**FRAMECAD Flooring Assembly Solution**

**H510 3-Hour Fire-Rated Flooring Assembly**

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<th>Assembly #</th>
<th>Type</th>
<th>Stud Size</th>
<th>Steel Gauge</th>
<th>Coating</th>
<th>Grade</th>
<th>Cavity Fill</th>
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<tr>
<td>UL H510</td>
<td>Floor/Ceiling</td>
<td>Min 3 1/2”</td>
<td>Min 18ga (43mil)</td>
<td>G60</td>
<td></td>
<td>Min. 3-1/2” thick batt insulation</td>
<td>Structural Cement-Fiber Units Nom 3/4 in. thick</td>
<td>3 x 3/4 in gypsum board</td>
<td>3 Hrs BXUV. H510</td>
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### UL H510 3-Hour Fire-Rated Flooring Assembly

1. **Structural Steel Members**

FRAMECAD Pre-fabricated 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 minimum 12” deep, spaced at a max of 24” OC.

2. **Structural Cement-Fiber Units**

Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to joists with end joints staggered a min of 4 ft and centered over the joists. Panels secured to steel joists with 1-5/8 in. long No. 8 self-drilling, self-countersinking steel screws spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the side edges of the panel.

3. **Furring Channels - Hat Channels**

Min 25 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 12 in. OC.

4. **Furring Channels - Resilient Channels**

Formed of No. 25 MSG galv steel, 1/2 in. deep, spaced max 12 in. OC, perpendicular to hat channels. Channel splices located beneath joists and overlapped 4 in. Channels secured to each hat channel, through the first two layers of gypsum board, with one 2 in. long Type S bugle head screw. Two channels, spaced 4 in. OC, oriented opposite each gypsum board to form a continuous end joint.

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*UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP*
5. Gypsum Board

Three layers of nom. 3/4 in. thick, 4 ft. wide boards. Base layer secured to hat channels with 1-1/4 in. long Type S bugle-head screws spaced 12 in. OC with end joints centered over hat channels and side joints parallel to, and centered between trusses.

Middle layer secured to hat channels with 2 in. long Type bugle-head screws with end joints centered over hat channels and side joints parallel to, and centered between trusses. End joints and side joints on middle layer staggered min 12 in. from base layer joints.

Face layer boards installed with side edges perpendicular to resilient channels. Gypsum boards secured to resilient channels 1-1/4 in. long Type S bugle-head screws spaced 8 in. OC.

End joints secured to double row of resilient channels at the continuous end joist.

6. Batts and Blankets

Min. 3-1/2 in. thick glass fiber batt insulation, min density of 0.58 pcf. draped over the hat channels (Item 3). Any glass fiber batt insulation bearing the UL Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less and a smoke developed index of 50 or less may be used.

Finishing System

Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints.

NOTE: In order for FRAMECAD Wall Solutions to perform as designed all components must be installed exactly as prescribed. Substituting building components may produce an entirely different solution and may seriously compromise performance.