This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: C1063 – 21

Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster[1]

This standard is issued under the fixed designation C1063; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification covers the minimum technical requirements for the installation of lathing and furring for the application of exterior and interior portland cement-based plaster, as in Specification C926. These requirements do not by default define a unit of work or assign responsibility for contractual purposes, which is the purview of a contract or contracts made between contracting entities.

1.2 *Table of Contents:*

1.3 Where a fire resistance rating is required for plastered assemblies and constructions, details of construction shall be in accordance with reports of fire tests of assemblies that have met the requirements of the fire rating imposed.

1.4 Where a specific degree of sound control is required for plastered assemblies and constructions, details of construction shall be in accordance with official reports of tests conducted in recognized testing laboratories in accordance with the applicable requirements of Test Method E90.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 The text of this specification references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C11 Terminology Relating to Gypsum and Related Building Materials and Systems

C847 Specification for Metal Lath

C926 Specification for Application of Portland Cement-Based Plaster

C933 Specification for Welded Wire Lath

C1032 Specification for Woven Wire Plaster Base

C1280 Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing

C1861 Specification for Lathing and Furring Accessories, and Fasteners, for Interior and Exterior Portland Cement-Based Plaster

E90 Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

2.2 *US Department of Commerce (DOC) Standards:*[3]

PS 1 Voluntary Product Standard PS 1, Structural Plywood

PS 2 Voluntary Product Standard PS 2, Performance Standard for Wood-Based Structural Use Panels

[1] This specification is under the jurisdiction of ASTM Committee C11 on Gypsum and Related Building Materials and Systems and is the direct responsibility of Subcommittee C11.03 on Specifications for the Application of Gypsum and Other Products in Assemblies.

Current edition approved July 1, 2021. Published July 2021. Originally approved in 1986. Last previous edition approved in 2020 as C1063 – 20a. DOI: 10.1520/C1063-21.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from U.S. Government Printing Office, Superintendent of Documents, 732 N. Capitol St., NW, Washington, DC 20401-0001, http://www.access.gpo.gov.

***A Summary of Changes section appears at the end of this standard**

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3. Terminology

3.1 *Definitions:*

3.1.1 For definitions relating to ceilings and walls, see Terminology C11.

3.1.2 For definitions relating to lathing accessories, furring accessories, and fasteners, see Specification C1861.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *building enclosure, n*—system of building assemblies and materials designed and installed in such a manner as to provide a barrier between different environments.

3.2.2 *control joint, n*—a joint that accommodates movement of plaster shrinkage and curing along predetermined, usually straight, lines.

3.2.3 *expansion joint, n*—a joint that accommodates movement beyond plaster shrinkage and curing.

NOTE 1—For design consideration of control and expansion joints, see A2.3.1.2 of Specification C926.

3.2.4 *framing member, n*—studs, joist, runners (track), bridging, bracing, and related accessories manufactured or supplied in wood or light gauge steel.

3.2.5 *hangers, n*—wires or steel rods or straps used to support main runners for suspended ceilings beneath floor or roof constructions.

3.2.6 *inserts, n*—devices embedded in concrete framing members to provide a loop or opening for attachment of hangers.

3.2.7 *reentrant corner, n*—a wall opening corner forming an angle of less than 180°.

3.2.8 *saddle tie, n*—see Figs. A1.6 and A1.7.

3.2.9 *self-furring, adj*—a metal plaster base manufactured with evenly-spaced indentations that hold the body of the lath approximately ¼ in. (6 mm) away from solid surfaces to which it is installed.

3.2.10 *water-resistive barrier, n*—a material that resists the infiltration of liquid moisture through the building enclosure system.

3.2.11 *weather-exposed surface, n*—surfaces of walls, ceilings, floors, roofs, soffits, and similar surfaces exposed to the weather except the following: *(1)* ceilings and roof soffits enclosed by walls, fascia, bulkheads or beams that extend not less than 12 in. (305 mm) below such ceiling or roof soffits; *(2)* walls or portions of walls beneath an unenclosed roof area, where located a horizontal distance from an open exterior opening equal to not less than twice the height of the opening; and *(3)* ceiling and roof soffits located a minimum horizontal distance of 10 ft (3048 mm) from the outer edges of the ceiling or roof soffits.

4. Delivery and Storage of Materials

4.1 *Delivery of Materials:*

4.1.1 Materials shall be delivered in the original packages, containers, or bundles bearing the brand-name and manufacturer's (or supplier's) identification.

4.2 *Storage of Materials:*

4.2.1 Materials shall be kept dry. Materials shall be stacked off the ground, supported on a level platform, and protected from the weather and surface contamination.

4.2.2 Materials shall be neatly stacked with care taken to avoid damage to edges, ends, or surfaces.

4.2.3 Metal plaster bases with a factory-attached water-resistive barrier shall be handled carefully in delivery, storage, and erection to prevent puncturing or removal of the factory-attached water-resistive barrier.

5. Materials

5.1 Metallic materials including lathing, lathing accessories, furring, furring accessories, and fasteners shall be selected for compatibility to minimize galvanic corrosion between adjacent metallic materials installed in the cement plaster cladding assembly.

5.2 *Metal Plaster Bases:*

5.2.1 *Expanded Metal Lath*—Specification C847, galvanized.

5.2.2 *Wire Laths:*

5.2.2.1 *Welded Wire Lath*—Specification C933.

5.2.2.2 *Woven Wire Lath*—Specification C1032.

5.3 *Lathing Accessories, Furring Accessories, and Fasteners:*

5.3.1 *Lathing Accessories, Furring Accessories, and Fasteners*—Specification C1861.

5.3.2 The selection of an appropriate type of material for lathing accessories shall be based upon applicable surrounding climatic and environmental conditions specific to the project location, such as salt air, industrial pollution, high moisture, or humidity.

6. Requirements for Substrates to Receive Metal Lathing and Furring

6.1 *Framed, or Framed and Sheathed Substrates:*

6.1.1 Framing member deflection shall not exceed L/360 (0.33 in. in 10 ft).

6.1.2 Substrates to receive lath shall be straight and true to line within ¼ in. in 10 ft. to receive the specified plaster thickness.

6.1.3 Plywood and oriented strand board sheathing panels shall be marked in accordance with DOC PS1 or DOC PS 2.

6.1.4 Plywood and oriented strand board sheathing panels shall be installed with ⅛ in. (3 mm) minimum panel edge gaps, and panel edges shall be offset 4 in. (10 cm) minimum from wall opening reentrant corners. (See Fig. 1.)

NOTE 2—This ⅛-in. (3 mm) gap is intended to accommodate expansion. Linear expansion that is not accommodated by an expansion gap can cause stress on the stucco membrane resulting in stucco cracks.

6.1.5 Wood framing members, plywood and oriented strand board sheathing panels shall have a moisture content not to exceed 19 % immediately before plastering.

6.1.6 Exterior gypsum sheathing panels shall be installed in compliance with Specification C1280.

7. Installation

7.1 *Workmanship*—Metal lathing, lathing accessories, furring, and furring accessories shall be erected so that the

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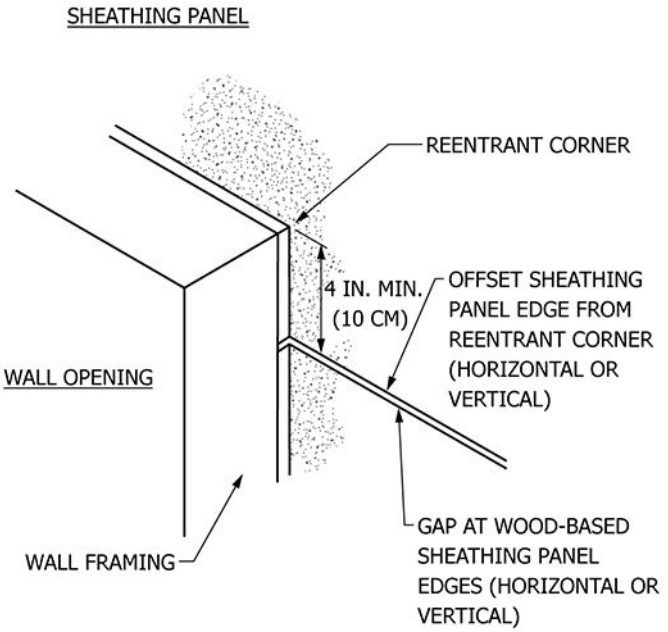

FIG. 1 Wall Opening Reentrant Corner (Isometric View Looking Up at Wall Opening Corner)

finished cement plaster surfaces are true to line (allowable tolerance of ¼ in. (6 mm) in 10 ft (3 m)), level, plumb, square, or curved as required to receive the specified cement plaster thickness.

7.2 *Installation of Metal Furring for Walls:*

7.2.1 Attachments for furring accessories shall be concrete nails driven securely into concrete or into masonry joints, power-actuated fasteners, or other devices specifically designed as spacer elements, spaced horizontally not more than 2 ft (610 mm) on centers. They shall be spaced vertically in accordance with horizontal stiffener spacing so that they project from the face of the wall in order for ties to be made.

7.2.2 Horizontal stiffeners shall be not less than ¾ in. (19 mm) cold-rolled channel furring, spaced not to exceed 54 in. (1372 mm) on centers vertically, with the lower and upper cold-rolled channel furring not more than 6 in. (152 mm) from the ends of vertical framing members and not less than ¼ in. (6 mm) clear from the wall face, securely tied to attachments with three loops of wire, or equivalent devices. Approved furring is not prohibited from use in this application.

7.2.3 Vertical framing members shall be not less than ¾ in. (19 mm) cold-rolled channel furring in accordance with the requirements of Table 1. Vertical framing members shall be saddle-tied to horizontal stiffeners with three loops of 0.0475-in. 18 gauge (1.21 mm) wire, or equivalent devices, at each crossing, and securely anchored to the floor and ceiling constructions. Where cold-rolled channel furring is not in contact with the wall, cold-rolled channel furring braces shall be installed between horizontal stiffeners and the wall, spaced horizontally not more than 2 ft (610 mm) on centers.

7.2.4 Where the water-resistive barrier has been damaged during installation of attachments, the water-resistive barrier shall be repaired with the same or an alternative material, compatible with the water-resistive barrier, before proceeding with the installation of the furring.

7.2.5 Z-furring used to support lathing and lathing accessories and its fasteners for fastening to framing members or solid bases, is a customized furring system which shall be engineered.

7.3 *Installation of Metal Plaster Bases:*

7.3.1 *General:*

7.3.1.1 Metal plaster bases shall be furred away from vertical framing members or solid surfaces at least ¼ in. (6 mm). Self-furring lath meets furring requirements; except, furring of expanded metal lath is not required on framing members having a bearing surface of 1⅝ in. (41 mm) or less.

7.3.1.2 The spacing of framing members for the type and weight of metal plaster base shall conform to the requirements of Table 1. Metal plaster bases shall be attached to framing members at not more than 7 in. (178 mm) on center, along framing members except for ⅜-in. (10 mm) rib metal lath that shall be attached at each rib. Attachment penetrations between the framing members shall be avoided.

TABLE 1 Types and Weights of Metal Plaster Bases and Corresponding Maximum Permissible Spacing of Wall and Ceiling Framing Members or Furring

<table>
<tr><th rowspan="3">Type of Metal Plaster Base</th><th rowspan="3">Minimum Weight of Metal Plaster Base, lb/yd² (kg/m²)</th><th colspan="5">Specific Installation Requirements and Maximum Permissible Spacing of Wall and Ceiling Framing Members or Furring, Center to Center, in. (mm)</th></tr>
<tr><th colspan="2">Walls</th><th colspan="3">Ceilings</th></tr>
<tr><th>24 (610)</th><th>16 (406)</th><th>24 (610)</th><th>16 (406)</th><th>12 (305)</th></tr>
<tr><td rowspan="2">Expanded Sheet Metal</td><td>2.5 (1.4)</td><td rowspan="2">Permitted only for self-furred lath on sheathed wall framing members or solid wall bases</td><td rowspan="2">Permitted</td><td rowspan="3">Not Permitted</td><td>Not Permitted</td><td>Permitted</td></tr>
<tr><td>3.4 (1.8)</td><td colspan="2" rowspan="4">Permitted</td></tr>
<tr><td>Flat Rib</td><td>2.75 (1.5)</td><td>Not Permitted</td><td>Permitted only for unsheathed wall framing members</td></tr>
<tr><td rowspan="2">⅜ in. Rib</td><td>3.4 (1.8)</td><td colspan="2" rowspan="2">Not Permitted</td><td rowspan="2">Permitted</td></tr>
<tr><td>4.0 (2.1)</td></tr>
<tr><td rowspan="2">Welded Wire</td><td>1.14 (0.618)</td><td>Not Permitted</td><td>Permitted</td><td>Not Permitted</td></tr>
<tr><td>1.95 (1.058)</td><td colspan="2">Permitted</td><td>Permitted</td></tr>
<tr><td rowspan="2">Woven Wire</td><td rowspan="2">1.4 (0.76)</td><td rowspan="2">Permitted only for wood wall framing members, wood furring</td><td rowspan="2">Permitted</td><td colspan="2">Permitted only for wood and concrete ceiling framing members</td></tr>
<tr><td>Not Permitted</td><td>Permitted only for steel ceiling framing members</td></tr>
</table>

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