



## Attachment of Sole Plate to Rim Board with Structural Screws to Resist Lateral Load

MiTek WS and WSTS Structural Screws can be used to transfer lateral shear loads from the sole plate into the rim board. Screws are to be installed into the wide face of the single or double 2x sole plate, through the floor sheathing and into the center of the narrow face of the rim board.

**Finish:** Yellow Zinc or Exterior Coat (EXT)

**Patent:** U.S. Patent No. 10,823,218 (WSTS)

### Installation:

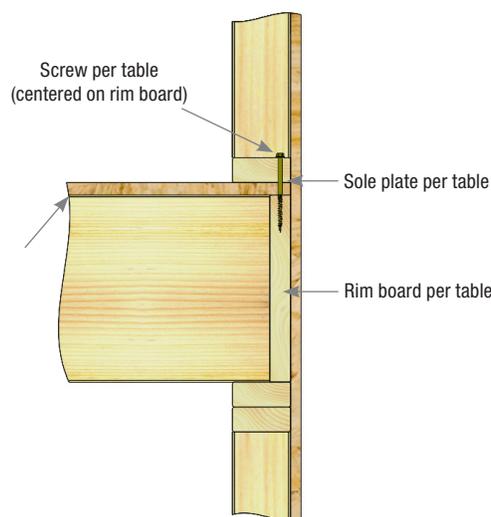
- The wall and rim board are to be designed to resist lateral loads by a licensed professional.
- Install MiTek WS or WSTS screws through sole plate and floor sheathing and into the rim board using a 3/8" head or T30\* driver.
- Follow the minimum spacing and edge distance guidelines per table footnotes shown below.
- Care should be taken to install the screws only where sole plate and rim board are free of any defects.



**WS45**  
(Yellow Zinc finish)

**WSTS45-EXT**  
(Exterior Coat finish)

| MiTek Stock No.         | Finish <sup>1</sup> | Member Type  |           | Allowable Loads (Lbs.) |
|-------------------------|---------------------|--------------|-----------|------------------------|
|                         |                     | Bottom Plate | Rim Board | Shear 100% (Per Screw) |
| WS45                    | Zinc                | SPF          | LSL       | 288                    |
| WS6 <sup>11</sup>       |                     |              | LVL       | 256                    |
| WS45-EXT                | EXT                 | DF           | SPF       | 275                    |
| WS6-EXT <sup>11</sup>   |                     |              | DF        | 291                    |
| WSTS45-EXT              | EXT                 | SPF          | DF        | 278                    |
| WSTS6-EXT <sup>11</sup> |                     |              | SPF       | 275                    |



**Typical 2x4 sole plate attached to DF rim board through 1/2" sheathing**

- 1) Zinc = Yellow Zinc Dichromate; EXT = Exterior Coat.
- 2) Allowable loads are based on testing and analysis per ICC-ES AC233.
- 3) Allowable loads above are shown with a load duration factor of 1.00. As permitted by the building code, loads may be increased up to 60%.
- 4) LVL and LSL rim board minimum thickness 1-1/4".
- 5) DF and SPF values assume solid sawn 2x (1-1/2") members.
- 6) DF values may be used in SP installations.
- 7) Minimum spacing for WS and WSTS screws is:
  - 3" on center on the narrow face of a solid sawn rim board
  - 6" on center on the narrow face of EWP products
- 8) For WS screws, the minimum end distance is 3-1/2" and the minimum edge distance is 5/8".
- 9) For WSTS screws, the minimum end distance is 2-1/4" and the minimum edge distance is 5/8".
- 10) Maximum floor sheathing thickness of 3/4".
- 11) 6" length WSTS6 and WS6 shall be used when a double sole plate is present with no change to load values in table.

\*T30 is a trademark of Acument

### Customer Service & Technical Assistance

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