

Incomplete Load Transfer from Vertical Members with Multiple Loads


Software Version(s) Affected: 2.3

Users Affected: Anyone using Forte[®]WEB software to design members with both of the following conditions:

1. A member is loaded using a linked load from a vertical member, AND
2. Two or more loads have been applied to the vertical member for design

Description: When a linked load is added to a member that originates from a vertical member, if that vertical member has more than one load applied to it, only the first load is transferred from the vertical member to the linked member for design. The outcome is incorrect loading being considered in the design of a member, which may result with the member passing design when it should fail.

Example:



Drawing is Conceptual

- Applicable calculations are based on NDS.

| Supports | Type | Material |
|----------|------|-------------------------------|
| Base | Beam | TimberStrand [®] LSL |

Member Type : Free Standing Post
Building Code : IBC 2018
Design Methodology : ASD

| Max Unbraced Length | Comments |
|---------------------|---------------------|
| Full Member Length | No bracing assumed. |

| Vertical Loads | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|----------------|-------------|-------------------|-------------|----------|
| 1 - Point (lb) | 1000 | 4000 | - | Load 1 |
| 2 - Point (lb) | 222 | - | 555 | Load 2 |

ForteWEB v2.3, Engine: V8.0.0.21, Data: V7.3.2.0

| + Add Load | | Load 1 |
|-------------------|--|--|
| Type | | Point (lb) |
| Full Length | | |
| Location | | |
| Tributary Width | | N/A |
| Placement | | Top |
| Dead (0.90) | | 1000 |
| Roof Slope | | 0/12 |
| Adjusted Dead | | 1000 |
| Floor Live (1.00) | | 4000 |
| Roof Live (1.25) | | 0 |
| Snow (1.15) | | 0 |
| Wind (1.60) | | 0 |
| Seismic (1.60) | | 0 |
| Comments | | Linked from: Free Standing Post, Support 1 |

| + Add Load | | Load 1 |
|-------------------|--|--|
| Type | | Point (lb) |
| Full Length | | |
| Location | | |
| Tributary Width | | N/A |
| Placement | | Top |
| Dead (0.90) | | 1222 |
| Roof Slope | | 0/12 |
| Adjusted Dead | | 1222 |
| Floor Live (1.00) | | 4000 |
| Roof Live (1.25) | | 0 |
| Snow (1.15) | | 555 |
| Wind (1.60) | | 0 |
| Seismic (1.60) | | 0 |
| Comments | | Linked from: Free Standing Post, Support 1 |

User Action: Until the new version is available, jobs created in ForteWEB software that include load linking from vertical members need to be specifically reviewed for accuracy. Loading from vertical members should be manually added to all other members to achieve proper loading for design.

Version Fixed: ForteWEB 2.4 (available March 2020)

Contact Support: If you have any questions or concerns regarding this software advisory please contact Weyerhaeuser Software Support at software@weyerhaeuser.com or by calling 1.800.833.9491.

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