EVALUATION SUBJECT:
Joto-Vent Foundation Vent System

REPORT HOLDER:
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CSI Division: 09 - FOUNDATION
CSI Section: 09 30 00 - Sill Plate

1.0 SCOPE OF EVALUATION

1.1 Compliance to the following codes & regulations:
- 2012 International Building Code® (2012 IBC)
- 2012 International Residential Code® (2012 IRC)
- 2009 International Building Code® (2009 IBC)
- 2009 International Residential Code® (2009 IRC)
- 2010 California Building Code (CBC)
- 2010 California Residential Code (CRC)

1.2 Evaluated in accordance with:
- IBC Section 1203.3 and IRC Sections R408.1 and R408.2
- IBC Sections 2308.3.3 and 2308.6 and IRC Section R403.1.6
- IBC Section 2606.4

1.3 Properties assessed:
- Crawl Space Venting
- Vertical load support
- Fire Characteristics

2.0 PRODUCT USE

The Joto-Vent System is used to provide cross ventilation of the under-floor space below residential and commercial buildings. The system is used between the wood sill plate and the concrete or concrete masonry foundation to provide ventilation around the perimeter of Type V construction.

3.0 PRODUCT DESCRIPTION

3.1 General: The Joto-Vent System is composed of three parts: the Joto-Vent, which is placed between the foundation stem wall and the sill plate; the Ventilation Flashing; and the optional VIP Ventilation and Insect Prevention Flashing.

3.2 Joto-Vent: The Joto-Vent is a composite material of calcium carbonate and polyolefin resin molded into the specified shapes as shown in Detail 1. The Joto-Vent is nominally ¾ inches (20 mm) thick and has a unique honey-comb cross-section with nominal ¼-inch (6.3 mm) minimum net openings. Two sizes are available, identified as KP-L102U for 2 x 4 framing and KP-L150U for 2 x 6 framing. The net ventilation area is 4.81 in^2 per linear foot (102 cm^2/m) for both the KP-L150U and KPL102U.

3.3 Ventilation Flashing: The Ventilation Flashings (WMF-U35, WMF-U45 and WMF-U55) are made from galvanized sheet steel complying with ASTM A792 (JIS G 3322) to cover the Joto-Vent and provide flashing to shed water at the base of exterior siding or cladding. The flashings have nominal $^1/_4$-inch (6.3 mm) net openings and provide a net ventilation area of 3.6 in^2 per linear foot (76 cm^2/m). See Detail 2 for specific details and dimensions of the flashing. The flashing is used in all cases with the Joto-Vent.

3.4 Ventilation and Insect Prevention Flashing (VIP): The Ventilation and Insect Prevention Flashing (VIP-U0609-L30) is used where the building code requires a minimum ventilation dimension of $^1/_8$-inch (3.2 mm). This flashing is used as an attachment along with the Ventilation flashing described in Section 3.3. See Detail 3 for specific details and dimensions. VIP flashing is made from galvanized sheet steel complying with ASTM A792 (JIS G 3322). The VIP flashing has $^1/_8$-inch (3.2 mm) nominally net openings and a net ventilation area of 5.73 in^2 per linear foot (121 cm^2/m).

4.0 DESIGN AND INSTALLATION

4.1 DESIGN: The required ventilation area shall be determined in accordance with Section 1203.3 of the IBC or Section R408.1 of the IRC, as applicable. The required ventilation area shall be less than or equal to the Joto-Vent System effective ventilation area for use of the Joto-Vent System. The effective ventilation area for the Joto-Vent System is 3.6 in^2 per linear foot of Joto-Vent (76 cm^2/m), regardless of the installation configuration.

4.2 INSTALLATION: The Joto-Vent System shall be installed between the top of the foundation wall and the bottom of the sill plate. Foundations shall be in accordance with Chapter 18 of the IBC or Chapter 4 of the IRC, as applicable. Steel anchor bolts shall be installed in accordance with Section 2308.6 of the IBC or Section R403.1.6 of the IRC, as applicable. The Joto-Vent shall be installed over the anchor bolts with a minimum of two bolts per piece of Joto-Voto with one anchor bolt located not more than 12 inches (305 mm) or less than 4 inches (102 mm) from each end of each piece of Joto-Vent. A properly sized nut and washer shall be installed on each bolt to hold the sill plate in accordance with Section 2308.6 of the IBC, or Section R403.1.6 of the IRC, as applicable.

The Ventilation Flashing shall be installed after the exterior wall sheathing is installed, but before installation of the exterior siding. If the Ventilation and Insect Prevention Flashing is required, it shall be installed prior to the installation of the Ventilation Flashing. See Detail 4 for additional details. The flashings shall be installed tight to the foundation so that a gap is not left between the edge of the flashing and the foundation.

The installation of the Joto-Vent System shall comply with Section 4.0 of this report and the manufacturer's installation instructions.

5.0 LIMITATIONS

The Joto-Vent System described in this report is used to provide ventilation in compliance with, or as an acceptable alternative to, the under-floor ventilation specified in those codes listed in Section 1.0 of this report subject to the following conditions:

5.1 The Joto-Vent System shall be installed in accordance with the code, the manufacturer's published installation instructions, and this report. Where conflicts occur, the more restrictive shall govern.

5.2 The Joto-Vent System shall be installed only on concrete or concrete masonry perimeter stem wall foundations where a crawl space is present.

5.3 The Joto-Vent System prevents the sill plate from being in direct contact with concrete. The jurisdiction having authority shall make the final decision whether decay resistant lumber and or treated lumber shall be required.

5.4 Use of the Joto-Vent System with fire-retardant-treated wood is outside of the scope of this evaluation report.

5.5 The ventilation requirement shall conform to Section 1203.3.1 and 1203.3.2 of the 2012 IBC, or Section R408.1, R408.2 and R408.3 of the 2012 IRC, as applicable.

5.6 Sill plates shall be in accordance with Section 2308.6 of the IBC or Section R403.1.6 of the IRC, as applicable.

6.0 SUBSTANTIATING DATA

- Reports of vertical and horizontal load testing
- Reports of self-ignition temperature testing in accordance with ASTM D1929
- Reports of combustibility classification testing in accordance with ASTM D635
- Reports of Surface Burning Characteristics testing in accordance with ASTM E84.

7.0 IDENTIFICATION

Each piece of Joto-Vent is stamped on one end with the lot number. Packages of the Joto-Vent System are labeled with the following information: the words "Joto-Vent System"; the company name, Joto Techno Co., Ltd; the product name; color; lot number, the words "Made in Japan"; the number of pieces in the package, the UES report number (UER #346); and the name of the inspection agency, RI Ogawa & Associates, Inc. (AA 705).

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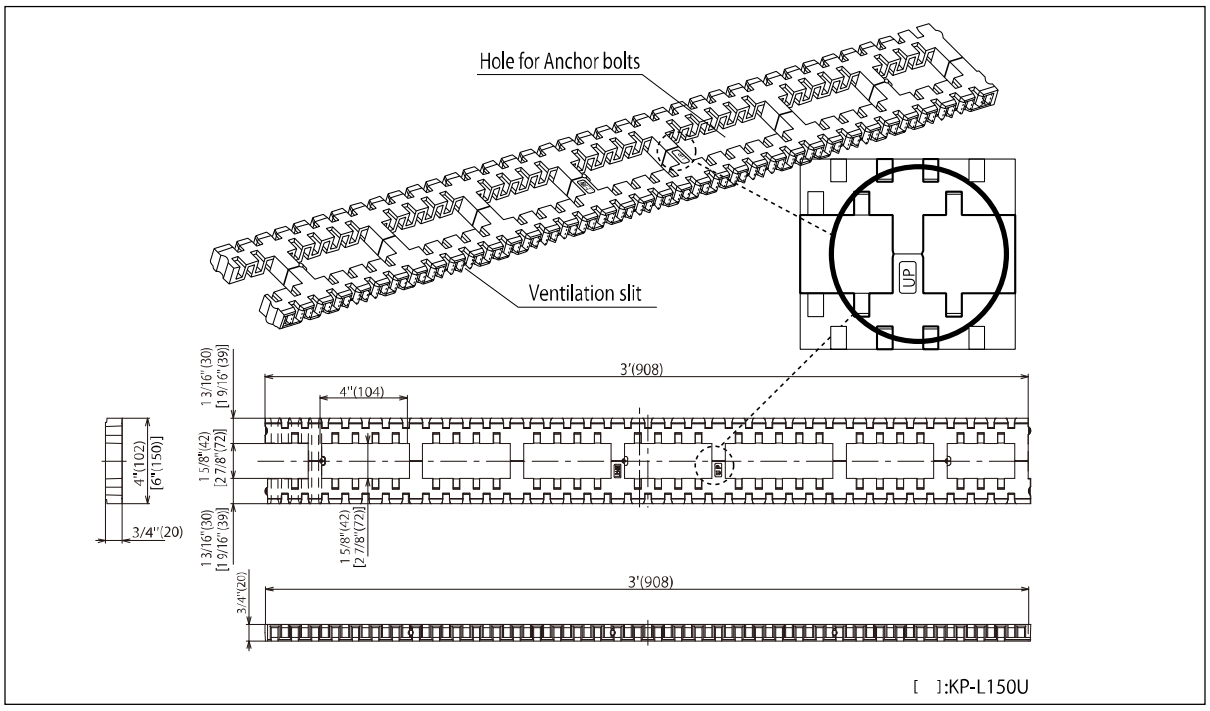
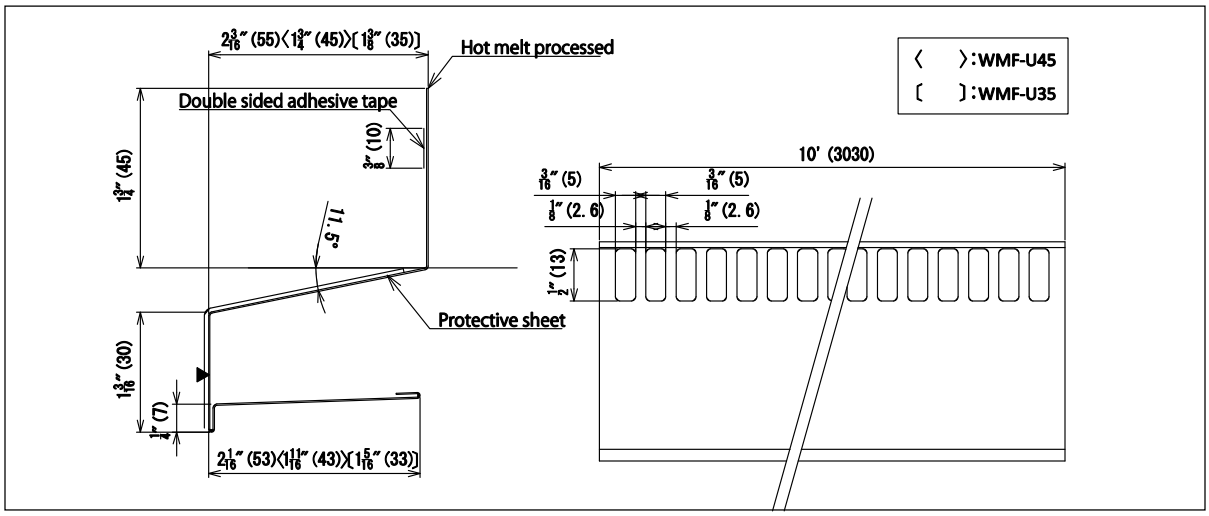
DETAIL #1



DETAIL #2



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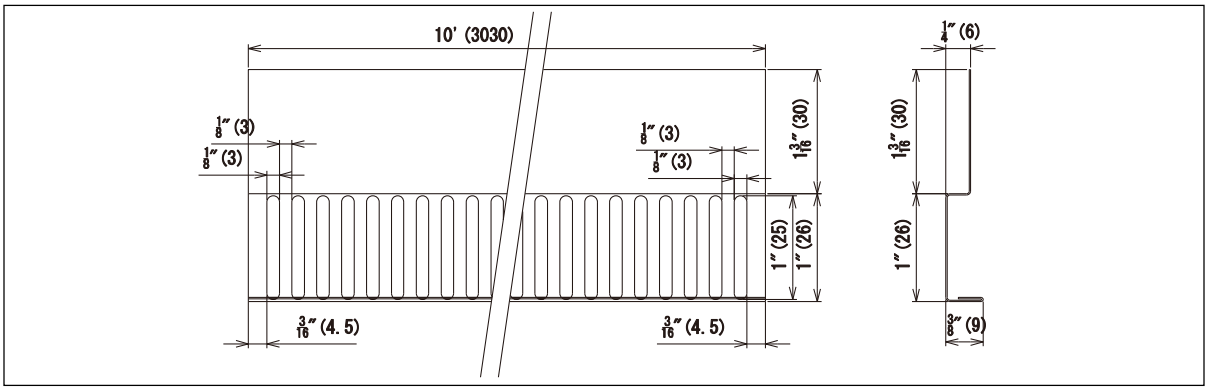

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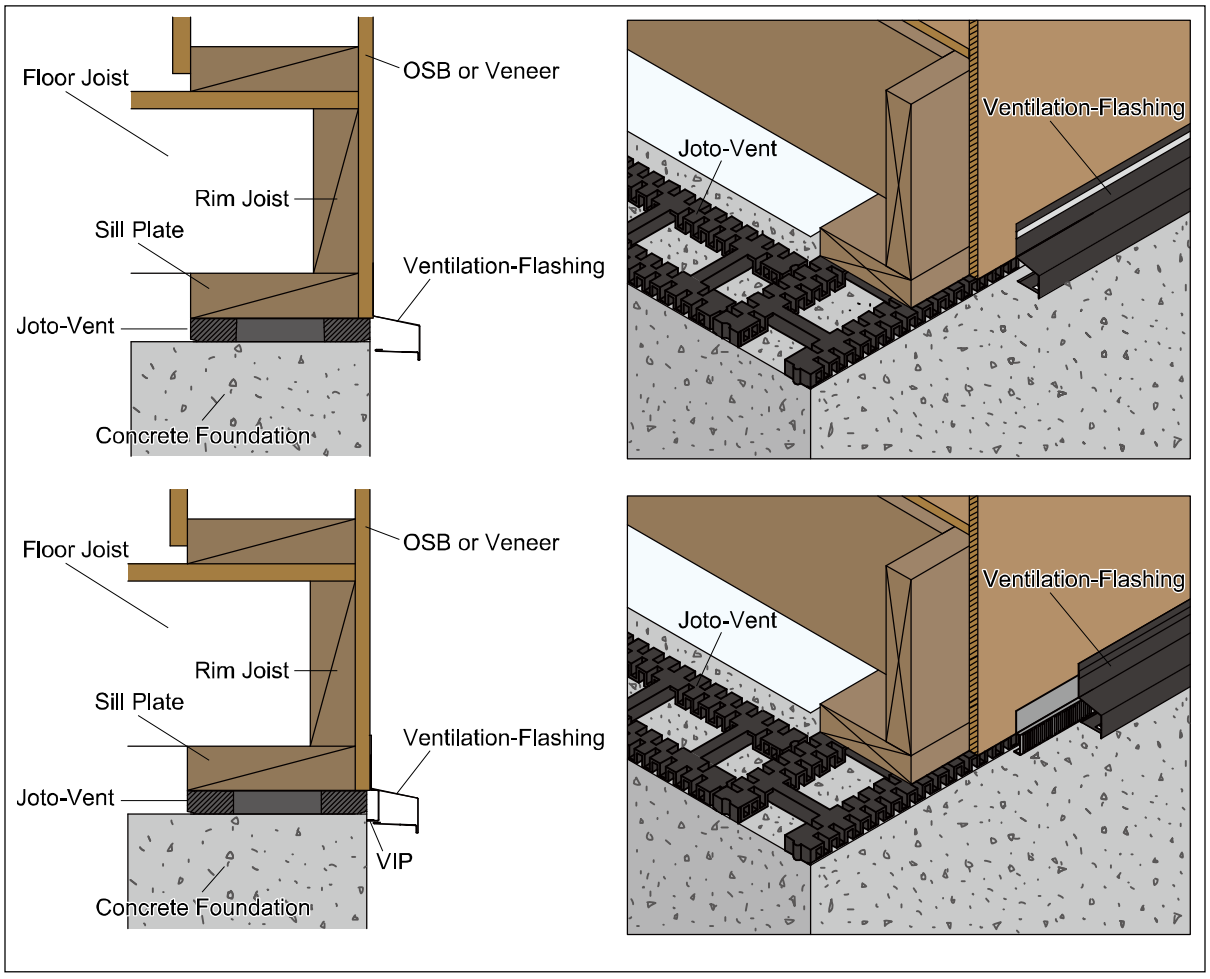

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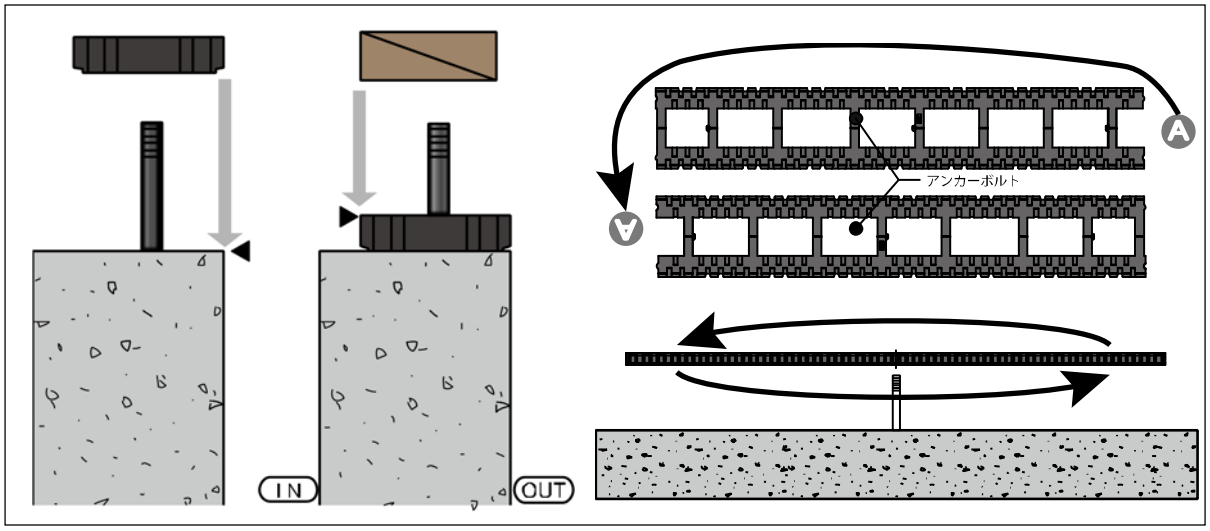

FIGURE 1 – TYPICAL INSTALLATION DETAILS