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Director

CITY OF PROVIDENCE • MAYOR JOSEPH A. DOORLEY, JR.

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MECHANICAL DIVISION

April 12, 1972

Mr. Vincent Vespia
City Clerk
City Hall

Dear Mr. Vespia:

Please be advised that the Building Code Revisions, Chapter 1079, submitted to you by the Legal Department are the result and recommendations of the Building Code Revision Board.

Very truly yours,

Vincent DiMase

Vincent DiMase, P.E.
Director, Department of
Building Inspection
(Secretary, Building Code
Revision Board)

VDM/np

CHAPTER 1972-26

No. 209 AN ORDINANCE REVISING, AMENDING AND MODIFYING THE GENERAL CONSTRUCTION REQUIREMENTS OF CHAPTER 1079, 1956 OF THE ORDINANCES OF THE CITY OF PROVIDENCE ENTITLED, "THE BUILDING ORDINANCES OF THE CITY OF PROVIDENCE" SECTIONS 503.0 ENTITLED, "STANDARDS OF NATURAL LIGHT" AND SECTION 603.0 TO SECTION 909.0 INCLUDING THE APPENDICES OF THE GENERAL CONSTRUCTION REQUIREMENTS TO THE BUILDING CODE OF THE APPROVED AMENDMENTS IN COMPLIANCE TO THE 1970 BOCA CODE.

Approved June 12, 1972

Be it ordained by the City of Providence:

SECTION I. Chapter 1079 of the Ordinances of the City of Providence entitled, "The Building Ordinances of the City of Providence" approved December 21, 1956, is hereby amended by changing, revising and modifying the following sections in the following manner:

SEC. 503.0 STANDARDS OF NATURAL LIGHT

~~Repealed~~ In the application of the provisions of this article, the standard of natural light for all habitable and occupiable rooms, unless otherwise specifically required by the provisions of article 4 for special uses and occupancies, shall be based on two hundred and fifty (250) foot candles of illumination on the vertical plane adjacent to the exterior of the light transmitting device in the enclosure wall and shall be adequate to provide an average illumination of six (6) foot candles over the area of the room at a height of thirty (30) inches above the floor level.

SEC. 603.0 USE AND OCCUPANCY REQUIREMENTS

603.4 Single-Exit Construction: Every sleeping room, in buildings permitted by sections 611.1 and 611.3 to have only one (1) exitway, unless it has two (2) doors providing separate ways of escape, or has a door leading directly to the outside of the building, shall have at least one (1) outside window which can be opened from the inside without the use of tools and of such design that it may serve as an emergency exit if the normal avenues of escape are blocked. The sill of such windows shall not be more than three and one-half (3 1/2) feet above the floor.

SEC. 611.0 NUMBER OF EXITWAYS

The following general requirements apply to buildings of all use groups. More restrictive requirements that may be provided in article 4 for special uses and occupancies shall take precedence over the general provisions of this section.

611.1 Minimum Number: There shall be not less than two (2) approved independent exitways serving every floor area above and below the first or grade floor, at least one (1) of which shall be in interior enclosed stairway, except in one- and two-family dwellings and as modified in section 611.3 and section 621.1. Exitways in dwellings shall be so arranged that they may be reached without passing through another living unit.

611.2 Grade Floor Exitways: From the first or grade floor, direct exitways shall be provided to the street consisting of one unit of exit width for each fifty (50) occupants on the grade floor in buildings of the high hazard use group and for each one hundred (100) occupants in all other use groups, in addition to the exitways from upper and lower floors.

611.3 Buildings With One Exitway: Only one exitway consisting of an interior enclosed stairway shall be required in buildings of the use group and characteristics specified:

Use Group	Characteristics of the Building						
	Max. Height Above Grade	Max. Floor Area (Sq. ft.)	Types of Construction	Max. Exitway Access Travel Distance	Min. Fire Resistance of Exitway Enclosure	Min. Fire Resistance of Opening Protection	Max. Occupancy Load
L-2 (multi-family)	3 Stories & attic	3000	1A, 1B, 2A, 2B	50 ft.	2 Hour	¾ Hour	6 Families
L-2 (multi-family)	3 Stories & attic	2400	2C, 3A, 3B, 3C, 4A, 4B	50 ft.	2 Hour	¾ Hour	6 Families
L-2 (multi-family)	2 Stories & attic	3000	1A, 1B, 2A, 2B, 2C, 3A, 3B, 3C, 4A, 4B	50 ft.	1½ Hour	¾ Hour	4 Families per floor
E (Business)	3 Stories	4000	1A, 1B, 2A	75 ft.	2 Hour	¾ Hour	50
E (Business)	2 Stories	3000	2B, 2C, 3A, 3B, 3C	75 ft.	2 Hour	¾ Hour	50
E (Business)	2 Stories	3000	4A, 4B	75 ft.	¾ Hour	¾ Hour	50

611.4 Basement Recreation Rooms: In residential buildings (use group L-1 and L-2), the basements of which are used as playrooms or for similar recreation purposes, with an occupancy load of twelve (12) or more, such areas and the exitway shall be enclosed with partitions and ceiling of not less than three-quarter (3/4) hour fireresistive construction. A direct secondary exit from the basement to streets, yards or courts leading to the street, shall be acceptable in lieu of the requirement for an enclosed stairway.

611.5 Open Parking Structures: Parking structures shall have not less than two (2) exitways from each parking tier, except that where vehicles are mechanically parked, only one (1) exitway need be provided in structures not exceeding eighty-five (85) feet in height. The maximum distance from any point on a parking tier to an exitway at that tier shall not exceed one hundred fifty (150) feet. Ramps used for the movement of vehicles need not be enclosed and may be considered as required exitways in structures not exceeding eighty-five (85) feet in height where vehicles are attendant parked and in other structures having not less than two (2) enclosed stairways. The construction of stairways, ramps and stairway enclosures shall comply with the applicable requirements of this code except that stairways in a structure where vehicles are attendant parked and the height of the structure does not exceed fifty (50) feet, or in structures not exceeding eighty-five (85) feet in height where vehicles are mechanically parked, only one (1) stairway need be enclosed.

SEC. 612.0- CORRIDORS AND AISLES

612.11 Turnstiles and Gates: Access from public areas through turnstiles, gates, rails or similar devices shall not be permitted unless such a device is equipped to readily swing in the exiting direction of travel under a total pressure of not more than fifteen (15) pounds.

SEC. 613.0- GRADE PASSAGEWAYS

Section 613.0 Grade Passageways and Lobbies Used as an Exitway Element

613.1 Enclosures of Passageways: Every required interior and exterior exitway element which does not adjoin a street shall be directly connected to the street or to an open court leading to the street by an enclosed passageway, hallway, lobby or other unobstructed exitway element constructed as provided in this section and in section 909.0.

613.2 Width and Height: The effective width of the lobby or other enclosed passageway shall be not less than three-quarters ($3/4$) of the aggregate width of all required exitway stairways leading thereto and all required exitway doorways opening into the passageway. Such passageway shall have a minimum width of forty-four (44) inches and a minimum clear ceiling height of eight (8) feet.

613.3 Maximum Stairway Limitations: Not more than two (2) required stairways shall discharge through the same passageway; except that in school and factory buildings and other use groups in which the occupants are regularly trained in supervised fire drills for rapid dismissal, a common grade passageway or lobby may be arranged to accommodate not more than four (4) stairways.

613.4 Construction: The enclosures of grade passageways and lobbies connecting required means of egress to the street shall be of two (2) hour fireresistive construction with openings protected by one and one-half ($1\ 1/2$) hour fireresistive assemblies; except, in buildings involving uses which are incidental to the main use and when such accessory uses are designed to serve the convenience of occupants in hotels, office buildings and buildings of similar uses the following requirements shall apply:

613.41 Door Openings: All required exitway doors shall comply with the requirements of article 9 for fire doors;

613.42 Show Windows: Show windows opening on such lobbies shall be protected with automatic sprinklers or shall be backed with fire partitions of two (2) hour fireresistive rating;

613.43 Trim and Finish: All architectural trim and finish and decorative materials in grade floor lobbies shall comply with the requirements of sections 925 and 930;

613.44 Sprinklered Buildings: When the grade floor lobbies, passageways, public hallways and other public spaces connected thereto are equipped with an approved automatic sprinkler system complying with article 12, the requirements of sections 613.42 and 613.43 shall be waived.

613.5 Sales Spaces: Sales spaces in grade floor passageways and lobbies for the retail sale of merchandise not exceeding one hundred (100) square feet in area shall be permitted provided the required clear width of the passageway or lobby is not reduced thereby.

SEC. 614.0 DOORWAYS IN THE PATH OF EGRESS

Section 614.0 Means of Egress Doorways

The requirements of this section shall apply to all doorways serving as a component or element of a means of egress; except this section shall not apply to doorways leading to or from required stairways (see sections 618.6 and 620.4)

614.1 Number of Doorways: Every room with an occupancy load of more than seventy-five (75) or which exceeds fifteen hundred (1500) square feet in area shall have at least two (2) egress doorways and the doors shall be hung to swing in the direction of exit travel without obstructing the required width of exit. Grade exit doors shall not project more than twelve (12) inches beyond the street lot line complying with section 312.4.

614.11 Entrance and Egress Doorways: Where separate doors are provided for entrance and egress use, the entrance door shall be clearly marked "ENTRANCE ONLY" in letters not less than six (6) inches in height and legible from both inside and outside; unless such doors are equipped with an emergency release bracket that will disengage the door operator and permit the door to swing outward under total pressure of not more than fifteen (15) pounds. Unless so equipped, doors swinging inward only shall not be accepted as part of the required egress elements. When doors are operated by mechanical opening device they shall comply with the requirements of section 614.44.

614.2 Size of Doors: The minimum width of single doors shall be thirty-two (32) inches and the maximum width shall be forty-four (44) inches; except that single doors in one- and two-family dwellings and from retail stores and similar spaces on the grade floor to the street may not be less than thirty (30) inches wide. When the doorway is subdivided into two (2) or more separate openings, the minimum clear width of each opening shall be not less than twenty-eight (28) inches and each opening shall be computed separately in determining the number of required units of exit width. A door forty (40) inches in width shall be deemed the equivalent of two (2) full units of exit width. The height of doors shall in no case be less than six and two-thirds ($6 \frac{2}{3}$) feet. In applying the provisions of the Basic Code, the normal door dimensions shall be used for computing required size of doors.

614.3 Location Doors: The required doorways opening from a room or space within a building leading to an exitway access shall be located as remote as practicable from each other.

The distance of exitway access travel from any point in a room or space to a required exitway door shall not exceed the limitations of section 609.2 and table 12.

614.4 Door Hardware.

614.41 Operation: Locks and fastenings on egress doors shall be readily opened from the inner side without the use of keys. Draw bolts, hooks and other similar devices shall be prohibited on all egress doors, unless there is a readily visible, durable sign on the door stating "THIS DOOR TO REMAIN UNLOCKED DURING OCCUPANCY". The sign shall be in letters not less than one (1) inch high on a contrasting background. The locking device must be of a type that will be readily distinguishable as locked.

614.42 Panic Proof: In rooms of use group F-2 (assembly) with an occupancy load of more than one hundred (100) and in rooms of use groups F-1 and F-3 (assembly) with an occupancy load of more than three hundred (300) egress doors shall be equipped with approved panic proof latches or bolts which release under a pressure of fifteen (15) pounds.

614.43 Remot Control: in rooms of use group H-1 (institutional) occupied as places of detention, approved releasing devices with remote control shall be provided for emergency use.

614.44 Mechanical Operations: All doors which open into enclosed exit stairs, exit passageways or those which are installed to provide fire or smoke barriers across corridors shall be self-closing and be so maintained, or shall be automatic doors which will close upon activation of an approved automatic fail-safe type of device by the detection of smoke which reduces the intensity of one (1) foot long beam of white light by four (4) per cent or by the detection of invisible products of combustion generated by that fire within that same period of time.

Where egress doors are arranged to be opened by mechanical devices of any kind, they shall be so constructed that the door may be opened manually, and will release under a total pressure of not more than fifteen (15) pounds applied in the direction of exit travel.

614.5 Door Construction: All required egress doors that serve as an element of an exitway shall be self-closing or automatic fire doors, except for grade floor exitway discharge doors and revolving exitway doors as provided for in sections 614 and 615.0, and 614.51.

614.51 Grade Exitway Discharge Doors: Doors at grade may be glazed with plate glass not less than seven thirty-seconds ($7/32$) inch thick, or with any other approved glazing materials of equal flameresistance and fireresistance. Approved plate glass doors having one (1) or more undrained edges may be used provided they are constructed to tempered glass not less than one-half ($1/2$) inch thick.

SEC. 618.0 - INTERIOR STAIRWAYS

618.52 Guard Details:

1. guards shall be not less than thirty (30) inches in height measured vertically above the nosing of the tread.
2. guard shall be constructed so that the area in the plane of the guard from the top of the tread to the top of the guard is subdivided or filled in one of the following methods:
 - a. a sufficient number of intermediate longitudinal rails constructed so that the clear distance between rails (measured at right angles to the rail) does not exceed ten (10) inches. The bottom rail shall be not more than ten (10) inches (measured vertically) from the tread nosing.
 - b. balusters spaced not more than six (6) inches apart.
 - c. panels of wire mesh, or expanded metal, or ornamental grills which provide protection equivalent to that provided by the intermediate rails or balusters specified in the two preceding paragraphs.
 - d. walls.
 - e. any combination of the foregoing.

618.61 Width: The width of every exitway door to or from a stairway shall be not less than the number of units of exit width required for the capacity of the stairway which services the floor or area from which the exitway door leads; but in no case shall such a door be less than thirty (30) inches nominal width in use group L-3 buildings (one- and two family dwellings) and thirty-two (32) inches nominal width in use group E (business) buildings.

SEC. 820.0 - READY-MIX CONCRETESEC. 820.3 - ORDINARY MATERIALS PROCEDURE:

When ready-mix is used under the ordinary materials procedure, either the cement content in bags per yard of concrete together with the maximum allowable water content, or the compressive strength and maximum permissible slump shall be specified.

SEC. 828.0 - PLYWOOD

828.1 Quality: All plywood when used structurally shall meet the performance standard and all other requirements of U. S. Product Standard PS 1 listed in appendix C for the type, grade and identification index or species group of plywood involved and shall be so identified by an approved agency. Working stresses shall conform to the standards of accepted engineering practice as listed in appendixes B and C.

828.2 Types: Plywood for interior use may be either of the moisture resistant or exterior type; plywood for exterior use shall be of the exterior waterproof type. Exterior plywood may be applied directly to the framing as a siding, provided it has a nominal thickness of three-eighths ($3/8$) inch. Joints shall occur over framing members, unless wood or plywood sheathing is used or joints are lapped horizontally a minimum of one and one-half ($1-1/2$) inches or otherwise made waterproof to the satisfaction of the building official. If plywood is used as lapped siding without sheathing, the wall framing to which it is attached shall be diagonally braced.

828.3 Spans: The maximum spans for plywood roof sheathing and sub-flooring shall be limited by the allowable stresses and deflections for the design live load but shall have not less than the following identification index provided it is continuous over two (2) or more spans and laid with face grain perpendicular to the supports.

828.31 Vertical Maximum Stud Spacing: Stud spacing for vertical sheathing and for use in stress-skin panel or other prefabricated constructions shall be determined by accepted engineering analysis or by the tests prescribed for prefabricated assemblies in section 803.

PLYWOOD ROOF SHEATHING
DOUGLAS FIR, WESTERN LARCH, SOUTHERN PINE
AND
GROUP 1 SHEATHING GRADES WESTERN SOFTWOOD PLYWOOD

Panel Identification Index(2) (roof span "/floor span")	Roof				Floor
	Maximum Span (Inches)		Load (psf)		Maximum Span(5) (Inches)
	Edges Blocked(3)	Edges Unblocked	Total Load	Live Load	
12/0	12	12	130	100	0
16/0	16	16	75	55	0
20/0	20	20	55	45	0
24/0	24(6)	24	60	45	0
30/12	30	26	55	40	12(7)
32/16	32	28	50(4)	40	16(8)
36/16	36	30	50(4)	35(4)	16(8)
42/20	42	32	45(4)	35(4)	20(8)
48/24	48	36	40(4)	40	24

1. These values apply for Structural I and II, Standard Sheathing and C-C grades only. Spans shall be limited to values shown because of possible effect of concentrated loads.
2. Identification index appears on all panels in the construction grades listed in footnote (1).
3. Edges may be blocked with lumber or other approved type of edge support.
4. For roof live load of forty (40) psf or total load of fifty-five (55) psf, decrease spans by thirteen (13) per cent or use panel with next greater identification index.
5. Plywood edges shall have approved tongue-and-groove joints or shall be supported with blocking, unless one-fourth (1/4) inch minimum thickness underlayment is installed, or finish floor is twenty-five thirty-seconds (25/32) inch wood strip. Allowable uniform load based on deflection of one three-sixtieth (1/60) of span is one hundred (100) psi.
6. 1/2 inch Structural I, when continuous over one (1) support, may be laid with face grain parallel to supports provided all panel edges are blocked or other approved type edge support is provided, the spacing of the supports does not exceed twenty-four (24) inches on center, and the live load does not exceed thirty (30) pounds per square foot. For other grades, a thickness of five-eighths (5/8) is required.
7. May be sixteen (16) inches, if twenty-five thirty-seconds (25/32) inch wood strip flooring is installed at right angles to joists.
8. May be twenty-four (24) inches if twenty-five thirty-seconds (25/32) inch wood strip flooring is installed at right angles to joists.

§23.32 Plywood Combination Subfloor-Underlayment

ALLOWABLE SPAN FOR PLYWOOD COMBINATION
SUBFLOOR-UNDERLAYMENT⁽¹⁾

Plywood Continuous over Two (2) or More Spans
and Face Grain Perpendicular to Supports

Species Groups	Maximum Spacing of Joists (inches)		
	16	20	24
1	1/2	5/8	3/4
2,3	5/8	3/4	7/8
4	3/4	7/8	1

1—Applicable to Underlayment grade, C-C (Plugged) and all grades of sanded exterior type plywood. Spans limited to values shown because of possible effect of concentrated loads. Allowable uniform load based on deflection of 1/60 of span is 100 psf. Plywood edges shall have approved tongue-and-groove joints or shall be supported with blocking, unless one-fourth (1/4) inch minimum thickness underlayment is installed, or finish floor is twenty-five thirty-seconds (25/32) inch wood strip. If wood strips are perpendicular to supports, thicknesses shown for sixteen (16) inch and twenty (20) inch spans may be used on twenty-four (24) inch span.

SECTION 829.0 - Wallboards and Sheathing

829.1 Sheathing: Sheathing of gypsum, processed fiber and other approved materials shall conform to accepted engineering practice. When used in frame construction, they shall meet requirements of section 855.1 and 855.2. When required to meet fireresistance ratings the assembled construction shall comply with table 5 for structural elements and article 9 for trim and finishes.

829.2 Wallboards: Wallboards of gypsum, processed fiber and other approved materials shall conform to accepted engineering practice. Wallboard shall conform to the standards of accepted engineering practice for gypsum or processed fiber wallboard interior finishes, listed in appendixes B and C. When required to meet firersistance ratings the assembled construction shall comply with table 5 for structural elements and article 9 for trim and finishes.

SEC. 858.0 - WOOD FRAME CONSTRUCTION

The exterior walls, interior partitions, floors and roofs of wood frame construction shall be designed and constructed to develop adequate strength to resist all vertical and lateral forces due to both dead and live loads. Standard balloon, braced platform and post and beam types of construction shall be acceptable framing methods.

858.1 Wood-Stud Frame.

858.11 Bearing Walls: Posts and studs in bearing walls and partitions shall be designed as columns, with due allowance for lateral support furnished by sheathing, intermediate bracing, horizontal bridging, wall coverings and the floor and roof assemblies. The walls shall be fabricated in such a manner as to provide adequate support for the material used to enclose the building and to provide for transfer of all lateral loads to the foundation, in accordance with section 805.

858.12 Non-Bearing Walls: Studs in non-bearing walls and partitions shall not be spaced more than forty-eight (48) inches on centers, and may be erected with the long dimension parallel to the wall, unless otherwise approved after test as in integrated assembly.

858.13 Bracing: In buildings more than one (1) story in height and where necessary for strength in one (1) story buildings, the corner posts shall be the equivalent of not less than three (3) pieces of two (2) by four (4) inch studs, braced by not less than one (1) piece of one (1) by four (4)

inch continuous diagonal brace let into the studs. Bracing may be omitted when diagonal wood sheathing or plywood panels are used, or other sheathing specified in section 855.2 is applied vertically in panels of not less than four (4) feet by eight (8) feet in area with approved nailing complying with appendix L. Ledger or ribbon boards used to support joists shall be not less than one (1) by four (4) inches in size, cut into and securely nailed to each stud.

858.14 Mortise and Tenon Framing: Where mortise and tenon framing is used, the vertical members of the frame shall be not less than four (4) by six (6) inches in size and shall be designed as a column.

858.15 Multiple Stories: When the frame is more than one (1) story in height and studs and posts are not continuous from sill to roof, the members shall be secured together with approved clips, splices or other connections to insure a continuous, well integrated structure. Sheet metal clamps, ties or clips shall be formed of galvanized steel or other approved corrosion-resistive materials equivalent to No. 20 U.S. gage steel sheets for two (2) inch framing members and not less than No. 18 gage for three (3) inch structural members. For four (4) inch and larger members, column splices and beam and girder supports shall comply with section 857.

858.16 Framing Over Openings: Headers, double joists, trusses or other approved assemblies of adequate size to transfer all superimposed loads to the vertical member shall be provided over all window and door openings in bearing walls and partitions.

858.2 Wall Sheathing: Except as provided in section 858.3 for weather boarding or when stucco construction complying with section 823 is used, all enclosed buildings shall be sheathed with one of the materials of the following nominal thickness or any other material of equal strength and durability approved by the building official:

Reinforced cement mortar.....	1 inch
Wood sheathing.....	1 inch
Plywood.....	5/16 inch
Gypsum sheathing.....	1/2 inch
Fiber boards.....	1/2 inch

858.21 Paper-Backed Lath Sheathing: In one- and two-family dwellings and one (1) story commercial buildings with brick or similar veneers the sheathing may consist of a layer of paper-backed lath complying with section

823.2 with a one (1) inch intermediate space which shall be mortar filed as each course of veneering is applied.

858.3 Exterior Weather Boarding, Veneers and Condensation: To secure weather-tightness in framed walls and other unoccupied spaces, the exterior walls shall be faced with an approved weather-resisting covering properly attached to resist wind and rain. The cellular spaces shall be so ventilated as not to vitiate the firestopping at roof, attic and roof levels or shall be provided with interior non-corrodible vapor-type barriers complying with the approved rules; or other means shall be used to avoid condensation and leakage of moisture. The following materials shall be acceptable as approved weather covering of the nominal thickness specified:

Brick masonry veneers.....	2 inches
Stone veneers.....	2 inches
Clay tile veneers.....	1/4 to 1 inch
Stucco or exterior plaster.....	3/4 inch
Precast stone facing.....	5/8 inch
Wood siding (without sheathing).....	5/8 inch
Wood siding (with sheathing).....	1/2 inch
Protected fiber board siding.....	1/2 inch
Wood shingles.....	3/8 inch
Exterior plywood (without sheathing).....	See sec. 825.2
Exterior plywood (with sheathing).....	5/16 inch
Asbestos shingles.....	5/32 inch
Asbestos cement boards.....	1/8 inch
Aluminum clapboard siding.....	.024 inch
Formed steel siding.....	29 gage
Hardboard siding.....	1/4 inch

858.31 Masonry Veneers: Veneers of unit masonry shall be attached to the wood frame with at least twenty-two (22) gage corrosion-resistive, corrugated metal ties not less than seven-eighths (7/8) inch in width at vertical intervals of not more than sixteen (16) inches and horizontal intervals of not more than thirty-two (32) inches.

858.32 Metal Veneers: Veneers of metal shall be fabricated from approved corrosion-resistive materials or shall be protected front and back with porcelain enamel or shall be otherwise treated to render the metal resistant to corrosion. Such veneers shall be not less than No. 29 gage in thickness mounted on wood or metal furring strips or approved sheathing on the frame construction.

858.33 Height of Veneers: The average height of four (4) inch brick veneer shall be not more than twenty-five (25) feet above its supports on foundation wall or on corbels of masonry or steel; and not more than eighteen (18) feet in height for two (2) inch veneers

858.34 Nailing: All weatherboarding and wall and roof coverings shall be securely nailed with aluminum, copper, zinc, zinc-coated or other approved corrosion-resistive nails in accordance with the recommended nailing schedule or the approved manufacturer's standards.

Shingles and other weather coverings shall be attached with appropriate standard shingle nails to furring strips securely nailed to studs, or with approved mechanically-bonding nails except when sheathing is wood not less than one (1) inch nominal thickness or plywood not less than five-sixteenths (5/16) inch thick.

Wood shingles or shakes attached with approved corrosion-resistive annular grooved nails may be applied over fiberboard shingle backer and fiberboard sheathing when the installation is in accordance with the approved manufacturer's standards listed in appendix C. Wood shingles or shakes and asbestos shingles or siding may be nailed directly to nail base fiberboard sheathing not less than one-half (1/2) inch nominal thickness with approved corrosion-resistive annular grooved nails when the installation is in accordance with the approved manufacturer's standards listed in appendix C.

858.4 Foundation Anchorage: When required to resist wind uplift, walls sills shall be anchored to the foundation walls or piers at corners and at intermediate intervals of not more than eight (8) feet with one-half (1/2) inch bolts. The bolts shall be imbedded in the masonry foundation to a depth of not less than eight (8) inches in placed concrete, and not less than fifteen (15) inches in unit masonry. Sill plates shall be at least equivalent to a two (2) by six (6) inch member.

858.5 At-Grade Protection.

858.51 Wood Framing: All exterior wood framework of buildings whether structural or nonload-bearing shall be supported on approved foundation walls at least eight (8) inches above the finished grade, and higher when necessitated by greater average snow fall. Where climatic conditions, or the geographical location require additional control measures to protect buildings and structures against decay and termite attack, the provisions of section 888.0 shall be complied with.

858.52 Metal Siding: Exposed metal siding or sheathing shall be protected from corrosion at the ground level by supporting the foundation channel at sufficient height above grade on the concrete apron or other approved

water-resisting foundation.

858.6 Floors.

858.61 Bridging: Except as hereinafter noted, in all floor, attic and roof framing, there shall be not less than one (1) line- of bridging for each eight (8) feet of span. The bridging shall consist of not less than one (1) by three (3) inch lumber, double-nailed at each end, or of equivalent metal bracing of equal rigidity. A line of bridging shall also be required at supports where adequate lateral support is not otherwise provided.

Midspan bridging is not required for floor, attic or roof framing in one- and two-family dwellings (use group L-3) and multi-family dwellings (use group L-2) except when the joist depth exceeds twelve (12) inches nominal and/or when the minimum uniformly distributed live load exceeds forty (4)) pounds per square foot.

858.62 Flooring: The flooring of wood frame construction shall be of adequate strength and stiffness to support required loads and, where necessary for strength and for lateral support of the building, subflooring shall be provided.

858.7 Roofs.

858.71 Types of Decking and Sheathing: Roof deck sheathing shall consist of not less than one (1) inch boards or plywood of the thickness specified in section 828.3, or other approved materials of equivalent strength and rigidity. When open-deck sheathing is used on pitched roofs, it shall consist of not less than one (1) by four (4) inch roofers spaced not more than six inches on centers or material of equivalent strength and rigidity.

858.72 Wood Shingles: Wood shingles and handsplit shakes complying with the standards listed in appendix C may be used for roof covering where permitted in section 933.2 and may be installed on tight decking or on spaced roof boards.

858.8 Flashing: Approved corrosion-resistive flashing shall be provided at top and side of all exterior window and door openings in such manner as to be leadproof. Similar flashings shall be installed at the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings; under and at the ends of masonry, wood or metal copings and sills; continuously above all projecting wood trim; at wall and roof intersections; under built-in gutters; at junction of chimneys and roofs; in all roof valleys and around all roof openings.

When veneers of natural or artificial stone are used, fourteen (14) pound

felt or paper shall be attached to the sheathing with flashing wherever necessary to prevent moisture penetration behind the veneer.

858.9 Interior Finish: In all habitable spaces, interior wall and partition surfaces shall be finished with materials which do not exceed the combustible limitations of section 905.0 and are of adequate strength to resist a horizontal force of not less than five (5) pounds per square foot.

SEC. 861.0 ENCLOSURE WALLS

All buildings, except as may be provided for miscellaneous structures designed for special uses, shall be enclosed on all sides with independent or party walls of frame, masonry or other approved construction. Such walls shall be constructed to afford the fireresistance specified in table 5 and as required in the Basic Code for location, use and type of construction.

861.1 Projections: Exterior enclosure walls shall be constructed entirely within property lines or building lines when established by law, except for authorized projections beyond the street lot line in accordance with the provisions of section 310.

861.2 Exterior Wall Pockets: In exterior walls of all buildings and structures, wall pockets or crevices in which moisture may accumulate shall be avoided or protected with adequate caps or drips, or other approved means shall be provided to prevent water damage.

861.3 Exceptions: The provisions of the Basic Code shall not be deemed to prohibit the omission of enclosure walls for all or part of a story when required for special uses and occupancies; except that when so omitted, the open areas shall be separated from the rest of the area and from the upper and lower stories of the building by wall and floor construction of the fireresistance required in table 5; and except as otherwise specifically permitted in the Basic Code, the piers, columns and other structural supports within the open portion shall be constructed with the fireresistance required for exterior bearing walls in table 5.

861.4 Glass in Walls.

861.41 Labeling: Each light of glass shall be labeled with a removable paper label showing type, thickness and manufacturer. To qualify as glass with special performance characteristics each unit of laminated, heat strengthened, fully tempered, and insulating glass shall be permanently identified by the manufacturer. The identification shall be etched or ceramic fired on the glass and be visible when the unit is glazed.

Heat strengthened and tempered spandrel glasses are exempted from permanent labeling. This type of glass shall be labeled with a removable paper label by the manufacturer.

861.42 Glass Supports: Where one or more sides of any light of glass is not firmly supported, or is subjected to unusual load conditions, detailed shop drawings, specifications and analysis by methods described in appendix K, or test data assuring safe performance for the specific installation, shall be prepared by engineers experienced in this work and approved by the building official.

861.43 Glass Dimensional Tolerance: Glass thickness tolerances will comply with those established in the following table. Where thickness is to be controlled, nominal values are stated subject to these tolerances:

Nominal Thickness	Plate Glass Min. Thickness (Inches)	Sheet Glass Min. Thickness (Inches)
SS	....	0.085
DS	....	0.115
1/8	0.094	....
3/16	0.156	0.182
13/16	0.172	....
7/32	....	0.205
1/4	0.218	0.236
5/16	0.281	....
3/8	0.343	0.357
1/2	0.468	0.478
5/8	0.562	....
3/4	0.689	....
7/8	0.750	....
1	0.875	....
1-1/4	1.125	....

861.44 Wind Loads: Glass exposed to wind pressure shall be capable of safely withstanding the loads specified in table A in appendix K, acting inward or outward. The design factor relating the maximum working stress to breaking stress shall be not less than two and one-half (2-1/2). Owners or tenants shall replace cracked lights promptly.

Glass which conforms to the required nominal thickness of table C in appendix K for the design wind loads of table A in appendix K shall be accepted.

861.45 Jalousies: In jalousie windows and doors regular plate, float sheet or rolled glass thickness shall be not less than three-sixteenths (3/16) inch glass length shall be not more than forty-eight (48) inches; glass edges shall be smooth. Other types of glass may be used if detailed shop drawings specifications and analysis by methods described in appendix K, or test data assuring safe performance for the specific installation, are prepared by engineers experienced in this work and approved by the building official.

861.46 Human Impact Loads: For safety, glazing in hazardous locations such as: exit doors, storm doors, sliding doors, fixed glazed panels which may be mistaken for means of egress or ingress, shower doors, tub enclosures, shall meet the requirements set forth in the following table, or by comparative tests shall be proven to produce at least equivalent performance. Glazed doors and fixed panels not subject to frequent exposure to accidental human impact and those fixed panels and other openings which have a glazing of eighteen (18) inches or more from the finished floor or whose least dimension is less than eighteen (18) inches are except from these requirements.

Glazing shall conform to these limits:

- 1) annealed glass less than single strength (SS) in thickness shall not be used.
- 2) if short dimension is larger than twenty-four (24) inches, annealed glass must be double strength (DS) or thicker.
- 3)

<i>For Specific Hazardous Locations</i>	<i>Size of Individual Glazed Area</i>	<i>Requirements</i>
Glazing in exit doors	Over 6 square feet	Each glazed area shall pass the test requirements of appendix K-12 if not protected by a protective grill or push-bar ¹ firmly attached to stiles on each exposed side.
Glazing in fixed glazed panels which may be mistaken for means of egress or ingress	Over 6 square feet	Each glazed area shall pass the test requirements of appendix K-12 if not protected by a protective grill or push-bar ¹ firmly attached to stiles on each exposed side.
Glazing in patio type sliding doors (Both fixed and sliding panels)	Over 6 square feet	Each glazed area shall pass the test requirements of appendix K-12.
Glazing in storm doors	Over 2 square feet	Each glazed area shall pass the test requirements of appendix K-12 if not protected by a protective grill firmly attached to stiles on at least one side.
Glass in all unframed doors (Swinging)	All sizes	Shall be fully-tempered glass and pass the test requirements of appendix K-12.
Glazing in shower doors and tub enclosures: (a) Obscure wired glass (b) Transparent wired glass or fully-tempered glass or laminated glass or transparent rigid plastic	All sizes	(a) Not less than $\frac{3}{16}$ inch nominal thickness. Must be protected by towel bar or push-bar ¹ firmly attached to stiles on one exposed side. (b) Shall pass the test requirements of appendix K-12.

4)

*For Application of
Specific Glazing
Materials
Subject to
Impact Loads*

*Size of
Individual
Glazed Area*

Requirements

Annealed glass (Regular plate, float, sheet, rolled or obscure)	Over 6 square feet	Not less than $\frac{3}{16}$ inch nominal thickness. Each glazed area must be protected by protective grill or push-bar ¹ firmly attached to stiles on each exposed side.
Annealed glass (Regular plate, float, sheet, rolled or obscure) surface sand blasted, etched or otherwise depreciated	Over 6 square feet	Not less than $\frac{3}{16}$ inch nominal thickness. Each glazed area must be protected by protective grill or push-bar ¹ firmly attached to stiles on each exposed side.
Fully-tempered glass	All sizes	Shall pass the test requirements of appendix K-12.
Laminated glass	All sizes	Shall pass the test requirements of appendix K-12.
Wired glasses (a) Obscure, patterned surface (b) Transparent	All sizes	(a) Not less than $\frac{1}{4}$ inch nominal thickness. (b) Shall pass the test requirements of appendix K-12.
Transparent rigid plastic	All sizes	Shall pass the test requirements of appendix K-12.

SEC. 866.0 - WALL FACINGS AND VENEERS

866.1 Backing Surfaces for Veneers: Veneers for other than frame buildings, shall be attached only to substantial, rigid, noncombustible surfaces which are plumb, straight and of true plane; and no wood backing surfaces shall be used except in frame construction. The backing shall provide sufficient rigidity, stability and weather resistance; and the veneer shall be installed and anchored as required in the Basic Code for the specific material.

866.2 Veneer Thickness: No materials used for nonbearing veneers on masonry walls shall have less than the following thickness:

Ceramic veneer (architectural terra cotta-anchored type)..	1 inch
Brick.....	2 inches
Stone (natural).....	2 inches
Stone (cast artifical).....	1-1/2 inch
Clay tile (structural).....	1-3/4 inch
Clay tile (flat slab).....	1/4 to 1 in
Marble slabs.	1 inch
Precast stone facing.....	5/8 inch
Structural glass.....	1-1/32 in.
Aluminum clapboard siding.....	.024 inch
Metal (approved corrosion-resistive).....	28 U.S. Gage

Masonry or other approved noncombustible materials used as facing on bearing walls or partitions shall not be considered to have structural value and shall be excluded in the determination of required wall thickness.

SEC. 869.0 - STRUCTURAL GLASS VENEERS

869.1 Dimensions: The minimum thickness of glass veneer shall be eleven thirty-seconds (11/32) inch and the area of individual panels shall not exceed ten (10) square feet, with a maximum length of four (4) feet. The edge of each unit shall be ground square with a slight arris; and all exposed external corners and angles shall be rounded to a radiou of not more than three-sixteenths (3/16) inch.

SEC. 870.0 - THIN STONE AND TILE VENEERS

870.1 Size of Units: In localities subject to frost and freezing temperatures tile and terra cotta units shall be frost-proof and shall not be more than two hundred and eighty-eight (288) square inches in area; and where not subject to frost action, the size of the tile may be increased not more than fifty (50) per cent in area.

SEC. 882.0 - FOUNDATION WALLS

882.1 Design: Foundation walls shall be designed to resist frost action and to support safely all vertical and lateral loads as provided in article 7. The maximum stresses due to combined load shall be within the values specified for the materials used in the construction. Unless properly reinforced, tensile stresses shall not exceed those permitted in plain masonry.

882.2 Minimum Thickness: The thickness of foundation walls shall be not less than the thickness of the wall supported and the minimum thickness shall be limited for the various materials of construction as herein specified. Wight (8) inch foundation walls shall be permitted under brick-veneered frame and under ten (10) inch cavity walls when the total height of wall supported including galbes is not more than twenty (20) feet;

882.21 Reinforec Concrete: When reinforced concrete is required to resist all stresses, foundation walls shall be not less than eight (8) inches thick;

882.22 Hollow and Solid Masonry and Mass Concrete: The thickness of masonry foundation walls shall not be less than shown in the following table for the type of foundation and superstructure construction used. The combined height of eight (8) inch foundation wall and the wall supported shall not exceed thirty-five (35) feet.

THICKNESS OF FOUNDATION WALLS

Foundation Wall Construction		Maximum Depth Below Grade (feet)		
Type	Thickness (Inches)	Frame	Masonry Veneer	Masonry
Hollow masonry	8	4(6)	4.5 (6)	5 (7)
	10	5(7)	5.5 (7)	6 (7)
	12	7	7	7
Solid masonry	8	5(7)	5.5 (7)	6 (7)
	10	6(7)	6 (7)	6.5(7)
	12	7	7	7
Mass Concrete	8	7	7	7

Note 1. Depth below grade may be increased up to those shown in parenthese where such increase is warranted by soil conditons and local experience and is required by the building offical.

Note 2. Where height of unbalanced fill (height of finish grade above basement floor or inside grade)exceeds seven (7) feet, foundation wall thick-ness shall be determined by structural analysis as required in section 883.1.

882.23 Hollow Unit Walls: Foundation walls of approved hollow masonry units shall be provided with not less than four (4) inches of solid masonry at girder bearings or shall be strengthened with buttresses;

882.24 Rubble Stone: Foundation walls of rough or random rubble stone shall be not less than sixteen (16) inches thick;

SEC. 903.0 - FIRE HAZARD CLASSIFICATION

TABLE 17 - FIRE GRADING OF USE GROUPS

Class	Use group	Fire grading in hours
A	High hazard.....	4
B-1	Storage--Moderate hazard.....	3
B-2	Storage--Low hazard.....	2
C	Mercantile.....	3
D	Industrial.....	3
E	Business.....	2
F-1	Assembly--Theatres.....	3
F-2	Assembly--Night Clubs.....	3
F-3	Assembly--Recreation Centers, Lecture halls, terminals, restaurants.....	2
F-4	Assembly--Churches, schools.....	1-1/2
H-1	Institutional--Restrained occupants.....	3
H-2	Institutional--Incapacitated occupants.....	2
L-1	Residential--Hotels.....	2
L-2	Residential--Multifamily dwellings.....	1-1/2
L-3	Residential--1 and 2 family dwellings.....	3/4

SECTION II. This Ordinance shall take effect upon its passage and all Ordinances or parts of Ordinances inconsistent herewith are hereby repealed.

IN CITY
COUNCIL
MAY 16 1972
FIRST READING
READ AND PASSED
Vincent Vespia
CLERK

IN CITY
COUNCIL
JUN 8 - 1972
FINAL READING
READ AND PASSED
.....
PRESIDENT
Vincent Vespia
CLERK

APPROVED
JUN 12 1972
Joseph A. Pryor
MAYOR

FILED

APR 12 11 14 AM '72

DEPT. OF CITY CLERK
PROVIDENCE, R.I.

REVISING, AMENDING AND MODIFYING
THE GENERAL CONSTRUCTION REQUIRE-
MENTS OF CHAPTER 1079, 1956 OF THE
ORDINANCES OF THE CITY OF PROVIDENCE
ENTITLED, "THE BUILDING ORDINANCES
OF THE CITY OF PROVIDENCE" SECTIONS
503.0 ENTITLED, "STANDARDS OF
NATURAL LIGHT" AND SECTION 603.0
TO SECTION 909.0 INCLUDING THE
APPENDIXES OF THE GENERAL CONSTRUC-
TION REQUIREMENTS TO THE BUILDING
CODE OF THE APPROVED AMENDMENTS
IN COMPLIANCE TO THE 1970 BACA CODE.

Appendix A

Accredited Authoritative Agencies

Concrete

American Concrete Institute
P.O. Box 4754 Redford Station
22400 West Seven Mile Road
Detroit, Michigan 48219.ACI

Concrete Reinforcing Steel Institute
228 No. LaSalle Street
Chicago, Illinois 60601.CRSI

Gypsum Association
201 North Wells Street
Chicago, Illinois 60606.GA

National Concrete Masonry Association
2009 Fourteenth Street, North
Arlington, Virginia 22201.NCMA

National Lime Association
4000 Brandywine Street, NW
Washington, D. C. 20016.NLA

Portland Cement Association
5420 Old Orchard Road
Skokie, Illinois 60076PCA

Electrical

American Institute of Electrical Engineers
33 West 39th Street
New York, New York 10018AIEE

Illuminating Engineers Society
345 East 47th Street
New York, New York 10017IES

International Association of Electrical Inspectors
201 East Erie Street
Chicago, Illinois 60611IAEI

National Electrical Manufacturers Association
155 East 44th Street
New York, New York 10017NEMA

National Electric Sign Association
10922 South Western Avenue
Chicago, Illinois 60642NESA

Equipment

Air-Conditioning and Refrigeration Institute
1815 North Fort Myer Drive
Arlington, Virginia 22209 ARI

American Gas Association
1032 East 62nd Street
Cleveland, Ohio 44103 AGA

American Petroleum Institute
1625 K Street, NW
Washington, D. C. 20005 API

American Society of Heating, Refrigerating and Air-Conditioning
Engineers
United Engineering Center
345 East 47th Street
New York, New York 10017. ASHRAE

The American Society of Mechanical Engineers
United Engineering Center
345 East 47th Street
New York, New York 10017. ASME

Home Ventilating Institute
1108 Standard Building
Cleveland, Ohio 44113 HVI

Incinerator Institute of America
60 East 42nd Street-Suite 1914
New York, New York 10017. IIA

The Institute of Boiler and Radiator Manufacturers
393 Seventh Avenue 10th Fl.
New York, New York 10001 I-B-R

National Automatic Sprinkler and Fire Control Association, Inc.
2 Holland Avenue
White Plains, New York 10603. NASFACA

National Elevator Manufacturing Industry, Inc.
101 Park Avenue
New York, New York, 10017 NEMI

National LP-Gas Association
79 West Monroe Street
Chicago, Illinois 60603 NLPGA

National Oil Fuel Institute, Inc.
60 East 42nd Street
New York, New York 10017 NOFI

Equipment - continued

National Environmental Systems Contractors Association
221 N. LaSalle Street
Chicago, Illinois 60601 NESCA

Uniform Boiler and Pressure Vessel Laws Society, Inc.
57 Pratt Street
Hartford, Connecticut 06103 UBPVLS

Government Agencies

Department of Defense
Office of Civil Defense
Office of the Secretary of the Army
Washington, D.C. 20390 DOD-OCA

Federal Aviation Agency
Systems Research and Development Service
Washington, D.C. 20553 FAA

Federal Specifications
Superintendent of Documents
Government Printing Office
Washington, D.C. 20234 FS

Forest Products Laboratory
United States Department of Agriculture
Madison, Wisconsin 53705 FPL

Housing and Home Finance Agency
Division of Housing Research
Washington, D.C. 20410 HHFA

Joint Army-Navy Specifications
Bureau of Supplies and Accounts
Navy Department
Washington, D.C. 20225
Air Material Command
Wright-Patterson Air Force Base
Dayton, Ohio 45433 JAN

National Bureau of Standards
(Department of Commerce)
Washington, D.C. 20234 NBS

National Research Council of Canada
Division of Building Research
Ottawa, Ontario, Canada NRCC

Naval Facilities Engineering Command
(formerly Bureau of Yards and Docks)
Navy Department
Washington, D.C. 20390 NFEC

Government Agencies - continued

Navy Specifications
Bureau of Supplies and Accounts
Navy Department
Washington, D.C. 20225 NS

Product Standards Section
Office of Engineering Standards Services
National Bureau of Standards
Washington, D.C. 20234 PS

Public Health Service
Department of Health, Education and Welfare
Washington, D.C. 20201 PHS

Superintendent of Documents
Government Printing Office
Washington, D.C. 20402 GPO

United States Department of Agriculture
Washington, D.C. 20225 USDA

United States Department of Commerce
Construction Division
Washington, D.C. 20225 USDC

United States Forest Service
Madison, Wisconsin 53705. USFS

United States Naval Supply Depot
5601 Tabor Avenue
Philadelphia, Pennsylvania 19120. USNSD

Interior Finishes and Masonry

Acoustical and Insulating Materials Association
205 West Touhy Avenue
Park Ridge, Illinois 60068 AIMA

American Hardboard Association
20 North Wacker Drive
Chicago, Illinois 60606 AHA

Asphalt and Vinyl Asbestos Tile Institute
101 Park Avenue
New York, New York 10017 AVATI

Facing Tile Institute
333 North Michigan Avenue
Chicago, Illinois 60601 FTI

Gypsum Association
201 North Wells Street
Chicago, Illinois 60606 GA

Interior Finishes and Masonry - continued

Marble Institute of America, Inc.
Pennsylvania Building
Washington, D.C. 20004 NIA

Indiana Limestone Institute of America, Inc.
400 East 7th Street-P.O. Box 489
Bloomington, Indiana 47401 ILIA

National Building Granite Quarries Association, Inc.
P.O. Box 444
Concord, New Hampshire 03302 NBGQA

National Concrete Masonry Association
2009 Fourteenth Street, North
Arlington, Virginia 22201 NCMA

National Lime Association
4000 Brandywine Street, NW
Washington, D. C. 20016 NLA

National Particleboard Association
711 Fourteenth Street, NW
Washington, D.C. 20005 NPA

Perlite Institute, Inc.
45 West 45th Street
New York, New York 10036 PI

Portland Cement Association
5420 Old Orchard Road
Skokie, Illinois 60076 PCA

The Society of the Plastics Industry, Inc.
250 Park Avenue
New York, New York 10017 SPI

Structural Clay Products Institute
1750 Old Meadow Road
McLean, Virginia 22101 SCPI

Tile Council of America
Research Center-P.O. Box 326
Princeton, New Jersey 08540 TCA

Vermiculite Institute
208 South LaSalle Street
Chicago, Illinois 60604 VI

Metal and Steel

Aluminum Association
750 Third Avenue
New York, New York 10017 AA

American Institute of Steel
Construction, Inc.
101 Park Avenue
New York, New York 10017 AISC

American Iron and Steel Institute
150 East 42nd Street
New York, New York 10017 AISI

American Welding Society, Inc.
United Engineering Center
345 East 47th Street
New York, New York 10017 AWS

Architectural Aluminum
Manufacturers Association
35 East Wacker Drive
Chicago, Illinois 60601 AAMA

Cast Iron Soil Pipe Institute
2029 K Street, NW
Washington, D.C. 20006 CISPI

Concrete Reinforcing Steel Institute
228 North LaSalle Street
Chicago, Illinois 60601 CRSI

Copper Development Association, Inc.
405 Lexington Avenue
New York, New York 10017 CDA

Lead Industries Association, Inc.
292 Madison Avenue
New York, New York 10017 LIA

Metal Building Manufacturers Association
2130 Keith Building
Cleveland, Ohio 44115 MBMA

Metal Lath Association
12703 Triskett
Cleveland, Ohio 44111 MLA

National Association of Architectural
Metal Manufacturers
228 North LaSalle Street
Chicago, Illinois 60601 NAAMM

Metal and Steel - continued

Rail Steel Bar Association
38 South Dearborn Street
Chicago, Illinois 60603 RSBA

Research Council on Riveted and
Bolted Structural Joints of the
Engineering Foundation
United Engineering Center
345 East 47th Street
New York, N. Y. 10017 RCRBSJEF

Steel Deck Institute
9836 W. Roosevelt Road
Westchester, Illinois 60153 SDI

Steel Bar Mills Association
(formerly Rail Steel Bar Association)
38 South Dearborn Street
Chicago, Illinois 60603 SBMA

Steel Door Institute
2130 Keith Building
Cleveland, Ohio 44115 SDI

Steel Joist Institute
2001 Jefferson Davis Highway
Arlington, Virginia 22202 SJI

Steel Scaffolding & Shoring Institute
2130 Keith Building
Cleveland, Ohio 44115 SSSI

The Steel Window Institute
2130 Keith Building
Cleveland, Ohio 44115 SWI

Wire Reinforcement Institute
5034 Wisconsin Avenue, NW
Washington, D. C. 20016 WRI

General Standards and Testing Laboratories

American Insurance Association
85 John Street
New York, New York 10038 AIA

American National Standards Institute, Inc.
(formerly United States of America Standards Institute, Inc.)
(formerly American Standards Association)
1430 Broadway
New York, New York 10018 ANSI

General Standards and Testing Laboratories - continued

American Society for Testing and Materials
P.O. Box 7510
Philadelphia, Pennsylvania 19101 ASTM

Factory Mutual Engineering Division
Standards-Laboratories Department
1151 Boston-Providence Turnpike
Norwood, Massachusetts 02062 FMEL

National Fire Protection Association
60 Batterymarch Street
Boston, Massachusetts 02110 NFIPA

National Sanitation Foundation
Testing Laboratory, Inc.
School of Public Health
P.O. Box 1468
Ann Arbor, Michigan 48106 NSFTL

Underwriters' Laboratories, Inc.
207 East Ohio Street
Chicago, Illinois 60611 ULI

Fire Testing Laboratories (Floor, Walls, Roof and Smilar Tests)

National Bureau of Standards
(Department of Commerce)
Superintendent of Documents
Government Printing Office
Washington, D. C. 20234 NBS

The Ohio State University
Building Research Laboratory
2070 Neil Avenue
Columbus, Ohio 43210 OSU

Underwriters' Laboratories, Inc.
207 East Ohio Street
Chicago, Illinois 60611 ULI

Underwriters' Laboratories, Inc.
333 Pfingsten Road
Northboork, Illinois 60062 ULI

Underwriters' Laboratories, Inc.
1655 Scott Boulevard
Santa Clara, California 95050 ULI

University of California at Berkeley
College of Engineering
Berkeley, California 94720 UCB

Flamespread Testing Laboratories

Southwest Research Institute
8500 Culebra Road
San Antonio, Texas 78228 SWRI

Underwriters' Laboratories, Inc.
1655 Scott Boulevard
Santa Clara, California 95050 ULI

Underwriters' Laboratories, Inc.
333 Pfingsten Road
Northbrook, Illinois 60062 ULI

Structural Testing Laboratories

The Detroit Testing Laboratory, Inc.
12800 Northend Avenue
Detroit, Michigan 48237 DTL

Forest Products Laboratory
United States Department of Agriculture
Madison, Wisconsin 53705 FPL

Robert W. Hunt Company
810 South Clinton
Chicago, Illinois 60607 RWH

IIT Research Institute
(formerly Armour Research foundation)
10 West 35th Street
Chicago, Illinois 60616 IITRI

NAHB Research Foundation, Inc.
Research Laboratory
Rockville, Maryland NAHB

H.C. Nutting Company
4120 Airport Road
Cincinnati, Ohio 45226 HCN

The Ohio State University
Building Research Laboratory
2070 Neil Avenue
Columbus, Ohio 43210 OSU

The Pennsylvania State University
Research Institute
University Park
Pennsylvania 16802 PSU

Structural Testing Laboratories - continued

Pittsburgh Testing Laboratory
1330 Locust Street
Pittsburgh, Pennsylvania 15219PTL

University of Detroit
Research Institute
Detroit, Michigan 48221UD

Unclassified Miscellaneous

The American Institute of Architects
1735 New York Avenue, NW
Washington, D.C. 20006AIA

American Public Health Association
1790 Broadway
New York, New York 10017APHA

American Society of Civil Engineers
United Engineering Center
345 East 47th Street
New York, New York 10017ASCE

American Society of Sanitary Engineering
4328 South Western Avenue
Chicago, Illinois 60609ASSE

American Water Works Association
2 Park Avenue
New York, New York 10016AWWA

Building Officials Conference of America, Inc.
1313 East 60th Street
Chicago, Illinois 60637BOCA

Building Research Advisory Board Division of Engineering
National Research Council
2101 Constitution Avenue
Washington, D. C. 20418BRAB

Home Manufacturers Association
1625 L. Street NW
Washington, D.C. 20036HMA

International Association of Plumbing & Mechanical Officials
5032 Alhambra Avenue
Los Angeles, California 90032IAMPO

International Conference of Building Officials
50 South Los Robles
Pasadena, California 91101ICBO

Unclassified Miscellaneous - continued

Manufacturing Chemists' Association, Inc.
1825 Connecticut Avenue, NW
Washington, D. C. 20006MCA

Mineral Fiber Products Bureau
509 Madison Avenue
New York, New York 10022MFPB

Mobile Homes Manufacturers Association
20 North Wacker Drive
Chicago, Illinois 60606MHMA

National Association of Home Builders
National Housing Center
1625 L. Street, NW
Washington, D. C. 20036NAHB

National Clay Pipe Institute
P.O. Box 310
350 West Terra Cotta Avenue
Crystal Lake, Illinois 60014.NCPI

National Insulation Manufacturers Association
441 Lexington Avenue
New York, New York 10017NIMA

National Mineral Wool Insulation Association
Rockefeller Center
1270 Sixth Avenue
New York, New York 10020NMWIA

National Society of Professional Engineers
2029 K Street, NW
Washington, D. C. 20006NSPE

Southern Building Code Congress
750 Brown-Marx Building
Birmingham, Alabama 35203SBCC

Truss Plate Institute, Inc.
Suite 800
919 Eighteenth Street, NW
Washington, D. C. 20006TPI

Wood and Wood Products

Acoustical and Insulating Materials Association
205 West Touhy Avenue
Park Ridge, Illinois 60068AIMA

American Hardboard Association
20 North Wacker Drive
Chicago, Illinois 60606AHA

Wood and Wood Products - continued

American Institute of Timber Construction
1700 K. Street, NW
Washington, D. C. 20006AITC

American Plywood Association
1119 A Street
Tacoma, Washington 98401APA-DEPA

American Wood Preservers Association
1012-14th Street, NW
Washington, D. C. 20037AWPA

American Wood Preservers Institute
2600 Virginia Avenue, NW
Washington, D. C. 20005AMPI

Appalachian Hardwood Manufacturers, Inc.
1015 Mercantile Library Building
414 Walnut Street
Cincinnati, Ohio 45202AHM

Association of Timber and Timber Treatment Inspection Agencies
729 Fisher Road
Grosse Pointe, Michigan 48230ATTIA

California Redwood Association
617 Montgomery Street
San Francisco, California 94111CRA

Hardwood Plywood Manufacturers Association
P.O. Box-6246
Arlington, Virginia 22206HPMA

National Forest Products Association
1619 Massachusetts Avenue, NW
Washington, D. C. 20036NFOPA

National Particleboard Association
711 Fourteenth Street, NW
Washington, D. C. 20005NPA

Northeastern Lumber Manufacturers Association, Inc.
271 Madison Avenue
New York, New York 10016NLMA

Northern Hardwood and Fine Manufacturers Association
207 Northern Building
Green Bay, Wisconsin 54301NHPMA

Plywood Fabricator Service, Inc.
an affiliate of the American
Plywood Association
1119 A Street
Tacoma, Washington 98401PFS

Wood and Wood Products - continued

Red Cedar Shingle and Handsplit Shake Bureau
5510 White Building
Seattle, Washington 98101RCSHSB

Southern Hardwood Producers, Inc.
805 Sterick Building
Memphis, Tennessee 38103SHF

Southern Pine Association
National Bank of Commerce Building
New Orleans, Louisiana 70112.SPA

Timber Engineering Company
1619 Massachusetts Ave., NW
Washington, D. C. 20036TECO

Western Wood Products Association
700 Yeon Building
Portland, Oregon 97204WWPA

Appendix B

Accepted Engineering Practice Standards

High hazard materials handling and storage; fire protection devices; heating equipment rules; specifications and standards. NFPA
National Fire Codes; Handbook of Fire Protection; standards and reports. NFPA
Technical bulletins of building construction data. NFPA

Concrete

Concrete Formwork-Recommended Practice for ACI 347-68
Gypsum Concrete, Reinforced-Specifications for USAS A
59.1-1968
Manufacture of Reinforced Concrete Floor and Roof Units-Recommended Practice for ACI 512-67
Reinforced Concrete-Building Code Requirements for ACI 318-1963
Reinforced Concrete Structures, Manual of Standard Practice for Detailing ACI 315-1965
Welding Reinforcing steel, Metal Inserts and Connections in Reinforced Concrete Construction, Recommended Practices for AWS D 12.1-61

Electrical Illumination

Daylighting-Recommended Practices of IES-1950
Electrical Code-National NFPA No. 70
1968
Electrical Safety Code-National. NES Handbook
H 30
Farmstead Wiring IES-1950
Home Lighting-Recommended Practice IES-1953
Industrial Lighting. ASA A 11.1
1952
Lighting Handbook. IES-1952
Lighting Performance for Residence Luminaries. IES-1946
Measuring Illumination in Buildings-Standard Method for. IES-1948
Office Lighting-Recommended Practice IES-1947
Residence Lighting-Recommended Practice. IES-1953
School Lighting-Recommended Practice IES-1948
and AIA31-F-1928
Wiring Handbook-Residential. IES-1947

Equipment

Air Conditioning and Ventilating

- Air Conditioning and Ventilating Systems
of Other Than Residence Type NFIPA 90A-1968
- Air Conditioning, Warm Air Heating and-
Residence Type NFIPA 90B-1968
- Blower and Exhaust Systems for Dust, Stock and Vapor
Removal or Conveying NFIPA 91-1961
- Gas-Fired Absorption Summer Air Conditioning
Appliances-USA Standard for ASA Z 21.40.1-1966
- Heating, Warm Air, and Air Conditioning Systems,
Residence Type (See Air Conditioning
Systems)
- Residence Type-Warm Air Heating and
Ventilating Systems (See Air Conditioning
Systems)
- Warm Air Heating and Air Conditioning Systems,
Residence Type (See Air Conditioning
Systems)

Elevators and Lifts

- Automotive Lifts USDC CS 142-62
- Elevators, Dumbwaiters, and Escalators-
Safety Code for USAS A 17.1-1965
- Supplement to Safety Code for Elevators, Dumbwaiters,
Escalators and Moving Walks USAS A 17.1b-1966
- Elevator Inspectors Manual USAS A 17.2-1966
(with Supplements) USAS A 17.2b-1967
USAS A 17.2a-1966
- Manlifts-Safety Code for ASA A 90.1-1949

Heating

- Boiler Code and Unfired Pressure Vessel Code . . . ASME-1965, 1966 & 1968
- Chimneys, Fireplaces and Venting Systems-
Standard for NFIPA 211-1966
- Central Heating Gas Appliances-Approved Requirements for
- Gas-Fired gravity and Fan Type Floor Furnaces-
USA Standard for ASA Z 21.48-1967
- Gas-Fired Gravity and Fan Type Vented Wall
Furnaces-USA Standard for ASA Z 21.49-1967
- Gas Fired Gravity and Forced Air Central
Furnaces-USA Standard for ASA Z 21.47-1968
- Gas-Fired Steam and Hot Water Boilers-
USA Standard for ASA Z 21.13-1967
- Gas-Fired Duct Furnaces-USA Standard for ASA Z 21.32-1968
- Gas-Fired Room Heaters, Vol. 1, Vented Room Heaters-
USA Standard Approval Requirements for ASA Z 21.11.1-1965
- Gas-Burning Equipment in Power Boilers-Requirements for
Installation of ASA Z 21.33-1950
- Gas-Fired Gravity and Fan Type Sealed Combustion
System Wall Furnaces-USA Standard for ASA Z 21.44-1966

Heating - continued

Gas-Fired Heavy Duty Forced Air Heaters-

USA Standard for ASA Z 21.53-1967

Gas-Fired Single Firebox Boilers-USA Standard for

ASA Z 21.52-1967

Gas Unit Heaters-USA Standard for ASA Z 21.16-1968

Unvented Gas-Fired Infrared Radiant Heaters-

USA Standard for ASA Z 21.43-1968

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USA Standard for ASA Z 21.51-1967

Gravity Warm Air Heating Systems. ASHVE-1953

Heating, Ventilating and

Air Conditioning. (See Air Conditioning and Ventilating)

High Pressure Boilers ASME Boiler Code-1952

Low Pressure Boilers. HPACA Std.-1948

Oil Burners, Automatic Mechanical Draft Designed for

Domestic Installation USDC CS 75-56

Oil Burning Equipment NFPA 31-1968

Oil Burning Floor Furnaces Equipped with Vaporizing

Pot Type Burners USDC CS 113-63

Residence Type-Warm Air Heating and

Air Conditioning Systems. (See Air Conditioning and Ventilating)

Solid Fuel Burning Forced Air Furnaces. USDC CS 109-47

Warm Air Heating and

Air Conditioning Systems. (See Air Conditioning and Ventilating)

Incinerators

Domestic Gas-Fired Incinerators-USA Standard

Approval Requirements for ASA Z 21.6-1966

Incinerator Standards IIA-April 1963

Plumbing and Piping (Gas or Water)

Air Caps in Plumbing Systems for Plumbing Fixtures

and All Water-Connected Devices USAS A40.4-1942

Backflow Preventers in Plumbing Systems (Vacuum Breakers)

for Plumbing Fixtures and All Water -Connected Devices. .USAS A40.6-1943

Gas Piping and Gas Appliances-Installation of . . .ASA Z 21.30-1964

Gas Piping in Buildings, Gas Appliances and-Installation of.NFPA 54-1964

Gas Piping and Gas Equipment on Industrial Premises

and Certain Other Premises-USA Standard Installation of .ASA Z 83.1-1968

Gas Water Heaters, Volume I, Automatic Storage Type

Water Heaters with Inputs Less Than 50,000 BTU

Per Hour-Approval Requirements for. USAS Z21.10.0-1966

Gas Water Heaters, Volume III, Circulating Tank,

Instantaneous and Large Automatic Storage Type

Water Heaters-Approved requirements for. USAS Z21.10.3-1966

National Plumbing Code ASA A40.8-1955

Pipe Applied Atmospheric Type Vacuum Breakers-

Standards and Test Procedures for ASSE 1001-May, 1966

Plumbing and Piping (Gas or Water) - continued

Relief Valves and Automatic Gas Shutoff Devices for
Hot Water Supply Systems-Listing Requirements for. . . .USAS Z21.22-1964
Water Pressure Reducing Valves for
Domestic Water Supply Systems-Self-Contained,
Direct-Acting, Single Seat, Diaphragm TypeASSE 1003-Oct, 19

Refrigeration

Mechanical Refrigeration-Safety Code forASHREA 15-1964
Also ASA B 9.1-1964

Unclassified-Miscellaneous

Mobile Home Standards for Plumbing, Heating, and
Electrical SystemsNHMA-1959
Swimming Pools and Other Public Bathing Places, Equipment
and Operation-Recommended Practice for Design.APHA-1949
Travel Trailer Standards for Electrical, Plumbing, Heating
and LP-Gas Consuming appliances systems.NHMA-1960

FIRE PROTECTION AND SAFETY PRACTICES

Safety to Life from Fire in Buildings and Structures . .NFiPA 101-1967

NOTE: NFiPA 101-1967 is acceptable for matters of design
of exits not provided for by the ECCA Codes. Finish
and construction requirements incorporated therein
are not applicable.

Aircraft Hangars.NFiPA 409-1967
Cutting and Welding-Oxygen Fuel Gas
Systems for.NFiPA 51-1964
Dry Cleaning and Dry Dyeing Plants.NFiPa 32-1964
Dust Explosions and Ignition
-in Country Grain Elevators-Prevention.NFiPA 64-1959
-in Flour and Feed Mills and Allied Grain Storage
Elevators-Prevention ofNFiPA 61C-1962
-in Industrial Plants-Fundamental Principles
for the Prevention of.NFiPA 63-1964
-Pulverized Fuel Systems-Installation and Operation of. .NFiPA 60-1961
-in Starch Factories-Prevention of.NFiPA 61A-1962
-in Terminal Grain Elevators-Prevention of Dust Explosions. .NFiPA 61B-195
Film, Motion Picture, Cellulose Nitrate-
Storing and Handling ofNFiPA 40-1967
Garages.NFiPA 88-1968
Gases, Liquefied Petroleum-Storage and Handling of. . NFiPa 58-1965
Gas, Liquefied Petroleum at Utility Gas Plants-
Storage and Handling of.NFiPa 59-1968
Heating, Ventilating and Air Conditioning. . . .(See Equipment-Heating)

Fire Protection and Safety Practices - continued

Incinerators, Rubbish Handling. NFIPA 82-1960
and NFIPA 82A-1960
Liquids, Flammable and Combustible, Code. . . . NFIPA 30-1966
Outdoor Assembly, Places of (Grandstands, Tents and
Air Supported Structures) NFIPA 102-1967
Piers and Wharves-Construction and Protection of. . NFIPA 87-1968
Pyroxylin Plastics in Factories Making Articles Therefrom-
Storage, Handling and Use of. NFIPA 42-1967
Pyroxylin Plastics in Warehouses and Retail Stores. NFIPA 43-1967
Recommended Safe Practices for Gas Shielded Arc Welding. . AWS A 6.1-66
Safe Practices for Welding and Cutting Containers
That Have Held Combustibles AWS A 6.0-65
Safety in Welding and Cutting USAS Z 49.1-1967
Spray Finishing Using Flammable and Combustible
Materials NFIPA 33-1966

Glass

-Fully-Tempered No. 8, ASA Z26.1-1950
-Laminated. Nos. 4, 9 and 12, ASA Z26.1
1950
-Wired No. 11, ASA Z26.1-1950
Methods of Test for Transparent Safety Glazing Material
Used in Buildings-United States Standard Performance
Specifications and. USAS Z97.1-1966

Interior Finishes

Gypsum Plastering-Specifications for. ASA A 42.1-1964
Gypsum Plastering Specifications for. Gypsum Association
Gypsum Wallboard Finishes-Specifications for. . ASA A 97.1-1958
Interior Lathing and Furring-Specifications for USAS A 42.4-1967
Marble Interior-Specifications for ASA A 94.1-1961
Portland Cement Plastering-Specifications for . ASA A 42.3-1946
Portland Cement Stucco-Specifications for . . . ASA A 42.2-1946
Tile Ceramic, Installed in Dry-Set Portland . .
Cement Mortar USAS A 108.5-1967
Tile, Ceramic Mosaic, Installed in Portland
Cement Mortar USAS A 108.2-1967
Tile, Glazed Ceramic Wall, Installed in Portland
Cement Mortar USAS A 108.1-1967
Tile, Quarry, and Pavers, Installed in
Portland Cement Mortar. USAS A 108.3-1967
Vermiculite Plastering and Vermiculite Acoustical Plastic
for Sound Conditioning-Standard Specifications for. VI-1963

Masonry

Design and Construction of Loadbearing Concrete

Masonry-Specifications for NCMA-1968

Engineered Brick Masonry-

Recommended Requirements for SCPI-1966

NOTE: This standard (SCPI-1966) is only applicable
to brick masonry of solid masonry units made
from clay or shale.

Lime-Cement Stucco-Standard Specifications for . ASA A 42.5-1960

Marble, Exterior Thin Veneer-Specifications for . ASA A 94.2-1961

Marble, Exterior Thin, in Curtain or Panel Walls-

Specifications for ASA A 94.3-1961

Marble, Interior-Specifications for (See Interior Finishes)

Masonry-Standard Requirements for ASA A 41.1-1953

Reinforced Masonry-Standard Requirements for . ASA A 41.2-1960

Metals

Aluminum Construction Manual, Specifications for

Aluminum Structures. AA-1967

Steel

Design of Cold-Formed Steel Structural Members-

Specification for AISI-1968

Design, Fabrication and Erection of Structural Steel for

Buildings-Specification for AISI-1969

Design of Light Gauge Cold-Formed Stainless Steel Structural

Members-Specification for AISI-1968

Open Web Steel Joists, J-Series and H-Series-

Standard Specification for SJI/AISC-1965

Longspan Steel Joists, LJ-Series and LH Series. . AISC/SJI-1966

Standard Specification for

Welding in Building Construction-

Code for AWS D 1.0-69

Structural Applications of Steel Cables for Buildings

Tentative Criteria for AISI-1966

Structural Joints Using ASTM A325 or A490 Bolts-

Specifications for AISC-1966

Architecturally Exposed Structural Steel-

Specifications for AISC-1960

Gas Systems for Welding and Cutting. (See Fire Protection and
Safety Practices)

Design Practices Manual, Recommended MEMA-1967

Wood and Wood Products

Hurricane-Resistant Plywood Construction.APA-1966
Maximum Spans for Joists and Rafters in
Residential Construction.NF or PA-1961 incl.1962 Supplement
Pile Building DesignAWPI-1969
Pile Foundations Know HowAWPI-1968
Plywood Beams-Design and Fabrication ofAPA-1966
Plywood Construction Systems.APA-1967
Plywood Curven Panels-Design and Fabrication of .APA-1964
Plywood Design SpecificationsAPA-1966
Plywood Folded Plate Fabrication.APA-1966
Plywood Stressed Skin Panels-Design and Fabrication of.APA-1964
Pressure Treated Timber Foundation Piles for
Permanent StructuresAWPI-1965
Pressure Treated Timber Piles for Permanent Structures.AMPI-1967
Simplified Span Tables for Joists and Rafters
in Residential ConstructionNFoPA-1966
Stress Grade Lumber and Its Fastenings-National Design
Specifications forNFoPA-1968
Structural Design Data-WoodNFoPA-1967
Timber Construction ManualAITC-1966
Timber Construction StandardsAITC-100-1969
Timber Structural Glued Laminated-
Inspection Manual forAITC 200-63 with 1967
Supplement
Wood HandbookUSDA Handbook No. 72-1955

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Building Codes-Administrative Requirements for. .ASA A 55.1-1948
Building Construction-Safety Code forASA A 10.2-1944
Building Materials-Coordination of Dimensions of.ASA A 62.1-1957
Clay Flue Linings-Sizes ofASTM C 315-63
Fallout Shelters-Suggested Building Code
Provisions forDOD-CCD TR-36-1966
Fibrous Glass Air Duct-Standard forNIMA Feb. 1, 1965
Floor and Wall Openings,
Railings, and Tow Boards-Safety Code for. . . .ASA A 12-1932
Floors-Waterproofing ofNFIPA 92-1937
Homes-PrefabricatedUSLC CS 125-1947
Installing Vitrified Clay Sewer Pipe.ASTM C 12-64
Light and Ventilation-Standards forASA A 53.1-1946
Loads, Minimum Design-Standards forASA A 58.1-1955
Safety Code for Vertical Shoring-Recommended Standard.SSSI-68
Signs and Outdoor Display Structures-Standards for. .ASA 60.1-1949

Appendix C

Material Standards

See also Appendix D for standards for tests of specific materials.

Concrete

Aggregates, Concrete Specifications for.ASTM C 33-67
Aggregates, Lightweight, for Structural Concrete-
Specifications for.ASTM C 330-64T
Aggregates, Lightweight, for Concrete
Masonry Units.(See Masonry)
Aggregates, Lightweight, for Insulating Concrete-
Specifications for.ASTM C 332-66
Bar Supports, Wire, in Reinforced Concrete Construction-
Simplified Practice Recommendations for.USDC SP 4687
Forms for Concrete Joist Construction Floors . . .USDC R 87-32
Forms for Two-Way Concrete Joist Floor and
Roof Construction.USDC R 265-63
Gypsum Concrete-Specifications forASTM C 317-64
Manufacture of Reinforced Concrete Floor and
Roof Units-Recommended practice for.ACI 512-67
Masonry Units-Concrete(See Masonry)
Natural Cement-Specifications for.ASTM C 10-64
Portland Cement, Air-Entraining-Specifications for.ASTM C 175-67
Portland Cement-Specifications for.ASTM C 150-67
Ready Mix Concrete-Specifications for.ASTM C 94-67
Reinforcing.(See Metals)
Roofs and Slabs-On Grade, Vermiculite Concrete-
Specifications for.ASA A 122.1-1965
Waterproof Paper for Curing Concrete-
Specifications forASTM C 171-63

Fire Protection

Fire Retardant Properties of Treated Textile Fabrics-
Specifications for.ASTM D 626-55T

Interior Finishes

Adhesives, Organic, for Installation of
Ceramic Tile-Standard for.USAS A 136.1-67
Adhesive-Water Resistant Organic, for Installation of
Clay Tile.USDC CS 181-52

Interior Finishes (continued)

Aggregates, Inorganic, for use in Gypsum Plaster-
Specifications forASTM C 35-67
Dry-Set Portland Cement Mortar-
(for Ceramic Tile)(See Masonry)
Gypsum and Gypsum Products, Chemical Analysis of-
Standard Methods forASTM C 471-66
Gypsum Base for Veneer Plaster-
Specifications forASTM C 583-66T
Gypsum Board Products and Gypsum Partition Tile or Block,
Physical Testing of-Standard Methods forASTM C 473-66
Gypsum Lath-Specifications forASTM C 37-67
Gypsum Plasters-Specifications forASTM C 28-66
Gypsum Plasters and Gypsum Concrete, Physical Testing of
Standard Methods forASTM C 472-66
Gypsum Veneer Plaster-Specifications forASTM C 587-66T
Gypsum Wallboard-Specifications forASTM C 36-67
Lime, Hydrated, Normal Finishing-
Specifications forASTM C 6-61
Lime, Hydrated, Special Finishing-
Specifications forASTM C 206-61
Quicklime and Hydrated Lime-
Methods of Physical Testing ofASTM C 110-67
Quicklime for Structural Purposes-
Specifications forASTM C 5-59

Masonry

Aggregate, Fine-Method of Test for Measuring
Mortar-Making Properties ofASTM C 87-63T
Aggregates, Lightweight, for Concrete Masonry Units-
Specifications forASTM C 331-64T
Aggregate for Masonry Grout-
Specifications forASTM C 404-61
Aggregate for Masonry Mortar-
Specifications forASTM C 144-66T
Brick, Building (solid Masonry Units Made from Clay or
Shale)-Specifications forASTM C 62-66
Brick, Concrete Building-Specifications forASTM C 55-66T
Brick, Face, Calcium Silicate (Sand Lime Brick)-
Specifications forASTM C 73-67
Brick, Facing (Solid Masonry Units Made from Clay or
Shale)-Specification forASTM C 216-66
Brick, Sand-Lime Building-Specification forASTM C 73-51
Cement, Masonry-Specifications forASTM C 91-67
Ceramic Tile (Veneers)(See Interior Finishes)
Clay Facing Tile, Structural-
Specifications forASTM C 212-60
Clay Load-Bearing Wall Tile, Structural-
Specification forASTM C 34-62
Clay Non-Load Bearing Screen Tile, Structural-
Specification forASTM E 530-63T

Masonry (continued)

Clay Non-Load Bearing Wall Tile, Structural
Specification forASTM C 56-62
Concrete Masonry Units, Hollow Load Bearing-
Specifications forASTM C 90-66T
Concrete Masonry Units, Hollow Non-Load Bearing-
Specifications forASTM C 129-64T
Concrete Masonry Units, Solid Load Bearing-
Specifications forASTM C 145-66T
Dry-Set Portland Cement Mortar-Standard Specifications
forUSAS A 118.1-67
Glazed Units:-Ceramic Glazed Structural Clay Facing Tile,
Facing Brick, and Solid Masonry Units-
Specifications forASTM C 126-67
Gypsum Partition Tile and Block-
Specifications forASTM C 52-54
Lime, Hydrated for Masonry Purposes-
Specifications forASTM C 207-49
Limes.(See Interior Finishes)
Mortar and Grout for Reinforced Masonry-
Specifications forASTM C 476-63
Mortar for Unit Masonry-Specifications forASTM C 270-64T
Portland Cement-Specifications for(See Concrete)

Metal

Alloy Steel Bolts, Quenched and Tempered, for Structural
Steel Joints-Standard Specifications forASTM A 490-68
Alloy Steel Sheets and Strip, Regular Quality Hot-Rolled and
Cold Rolled-Specification forASTM A 506-64
Aluminum-Alloy Bars, Rods, Shapes and Tubes-
Standard Specifications forASTM B 221-68
Aluminum-Alloy Bars, Rods and Wire-
Standard Specifications forASTM B 211-68
Aluminum-Alloy Die and Hand Forgings-
Standard Specifications forASTM B 247-68
Aluminum-Alloy Pipe-Standard Specifications forASTM B 241-68
Aluminum-Alloy Sheet and Plate-
Standard Specifications forASTM B 209-68
Aluminum-Alloy Standard Structural Shapes rolled or
Extruded-Standard Specifications forASTM B 308-68
Aluminum-Alloy Drawn Seamless Tubes-
Standard Specifications forASTM B 210-68
Aluminum-Alloy Extruded Structural Pipe and Tube-
Standard Specifications forASTM B 429-67
Aluminum-Alloy Round Welded Tubes-
Standard Specifications forASTM B 313-68

Metal (continued)

Aluminum and aluminum-Alloy Welding Rods and Bare
Electrodes-Tentative Specifications for.ASTM B 285-61T
Aluminum-Alloy Rivet and Cold Heading Wire and Rods-
Standard Specifications for.ASTM B 316-68
Aluminum-Base Alloy Die Castings-
Standard Specifications for.ASTM B 85-60
Aluminum-Base Alloy Permanent Mold Castings-
Standard Specifications for.ASTM B 108-68
Aluminum-Base Alloy Sand Castings-
Standard Specifications for.ASTM B 26-68
Aluminum Sliding Glass Doors-
Specifications for.AAMA 402.6-68
Aluminum Windows-Specifications for.AAMA 302.6-68
Bare Mild Steel Electrodes and Fluxes for Submerged Arc
Welding-Specifications for.ASTM A 558-65T
Bolts, High Strength, for Structural Steel Joints
Including Suitable Nuts and Plain Hardened Washers-
Specifications for.ASTM A 325-68
Bolts and Studs, Quenched and Tempered-
Specifications for.ASTM A 449-68
Carbon and Alloy Steel Nuts for Bolts for
High-Pressure and High Temperature Service-
Specifications for.ASTM A 194-68
Carbon-Steel Castings Suitable for Fusion Welding for
High Temperature Service-Specifications for.ASTM A 216-65
Carbon Steel Nuts-Specifications for.ASTM A 563-66
Carbon Steel Plates of Structural Quality, Low and
Intermediate Tensile Strength-Specifications for,
(Plate 2 inches and under in thickness)ASTM A 283-67
Carbon Steel Sheets of Structural Quality, Flat-Rolled-
Specifications for.ASTM A 245-64
Carbon Steel Strip, Cold Rolled-Specifications forASTM A 109-65
Carbon Steel Strip of Structural Quality, Hot-Rolled-
Specifications for.ASTM A 303-64
Castings, Mild to Medium Strength Carbon Steel for
General application-Specifications for.ASTM A 27-65
Castings, Gray Iron-Specification for.ASTM A 48-65
Cold-Formed Welded and Seamless Carbon Steel Structural
Tubing in Rounds and Squares-Specifications forASTM A 500-68
Steel Castings for Structural Purposes, High Strength-
Specifications for.ASTM A 148-65
Electrodes, Low Alloy Steel Covered Arc Welding-
Specifications for.ASTM A 316-64T
Electrodes, Mild Steel Arc Welding-Specifications
for.ASTM A 233-64T
Forgings, Alloy Steel for General Industrial Use-
Specifications for.ASTM A 237-67
Forgings, Carbon Steel for General Industrial Use-
Specifications for.ASTM A 235-67

Metal (continued)

General Requirements for Carbon and High Strength

- Low Alloy Steel, Hot Rolled Strip, Hot Rolled Sheets,
and Cold rolled sheets-Specifications forASTM A 568-66T
- High Strength, Low Alloy Structural Steel with 50,000 psi
minimum yield point to 4" thick-Specifications for .ASTM A 588-68
- Hot-Formed Welded and Seamless Carbon Steel Structural
Tubing-Specifications forASTM A 501-68a
- Hot Rolled Carbon Steel Sheets and Strip, Structural
Quality-Specifications forASTM A 570-66T
- Low Carbon Steel, External and Internal Threaded,
Standard Fasteners-Specifications forASTM A 307-62
- Iron or Steel Roofing Sheets, 1.25 oz. Class Coating
(Pot Yield) Zinc Coated (Galvanized) Specification for ASTM A 361-67
- Iron or Steel Sheets, Long Terne, Coils and Cut Lengths
Specification forASTM A 308-67
- Mild Steel Electrodes for Gas Metal-Arc Welding-
Specifications forASTM A 559-65T
- Pipes, Welded and Seamless Pipe-
Specifications forASTM A 252-68
- Pipe, Metal. (See Plumbing
and Piping)
- Reinforced Concrete Columns, Steel Spirals for-
Simplified Practice Recommendations forUSDC R 53-63
- Reinforced Concrete Construction-Wire Bar
Supports forUSDC PS 7-66
- Reinforced, Axle-Steel Bars for Concrete-
Specifications forASTM A 618-68
- Reinforcement, Billet-Steel Bars for Concrete-
Specifications forASTM A 615-68
- Reinforcement, Deformed Billet-Steel Bars for Concrete
with 60,000 psi Minimum Yield Strength-
Specifications forASTM A 432-66
- Reinforcement, Deformed Rail-Steel Bars for Concrete,
with 60,000 psi Minimum Yield Strength-
Specifications forASTM A 61-66
- Reinforcement, High Strength Deformed Billet-Steel Bars
for Concrete, with 75,000 psi Minimum Yield Strength-
Specifications forASTM A 431-66
- Reinforcement, Special Large Size Deformed Billet-Steel
Bars for Concrete-Specifications forASTM A 408-65
- Reinforcement, Rail-Steel Bars for Concrete-
Specifications forASTM A 616-68
- Reinforcement, Steel Wire, Cold-Drawn, for Concrete-
Specifications forASTM A 82-62T
- Reinforcement, Deformed Steel Wire for Concrete.ASTM A 496-64
- Reinforcement, Welded Deformed Steel Wire Fabric
for concrete.ASTM A 497-64
- Reinforcement, Steel Wire, Welded Fabric for Concrete-
Specifications forASTM A 185-64
- Rivet Steel, Structural-Specifications forASTM A 141-58
- Seven-Wire Stress-relieved Strand, Uncoated, for
Prestressed Concrete-Specifications forASTM A 416-64

Metal (continued)

Uncoated Stress-Relieved Wire for Prestressed Concrete-

Specification for	ASTM A 421-65
Sheet Piling, Steel-Specifications for	ASTM A 328-67
Steel, Plate Sheet and Strip, Corrosion-Resisting Chromium Specification for	ASTM A 176-63
Steel Plate, Sheet and Strip, Corrosion-Resisting Chromium- Nickel-Specification for	ASTM A 167-63
Steel Sheets and Strip, High Strength Low Alloy Hot-Rolled	ASTM A 375-64
Structural Steel-Specifications for	ASTM A 36-69
Structural Steel, High Strength-Specifications for	ASTM A 440-66
Structural Steel, High Strength Low Alloy- Specifications for	ASTM A 242-68
Structural Steel, High Strength Low Alloy- Columbian Vanadium-Specifications for	ASTM A 572-68
Structural Steel, High Strength Low Alloy- Manganese Vanadium-Specifications for	ASTM A 441-68
Structural Steel, High Yield Strength, Quenched and Tempered Alloy Steel Plate-Specifications for	ASTM A 514-68
Steel Structural Rivets-Specification for	ASTM A 502-65
Structural Steel with 42,000 psi Minimum Yield Point ($\frac{1}{2}$ in. Maximum Thickness)-Specification for	ASTM A 529-64

Plumbing and Piping

Asbestos-Cement Non-Pressure Sewer Pipe-

Specifications for	ASTM C 428-64T
Asbestos-Cement Pressure Pipe-Specifications for	ASTM C 296-64T
Brass Pipe, Seamless Red Brass-Specification for	ASTM B 43-62
Cast Iron Pipe -Pressure-Specifications for	ASTM A 377-57
-Soil Pipe and Fittings-Specifications for	ASTM A 74-66
Clay Pipe -Compression Joints	ASTM C 425-66T
-Drain Tile-Specifications for	ASTM C 4-62
-Extra Strength-Specifications for	ASTM C 200-65T
-Perforated	ASTM C 211-68
-Sewer, Standard Strength Ceramic Glazed or Unglazed- Specifications for	ASTM C 261-60T
-Sewer, Standard Strength-Specifications for	ASTM C 13-65T
Concrete Pipe -Culvert Storm Drain and Sewer, Reinforced- Specifications for	ASTM C 76-64T
-Sewer-Specifications for	ASTM C 14-63
Copper Drainage Tube (DWV)	ASTM B 306-62
Copper Pipe -Seamless, Standard Sizes-Specifications for	ASTM B 42-62

Plumbing and Piping (continued)

Fiber Pipe, Bituminized Drain and Sewer. USDC CS 116-54
Lead Pipe. FS WW-P 325
Non-Metallic Pipe and Fittings USDC CS 255-63 (ABS)
Plastic Drain, Waste and Vent Pipe and Fittings-
Acrylonitrile Butadiene-Styrene (ABS). USDC CS 270-65
Plastic Drain, Waste and Vent Pipe and Fittings-
Polyvinyl Chloride (PVC). USDC CS 272-65
Plastic Pipe and Fittings USDC CS 255-63 (PE)
(Water Supply). USDC CS 256-63 (PVC)
Sewer and Storm Drain USDC CS 228-61 (SRP)
Steel Pipe
-Black and Hot Dipped Zinc Coated (Galvanized)Welded
and Seamless, for Ordinary Uses-Specifications for. .ASTM A 120-65
-Steel or Iron, Special-Welded-Specifications for. . .ASTM A 211-63
-Welded and Seamless-Specifications for ASTM A 53-69
Tile, Clay Drain. (See Clay Pipe)
Traps and Bends, Lead FS WW-P-325
Tube and Tubing
-Brass, Seamless-Specifications for ASTM B 135-63
-Copper, Seamless-Specifications for ASTM B 75-66
-Copper, Seamless, Water-Specifications for ASTM B 88-62
-Copper Brazed Steel Tubing-Specifications for. ASTM A 254-64
Wrought Iron and Wrought Steel Pipe. ASA B 36.10-59
Wrought Iron Pipe, Welded-Specifications for ASTM A 72-66
Valves, Flanges and Pipe Fittings, Gray Iron Castings-
Specifications for. ASTM A 126-61T

Roofing and Siding

Asphalt for Dampproofing and Waterproofing-
Specifications for. ASTM D 449-49
Asphalt for Use in Construction Built-Up Roof Coverings
Specifications for. ASTM D 312-64
Asphalt Roll Roofing Surfaced with Mineral Granules-
Specifications for. ASTM D 249-60
Asphalt Roll Roofing Surfaced with Powdered Talc or Mica-
Specifications for. ASTM D 224-58
Asphalt-Saturated and Coated Asbestos Felts for Use in
Constructing Built-Up Roofs-Specifications for. . .ASTM D 655-47
Asphalt Shingles Surfaced with Mineral Granules-
Specifications for. ASTM D 225-62
Asphalt Siding Surfaced with Mineral Granules-
Specifications for. ASTM D 699-58
Fiberboard Nail-Base Sheathing-Standard
Specifications for. ASTM D 2277-66
Fiber Insulation Board, Structural-
-Commercial Standard for. USDC CS 42-49
-Federal Specification. LLL-I-525-60

Roofing and Siding (continued)

- Manufacturers Standards for Fiberboard Nail-Base Sheathing.IB Spec. No. 2-69
- Manufacturers Standards for Insulating Roof Deck. IB Spec. No. 1-69
- Method of TestingASTM C 209-66
- Specifications forASTM C 208-66
- Formboard, Structural Insulating-
 - Specifications forASTM C 532-66
- Gypsum Sheathing Board-Specifications for.ASTM C 79-64
- Wood Shingles (Red Cedar, Tidewater, Red Cypress and California Redwood).USDC CS 31-52

Wood and Wood Products

- American Lumber Standards for Softwood Lumber. . .USDC R16-53
- Fire Retardant Pressure Treatment, Plywood. . .AWPA C 27B-63
- Fire Retardant Pressure Treatment, Structural Lumber.AWPA C 20B-63
- Glue Laminated Structural Lumber Standards
 - Structural Glued Laminated Southern PineSPIB-65
- Glues for Laminated and Built-Up Wood Members . .F.E.D. Spec. CG 496
 - with Amendment #2
 - U.S.A. Spec. 14122, 14124
 - U.S.N. S.P.C. 52C-12
- Hardboard, Commercial Standard for.USDC CS 251-63
- Method for Establishing Structural Grades of Lumber.ASTM D 245-68T
- Particleboard-Commercial Standard forUSDC CS 236-66
- Piles, Timber, Round-Specifications for.ASTM D 25-58
- Piles, Wood Foundation, Creosote.AWPA C 12-51
- Plywood-Methods of Calculating Strength of . . .USFS Bul. 1630-50
- Plywood-Standards for.AWPA C 29-67
- Preservative Treatment
 - of Lumber, Timber, Bridge Ties, and Mine Ties (All Species)-Standards for.AWPA C2-68
 - of Piles by Pressure Process-Standards for. . .AWPA C 3-68
 - of Poles by Pressure Process-Standards for. . .AWPA C 4-68
 - by Pressure Process-All Timber Products-Standards for.AWPA C 1-68
- Quality Control Standards for Pressure-Treated Lumber and Plywood
 - With water-borne preservatives (for ground contact. AWPI-LP-22-68
 - With light petroleum solvent-penta solution (for ground contact.AWPI-LP-33-68
 - With volatile petroleum solvent (LPG)-penta solution (for above ground use).AWPI-LP-4-68
 - With volatile petroleum solvent (LPG)-penta solution (for ground contact)AWPI-LP-44-68
 - With heavy petroleum solvent-penta solution (for ground contact)AWPI-LP-77-68
- Shingles.(See Roofing and Siding)

Wood and Wood Products (continued)

Timber Foundtaion Piles.AWPA C 12-68
Glued Laminated Structural Lumber Standards
-Glued Laminated Douglas Fir (WPA Region)-
Interim Specifications and Design for.AWPA-1966
-Hardwood Glued Laminated Lumber, Design and
Fabrication of.SHP-59
-Structural Glued Laminated Members (and Laminators)
Before Gluing of Southern Pine, Pacific Coast
Douglas Fir and Western HemlockAWPA C 28-67
-Structural Glued Laminated Douglas Fir.AWPA-1964
(Coast Region)Timber
-Structural Glued Laminated Southern Pine Timber.SPIB-65
-Structural Glued Laminated TimberUSDC CS 253-63

Unclassified Miscellaneous

Felt-Methods of Testing.ASTM D 461-61
Fire Retardant Plastics for Roofing and Siding .FRED Standard 4420
Fire-Retardant Properties of Treated Textile Fabrics-
Specifications for.ASTM D 626-55T
Flammability of Plastics 0.050 inches and Under in
Thickness-Method of Test forASTM D 568-61
Flammability of Rigid Plastics Over 0.050 inches in
Thickness-Method of Test forASTM D 635-63
Formboard, Gypsum-Specifications forASTM C 318-55
Insulated Metal Roof Deck StandardFRED Standard 4450
Mineral Wool Building Insulation-Standard for.NMMA-60
Perlite Loose Fill Insulation-Standard
Specifications for.ASTM C 549-67
Plastics-Definitions of Terms Relating toASTM D 883-64aT
Plastics, Deformation of, Under Load-Method of
Test for.ASTM D 621-64
Preservatives for Wood
-Creosote-Standards forAWPA P 1-65
-Creosote, Coal Tar Solutions-Standards forAWPA P 2-68
-Oil Borne Preservatives-Standards for.AWPA P 8-68
-Oil Borne Solvents-Standards forAWPA P 9-67
-Water Borne Preservatives-Standards for.AWPA P 5-68
Thickness of Solid Electrical Insulation-
Method of Test for.ASTM D 374-57T
Vermiculite Loose Fill Insulation-Standard
Specifications for.ASTM C 516-67
Waterproof Paper for Curing Concrete-
Specifications for.ASTM D 374-57T
Waterproof Paper for Curing Concrete-
Specifications for.(See Concrete)
Zinc Chromate Primer.U.S.N. Dept. Spec. 52-18

Appendix D

Structural Unit Test Standards

See also appendixes B and C for engineering practice standards and material standards which contain unit test methods.

Concrete

Coarse Aggregates, Resistance to Abrasion of Small Size,
by use of the Los Angeles Abrasion Machine-Test for.ASTM C 131-66
Fine and Coarse Aggregates, Sieve or Screen Analysis of-
Test for (A 37.8-1967).ASTM C 136-67
Graded Coarse Aggregates, Abrasion of, by Use of The
Deval Machine-Method of Test for.ASTM D 289-63
Concrete, Securing, Preparing and Testing
Specimens for Hardened, for Compressive and
Flexural Strength (A 37.20-1966).ASTM C 42-64
Concrete Compression and Flexure Test Specimens in the
Laboratory-Making and Curing.ASTM C 192-66
Concrete, Molded Cylinders-Test for Compressive
Strength of.ASTM C 39-66.
Lightweight Insulating Concrete, Compressive
Strength-Test for.ASTM C 496-66
Concrete Masonry Units-Sampling and Testing
(A 84.1-1967).ASTM C 140-65T
Concrete Masonry Units, Hollow Load Bearing-
Specifications for.ASTM C 90-66T
Concrete, Masonry Units, Solid Load Bearing-
Specifications for (A 81.1-1967).ASTM C 145-66T
Concrete, Hardened Portland Cement-Test for Cement
Content of (A 1.22-1967).ASTM C 85-66
Concrete, Ready-Mixed-Specifications for (A 37.69-1967).ASTM C 94-67
Sands for Concrete-Test for Organic Impurities in.ASTM C 40-66

Interior Finishes

Ceramic Tile, Method of Test for Bond Strength of,
to Portland Cement Mortar.ASTM C452-64T
Gypsum and Gypsum Products, Chemical Analysis of-
Standard Methods for.ASTM C 471-66
Gypsum Board Products and Gypsum Partition Tile of Block,
Physical Testing of-Standard Methods for.ASTM C 473-66
Gypsum Concrete-Specifications for.ASTM C 317-64
Gypsum Formload-Specifications for.ASTM C 318-67
Gypsum Lath-Specifications for.ASTM C 37-67
Gypsum Plasters-Specifications for.ASTM C 28-67
Gypsum Plasters and Gypsum Concrete, Physical Testing of-
Standard Methods for.ASTM C 472-66
Gypsum Sheathing Board-Specifications for.ASTM C 79-67
Gypsum Wallboard-Specifications for.ASTM C 36-67
Insulation Board, Structural, Made from Vegetable Fibers-
Methods of Testing.ASTM C 209-66
Specifications for.ASTM C 208-66
Lime.(See Masonry)

Masonry

Aggregate for Masonry Mortar-Specifications for.ASTM C 144-66T
Brick, Concrete Building-Specifications for.ASTM C 55-66T
Brick-Methods of Testing and Sampling.ASTM C 67-66
Cement, Masonry-Specifications for.ASTM C 91-67
Ceramic Tile (Veneers).(See Interior Finishes
Chemical Analysis of Limestone, Quicklime and
Hydrated Lime.ASTM C 25-67
Concrete Masonry Units.(See Concrete)
Glazed Units-Ceramic Glazed Structural Clay Facing Tile,
Facing Bricks, and Solid Masonry Units-
Specifications for.ASTM C 126-67
Lime and Limestone Products-Methods of Sampling,
Inspection, Packing and Marking of.ASTM C 50-57
Lime, Hydrated and Quick-Methods of Physical
Testing of.ASTM C 110-67
Lime, Hydraulic Hydrated for Structural Purposes-
Specifications for.ASTM C 141-67
Mortars, Hydraulic Cement-Method of Test for
Compressive Strength of (Using 2 in. cube Specimens)ASTM C 109-64
Mortars, Hydraulic Cement-Method of Test
for Tensile Strength of.ASTM C 190-63
Stone, Natural Building-Methods of Test for
Absorption and Bulk Specific Gravity of.ASTM C 97-58
Stone, Natural Building-Method of Test for
Compressive Strength of.ASTM C 170-58
Stone, Natural Building-Methods of Test for
Modulus of Ruptures of.ASTM C 99-58
Tile, Structural Clay-Methods of Sampling and Testing ASTM C 112-60

Metals

Cast Iron-Method of Testing Compression of.ASTM A 256-46
Metallic Materials-Methods of Tension Testing of.ASTM E 8-61T

Unclassified Miscellaneous

Cement, Hydraulic-Methods of Sampling.ASTM C 183-65T
Cement, Natural-Specifications for.ASTM C 10-64
Cement, Portland-Specifications for.ASTM C 150-68
Clay Pipe, Testing.ASTM C 301-68
Plastics Under Load-Method of Test for Deformation ofASTM D 621-64
Tile, Clay Drain-Specification for.ASTM C 4-62

Wood and Wood Products

Evaluating the Properties of Wood-Base Fiber
and Particle Panel Materials.ASTM D 1037-64

Wood and Wood Products (continued)

Timber, Small Clear Specimens-Method of Testing. . .ASTM D 143-52
Timbers in Structural Sizes-Methods of Static
Tests of. ASTM D 198-67
Veneer, Plywood and Other Glazed Veneer Construction-
Methods of Testing. ASTM D 805-63

Appendix E

Structural Assembly Test Standards

See also appendix D for standards for tests of unit materials.

Heavy Truss Assemblies, Test.ASTM E 73-68
Panels for Building Construction-Methods of
Conducting Strength Test ofASTM E 72-68
Plywood, Prefabricated-Structural
Properties ofNBS BMS 104-45
Timbers in Structural Sizes-Methods
of Static Tests of.ASTM D 198-67
Veneer, Plywood and Other Glued Veneer Constructions-
Methods of Testing.ASTM D 805-63

Appendix F

Durability Test Standards

See also appendixes C, D and E for tests of individual materials or unit assemblies.

Concrete and Concrete Aggregate

Concrete, Aggregate-Method of Tests for Voids in.ASTM C 30-37
Concrete, Air Content of Freshly Mixed, by the
Pressure Method-Method of Test for.ASTM C 231-62
Concrete, Weight per Cubic Foot, Yield and Air
Content of-Method of Test for.ASTM C 138-63
Organic Impurities in Sand for Concrete-
Method of Test of.ASTM C 40-66

Masonry and Masonry Products

Ceramic Glazed Structural Clay Facing Tile,
Facing Brick and Solid Masonry Units-
Specifications for (Autoclave Test).ASTM C 126-67
Freezing and Thawing Tests (See Specifications
for Materials)
-Bricks-Methods of Sampling and Testing.ASTM C 67-66
-Drain Tile-Specifications for.ASTM C 4-62
-Structural Clay Tile-Methods of
Sampling and Testing.ASTM C 112-60

Plastics

Accelerated Weathering Tests of Plastics-
Recommended Practice for.ASTM D 795-57T
Water Absorption of Plastics-Method of Test for . . .ASTM D 570-63

Roofing and Siding

Asphalt Roll Roofing, Cap Sheets and Shingles-
Methods of Testing.ASTM D 228-64
Bituminous Materials, Accelerated Test of Weathering-
Recommended Practice for.ASTM D 529-62
Felted and Woven Fabrics Saturated with Bituminous Substance
for Use in Waterproofing and Roofing-
Methods of Sampling and TestingASTM D 146-59

Unclassified Miscellaneous

Fibre Building Boards-Method of Accelerated Aging. . .NBS BMS 4-38
Fibre Building Boards-Method of Accelerated Aging. . .ASTM D 1037-63T
Gypsum and Gypsum Products, Chemical Analysis of-
Standard Methods for.ASTM C 471-61
Gypsum Board Products and Gypsum Partition Tile
or Block, Physical Testing of-Standard Methods of. .ASTM C 473-62
Gypsum Plasters and Gypsum Concrete, Physical Testing of-
Standard Methods for.ASTM C 472-64
Textile Fabrics-Method of Test for Water Resistance-
of.ASTM D 583-63

Appendix G

Fire Test and Flame Spread Test Standards

Combustible or Noncombustible Properties

Fire-Retardant Treatments of Building Materials. . . . NFPA 703-1961
Noncombustibility of Elementary Materials-
Method of Test for Determining. ASTM E 136-65
Textile Fabrics, Treated-Specifications for
Fire-Retardant Properties of ASTM D 626-55T
Wood, Treated-Method of Test for Combustible Properties of
-by The Crib Test. ASTM E 160-50
-by The Fire Tube Apparatus. ASTM E 69-50

Fire Resistance Properties

Building Construction and Materials-Methods of
Fire Test of. ASTM E 119-67
Ceiling Construction-(See Building Construction)
Door Assemblies-Methods of Fire Tests of. ASTM E 152-66
Roof Coverings-Methods of Fire Test of. ASTM E 108-58

Flame Spread Properties

Flame Resistance Tests-Acoustical Units,
Prefabricated. Fed. Spec. SSAC0118c-60
Surface Burning Characteristics of Building Materials-
Method of Test for ASTM E 84-68

Flash Point

Fuel Oils, by Pensky-Masters, Closed Tester-
Method of Test for Flash Point ASTM D 93-62
Liquids other than Fuel Oil, by Tag Closed Tester-
Method of Test for Flash Point ASTM D 56-64
Flash and Fire Points by Cleveland Open Cup-
Method of Test for. ASTM D 92-57

Appendix I

Fire Protection Standards

Alarm and Detecting Systems

Alarm Systems, Municipal-Installations, Maintenance
and Use of. NF iPA 73-1967
Signaling Systems, Central Station Protective-
For Watchman, Fire Alarm and Supervisory Service,
Installation, Maintenance and Use of. NF iPA 71-1967
Signaling Systems, Proprietary, Auxiliary and Local
Protective-Installation, Maintenance and Use of. NF iPA 72-1964
Signaling Systems-Installation, Maintenance and Use
Local Protective. NF iPA 72A-1967
Auxiliary Protective. NF iPA 72B-1967
Remote Station Protective. NF iPA 72C-1967
Proprietary Protective. NF iPA 72D-1967

Prevention of Spread of Fire

Air Conditioning And Ventilating Systems
-other than Residence Type. NF iPA 90A-1966
-Residence Type. NF iPA 90B-1966
Aircraft Hangars. NF iPA 409-1967
Doors, Tin-Clad Fire. ULI 10a-56
Dust Explosion Prevention. (See App. B)
Fire Doors and Windows-Standard for. NF iPA 80-1968
Hardware, Sliding, for Standard Tin-Clad
Fire Doors. ULI 14(b) Nov. 1953
Prevention and Spread of Fire Approved Fire Protection
Equipment and Building Materials. FMED
Hardware, Swinging, for Standard Tin-Clad
Fire Doors. ULI 14(c) -1968

Protection Systems

Carbon Dioxide Extinguishing Systems. NF iPA 12-1968
Extinguishers, Portable Fire-Installation. NF iPA 10A-1968
Extinguishers, Portable Fire, Maintenance and Use. NF iPA 10B-1968
Foam Extinguishing Systems. NF iPA 11-1963
Foam-Water Sprinkler and Foam-Water Spray
Systems-. NF iPA 16-1968
Hose Systmes. [See Standpipe
and Hose Systems)
Outside Protection(Yard Mains for Sprinklers,
Stanpipes, etc.). NF iPA 24-1968

Protection Systems (continued)

Private Fire Brigades-Organization, Training and
Equipment ofNFIPA 27-1967
Pumps, Centrifugal Fire-Installation ofNFIPA 20-1968
Sprinkler Systems
-Installation ofNFIPA 13-1968
-Care and Maintenance ofNFIPA 13A-1968
Standpipe and Hose SystemsNFIPA 14-1968
Valves Controlling Water Supplies for Fire Protection-
Supervision ofNFIPA 26-58
Water Tanks for Private Fire ProtectionNFIPA 22-1967
Water Spray SystemsNFIPA 15-1962

IN CITY
COUNCIL

APR 20 1972

FIRST READING
REFERRED TO COMMITTEE ON
ORDINANCES

Vernon Vesper
CLERK

THE COMMITTEE ON
ORDINANCES

Approves Passage of
The Within Ordinance

Vernon Vesper
MAY 10 1972
Clinch

*Councilman Scarnette
and Councilman Lynch, by request*

Appendix D

Structural Unit Test Standards

See also appendixes B and C for engineering practice standards and material standards which contain unit test methods.

Concrete

Coarse Aggregates, Resistance to Abrasion of Small Size, by use of the Los Angeles Abrasion Machine-Test for. ASTM C 131-66
Fine and Coarse Aggregates, Sieve or Screen Analysis of-Test for (A 37.8-1967). ASTM C 136-67
Graded Coarse Aggregates, Abrasion of, by Use of The Deval Machine-Method of Test for. ASTM D 289-63
Concrete, Securing, Preparing and Testing Specimens for Hardened, for Compressive and Flexural Strength (A 37.20-1966). ASTM C 42-64
Concrete Compression and Flexure Test Specimens in the Laboratory-Making and Curing. ASTM C 192-66
Concrete, Molded Cylinders-Test for Compressive Strength of. ASTM C 39-66
Lightweight Insulating Concrete, Compressive Strength-Test for. ASTM C 496-66
Concrete Masonry Units-Sampling and Testing (A 84.1-1967). ASTM C 140-65T
Concrete Masonry Units, Hollow Load Bearing-Specifications for. ASTM C 90-66T
Concrete, Masonry Units, Solid Load Bearing-Specifications for (A 81.1-1967). ASTM C 145-66T
Concrete, Hardened Portland Cement-Test for Cement Content of (A 1.22-1967). ASTM C 85-66
Concrete, Ready Mixed-Specifications for (A 37.69-1967). ASTM C 94-67
Sands for Concrete-Test for Organic Impurities in. ASTM C 40-66

Interior Finishes

Ceramic Tile, Method of Test for Bond Strength of, to Portland Cement Mortar. ASTM C 452-64T
Gypsum and Gypsum Products, Chemical Analysis of-Standard Methods for. ASTM C 471-66
Gypsum Board Products and Gypsum Partition Tile of Block, Physical Testing of-Standard Methods for. ASTM C 473-66
Gypsum Concrete-Specifications for. ASTM C 317-64
Gypsum Formload-Specifications for. ASTM C 318-67
Gypsum Lath-Specifications for. ASTM C 37-67
Gypsum Plasters-Specifications for. ASTM C 28-67
Gypsum Plasters and Gypsum Concrete, Physical Testing of-Standard Methods for. ASTM C 472-66
Gypsum Sheathing Board-Specifications for. ASTM C 79-67
Gypsum Wallboard-Specifications for. ASTM C 36-67
Insulation Board, Structural, Made from Vegetable Fibers-Methods of Testing. ASTM C 209-66
Specifications for. ASTM C 208-66
Lime. (See Masonry)

Masonry

Aggregate for Masonry Mortar-Specifications for.ASTM C 144-66T
Brick, Concrete Building-Specifications for.ASTM C 55-66T
Brick-Methods of Testing and Sampling.ASTM C 67-66
Cement, Masonry-Specifications for.ASTM C 91-67
Ceramic Tile (Veneers).(See Interior Finishes)
Chemical Analysis of Limestone, Quicklime and
Hydrated Lime.ASTM C 25-67
Concrete Masonry Units.(See Concrete)
Glazed Units-Ceramic Glazed Structural Clay Facing Tile,
Facing Bricks, and Solid Masonry Units-
Specifications for.ASTM C 126-67
Lime and Limestone Products-Methods of Sampling,
Inspection, Packing and Marking of.ASTM C 50-57
Lime, Hydrated and Quick-Methods of Physical
Testing of.ASTM C 110-67
Lime, Hydraulic Hydrated for Structural Purposes-
Specifications for.ASTM C 141-67
Mortars, Hydraulic Cement-Method of Test for
Compressive Strength of (Using 2 in. cube Specimens)ASTM C 109-64
Mortars, Hydraulic Cement-Method of Test
for Tensile Strength of.ASTM C 190-63
Stone, Natural Building-Methods of Test for
Absorption and Bulk Specific Gravity of.ASTM C 97-58
Stone, Natural Building-Method of Test for
Compressive Strength of.ASTM C 170-58
Stone, Natural Building-Methods of Test for
Modulus of Ruptures of.ASTM C 99-58
Tile, Structural Clay-Methods of Sampling and Testing ASTM C 112-60

Metals

Cast Iron-Method of Testing Compression of.ASTM A 256-46
Metallic Materials-Methods of Tension Testing of.ASTM E 8-61T

Unclassified Miscellaneous

Cement, Hydraulic-Methods of Sampling.ASTM C 183-65T
Cement, Natural-Specifications for.ASTM C 10-64
Cement, Portland-Specifications for.ASTM C 150-68
Clay Pipe, Testing.ASTM C 301-68
Plastics Under Load-Method of Test for Deformation ofASTM D 621-64
Tile, Clay Drain-Specification for.ASTM C 4-62

Wood and Wood Products

Evaluating the Properties of Wood-Base Fiber
and Particle Panel Materials.ASTM D 1037-64

Wood and Wood Products (continued)

Timber, Small Clear Specimens-Method of Testing. . .ASTM D 143-52
Timbers in Structural Sizes-Methods of Static
Tests of. ASTM D 198-67
Veneer, Plywood and Other Glazed Veneer Construction-
Methods of Testing. ASTM D 805-63

Memo to Vin Palloggi
for your information

If you will call us at 831-6550
Ext 60
when your letter is ready,
it can be picked up.

J. Sordani

June 2, 1972

Vincent Pallozzi, Director
Department of Planning and Urban Development
40 Fountain Street
Providence, Rhode Island

Dear Mr. Pallozzi:

This is in response to your June 1, 1972, correspondence regarding the following Ordinances:

"An Ordinance Revising, Amending, and Modifying the Plumbing Code of the City of Providence contained within Chapter 1079 of 1956, Sections 1700-1731, entitled, "Plumbing, Drainage, and Gas Piping," and Sections 505.2-515.0, entitled "Ventilation," contained within and also known as the "Building Ordinances of the City of Providence."

"An Ordinance Revising, Amending, and Modifying the General Construction Requirements of Chapter 1079 of 1956 of the Ordinances of the City of Providence entitled, "The Building Ordinances of the City of Providence" Sections 503.0 entitled, "Standards of Natural Light" and Section 603.0 to Section 909.0 including the Appendices of the General Construction Requirements to the Building Code of the Approved Amendments in Compliance to the 1970 BOCA Code."

The subject Ordinances were in City Council May 16, 1972, and were Read and Passed the First Time.

The said Ordinances will be placed on the Docket of the City Council, which is scheduled to be held on Thursday, June 8, 1972, for consideration by that Body for Passage the Second Time.

Assuming that the City Council does pass the two subject Ordinances at its scheduled meeting, the same will be transmitted to the Mayor on June 9, 1972, for his consideration and approval in which he has ten days from the latter date to so approve or to veto the same.

Vincent Pallozzi
Page 2
June 2, 1972

As if and when the subject Ordinances are returned to the City Clerk with the Mayor's approval, they will be properly identified by number and certified copies then will be made available for distribution.

Very sincerely yours,

Vincent Vespia
City Clerk of Providence

VV:pb

VINCENT PALLOZZI
DIRECTOR



JOSEPH A. DOORLEY, JR.
MAYOR

DEPARTMENT OF PLANNING AND URBAN DEVELOPMENT
40 FOUNTAIN ST. • PROVIDENCE, R. I. 02903 • TEL. 401-831-6550

June 1, 1972

Mr. Vincent Vespia
City Clerk, City of Providence
City Hall
Providence, Rhode Island

Re: Items 37 and 38 on the Docket
for May 16, 1972 - Amendments
to the "Building Ordinances of
the City of Providence"

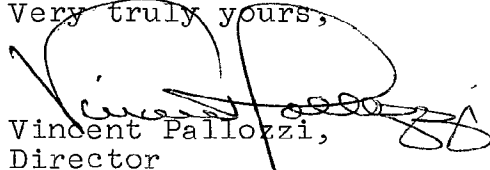
Dear Mr. Vespia:

The Application for Recertification of the Workable Program submitted to HUD on September 8, 1971, has not yet been approved because certain revisions to the Building Code are yet to be enacted. Failure to receive recertification of the Workable Program in turn will prevent the federal funding of third year NDP programs.

In order to facilitate approval of the Workable Program, we are advised by the HUD Area Office that it needs evidence of City Council action on Items 37 and 38 on the Docket for the May 16th meeting of the Council and evidence that these matters will be on the Docket for the June 8th meeting.

We therefore request a letter from you to submit to HUD as soon as possible as evidence that the City of Providence is acting in the matter of the Building Code revisions.

Very truly yours,


Vincent Pallozzi,
Director

VP/rb
bs

MEMORANDUM

Date : June 1, 1972

To : Vincent Pallozzi, Director
Stanley Bernstein, D. Director

From : Barbara Saydam, Research Division

Re : Workable Program Recertification

When I talked with Don Levitan this morning about the Workable Program he told me that the Building Code Revision was the major item outstanding preventing the recertification. There is apparently something else "we are going to tell you to do right along" but he didn't identify the activity.

He further stated that if we don't get anything before the Friday (June 9) after next he is going to recommend disapproval. "It has been so long", he said, "and we have no evidence". I volunteered to send information concerning City Council action. He also wanted the amendments to the Building Code.

After talking with Mr. Vespia this morning, he agreed to send you a letter, on receipt of a written request from you, stating that two items pertaining to the Building Code received first reading at the City Council meeting on May 16, 1972 and that they will be on the Docket for June 8. He will further state that after an ordinance receives City Council passage there are ten days within which the Mayor may give his approval, and that after that the City Clerk will certify the ordinances and make copies available to HUD.

Mr. Vespia very strongly disapproved of sending copies of the proposed ordinances to HUD while under Council consideration.

Accordingly I have prepared a request to Mr. Vespia which can be hand delivered in order to get an immediate reply.

I also think we should request a letter from Mr. DiMase verifying that the amendments contained in the two items cover all the changes discussed at meetings between HUD Code officials, the Building Board of Review and the Building Inspector on earlier occasions. Perhaps he should also say that copies are available in the office of the Building Inspector for office inspection until such time as final action is taken by the City Council and the Mayor.

Also attached to this memo is a request to Mr. DiMase for the information we need.

If there is anything else the Research office can do, please advise.