CHAPTER 25
GYPSUM BOARD AND PLASTER

SECTION 2501
GENERAL

2501.1 Scope.

2501.1.1 General. Provisions of this chapter shall govern the materials, design, construction and quality of gypsum board, lath, gypsum plaster and cement plaster.

Exception: Buildings and structures located within the high-velocity hurricane zone shall comply with the provisions of Sections 2514 through 2520.

2501.1.2 Performance. Lathing, plastering and gypsum board construction shall be done in the manner and with the materials specified in this chapter, and when required for fire protection, shall also comply with the provisions of Chapter 7.

2501.1.3 Other materials. Other approved wall or ceiling coverings shall be permitted to be installed in accordance with the recommendations of the manufacturer and the conditions of approval.

SECTION 2502
DEFINITIONS

2502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

CEMENT PLASTER. A mixture of portland or blended cement, portland cement or blended cement and hydrated lime, masonry cement or plastic cement and aggregate and other approved materials as specified in this code.

EXTERIOR SURFACES. Weather-exposed surfaces.

GYPSUM BOARD. Gypsum wallboard, gypsum sheathing, gypsum base for gypsum veneer plaster, exterior gypsum soffit board, predecorated gypsum board or water-resistant gypsum backing board complying with the standards listed in Tables 2506.2, 2507.2 and Chapter 35.

GYPSUM PLASTER. A mixture of calcined gypsum or calcined gypsum and lime and aggregate and other approved materials as specified in this code.

GYPSUM VENEER PLASTER. Gypsum plaster applied to an approved base in one or more coats normally not exceeding $^1/_4$ inch (6.4 mm) in total thickness.

INTERIOR SURFACES. Surfaces other than weather-exposed surfaces.

WEATHER-EXPOSED SURFACES. 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 a minimum of 12 inches (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 at least twice the height of the opening.
3. Ceiling and roof soffits located a minimum horizontal distance of 10 feet (3048 mm) from the outer edges of the ceiling or roof soffits.

WIRE BACKING. Horizontal strands of tautened wire attached to surfaces of vertical supports which, when covered with the building paper, provide a backing for cement plaster.

SECTION 2503
INSPECTION

2503.1 Inspection. Lath and gypsum board shall be inspected in accordance with Section 109.3.5.

SECTION 2504
VERTICAL AND HORIZONTAL ASSEMBLIES

2504.1 Scope. The following requirements shall be met where construction involves gypsum board, lath and plaster in vertical and horizontal assemblies.

2504.1.1 Wood framing. Wood supports for lath or gypsum board, as well as wood stripping or furring, shall not be less than 2 inches (51 mm) nominal thickness in the least dimension.

Exception: The minimum nominal dimension of wood furring strips installed over solid backing shall not be less than 1 inch by 2 inches (25 mm by 51 mm).

2504.1.2 Studless partitions. The minimum thickness of vertically erected studless solid plaster partitions of $^3/_8$-inch (9.5 mm) and $^3/_4$-inch (19.1 mm) rib metal lath or $^1/_2$-inch-thick (12.7 mm) long-length gypsum lath and gypsum board partitions shall be 2 inches (51 mm).

SECTION 2505
SHEAR WALL CONSTRUCTION

2505.1 Resistance to shear (wood framing). Wood-framed shear walls sheathed with gypsum board, lath and plaster shall be designed and constructed in accordance with Section 2306.4 and are permitted to resist wind loads.

2505.2 Resistance to shear (steel framing). Cold-formed steel-framed shear walls sheathed with gypsum board and constructed in accordance with the materials and provisions of Section 2210.5 are permitted to resist wind loads.

SECTION 2506
GYPSUM BOARD MATERIALS

2506.1 General. Gypsum board materials and accessories shall be identified by the manufacturer's designation to indicate compliance with the appropriate standards referenced in this section and stored to protect such materials from the weather.

2506.2 Standards. Gypsum board materials shall conform to the appropriate standards listed in Table 2506.2 and Chapter 35 and, where required for fire protection, shall conform to the provisions of Chapter 7.

TABLE 2506.2
GYPSUM BOARD MATERIALS AND ACCESSORIES

MATERIAL	STANDARD
Accessories for gypsum board	ASTM C 1047
Adhesives for fastening gypsum wallboard	ASTM C 557
Exterior soffit board	ASTM C 931
Fiber-reinforced gypsum panels	ASTM C 1278
Glass mat gypsum backing panel	ASTM C 1178
Glass mat gypsum substrate	ASTM C 1177
Gypsum backing board and gypsum shaftliner board	ASTM C 442
Gypsum ceiling board	ASTM C 1395
Gypsum sheathing	ASTM C 79
Gypsum wallboard	ASTM C 36
Joint reinforcing tape and compound	ASTM C 474; C 475
Nails for gypsum boards	ASTM C 514, F 547, F 1667
Predecorated gypsum board	ASTM C 960
Steel screws	ASTM C 954; C 1002
Steel studs, load bearing	ASTM C 955
Steel studs, nonload bearing	ASTM C 645
Standard specification for gypsum board	ASTM C 1396
Testing gypsum and gypsum products	ASTM C 22; C 472; C 473
Water-resistant gypsum backing board	ASTM C 630

2506.2.1 Other materials. Metal suspension systems for acoustical and lay-in panel ceilings shall conform with ASTM C 635 listed in Chapter 35 and Section 13.5.6 of ASCE 7 for installation in high seismic areas.

SECTION 2507
LATHING AND PLASTERING

2507.1 General. Lathing and plastering materials and accessories shall be marked by the manufacturer's designation to indicate compliance with the appropriate standards referenced in this section and stored in such a manner to protect them from the weather.

2507.2 Standards. Lathing and plastering materials shall conform to the standards listed in Table 2507.2 and Chapter 35 and, where required for fire protection, shall also conform to the provisions of Chapter 7.

TABLE 2507.2
LATH, PLASTERING MATERIALS AND ACCESSORIES

MATERIAL	STANDARD
Accessories for gypsum veneer base	ASTM C 1047
Blended cement	ASTM C 595
Exterior plaster bonding compounds	ASTM C 932
Gypsum base for veneer plasters	ASTM C 588
Gypsum casting and molding plaster	ASTM C 59
Gypsum Keene's cement	ASTM C 61
Gypsum lath	ASTM C 37
Gypsum plaster	ASTM C 28
Gypsum veneer plaster	ASTM C 587
Interior bonding compounds, gypsum	ASTM C 631
Lime plasters	ASTM C 5; C 206
Masonry cement	ASTM C 91
Metal lath	ASTM C 847
Plaster aggregates	
Sand	ASTM C 35; C 897
Perlite	ASTM C 35
Vermiculite	ASTM C 35
Plastic cement	ASTM C 1328
Portland cement	ASTM C 150
Steel screws	ASTM C 1002; C 954
Steel studs and track	ASTM C 645; C 955
Welded wire lath	ASTM C 933
Woven wire plaster base	ASTM C 1032

SECTION 2508
GYPSUM CONSTRUCTION

2508.1 General. Gypsum board and gypsum plaster construction shall be of the materials listed in Tables 2506.2 and 2507.2. These materials shall be assembled and installed in compliance with the appropriate standards listed in Tables 2508.1 and 2511.1, and Chapter 35.

TABLE 2508.1
INSTALLATION OF GYPSUM CONSTRUCTION

MATERIAL	STANDARD
Gypsum board	GA-216; ASTM C 840
Gypsum sheathing	ASTM C 1280
Gypsum veneer base	ASTM C 844
Interior lathing and furring	ASTM C 841
Steel framing for gypsum boards	ASTM C 754; C 1007

2508.2 Limitations. Gypsum wallboard or gypsum plaster shall not be used in any exterior surface where such gypsum construction will be exposed directly to the weather. Gypsum wallboard shall not be used where there will be direct exposure to water or continuous high humidity conditions. Gypsum sheathing shall be installed on exterior surfaces in accordance with ASTM C 1280.

2508.2.1 Weather protection. Gypsum wallboard, gypsum lath or gypsum plaster shall not be installed until weather protection for the installation is provided.

2508.3 Single-ply application. Edges and ends of gypsum board shall occur on the framing members, except those edges and ends that are perpendicular to the framing members. Edges and ends of gypsum board shall be in moderate contact except in concealed spaces where fire-resistance-rated construction, shear resistance or diaphragm action is not required.

2508.3.1 Floating angles. Fasteners at the top and bottom plates of vertical assemblies, or the edges and ends of horizontal assemblies perpendicular to supports, and at the wall line are permitted to be omitted except on shear resisting elements or fire-resistance-rated assemblies. Fasteners shall be applied in such a manner as not to fracture the face paper with the fastener head.

2508.4 Joint treatment. Gypsum board fire-resistance-rated assemblies shall have joints and fasteners treated.

Exception: Joint and fastener treatment need not be provided where any of the following conditions occur:

1. Where the gypsum board is to receive a decorative finish such as wood paneling, battens, acoustical finishes or any similar application that would be equivalent to joint treatment.
2. On single-layer systems where joints occur over wood framing members.
3. Square edge or tongue-and-groove edge gypsum board (V-edge), gypsum backing board or gypsum sheathing.
4. On multilayer systems where the joints of adjacent layers are offset from one to another.
5. Assemblies tested without joint treatment.

2508.5 Horizontal gypsum board diaphragm ceilings. Gypsum board shall be permitted to be used on wood joists to create a horizontal diaphragm ceiling in accordance with Table 2508.5.

2508.5.1 Diaphragm proportions. The maximum allowable diaphragm proportions shall be $1^1/_2$:1 between shear resisting elements. Rotation or cantilever conditions shall not be permitted.

2508.5.2 Installation. Gypsum board used in a horizontal diaphragm ceiling shall be installed perpendicular to ceiling framing members. End joints of adjacent courses of gypsum board shall not occur on the same joist.

2508.5.3 Blocking of perimeter edges. All perimeter edges shall be blocked using a wood member not less than 2-inch by 6-inch (51 mm by 159 mm) nominal dimension. Blocking material shall be installed flat over the top plate of the wall to provide a nailing surface not less than 2 inches (51 mm) in width for the attachment of the gypsum board.

2508.5.4 Fasteners. Fasteners used for the attachment of gypsum board to a horizontal diaphragm ceiling shall be as defined in Table 2508.5. Fasteners shall be spaced not more than 7 inches (178 mm) on center (o.c.) at all supports, including perimeter blocking, and not more than $^3/_8$ inch (9.5 mm) from the edges and ends of the gypsum board.

2508.5.5 Lateral force restrictions. Gypsum board shall not be used in diaphragm ceilings to resist lateral forces imposed by masonry or concrete construction.

SECTION 2509
GYPSUM BOARD IN SHOWERS AND WATER CLOSETS

2509.1 Wet areas. Showers and public toilet walls shall conform to Sections 1210.2 and 1210.3.

2509.2 Base for tile. Cement, fiber-cement or glass mat gypsum backers in compliance with ASTM C 1178, C 1288 or C 1325 and installed in accordance with manufacturer recommendations shall be used as a base for wall tile in tub and shower areas and wall and ceiling panels in shower areas. Water-resistant gypsum backing board shall be used as a base

TABLE 2508.5
SHEAR CAPACITY FOR HORIZONTAL WOOD FRAMED GYPSUM BOARD DIAPHRAGM CEILING ASSEMBLIES

MATERIAL	THICKNESS OF MATERIAL (MINIMUM) (inches)	SPACING OF FRAMING MEMBERS (MAXIMUM) (inches)	SHEAR VALUE[a] (plf of ceiling)	MIMIMUM FASTENER SIZE
Gypsum board	$^1/_2$	16 o.c.	90	5d cooler or wallboard nail; $1^5/_8$-inch long; 0.086-inch shank; $^{15}/_{64}$ -inch head[b]
Gypsum board	$^1/_2$	24 o.c.	70	5d cooler or wallboard nail; $1^5/_8$-inch long; 0.086-inch shank; $^{15}/_{64}$ -inch head[c]

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.59 N/m.

a. Values are not cumulative with other horizontal diaphragm values and are for short-term loading due to wind loading. Values shall be reduced 25 percent for normal loading.

b. $1^1/_4$-inch, No. 6 Type S or W screws are permitted to be substituted for the listed nails.

for tile in water closet compartment walls when installed in accordance with GA-216 or ASTM C 840 and manufacturer recommendations. Regular gypsum wallboard is permitted under tile or wall panels in other wall and ceiling areas when installed in accordance with GA-216 or ASTM C 840.

2509.3 Limitations. Water-resistant gypsum backing board shall not be used in the following locations:

1. Over a vapor retarder in shower or bathtub compartments.
2. Where there will be direct exposure to water or in areas subject to continuous high humidity.
3. On ceilings where frame spacing exceeds 12 inches (305 mm) o.c. for $^{1}/_{2}$-inch-thick (12.7 mm) water-resistant gypsum backing board and more than 16 inches (406 mm) o.c. for $^{5}/_{8}$-inch-thick (15.9 mm) water-resistant gypsum backing board.

SECTION 2510
LATHING AND FURRING FOR CEMENT PLASTER (STUCCO)

2510.1 General. Exterior and interior cement plaster and lathing shall be done with the appropriate materials listed in Table 2507.2 and Chapter 35.

2510.2 Weather protection. Materials shall be stored in such a manner as to protect such materials from the weather.

2510.3 Installation. Installation of these materials shall be in compliance with ASTM C 926 and ASTM C 1063.

2510.4 Corrosion resistance. Metal lath and lath attachments shall be of corrosion-resistant material.

2510.5 Backing. Backing or a lath shall provide sufficient rigidity to permit plaster applications.

2510.5.1 Support of lath. Where lath on vertical surfaces extends between rafters or other similar projecting members, solid backing shall be installed to provide support for lath and attachments.

2510.5.2 Use of gypsum backing board.

2510.5.2.1 Use of gypsum board as a backing board. Gypsum lath or gypsum wallboard shall not be used as a backing for cement plaster.

Exception: Gypsum lath or gypsum wallboard is permitted, with a water-resistive barrier, as a backing for self-furred metal lath or self-furred wire fabric lath and cement plaster where either of the following conditions occur:

1. On horizontal supports of ceilings or roof soffits.
2. On interior walls.

2510.5.2.2 Use of gypsum sheathing backing. Gypsum sheathing is permitted as a backing for metal or wire fabric lath and cement plaster on walls. A water-resistive barrier shall be provided in accordance with Section 2510.6.

2510.5.3 Backing not required. Wire backing is not required under expanded metal lath or paperbacked wire fabric lath.

2510.6 Water-resistive barriers. Water-resistive barriers shall be installed as required in Section 1404.2 and, where applied over wood-based sheathing, shall include a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper.

Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal to or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially nonwater-absorbing layer or drainage space.

2510.7 Preparation of masonry and concrete. Surfaces shall be clean, free from efflorescence, sufficiently damp and rough for proper bond. If the surface is insufficiently rough, approved bonding agents or a portland cement dash bond coat mixed in proportions of not more than two parts volume of sand to one part volume of portland cement or plastic cement shall be applied. The dash bond coat shall be left undisturbed and shall be moist cured not less than 24 hours.

SECTION 2511
INTERIOR PLASTER

2511.1 General. Plastering gypsum plaster or cement plaster shall not be less than three coats where applied over metal lath or wire fabric lath and not less than two coats where applied over other bases permitted by this chapter.

Exception: Gypsum veneer plaster and cement plaster specifically designed and approved for one-coat applications.

2511.1.1 Installation. Installation of lathing and plaster materials shall conform with Table 2511.1.1 and Section 2507.

TABLE 2511.1.1
INSTALLATION OF PLASTER CONSTRUCTION

MATERIAL	STANDARD
Gypsum plaster	ASTM C 842
Gypsum veneer plaster	ASTM C 843
Interior lathing and furring (gypsum plaster)	ASTM C 841
Lathing and furring (cement plaster)	ASTM C 1063
Portland cement plaster	ASTM C 926
Steel framing	ASTM C 754; C 1007

2511.2 Limitations. Plaster shall not be applied directly to fiber insulation board. Cement plaster shall not be applied directly to gypsum lath or gypsum plaster except as specified in Sections 2510.5.1 and 2510.5.2.

2511.3 Grounds. Where installed, grounds shall ensure the minimum thickness of plaster as set forth in ASTM C 842 and ASTM C 926. Plaster thickness shall be measured from the face of lath and other bases.

2511.4 Interior masonry or concrete. Condition of surfaces shall be as specified in Section 2510.7. Approved specially

prepared gypsum plaster designed for application to concrete surfaces or approved acoustical plaster is permitted. The total thickness of base coat plaster applied to concrete ceilings shall be as set forth in ASTM C 842 or ASTM C 926. Should ceiling surfaces require more than the maximum thickness permitted in ASTM C 842 or ASTM C 926, metal lath or wire fabric lath shall be installed on such surfaces before plastering.

2511.5 Wet areas. Showers and public toilet walls shall conform to Sections 1210.2 and 1210.3. When wood frame walls and partitions are covered on the interior with cement plaster or tile of similar material and are subject to water splash, the framing shall be protected with an approved moisture barrier.

SECTION 2512
EXTERIOR PLASTER

2512.1 General. Plastering with cement plaster shall not be less than three coats where applied over metal lath or wire fabric lath and not less than two coats where applied over masonry, concrete or gypsum board backing as specified in Section 2510.5. If the plaster surface is to be completely covered by veneer or other facing material, or is completely concealed by another wall, plaster application need be only two coats, provided the total thickness is as set forth in ASTM C 926.

2512.1.1 On-grade floor slab. On wood framed or steel stud construction with an on-grade concrete floor slab system, exterior plaster shall be applied in such a manner as to cover, but not to extend below, the lath and paper. The application of lath, paper and flashing or drip screeds shall comply with ASTM C 1063.

2512.1.2 Weep screeds. A minimum 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed with a minimum vertical attachment flange of $3^1/_2$ inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and be of a type that will allow trapped water to drain to the exterior of the building. The water-resistive barrier shall lap the attachment flange. The exterior lath shall cover and terminate on the attachment flange of the weep screed.

2512.2 Plasticity agents. Only approved plasticity agents and approved amounts thereof shall be added to portland cement. When plastic cement or masonry cement is used, no additional lime or plasticizers shall be added. Hydrated lime or the equivalent amount of lime putty used as a plasticizer is permitted to be added to cement plaster or cement and lime plaster in an amount not to exceed that set forth in ASTM C 926.

2512.3 Limitations. Gypsum plaster shall not be used on exterior surfaces.

2512.4 Cement plaster. Plaster coats shall be protected from freezing for a period of not less than 24 hours after set has occurred. Plaster shall be applied when the ambient temperature is higher than 40°F (4°C), unless provisions are made to keep cement plaster work above 40°F (4°C) during application and 48 hours thereafter.

2512.5 Second-coat application. The second coat shall be brought out to proper thickness, rodded and floated sufficiently rough to provide adequate bond for the finish coat. The second coat shall have no variation greater than $^1/_4$ inch (6.4 mm) in any direction under a 5-foot (1524 mm) straight edge.

2512.6 Curing and interval. First and second coats of cement plaster shall be applied and moist cured as set forth in ASTM C 926 and Table 2512.6.

TABLE 2512.6
CEMENT PLASTERS[a]

COAT	MINIMUM PERIOD MOIST CURING	MINIMUM INTERVAL BETWEEN COATS
First	48 hours[a]	48 hours[b]
Second	48 hours	7 days[c]
Finish	—	Note c

a. The first two coats shall be as required for the first coats of exterior plaster, except that the moist-curing time period between the first and second coats shall not be less than 24 hours. Moist curing shall not be required where job and weather conditions are favorable to the retention of moisture in the cement plaster for the required time period.
b. Twenty-four-hour minimum interval between coats of interior cement plaster. For alternate method of application, see Section 2512.8.
c. Finish coat plaster is permitted to be applied to interior portland cement base coats after a 48-hour period.

2512.7 Application to solid backings. Where applied over gypsum backing as specified in Section 2510.5 or directly to unit masonry surfaces, the second coat is permitted to be applied as soon as the first coat has attained sufficient hardness.

2512.8 Alternate method of application. The second coat is permitted to be applied as soon as the first coat has attained sufficiently rigidity to receive the second coat.

2512.8.1 Admixtures. When using this method of application, calcium aluminate cement up to 15 percent of the weight of the portland cement is permitted to be added to the mix.

2512.8.2 Curing. Curing of the first coat is permitted to be omitted and the second coat shall be cured as set forth in ASTM C 926 and Table 2512.6.

2512.9 Finish coats. Cement plaster finish coats shall be applied over base coats that have been in place for the time periods set forth in ASTM C 926. The third or finish coat shall be applied with sufficient material and pressure to bond and to cover the brown coat and shall be of sufficient thickness to conceal the brown coat.

SECTION 2513
EXPOSED AGGREGATE PLASTER

2513.1 General. Exposed natural or integrally colored aggregate is permitted to be partially embedded in a natural or colored bedding coat of cement plaster or gypsum plaster, subject to the provisions of this section.

2513.2 Aggregate. The aggregate shall be applied manually or mechanically and shall consist of marble chips, pebbles or similar durable, moderately hard (three or more on the Mohs hardness scale), nonreactive materials.

2513.3 Bedding coat proportions. The bedding coat for interior or exterior surfaces shall be composed of one-part portland cement, one-part Type S lime and a maximum of three parts of graded white or natural sand by volume. The bedding coat for interior surfaces shall be composed of 100 pounds (45.4 kg) of neat gypsum plaster and a maximum of 200 pounds (90.8 kg) of graded white sand. A factory-prepared bedding coat for interior or exterior use is permitted. The bedding coat for exterior surfaces shall have a minimum compressive strength of 1,000 pounds per square inch (psi) (6895 kPa).

2513.4 Application. The bedding coat is permitted to be applied directly over the first (scratch) coat of plaster, provided the ultimate overall thickness is a minimum of $^{7}/_{8}$ inch (22 mm), including lath. Over concrete or masonry surfaces, the overall thickness shall be a minimum of $^{1}/_{2}$ inch (12.7 mm).

2513.5 Bases. Exposed aggregate plaster is permitted to be applied over concrete, masonry, cement plaster base coats or gypsum plaster base coats installed in accordance with Section 2511 or 2512.

2513.6 Preparation of masonry and concrete. Masonry and concrete surfaces shall be prepared in accordance with the provisions of Section 2510.7.

2513.7 Curing of base coats. Cement plaster base coats shall be cured in accordance with ASTM C 926. Cement plaster bedding coats shall retain sufficient moisture for hydration (hardening) for 24 hours minimum or, where necessary, shall be kept damp for 24 hours by light water spraying.

SECTION 2514
HIGH-VELOCITY HURRICANE ZONES — LATHING

2514.1 General. Lath shall be gypsum, metal or wire lath, as set forth herein, and shall conform to the *Standard Specification for Interior Lathing and Furring*, ANSI A42.4.

2514.2 Gypsum lath. Gypsum lath shall conform to the *Standard Specification for Gypsum Lath*, ASTM C37.

2514.2.1 Gypsum lath shall be nailed to wood supports, at intervals not to exceed 5 inches (127 mm), with 13-gauge galvanized or blued nails having 19/64-inch (7.5 mm) diameter flat heads (7.5 mm). Nails shall be not less than 11/8-inches (29 mm) long for 3/8-inch(9.5 mm) lath nor less than 11/4-inches (32 mm) for 1/2-inch (12.7 mm) lath. Each 16-inch (406 mm) width of lath shall be secured to each support with not less than five nails except that where fire-resistive-rated construction is not required, there shall not be less than four nails.

2514.2.2 Lath shall be secured to horizontal or vertical metal supports by means of approved special clips.

2514.2.3 The center-to-center spacing of wood supports shall not exceed 16 inches (406 mm) for 3/8-inch (9.5 mm) gypsum lath and shall not exceed 24 inches (610 mm) for 1/2-inch (12.7 mm) gypsum lath.

2514.2.4 The center-to-center spacing for gypsum lath applied to metal studs shall not exceed that set forth herein above for wood supports except that 3/8-inch (9.5 mm) gypsum lath may be applied to metal studs spaced 24 inches (610 mm) on centers where a minimum of 3/4-inch (19 mm), three-coat plaster is applied over the lath.

2514.2.5 Lath shall be applied with face side out and with the long dimension at right angles to the framing members. Joints shall be broken in each course, except that end joints may fall on one support when such joints are covered with 3 inch (76 mm) wide strips of metal lath. Lath shall be butted together.

2514.2.6 Corner bead and inside angle reinforcing shall not be required.

2514.2.7 No interior lath shall be applied until the roof is on and the building is dried in.

2514.3 Metal and wire lath.

2514.3.1 Metal and wire lath and metal accessories embedded in the plaster shall be galvanized or otherwise rust-resistant by approved means. Weight tags shall be left on all metal or wire lath until approved by the building official.

2514.3.2 The weight of metal and wire lath and the spacing of supports shall conform to the requirements set forth in Table 2514.3.2.

2514.3.3 All metal lath shall be lapped 1 inch (25 mm) minimum.

2514.3.4 All attachments for securing metal lath, wire lath and wire fabric to supports shall be spaced not more than 6 inches (152 mm) apart, and side laps shall be secured to supports and be tied between supports at not to exceed 9 inches (229 mm) intervals.

2514.3.5 Metal and wire lath shall be attached to vertical wood supports with the equivalent of 4d galvanized or blue common nails driven to a penetration of at least 3/4 inch (19 mm) and bent over to engage not less than three strands of lath. Metal and wire lath shall be attached to ceiling joists or other horizontal wood supports with the equivalent of No. 11-gauge, barbed, galvanized or blued nails 11/2 inches (38 mm) long having a head not less than 3/8 inch (9.5 mm) in diameter.

2514.3.6 Metal and wire lath shall be attached to horizontal and vertical metal supports with the equivalent of No. 8 galvanized sheet-metal screws.

2514.4 Nonbearing lath and plaster partitions.

2514.4.1 Where reinforced plaster or pneumatically placed plaster partitions are used, they shall have vertical steel or iron channels with a depth of not less than one-third of the thickness of the partition and spaced not more than 24 inches (610 mm) on centers. The thickness of metal in the channels shall not be less than 16 U.S. standard gauge or light gauge steel studs.

2514.4.2 Hollow nonbearing partitions of reinforced plaster or pneumatically placed plaster shall have a shell thickness of not less than 3/4 inch (19 mm).

2514.4.3 Metal reinforcing shall be as set forth in Table 2514.3.2, and gypsum lath shall not be less than 3/8 inch (9.5 mm) in thickness. The minimum thickness of metal lath and plaster partitions shall be not less than 2 inches (51 mm) or 1/84 of the distance between supports.

TABLE 2514.3.2
WEIGHTS OF METAL AND WIRE LATH(*)

TYPE OF LATH	MINIMUM WGT (lb per sq yd)	MAXIMUM SPACING OF SUPPORTS (in.)	
		For Walls	For Ceilings
Flat Expanded Metal Lath	2.5	16	0
Flat Expanded Metal Lath	3.4	16	16
Flat Rib Metal Lath	2.75	16	12
Flat Rib Metal Lath	3.4	19	19
3/8" Rib Metal Lath	3.4	24	24
Sheet-Metal Lath	4.5	24	24
Wire Lath	2.48	16	12
Wire Fabric	**	16	16

For SI: 1 inch = 25.4 mm, 1 square yard = 0.8361 m^2.

* V-stiffened that expanded metal lath of equal rigidity and weight is permissible on the same spacings as 3/8-inch rib metal lath.

** Paper-backed wire fabric, No. 16-gauge wire, 2-inch by 2-inch mesh, with stiffener.

2514.5 Suspended and furred plaster ceilings.

2514.5.1 General. Suspended or furred plaster ceilings shall be designed and constructed as set forth herein.

2514.5.2 Main runners. Main runners or carriers shall be rolled steel channels not less than the sizes and weights set forth in Table 2514.5.2.

A main runner shall be located not more than 6 inches (152 mm) from parallel walls to support the ends of cross furring. The ends of main runners at walls shall be supported by hangers located not more than 12 inches (305 mm) from such ends. Splices in main runners shall be lapped 12 inches (305 mm) and tied, each end, with double loops of No. 16-gauge wire.

2514.5.3 Cross furring. Cross furring, or spacers, for various spacing of main runners or other supports shall be not less than as set forth in Table 2514.5.3.

2514.5.3.1 Cross furring shall be securely saddle-tied to the main runners by not less than two strands of No. 16 W and M gauge galvanized wire or equivalent approved attachments. Cross furring shall be attached to joists or beams with double No. 14 W and M gauge galvanized wire or equivalent approved attachments.

Splices in cross furring shall be lapped 8 inches (203 mm) and tied, each end, with double loops of No. 16-gauge wire.

2514.5.4 Hangers. Hangers supporting suspended ceilings shall be not less than as set forth in Table 2514.5.4.

TABLE 2514.5.4
HANGERS SUPPORTING SUSPENDED CEILINGS

CEILING AREA SUPPORTED (SQUARE FEET)	MINIMUM SIZE OF HANGER
12.5	8-gauge wire
16	6-gauge wire
18	3/16" rod
22.5	1/4" rod
50	1" x 3/16" flat bar

For SI: 1 inch = 25.4 mm.

2514.5.4.1 Hangers shall be saddle-tied or wrapped around main runners to develop the full strength of the hangers. Hangers shall be fastened to or embedded in the structural framing, masonry or concrete. Lower ends of flat-strap hangers shall be bolted with 3/8 inch (9.5 mm) bolts to runner channels or bent tightly around corners and bolted to the main part of the hanger. Where the area

TABLE 2514.5.2
SPANS AND SPACING OF MAIN RUNNERS

MINIMUM SIZE AND TYPE (inches)	MAXIMUM SPAN BETWEEN HANGERS OR SUPPORTS (feet, inches)	MAXIMUM CENTER-TO-CENTER SPACING OF RUNNERS (feet, inches)
3/4 - 0.3 lb per ft	2-0	3-0
1-1/2 - 0.475 lb per ft	3-0	4-0
1-1/2 - 0.475 lb per ft	3-6	3-6
1-1/2 - 0.475 lb per ft	4-0	3-0
1-1/2 - 1.12 lb per ft	4-0	5-0
2 -1.26 lb per ft	5-0	5-0
1-1/2 x 1-1/2{*} by 3/16 angle	5-0	5-0

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 lb/ft = 1.4882 kg/m.

TABLE 2514.5.3
SIZES OF CROSS FURRING IN SUSPENDED AND FURRED CEILINGS

SIZE AND TYPE (inches)	MAXIMUM SPAN BETWEEN SUPPORTS (feet)	MAXIMUM SPACING (inches)
1/4 pencil rods	Up to 2-0	12
3/4 channels	Up to 3-0	24
3/4 channels	Up to 4-0	16

For SI: 1 inch = 25.4 mm.

of a plastered ceiling exceeds 100 square feet (93 m^2), suitable methods to resist uplift forces shall be provided for each 64 square feet (6 m^2) of ceiling.

SECTION 2515
HIGH-VELOCITY HURRICANE ZONES — PLASTER

2515.1 General.

2515.1.1 Gypsum plastering shall conform to the *Standard Specification for Gypsum Plastering*, ANSI A42.1.

2515.1.2 Plastering with gypsum, hardwall, lime or cement plaster shall be three-coat work when applied over metal and wire lath and shall be not less than two-coat work when applied over gypsum lath or gypsum block.

2515.1.3 Portland cement plaster shall not be applied directly to gypsum lath.

2515.1.4 In no case shall a brush coat be accepted as a required coat where three-coat work is required by this section.

2515.1.5 Grounds shall be installed to provide for the thickness of plaster, as set forth in Table 2515.1.5, as measured from the face of the lath.

TABLE 2515.1.5
REQUIRED THICKNESS OF INTERIOR PLASTER

TYPE OF LATH	THICKNESS OF PLASTER (inches)
Metal or wire lath	5/8 minimum
Gypsum lath	1/2 minimum

For SI: 1 inch = 25.4 mm.

2515.1.6 If monolithic-concrete ceiling surfaces require more than 3/8 inch (9.5 mm) of plaster to produce desired lines or surfaces, metal lath or wire lath shall be attached thereto; except that special bonding agents approved by the building official may be used.

2515.1.7 The building official may require test holes to be made for the purpose of determining the thickness of plaster.

2515.2 Materials.

2515.2.1 Aggregates.

2515.2.1.1 Inorganic aggregates used for plaster and stucco shall conform to the *Standard Specification for Inorganic Aggregates for Use In Gypsum Plaster*, ASTM C 35, except that graduation of locally produced sand shall be such that the fineness modulus is between 1.20 and 2.35.

2515.2.1.2 Aggregates shall be quarried or washed in fresh water and shall contain not more than 1/20 of one percent salt, by weight.

2515.2.2 Gypsum. Gypsum plaster shall conform to the *Standard Specification for Gypsum Plaster*, ASTM C 28.

2515.2.3 Lime. Lime shall conform to the *Standard Specification for Quicklime for Structural Purposes*, ASTM C 5, and the *Standard Specification for Special Finish Hydrated Lime*, ASTM C 206.

2515.2.4 Keene's cement. Keene's cement shall conform to the *Standard Specification for Keene's Cement*, ASTM C 61.

2515.2.5 Portland cement.

2515.2.5.1 Portland cement shall conform to the *Standard Specification for Portland Cement*, ASTM C 150.

2515.2.5.2 Approved types of plasticity agents may be added to cement in the manufacturing process or when mixing the plaster, but in no case shall the amount of the plasticity agent exceed 10 percent of the volume of cement in the plaster mixture.

2515.2.6 Masonry cement. Masonry cement shall be Type II and shall conform to the *Standard Specification for Masonry Cement*, ASTM C 91.

2515.3 Proportioning and mixing.

2515.3.1 Base coats. The proportions of sand, vermiculite or perlite to 100 pounds (45.4 kg) of gypsum neat plaster shall not exceed the requirements in this section.

2515.3.1.1 Gypsum or hardwall plaster. Gypsum or hardwall plaster shall be proportioned in accordance with Section 2515.3.1.1.

2515.3.1.2 Wood-fiber gypsum plaster. Wood-fiber gypsum plaster for use on all types of lath shall be mixed with water only and shall be mixed in the proportion of one part of plaster to one part of sand, by weight, for use on masonry.

2515.3.1.3 Ready mixed plaster. Gypsum ready-mixed plaster shall be in the proportion of 100 pounds (45.4 kg) of gypsum neat plaster to not more than 250 pounds (113 kg) of sand; or when vermiculite or perlite is used as an aggregate, the proportions shall be 100 pounds (45.4 kg)

TABLE 2515.3.1.1
GYPSUM AND HARDWALL PLASTER

APPLICATION METHOD	DAMP LOOSE SAND (LB)	VERMICULITE OR PERLITE (CU FT)
TWO-COAT WORK (DOUBLE-UP METHOD)		
(1) Over gypsum lath	250	2-1/2
(2) Over masonry[2]	300	3
THREE-COAT WORK		
(1) First (scratch) coat over lath	200[1]	2
(2) First (scratch) coat over masonry	300	3
(3) All second (brown) coats	300[1]	3

For SI: 1 cubic foot = 0.02832 m^3, 1 pound = 0.454 kg.

1. Except over monolithic concrete.
2. In lieu of the proportioning specified, the proportions may be 100 pounds of gypsum neat plaster to not more than 250 pounds of damp, loose sand or $2^1/_2$ cubic feet of vermiculite or perlite, provided this proportioning is used for both scratch and brown coats.

of gypsum neat plaster to not more than 21/2 cubic feet (0.07 m^3) vermiculite or perlite.

2515.3.1.4 Portland cement plaster. For three-coat work, the first two coats shall be required for the first two coats of exterior stucco (see Section 2516).

2515.3.1.5 Masonry cement plaster. For two- or three-coat work, all work shall be set forth in Section 2515.

2515.3.2 Finish coats for gypsum or lime plaster. The finish coats shall be mixed and proportioned in accordance with this section.

2515.3.2.1 Smooth white finish, mixed in the proportion of not less than one part gypsum gaging plaster to three parts lime putty, by volume, or an approved prepared gypsum trowel finish.

2515.3.2.2 Sand-float finish, mixed in the proportion of one-half part of Keene's cement to two parts of lime putty and not more than four and one-half parts of sand, by volume, or an approved gypsum sand-float finish.

2515.3.2.3 Keene's cement finish, mixed in the proportion of three parts Keene's cement to one part lime putty, by volume.

2515.3.2.4 Lime sand-float finish, mixed in the proportion of three parts lime putty to three parts sand, by volume.

2515.3.2.5 Finish coat for perlite or vermiculite aggregate plasters, mixed in the proportion of 1 cubic foot (28 339 cc) of aggregate to 100 pound (45 kg) of unfibered gypsum plaster, or mixed according to manufacturer's specifications.

2515.3.3 Finish coat for Portland cement plaster. Finish coats for interior Portland cement plaster shall be one of the following:

1. As required for the third coat of exterior stucco. See Section 2413.
2. A gaged cement plaster mixed in proportion of one part Portland cement to not more than 15 percent lime putty and not more than four parts of sand, by volume.

2515.3.4 Finish coat for masonry cement plaster. Finish coat for masonry cement plaster shall be as set forth in Section 2515.4.2.3.

2515.4 Application.

2515.4.1 Base coats.

2515.4.1.1 Gypsum plaster. The scratch coat shall be applied with sufficient material and pressure to form a full key or bond.

2515.4.1.1.1 For two-coat work it shall be doubled back to bring the plaster out to grounds and straightened to a true surface and left rough to receive the finish coat.

2515.4.1.1.2 For three-coat work, the scratch (first) coat shall be scratched to a rough surface. The brown (second) coat shall be applied after the scratch coat has set firm and hard, brought out to grounds, straightened to a true surface with rod and darby and left rough, ready to receive the finish (third) coat.

2515.4.1.1.3 The finish coat shall be applied to a practically dry base coat or to a thoroughly dry base coat which has been evenly wetted by brushing or spraying. The use of excessive water shall be avoided in the application of all types of finish coat plastering.

2515.4.1.2 Portland cement plaster. The first two coats shall be as required for the first two coats of exterior stucco, except that the interval between the first and second coats shall be not less than 24 hours.

2515.4.1.3 Masonry cement plaster. Where masonry cement is the only cementitious material, the second coat may be applied to the base coat as soon as the base coat has attained sufficient strength and rigidity to support the second (finish) coat.

2515.4.2 Finish.

2515.4.2.1 Smooth white finish shall be applied over the base coat that has set for a period of not less than 24 hours and is surface dry. Thickness shall be from 1/16 inch to 1/8 inch (1.6 mm to 3.3 mm).

2515.4.2.2 Sand-float finish shall be applied over the set base coat that is not quite dry.

2515.4.2.3 Keene's cement finish shall be applied over the set base coat that is not quite dry. Thickness shall be from 1/16 inch to 1/8 inch (1.6 to 3.3 mm), unless finish coat is marked off or is jointed; in which case, the thickness may be increased as required by depth of marking or jointing.

2515.4.2.4 The finish coat for interior Portland cement plastering shall be applied in the same manner as required for the third coat of exterior stucco, except that other types of finish coat may be applied as specified in Section 2413.

2515.4.2.5 The finish coat for lightweight aggregate plastering shall be from 1/16 inch to 1/8 inch (1.6 mm to 3.3 mm).

2515.4.3 Plaster on concrete.

2515.4.3.1 Monolithic concrete surfaces shall be clean, free from efflorescence, damp and sufficiently rough to insure adequate bond.

2515.4.3.2 Gypsum plaster applied to monolithic-concrete ceilings shall be specially prepared bond plaster for use on concrete, to which only water shall be added. Gypsum plaster on monolithic walls and columns shall be applied over a scratch coat of bond plaster, or other bonding material, before it has set. The brown coat shall be brought out to grounds, straightened to a true surface and left rough, ready to receive the finish coat.

2515.4.3.3 Portland cement plaster applied to interior concrete walls or ceilings shall conform to requirements for application to exterior concrete walls as specified in Section 2516.

SECTION 2516
HIGH-VELOCITY HURRICANE ZONES — STUCCO

2516.1 General.

2516.1.1 Portland cement-based plaster shall be applied in accordance with ASTM C 926, excluding Table 4 of that standard.

2516.1.2 Stucco base and finish coats, where required to meet fire-resistance requirements, shall be mixed in proportion of at least one part portland cement to a maximum of two and one-half parts sand by volume.

2516.1.3 Approved manufacturing products may be used for base and finish coats.

2516.1.4 Materials. The materials of stucco shall conform to ASTM C 926.

2516.1.5 Admixtures.

2516.1.5.1 Plasticity agents shall be of approved types and amounts and, where added to Portland cement in the manufacturing process, no additions shall be made later.

2516.1.5.2 Color may be added to the finish coat in approved amounts.

2516.1.6 Application.

2516.1.6.1 Stucco applied to concrete or masonry to meet fire-resistance requirements shall consist of at least two coats, and the total thickness shall be not less than 1/2 inch (12.7 mm).

2516.1.6.2 Masonry surfaces on which all stucco is applied shall be clean, free from efflorescence, damp and sufficiently rough, or coated with an approved bonding agent, to insure proper bond.

2516.1.6.3 All concrete surfaces shall be coated with an approved bonding agent or shall be effectively roughened.

2516.1.6.4 The first coat shall be well forced into the pores of the masonry, shall be brought out to grounds, straightened to a true surface and left rough enough to receive the finish coat.

2516.1.6.5 The first coat shall be rodded and waterfloated to a true surface approximately one-half the total thickness.

2516.1.6.6 The base coat shall be damp cured for a period of not less than 24 hours.

2516.1.6.7 In lieu thereof, the finish coat, where containing appropriate waterproofing or curing admixtures, may be applied as soon as the base coat has attained initial set and is sufficiently firm to receive the finish coat.

2516.1.6.8 The finish coat shall be applied over a uniformly damp but surface-dry base.

2516.1.6.9 Stucco shall be kept damp for a period of not less than 48 hours after application of the finish coat.

2516.1.6.10 In lieu thereof, the finish coat may contain appropriate approved waterproofing or curing agents.

2516.2 Stucco on walls other than concrete or masonry.

2516.2.1 General. Stucco shall be as set forth in Section 2516.1.

2516.2.2 Moisture barrier. Wood shall be covered with 15-pound (7 kg) roofing felt, or other approved equally moisture-resisting layer, and metal reinforcement as set forth herein.

2516.2.3 Metal reinforcement.

2516.2.3.1 Stucco shall be reinforced with galvanized expanded metal weighing no less than 1.8 pounds per square yard (0.98 kg/m^2), or galvanized welded or woven wire-fabric weighing no less than 1 pound per square yard (0.54 kg/m^2).

2516.2.3.2 All metal lathing shall be lapped not less than 1 inch (25 mm).

2516.2.3.3 Metal reinforcement shall be furred out from the backing by an approved method.

2516.2.3.4 Fastenings into wood sheathing or wood framing shall be by galvanized nails, with heads not less than 3/8 inch (9.5 mm) in diameter, driven to full penetration, using a minimum of two nails per square foot (0.093

m^2), or by approved staples having equal resistance to withdrawal.

2516.2.3.5 The fastening of rib-lath to metal members shall be by #8 galvanized sheet-metal screws, using a minimum of two screws per square foot (0.093 m^2).

2516.2.4 Application.

2516.2.4.1 Stucco applied on metal lath shall be three-coat work applied to a total thickness of not less than 1/2 inch (12.7 mm) thickness except as required to meet fire-resistance requirements.

2516.2.4.2 The first coat shall be forced through all openings in the reinforcement to fill all spaces and scored horizontally.

2516.2.4.3 The second coat shall be applied after the first coat has set sufficiently to provide a rigid backing.

2516.2.4.4 The third coat shall be applied as soon as the second coat has attained initial set.

2516.3 Pneumatically placed stucco.

2516.3.1 Pneumatically-placed stucco shall consist of a mixture of one part Portland cement to not more than five parts sand, conveyed through a pipe or flexible tube and deposited by pressure in its final position.

2516.3.2 Rebound material may be screened and reused as sand in an amount not greater than 25 percent of the total sand in any batch.

2516.3.3 Plasticity agents may be used as specified in Section 2516.1.5.1.

SECTION 2517
HIGH-VELOCITY HURRICANE ZONES — GYPSUM BOARD PRODUCTS AND ACCESSORY ITEMS

2517.1 General.

2517.1.1 Gypsum wallboard products and related items and accessories to be used with or without the addition of plaster for partitions, walls and ceilings shall be as set forth in this section.

2517.1.2 Where required to be fire resistive, such assemblies shall also comply with Chapter 7 of this code.

2517.2 Standards. The following standards are adopted as set forth in Chapter 35.

Standard Specification for the Application and Finishing of Gypsum Wallboard, ANSI A97.1.

Specification for Gypsum Wallboard, ASTM C 36.

Specification for General Requirements for Zinc-Coated (Galvanized) Steel Sheets, by the Hot-Dip Process, ASTM A 525.

Specification for Light-gauge Steel Studs, Runners, and Rigid Furring Channels, ASTM C 645.

Specification for Joint Treatment Materials for Gypsum Wallboard Construction, ASTM C 475.

2517.3 Gypsum wallboard.

2517.3.1 The gypsum wallboard shall comply with the standards set forth in Section 2517.2, and single or multiple system combinations shall be not less than 1/2 inch (12.7 mm) in thickness.

2517.3.2 The span between supports for gypsum wallboard shall be not more than 24 inches (610 mm) for 1/2 inch (12.7 mm) thick and 5/8 inch (17.1 mm) thick wallboard.

2517.3.3 Gypsum wallboard used in fire-rated assemblies shall be of a type for which test ratings are available.

2517.4 Wood studs and wood ceiling supports. Wood studs and wood ceiling supports shall comply with Chapter 23 (High-Velocity Hurricane Zones).

2517.5 Steel studs, ceiling supports and track runners.

2517.5.1 Steel studs and runners used to construct fire-resistive walls or partitions shall be hot-dipped galvanized in accordance with ASTM A 525, coating designation G40, minimum and be of channel or "C"-type shape. The total thickness of the base metal plus coating shall not be less than 0.0184 inch (0.467 mm) unpainted and not less than 0.0194 inch (0.493 mm) if coated and painted. Studs and runners shall comply with ASTM C 645 and have a base metal thickness, before application of any coating, of not less than 0.0179 inch (0.455 mm). Structural properties of such studs and runners shall comply with ASTM C 645.

2517.5.1.1 Steel studs supporting wall hung plumbing fixtures shall be doubled or not less than 20 gauge with a minimum effective moment of inertia equal to 0.864 $in.^4$ (360 m^4).

2517.5.1.2 Such studs shall be rigidly connected top and bottom to prevent significant end rotation or displacement.

2517.5.1.3 A horizontal member securely fastened to not less than two studs shall be installed for the attachment of each wall hung plumbing fixture.

2517.5.2 The unsupported height of partitions shall comply with the loads and deflections set forth in Chapter 16 (High-Velocity Hurricane Zones) and where wallboard is suitably attached, the composite action may be accounted for in the design.

2517.5.3 Steel ceiling supports shall comply with Section 2514.5.

2517.5.4 Steel studs track runners and ceiling supports in walls, including curtain walls, shall comply with ASTM A 525.

Exception: Such members in interior nonload-bearing walls need not be galvanized but shall comply with ASTM C 645.

2517.6 Attachments.

2517.6.1 Attachments shall be as set forth herein and for fire-rated assemblies shall also conform to the material and conditions of the assembly tested.

2517.6.2 Attachment to wood supporting members shall conform to the standard set forth in Section 2517.2.

2517.6.3 Nails and screws attaching gypsum wallboard shall, without substantially fracturing the surface paper, be driven below the surface and spotted with finishing joint compound.

2517.6.4 Attachment to metal members shall be in accordance with Section 2517.6.4.1 through Section 2517.6.4.5.

2517.6.4.1 Gypsum wallboard shall be attached to metal members by self-drilling, self-tapping sheet metal screws.

2517.6.4.2 The spacing of screws attaching gypsum wallboard to metal studs and runners, shall be not more than 12 inches (305 mm) on center.

2517.6.4.3 Screws for attaching gypsum wallboard to metal studs shall be not less than 7/8 inch (22.2 mm) long for 1/2 inch (17.7 mm) wallboard or 1 inch (25.4 mm) long for 5/8 inch (17.1 mm) wallboard.

2517.6.4.4 Screws attaching gypsum wallboard shall be driven below the surface and spotted with finishing compound.

2517.6.4.5 Runners shall be fastened to the ceiling, contiguous walls and partitions and to the floor at intervals not exceeding 24 inches (610 mm) on center. Such attachment may be by nails penetrating the base material not less than 5/8 inch (17.1 mm) or by self-drilling, self-tapping sheet metal screws attaching metal to metal.

SECTION 2518
HIGH-VELOCITY HURRICANE ZONES — SUSPENDED AND FURRED CEILINGS

2518.1 General. Lath and plaster ceilings shall be as set forth in this chapter.

2518.2 Suspended and furred ceilings, other than lath and plaster where providing fire protection shall comply with Chapter 7.

2518.3 Suspended and furred ceilings, other than lath and plaster, shall be suspended and supported in conformance with the conditions of fire tests or, if not tested, as recommended by the manufacturer or as required for structural stability.

SECTION 2519
HIGH-VELOCITY HURRICANE ZONES — ASBESTOS

2519.1 Asbestos cement shall not be permitted for use under this code.

SECTION 2520
HIGH-VELOCITY HURRICANE ZONES — TILE

2520.1 Ceramic and Portland cement floor tile shall be set on a concrete slab or on wood sheathing on wood joists protected by a waterproof membrane.

2520.2 Floor tile shall be set in a mortar bed of one part portland cement to three parts aggregate or otherwise bedded in an approved adhesive material.

2520.2.1 Ceramic and portland cement wall tile used in areas subject to frequent wearing shall be backed with masonry, stucco on wire lath or approved tile backer board.

2520.2.2 Wall tile used in areas not subject to frequent wearing shall be backed by a cladding having the rigidity of stucco on wire lath and shall be bedded in cement mortar or other approved adhesive material.

2520.3 Portland cement or other porous tile shall be soaked in water not less than 1 hour before placing.

2520.4 Built-in tubs with overhead showers shall have waterproof joints between the tub and the wall and floor.