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USACE / NAVFAC / AFCEC / NASA UFGS-31 31 16.21 (August 2008)  
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Preparing Activity: USACE Superseding  
UFGS-31 31 16.21 (April 2006)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated October 2014

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08/08

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### SECTION 31 31 16.21

#### MESH TERMITE BARRIER 08/08

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NOTE: This guide specification covers the requirements for mesh termite barrier for termite control. This UFGS is not for a soil treatment.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. 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, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

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## PART 1 GENERAL

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NOTE: Termite infestation exists throughout the United States and overseas areas with the exception of Alaska. Mesh termite barriers can be prescribed for installation at all sites where termites are likely to establish colonies and make concealed access to wood construction, when it is deemed appropriate and cost effective.

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### 1.1 SUMMARY

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NOTE: The mesh physically prevents termites from entering the building.

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Place the stainless steel mesh across all openings to the building (shrinkage cracks in concrete slabs and built penetrations in slabs and walls that termites may use). The mesh shall be bonded to the material surrounding the opening using bonding cement, when directed by the Contracting Officer, after determining that a quality bond can be obtained. A correct and complete installation with no gaps, penetrations or damage to the mesh is essential to achieve an effective barrier. System Installers shall be trained in the behavior of termites and the installation techniques of the mesh barrier. Submit qualifications of installer's personnel, level of accreditation and the effective time period of the accreditation level.

## 1.2 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.

### ASTM INTERNATIONAL (ASTM)

ASTM A478	(1997; R 2013) Standard Specification for Chromium-Nickel Stainless Steel Weaving and Knitting Wire
ASTM A580/A580M	(2013b) Standard Specification for Stainless Steel Wire

## 1.3 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.

The Guide Specification technical editors have designated those items that require Government

approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, 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.

An "S" following a submittal item indicates that the submittal is required for the Sustainability Notebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS.

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.] [information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance to Section 01 33 29 SUSTAINABILITY REQUIREMENTS. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Installation[; G][; G, [\_\_\_\_\_]]

SD-03 Product Data

Materials  
Barrier Mesh  
Manufacturer's guidance  
Visual Inspection Guide  
Site Verification

SD-04 Samples

Barrier Mesh

SD-07 Certificates

System Installers

## Materials

### 1.4 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unbroken packaging and containers, with original labels in place. The bonding cement shall be in the original sealed containers with all labels intact to include any EPA designation. Store materials in conformance with manufacturer's recommendations.

### 1.5 WARRANTY

Provide a minimum 1-year warranty.

## PART 2 PRODUCTS

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NOTE: Check with local agencies to determine the  
local building code requirements and specifications  
to ensure conformance where required.  
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### 2.1 MATERIALS

Submit written verification from the manufacturer that the material furnished meets the specified requirements. Submit descriptive data for materials used in this work.

#### 2.1.1 Asbestos Prohibition

No asbestos containing materials or equipment are permitted at the job site. Ensure that materials proposed for the project are asbestos free.

#### 2.1.2 Barrier Mesh

Submit manufacturer's label and Material Safety Data Sheet (MSDS) proposed for use. Stainless steel mesh shall conform to ASTM A478 and ASTM A580/A580M, Type A1AA marine grade 316 stainless steel mesh of 0.18 mm 0.007 inch diameter wire with mesh openings of 0.66 x 0.45 mm 0.026 x 0.018 inches. Submit samples of stainless steel mesh to be used in this work, 102 x 102 mm 4 x 4 inches.

#### 2.1.3 Accessories

Parging adhesives, bonding cement, clamps, ties, and other accessories as recommended by the manufacturer.

## PART 3 EXECUTION

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NOTE: The stainless steel mesh must be installed in  
a manner to provide maximum protection to the  
dwelling. The material provides a physical barrier  
to the termites, thus, preventing entry. A range of  
techniques and material widths may be required to  
meet site conditions. The designer is required to  
determine the extent of openings to be covered to  
provide quantity estimates for the material  
installed.  
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### 3.1 SITE VERIFICATION

#### 3.1.1 Site Preparation

Site preparation shall be in accordance with Sections 31 11 00 CLEARING AND GRUBBING, 31 00 00 EARTHWORK, 32 92 19 SEEDING, 32 92 23 SODDING, 32 92 26 SPRIGGING, AND 32 93 00 EXTERIOR PLANTS. Work related to final grades, landscape plantings, foundations, or any other alterations to finished construction that might alter the condition of the site, shall be coordinated with this specification. Do not proceed until any unsatisfactory conditions detrimental to timely and proper completion of the work have been corrected.

#### 3.1.2 Ground Preparation

Eliminate termite food sources by removing debris from the clearing and grubbing operations and construction wood scraps such as ground stakes, form boards, and scrap lumber from the work area, before installing the mesh barrier.

#### 3.1.3 Verification

Before installing the mesh, verify that final grades are as indicated and smooth grading has been completed. Submit written verification that site conditions are as required and other site work will not disturb the installation. Soil particles in the work area shall be finely graded with particles no larger than 25 mm 1 inch and compacted to eliminate soil movement to the greatest degree. The condition of the site shall meet the manufacturer's recommendations prior to installing the mesh barrier.

### 3.2 INSTALLATION

Submit shop drawings of mesh installation at perimeter, joint, and penetration conditions. Install the mesh barrier in accordance with the manufacturer's recommendations. The stainless steel mesh shall be lap-jointed 10 to 15 mm 0.39 to 0.59 inch. The joint may be strengthened by using bonding cement a minimum distance of 500 to 1000 mm 20 to 40 inches along the joint. Penetrations and shrinkage cracks through concrete slabs shall be sealed as recommended.

### 3.3 PROTECTION

The installed mesh shall be protected as required or directed.

### 3.4 VISUAL INSPECTION GUIDE

To maintain resistance to termites, the system shall be complete and not disturbed, penetrated or damaged during the remaining contract time period. The installer shall provide manufacturer's guidance for performing a visual assessment of the installed mesh barrier to ensure the mesh barrier provides the designed termite physical barrier. Submit manufacturer's installation instruction manual and visual inspection guide.

### 3.5 REPAIRS

If live subterranean termite entry is discovered during the warranty period, provide an evaluation of the site and repair the installed mesh

barrier and any damage occurred, as required.

-- End of Section --