

The Sure Safe® EFS system has a HUD Permanent Foundation Guide compliant solution for manufactured homes that can be installed with the home in place. EFS also complies with other national building codes such as the International Building Code. EFS foundations are individually engineered for each site and the specific model of home, insuring that your foundation will satisfy all of the requirements for vertical and lateral loads, as well as seismic conditions for your site. The EFS system has no restrictions to wind zone, frost depth or snow loads. EFS transfers all loads evenly along the frames and walls into the ground by utilizing the natural laws of physics. This helps eliminate defects in the home that are associated with inferior foundation systems. The EFS system has no restrictions with regard to width, roof home, roof overhangs, roof pitch, sidewall height or frame spacing; however the maximum pier height is 42 inches. The EFS foundation can be installed in as little as four hours under new and existing homes, with an average savings of thousands of dollars over other foundations, offsetting the added costs now required by HUD, Fannie Mae, Freddie Mac and FHA. EFS engineers are registered in 40 states at present, and use affiliated engineers in states where not yet registered.

PLEASE NOTE, ADDITIONAL ENGINEERING FEES MAY APPLY WHERE THIRD PARTY (DAPIA) APPROVAL IS REQUIRED BY LOCAL JURISDICTION.

The following are the locations for additional information about Sure Safe®:

Sure Safe® New Manufactured Homes

<http://www.suresafe.com/New%20Manufactured%20Home%20Foundation%20Engineering%20Order%20Form.pdf>

Sure Safe® Existing Manufactured Homes

<http://www.suresafe.com/Existing%20Manufactured%20Home%20Foundation%20Engineering%20Order%20Form.pdf>

Training Video:

http://suresafe.com/HUD_2007.htm



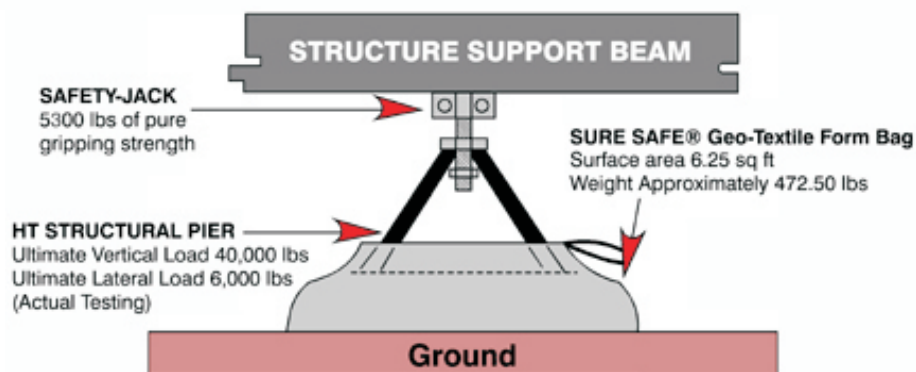
Technician completes bolting the Sure Safe steel buttress to the steel chassis beam under a HUD-Code home. Note how the base of the galvanized steel buttress is enclosed by the patented geotextile form bag.



The concrete fills the bag forming a solid concrete attachment measuring approximately 6-1/4 sq. ft. At the right one of the temporary support jacks is seen which is utilized to level and hold the home firmly until the concrete hardens in the permanent buttress system members.



Close-up shows how concrete completely fills the geotextile bags and seeps through the bottom to form a concrete connection to the earth.



Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation Systems are engineered to be site, soil and model specific . .

The site and model specificity of the Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation System means that all engineering is geared towards meeting live and dead loads of the home along with the specific site conditions such as soil, earthquake, hurricane, frost heave, snow load, etc. Sure Safe® is also the only foundation that can be retrofitted on existing manufactured homes in compliance with IBC and HUD building codes without moving or lifting the home. AND, due to the superior structural performance of manufactured homes installed on Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation System, special financing is now in the offering (the "MS Select Program") that will allow homes that are installed on Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation Systems to be appraised just like site built homes!

Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation Systems can be installed in under 4 hours at 1/3 the cost of any IBC/HUD compliant foundation today!

Since its introduction, the Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation System has raised considerable excitement with engineers, architects, developers and building officials. This is because the natural forces of gravity govern the installation of the Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation System. When completed each structural pier column carries precisely the same load, no more, no less. The Sure Safe® EFS Steel Buttress™ Manufactured Home Foundation System is the logical choice for permanent foundations in the manufactured home industry today. Sure Safe's superior strength, performance, and simplicity of installation can be fully installed on existing homes and new sets in less than four hours. . . at one-third the cost of any IBC/HUD compliant foundation today!

GENERAL CONDITIONS

A. CONDITIONS FOR USE:
The SURE SAFE® STEEL BUTTRESS™ SYSTEM is custom designed for each and every installation and must be accompanied by a set of site specific calculations obtained from SURE SAFE® DESIGN. Each design is sealed by a professional engineer, registered in the state where the system is to be installed.

- B. DESIGN DATA:
- a. MATERIALS:
Steel plates & shapes: ASTM A36
Tube steel: ASTM A50
Bolts: ASTM A307
Welding: AWS E70XX, ER70S-X
Galvanizing: ASTM A390, steel plates, shapes
Concrete: f'c = 2500 psi., min. @ 28 days
 - b. SURE SAFE® products have been laboratory tested with the following results:
Vertical load:
4 leg piers: 12,000 # (safety factor of 3)
Tube piers: 9334# (safety factor of 3)
Lateral load @ top of 4 leg pier: 1967# (s.f. of 3)
Sliding coefficient: 0.67 (s.f. of 2.16)

C. SURE SAFE® PRODUCTS: The installer shall insure that all components used are SURE SAFE® INDUSTRIES INTERNATIONAL, U. S. Patented products, labeled as follows; SURE® FORM BAGS, #5664377, SAFETY JACKS: #4886797, MARRIAGE LOCKS: #4937989

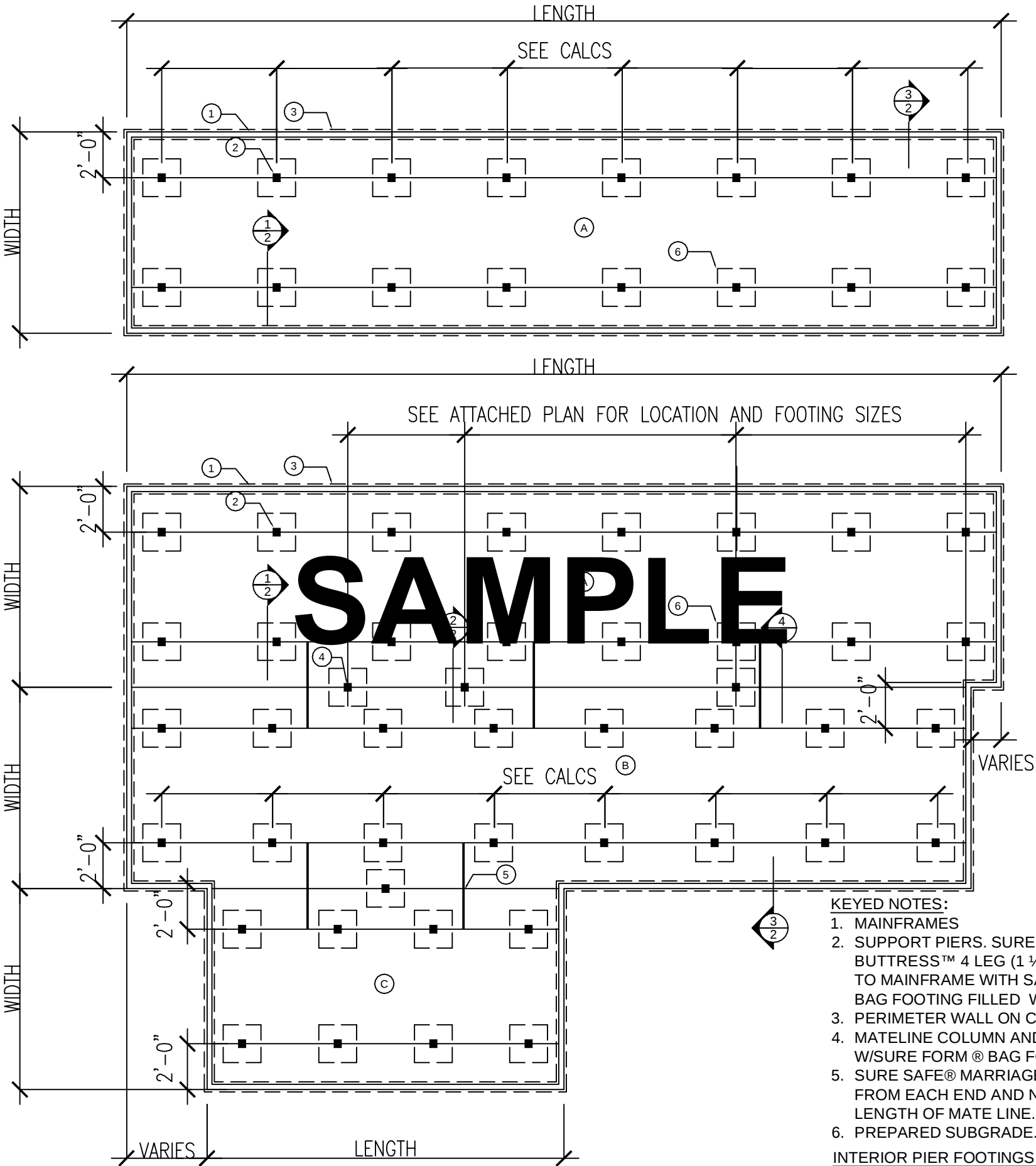
D. SOIL CONDITIONS AND PREPARATION:

- a. All concrete footings must be placed on undisturbed soil (organic matter and sod removed), or engineered fill that has been compacted to a minimum density of 95% to achieve a minimum bearing pressure of 1000PSF. Any existing ground vapor barrier must be cut and removed from below each new support pier.

The engineer cannot be responsible for the ultimate performance of the SURE SAFE® support system on a site having expansive clay, fill or other adverse conditions. Sites containing expansive soils must be investigated by a Geotechnical engineer and the condition mitigated in compliance with his written report and recommendations, prior to the design and installation of the foundation.

TEMPORARY SUPPPORT with TEMP BLOCKS

THE SURE SAFE® TEMPBLOCK SYSTEM is used to temporarily support the home, while the SURE SAFE® STEEL BUTTRESS permanent foundation system is installed. Place as follows: Under each steel beam: within 5 feet of each end and then a maximum of 20 feet apart along the remainder of the beam; Level top of all steel tubes using 1" diameter bolts and nuts. Re level after home is placed as required. REMOVE TEMPBLOCKS for REUSE: after permanent support system is completed and concrete in footings has cured.



- KEYED NOTES:
1. MAINFRAMES
 2. SUPPORT PIERS. SURE SAFE® GALV. STEEL BUTTRESS™ 4 LEG (1 ¼" x 1 ¼" X 1/8") PIER, ATTACHED TO MAINFRAME WITH SAFETY JACK AND SURE FORM® BAG FOOTING FILLED W/ CONCRETE.
 3. PERIMETER WALL ON CONT. CONCRETE FOOTING.
 4. MATELINE COLUMN AND BLOCKING SUPPORT PIERS, W/SURE FORM ® BAG FOOTING FILLED W/ CONCRETE.
 5. SURE SAFE® MARRIAGE LOCKS, LOCATE WITHIN 15' FROM EACH END AND NOT MORE THAN 15' APART FOR LENGTH OF MATE LINE.
 6. PREPARED SUBGRADE.

INTERIOR PIER FOOTINGS
ALL INTERIOR PIER FOOTINGS ARE B30 (30"X30")
W/ NO REBAR UNLESS SPECIFICALLY NOTED AS
B42 (42"X42") W/(3) - #4 BARS E.W. IN BOTTOM AS
SHOWN IN DETAIL 2/2.

SURE SAFE® INDUSTRIES INTERNATIONAL 1257 Simpson Way, Escondido, CA 92029 1.800.322.1999	FOUNDATION PLAN	1 of 2
HUD-CODE FRAME ON PERMANENT FOUNDATION SYSTEM		