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USACE / NAVFAC / AFCEC **UFGS-09 22 36 (August 2024)**

Preparing Activity: NAVFAC **Superseding**
UFGS-09 22 36 (January 2008)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2024

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SECTION 09 22 36

LATH

08/24

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NOTE: This guide specification covers the requirements for lathing for gypsum and portland cement-based plaster work.

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 item(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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NOTE: Metal framing, furring and ceiling suspension systems for lathing are specified in Section 05 40 00 COLD-FORMED METAL FRAMING and Section 09 22 00 SUPPORTS FOR PLASTER AND GYPSUM BOARD.

NOTE: If discoloration of exterior plaster work along the lines of the framing system used to support the lath (metal framing in particular and wood framing to a lesser extent) occurs or is anticipated, design the exterior wall with a thermal break between the metal lath and the framing members. One suggested solution is to install 12.7 mm 1/2 inch thick gypsum sheathing board, conforming to ASTM C1396, "Gypsum Sheathing Board" or to ASTM C1177, "Glass Mat Gypsum Substrate," on the framing

members before attaching the metal lath.
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NOTE: On the drawings, show:

1. Location and extent of plastering

2. Type(s) and spacing of supports

3. Type(s) of plaster and location

4. Control joint locations

5. Fire resistance rating(s), where applicable

6. Sound transmission class (STC) rating(s), where applicable

7. Location and size of access panels and fabrication details for access panels larger than 600 by 900 mm 24 by 36 inches.
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PART 1 GENERAL

1.1 REFERENCES

****
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 Reference Identifier (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 A240/A240M	(2024) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

ASTM A489	(2018; E 2018) Standard Specification for Carbon Steel Eyebolts
ASTM A580/A580M	(2023) Standard Specification for Stainless Steel Wire
ASTM A641/A641M	(2019) Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
ASTM A653/A653M	(2023) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A924/A924M	(2022a) Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM A1008/A1008M	(2024) Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable
ASTM B633	(2023) Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel
ASTM C636/C636M	(2013) Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels
ASTM C841	(2023) Installation of Interior Lathing and Furring
ASTM C1063	(2023) Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
ASTM C1764	(2020) Standard Test Methods for Non Metallic Plaster Bases (Lath) Used With Portland Cement Based Plaster in Vertical Wall Applications
ASTM C1787	(2020; R 2023) Standard Specification for Installation of Non Metallic Plaster Bases (Lath) Used with Portland Cement Based Plaster in Vertical Wall Applications
ASTM C1788	(2020) Standard Specification for Non Metallic Plaster Bases (Lath) Used With Portland Cement Based Plaster in Vertical Wall Applications

GYPSUM ASSOCIATION (GA)

GA 600	(2021) Fire Resistance and Sound Control

UNDERWRITERS LABORATORIES (UL)

UL Fire Resistance (2014) Fire Resistance Directory

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, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified 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 Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters 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 and Air Force projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

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Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Lath

Recycled Content for Metal Lath; S

Accessories

Access Panels

1.3 DELIVERY AND STORAGE

Deliver materials in the manufacturer's original unbroken packages or containers that are labeled plainly with the manufacturer's names, brands, base metal gauge, and if a corrosion inhibiting coating is required, the description of the coating. Store materials in dry locations with adequate ventilation, free from water, and in such a manner to permit easy access for inspection and handling.[Stack gypsum lath flat to avoid sagging or damage to edges, ends, or surfaces, and protect from exposure to direct sunlight.]

PART 2 PRODUCTS

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NOTE: This guide specification presents nonproprietary materials. When the guide specification is edited or supplemented to suit project requirements, ensure project specification section which contains no proprietary materials.
****

2.1 LATH

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NOTE: Use materials with recycled content where appropriate for use. Verify suitability, availability within the region, cost effectiveness and adequate competition before specifying product recycled content requirements.
****

Provide metal lath containing a minimum of 20 percent recycled content. Provide data identifying percentage of recycled content for metal lath.

2.1.1 Metal Plastering Base (Lath)

Provide the type(s) and weight(s) required for the type and spacing of supports shown for the kind of plaster indicated and specified. Do not use rib lath for ceramic tile scratch coat. ASTM A924/A924M Galvanized, unless indicated otherwise.

****
NOTE: Consult Table 2 in ASTM C1063 and Table 1 in ASTM C841 to determine the type and weight of the metal lath based on the type and spacing of the support system shown on the project drawings.
****

2.1.1.1 For Portland Cement-Based Plaster (Stucco)

ASTM C1063,[diamond mesh][self-furring diamond mesh][flat rib][10 mm 3/8 inch rib][20 mm 3/4 inch rib][expanded metal][welded wire][woven wire] metal lath weighing not less than [_____] kilograms per square meter pounds per square yard.

2.1.1.2 For Gypsum Plaster

ASTM C841,[diamond mesh][self-furring diamond mesh][flat rib][10 mm 3/8 inch rib][20 mm 3/4 inch rib][expanded-metal][welded wire][woven wire]

metal lath weighing not less than [_____] kilograms per square meter pounds per square yard.

2.1.1.3 Paper Backing (Waterproofed Kraft Building Paper)

****
NOTE: Specify "Moderate water-vapor Resistant" where moisture protection or use of vapor barrier is required. Specify "Water-vapor permeable" to maintain hollow partitions plaster free, to prevent plaster from bonding to substrate, to prevent over spray where plaster is sprayed on, to provide uniform plaster thickness and to improve bonding (keying). Specify paper backing at lath to help prevent plaster "push-through" or "blow-through" waste. Verify that paper backing is available for lath configurations retained below. Confirm that paper is Grade D or better black asphalt per Federal Specification UU-B-790a. Edit paragraph as required.
****

Provide metal plastering base with paper backing,["Moderate water-vapor Resistant" for room(s) [_____]]["Water-vapor permeable" for room(s) [_____]][and][for exterior plastering work].

2.1.1.4 Plastering Base

****
NOTE: Specify galvanized metal or stainless steel plastering base for all exterior plastering and for plastering interior areas subject to high moisture conditions such as natatoriums and shower and laundry rooms. Consider using stainless steel for all exterior locations such as surfaces exposed to water flow including walls, ledges, wall opening returns, and soffit edges that include drip reveals.
****

Provide[ASTM A924/A924M Galvanized Metal][ASTM A240/A240M Stainless Steel][for exterior plastering work][and][for plastering room(s) [_____]][in all locations].

2.1.2 Gypsum Lath

****
NOTE: Specify only for interior gypsum plastering work in relatively large, flat areas. Do not use for curved areas or areas subject to high moisture conditions.
****

ASTM C1063 ASTM C1764 ASTM C1787 ASTM C1788. Provide[plain][Type X (fire resistant)][foil-backed] gypsum lath [9.53][12.70][15.87] mm [3/8][1/2][5/8] inch thick.

2.1.3 Accessories

****
NOTE: Referenced ASTM standards permit accessories

fabricated from:

1. ASTM C1063:
- zinc coated (galvanized) steel
- zinc alloy
- rigid poly (vinyl chloride) (PVC) plastic

2. ASTM A240:
- stainless steel

3. ASTM C841:
- zinc coated (galvanized) steel
- paint coated steel
- rigid poly (vinyl chloride) (PVC) plastic
- clear plastic coated aluminum

If no exceptions are specified, these materials become Contractor options. Include the last sentence, appropriately edited, to exclude any undesirable options.
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NOTE: Use PVC or plastic coated aluminum in lieu of galvanized metal for areas of high humidity or project locations with Environmental Severity Classifications (ESC) of C3 thru C5. Humid project locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 3C, 4C and 5C (as identified in ASHRAE 90.1). See UFC 1-200-01 for determination of ESC for project locations.
****

[ASTM C1063.][ASTM C841.][Provide only[galvanized steel][zinc alloy][stainless steel][rigid poly (vinyl chloride) (PVC) plastic][clear plastic coated aluminum] accessories.]

2.2 ACCESS PANELS

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NOTE: Detail fabrication of access panels larger than 600 by 900 mm 24 by 36 inches on project drawings or any size where applied materials such as acoustic panels or wall panels will be supported by the access panels.
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****
NOTE: Where access panels are located in ceilings and intended to swing down, specify panels that are greater than 2030 mm 6 foot 8 inches above finished floor when opened to their lowest point.
****

Prefabricated[galvanized][galvannealed][stainless] steel units, size(s)[as indicated][[_____] by [_____] mm inches]. Fabricate frame of preformed angle or channel with welded joints. Perforate wide leg or flange of frame section or extend frame section into expanded metal wings to provide a key for the plaster. Provide a hinged or snap-on type cover

with turn-latch or spring catch.[Provide access panels[for room(s) [_____]] with a means for locking.] Fabricate access panels not larger than 600 by 900 mm 24 by 36 inches from 1.8 mm thick 14 gage steel with frames not lighter than 1.5 mm thick 16 gage. Fabricate access panels larger than 600 by 900 mm 24 by 36 inches as indicated. Factory-prime panels with rust-inhibitive paint[except at polished stainless steel access panels].

2.3 HANGERS

****
NOTE: Indicate and provide a detail drawing showing splayed and countersplayed suspension system hanger wires.

In high humidity areas or project locations with Environmental Severity Classifications (ESC) of C3 thru C5, use corrosion resistant materials (stainless steel or copper-bearing alloys) for suspension components. Humid project locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 3C, 4C and 5C (as identified in ASHRAE 90.1). See UFC 1-200-01 for determination of ESC for project locations.
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Provide hangers and attachment capable of supporting a minimum 1330 N 300 pound ultimate vertical load without failure of supporting material or attachment.

2.3.1 Wires

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NOTE: Select stainless steel or nickel copper alloy wire for facilities where high humidity can be expected such as large kitchens, dishwashing areas, and indoor swimming pools. Select zinc-coated steel wire for other locations.

When spacing of hanger wires exceeds 1200 mm 4 feet or when heavy loads are supported, specify 3.4 or 4.1 mm 8 or 10 gauge wire.
****

Conform wires to[ASTM A641/A641M, Class 1, [2.0] [_____] mm [0.08 inch (12 gauge)] [[_____] inch] in diameter.][ASTM A580/A580M, composition 302 or 304, condition annealed stainless steel, [2.0] [_____] mm [0.08 inch (12 gauge)] [[_____] inch] in diameter.]

****
NOTE: Normally wire hangers should be used, as specified above. If the project is in an area subject to violent storms, specify steel strap or rod hangers as included in the following sub-paragraphs.
****

[2.3.2 Straps

Provide straps of 25 by 5 mm 1 by 3/16 inch galvanized steel conforming to ASTM A653/A653M, with a light commercial zinc coating or ASTM A1008/A1008M with an electrodeposited zinc coating conforming to ASTM B633, Type RS.

][2.3.3 Rods

Provide 5 mm 3/16 inch diameter threaded steel rods, zinc or cadmium coated.

]2.3.4 Eyebolts

Provide eyebolts of weldless, forged-carbon-steel, with a straight-shank in accordance with ASTM A489. Eyebolt size must be a minimum [_____] [7] mm [_____] [1/4] inch,[zinc coated][cadmium plated].

2.3.5 Masonry Anchorage Devices

Comply with [ASTM C636/C636M][_____] for anchorage devices for[eyebolts][machine screws][wood screws].

PART 3 EXECUTION

3.1 INSPECTION

Verify that framing, furring and accessories are securely attached and of proper sizes and spacing necessary to provide a suitable substrate to receive lath. Do not proceed with work until framing, furring and accessories are acceptable to the Contracting Officer for application of lath.

3.2 INSTALLATION

3.2.1 Lathing Materials and Accessories

Install in accordance with[ASTM C1063 for portland cement-based plaster work][and][ASTM C841 for gypsum plaster work], except where indicated or specified otherwise herein.

3.2.1.1 Metal Plastering Base

Install[where indicated][on wood or metal studding, furring, joists, rafters, and similar framing members for plastered walls, partitions, ceilings, and soffits][to receive scratch coat for ceramic tile or terrazzo work][on[concrete][and][masonry] surfaces to receive plaster].

3.2.1.2 Metal Plaster Base with Paper Backing

Where used, lap joints to provide backing on backing and metal-on-metal. Lap backing not less than 25 mm 1 inch. Lap backing so that water will flow to the exterior.

3.2.1.3 Gypsum Lath

Install[where indicated][on wood or metal studding, furring, joists, rafters and similar framing members for plastered walls, partitions, ceilings, and soffits].

3.2.1.4 Control (Expansion and Contraction) Joints

a. For portland cement-based plaster (ceilings and walls), install to create panels no larger than 9.3 square meters l00 square feet with no dimension exceeding 3.0 m 10 feet.

b. For unrestrained gypsum plaster ceilings install to create panels no larger than 232 square meters 2,500 square feet with no dimension exceeding 15.2 m 50 feet. For gypsum plaster walls, partitions and ceilings without perimeter relief install not more than 9.1 m 30 feet on centers in either direction.

c. Install[where indicated,] where expansion joints occur in the structural walls and ceilings and where ceiling framing or furring changes direction. Terminate lath at each side of joint and fasten joints securely to lath.

3.2.1.5 Unrestrained Ceilings

Ensure furred or suspended ceilings constructed with[gypsum plaster and larger than 232 square meters 2,500 square feet in area or with any dimension exceeding 15.2 m 50 feet][or][portland cement-based plaster] are unrestrained. Isolate ceiling lath and plaster from ceiling intersecting vertical surfaces with casing beads, control joints, or similar devices designed to keep the ceiling isolated from the adjacent vertical surfaces (walls, partitions, beams, and columns). Do not use corner reinforcement at the internal angle between the ceiling and the vertical surfaces.

3.2.1.6 Plastering Beads

Install edge trim (casing bead)[at the edges of plaster which abuts or adjoins an unplastered surface,][on each surface at the internal angle formed by load bearing and non-load bearing walls and partitions abutting structural walls, columns, or floor-ceiling slabs,][between concrete or terrazzo bases and the plaster above them,][on each side of the joint between walls or partitions constructed of dissimilar materials which require plastering,][and between plasters of a different composition]. Fill voids formed in corners with sealant. Install corner beads at all vertical external corners of plaster walls.

3.2.2 Fire-Resistant Assemblies

****
NOTE: Coordinate with the preparer of the project drawings to ensure that UL Design Number(s) or GA File Number(s) are indicated on the drawings for fire resistant construction.
****

Wherever fire-resistant construction is indicated, provide all materials and application methods, including types and spacing of fasteners, in accordance with the specifications contained in the[UL Fire Resistance for the Design Number(s) indicated][or][GA 600 for the File Number(s) indicated].

3.2.3 Access Panels

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NOTE: Ensure project drawings include the exact number and location of access panels coordinate with mechanical and electrical work to ensure adequate access to mechanical and electrical systems. Do not install access panels in fire rated walls or ceilings unless approved by the Government's Fire Protection Engineer.

****

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NOTE: Insert appropriate Section number and title in blank below using format per UFC 1-300-02, "Unified Facilities Guide Specifications (UFGS) Format Standard".

****

Install in suspended ceilings and plastered walls at locations[indicated][and][specified in [_____]].

3.3 SCHEDULE

Some metric measurements in this section are based on mathematical conversion of inch-pound measurements, and not on metric measurement commonly agreed to by the manufacturers or other parties. The inch-pound and metric measurements are as follows:

PRODUCTS	INCH-POUND	METRIC
Access Panels	24 by 36 inches	600 by 900 mm
	14 gage	1.8 mm
	16 gage	1.5 mm

-- End of Section --