those specified are required, the specification will be revised accordingly. Generally G40 minimum galvanized coating with prime coat is sufficient for interior applications on most projects. Aluminum or stainless steel should be selected for esthetics. Aluminum should not be chosen for high use applications. Fire rated doors shall be constructed only of steel or stainless steel.

Fire-rated doors are not normally available in sizes as large as non-rated doors. Coordinate with manufacturers on available heights and widths.

Add requirements for weatherstripping and weather-tight installation for rolling counter doors located on exterior walls.

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### 2.1 BASIC COMPONENTS

#### 2.1.1 Curtain

The curtain shall be fabricated of extruded aluminum slats conforming to ASTM B 221M ASTM B 221, Alloy 6063, 0.759 mm 22 gauge Type 304 stainless steel slats conforming to ASTM A 240/A 240M, Type 304 or Type 430, or 0.759 mm 22 gauge galvanized steel slats conforming to ASTM A 653/A 653M, Coating Designation [G60] [G90] as specified. Thickness of slat material shall be as required by width of opening or as required by specified fire-rating.

Slats shall be approximately 32 to 38 mm 1-1/4 to 1-1/2 inch wide with a depth of crown of 13 mm 1/2 inch. Alternate slats shall be fitted with end locks to maintain curtain alignment. Bottom of curtain shall be provided with angle or tubular bar reinforcement matching the curtain, and fitted with a resilient bottom seal.

#### 2.1.1.2 Jamb Guides

Guides shall be of [3 mm 1/8 inch minimum thickness extruded aluminum conforming to ASTM B 221M ASTM B 221, Alloy 6063, and shall be fitted with neoprene silencers or replaceable heavy nap striping to eliminate noise and dust infiltration.] [2.278 mm 13 gauge minimum thickness stainless steel conforming to ASTM A 240/A 240M, Type 304 or Type 430.] [2.278 mm 13 gauge minimum thickness galvanized steel angles conforming to ASTM A 653/A 653M, Coating Designation [G60] [G90].]

#### 2.1.1.3 Counterbalance Shaft Assembly

The curtain shall be coiled around a steel tube of sufficient thickness and diameter to prevent deflection exceeding 2.5 mm per meter 0.03 inch per foot.

The barrel shall contain oil tempered helical steel torsion springs capable of sufficient torque to counterbalance the weight of the curtain. Springs shall be calculated to provide a minimum of [7,500] [\_\_\_\_\_] operating cycles (one complete cycle of door operation will begin with the door in the closed position, move to the full open position and return to the closed position).

#### 2.1.1.4 Brackets

Brackets shall be a minimum 2.657 mm 12 gauge thickness steel if flat plate, or 1.519 mm 16 gauge thickness if there are a minimum of 3 returns of 19 mm 3/4 inch width.

#### 2.1.1.5 Hood

The hood shall be of [1.02 mm 0.040 inch minimum thickness aluminum sheet conforming to ASTM B 209M ASTM B 209, Alloy 5005.] [0.607 mm 24 gauge stainless steel conforming to ASTM A 240/A 240M, Type 304 or Type 430.] [0.607 mm 24 gauge galvanized steel conforming to ASTM A 653/A 653M, Coating Designation [G60] [G90].]

#### 2.1.1.6 Locks

The curtain shall be locked at [each side of the bottom bar by an integral slide bolt suitable for padlocks by others] [both sides of bottom bar by a chrome-plated cylinder lock keyed into the building keying system]. Lock shall be on the [\_\_\_\_\_] room side of the counter door. [[Pad locks] [and] [keying] shall [conform to Section 08710 DOOR HARDWARE] [be as shown].]

#### 2.2 ROLLING COUNTER DOOR (NON-RATED)

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**NOTE: Standard non-rated rolling counter doors may be constructed of aluminum, steel or stainless steel. Operation may be manual push-up, manual crank with removable handle, or motor operation. Edit the specification for the type or types of rolling doors required for the project.**  
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Rolling counter doors shall conform to the requirements specified herein and shall be constructed of [aluminum] [stainless steel] [galvanized steel] curtains, guides and hood components.

### 2.3 FIRE-RATED ROLLING COUNTER DOOR

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NOTE: Fire-rated rolling counter doors are available with Class A (3 hr), Class B (1-1/2 hr), C (3/4 hr), or Class D (1-1/2 hr) label. If only one class of rolling counter door is required for the project, the label requirement may be specified. If the project requires more than one class of rolling counter door, the label requirements should be shown on the drawings. If fire-rated rolling counter doors are not required, all references to fire-rating and label requirements will be deleted.

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Fire-rated rolling counter doors shall be [[Class A (3 hr.)] [Class B (1-1/2 hr.)] [Class C (3/4 hr.)] [Class D (1-1/2 hr.)] rated] [as shown] and shall conform to the requirements specified and to NFPA 80 for the class indicated. Doors shall bear the labels of a recognized testing agency indicating the applicable fire resistance rating. The construction details necessary for labeled rolling counter doors shall take precedence over details indicated or specified herein. Door curtains, guides and hood shall be [stainless steel] [galvanized steel]. Fire-rated rolling counter doors shall be complete with hardware, accessories, and automatic closing device. Rolling counter doors in exit corridor walls shall be provided with perimeter smoke and draft control gasketing.

### 2.4 INTEGRAL FRAME ROLLING COUNTER DOOR (RATED OR NON-RATED)

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NOTE: Requirements for counter and frame construction will be shown on the drawings. Integral frame units may be used where appropriate; however, the specification must be edited to incorporate the additional requirements for frame and counter. Fire rated integral frame units are available with Class A (3 hr), Class B (1-1/2 hr), or Class C (3/4 hr), or Class D (1-1/2 hr) label. Integral frame doors are not available as split frame.

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Integral frame rolling counter door shall be [[aluminum] [stainless steel] [galvanized steel].] [[[Class A (3 hr.)] [Class B (1-1/2 hr.)] [Class C (3/4 hr.)] [Class D (1-1/2 hr.)]] [as shown], [stainless steel] [galvanized steel].] Fire-rated doors shall conform to the requirements of NFPA 80 for the Class indicated and shall bear the labels of a recognized testing agency indicating the applicable fire resistance rating. Jambs shall be formed to create guides for the curtain. Head and jambs shall be 1.519 mm 16 gauge thickness. Counter shall be 1.894 mm 14 gauge thickness. Rolling counter doors in exit corridor walls shall be provided with perimeter smoke and draft control gasketing.



## 2.5 OPERATION

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NOTE: Rolling counter doors over 3048 mm (10 feet)  
wide, or where the interior counter is over 380 mm  
(15 inches) deep, may use manual crank operation or  
electric operation.  
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### 2.5.1 Manual Operation

The curtain shall be operated by means of [manual push-up with lift handles  
or continuous full width lift bar]. [manual crank with removable handle].

### 2.5.2 Power Operation

A high-starting torque, reversible type motor of sufficient power and  
torque output to move the door in either direction from any position at the  
required speed shall be furnished. Power operator shall have an emergency  
push-up operation, limit switch, three-button type control marked "OPEN",  
"CLOSE", and "STOP". Control voltage shall be [24 vac] [120 vac]. Conduit  
and wiring necessary for proper operation shall be provided in accordance  
with Section 16415A ELECTRICAL WORK, INTERIOR.

## 2.6 AUTOMATIC CLOSING DEVICE

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NOTE: Activation of the automatic closing device on  
fire rated counter doors shall be by the building's  
fire alarm system or smoke/heat detector system when  
counter doors are located in smoke barriers and fire  
barriers, or where life safety would be endangered  
by fire and smoke if the doors were left open.  
Fusible link devices will only be used in those  
areas where protection of property from fire is the  
only consideration.  
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Fire-rated counter doors shall be equipped with an automatic closing device  
which shall operate upon [the fusing of a 74 degrees C 165 degree F fusible  
link] [activation of the building's [fire alarm system] [smoke alarm  
system] [heat detector system]]. Fire and smoke doors shall be easily reset  
by the facility user after they have been released by the detection system.  
Resetting the door shall not require the use of special tools.]

## 2.7 FINISH

Exposed parts of the counter door, including the curtain, bottom rail,  
guides, and hood shall be of uniform finish and appearance. [Aluminum  
shall have a clear anodized finish.] [Stainless steel shall have a No. 4  
finish.] [Steel galvanized coating shall have a [prime coat] [and] [a  
baked-on or powder-coated Factory top coat finish].] All other steel parts  
shall be given a shop coat of primer paint standard with the manufacturer.  
Factory coated color shall be [in accordance with Section 09915 COLOR  
SCHEDULE] [\_\_\_\_\_].

## PART 3 EXECUTION

### 3.1 INSTALLATION

Doors shall be installed in accordance with approved detail drawings and manufacturer's instructions. Anchors and inserts for guides, brackets, hardware, and other accessories shall be accurately located. Upon completion, doors shall be free from warp, twist, or distortion. Doors shall be lubricated, properly adjusted, and demonstrated to operate freely. Fire-door installation shall be in conformance with NFPA 80 for the class indicated and the manufacturer's instructions.

### 3.2 FIELD FINISHING

Doors to receive field finishing shall be factory primed, as required, and then shall be finished in accordance with Section 09900 PAINTS AND COATINGS. Color shall be [in accordance with Section 09915 COLOR SCHEDULE] [\_\_\_\_\_].

### 3.3 CLEANING

Aluminum and stainless steel doors shall be cleaned in accordance with manufacturer's approved instructions.

### 3.4 TESTS

The fire doors shall be drop tested in accordance with NFPA 80 to show proper operation and full automatic closure and shall be reset in accordance with the manufacturer's instructions. A written record of initial test shall be provided to the Contracting Officer.

-- End of Section --