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Engineered Tie Down System
Manufactured Home Tie Down Calculations and Schedules for Single, Double and Triple Wide Homes - ETS 140

INTRODUCTION

30" Auger - Can only be used in class 2 & 3 Soils

Design Loads		
Wind	15 PSF	(70 MPH Exposure "C")
Wind	25 PSF	(85 MPH Exposure "C")
Wind	35 PSF	(100 MPH Exposure "C")
Soil Bearing	1000 PSF	
Seismic Zone	D	

Oliver Technologies tie down straps meet federal specifications QQ-S-781H for Type 1, Class B, Grade 1 strapping and are minimum 1-1/4" x .035, zinc plated.

Earth Augers	4725# min total load capacity / 3150# working load capacity
Cross Drives	4725# min total load capacity / 3150# working load capacity
Concrete Slab Anchors	4725# min total load capacity / 3150# working load capacity
Tie Down Straps	4725# min total load capacity / 3150# working load capacity

Note: Maximum soil pressure is 1000 PSF without soil report.

GENERAL NOTES:

1. In the event an earth auger cannot be installed due to an obstruction, use of cross drive anchor are permissible, provided that two cross drive anchors are installed for each earth auger anchor that cannot be installed.
2. For all tie down installations, the manufactured home chassis members are shown as "I" beams for illustration purposes only . Chassis can also be "C" shaped or RFC Shaped.
3. The sizes, types, lengths, etc. or materials shown herein are minimum. Larger, longer, heavier materials supplied by Oliver Technologies, Inc. may be used at the same spacing and locations shown.
4. This tie down system meets the requirements of section 1336.3, subsection (a) of Title 25, CFR.
4. This tie down system may not be installed within 1500' of coastline.

NOTE: A soil test probe is recommended on each project to identify soil classification and a selection of the proper anchor to be used.

ENGINEER APPROVAL

ENGINEERED TIEDOWN SYSTEM
APPROVED
SUBJECT TO CORRECTIONS NOTED
Approved does not authorize or approve any omission or deviation from requirements of applicable State laws and regulations.

State of California
Department of Housing and Community Development
DIVISION OF CODES AND STANDARDS

By Caldwell (Signature) Date 7/30/09

SPA NO ETS 140

This Plan Approval Expires 5/19/11

STATE APPROVAL

13 PAGES

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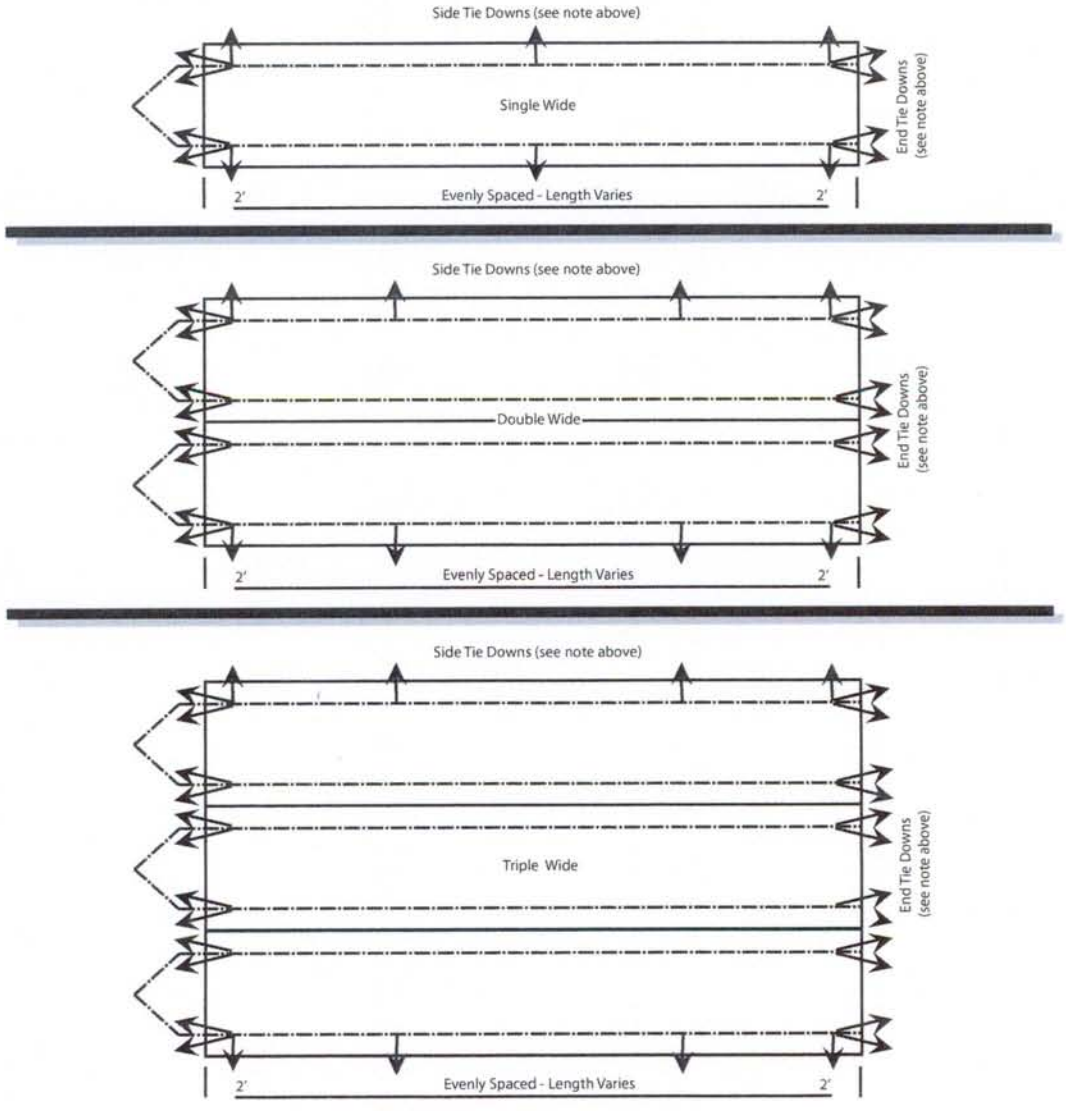
Wind = 70 MPH - 85 MPH - 100 MPH • Exposure "C" • Seismic D

REQUIRED NUMBER OF COMBINED ANCHORS FOR EACH SIDE AND END OF MANUFACTURED HOME

WIDTH	LENGTH	SEISMIC	WIND SPEED	# OF SIDE TIE DOWNS	# OF END TIE DOWNS	TOTAL # OF TIE DOWNS
Single Wide Up to 16'	0' to 78'	D	70 MPH - 15 PSF 85 MPH - 25 PSF 100 MPH - 35 PSF	5 8 12	2 2 2	14 20 28
Double Wide Up to 28'	0' to 78'	D	70 MPH - 15 PSF 85 MPH - 25 PSF 100 MPH - 35 PSF	5 8 12	4 4 4	18 24 32
Triple Wide Up to 42'	0' to 78'	D	70 MPH - 15 PSF 85 MPH - 25 PSF 100 MPH - 35 PSF	5 8 12	6 6 6	22 28 36

Note:

1. Side tie downs must be within 24" of the end of the chassis beam.
2. End tie downs can be located within 18" of the center line of each chassis beam.
3. One tie down is required for each end of each "I" Beam.



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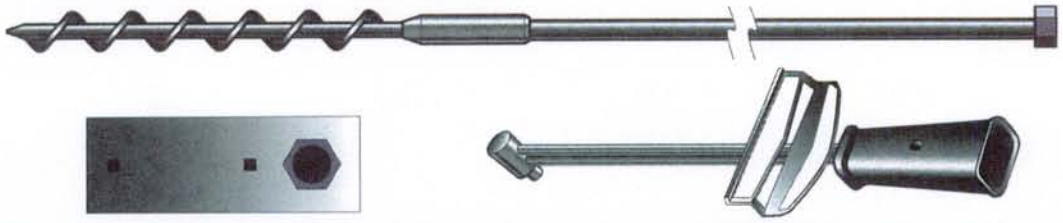
GROUND ANCHOR INSTALLATION INSTRUCTIONS

NOTE: 1) The tensioning bolt can be inserted in the head from either side.
2) In areas of severe cold weather, where possible damage could occur from frost heave, the home owner should be prepared to adjust tension on the straps to take up slack.

Ground anchors come in a variety of lengths and designs. Always test the soil with a "soil test probe" prior to any anchor installation. This will determine the proper anchor for the soil condition.

WARNING! Prior to any anchor installation, determine that the anchor location around the home will not be close to any underground electrical cables, water lines or sewer pipes. Failure to determine the location of electrical cable may result in serious injury or death.



SOIL CLASSIFICATION CHART

SOIL CLASS	SOIL DESCRIPTION	ALLOWABLE FOUNDATION PRESSURE (psf)	TEST VALUE	RECOMMENDED ANCHOR	RECOMMENDED STABILIZING DEVICES
1	Crystalline bedrock	12,000	N/A	OT36CDP	N/A
2	Sedimentary and foliated rock	4,000	550 in. lbs.	OT3044AP *OT3044BP *OT3646BP	
3	Sandy gravel and/or gravel (GW and GP)	3,000	350 to 550 in. lbs.	OT3044AP *OT3044BP (C/Z) *OT3646BP (C/Z) OT486A OT486B	
4	Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM AND GC)	2,000	276 to 350 in. lbs.*	*OT3646BP (C/Z) OT486AP OT486BP OT486A (Galv.) OT486B (Galv.)	
5	Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH and CH)	1,500	175 to 275 in. lbs.**	OT607B (Galv.)	

*These anchors can be used with Quick Cap/Anchor model # OTCAP1
**Below 175 in. lbs., a professional engineer should be consulted.

REMEMBER: Each State, County, or Municipality may require a specific anchor from the groups shown for each soil classification. Check State & local regulations first.

NOTE: Many anchors are designed for particular soil condition(s) and are unacceptable for use in other soil types. We have listed the soils for which each anchor is designed and approved. Soil classifications are taken from the "standard for the installation on mobile homes." Each anchor listed meets ANSI A225.1 and ASTM D3953.91 codes.

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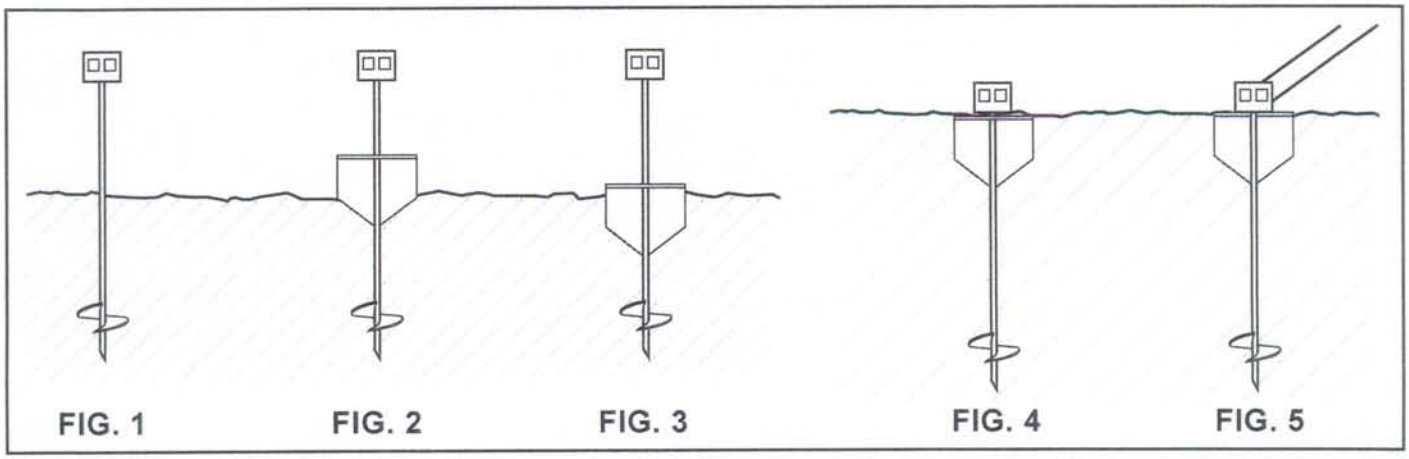
INSTALLATION INSTRUCTIONS
OTI AUGER ANCHOR



1. Attach anchor to machine (two person operation), place anchor in proper position in line with the strap.
2. Install (FIG. 1) the anchor into the ground leaving 14" - 16" of the rod exposed.
3. Place the stabilizing plate (FIG. 2) in front of the shaft in the direction of pull. Always remove vegetation under the stabilizing plate.
4. Drive the stabilizing plate into the ground (FIG. 3)
5. The anchor is then turned into the ground (FIG. 4) to a point where the bottom of the tension head is at or slightly below ground level. Engineered to allow ground anchor to be installed at a slight back angle of 10 degrees.
6. Use Galvanized Strapping page for installation instructions for proper tensioning on anchor and stabilizer plate (FIG. 5)

IMPORTANT NOTES

- Anchors must be approved by the authority having jurisdiction.
- Anchors must be installed in the correct soil types (classes 2-3-4).
- When the rod is installed vertically with no stabilizer plate, the maximum allowable working load on a single vertical tie is 3150 lbs.
- When the anchor rod is installed vertically with an OTMSP2P stabilizer plate, the maximum allowable working load on a single vertical tie (or the maximum allowable working resultant load of two ties) is 3150 lbs. between 45 and 90 degrees from horizontal.

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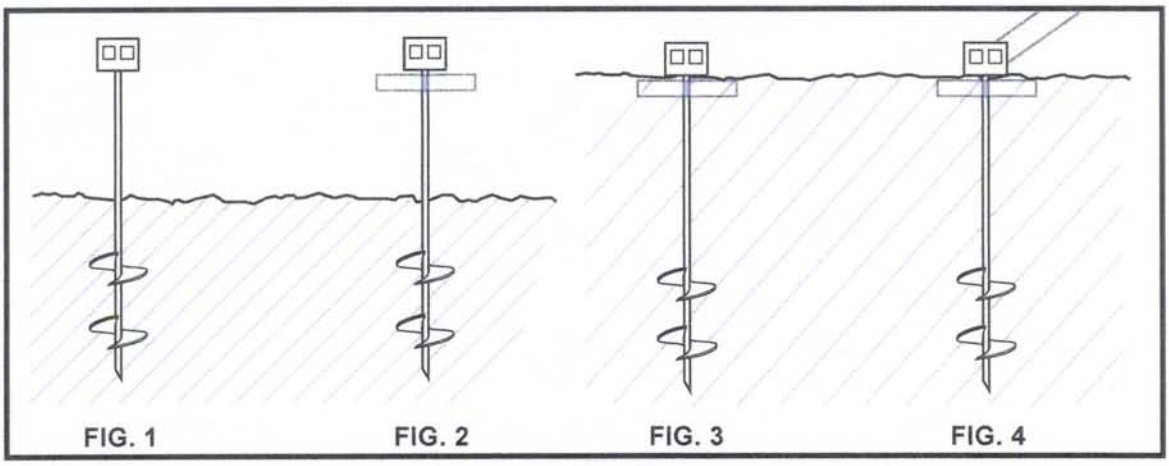
QUICK ANCHOR INSTALLATION INSTRUCTIONS MODEL# OTCAP1
OTI Anchor Model #'s OT3044BP and OT3646BP

1. Attach anchor to drive machine (two person operation). Place anchor in proper position in line with strap.
2. Install the anchor into the ground leaving 14" to 16" of rod exposed. (Fig. 1)
3. Slide the slotted end of the "Quick Cap" over the exposed anchor rod. (Fig. 2)
   *Always remove grass, sod, or loose vegetation under the "Quick Cap."
4. The anchor is then turned into the ground to a point where the bottom of the tension head is at or below ground level. (Fig. 3) Quick Cap slot must be at least 90 degrees away from direction of pull. (Fig. 4) The Quick Cap was engineered to allow ground anchor to be installed at a slight back angle of 10 degrees.
5. Use installation instructions on galvanized strapping page for proper tensioning of anchor and stabilizing device.

PATENT # 6,298, 611B1



IMPORTANT NOTES

- Anchors must be approved by the authority having jurisdiction.
- Anchors must be installed in the correct soil types (Classes 2, 3, or 4).
- OT3646BP: In class 4, the soil torque value must be 276 in. lbs. or greater at the stabilizer device depth and the soil torque value must be 276 in. lbs. or greater at the bottom helix depth. In class 3 soil: OT3646BP or OT3044BP, the soil torque value must be 350 in. lbs. or greater at the stabilizer device depth and the soil torque value must be 350 in. lbs. or greater at the helix depth.
- When the rod is installed vertically with no stabilizer plate, the maximum allowable working load on a single vertical tie is 3150 lbs.
- When using a fixed or attachable cap stabilizer, the maximum allowable working load on a single tie (or the maximum allowable working resultant load of two ties) is 3150 lbs between 45 and 90 degrees from horizontal.

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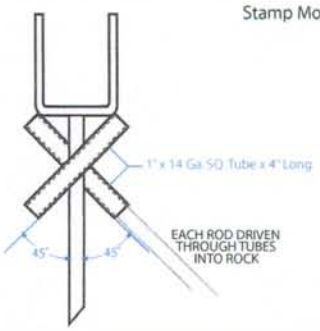
GROUND ANCHOR INSTALLATION INSTRUCTIONS

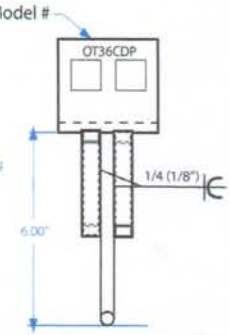
CROSS DRIVE ROCK ANCHOR (Model# OT36CDP)

1. Drill a 5/8" diameter hole 5 1/2" deep, on a 90 degree angle on center of anchor location, for pilot stud into hole.
2. Drill two - 3/4" diameter holes in rock at 45 degree angles, using anchor head as a location guide.
3. Place rod through the top of (1) square tube and into hole.
4. Rod must be driven into rock at least 24" in order to achieve minimum allowable pullout resistance.
5. Place the second rod through the top of the remaining tube.
6. Distance from the square tubing to the rock surface shall not exceed 1".

APPROVED FOR SOLID ROCK ONLY

NOTE: The maximum allowable working load of a single tie (or the maximum allowable resultant load of 2 ties) is 3150 lbs. between 45 and 90 degrees from horizontal.

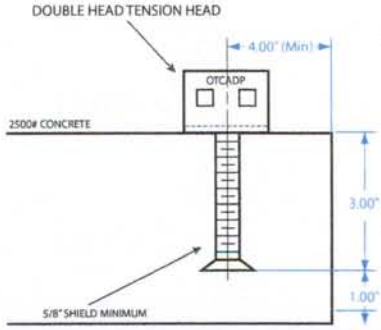


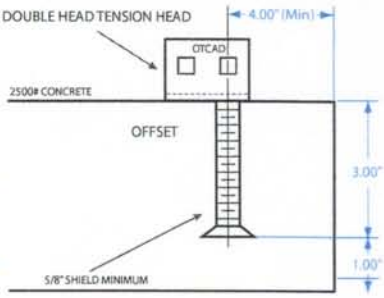


CONCRETE DRY SET INSTALLATION (Model# OTCADP or OTCAD Offset)

1. Drill a 21/32" diameter hole 4" from the edge of the slab and insert shield per manufacturers instructions.
2. Place tension head on slab and install 5/8" diameter bolt. (Torque bolt per manufacturers instructions.)

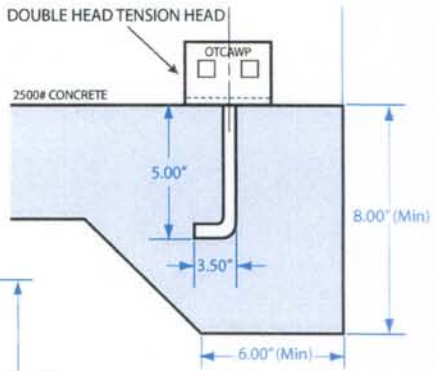
A. Maximum load per anchor = 4725 lbs
B. Minimum slab area per anchor:
4" slab - 95 sf
6" slab - 65 sf
8" slab - 48 sf

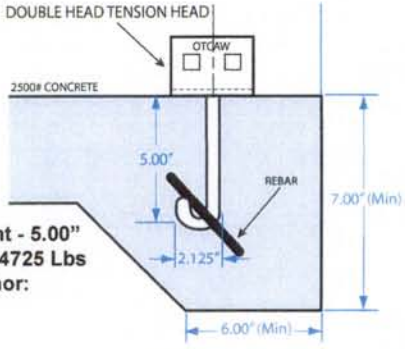


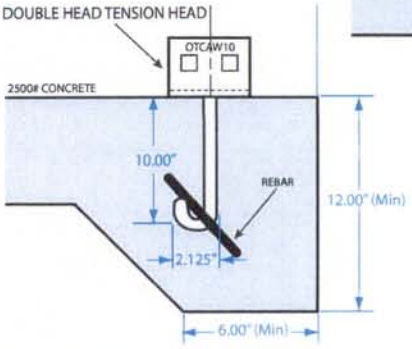


CONCRETE WET SET INSTALLATION (Model# OTCAWP, OTCAW or OTCAW10)

1. Concrete slab or footer must allow 4725 lbs. of vertical tension on anchor without lifting, assuming that the concrete weighs 150 lbs per cubic foot.
2. Concrete must be a minimum thickness to allow at least 2" of concrete below bottom of rod at anchor location.
3. Insert anchor into wet concrete so that the bottom of the anchor head is flush with the concrete.







A. Minimum anchor embedment - 5.00"
B. Maximum load per anchor - 4725 Lbs
C. Minimum slab area per anchor:
4" slab - 95 SF
6" slab - 65 SF
8" slab - 48 SF

NOTE: OTCAW & OTCAW10 are rebar anchors

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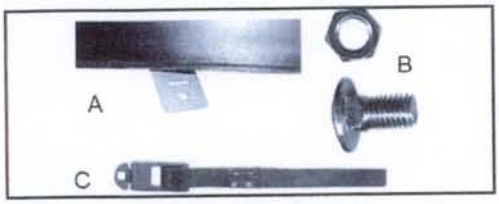
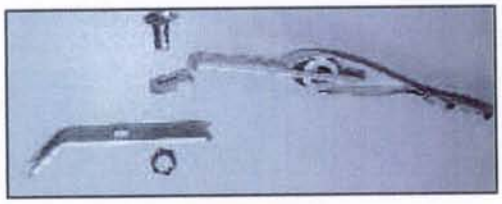
LONGITUDINAL FRAME CONNECTIONS MODEL# OTQC or OT 2002

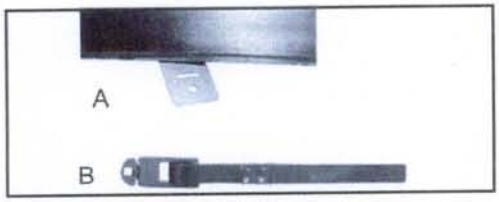


A = Typical longitudinal bracket installed by home manufacturer.
B = Bolt and Nut
C = Quick Connector with factory installed strap.

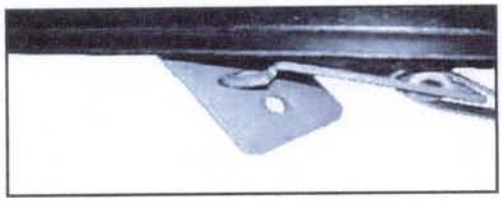


STEP 1: Locate the longitudinal bracket installed by home manufacturer, insert bolt through hole in Quick Connector then through hole in bracket.
STEP 2: Place nut on bolt and tighten.

STEP 3: Refer to strapping page for proper installation of strap.



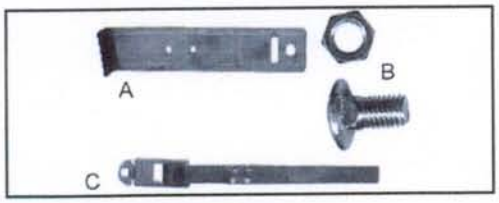
A = Typical longitudinal bracket installed by home manufacturer.
B = Quick Connector with factory installed strap.



STEP 1: Locate the longitudinal bracket installed by home manufacturer, insert Quick Connector into bracket slot at 45 degree angle.

STEP 2: Turn Quick Connector until locked into position.
STEP 3: Refer to strapping page for proper installation of strap.

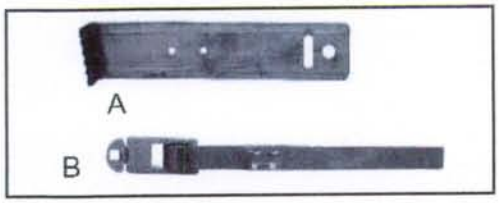
SIDEWALL FRAME CONNECTIONS MODEL# OTQC or OT 2002



A = Typical sidewall bracket installed by home manufacturer.
B = Bolt and Nut
C = Quick Connector strap with factory installed strap.

STEP 1: Locate the sidewall bracket installed by home manufacturer, insert bolt through hole in Quick Connector then through hole in bracket.

STEP 2: Place nut on bolt and tighten.
STEP 3: Refer to strapping page for proper installation of strap.



A = Typical sidewall bracket installed by home manufacturer.
B = Quick Connector strap with factory installed strap.

STEP 1: Locate the sidewall bracket installed by home manufacturer, insert Quick Connector into bracket slot at 45 degree angle.

STEP 2: Turn Quick Connector until locked into position.
STEP 3: Refer to strapping page for proper installation of strap.

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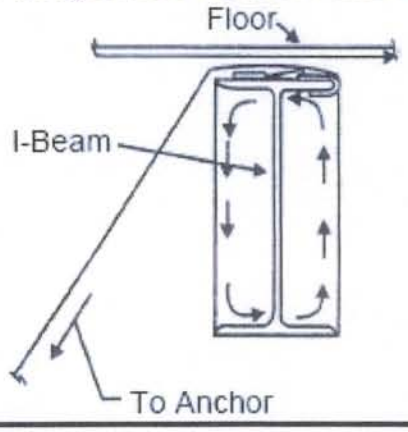
I-BEAM FRAME CONNECTIONS

FRAME TIE (OTFT-1)

STEP 1: Attach frame clamp (hook) inside top flange of home frame.
STEP 2: Place strap between the frame and home as shown.
STEP 3: Pull strap tight and attach to the anchor tension head. (Refer to strapping page for proper installation of strap.)
NOTE: The frame tie has an allowable working load of 3150 lbs., with no more than 2% elongation and shall withstand a 50% overload (4725 lbs. total)

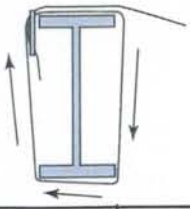
OTFT-1 with factory Installed strap

Enlarged End View of I-Beam



DOUBLE SLOTTED BUCKLE (OTST-1)

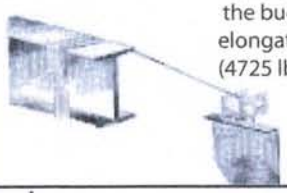
OTST-1 (without factory Installed strap)



STEP 1: Thread frame tie strap through buckle as shown.
STEP 2: Thread long end of strap between the frame and floor of home.
STEP 3: Ensure proper strap tension. (Refer to strapping page for proper installation of strap.)

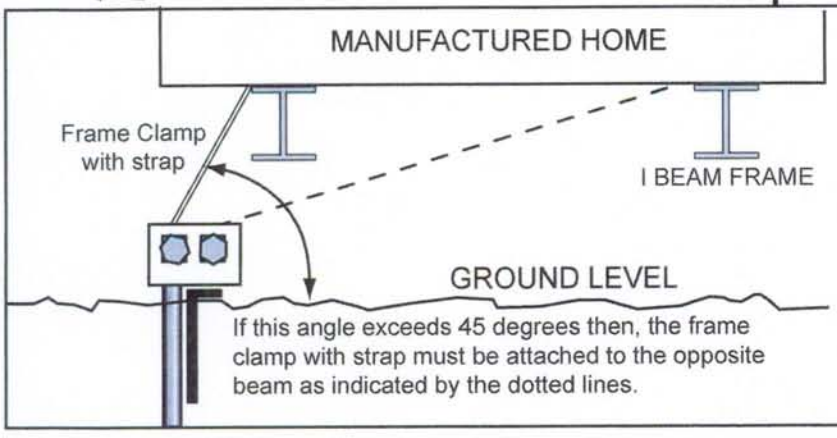
NOTE: The maximum allowable working load capacity of the strap woven through the slots in the buckle is 3150 lbs., with no more than 2% elongation and shall withstand a 50% overload (4725 lbs. total)

OTST-1 (with factory Installed strap)



STEP 1: Install strap by pushing the end of the strap between the inside of the frame I-beam and the floor.
STEP 2: Position the buckle at the upper end of the I-beam frame. Wrap the end of the strap through the slot in the buckle as shown. Push the end of the strap in between the I-beam and floor.

NOTE: The maximum allowable working load capacity of the strap woven through the slots in the buckle is 3150 lbs., with no more than 2% elongation and shall withstand a 50% overload (4725 lbs. total)



1) The tensioning bolt can be inserted in the head from either side.
2) In areas of severe cold weather, where possible damage could occur from frost heave, the homeowner should be prepared to adjust tension on the straps to take up slack.

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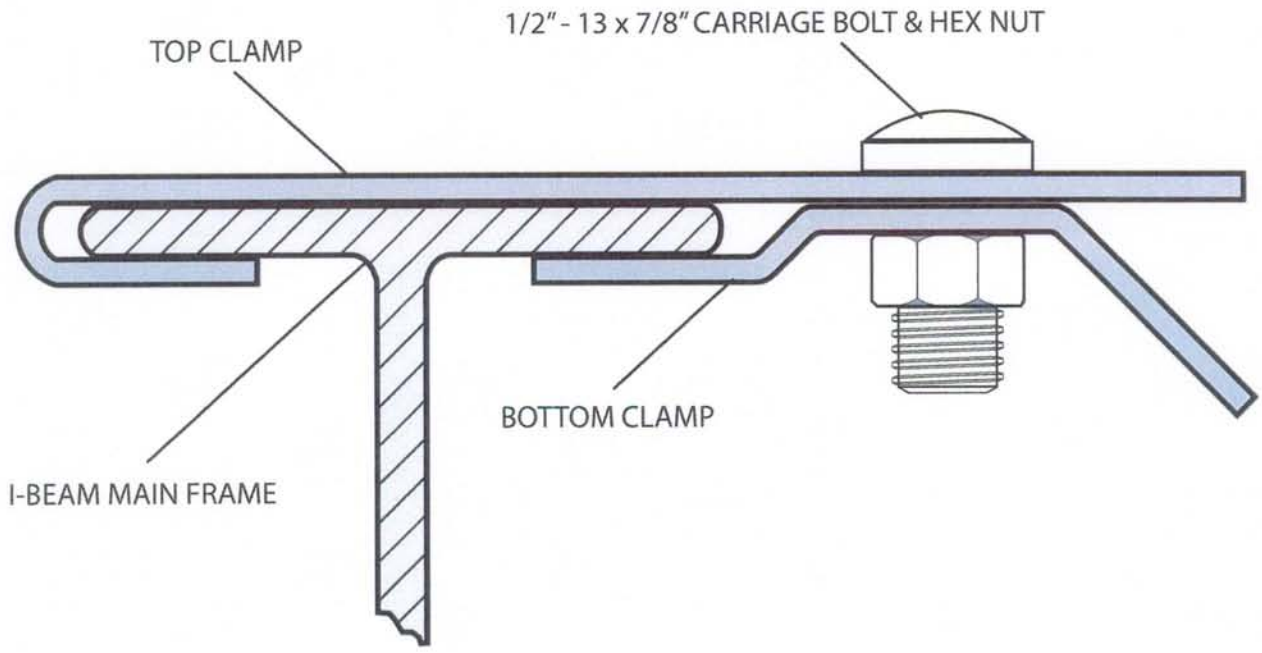
SWIVEL FRAME TIE

Model # OTSFT



STEP 1: Place top clamp over the top of the I-beam.

STEP 2: Place the carriage bolt in the first exposed hole closest to the I-Beam. (Top clamp works on I-beam sizes 2 3/4" through 4".)

STEP 3: Attach the bottom clamp (with pre fabricated strap) by tightening the carriage bolt and hex nut.

STEP 4: The SWIVEL FRAME TIE and attached strap must be perpendicular to the I-BEAM and is not designed to resist wind load on an endwall of a manufactured home.

NOTE: The maximum allowable working load capacity of the OTSFT is 3150 lbs., with no more than 2% elongation and shall withstand 50 % overload (4725 lbs.).

Fastener required to assemble both parts 1/2" - 13 x 7/8" grade 2 carriage bolt and hex nut (abstract of SAE J429 1985) coating ASTM standard B633-85 (re-approved 1994).

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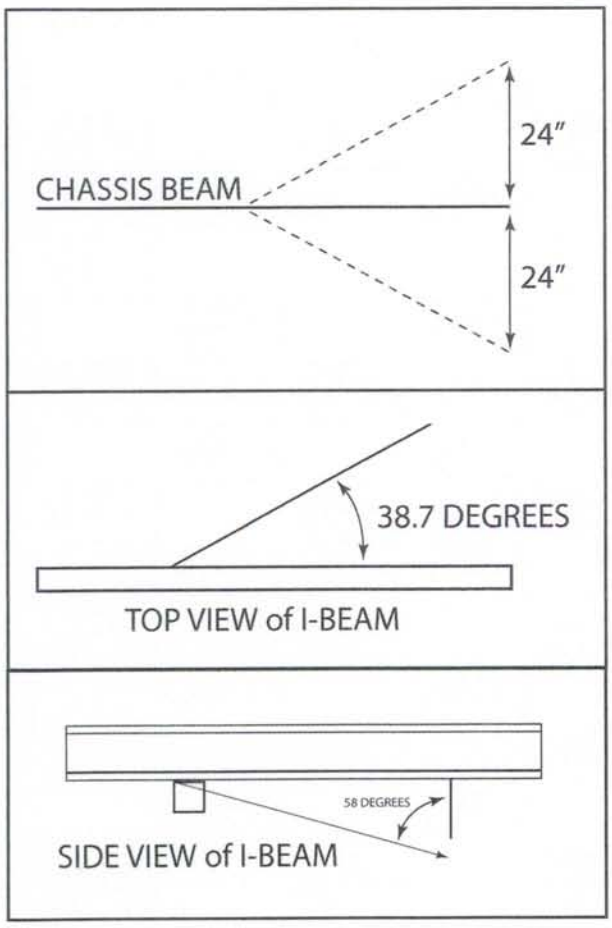
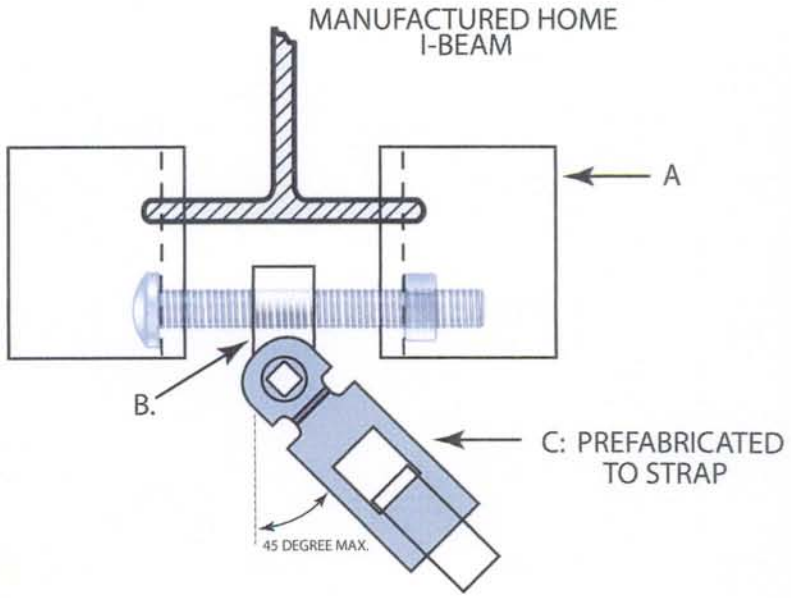
INSTALLATION INSTRUCTIONS

MODEL # OTLT LONGITUDINAL BEAM CONNECTOR
Use with OTQC (Quick Connector Strap)

STEP 1: Attach the longitudinal beam connectors (A) on the bottom flange of the I-beam, tighten beam connectors with carriage bolt & nut 2 1/2 turns past hand tight.
STEP 2: Slide clip (B) over bolt and attach swivel clamp (C) with 1 1/2" carriage bolt & nut and tighten with standard hand tools.
STEP 3: Refer to anchor and strapping installation instructions for proper installation to anchor and strap.

NOTE: 1) End tie-downs shall be located within 24" of either side of chassis beam axis as refer to "*" below.
2) Brackets need to be connected to I-Beam at proper distance from anchor so that correct strap angle can be achieved.
3) TEXAS: OTLT must be installed a minimum of 58 degrees from vertical.





*When following the Texas Generic Standards, the installer must use the numbers and angles of longitudinal ties specified by the Texas Generic Standards. These standards describe longitudinal angles measured only from the vertical ties angled downward from the I-beam. The Texas Generic Standards do not allow longitudinal ties to also be angled sideways.

*When following the home installation instructions, the installer must use the numbers and angles of the longitudinal ties specified by the home installation instructions. The longitudinal tie angles shall not exceed the limits of these OTLT instructions.

TABLE 1

The maximum allowable working load capacity of the OTQC is 3150 lbs., with no more than 2% elongation and shall withstand 50% overload (4725 lbs.)

Fastener required to assemble both parts (1) 4" and (1) 1 1/2" - 13 x 7/8" carriage bolt & hex nut. (abstract of SAE J429 1985) coating ASTM standard B633-85 (re-approved 1994)

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INSTALLATION INSTRUCTIONS
GALVANIZED STRAPPING

STRAP SPLICE

To lengthen strap in the field, a double crimp seal is required. Overlap strap approximately 12" and use two crimp seals evenly spaced, with 2 crimp seals per seal.

2 Seals - 2 Crimps per seal

Seals specifications: Type 1, Finish B, Grade 1, Semi-open crimp seals

Certified Galvanized Strapping

HUD requires that certified strapping must meet ASTM specification. Also strap must be marked every 5 ft.. OTI strapping is marked every 12 inches.

Oliver Technologies, Inc.
Certified TO
ANSI A225.1 ASTM D3953-91

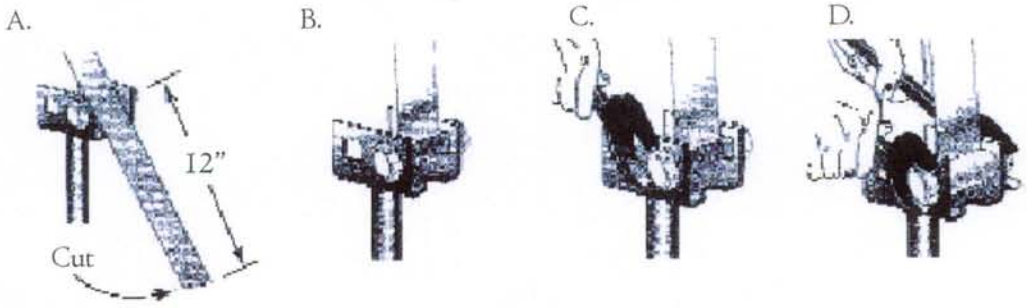
Material: Type 1, Finish B, Grade 1
Dimension of strapping: 1 1/4" width, .035 thickness + or - .005

SPLIT BOLT

Galvanized split bolt: 5/8"x3"x5/8" sq. shoulder with hexagon head, Standard national thread, shaft saw cut.

1. ENSURE PROPER STRAP TENSION:
   A) Insert split bolt into anchor head, attach loosely. Pull strap past bolt and cut strap leaving approximately 12" of strap to wrap onto bolt.
   B) Insert the strap end into the slot in bolt until flush with opposite side of bolt.
   C) Using 15/16" wrench or socket; turn the bolt, winding the strap so that a minimum of four to five complete turns are made and the strap is adequately tensioned so that the anchor is firmly against the stabilizing device in direction of pull. All slack must be removed.
   D) Hold the bolt under tension while tightening the nut, drawing the head of the bolt into the recess, continue to tighten the nut until securely fastened.

NOTE: The tensioning bolt can be inserted in the head from either side.
NOTICE: In areas of severe cold weather where possible damage could occur from frost heave, the homeowner should be prepared to adjust tension on the straps to take up slack.



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Independent Testing Results for Ground Anchors

MODEL #	DESCRIPTION OF TEST	ULTIMATE LOAD	DATE
OT3044AP	vertical pull-out test probe torque value = 400 - 450 inch lbs.	4725	3-14-02
OT3044BP	vertical pull-out test probe torque value = 400 - 450 inch lbs.	4725	3-14-02
OT3646BP	vertical pull-out test probe torque value = 250 inch lbs.	4725	3-14-02
OT486A (Galv)	vertical pull-out test probe torque value = 250 inch lbs.	4725	3-14-02
OT486AP	vertical pull-out test probe torque value = 250 inch lbs.	4725	3-14-02
OT486B (Galv)	vertical pull-out test probe torque value = 250 inch lbs.	4725	3-14-02
OT486BP	vertical pull-out test probe torque value = 250 inch lbs.	4725	3-14-02
OT607B (Galv)	vertical pull-out test probe torque value = 175 - 250 inch lbs.	4725	3-14-02
OTCAP1	45 degree pullout test probe torque value = 250 inch lbs.	4725	3-14-02
OTMSP2P	45 degree pullout test probe torque value = 250 inch lbs.	4725	3-14-02
OTCAWP	vertical pull-out test probe in 2500 PSI cured concrete	4725	3-14-02
OTCADP	vertical pull-out test probe in 2500 PSI cured concrete	4725	3-14-02
OT36CDP	vertical pull-out test probe in solid rock	4725	3-14-02

Note: All above tests were conducted by American Industrial Testing (formerly Tri-State Testing Services)
The individual testing results will be made available upon request.

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American Industrial Testing completed an in-house audit of Oliver Technologies' quality control, quality assurance, procurement, welding procedure, installation instructions, etc. American Industrial Testing in compliance with the rules and regulations of the State of California Department of Housing and Community Development Division of Codes and Standards lists the following products:

Model #	Description
OT3044AP	30" x 5/8" soil anchor with 2 - 4" helix
OT3044BP	30" x 3/4" soil anchor with 2 - 4" helix
OT3646BP	36" x 3/4" soil anchor with 1 - 4" helix and 1 - 6" helix
OT486A	48" x 5/8" soil anchor with 1 - 6" helix (Galv)
OT486AP	48" x 5/8" soil anchor with 1 - 6" helix
OT486B	48" x 3/4" soil anchor with 1 - 6" helix (Galv)
OT486BP	48" x 3/4" soil anchor with 1 - 6" helix
OT607B	60" x 3/4" soil anchor with 1 - 7" helix (Galv)
OTMSP2P	11" Stabilizer Plate
OTMSP1G	17" Stabilizer Plate (Galv)
OTCAP1	Stabilizer Device (Cap)
OT36CDP	30" Cross Drive Rock Anchor
OTCADP	Concrete Patio Anchor (Dry Set)
OTCAWP	Concrete Anchor (Wet Set)
OT Crimp Seal	Crimp Seal
OTST-1	Buckle
OTS/B	Slotted Bolt & Nut (Split Bolt)
OTGALST37	1-1/4" x 37' Galvanized Strap
OTGALST600	1-1/4" x 600' Galvanized Strap
OTFT1-5	1-1/4" x 5' Strapping with J-Hook
OTFT1-7	1-1/4" x 7' Strapping with J-Hook
OTFT1-8	1-1/4" x 8' Strapping with J-Hook
OTFT1-10	1-1/4" x 10' Strapping with J-Hook
OTFT1-12	1-1/4" x 12' Strapping with J-Hook
OTFT1-14	1-1/4" x 14' Strapping with J-Hook
OTFT1-18	1-1/4" x 18' Strapping with J-Hook
OTST1-5	1-1/4" x 5' Strapping with Buckle
OTST1-7	1-1/4" x 7' Strapping with Buckle
OTST1-8	1-1/4" x 8' Strapping with Buckle
OTST1-10	1-1/4" x 10' Strapping with Buckle
OTST1-12	1-1/4" x 12' Strapping with Buckle
OTQC1-5	1-1/4" x 5' Strapping with Side Wall Quick Connector (large or small)
OTQC1-7	1-1/4" x 7' Strapping with Side Wall Quick Connector (large or small)
OTSFT1-5	1-1/4"x 5' Strapping with Swivel Frame Tie PLUS Top Clamp
OTSFT1-7	1-1/4"x 7' Strapping with Swivel Frame Tie PLUS Top Clamp
OTSFT1-8	1-1/4"x 8' Strapping with Swivel Frame Tie PLUS Top Clamp
OTSFT1-10	1-1/4"x 10' Strapping with Swivel Frame Tie PLUS Top Clamp
OTSFT1-12	1-1/4"x 12' Strapping with Swivel Frame Tie PLUS Top Clamp
OTLT	Longitudinal Tie (for Side Wall Quick Connector)

Should you have any questions concerning this report please contact Will Jackson - Assistant Manager
American Industrial Testing - 5101 Wilfong Rd, Memphis, TN 38134 (901) 373-6992

State of California
Business, Transportation and Housing Agency
Department of Housing and Community Development
Division of Codes and Standards

APPLICATION FOR STANDARD PLAN APPROVAL

12812

(SEE REVERSE SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM)

Check appropriate box(es):

SECTION 1.
Standard Plan Approval (SPA) Requested:

- [ ] Accessory Building or Structure
- [ ] Foundation System
- [X] Engineered Tiedown System

Type of Accessory Building or Structure

- [ ] Awning
- [ ] Cabana
- [ ] Porch
- [ ] Garage
- [ ] Enclosure
- [ ] Carport
- [ ] Ramada
- [ ] Other
- [ ] Storage Building

Service Requested:

- [ ] New Application
- [X] Renewal
- [ ] Resubmission
- [X] Revision
- [ ] Change of Name/Ownership

Type of Unit:

- [ ] Manufactured Home/Mobilehome
- [ ] Commercial Modular

Drawing Number: Pages (1-12)

Model Number:

Product Name: Engineered Tie Down System

Standard Plan Approval Number
(If previously issued by the Department)
ETS - 140

DEPARTMENT USE ONLY

Collection No. 5793441
Date 5/26/09
Application Fee $ 203.00
Renewal Fee $ 203.00
Resubmission Fee $ 10.00
Revision Fee $ 203.00
Change of Name/ Ownership $ 10.00
+203 +2
Plan Approval Fee (First Hour) $ 203.00
Other
TOTAL 406 609

SECTION 2. APPLICANT INFORMATION Jared Rose - contact person

Applicant Name Oliver Technologies, Inc. Telephone Number 800.284.7437 ext 711
Address PO Box 9 City Hohenwald Zip 38462
Architect/Engineer Name Ray Tucker, PE Telephone Number 310-809-2544
Address 2117 W. 25th St #1 City San Pedro CA Zip 90732
License/Registration Number CA 26070

SECTION 3. APPLICANT CERTIFICATION

I hereby certify: (1) that the information I have provided is correct; (2) and that I will ensure that the manufacture and/or construction of this system is in compliance with the approved plan and the applicable provisions of Title 25, California Code of Regulations, Division I, Chapter 2.or 2.2. I understand that failure to comply with the terms of approval shall be cause for cancellation of the Standard Plan Approval.

Executed on 4/29/09 (Date) at Hohenwald (City), TN (State)

Signature [signature] Print Name Scott Oliver

NOTE: Standard Plan Approval is valid only when the design is suitable for the locality. Two (2) copies of the approved plan shall be provided with each foundation system or engineered tiedown system sold, for the purpose of obtaining a permit to construct from the enforcement agency.

DEPARTMENT USE ONLY

Date Approved 7,30,09 Standard Plan Approval Number ETS 140 Expiration Date 5,1911

Approved By: [signature]

The Approved plans have been:

- [X] Returned to the applicant
- [ ] Withheld pending payment of fees
- [ ] Other

Comments: Renewal with revisions, new 17" stabilizer plate

HCD 520 (7/04)

TOTAL P.01