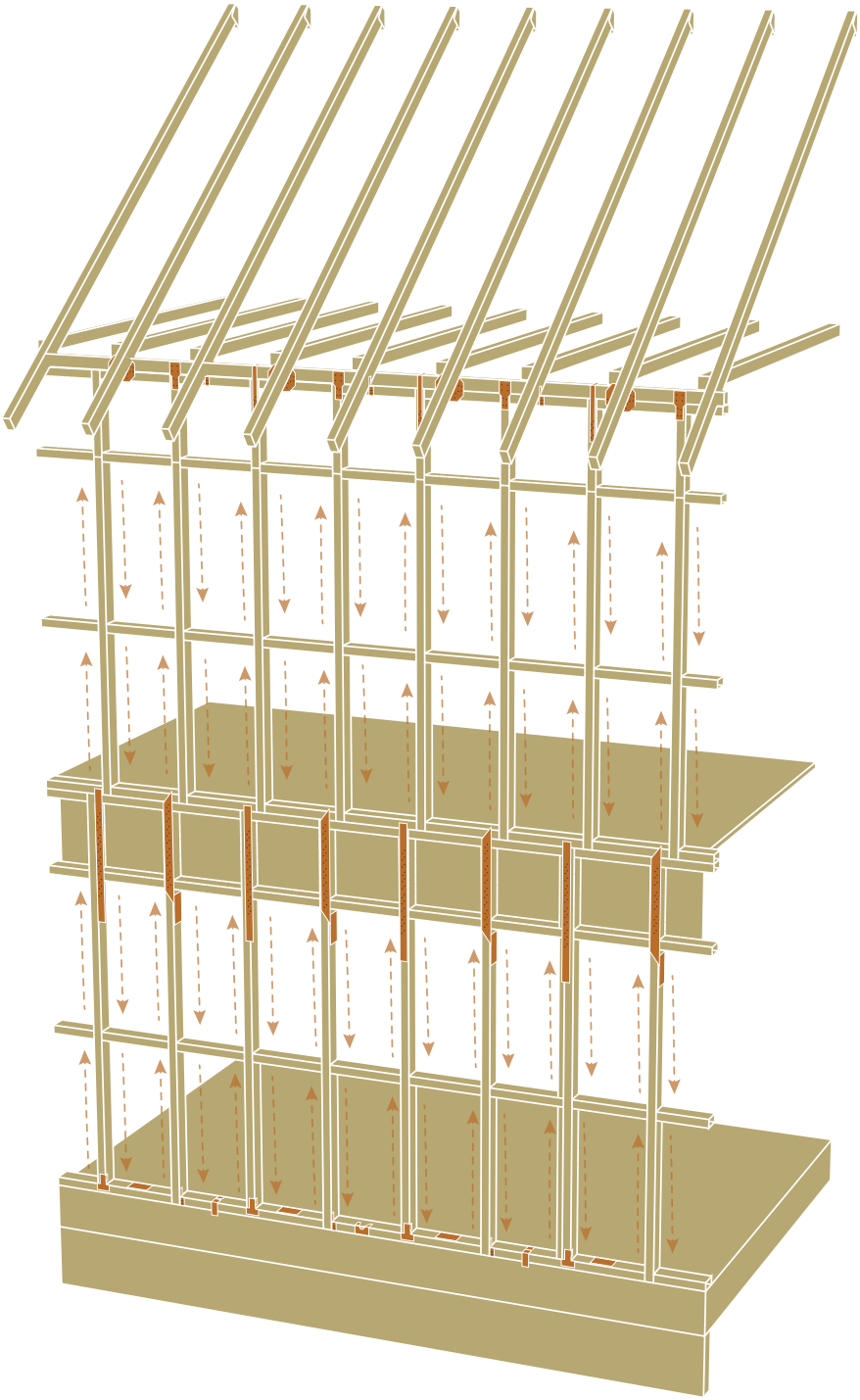
Strengthening Homes Against High Winds:
The Power of the Continuous Load Path

A continuous load path is the primary feature of the FORTIFIED Gold designation. This ties the whole house together to strengthen it against high winds.

Often during high-wind events, roofs will be strained by uplift forces and come off the house. Wind separation at the edge of a roof causes negative uplift forces, similar to an airplane wing. This uplift force can potentially cause catastrophic damage. Ensuring the roof is attached to the walls sufficiently is very important to resist uplift.

Even though the roof is the most common point of failure during severe weather, failure can also occur at the base of the house, where the walls connect to the foundation. A continuous load path is created by roof-to-wall, wall-to-foundation and story-to-story connections. The foundation is the strongest part of the house, and it can secure the walls and roof during high-speed winds if properly connected.



Example of structure built with a continuous load path. Illustration by the LSU AgCenter.

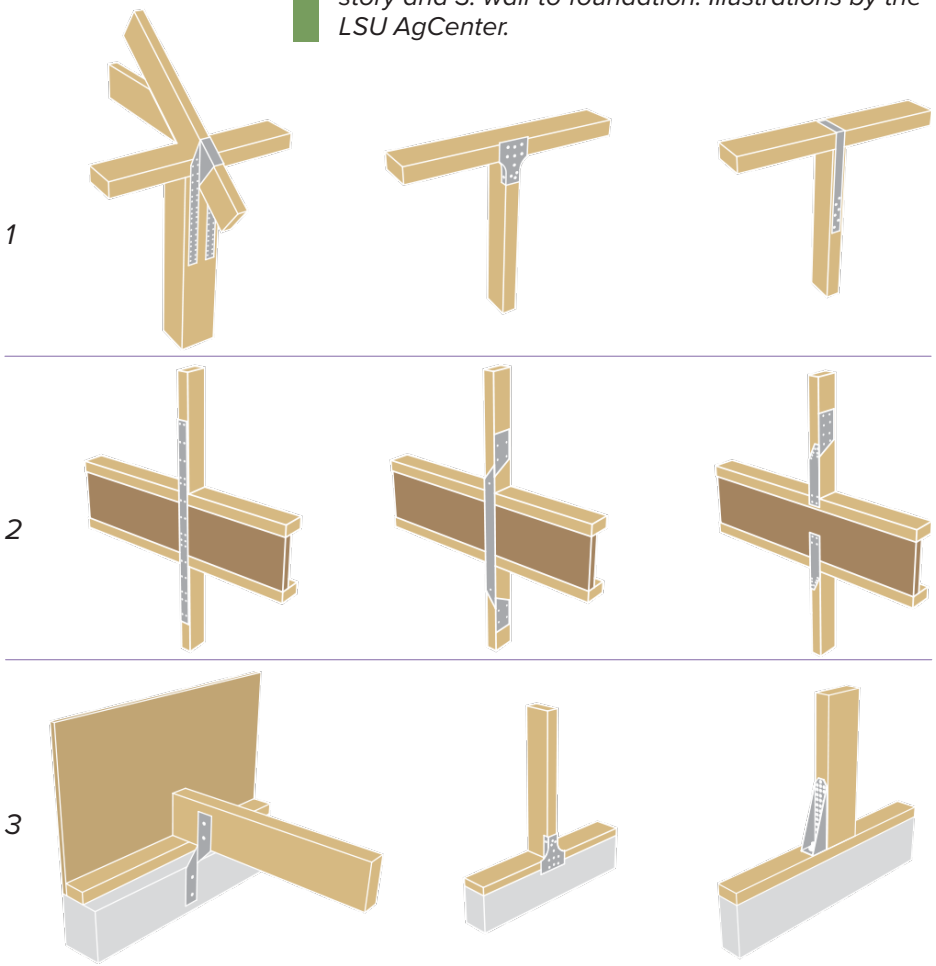
A load path is created by installing connectors to specific parts of the structure. There are many types of connectors, and each has its own purpose.

FOR EXAMPLE, THERE ARE:

1. Roof-to-wall connectors.
2. Story-to-story connectors.
3. Wall-to-foundation connections.

To achieve the FORTIFIED Gold designation, a continuous load path must be designed by an engineer licensed in your state. By designing and calculating the continuous load path, the engineer specifies how the roof should be attached to the walls and how the walls should be anchored to the foundation.

A continuous load path is much easier to install for new construction homes. However, if a house receives substantial damage and the studs are exposed, a continuous load path can be added during reconstruction.



Examples of connectors: 1. roof-to-wall, 2. story-to-story and 3. wall-to-foundation. Illustrations by the LSU AgCenter.

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Pub. 3899-C (online) 1/24

This work is supported by the USDA National Institute of Food and Agriculture award number 2023-67019-40610.