

NEW!

FWA Foundation Wall Angles

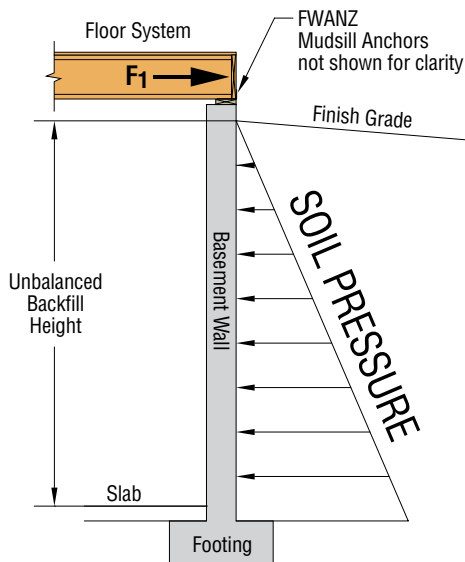


The new FWANZ foundation wall angle is a nail-on, cost-effective solution for bracing basement walls

The new FWANZ foundation wall angle was designed for the same purpose as the original FWAZ: anchoring foundation and basement walls to the floor system to resist lateral loads due to soil pressure. The new FWANZ fastens the floor system to the sill plate with nails and is used when the sill plate is fastened to the foundation wall by independent anchorage (*by Designer*). The FWAZ utilizes the Simpson Strong-Tie® Titen HD® heavy-duty screw anchor to replace the sill plate anchorage.

FWANZ/FWAZ FEATURES

- Testing performed on most common rim joist materials and types
- Addresses requirements set forth in Section 1610.1 in the IBC and Section R404 in the IRC
- Eliminates the need for costly cantilevered foundation designs
- Installed after the foundation is poured and joist location is known
- Connects to the rim joist, keeping its spacing independent of joist on-center spacing
- Compatible with solid sawn joists, I-joists and floor trusses
- ZMAX® coating for additional corrosion resistance



Forces Imposed by Unbalanced Backfill

MATERIAL: 14 gauge **FINISH:** ZMAX® coating

INSTALLATION: • Use all specified fasteners. See General Notes.

- Connectors must be fastened directly to the outside face of the rim board with 5-10d x 1 1/2" (0.148" dia. x 1 1/2") long nails.
- For joist/blocking spacing greater than 16" o.c., but less than 48" o.c. where permitted by code, the FWA must be located within 4" o.c. of adjacent joist/block.
- When floor joists are parallel to the rim board, full depth blocking shall be used in the first two bays of the floor per 2006 IRC Section R404.1.
- Splice joint not permitted on rim board in same bay unless blocking is placed on both sides of the splice.
- FWAZ only—maximum sill plate thickness to be used shall be 1 1/2".
- FWAZ only—must be anchored to the foundation wall with 5/8" x 6" mechanically galvanized Titen HD® anchor (*included*). Cast-in-place anchor bolts may not be used as a substitute.
- When I-joist rim material is used, backer blocks must be used. Installed per manufacturer's recommendations.

CODES: Refer to the current *Wood Construction Connectors* catalog for Code Listing Key Chart.



FWANZ Spacing Tables

The following tables provide maximum on-center spacing of the FWANZ when fastened to a Southern Pine or Douglas Fir-Larch sill plate to satisfy the requirements prescribed in Table R404.1(1) of the 2006 IRC. The FWANZ does not address the anchor bolt requirements prescribed in Table R404.1(2) of the 2006 IRC. These requirements can be satisfied by using the IRC prescribed anchor-bolts in conjunction with the FWANZ or by using the FWAZ installed with the Titen HD screw anchor.

Maximum Connector Spacing for 1" OSB Rim

Wall Height (ft.)	Maximum Unbalanced Backfill Height (ft.)	Soil Classes		
		GW, GP, SW, SP	GM, GC, SM-SC, ML	SC, MH, ML-CL, Inorganic CL
		Minimum Sill Plate Size		
		2x4	2x4	2x4
7	5	—	6'-0"	5'-1"
	6	5'-10"	3'-11"	2'-11"
	7	3'-8"	2'-6"	1'-10"
8	5	—	6'-0"	5'-9"
	6	6'-0"	4'-6"	3'-4"
	7	4'-3"	2'-10"	2'-2"
	8	2'-10"	1'-11"	1'-5"
9	5	—	6'-0"	6'-0"
	6	6'-0"	5'-0"	3'-9"
	7	4'-9"	3'-2"	2'-5"
	8	3'-2"	2'-2"	1'-7"
	9	2'-3"	1'-6"	1'-2"

1. Values are based on a load duration factor $C_D = 0.90$.
2. The FWANZ installs with (5) 10dx1½" nails (0.148"x1.50") into the rim and either (8) 10dx1½" nails into a 3½" wide sill plate or (11) 10dx1½" nails into a 5½" wide sill plate.
3. Soil classes are in accordance with Table R405.1 of the 2006 IRC.
4. "—" indicates IRC Table R602.3(1) nailing satisfies the code requirements.

Maximum Connector Spacing for 1½" OSB Rim or 1¾" I-joist Rim⁵

Wall Height (ft.)	Maximum Unbalanced Backfill Height (ft.)	Soil Classes					
		GW, GP, SW, SP		GM, GC, SM-SC, ML		SC, MH, ML-CL, Inorganic CL	
		Minimum Sill Plate Size					
		2x4	2x6	2x4	2x6	2x4	2x6
7	5	—	—	6'-0"	6'-0"	5'-4"	6'-0"
	6	6'-0"	6'-0"	4'-2"	4'-10"	3'-1"	3'-8"
	7	3'-11"	4'-7"	2'-7"	3'-1"	2'-0"	2'-4"
8	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	4'-8"	5'-6"	3'-6"	4'-2"
	7	4'-5"	5'-3"	3'-0"	3'-6"	2'-3"	2'-8"
	8	3'-0"	3'-6"	2'-0"	2'-4"	1'-6"	1'-9"
9	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	5'-3"	6'-0"	4'-0"	4'-8"
	7	5'-0"	5'-10"	3'-4"	3'-11"	2'-6"	2'-11"
	8	3'-4"	3'-11"	2'-3"	2'-8"	1'-8"	2'-0"
	9	2'-4"	2'-9"	1'-7"	1'-10"	1'-2"	1'-5"

1. Values are based on a load duration factor $C_D = 0.90$.
2. The FWANZ installs with (5) 10dx1½" nails (0.148"x1.50") into the rim and either (8) 10dx1½" nails into a 3½" wide sill plate or (11) 10dx1½" nails into a 5½" wide sill plate.
3. Soil classes are in accordance with Table R405.1 of the 2006 IRC.
4. "—" indicates IRC Table R602.3(1) nailing satisfies the code requirements.
5. 1¾" I-joist rim backer blocks installed per manufacturer's recommendations must be used.

Maximum Connector Spacing for 1¼" LSL Rim

Wall Height (ft.)	Maximum Unbalanced Backfill Height (ft.)	Soil Classes					
		GW, GP, SW, SP		GM, GC, SM-SC, ML		SC, MH, ML-CL, Inorganic CL	
		Minimum Sill Plate Size					
		2x4	2x6	2x4	2x6	2x4	2x6
7	5	—	—	6'-0"	6'-0"	5'-4"	6'-0"
	6	6'-0"	6'-0"	4'-2"	5'-4"	3'-1"	4'-0"
	7	3'-11"	5'-0"	2'-7"	3'-4"	2'-0"	2'-6"
8	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	4'-8"	6'-0"	3'-6"	4'-7"
	7	4'-5"	5'-9"	3'-0"	3'-10"	2'-3"	2'-11"
	8	3'-0"	3'-10"	2'-0"	2'-7"	1'-6"	1'-11"
9	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	5'-3"	6'-0"	4'-0"	5'-1"
	7	5'-0"	6'-0"	3'-4"	4'-4"	2'-6"	3'-3"
	8	3'-4"	4'-4"	2'-3"	2'-11"	1'-8"	2'-2"
	9	2'-4"	3'-1"	1'-7"	2'-1"	1'-2"	1'-7"

1. Values are based on a load duration factor $C_D = 0.90$.
2. The FWANZ installs with (5) 10dx1½" nails (0.148"x1.50") into the rim and either (8) 10dx1½" nails into a 3½" wide sill plate or (11) 10dx1½" nails into a 5½" wide sill plate.
3. Soil classes are in accordance with Table R405.1 of the 2006 IRC.
4. "—" indicates IRC Table R602.3(1) nailing satisfies the code requirements.

Maximum Connector Spacing for 2x Solid-Sawn Rim or 1¾" LVL Rim

Wall Height (ft.)	Maximum Unbalanced Backfill Height (ft.)	Soil Classes					
		GW, GP, SW, SP		GM, GC, SM-SC, ML		SC, MH, ML-CL, Inorganic CL	
		Minimum Sill Plate Size					
		2x4	2x6	2x4	2x6	2x4	2x6
7	5	—	—	6'-0"	6'-0"	5'-4"	6'-0"
	6	6'-0"	6'-0"	4'-2"	5'-8"	3'-1"	4'-3"
	7	3'-11"	5'-4"	2'-7"	3'-7"	2'-0"	2'-8"
8	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	4'-8"	6'-0"	3'-6"	4'-10"
	7	4'-5"	6'-0"	3'-0"	4'-1"	2'-3"	3'-1"
	8	3'-0"	4'-1"	2'-0"	2'-9"	1'-6"	2'-1"
9	5	—	—	6'-0"	6'-0"	6'-0"	6'-0"
	6	6'-0"	6'-0"	5'-3"	6'-0"	4'-0"	5'-5"
	7	5'-0"	6'-0"	3'-4"	4'-7"	2'-6"	3'-5"
	8	3'-4"	4'-7"	2'-3"	3'-1"	1'-8"	2'-4"
	9	2'-4"	3'-3"	1'-7"	2'-2"	1'-2"	1'-8"

1. Values are based on a load duration factor $C_D = 0.90$.
2. The FWANZ installs with (5) 10dx1½" nails (0.148"x1.50") into the rim and either (8) 10dx1½" nails into a 3½" wide sill plate or (11) 10dx1½" nails into a 5½" wide sill plate.
3. Soil classes are in accordance with Table R405.1 of the 2006 IRC.
4. "—" indicates IRC Table R602.3(1) nailing satisfies the code requirements.

For complete technical information, including load values and a spacing table for the FWAZ, see www.strongtie.com/FWA or our current *Wood Construction Connectors* catalog.

This flier is effective until June 30, 2011, and reflects information available as of July 1, 2009. This information is updated periodically and should not be relied upon after June 30, 2011; contact Simpson Strong-Tie for current information and limited warranty or see www.strongtie.com.