



Basic Description

Wood floor trusses can be designed to extend over large open areas while supporting the floor above. They are often used in homes with large open plans. The dimensional wood components, called chords and webbing, are generally joined together using steel gusset plates, but can be held together in other ways. The wood components may be standard 2x4 dimensional lumber, but can be smaller or larger based on the engineered design. Floor truss depth will also vary based on truss design for the span and load it is designed to handle. They are typically spaced at 16, 19.2, or 24 inch centers to accommodate the use of 4' x 8' floor sheathing. The floor sheathing is typically plywood or oriented strand board (OSB). The open web design of floor trusses allows for easy installation of trades, such as ductwork, wiring, and piping.

Firefighter's Notes

1. Use of Engineered Floor Systems is Not Generally Identifiable From Outside the Home. A pre-fire assessment is necessary to identify and verify use of engineered floor trusses. Neighborhood surveys may be helpful in determining where open floor truss construction exists.

2. Open Web Trusses Allow Fire to Spread Easily Throughout the Floor Structure. Their open design and high surface area to mass ratio contribute to accelerating the fire. Even when protected from below by drywall, the open webbing allows trusses within the enclosed space to be preheated prior to exposure to fire, resulting in quicker ignition once fire penetrates the enclosed space. Combustible wiring and plumbing

products that extend throughout the open webs of this floor system also quicken the spread of fire. Consequently, floor system collapse occurs more quickly than if the floor system was compartmentalized using solid dimensional lumber.

3. Some Protection is Better Than None. It is important that floor trusses, like any wood framed floor system, be protected from the rapid spread of fire. A finished drywall ceiling should be installed to protect the trusses from below. This provides a measure of protection from fire entering the floor structure immediately and should be done in all rooms where the trusses are exposed. **Homeowners need to be made aware that by protecting their floors from below, they are protecting the occupants above.**