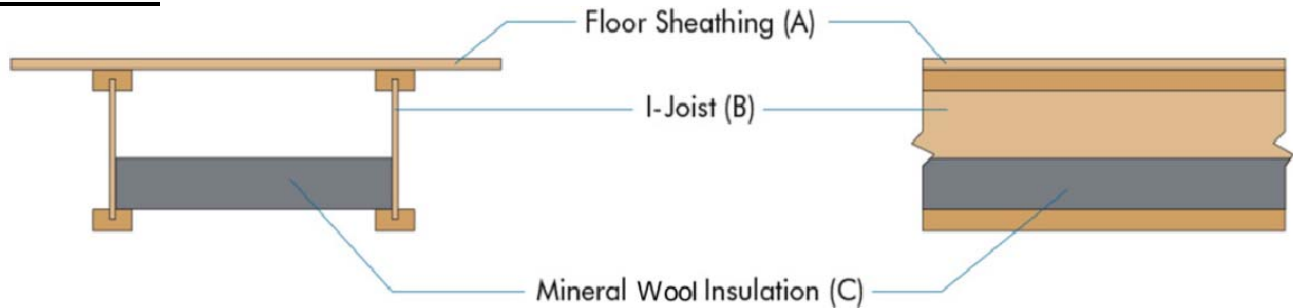




## **Mineral Wool Insulation for Fire Protection of Floors** **Installation Guide**

### **Materials**



(A) Floor Sheathing: Materials and installation per Section R503 of the IRC®

(B) AJS® Joists (all series): APA PR-S201, ICC-ES® ESR-1144

BCI® Joists (5000 & larger series): APA PR-S201, ICC-ES ESR-1336

(C) Mineral Wool Insulation: installed as shown, resting on tops of bottom flanges

Insulation Batt Thickness & Density:

- 2" min. thickness - 2.0 lb/ft<sup>3</sup> min. nominal density: 19.2" o.c. joist spacing or less (APA PR-S201)
- 3" or 3.5" min. thickness - 2.5 lb/ft<sup>3</sup> min. nominal density: 24" o.c. joist spacing or less (ROCKWOOL® SAFE'n'SOUND® or Comfortbatt® required for 24" o.c. joist spacing per APA PR-S201)

Insulation Batt Width

- 16" joist spacing: Min. 15.25"
- 19.2" joist spacing: Min. 18.5"
- 24" joist spacing: Min. 23"

### **Mineral Wool Installation Instructions**

- Follow insulation manufacturer's instructions regarding personal protective equipment.
- Install batts between joist webs, on top of the bottom flanges, use batt width that corresponds to the joist spacing.
- Install batts snug around any pipes located in the joist cavity area.
- Use rigid wire insulation stays between bottom flanges, 24" on-center and no more than 6 inches from batt ends, to assist in insulation support.
- When necessary, cut mineral wool insulation with serrated knife or table saw.
- Glass fiber insulation may not be substituted for mineral wool insulation as fire resistant component.
- Compressing mineral wool to a 2 inch thickness to fit under mechanical pipe / ducts does not compromise the fire resistance if the batts remain tight to top of the bottom flanges.



## **Energy Conservation Code Considerations**

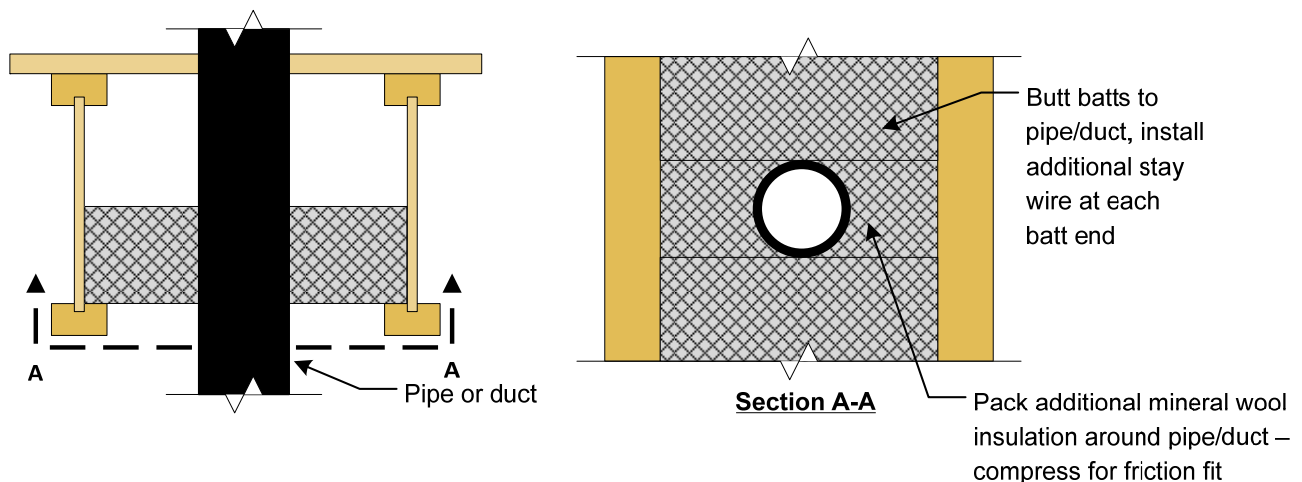
- Multiple or thicker layers and/or wider width of mineral wool insulation may be installed or required by applicable building code. Consult the authority having jurisdiction (AHJ) for energy conservation code requirements.
- Typical 2.5 lb/ft<sup>3</sup> x 3.5 inch thick mineral wool insulation has a rating of R-15. Higher R-values are required in northern climates. Multiple or thicker layers of mineral wool insulation may be installed.
- Glass fiber insulaton may be installed on top of the minimum required mineral wool insulation for energy conservation purposes noted previously.
- Additional insulation at joist end support locations and/or vapor/air barriers may be required per the AHJ.

## **Detailing**

### Penetrations

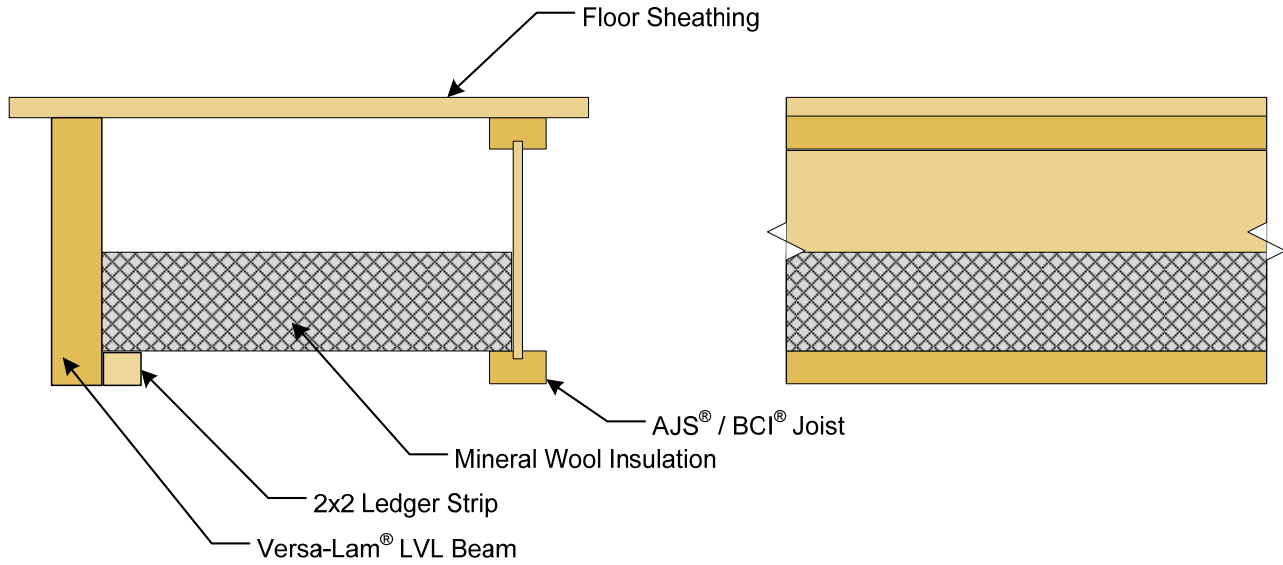
- Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.
- 2012 IRC R501.3 and 2015/2018 IRC R302.13 allows an aggregate area of unprotected ceiling portions, not to exceed 80 square feet.

### Pipe/Duct Detailing





### Parallel Beam Application



### Mechanical Between Flanges

Install Mineral wool to web if bay blocked by mechanical, compress for friction fit

