



Design No. P 521

Restrained Assembly Rating - 1 and 1-1/2 hr. -(See Items 5, 5A and 5B)

Unrestrained Assembly Rating – 1, 1-1/2 hr. and 2 hr. – (See Items 5, 5A, and 5B)

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 thicknesses. Trusses spaced a max. of 48 in. OC.

MiTek Industries, Inc.- Ultra-Span®, Pre-fabricated Light Gauge Steel Truss System

Fabrication & installation by: Superior Truss & Panel, Inc. 2204 West 159th Street, Markham, Illinois 60426 Contract: Mike Goncher or Bryce Welty Ph. 708-339-1200 Fx. 708-339-1248

2. Bridging – (not shown) – Location of lateral bracing for truss chord and web sections to be specified on truss engineering.

3. Steel Roof Deck – (classified or unclassified) – Corrugated or fluted steel form units, min 22 MSG painted or galv. steel, welded or mechanically fastened max. 12 in. OC to truss top chord.

3A. Steel Floor and Form Units*-As an alternate to Item 3—min 25 MSG, 15/16 in. deep, painted or galv. units welded or mechanically fastened max 12 in. OC to the top chord of trusses. When used, max hourly rating is reduced to 1Hr.

Loadmaster Systems, Inc.—Types HD, ED or PS

4. Cementitious Backer Units* - Nom ½ or 5/8 in. thick sheets. End joints to occur over crests of steel roof deck with end-joints staggered in adjacent rows. Units loosely laid, adhered or mechanically attached to steel roof deck.

United States Gypsum Co. – Durock

Exterior Cement Board or Durock Cement Board

4A. Wallboard, Gypsum – (classified or unclassified) – (not shown) As an alternative to item 4, Gypsum sheathing, min ½ in. thick, applied perpendicular to steel roof deck. End joints to occur over crests of steel roof deck. Sheathing loosely laid, adhered or mechanically attached to steel roof deck

5. Roof Insulation – Foamed Plastic* - Any polyisocyanurate foamed plastic insulation boards bearing the UL classification marking. Min thickness is 1 in. for the 1-hr assembly ratings, and 2 in. for the 1-1/2 hr assembly ratings with no limit on max overall thickness. Boards installed over the Cementitious backer units (item 4) or gypsum sheathing (item 4A), with the end-joints staggered in adjacent rows. When applied in more than one layer, each layer of board to be offset in both directions from layer below in order to lap all joints. Boards loosely laid, adhered or mechanically fastened to cementitious backer units or gypsum sheathing, and to steel roof deck (item 3). See foamed plastic (CCVW) category in the fire resistance directory.

5A. Roof insulation - foamed plastic* - (not shown) – As an alternative to item 5 – Any Polystyrene foamed plastic insulation boards bearing the UL classification marking. Min thickness is 1 in. for the 1hr assembly rating, and 2 in. for the 1-1/2 hr assembly ratings with no limit on max overall thickness. Boards installed over the Cementitious backer units (item 4) or gypsum sheathing (item 4A), with end –joints staggered in adjacent rows. When applied in more than one layer, each layer of board to be offset in both directions from layer below in order to lap all joints. Boards loosely laid, adhered or mechanically fastened to cementitious backer units of gypsum sheathing, and to steel roof deck (item 3). See foamed plastic (BRYX) category in the Building Materials Directory or Foamed Plastic (CCVW) category in the Fire Resistance Directory.

5B. Roof Insulation – Mineral and Fiber Boards* - (not shown) – As an alternate to Item 5 – Mineral wool, glass fiber or perlite insulation boards, 24 by 48 in. min size, applied in one or more layers. Min thickness is 1 in. for the 1-hr assembly rating and 2 in. for the 1-1/2 hr assembly ratings with no limit on max overall thickness. Boards loosely laid, adhered or mechanically fastened to cementitious backer units of gypsum sheathing, and to steel roof deck (item 3). See mineral and fiber boards (BQXR) category in the Building Materials Directory or Mineral and FiberBoards (CERZ) category in the Fire Resistance Directory.

6. 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).

6A. Roofing Membrane * - (not shown) – In lieu of item 6, single ply membrane that is either ballasted, adhered, or mechanically attached to the insulation(s) described herein as permitted under the respective company's classification. See Fire Resistance Directory – Roofing Membranes (CHCI) category.

6B. Metal Roof Deck Panels * - In lieu of or in addition to items 6 and 6A, the roof covering may consist of mechanically fastened galv. or painted steel roof deck panels. Panels may be installed above a steel purlin assembly per metal roof deck manufacturer's specifications. Steel purlin assembly to be installed transverse to steel roof trusses (item 1). A line of sealant or tape may be used at panel side and end laps. See Metal Roof Deck Panels

category in the Roofing Materials and Systems Directory (TJPV) or Fire Resistance Directory (CETW) for names of manufacturers.

7. Resilient Channels – Formed of 25 MSG galv. steel, installed perpendicular to the trusses (item 1), spaced a max. of 16 in. OC. Channels orientated 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.

7A. Furring Channels - (not shown) – As an alternate to the resilient channels - Min 20 MSG galv. steel, min 2 5/8 in. wide by min 7/8 in. deep, installed perpendicular to the trusses (item 1) spaced a max of 16 in. OC. Two courses of resilient channel positioned 6 in. OC at wallboard butt joints (3 in. from each end of wallboard). Channel splices overlapped 6 in. beneath steel trusses. Channels secured to each truss with No. 18 SWG steel wire double strand saddle ties. Channels tied together with double strand of No. 18 SWG galv. steel wire at each end of overlap.

7B. Resilient 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, spaced 16 in. OC, perpendicular to steel trusses. 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 steel wire double strand saddle ties. Channels tied together with double strand of No. 18 SWG galv. steel wire at each end of overlap.

8. Wallboard, Gypsum * - For all Ratings except the 2 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 spaced 12 in. OC along butted end-joints and 12 in. OC in the field. For the 2 Hr. Ratings—Two layers of nom 5/8 in. thick by 48-in. wide boards, installed with long dimension parallel to trusses. Base layer attached as described above. 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.

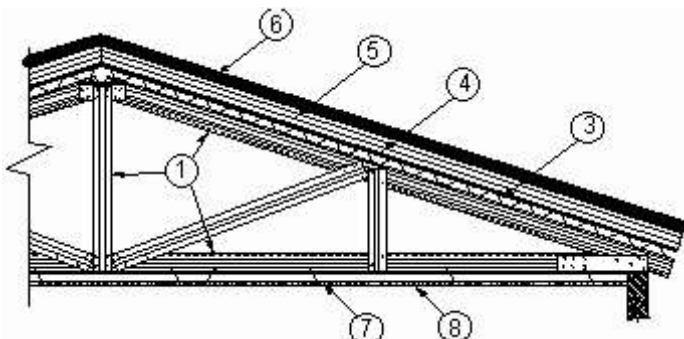
Canadian Gypsum Company –Type C or IP – X2

United States Gypsum Company – Type C or IP-X2

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.

*** Bearing the UL Classification Marking**

This design was reproduced from the original UL design Document.



Fabrication & installation by:
Superior-Truss & Panel Inc.
 2204 W. 159th St.
 Markham, Illinois 60426
 Ph. 708-339-1200 Fx. 708-339-1248
 Web Site: www.superior-truss.com
 Contact: Mike Goncher or Bryce Welty