



**Attachment of Residential Deck Ledgers to the Side of
Metal Plate Connected Wood Trusses–
40 psf Deck Live Load**

DD No. 1506-11

Structural Building Components Association (SBCA)

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6300 Enterprise Lane
Madison, WI 53719
608-274-4849
sbcindustry.com

Joist Span	< 6' to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'	16'-1" to 18'
Connection Details	On-center Spacing of Fasteners (in.) ⁴					
½" x 6" lag screw with 15/32", max., wood structural sheathing	16	16	8 ⁵	8 ⁵	8 ⁵	8 ⁵
½" diameter bolt with 15/32", max., wood structural sheathing	32	32	16	16	16	16
1. Ledgers shall be flashed in accordance with applicable building code requirements to prevent water from contacting the exposed wood structural sheathing and floor truss. 2. Snow load shall not be assumed to act concurrently with live load. 3. Ledgers must be 2x10 or 2x12 PPT or code-approved decay-resistant lumber with specific gravity, G > 0.43. Truss 4x4 vertical web and key-blocks must have a G > 0.42. 4. Stagger lag screws and bolts as shown in Detail 1.1 . 5. Requires key-blocks at 16" o.c., maximum. Attach ledger to each 4x4 vertical web with one (1) fastener and to each key-block with one (1) fastener. Refer to Detail 1.3 for key-block construction and installation information.						

Table 1: Deck Ledger Connection to Side of MPCW Floor Ladder Frame with 4x4 Vertical Webs Spaced at 16" o.c., Max.^{1,2,3}

(Deck Live Load = 40 psf, Deck Dead Load = 10 psf, Snow Load ≤ 40 psf)

The seal on this design drawing indicates acceptance of professional engineering responsibility solely for the component(s) depicted. The design assumptions, loading conditions, suitability and use of this component for any particular building is the responsibility of the building designer or owner of the components, per *ANSI/TPI 1*. The responsibilities and duties of the component designer, component design engineer and component manufacturer shall be in accordance with the latest edition of *ANSI/TPI 1* Chapter 2 unless otherwise defined by a contract agreed upon by the parties involved.

DrJ Design Detail

WALL SECTION

NOTE - EXTERIOR CLADDING AND FLASHING NOT SHOWN FOR CLARITY.

12" LONG 2X4 SPF (MIN) KEEPER-BLOCKS AT EACH KEY-BLOCK LOCATION, CENTER KEEPER-BLOCKS ABOUT KEY-BLOCK, ATTACH TO LADDER FRAME CHORDS W/ 3-12d (0.131"x3.25") NAILS AND TO EACH KEY-BLOCK WITH 2-12d NAILS. (SEE KEEPER-BLOCK DETAIL.)

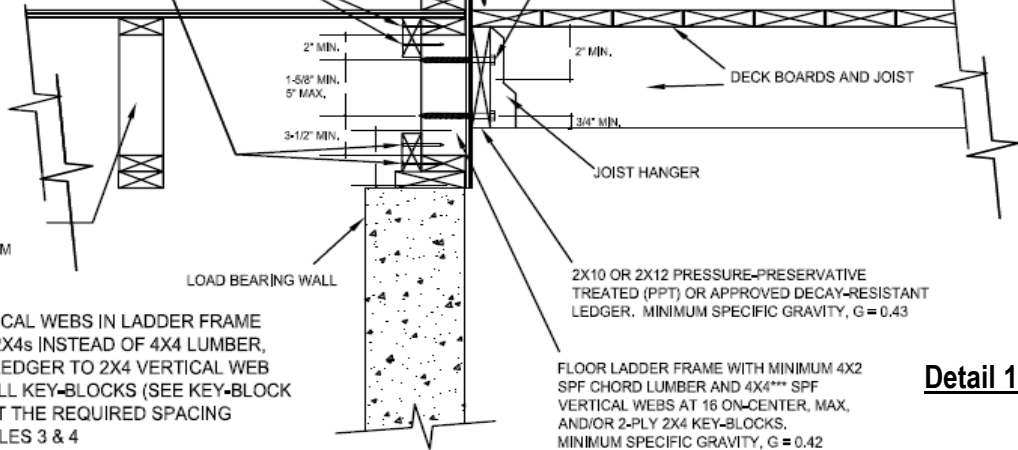
METAL PLATE CONNECTED WOOD FLOOR TRUSS @ 24" ON-CENTER, MAXIMUM

***NOTE - IF VERTICAL WEBS IN LADDER FRAME ARE ONLY 1-PLY 2X4s INSTEAD OF 4X4 LUMBER, DO NOT ATTACH LEDGER TO 2X4 VERTICAL WEB MEMBERS. INSTALL KEY-BLOCKS (SEE KEY-BLOCK DETAIL BELOW) AT THE REQUIRED SPACING INDICATED IN TABLES 3 & 4

MAX 15/32" THICK WOOD STRUCTURAL PANEL SHEATHING FASTENED PER BUILDING CODE

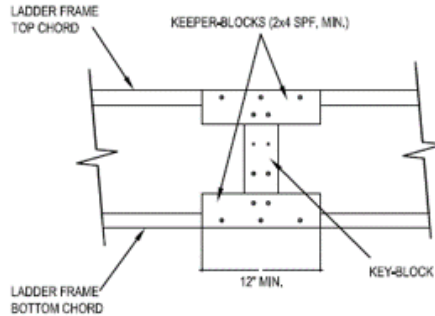
EXISTING STUD WALL

STAGGERED 1/2" DIA. x 6" LAG SCREWS WITH WASHERS OR 1/2" DIA. BOLTS WITH NUTS AND WASHERS (SEE INSTALLATION SECTION OF REPORT FOR MINIMUM CORROSION RESISTANCE REQUIREMENTS), INSTALL ONE FASTENER THROUGH CENTERLINE OF EACH 4x4 VERTICAL TRUSS WEB AND/OR KEY-BLOCK PER THE SPACING REQUIREMENTS PROVIDED BELOW AND IN TABLES 3 & 4. TAKE CARE SO FASTENERS DO NOT DAMAGE/DISTURB WITH CONNECTOR PLATES AT TOP AND BOTTOM CHORD JOINTS



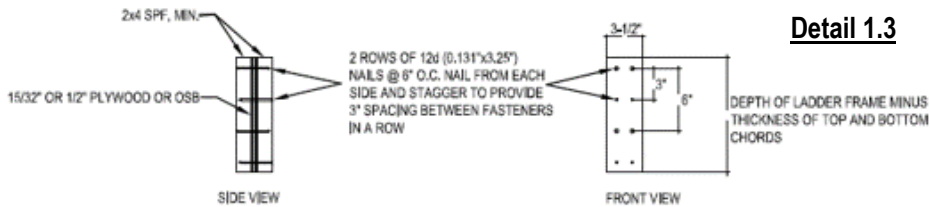
Detail 1.1

KEEPER-BLOCK DETAIL FOR LEDGER ATTACHED TO SIDE OF FLOOR LADDER FRAME



Detail 1.2

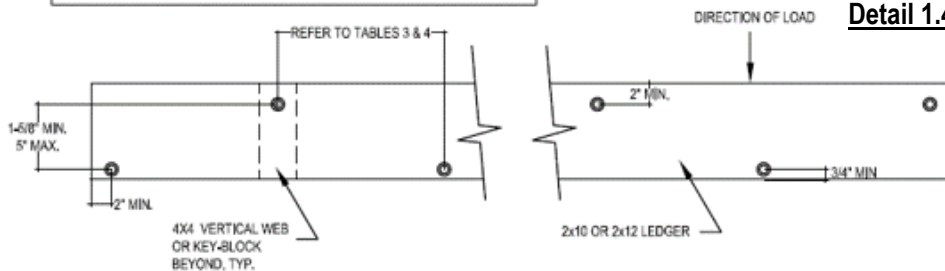
KEY-BLOCK DETAIL FOR LEDGER ATTACHED TO SIDE OF FLOOR LADDER FRAME



Detail 1.3

CUT KEY-BLOCKS TO FIT TIGHT BETWEEN TOP AND BOTTOM CHORDS OF LADDER FRAME. INSTALL AT REQUIRED LOCATIONS. ATTACH BLOCKS TO TOP AND BOTTOM CHORDS OF LADDER FRAME WITH 4 - 12d (0.131"x3.25") TOE-NAILS AT EACH END

PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGER



Detail 1.4

DrJ Design Detail

1. General Notes:

- 1.1. Ledger must be identified by the grade mark of, or certificate of inspection issued by, an approved lumber grading or inspection bureau or agency.
- 1.2. PPT material must be pressure treated with an approved process in accordance with American Wood Protection Association standards.

2. Fasteners:

- 2.1. Lag screws and bolts must be installed according to 2012 NDS requirements.
 - 2.1.1. ½" x 6" lag screws
 - 2.1.1.1. Lead holes for the threaded portion must be $\frac{5}{16}$ ".
 - 2.1.1.2. Clearance holes must be ½" and the same depth of penetration as the length of unthreaded shank.
 - 2.1.2. ½"-diameter bolts
 - 2.1.2.1. Holes must be a minimum of $\frac{17}{32}$ " to a maximum of $\frac{9}{16}$ ".
- 2.2. All fasteners used with PPT wood must be hot-dip zinc-coated (i.e., Galvanized steel, Stainless steel, Silicon bronze, Copper).
- 2.3. Fasteners must meet *ASTM A153*, Class D, for fasteners $\frac{3}{8}$ " diameter and smaller or Class C for fasteners with diameters over $\frac{3}{8}$ ".
- 2.4. Lag screws, bolts, nuts and washers are permitted to be mechanically deposited zinc-coated steel with coating weights.

3. Hardware:

- 3.1. All hardware (e.g., joist hangers, hold-down device) must be galvanized or stainless steel.
- 3.2. Hardware hot-dipped prior to fabrication must meet *ASTM A653*, G-185 coating.
- 3.3. Hardware hot-dipped post fabrication must meet *ASTM A123*.
- 3.4. Hardware exposed to saltwater or located within 300' of a saltwater shoreline must be stainless steel grade 304 or 316.
- 3.5. Other coated or non-ferrous hardware must be approved by the authority having jurisdiction.