

Supplemental Handout

- 1) A doublewide home is a 28 x 60, roof load is 30 psf, with 8" inch eave overhangs. Frame blocking is 6' -0" on center and the soil capacity is 1,500 psf.

What is the pier support load?

What is the minimum footing size?

- 2) A home with a section width of 14' has 8 inch eave overhang, 20 PSF roof load, pier spacing is 6 foot and soil capacity is 1,000 PSF.

What is the pier support load?

What is the minimum footing size?

- 3) A home with a 16 foot section width, 16 inch eave overhang, 40 PSF roof load, pier spacing 8 foot and soil capacity is 1,500 PSF.

What is the pier support load?

What is the minimum footing size?

- 4) A home with 12 foot section width, 24 inch eave overhang, 30 PSF roof load, pier spacing 10 foot and soil capacity 1,000 PSF.

What is the pier support load?

What is the minimum footing size?

- 5) Pier capacity for ridge beam column support. Section width is 13' - 8", roof load is 30 PSF, you are looking at 12' foot spans and soil capacity is 1,500 PSF.

What is the pier support load?

What is the minimum footing size for your marriage line blocking?

- 1) A doublewide home is a 28x60, roof load is 30 psf, with 8" inch eave overhangs. Frame blocking is 6'-0" on center and the soil capacity is 1,500 psf. What is the pier support load? What is the minimum footing size?

Divide sections into halves each section is 14'-0", frame pier load is 4,450 for 6 foot spacing. Table 4-3 use 4,500 footing size will be 21x21.

- 2) A home with a section width of 14' has 8 inch eave overhang, 20 PSF roof load, pier spacing is 6 foot, and soil capacity is 1,000 PSF. What is the pier support load? What is the minimum footing size?

4,000 pier capacity/ 1,000 psf = 4.0 square feet.
4.0 square feet x 144 sq. inches = 576 square inches
Sq. root 576 square inches = 24 x 24 footing size.

- 3) A home with a 16 foot section width, 16 inch eave overhang, 40 PSF roof load, pier spacing 8 foot, and soil capacity is 1,500 PSF. What is the pier support load? What is the minimum footing size?

7,425 | 1,500 pier capacity = 4.95 square feet
4.95 square feet x 144 sq. inches = 712.8 square inches
Sq. root the 712.8 square inches = 26.7 or footing size 27 x 27

- 4) A home with 12 foot section width, 24 inch eave overhang, 30 PSF roof load, pier spacing 10 foot, and soil capacity 1,000 PSF. What is the pier support load? What is the minimum footing size?

6,825 pier capacity/ 1,000 = 6.825 square feet
6.825 x 144 sq. in. = 982.8 square inches
Square root = 31.3 square inches or footing size 31 x 31 (Table 6,825 = 32x32)

- 5) Pier capacity for ridge beam column support. Section width is 13 '-8"', roof load is 30 PSF, you are looking at 12' foot spans and soil capacity is 1,500 PSF. What is the pier support load? What is the minimum footing size for your marriage line blocking? ·

4,100 pier capacity/ 1,500 = 2.73 square feet
2.73 x 144 square inches = 393.6 square inches
Square root = 19.8 square inches or footing size 20 x 20 (Table 4,500 = 21x21)

MINIMUM FRAME PIER CAPACITY TABLE

TABLE 4.1

(FRAME BLOCKING ONLY)

SECTION WIDTH (FEET)	EAVE OVERHANG (INCHES)	ROOF LIVE LOAD (PSF)	MINIMUM PIER CAPACITY (POUNDS)				
			MAXIMUM PIER SPACING (FEET)				
			4	6	8	10	12
12	0	20	2400	3400	4425	5450	6450
		30	2650	3775	4900	6025	7150
		40	2875	4100	5350	6600	7850
	8	20	2500	3550	4600	5650	6700
		30	2750	3925	5100	6300	7500
		40	3000	4325	5625	6950	8250
	16	20	2550	3650	4750	5850	6950
		30	2850	4100	5325	6550	7800
		40	3150	4525	5900	7300	8650
	24	20	2650	3800	4900	6050	7200
		30	2950	4250	5550	6825	8125
		40	3275	4725	6150	7600	9050
14	0	20	2725	3900	5075	6250	7425
		30	3000	4300	5625	6925	8250
		40	3275	4725	6150	7600	9050
	8	20	2800	4000	5225	6450	7650
		30	3100	4450	5825	7200	8550
		40	3400	4925	6425	7950	9450
	16	20	2900	4150	5400	6650	7900
		30	3200	4625	6050	7450	8875
		40	3550	5125	6700	8275	9850
	24	20	2950	4250	5550	6850	8150
		30	3300	4800	6250	7725	9200
		40	3675	5325	6950	8600	10250
16	0	20	3000	4350	5650	6975	8300
		30	3325	4800	6275	7750	9225
		40	3650	5250	6900	8525	10150
	8	20	3100	4450	5800	7200	8550
		30	3425	4950	6500	8000	9550
		40	3750	5450	7150	8850	10550
	16	20	3170	4570	5970	7370	8900
		30	3535	5115	6700	8280	10000
		40	3900	5660	7425	9310	11075

NOTES:

1. MAXIMUM PIER SPACING FOR 8" LONGITUDINAL I-BEAM IS 8'-0"
2. MAXIMUM PIER SPACING FOR 10" AND 12" LONGITUDINAL I-BEAM IS 12'-0"

MINIMUM PIER CAPACITY TABLE
TABLE 4.2
MULTI-SECTION RIDGEBEAM COLUMN SUPPORT

TOTAL WIDTH (FEET)	ROOF LIVE LOAD (PSF)	MINIMUM PIER CAPACITY (POUNDS)								
		MAXIMUM INFLUENCE SPAN (FEET)								
		4	8	12	16	20	24	28	32	36
24	20	1200	2000	2800	3550	4325	5100	5900	6675	7450
	30	1525	2550	3575	4600	5600	6625	7650	8675	9700
	40	1850	3100	4375	5625	6900	8150	9400	10675	11950
26	20	1300	2175	3050	3900	4750	5625	6500	7350	8225
	30	1675	2800	3925	5050	6200	7325	8450	9600	10200
	40	2025	3425	4825	6225	7625	9025	10425	11800	13200
28	20	1375	2275	3175	4100	5000	5900	6800	7700	8600
	30	1750	2925	4100	5300	6500	7675	8850	10050	11225
	40	2125	3600	5050	6525	8000	9450	10925	12400	13850
30	20	1475	2450	3450	4450	5425	6400	7400	8400	9375
	30	1900	3200	4475	5775	7075	8375	9650	10950	12250
	40	2300	3900	5500	7100	8725	10325	11925	13525	15125
32	20	1525	2550	3550	4575	5600	6600	7625	8650	9650
	30	1950	3300	4525	5950	7300	8625	9950	11300	12650
	40	2375	4025	5675	7350	9000	10650	12300	13950	15600

MINIMUM FOOTING SIZE TABLE
TABLE 4.3

PIER CAPACITY (POUNDS)	MINIMUM FOOTING SIZE (OR EQUAL AREA) (INCHES)			
	SOIL BEARING CAPACITY (PSF)			
	1000	1500	2000	4000
600	12x12	12x12	12x12	12x12
800	12x12	12x12	12x12	12x12
1000	12x12	12x12	12x12	12x12
1500	15x15	12x12	12x12	12x12
2000	17x17	14x14	12x12	12x12
2500	19x19	15x15	13x13	12x12
3000	21x21	17x17	15x15	12x12
3500	22x22	18x18	16x16	12x12
4000	24x24	20x20	17x17	12x12
4500	25x25	21x21	18x18	13x13
5000	27x27	22x22	19x19	13x13
5500	28x28	23x23	20x20	14x14
6000	29x29	24x24	21x21	15x15
6500	31x31	25x25	22x22	15x15
7000	32x32	26x26	22x22	16x16
7500	33x33	27x27	23x23	16x16
8000	34x34	28x28	24x24	17x17
8500	35x35	29x29	25x25	17x17
9000	36x36	29x29	25x25	18x18
9500	37x37	30x30	26x26	19x19
10000	38x38	31x31	27x27	19x19
11000	40x40	32x32	28x28	20x20
12000	42x42	34x34	29x29	21x21
13000	43x43	35x35	31x31	22x22
14000	45x45	37x37	32x32	22x22
15000	46x46	38x38	33x33	23x23
16000	48x48	39x39	34x34	24x24
17000	49x49	40x40	35x35	25x25
18000	51x51	42x42	36x36	25x25
19000	52x52	43x43	37x37	26x26
20000	54x54	44x44	38x38	27x27
21000	55x55	45x45	39x39	28x28
22000	57x57	46x46	40x40	28x28
23000	58x58	47x47	41x41	29x29
24000	59x59	48x48	42x42	30x30
25000	60x60	49x49	43x43	30x30

NOTES:

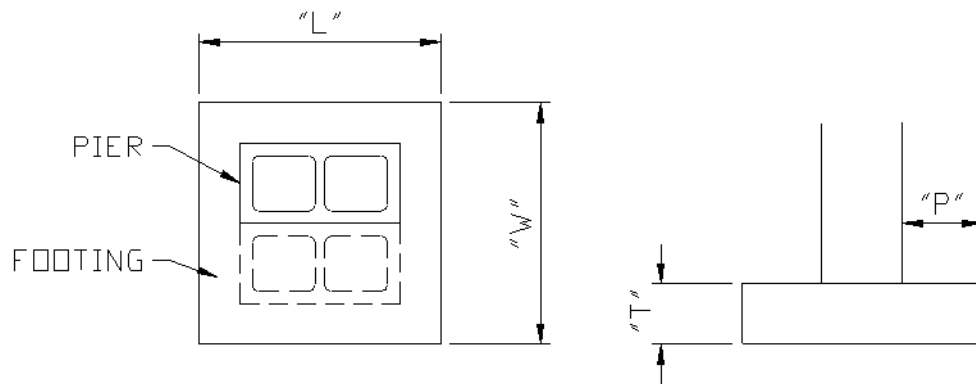
1. FOOTING SIZES SHOWN ARE FOR SQUARE PADS AND ARE BASED ON THE AREA (SQ. INCHES) REQUIRED FOR THE LOAD. OTHER FOOTING CONFIGURATIONS, SUCH AS RECTANGULAR, MAY BE USED PROVIDED THE AREA (SQ. INCHES) IS EQUAL TO OR GREATER THAN THE AREA OF THE SQUARE FOOTING SHOWN IN THE TABLE. FOR EXAMPLE, A 12"x22" (288 SQ. IN.) FOOTING MAY BE USED IN PLACE OF A 16"x16" (256 SQ. IN.) FOOTING. ALSO, TWO 12"x24" PADS MAY BE USED IN PLACE OF ONE 24"x24" PAD. PROJECTION SHALL NOT EXCEED "P".
2. THE FOLLOWING TABLE SPECIFIES THE MAXIMUM FOOTING SIZE FOR VARIOUS FOOTING THICKNESSES. THIS TABLE IS BASED ON UNREINFORCED FOOTINGS. REINFORCED FOOTINGS MAY REQUIRE A SMALLER THICKNESS THAN THAT LISTED BUT MUST BE DESIGNED BY A LICENSED ENGINEER. ALSO SEE SECTION 4.2.1 FOR ALTERNATIVES.

(SEE REVERSE FOR PIER/FOOTING CONFIGURATIONS)

PIER/FOOTING CONFIGURATIONS

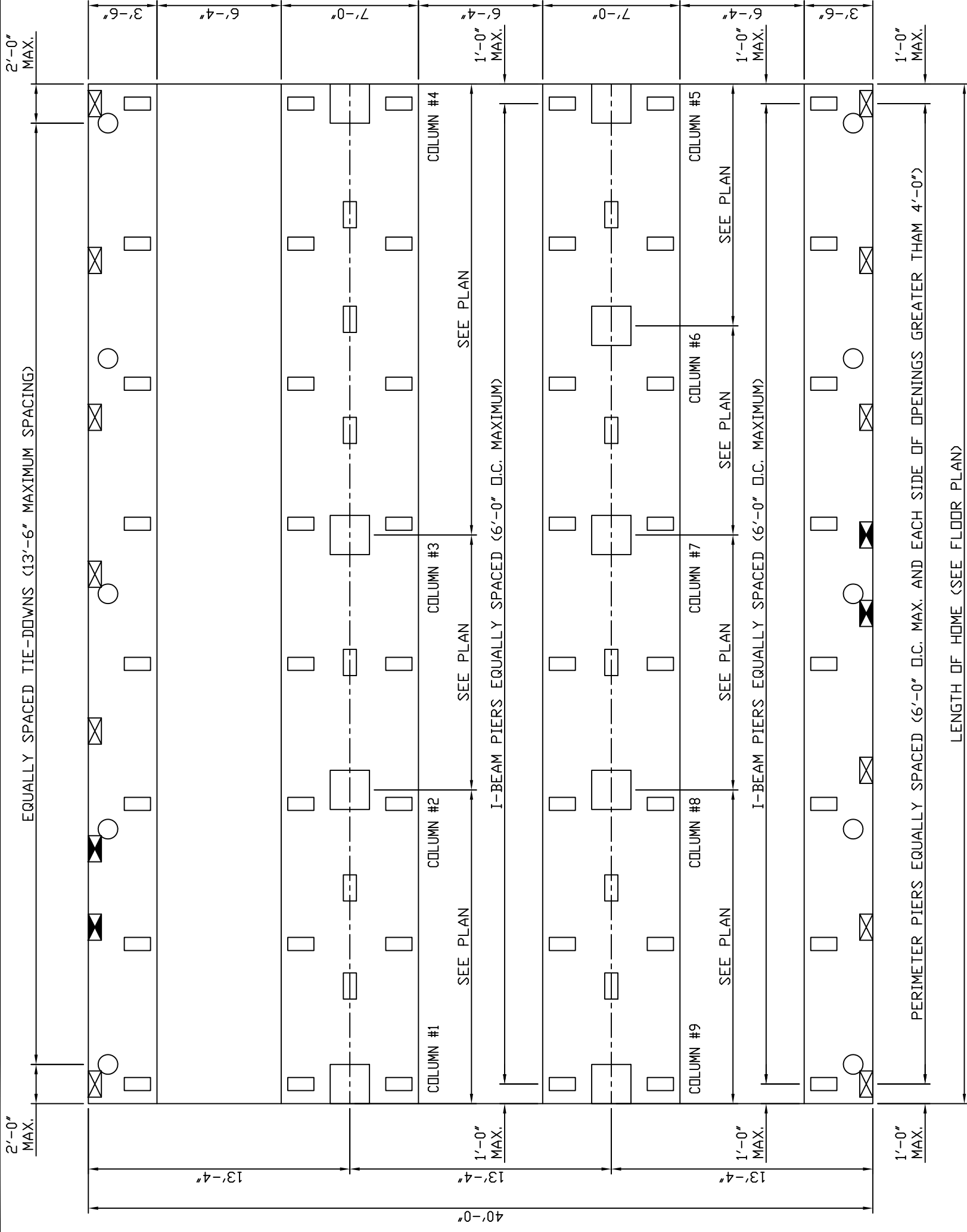
THE FOLLOWING TABLE SPECIFIES THE MAXIMUM FOOTING SIZE FOR VARIOUS FOOTING THICKNESSES. THIS TABLE IS BASED ON UNREINFORCED FOOTINGS. REINFORCED FOOTINGS MAY REQUIRE A SMALLER THICKNESS THAN THAT LISTED BUT MUST BE DESIGNED BY A LICENSED ENGINEER.

FOOTING		SINGLE STACKED	DOUBLE STACKED
T	Pmax	PIERS (W x L)	BLOCKS (L x W)
4"	4"	16"x16"	16"x16"
6"	6 ½"	16"x24"	24"x24"
8"	8 ½"	19"x27"	27"x27"
12"	13"	24"x32"	32"x32"
18"	19 ½"	32"x40"	40"x40"



SUPPLEMENTAL INSTALLATION INFORMATION

The following pages are intended for use as reference to information critical to Installation for a manufactured home. These pages are one manufacturer's method of providing pier load and placement for their homes. The first two pages are generic for a double or triple wide home. Installation Manuals have statements requiring the installer to create a sketch for proper pier placement and capacities. These first two pages are to help with that process for the installer. The remaining pages to this example are home specific information to determine locations for utility drops and concentrated load pier locations along the mating line for the home.



ANCHOR/PIER TYPE SCHEDULE

TRIPLE WIDE PIER AND ANCHOR PLAN VIEW

- SIDEWALL TIE-DOWN ANCHOR
- ⊗ SIDEWALL PERIMETER PIER
- ⊠ SIDEWALL DOOR/WINDOW OPENING PIER
- MAIN I-BEAM PIER
- ▭ MATING LINE INTERMEDIATE PIER
- ▭ MATING LINE BEARING POST PIER

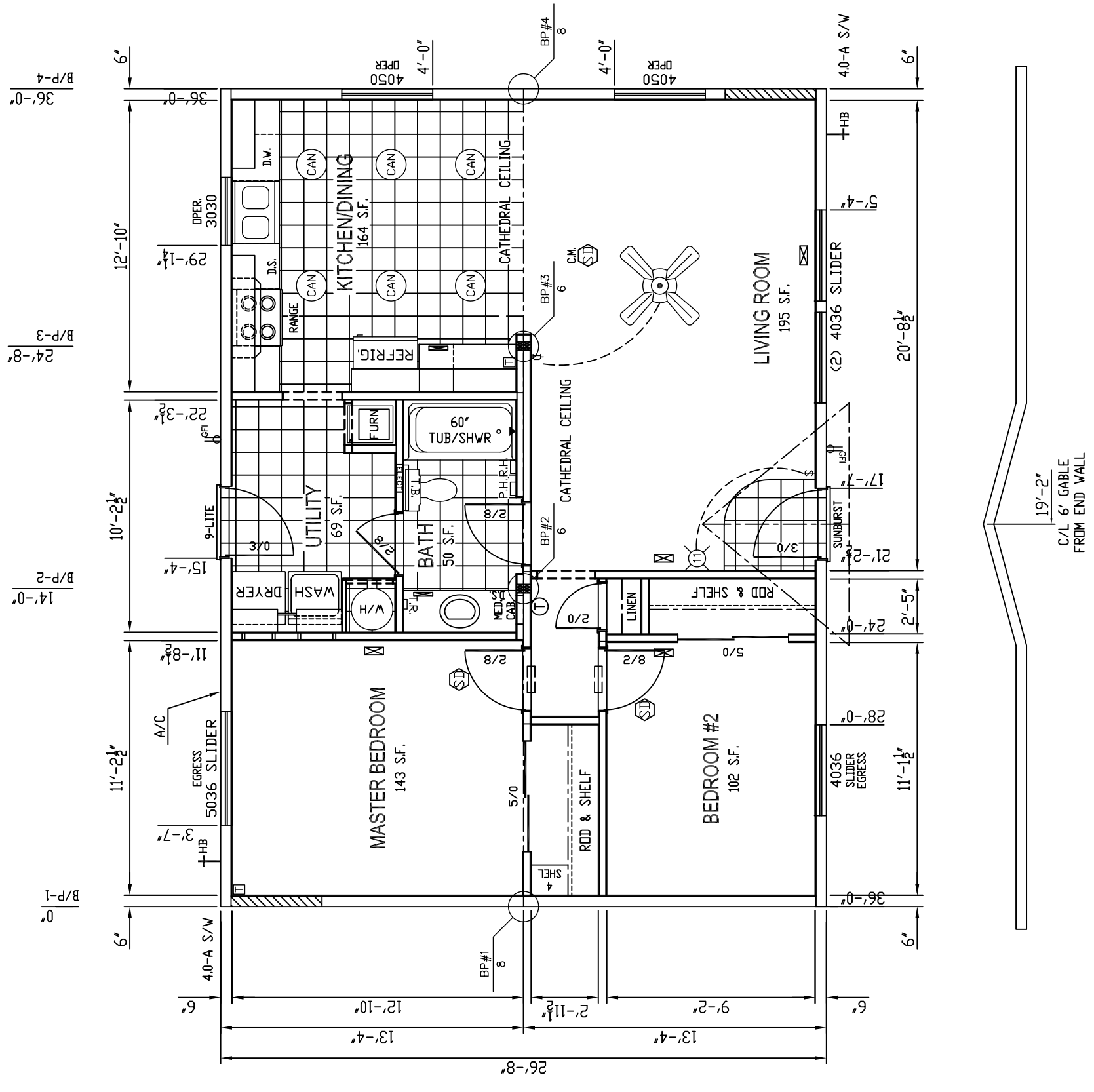
NOTES:
 1. SEE PAGES 22 - 37 & 84 - 96 IN THE INSTALLATION MANUAL FOR ADDITIONAL DETAILS
 2. SPACINGS BASED ON 40 PSI ROOF LOAD AND UP TO 25' HEIGHT FROM GROUND TO STRAP ATTACHMENT.

ALLEY MANUFACTURED HOUSING INC.
 1717 South 4th Street • Summerville, WA 98944
 (509) 839-9409 • FAX (509) 839-9417

DRAWN BY:	CP	TITLE:	CP
DATE:	9-26-11	TYPICAL TRIPLE WIDE PIERS	
REV. BY:	VMH	SECTION:	VMH
REV. DATE:	0-0-00	SET-UP	

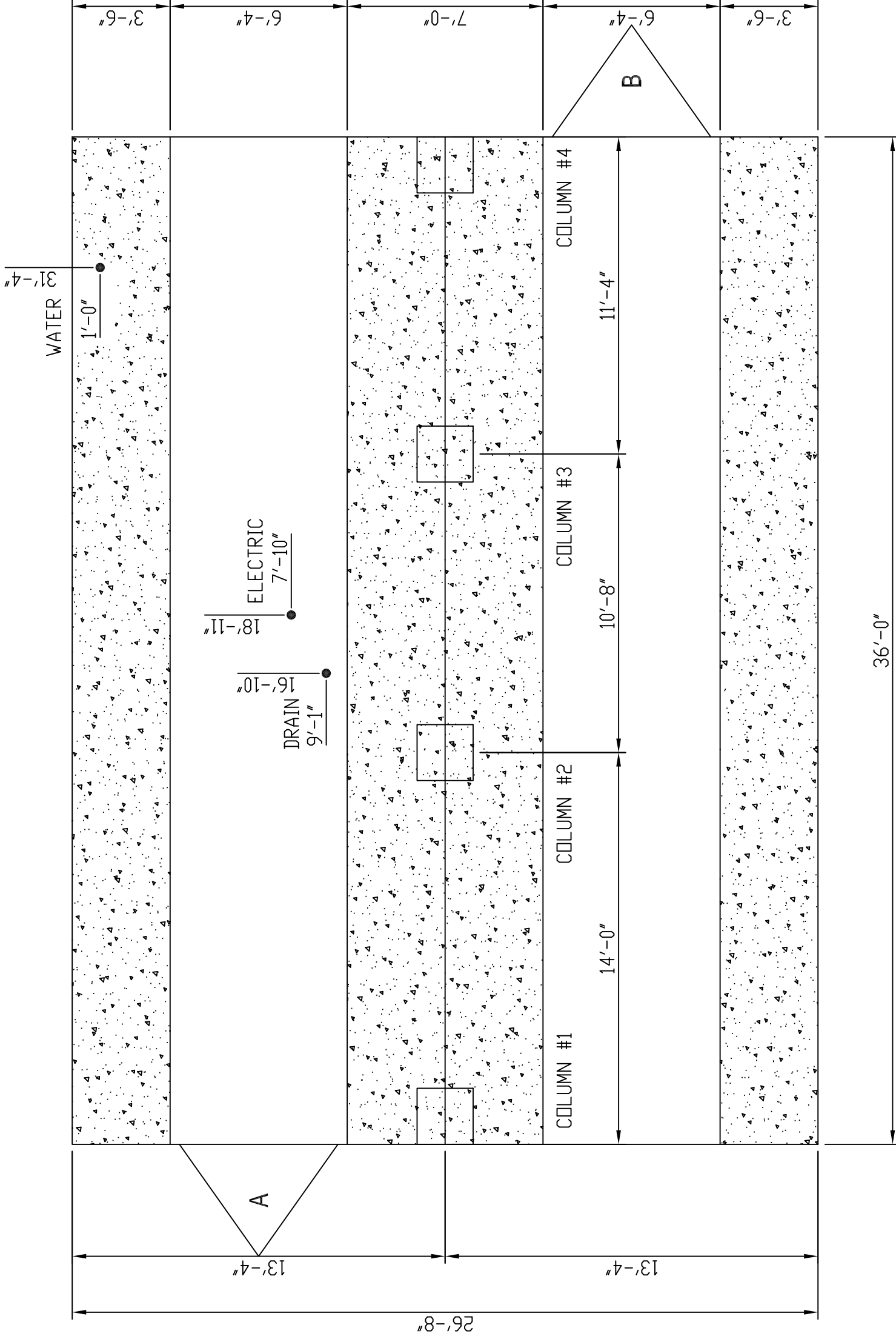
BPA MAPS HOME	109 S.F.
GLAZING	960 S.F.
CONDITIONED FLOOR	0.0 S.F.
SKYLIGHTS	0.0 S.F.
PATIO DOOR	0.0 S.F.
WIRE FOR A/C HEAT PUMP	

SINGLE LAYER BEAM
40 LB ROOF LOAD



VENT-A-RIDGE

 VALLEY MANUFACTURED HOUSING INC. 1717 South 4th Street Sunnyside, WA 98944 MANUFACTURED HOUSING AT IT'S BEST!	DESCRIPTION: <h1>FLOOR PLAN</h1>	ORDER #: <h2>226924</h2>	REV. DATE: 04-13-2022	DRAWN BY: MB DATE: 09-12-2022
			BOX SIZE: 26'-8" x 36'-0"	MODEL: 2801



VALLEY MANUFACTURED HOUSING

1717 S. 4th Street
Sunnyside, Wa. 98944

(509) 839-9409 voice
(509) 839-9417 fax

ROOF LIVE LOAD	40 PSF
ROOF DEAD LOAD	10 PSF
ROOF TOTAL LOAD	50 PSF

UNIT MODEL NUMBER
2801

UNIT SERIAL NUMBER
226924

A & B Section

Column Number	Distance From End	Pier Load (LBS.)	Footing Size	
			1000 PSF	2000 PSF
1	0.00	5332.00	36x26x6	24x20x6
2	14.00	8220.17	36x36x6	24x26x6
3	24.67	7331.50	36x36x6	24x26x6
4	36.00	4443.33	36x26x6	24x20x6