

**OLIVER TECHNOLOGIES, INC.  
FLORIDA INSTALLATION INSTRUCTIONS FOR THE  
MODEL 1101 "V" SERIES ALL STEEL FOUNDATION SYSTEM**

**MODEL 1101"V" (Steps 1-14)  
LONGITUDINAL ONLY: Follow Steps 1-9  
LATERAL ONLY: Follow Steps 1-3 and Steps 10-14  
FOR CONCRETE APPLICATIONS: Follow Steps 15-18**

ENGINEERS STAMP

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**1. SPECIAL CIRCUMSTANCES:** If the following conditions occur - **STOP! Contact Oliver Technologies at 1-800-284-7437 :**

- a) Pier height exceeds 48"      c) Roof eaves exceed 16"      e) Location is within 1500 feet of coast
- b) length of home exceeds 76'      d) Sidewall height exceed 96"

**INSTALLATION OF GROUND PAN**

2. Remove weeds and debris in an approximate two foot square to expose firm soil for each ground pan (C).
3. Place ground pan (C) directly below chassis I-beam. Press or drive pan firmly into soil until flush or below soil then install pier per manufacturer's instructions or per Florida Regs.

**SPECIAL NOTE:** The longitudinal "V" brace system may also serve as a pier under the home and should be loaded as any other pier. It is recommended that after leveling piers, and one-third inch (1/3") before home is lowered completely on to piers, complete steps 4 through 9 below then remove jacks.

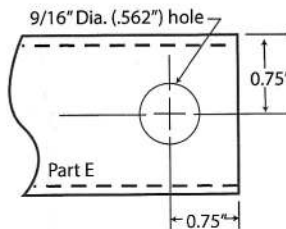
**INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM (Model 1101 L "V")**

**NOTE:** WHEN INSTALLING THE LONGITUDINAL SYSTEM ONLY, A MINIMUM OF 2 SYSTEMS PER FLOOR SECTION IS REQUIRED. SOIL TEST PROBE SHOULD BE USED TO DETERMINE CORRECT TYPE OF ANCHOR PER SOIL CLASSIFICATION. IF PROBE TEST READINGS ARE BETWEEN 175 & 275 A 5 FOOT ANCHOR MUST BE USED. IF PROBE TEST READINGS ARE BETWEEN 276 & 350 A 4 FOOT ANCHOR MAY BE USED. USE GROUND ANCHORS WITH DIAGONAL TIES AND STABILIZER PLATES EVERY 5'4". VERTICAL TIES ARE ALSO REQUIRED ON HOMES SUPPLIED WITH VERTICAL TIE CONNECTION POINTS (PER FLORIDA REG.).

4. Choose one of the approved longitudinal tube installations; either Diagram A or B. Then select the correct square tube (E) length from the diagram for appropriate pier height at support location or cut and drill 1.5" square tube to achieve appropriate length.

PIER HEIGHT (40° Min. - 45° Max.)	1.25" Tube Length	1.50" Tube Length
7 3/4" to 25"	22"	18"
24 3/4" to 32 1/4"	32"	18"
33" to 41"	44"	18"
40" to 48"	54"	18"

Diagram A



PIER HEIGHT (40° Min. - 60° Max.)	1.50" Tube Length
14" to 18"	20"
18" to 25"	28"
24" to 35"	39"
30" to 40"	44"
36" to 48"	54"

Diagram B

5. Install (2) of the 1.50" square tubes (E) into the "U" bracket (J), insert carriage bolt and leave nut loose for final adjustment.
6. Place I-beam connector (F) loosely on the bottom flange of the I-beam.
7. (For Diagram A installation) Slide the selected 1.25" tube (E) into a 1.50" tube (E) and attach to I-beam connectors (F) and fasten loosely with bolt and nut. (For Diagram B installation) Attach the selected 1.5" tubes (E) to the I-beam connectors (F) and fasten loosely with bolts and nuts.
8. Repeat steps 6 through 7 to create the "V" pattern of the square tubes loosely in place.
9. Using standard hand tools tighten all nuts and bolts. (For Diagram A installation only, secure 1.25" and 1.50" tubes using four(4) 1/4"-14 x 3/4" self-tapping screws in pre-drilled holes.)

**INSTALLATION OF LATERAL TELESCOPING TRANSVERSE ARM SYSTEM (Model 1101 T "V")**

THE MODEL 1101 "V" (LONGITUDINAL & LATERAL PROTECTION) ELIMINATES THE NEED FOR STABILIZER PLATES & FRAME TIES.

**NOTE:** THE USE OF THIS SYSTEM REQUIRES VERTICAL TIES SPACED AT 5'4".

FOUR FOOT (4') GROUND ANCHOR MAY BE USED EXCEPT WHERE THE HOME MANUFACTURER SPECIFIES DIFFERENT.

10. Install remaining vertical tie-down straps and 4' ground anchors per home manufacturer's instructions. NOTE: Centerline anchors to be sized according to soil torque condition. Any manufacturer's specifications for sidewall anchor loads in excess of 4,000 lbs. require a 5' anchor per Florida Code.
11. Select the correct square tube brace (H) length for set-up lateral transverse at support location. The lengths come in either 60" or 72" lengths. (With the 1.50" tube as the bottom tube, and the 1.25" tube as the inserted tube.)
12. Install the 1.50 transverse brace (H) to the ground pan connector (D) with bolt and nut.
13. Slide 1.25" transverse brace into the 1.50" brace and attach to adjacent I-beam connector (I) with bolt and nut.
14. Secure 1.50" transverse arm to 1.25" transverse arm using four (4) 1/4" - 14 x 3/4" self-tapping screws in pre-drilled holes.

**INSTALLATION USING CONCRETE RUNNER/ FOOTER**

15. A concrete runner, footer or slab may be used in place of the steel ground pan.
- a) The concrete shall be minimum 2500 psi mix
  - b) A concrete runner may be either longitudinal or transverse, and must be a minimum of 8" deep with a minimum width of 16 inches longitudinally or 18 inches transverse to allow proper distance between the concrete bolt and the edge of the concrete (see below).
  - c) Footers must have minimum surface area of 441 sq. in. (i.e. 21" square), and must be a minimum of 8" deep.
  - d) If a full slab is used, the depth must be a 4" minimum . Special inspection of the system bracket installation is not required. Footers must allow for at least 4" from the concrete bolt to the edge of the concrete.

**NOTE:** The bottom of all footings, pads, slabs and runners must be per local jurisdiction.

**LONGITUDINAL: (Model 1101 LC "V")**

16. When using Part# 1101-W-CPCA (wetset) simply install the bracket in runner/footer **OR** When installing in cured concrete use Part# 101-D-CPCA (dryset). The 1101 (dryset) CA bracket is attached to the concrete using (2) 5/8"x3" concrete wedge bolts (Simpson part # S162300H 5/8" X 3" or Powers equivalent). Place the CA bracket in desired location. Mark bolt hole locations, then using a 5/8" diameter masonry bit, drill a hole to a minimum depth of 3". Make sure all dust and concrete is blown out of the holes. Place wedge bolts into drilled holes, then place 1101 (dry set) CA bracket onto wedge bolts and start wedge bolt nuts. Take a hammer and lightly drive the wedge bolts down by hitting the nut (making sure not to hit the top of threads on bolt). The sleeve of concrete wedge bolt needs to be at or below the top of concrete. Complete by tightening nuts.

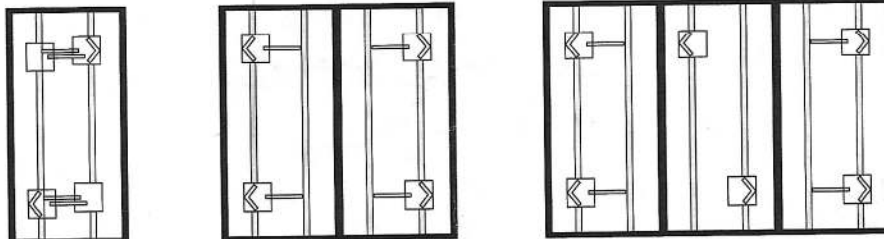
**LATERAL: (Model 1101 TC "V")**

17. For wet set (part # 1101-W-TACA) installation simply install the anchor bolt into runner/footer. For dry set installation (part # 1101-D-TACA) mark bolt hole locations, then using a 5/8" diam. masonry bit. drill a hole to a minimum depth of 3". Make sure all dust and concrete is blown out of the hole. Place wedge bolts (Simpson part #S162300H 5/8" X 3" or Powers equivalent) into (D) concrete dry transverse connector and into drilled hole. If needed, take a hammer and lightly drive the wedge bolts down by hitting the nut (making sure not to hit the top of threads on bolt), then remove the nut. The sleeve of concrete wedge bolt needs to be at or below the top of concrete.
18. When using part# 1101 CVW (wetset) or 1101 CVD (dryset), install per steps 17 & 18.

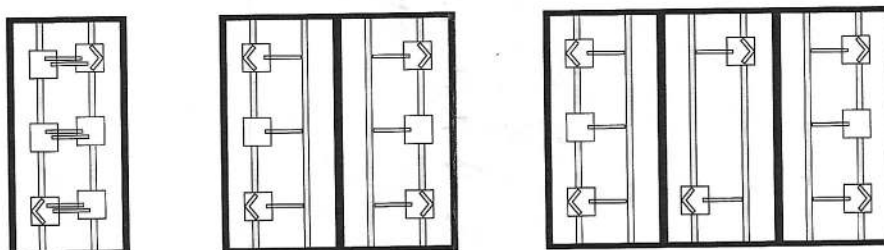
**Notes:**

1. LENGTH OF HOUSE IS THE ACTUAL BOX SIZE
2. □ = LOCATION OF TRANSVERSE BRACING ONLY
3. ◻ = LOCATION OF LONGITUDINAL BRACING ONLY
4. ◻◻ = TRANSVERSE AND LONGITUDINAL LOCATIONS

ALL WIDTHS AND LENGTHS UP TO 52'

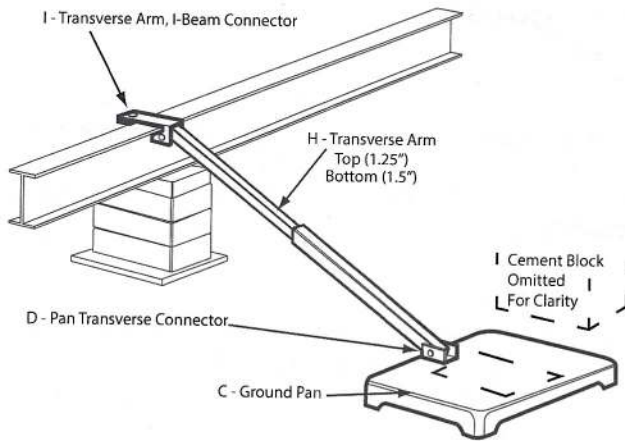


ALL WIDTHS AND LENGTHS OVER 52' TO 80"

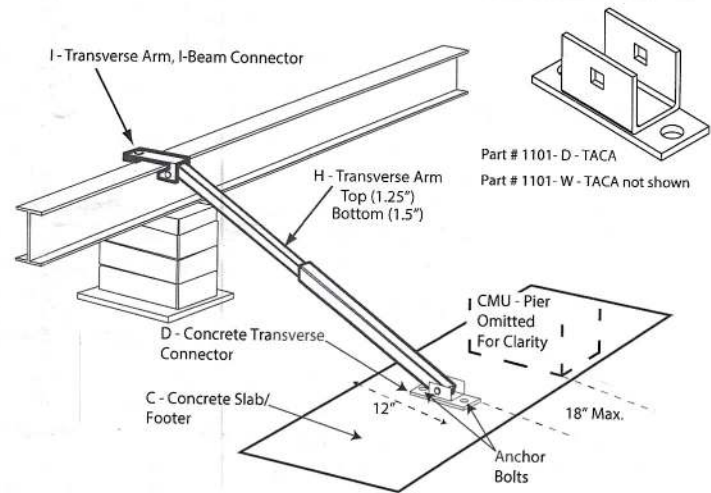


HOMES WITH 5/12 ROOF PITCH REQUIRE: PER FLORIDA REGULATIONS  
6 systems for home lengths up to 52' and 8 systems for homes over 52' and up 80'.

PATENT# 6634150 & OTHER PATENT PENDING



**Model # 1101 T "V"**



**Model # 1101 TC "V"**

Florida approved 4' ground anchors may be used in all locations except where home manufacturers specifications for sidewall straps are in excess of 4,000 lbs. These locations require a 5' anchor. Per Florida code.

C = GROUND PAN / CONCRETE FOOTER OR RUNNER

D = GROUND PAN / CONCRETE U BRACKETS TRANSVERSE CONNECTOR (connects with grade 5 - 1/2" x 2" 1/2" carriage bolt and nut)

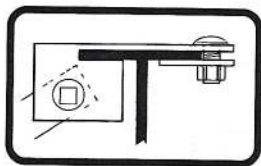
E = TELESCOPING V BRACE TUBE ASSEMBLY (1.5" TUBE BOTTOM AND 1.25" TUBE INSERT) OR 1.5" TUBE

F = "V" BRACE I-BEAM CONNECTOR ASSEMBLY

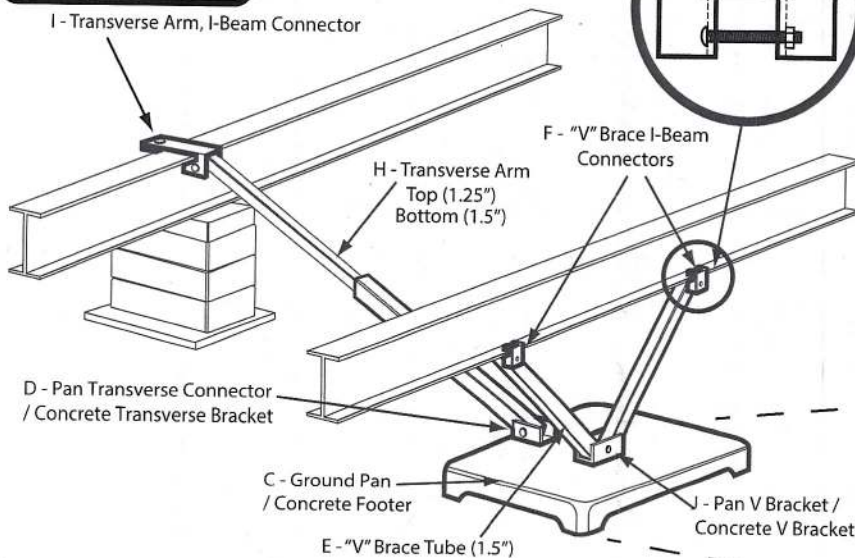
H = TELESCOPING TRANSVERSE ARM ASSEMBLY

I = TRANSVERSE ARM I-BEAM CONNECTOR (connects with grade 5 - 1/2" x 2" 1/2" carriage bolt and nut)

J = V PAN BRACKET (connects with grade 5 - 1/2" x 2" 1/2" carriage bolt and nut)

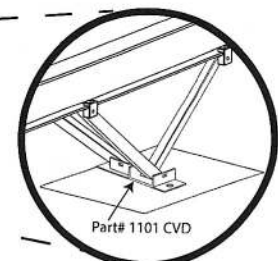
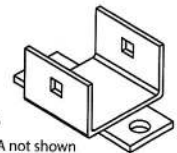


I - Transverse Arm, I-Beam Connector



**Model # 1101 "V"**

Part# 1101 D-CPCA  
Part # 1101 W-CPCA not shown



**Model # 1101 C "V"**