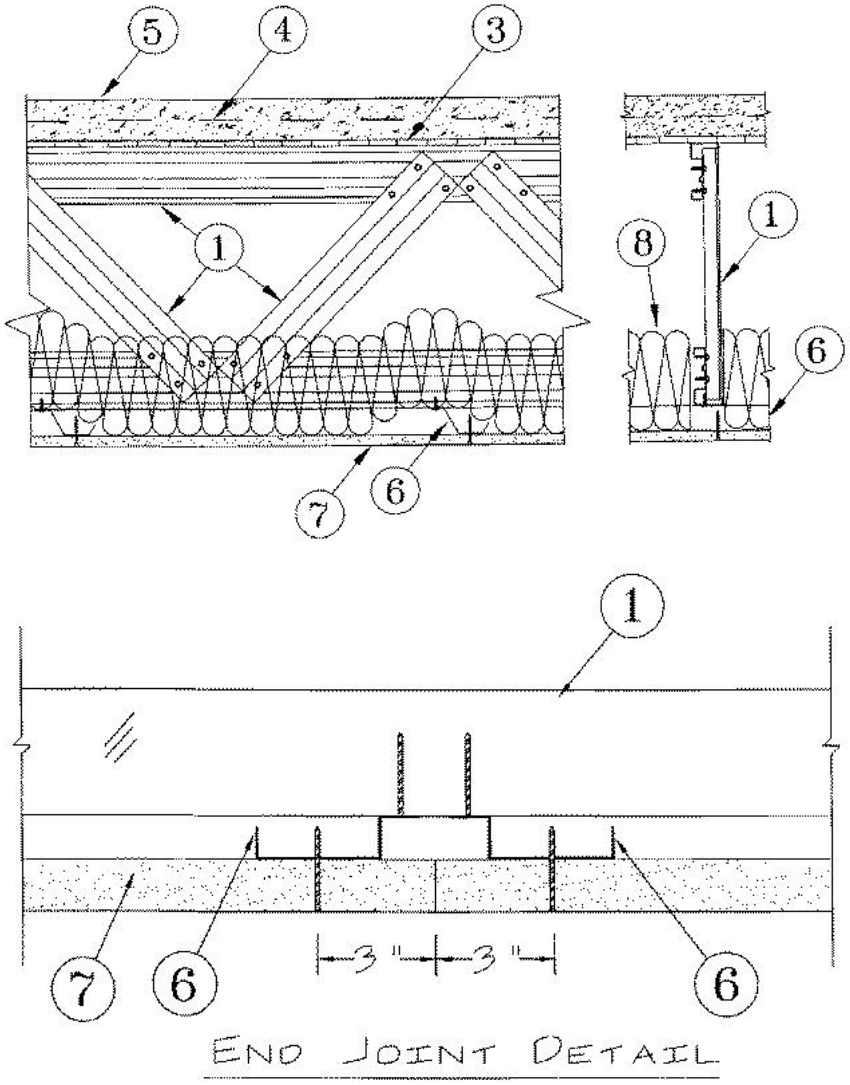
Fire Resistance Ratings - ANSI/UL 263

Design No. G540
September 27, 2002

Restrained Assembly Rating - 1 and 2 Hr (See Items 7 and 8)
Unrestrained Assembly Rating - 1 and 2 Hr (See Items 7 and 8)
Unrestrained Beam Rating - 1 and 2 Hr (See Items 7 and 8)



1. **Structural Steel Members* —** Pre-fabricated light gauge steel truss system consisting of cold-formed, galvanized steel chord and web sections. Trusses fabricated in various sizes, depths, and from various steel thickness. Trusses spaced a max of 48 in. OC.

AEGIS METAL FRAMING L L C — Ultra-Span, Pre-fabricated Light Gauge Steel Truss System

2. **Bridging —** (Not Shown) — Location of lateral bracing for truss chord and web sections to be specified on truss engineering.

3. **Metal Lath —** 3/8 in. rib, 3.4 lb per sq yd expanded steel lath tied to each truss at every other rib and midway between trusses at side laps with 18 SWG galv steel wire. As an alternate, the form material for the concrete may be corrugated steel deck, min 9/16 in. deep, 28 MSG galv steel, mechanically fastened to trusses 15 in. OC. The concrete topping thickness shall be measured to the top plane of the steel deck.

4. **Welded Wire Fabric —** 6 by 6 in., 10/10 SWG.

5. **Normal Weight or Lightweight Concrete —** Carbonate or siliceous aggregate, 150 + or - 3 pcf unit weight, 3000 psi compressive strength. Lightweight concrete, expanded shale, clay or slate aggregate by rotary kiln method, 117 + or - 3 pcf unit weight, 3000 psi compressive strength. Min. thickness is 2 in.

6. **Furring Channels —** Resilient channels formed of 25 MSG galv steel, installed perpendicular to the steel trusses (Item 1), spaced a max of 16 in. OC when no insulation (Item 8 or 8A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 8 or 8A) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath steel trusses. Channels secured to each truss with Type S12 by 1/2 in. long screws.

6A. **Furring Channels —** As an alternate to Item 6, resilient channels, double legged formed of 25 MSG galv steel, 2-7/8 in. wide by 1/2 in. deep, installed perpendicular to the trusses (Item 1) spaced max 16 in. OC when no insulation (Item 8 or 8A) is fitted in the concealed space, or a max of 12 in. OC when insulation (Item 8 or 8A) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channel splices overlapped 4 in. beneath steel trusses. Channels secured to each truss with Type S12 by 1/2 in. long screws or with No. 18 SWG galv steel wire double strand saddle ties. Channels tied together with double strand of No. 18 SWG galv steel wire at each end of overlap.

7. **Gypsum Board* —** For the 1 Hr. Ratings - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 8 or 8A) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 8 or 8A) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane. For the 2 Hr. Ratings - Two layers of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trussses. Base layer attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field. Face layer attached to the resilient channels using 1-5/8 in. long Type S bugle-head screws spaced 12 in. OC along butted end-joints and 12 in. OC in the field. Screws staggered from base layer screws. Face layer side and end joints offset a minimum 16 in. from base layer side and end joints.

CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR.
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR.
USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR.

8. **Batts and Blankets* —** Optional for the 1 Hr Ratings - To be omitted for the 2 Hr Ratings- Any thickness mineral wool or glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke value of 50 or less. Insulation fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.

8A. **Loose Fill Material* —** As an alternate to Item 8 — Any thickness of loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke spread value of 50 or less. Loose fill material fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.

9. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.

10. **Steel Beam —** Optional — (Not Shown) — W8x35 min size, used to support structural steel members (Item 1) at ends.

*Bearing the UL Classification Mark