

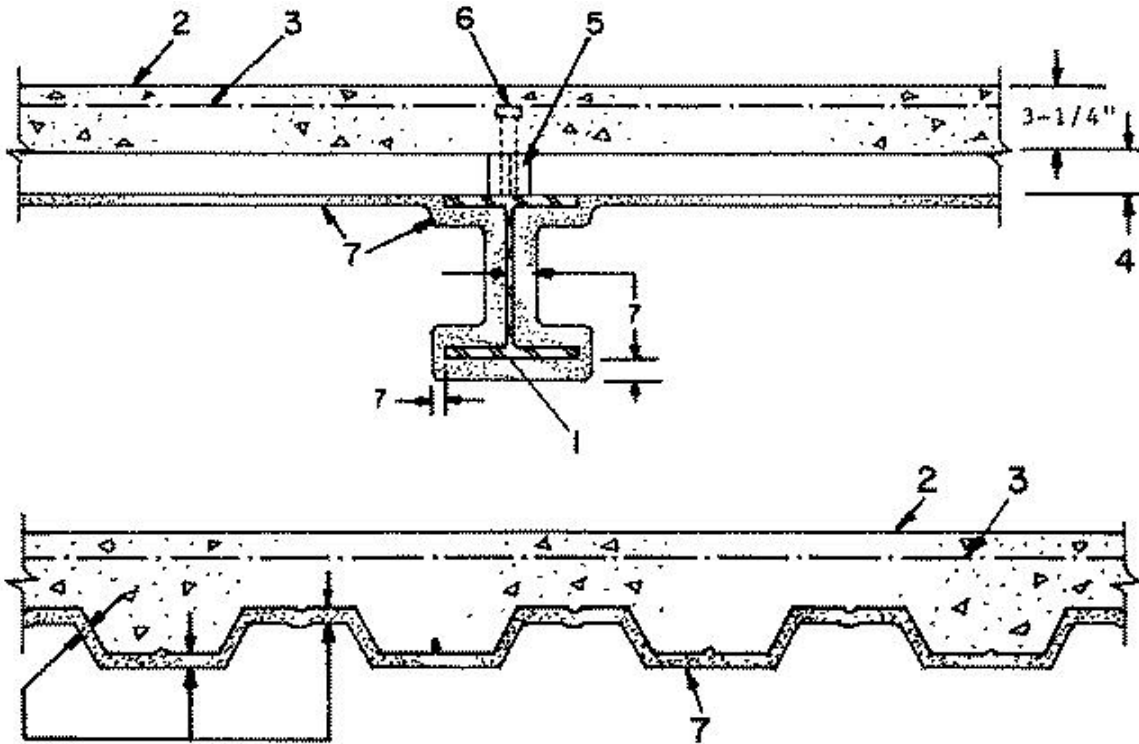
Design No. D754

October 17, 2001

Restrained Assembly Rating — 3 and 4 Hr.

Unrestrained Assembly Rating — 1-1/2 and 2 Hr.

Unrestrained Beam Rating — 1-1/2 and 2 Hr.



1. **Beam** — W8 x 28 min size.

2. **Light — Weight Concrete** — Expanded shale, clay or slate aggregate by rotary kiln method; 118 (+ or -) 3 pcf unit weight, 2500 psi compressive strength, vibrated; 2 to 5 percent entrained air.

3. **Welded Wire Fabric** — 6 x 6 — W1.4 x W1.4.

4. **Steel Floor and Form Units*** — Composite 1-1/2, 2 or 3 in. deep galv fluted units. Min gauge is 22 MSG. Spacing of welds attaching units to supports shall be at each side of joint and not to exceed 12 in. OC between joints. Adjacent units button punched or welded together 36 in. O.C. at joints.

CONSOLIDATED SYSTEMS INC — 24 or 36 in. wide, Types CFD-2, CFD-3; 24, 30 or 36 in. wide Type CFD-1.5. Units may be phos/ptd.

Alternate Construction-Non-Composite units of the same type listed above may be used provided allowable loading is calculated on the basis of noncomposite design.

5. **Joint Cover** — 2 in. wide, pressure-sensitive cloth tape, applied following the contour of floor units.

6. **Shear Connector** — (Optional) — Studs, 3/4 in. diam by 3-3/8 in. long, headed type or equivalent per AISC specifications. Welded to the top flange of beam through the steel floor units.

7. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one coat to a final thickness as shown above, to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106 and Z-106/G. For method of density determination see Design Information Section.

Use of a spatter coat Type DK or SK-3 is required on fluted units for 4 Hr Restrained Assembly Rating. Optional on other steel surfaces. Thickness of spatter coat is included in the total thickness of the protection material.

The thickness of material required on the steel beam for the individual Unrestrained Beam Ratings and Restrained Assembly Ratings is shown in the following table:

| Restrained Assembly Rating Hr | Unrestrained Assembly Rating Hr | Min Required Unrestrained Beam Rating Hr | Min Spray Applied Fire Resistive Mtl Thkns In. |
|--------------------------------------|--|---|---|
| 3 | 1-1/2 | 1-1/2 | 3/4* |
| 4 | 2 | 2 | 1 |

*Lower flange tips may be reduced to 3/8 in.

The thicknesses of material required on the steel floor units for the individual Restrained and Unrestrained Assembly Ratings are shown in the following table:

| Restrained Assembly Rating Hr | Unrestrained Assembly Rating Hr | Min Required Unrestrained Beam Rating Hr | Min Spray Applied Fire Resistive Mtl Thkns In. | |
|--------------------------------------|--|---|---|---------------|
| | | | Crests | Valley |
| 3 | 1-1/2 | 1-1/2 | 3/8 | 3/8 |
| 4 | 2 | 2 | 11/16 | 1/2 |

ARABIAN VERMICULITE INDUSTRIES — Type MK-5.

W R GRACE & CO - CONN CONSTRUCTION PRODUCTS DIV — Types MK-4, MK-5, MK-6/HY, MK-6s, RG, SK-3, Monokote Acoustic 1, Monokote Acoustic 5, Z-106, Z-106/G.

GRACE KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, SK-3, Monokote Acoustic 1, Monokote Acoustic 5, Z-106, Z-106/G.

PYROK INC — Type LD.

SOUTHWEST VERMICULITE CO — Types 4, 5, 5EF, 5GP, 5MD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

*Bearing the UL Classification Mark

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