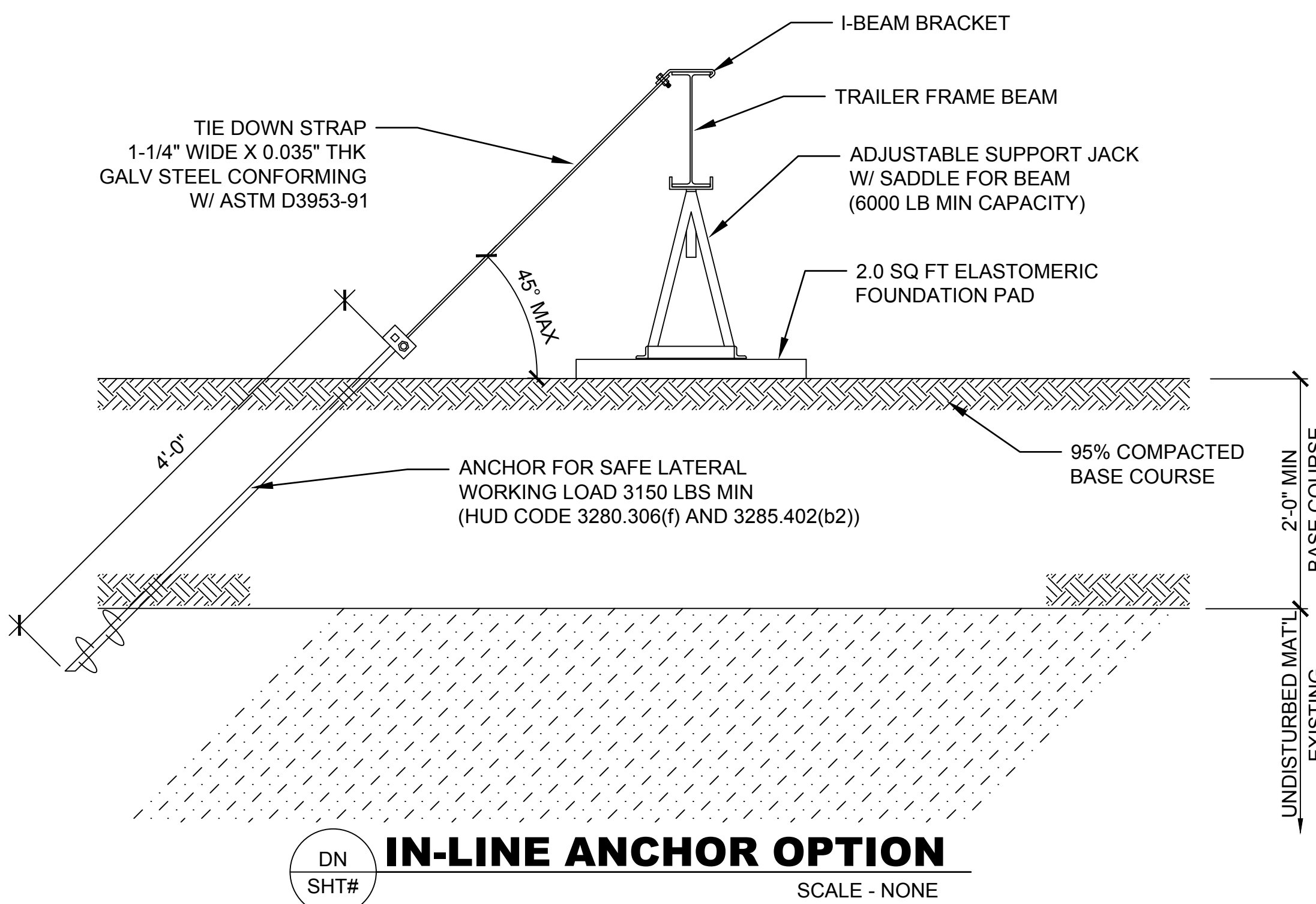
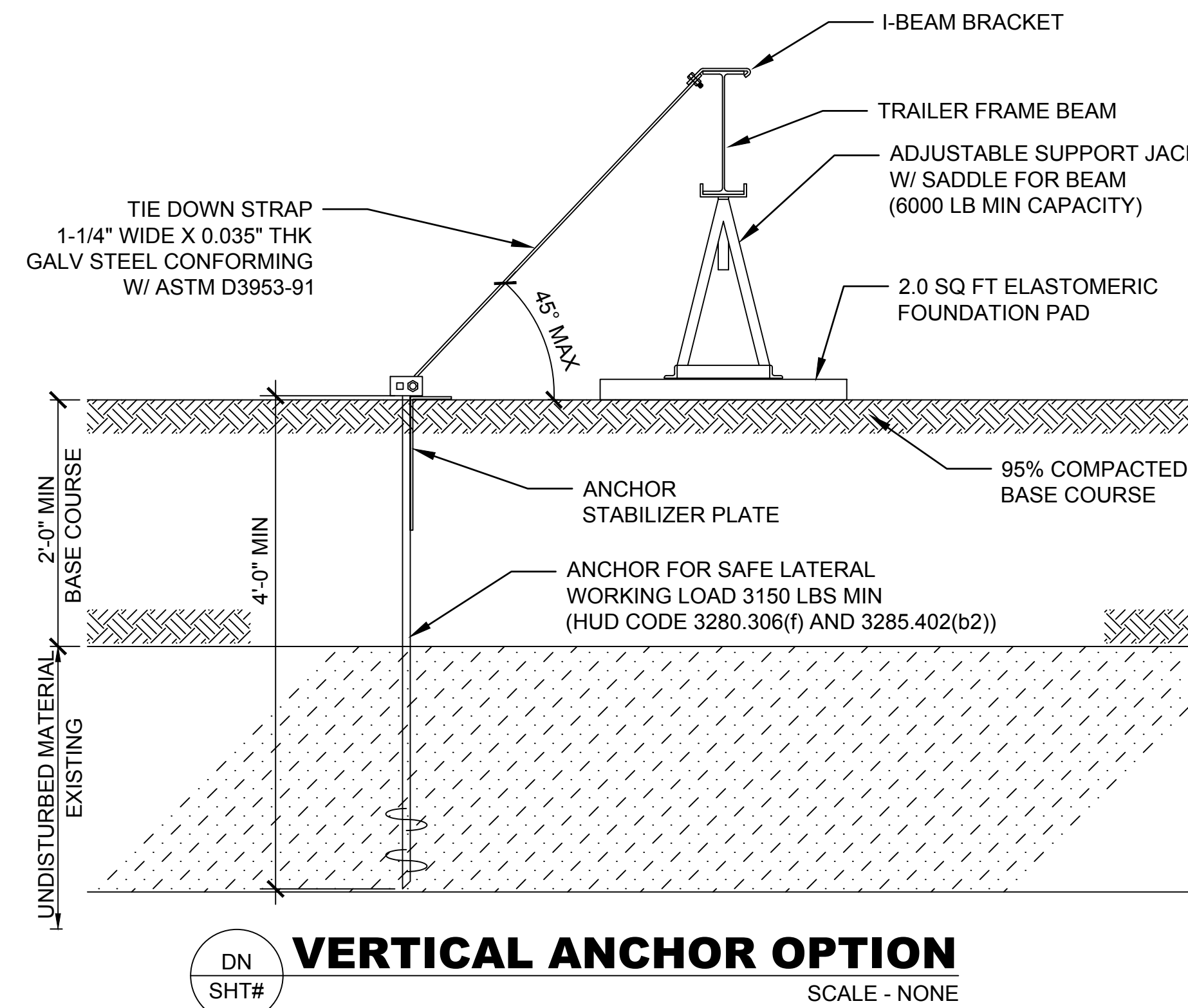
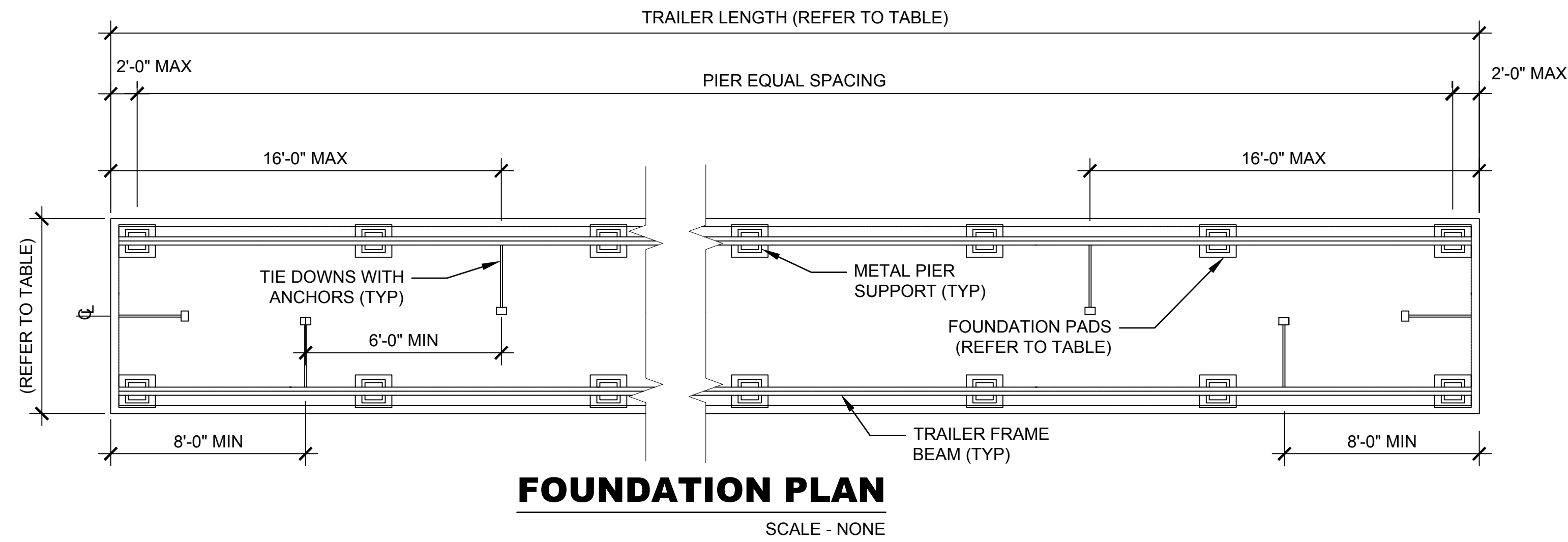


Trailer Size	Total Anchors	No. Anchors Along Long Side	No. Anchors Along Short End	Pad Size ft ²	Bearing Capacity 1500 psf		Bearing Capacity 3000 psf	
					Total No. of Piers	No. Piers Per Side	Total No. of Piers	No. Piers Per Side
					8x30	8	3	1
8x40	8	3	1	2.5	10	5	8	4
				3	8	4		
				4	6	3		
8x50	10	4	1	2	14	7	10	5
				2.5	12	6		
				3	10	5		
8x60	12	5	1	4	8	4	12	6
				2	18	9		
				2.5	14	7		
10x30	8	3	1	2	14	7	8	4
				2.5	10	5		
				3	10	5		
10x40	8	3	1	4	8	4	10	5
				2	18	9		
				2.5	14	7		
10x50	10	4	1	2	22	11	12	6
				2.5	18	9		
				3	14	7		
10x60	12	5	1	4	12	6	14	7
				2	26	13		
				2.5	20	10		
12x30	8	3	1	2	16	8	8	4
				2.5	12	6		
				3	10	5		
12x40	8	3	1	4	8	4	10	5
				2	20	10		
				2.5	16	8		
12x50	10	4	1	3	14	7	12	6
				4	10	5		
				2	24	12		
12x60	12	5	1	2.5	20	10	16	8
				3	16	8		
				4	12	6		



DESIGN CRITERIA:

THIS DRAWING DEPICTS A PIER AND GROUND ANCHOR SUPPORT SYSTEM FOR SINGLE WIDE MANUFACTURED TEMPORARY OFFICE BUILDING UNITS THAT WILL BE INSTALLED AT LOS ALAMOS NATIONAL LABORATORY. PIERS ARE PYRAMID SHAPED OPEN STEEL FRAMES SUPPORTED IN ELASTOMERIC BEARING PADS.

- BASIS OF DESIGN IS CALCULATION CALC-11-00-000-000-0008-S-R-0, 3/7/2012
- PIER AND GROUND ANCHOR LOCATIONS AND SPACING ARE BASED ON GUIDELINES DEVELOPED BY THE MANUFACTURED HOUSING RESEARCH ALLIANCE.
- TIE DOWN ENGINEERING (WWW.TIEDOWN.COM) OR APPROVED EQUAL GROUND ANCHORS MAY BE VERTICAL OR IN-LINE ANCHORS AND MUST BE CAPABLE OF PROVIDING A SAFE LATERAL WORKING LOAD OF 3150 LBS AT EACH ANCHOR LOCATION. ANCHOR STRAPPING MUST COMPLY WITH THE HUD CODE AS REFERENCED IN PART 3280 OF THE MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS AND PART 3285 OF THE INSTALLATION STANDARDS. GROUND ANCHOR HOLDING CAPACITIES MUST BE JUSTIFIED WITH CERTIFYING DOCUMENTATION FROM THE MANUFACTURER. DESIGN ANCHORS FOR SOIL OR WELDED TUFF AS SITE DICTATES.
- THE ALLOWABLE SOIL BEARING CAPACITY MUST BE DETERMINED FOR EACH INDIVIDUAL SITE. THE PIER AND PAD SPACING REQUIREMENTS TABULATED ON THIS DRAWING ARE FOR 1500 PSF AND 3000 PSF BEARING CAPACITIES. ASSUME 1500 PSF SOIL BEARING PRESSURE UNLESS SITE SPECIFIC GEOTECHNICAL INVESTIGATIONS INDICATE OTHERWISE. MANUFACTURED TEMPORARY OFFICE SHALL BE PLACED ON A MINIMUM OF TWO FEET OF BASE COURSE MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY.
- ANCHORS MUST BE SEPARATED BY A MINIMUM OF 6'-0" IN ANY DIRECTION.
- THE EAST END OF TA-54 AND TA-53 ARE LOCATIONS WHERE TOPOGRAPHIC EFFECTS MAY CAUSE AN INCREASE IN WIND SPEED. FOR TRAILERS LOCATED IN THESE AREAS, CONTACT ES-EPD FOR FURTHER ANALYSIS.

CONSTRUCTION CRITERIA:

- FINISH GRADE UNDER PADS MUST BE LEVELED AND EVENLY COMPACTED. MAXIMUM PAD DEFLECTION SHALL BE 1/8".
- PLACE ELASTOMERIC PAD WITH GRID SIDE UP AND SMOOTH SIDE DOWN.
- CENTER STEEL PIER SUPPORT ON ELASTOMERIC PAD AND ENSURE THAT TIE STRAPS ARE TIGHT.

NOTES FOR FIELD

(DO NOT INCLUDE ON CONSTRUCTION DRAWINGS)

- PROVIDE PIER SPACING.
- APPLICABLE TO SINGLE WIDE TEMPORARY TRAILER, STANDARDIZED ANCHORAGES ARE SUFFICIENT FOR WIND LOAD ALONE, AND SEISMIC DOES NOT CONTROL THE LOADING.
- CONSTRUCTION OF THE TRAILER ASSUMED TO BE OF LIGHT FRAMED WALLS WITH SHEAR PANELS OF OTHER MATERIALS.
- TRAILER MUST BE DESIGNED/BUILT TO MEET LANL REQUIREMENTS, ESPECIALLY ESM CHAPTERS 5 & 16.
- SUBMIT INFORMATION ON ANCHORAGE CAPACITY AND INSTALLATION FOR APPROVAL PRIOR TO CONSTRUCTION.

DRAWING DEVELOPED FOR ML-4 INSTALLATIONS

1	10-24-16	UNCLASS	ES	UPDATED TABLE TO CORRECT ERRORS FROM ORIGINAL CALC. ADMIN. CHANGES TO CAD MANUAL REV#5 FORMAT.	SR	GP	AM	GP	TO
NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP

ENGINEERING STANDARDS

FOUNDATION SUPPORT SYSTEM FOR TEMPORARY TRAILERS				DRAWN	R.MARTINEZ
SINGLE WIDE TRAILER REQUIREMENTS FOR IN-SITU SOIL FOUNDATION PLAN AND ANCHOR DETAILS				DESIGN	A.MOSIMANN
				CHECKED	K.SOUZA
				DATE	3-7-12
TA-XX		BLDG XXXX			
SUBMITTED DOUG VOLKMAN		APPROVED FOR RELEASE STANDARDS MANAGER: TOBIN ORUCH			
Los Alamos NATIONAL LABORATORY		P0 Box 1663 Los Alamos, New Mexico 87545		SHEET 1	
D.C.: UNCLASSIFIED		REVIEWER: TOBIN ORUCH		DATE: 3-7-12	
PROJECT ID		DRAWING NO		REV 1	
ST-Z1052-1					

00% REVIEW NOT FOR CONSTRUCTION