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USACE / NAVFAC / AFCEA / NASA

UFGS-12 34 00 (May 2009)

Preparing Activity: NASA

Superseding

UFGS-12 34 00 (January 2008)

## UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2009

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05/09

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### SECTION 12 34 00

#### MANUFACTURED PLASTIC CASEWORK 05/09

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NOTE: This guide specification covers the requirements for manufactured plastic casework.

Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

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).

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## PART 1 GENERAL

### 1.1 REFERENCES

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NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically  
be deleted from this section of the project  
specification when you choose to reconcile  
references in the publish print process.

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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.

ASME INTERNATIONAL (ASME)

ASME B18.6.1 (1981; R 2008) Wood Screws (Inch Series)

ASTM INTERNATIONAL (ASTM)

ASTM A 167 (1999; R 2009) Standard Specification for  
Stainless and Heat-Resisting  
Chromium-Nickel Steel Plate, Sheet, and  
Strip

ASTM A 325 (2009) Standard Specification for  
Structural Bolts, Steel, Heat Treated,  
120/105 ksi Minimum Tensile Strength

ASTM A 325M (2009) Standard Specification for  
Structural Bolts, Steel, Heat Treated, 830  
Mpa Minimum Tensile Strength (Metric)

ASTM C 1036 (2006) Standard Specification for Flat  
Glass

ASTM D 4000 (2009a) Standard Classification System for  
Specifying Plastic Materials

ASTM D 4689 (1999; R 2005) Standard Specification for  
Adhesive, Casein-Type

ASTM D 4690 (1999; R 2005) Standard Specification for  
Urea Formaldehyde Resin Adhesives

ASTM F 594 (2008) Standard Specification for  
Stainless Steel Nuts

ASTM F 836M (2002) Standard Specification for Style 1  
Stainless Steel Metric Nuts

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

BHMA A156.9 (2003) Cabinet Hardware

KITCHEN CABINET MANUFACTURERS ASSOCIATION (KCMA)

KCMA A161.1 (2000) Performance & Construction  
Standards for Kitchen and Vanity Cabinets

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA LD 3 (2005) Standard for High-Pressure

Decorative Laminates

NEMA LD 3.1

(1995) Performance, Application,  
Fabrication, and Installation of  
High-Pressure Decorative Laminates

SCIENTIFIC EQUIPMENT AND FURNITURE ASSOCIATION (SEFA)

SEFA 7

(1996) Recommended Practice for Laboratory  
and Hospital Service Fittings

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FS FF-B-588

(Rev E) Bolt, Toggle: and Expansion  
Sleeve, Screw

FS FF-S-325

(Int Amd 3) Shield, Expansion; Nail,  
Expansion; and Nail, Drive Screw (Devices,  
Anchoring, Masonry)

FS TT-C-490

(1990; Am 2) Cleaning Methods for Ferrous  
Surfaces and Pretreatments for Organic  
Coatings

FS TT-C-520

(Rev B; Am 1) Coating Compound,  
Bituminous, Solvent Type, Underbody (for  
Motor Vehicles)

FS TT-E-491

(Rev C) Enamel; Gloss, Synthetic (for  
Metal and Wood Furniture)

FS TT-F-336

(Rev E) Filler, Wood, Paste

FS WW-P-541

(1990e; Am 1) Plumbing Fixtures

1.2 SUBMITTALS

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NOTE: Review Submittal Description (SD) definitions  
in Section 01 33 00 SUBMITTAL PROCEDURES and edit  
the following list to reflect only the submittals  
required for the project. Submittals should be kept  
to the minimum required for adequate quality control.

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, Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army 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.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

#### SD-02 Shop Drawings

Submit fabrication drawings for plastic cabinets.

Submit [Installation Drawings](#) for plastic cabinets in accordance with the paragraph entitled, "Installation," of this section.

#### SD-03 Product Data

Submit Manufacturer's catalog data for the following items:

[Cabinets](#)  
[Glass](#)  
[Adhesives](#)  
[Filler Material](#)  
[Fasteners](#)  
[Service Fixtures](#)  
[Accessories and Hardware](#)  
[Plastic Laminate](#)  
[Steel Sinks](#)  
[Countertops](#)

#### SD-04 Samples

Submit samples in accordance with [ASTM D 4000](#), and include:

[Accessories and Hardware](#), one each.

Submit [Manufacturer's Standard Color Charts](#) in accordance with paragraph entitled, "General," of this section.

#### SD-07 Certificates

Submit certificates for the following items showing conformance with the referenced standards contained in this section.

[Corrosion-Resistant Steel](#)  
[Glass](#)  
[Adhesives](#)  
[Filler Material](#)

Fasteners  
Service Fixtures  
Accessories and Hardware

#### SD-08 Manufacturer's Instructions

Submit [Manufacturer's Instructions](#) in accordance with paragraph entitled, "General," of this section.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

Deliver, handle, and store cabinets in a manner that will prevent damage or deformity.

Provide temporary skids under units weighing more than [\_\_\_\_\_] [kilogram](#) [pounds](#).

#### 1.4 DESIGN

Furnish plastic laminate cabinets, factory-fabricated and finished in the manufacturer's standard sizes and finishes of the type, design, and configuration indicated. Construct cabinets as specified and meet the requirements of [KCMA A161.1](#). Provide wall and base cabinet assemblies consisting of individual units joined into continuous sections. Accomplish fastenings to permit removal and replacement of individual units without affecting the remainder of the installation. Provide counters with watertight sink rim when indicated. Provide removable drawers equipped with position stops to avoid accidental complete withdrawals. Fix or adjust shelves as indicated.

### PART 2 PRODUCTS

#### 2.1 GENERAL

Submit [Manufacturer's Standard Color Charts](#) for plastic cabinets showing the manufacturer's recommended color and finish selections.

Submit [Manufacturer's Instructions](#) for plastic cabinet systems including special provisions required to install equipment components and system packages, and any special notices detailing impedances, hazards and safety precautions.

[Provide the manufacturer's cabinets with the standard sizes, type, and design indicated. Both wall and base cabinet assemblies will consist of individual units joined into continuous sections as indicated. Accomplish fastenings to permit removal and replacement of individual units without affecting the remainder of the installation.]

#### 2.2 MATERIALS

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**NOTE: Delete any of the following materials that  
are not applicable.**  
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[Provide [Corrosion-Resistant Steel](#) conforming to [ASTM A 167](#), Type [302] [304] [316] Finish 4.]

[Provide [Glass](#) conforming to [ASTM C 1036](#), Type I, Class 1, Quality q3, 6

millimeter 1/4 inch thick, for unframed sliding glass doors; and other glass conforming to ASTM C 1036, Type II, Class 1, Quality q8, 5 millimeter 7/32 inch thick.]

Provide thermosetting urea-resin Type II Adhesives for application of plastic laminate conforming to ASTM D 4690 as recommended by the manufacturer of the laminate. Provide adhesive for wood members conforming to ASTM D 4689.

[Provide Filler Material conforming to FS TT-F-336.]

[\_\_\_\_\_]

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NOTE: Review NEMA LD 3 and insert style, type,  
grade, class, and finish as required.  
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Provide Plastic Laminate that conforms to NEMA LD 3, Style [\_\_\_\_\_], Type [\_\_\_\_\_], Grade [\_\_\_\_\_], Class [\_\_\_\_\_], Finish [\_\_\_\_\_].

Provide Accessories and Hardware that conforms to the following requirements, as applicable:

Extension drawer slides: BHMA A156.9, Type B85071

Semiconcealed hinges: BHMA A156.9, Type B81201, 40 millimeter 1-1/2 inches

Full surface hinges: BHMA A156.9, Type B81131, 40 millimeter 1-1/2 inches

Knob pulls: BHMA A156.9, Type B12132 25 millimeter 1-inch diameter

Bar type pulls: BHMA A156.9, Type B12012 100 millimeter 4-inch overall length

Locks, keying, and keys: As directed

Catches: Magnetic, 22 newton 5-pound pull

Sliding door set:

Nylon glides

[\_\_\_\_\_]

Provide Fasteners conforming to the following:

Screws: ASME B18.6.1, Group, Type and Class as applicable

Anchoring Devices: FS FF-S-325, Group, Type, and Class as applicable

Toggle bolts: FS FF-B-588, Type I, Class A, Style 2

Nuts: ASTM F 836M ASTM F 594, corrosion-resistant steel

Bolts: ASTM A 325M ASTM A 325, heavy, hexagon head bolts corrosion-resistant steel

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NOTE: Sink for inset-type installation is as  
specified in Section 22 00 00 PLUMBING, GENERAL  
PURPOSE.  
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[Integral Corrosion-resistant Steel Sinks:

[1.3 millimeter 18-gage corrosion-resistant steel, integral with  
corrosion-resistant steel countertop]

[1.3 millimeter 18-gage corrosion-resistant steel, nonintegral,  
self-rimming]

Drain holes in center of bowl

Underside coated with 3 millimeter 1/8-inch thick sound deadener

Die-form, seamless, raised edges at front and ends

Cove corners to 13 millimeter 1/2-inch radius

Equip with strainers and tail pieces]

[Provide Sound deadening conforming to FS TT-C-520.]

[Provide Service Fixtures conforming to the following requirements:

Provide fixtures in accordance with the water conservation policy as  
stated in the Standard Plumbing Codes, Appendix J.

Faucets: Splashback mounted, cast brass, chrome plated, FS WW-P-541

Faucets: Deck mounted, cast brass, chrome plated, FS WW-P-541

Gas, air, and vacuum, distilled water, steam, and de-ionized water  
cocks: Cast brass, chrome plated, ground key type

Drains, strainers, and taps: Brass, chrome plated, FS WW-P-541

Index buttons: Plastic, color codes in accordance with SEFA 7

Special items: Nipples and locknuts with each fixture will be as  
directed.]

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NOTE: Delete any of the following types that are  
not applicable.

Type I, zinc phosphate

Type II, iron phosphate

Type III, organic-paint, varnish, lacquer

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[Metal pretreatment coatings: FS TT-C-490, Type I]



[Metal pretreatment coatings: FS TT-C-490, Type II]

[Metal pretreatment coatings: FS TT-C-490, Type III]

[Enamel: FS TT-E-491, Class 2]

## 2.3 MISCELLANEOUS CABINETS

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**NOTE: Delete inapplicable paragraphs, or state appropriate options.**  
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### 2.3.1 Combination Sink-and-Base Cabinet

Provide sink with matching drainboards, made of [corrosion-resistant steel] [porcelain-enamel steel] [plastic laminate] [Corian] [fiberglass composites]; equipped with a chromium-plated [swinging-spout faucet, chromium-plated water-control valves,] [automatic faucet] and chromium-plated cup strainer. Make joints between sink and drainboard and between drainboard and countertop watertight.

### 2.3.2 Special Purpose Cabinets

Provide special-purpose cabinets, such as cabinets for eye-level oven units, countertop range units, and built-in refrigerators as indicated on the drawings with the same materials and construction as adjacent cabinets.

## 2.4 ACCESSORIES AND HARDWARE

Furnish accessories such as utility shelves and racks for extracts, condiments, and towels; bins for sugar and flour; breadboxes; and trays for cutlery and flatware as indicated.

Provide corrosion resistant hardware. Provide exposed with a chromium-plated finish or a corrosion-resistant finish as approved. Paint semiconcealed hinges on cabinets where paint finish is required to match the cabinets. Equip doors with [bullet-type catches] [spring hinges] [magnetic-type catches]. Provide door and drawer pulls as indicated.

## 2.5 CABINETS

The work includes providing new factory-finished kitchen wall and base cabinets with high pressure decorative laminate (HPDL) countertops [and bathroom vanity cabinets [with HPDL countertops] [to receive combination lavatory-countertops as specified in Section 22 00 00 PLUMBING, GENERAL PURPOSE]]. Provide cabinets conforming to KCMA A161.1, requirements specified herein, and bear the "KCMA Certified Cabinet" seal of the Kitchen Cabinet Manufacturers Association. Provide Countertops that conform to NEMA LD 3.1 and requirements specified herein.

## 2.6 FINISH

### 2.6.1 Cabinet Finish

Provide cabinets with a factory-applied durable finish in accordance with KCMA A161.1 requirements and of a type standard with the manufacturer.

## 2.6.2 Backer Sheets

Provide backer sheets of high pressure plastic laminate conforming to NEMA LD 3, Grade BK20 applied to the underside of all core material.

## 2.7 COLOR, TEXTURE, AND PATTERN

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NOTE: Coordinate editing of color reference sentence(s) with the Government. Generally, Section 09 06 90 COLOR SCHEDULE or drawing is used when the project is designed by an Architect or Interior designer. Select color from manufacturers standard colors or identified as a manufacturers color in this specification only when the project is very simple and has minimal finishes.

When the Government directs that color be located in the drawings add a note that states: "Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

Prior to specifying a custom color finish, research to determine if additional cost and lead time is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

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Provide color [in accordance with Section 09 06 90 COLOR SCHEDULE.] [as indicated on the drawings.] [as selected from manufacturers standard colors.] [[\_\_\_\_\_.] Color listed is not intended to limit the selection of equal colors from other manufacturers.]

## PART 3 EXECUTION

### 3.1 INSTALLATION

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NOTE: Installation of sinks is per the requirements of Section 22 00 00 PLUMBING, GENERAL PURPOSE.

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Install casework plumb with countertops level to within 1 millimeter in 3000 millimeter 1/16 inch in 10 feet. Level base cabinets by adjusting leveling screws. Scribe and fit scribe strips to irregularities of adjacent surfaces. Gap opening is not to exceed 0.63 millimeter 0.025 inch.

[Secure cases permanently to floor and wall construction using 6 millimeter 1/4-inch diameter masonry anchors, spaced 760 millimeter 30 inches maximum

on center, minimum of two for each case, where indicated.]

Support wall cases on continuous 1.3 millimeter 18-gage galvanized steel hanging brackets. [Secure wall cases in position with screws to blocking, where indicated.][Bolt adjoining cases together. Width of joints not exceed 0.79 millimeter 1/32 inch, where indicated.] [Provide closer strips, filler strips, and finish moldings as required.] Align doors, adjust hardware, clean and wax surfaces.

Submit Installation Drawings for steel and wood cabinets. Include in drawings location of cabinets, details of cabinets related and dimensional positions, and locations for roughing in plumbing, including sinks, faucets, strainers and cocks.

### 3.2 CLEANING

On completion of cabinet installation, clean surfaces and surrounding area. Remove crating and packing materials from premises. Wipe down surfaces to remove fingerprints and markings and leave in clean condition.

### 3.3 INSPECTION

Examine casework grounds and supports for adequate anchorage, foreign material, moisture, and unevenness that could prevent quality casework installation.

Ensure that electrical and plumbing rough-ins for casework are complete. Do not proceed with installation until defects are corrected.

-- End of Section --