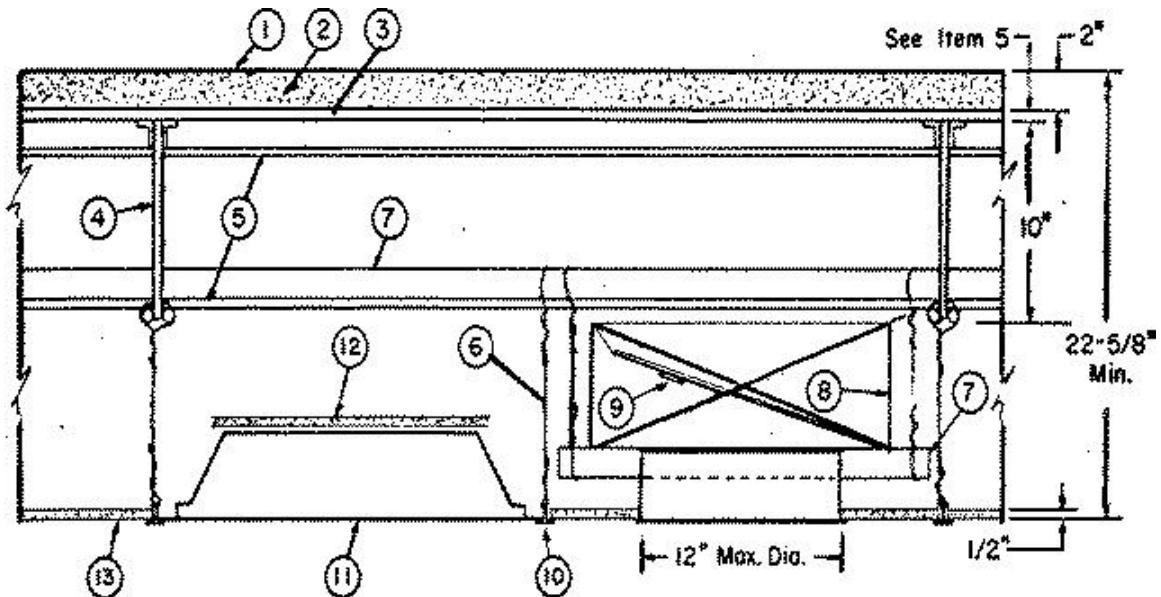


Restrained Assembly Rating — 1 Hr.

Unrestrained Assembly Rating — 3/4 Hr.



1. **Roof Covering*** — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials (TEVT).

1A. **In lieu of Item 1, roof covering consisting of single-ply Roofing Membrane*** — that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's classification. See Fire Resistance Directory-Roofing Membranes (CHCI).

2. **Insulating Concrete** — various types of insulating concrete prepared and applied in the thickness indicated below:

A. **Vermiculite Concrete** — 6 cu ft of Vermiculite Aggregate*, 94 lbs. of Portland cement and 9 oz. of air entraining agent. Thickness of vermiculite concrete topping to be 2 in. min as measured to the top plane of the steel form units.

GRACE CANADA INC

ELASTIZELL CORP OF AMERICA — Types MS 16-U, MSV 200.

MANDOVAL LTD

MANDOVAL VERMICULITE PRODUCTS INC

PALMETTO VERMICULITE CO

SIPLAST INC

B. **Cellular Concrete — Roof Topping Mixture*** — Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day compressive strength of min 190 psi as determined in accordance with ASTM C495-66.

Thickness of cellular concrete topping to be 2-3/4 in. min from top plane of steel roof deck.

CELCORE INC — Cast dry density of 31 (+ or -) 3.0 pcf.

CELLULAR CONCRETE L L C — Cast dry density 37 (+ or -) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

LITE-CRETE INC — Cast dry density of 29 (+ or -) 3.0 pcf.

SIPLAST INC — Mix #2. Cast dry density of 36 (+ or -) 3.0 pcf.

C. Perlite Concrete — Mix consists of 6 cu ft of Perlite Aggregate* to 94 lb of Portland cement and 1-1/2 pints of air entraining agent. Thickness of perlite concrete topping to be 2 in. min from the top plane of steel roof deck.

See **Perlite Aggregate** (CFFX) category in Fire Resistance Directory for names of Classified companies.

D. Cellular Concrete — Roof Topping Mixture* — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86. The cellular concrete topping thickness shall be 2-3/4 in. min from the top plane of steel roof deck.

CELLULAR CONCRETE L L C — Mix #3.

SIPLAST INC — Mix #3.

3. Corrugated Steel Deck — (Unclassified) — Min 9/16 in. deep and 31-3/4 in. wide, galv steel deck. Min gauge is 28 MSG. Corrugations 2-3/8 in. OC. Attached to each joist with welds 14 in. OC. Adjacent units overlapped one corrugation at sides and 2 in. at ends or,

Classified Steel Floor and Form Units* — Noncomposite 9/16, 15/16, 1-5/16 or 1-1/2 in. deep, 30 in. wide, galv units. Min gauge is 28 MSG for corrugated and 22 MSG for fluted units. Spacing of welds attaching units to supports shall not exceed 12 in. OC, corrugated units welded to supports through welding washers. Adjacent corrugated units overlapped one corrugation. Adjacent fluted units button-punched or welded together 36 in. OC along side joints.

CONSOLIDATED SYSTEMS INC — Types EHD, HD, S, SD.

4. Steel Joists — Type 10J3 min size, spaced 48 in. OC and welded to end supports.

5. Bridging — 1/2 in. diam continuous steel bar stock, welded to top and bottom chords of each joist.

6. Hanger Wire — No. 12 SWG galv wire, spaced not over 48 in. OC along main runners, and to occur at splices in main runners, at all four corners of the light fixtures, at centers of cross tees adjacent to light fixtures and 2 ft OC around air duct outlet. The hanger wires shall be attached to the lower chord of the steel joists or to cold-rolled channels attached to the bar joists.

7. Cold Rolled Channels — No. 16 MSG cold-rolled steel, 1-1/2 in. deep channels placed under air duct and supported by hanger wires at each end, spaced not over 48 in. OC, and at air outlet to support the air duct.

8. **Air Duct** — Galv steel, min 0.029 in. thick (22 gauge). Total area of duct openings not to exceed 57 sq in. per each 100 sq ft of ceiling area. Area of individual duct opening not to exceed 113 sq in. Max dimension of opening 12 in.

9. **Damper** — Min 0.023 in. thick (24 gauge) galv steel. Protected on both surfaces with 1/16 in. ceramic fiber paper and held open with a **Fusible Link** (Bearing the UL Listing Mark.) Damper to overlap duct outlet 1 in. min.

10. **Steel Framing Members*** — Main runners 12 ft long, spaced 48 in. OC. Cross tees, nom 48 in. long, installed perpendicular to main runners 24 in. OC.

ARMSTRONG WORLD INDUSTRIES INC — Types AFG, AFG-A . Type GLBP (consisting of main runners, 4 ft cross tees and steel straps) for use with 24 by 48 by 5/8 or 3/4 in. thick Type P lay-in panels.

BPB AMERICA INC — Types PAC, PCH, PCS

CHICAGO METALLIC CORP — Types 250, 260, 1250, 1260, 1850, 1860.

10A. **Steel Framing Members*** — Main runners 10 or 12 ft long, spaced 4 ft OC. Cross tees, nom. 4 ft long, installed perpendicular to main runners 2 ft OC. Border panels supported at walls by min. 0.016 in. thick painted steel angle with 7/8 in. legs or min. 0.016 in. thick painted steel channel with a 1 by 1-9/16 by 1/2 in. profile.

CGC INTERIORS, DIV OF CGC INC — Types DXL, DXLZ, SDXL.

USG INTERIORS INC — Types DXL, DXLZ, SDXL.

11. **Fixtures, Recessed Light** — (Bearing the UL Listing Mark). Fluorescent lamp type, steel housing, 2 by 4 ft size. Fixtures spaced so their area does not exceed 16 sq ft per 100 sq ft of ceiling area. Wired in conformance with the National Electrical Code.

12. **Fixture Protection — Acoustical Material*** — Same as Item 13. 24 by 48 in. size panel placed over each fixture. Two 24 by 2 in. pieces located near each end of fixture to provide 1-in. clearance between protection board and back of light fixture. Spacers secured to protection board with 8d common nails.

13. **Acoustical Material*** — Nom 24 by 48 in. lay-in panels. Border panels supported by min 0.016 in. thick (26 MSG) painted steel angle with 7/8 in. legs; or min 0.016 in. thick (26 MSG) painted steel channel, 1-5/8 in. deep with 7/8 in. flanges. (S)=surface perforations.

ARMSTRONG WORLD INDUSTRIES INC — Type 1/2, 5/8 or 3/4 in. Type P(S).

Hold-Down Clips — (Not illustrated) — No. 28 MSG spring steel, 3/8 in. wide, 1-1/8 in. high, placed over cross tees symmetrically 2 ft O.C. Access clips may be used as required.

*Bearing the UL Classification Mark

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