

Tiedown Engineering, Inc. – Xi2 Foundation System

The following are the requirements for using the Xi2 Foundation System from Tiedown Engineering, Inc.:

- Approved for HUD coded homes ONLY
- Homes must *not* be located within 1500 feet of the coast
- Approved for Wind Zone 1, 2 and 3
- Main I-beam spacing 75.5 inches – 99.5 inches
- Maximum main I-beam depth 12 inches
- Maximum pier height 48 inches
- Maximum sidewall height 108 inches
- Vertical tiedowns must be used at all connection points furnished/required by the manufacturer along the sidewall and marriagewall
- Max roof pitch 9/12
- Maximum width 16 feet nominal width – singlewide
- Maximum width 36 feet nominal width – doublewide
- Maximum width 48 feet nominal width – triplewide
- Soil conditions must equal or exceed 4B

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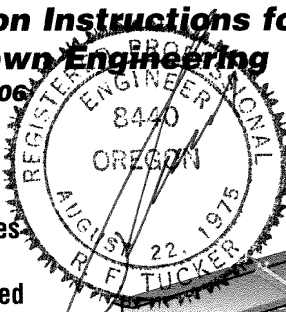


Foundation System

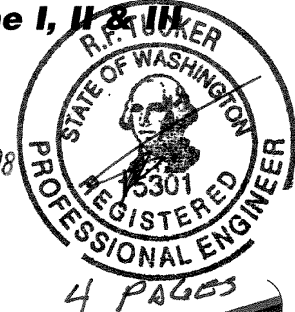
Installation Instructions for Wind Zone I, II & III

By Tie Down Engineering

Updated: 8/9/06



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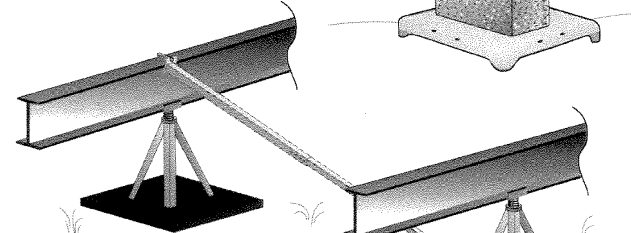
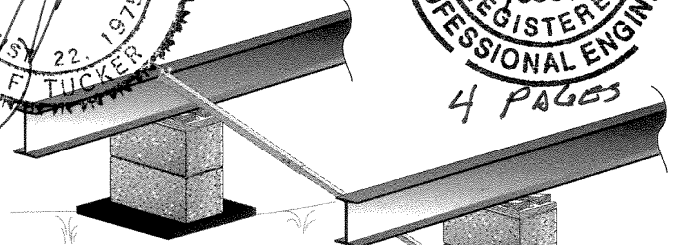


4 PAGES

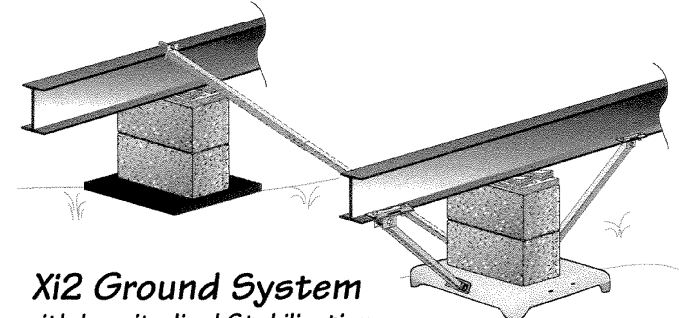
- Easy installation
- Stabilizer plates and diagonal frame ties are not required in most set-ups
- Longitudinal stabilization is easily added with Tie Down's LSD strut kit.
- Heavy galvanized coating* on bracket and struts.

REQUIREMENTS

- Install in any type of soil, 4B(175-275 lbs.) or better.
- Maximum vertical projection at sidewall is 9'. Higher walls may be used when the design loads are adjusted accordingly.
- Main rail spacing must be 75.5" - 99.5"
- Additional vertical anchor ties that are unique to a home's design may be required by the home manufacturer. These locations may include shear walls, marriage line ridge beam support posts, and rim plates. The longitudinal component of the Xi2 system replaces end frame ties. Check manufacturers set-up requirements.
- Maximum pier height is 48".
- Systems must be placed as evenly as possible, no more than 10' from end of home.
- Additional systems may be needed for roof slopes greater than 20 degrees, (4.37" in 12" Pitch) See Page 4.
- Two systems designed to work in conjunction with each other.
- Wind Zones II & III requires sidewall anchors. Check manufacturers requirements.



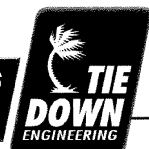
Xi2 Ground System
(For Block or Steel Pier)



Xi2 Ground System
with Longitudinal Stabilization
(One Strut for Wind Zone I
Two Struts for Wind Zones II & III)

* Xi2 components exceed HUD code 3280.307g "Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coating...."

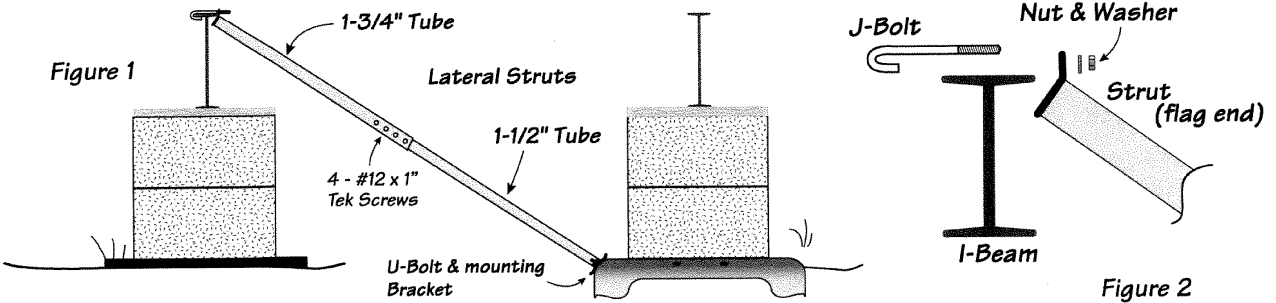
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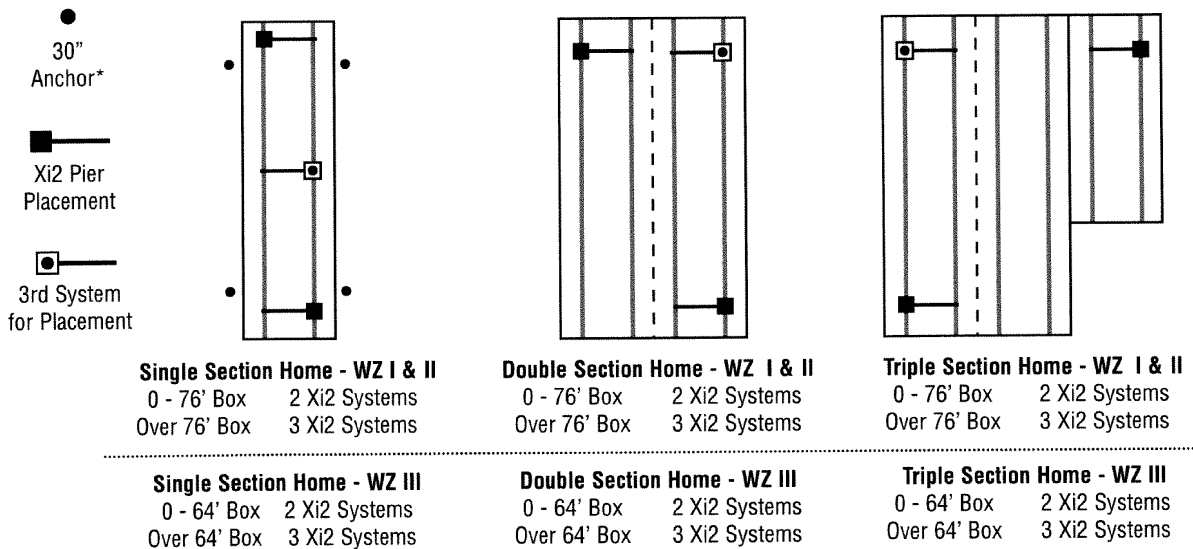
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Installation of Lateral System

1. Identify the number of systems to be used on the home using the chart above.
2. Identify the location where the lateral systems will be installed.
3. Clear all organic matter and debris from the pad site.
4. Place pad centered under beam with the lateral strut bracket towards the inside of the home.
5. Press or drive pan into ground until level and flush with prepared surface.
6. Build pier according to State, Local or Home Manufacturers guidelines. (Figure 1)
7. Attach the end of the smaller tube to the inside of pan using U-bolt & nuts provided
8. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. (Figure 2)
9. Install a minimum of four (#12 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together. (Figure 1)



Xi2 Lateral Stabilization Pier Placement



* For Wind Zone I - 30" anchor w/vertical strap or frame tie w/stabilizer plate, within 10' of end of home on single sections.

NOTE: Diagram represents single section up to 16' width, double section up to 32' width, and triple section homes up to 48' width.

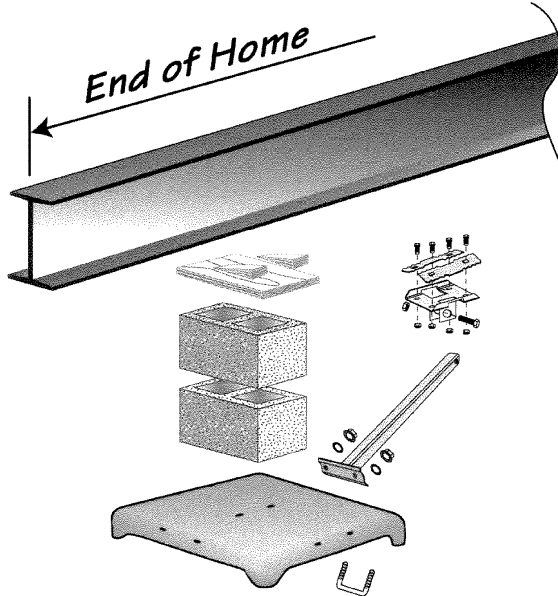
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Installation of Longitudinal Struts

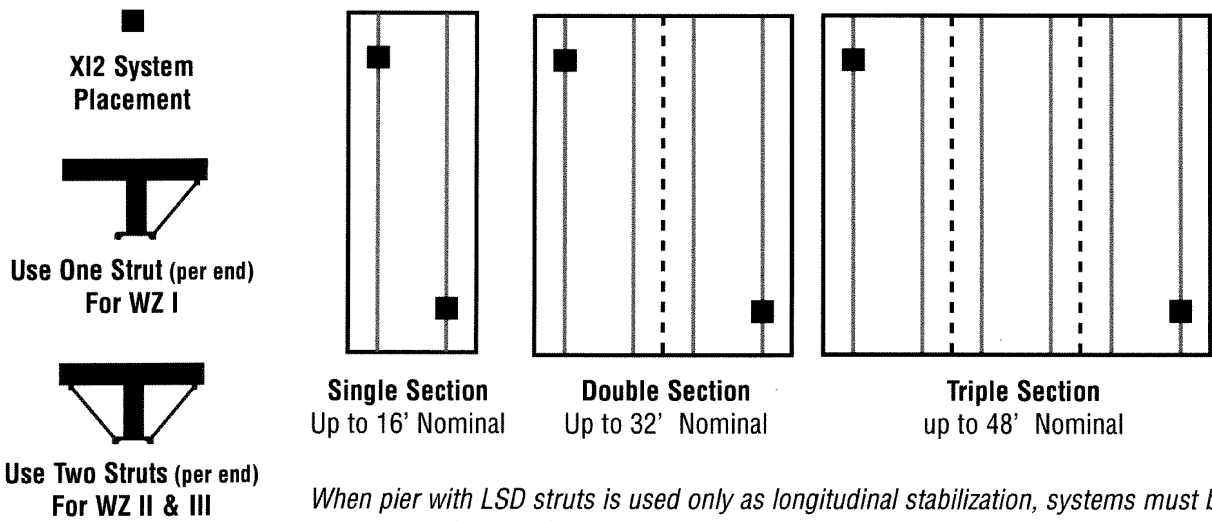
Longitudinal stabilization can be combined economically with the Xi2 Lateral System. Combining LSD struts with the pad for the lateral system saves time and material costs. When combining the lateral and longitudinal systems, use the placement directions for the lateral system.



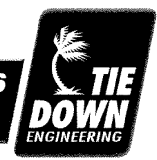
Installation of Longitudinal Struts

1. Identify the number of systems to be used on the home using the chart below.
2. Clear all organic matter and debris from the pad site.
3. Place u-bolt through holes provided. Attach lock washers on u-bolt, on the top side of pan
4. Press or drive pan into ground until level and flush with prepared surface.
5. Build pier according to State, local or Home Manufacturers guidelines.
6. Install frame bracket clamps to I-beam on inside of block/pier. Do not tighten nuts at this time.
7. Insert u-bolt through mount bracket, attach with nut and bolt. Do not tighten at this time.
8. Insert strut in the frame bracket clamp, attach with nut and bolt. Do not tighten at this time.
9. Pull the frame bracket clamp with the fastened strut outward to remove any slack.
10. Tighten all nuts and bolts on the struts and beam clamps.

Xi2 Longitudinal Pier Placement



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Number of Xi2 Systems Required for Roof Pitches Higher than 20 degrees

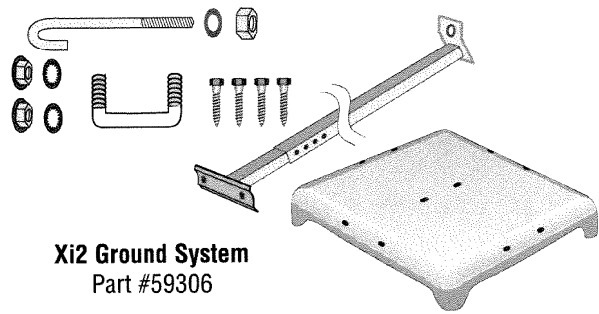
FEDERAL MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS
APPROVED
07
7/25/2008

Module Length (Feet)	Wind Zone I				Wind Zone II				Wind Zone III			
	5:12	6:12	7:12	9:12	5:12	6:12	7:12	9:12	5:12	6:12	7:12	9:12
34	2	2	2	2	2	2	2	2	2	2	3	3
36	2	2	2	2	2	2	2	3	2	2	3	3
38	2	2	2	3	2	2	2	3	2	3	3	3
40	2	2	2	3	2	2	2	3	3	3	3	3
42	2	2	3	3	2	2	3	3	3	3	3	3
44	2	2	3	3	2	2	3	3	3	3	3	3
46	2	3	3	3	2	3	3	3	3	3	3	4
48	2	3	3	3	3	3	3	3	3	3	3	4
50	3	3	3	3	3	3	3	3	3	3	3	4
52	3	3	3	3	3	3	3	3	3	3	4	4
54	3	3	3	3	3	3	3	3	3	3	4	4
56	3	3	3	3	3	3	3	3	3	3	4	4
58	3	3	3	3	3	3	3	3	3	3	4	4
60	3	3	3	3	3	3	3	3	3	3	4	5
62	3	3	3	3	3	3	3	3	4	4	4	5
64	3	3	4	4	3	3	4	4	4	4	4	5
66	3	3	4	4	3	3	4	4	4	4	4	5
68	3	4	4	4	3	4	4	4	4	4	5	5
70	3	4	4	4	3	4	4	4	4	4	5	5
72	3	4	4	4	4	4	4	5	4	4	5	5
74	4	4	4	5	4	4	4	5	4	5	5	5
76	4	4	4	5	4	4	4	5	4	5	5	6
78	4	4	4	5	4	4	4	5	4	5	5	6
80	4	4	4	5	4	4	4	5	4	5	5	6

Xi2 Ground System

Part #59306

Includes: 5' Strut, pad & hardware.

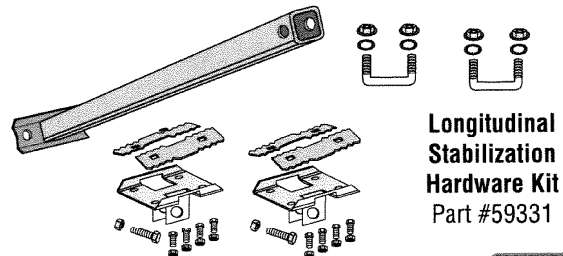


Xi2 Ground System
Part #59306

Longitudinal Stabilization Hardware Kit

Part #59331

Includes: 2 I-beam brackets & 2 U-bolts with all nuts and bolts.



Longitudinal Stabilization Hardware Kit
Part #59331

Struts for Longitudinal Stabilization

Part No.	Strut Length	Pier Height Up To:
59330-30	30"	2 Blocks or 18"
59330-39	39"	3 Blocks or 24"
59330-44	44"	4 Blocks or 32"
59330-53	53"	5 Blocks or 40"
59330-65	65"	6 Blocks or 48"

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