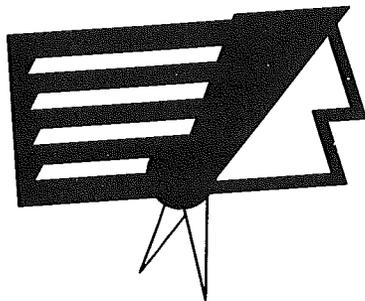


12/21/00

2000 DEC 21 11:03  
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**CHIEF INDUSTRIES, INC.**



**HOUSING DIVISION**

**AURORA INDUSTRIAL SITE**

**CHIEF INDUSTRIES, INC.**  
**HOUSING DIVISION**

**----CONTENTS----**

This booklet contains **Field Installation Specifications**  
for all Chief Industries, Inc., Housing Division  
Double Section Homes, per category as follows:

SECTION I      SERVICE LOCATION - Double Section by Model

SECTION II     PIER CONSTRUCTION - Double Section Homes

**SECTION I**

**SERVICE ENTRANCE LOCATIONS**

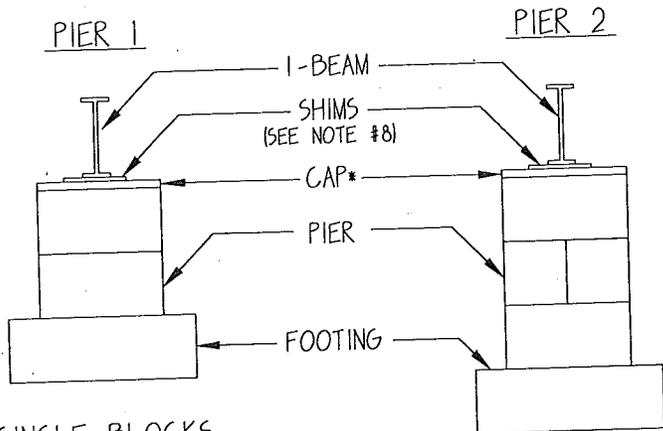
Double Section Homes

**SECTION II**

**PIER CONSTRUCTION**

Double Section Homes

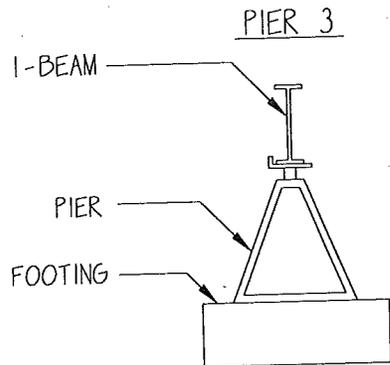
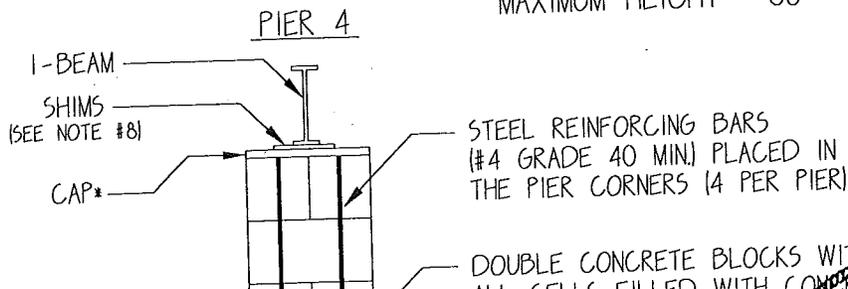
# TYPICAL PIER CONSTRUCTION



SINGLE BLOCKS  
 MAXIMUM HEIGHT = 36"  
 (SEE NOTE #2)

DOUBLE INTERLOCKED  
 BLOCKS  
 MAXIMUM HEIGHT = 80"

\*CAP IS 4 X 16 X 16  
 SOLID CONCRETE BLOCK  
 FOR ALL DOUBLE STACKED  
 PIERS AND 2 X 8 X 16"  
 LONG MIN. FOR ALL  
 SINGLE STACKED PIERS  
 (WOOD OR CONCRETE)



STEEL OR CONCRETE  
 MANUFACTURED PIER

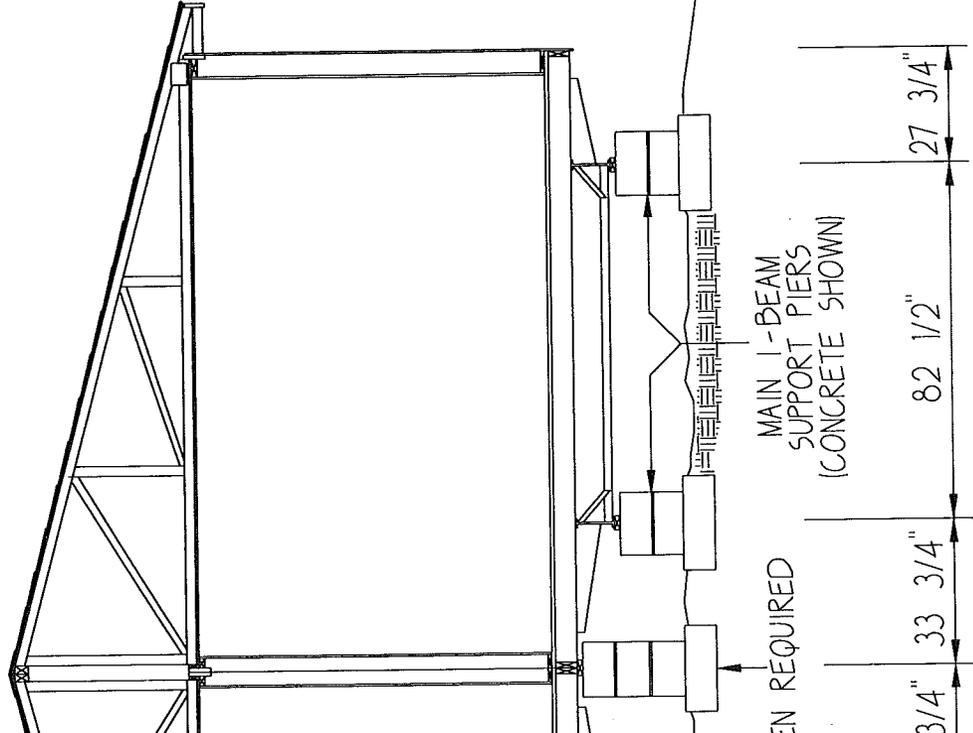
**SECTION III**

**SUPPORT BLOCKING**

Double Section Homes

# SUPPORT BLOCKING

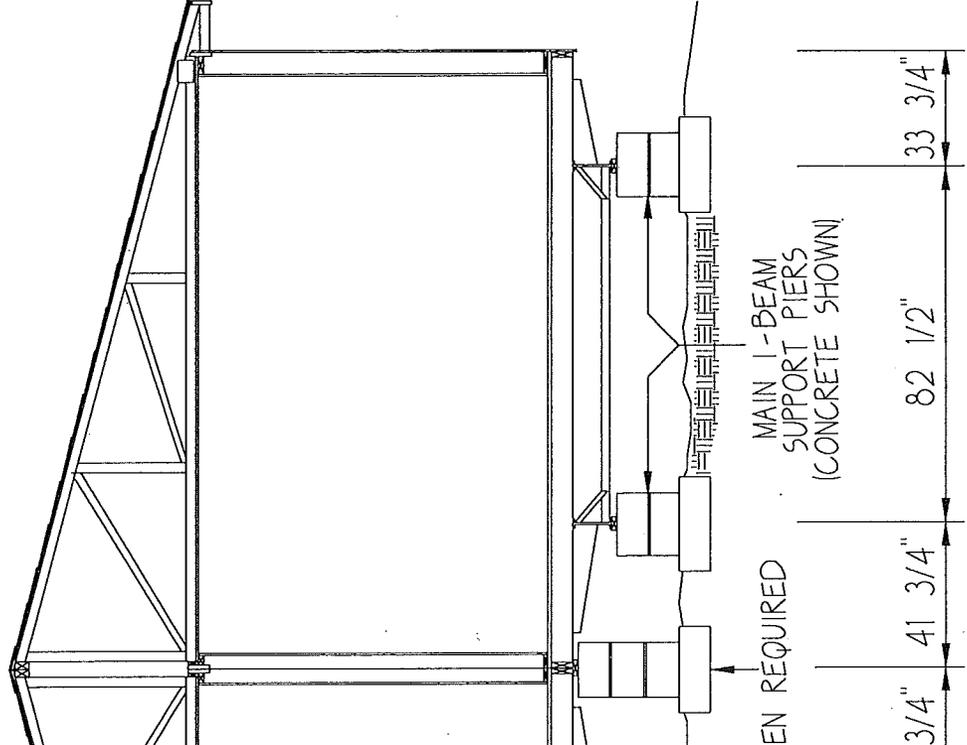
1.5 FT. ROOF LIVE LOAD



DOUBLE WIDE  
OR DIMENSION 24'-0"

# SUPPORT BLOCKING

50. FT. ROOF LIVE LOAD



EN REQUIRED

MAIN I-BEAM  
SUPPORT PIERS  
(CONCRETE SHOWN)

3/4"

41 3/4"

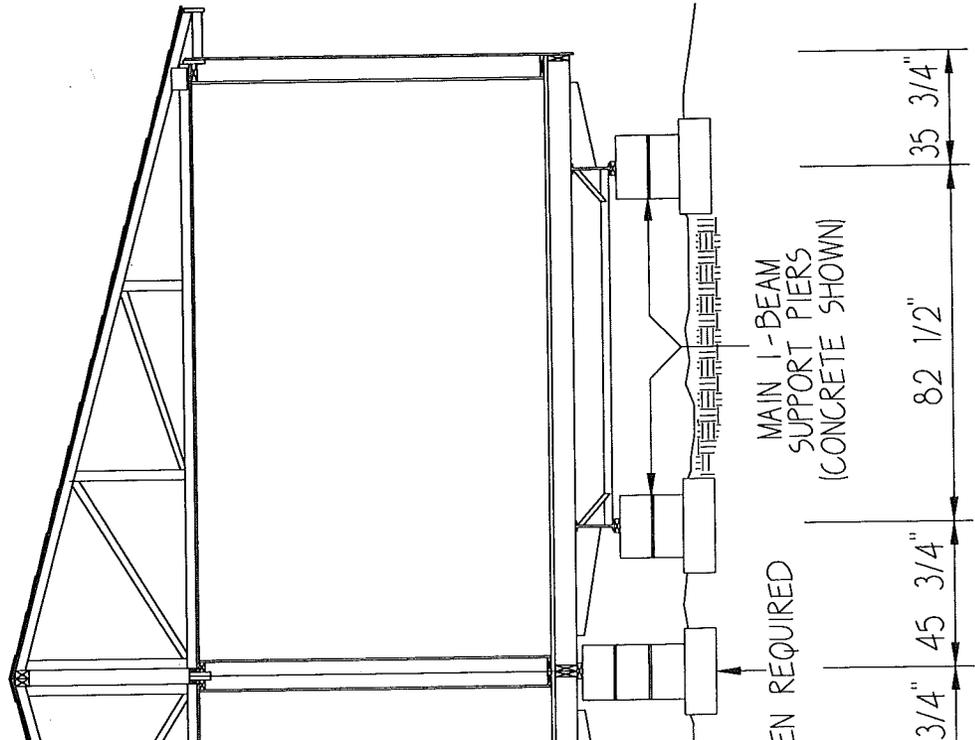
82 1/2"

33 3/4"

DOUBLE WIDE  
OR DIMENSION 26' - 4"

# SUPPORT BLOCKING

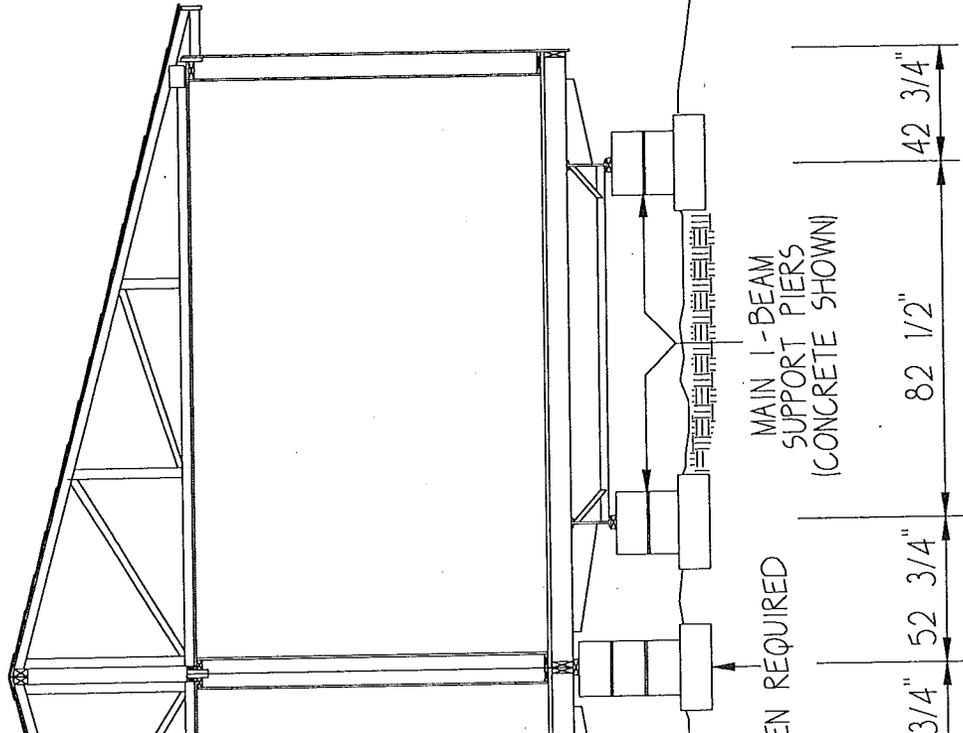
1/2 FT. ROOF LIVE LOAD



DOUBLE WIDE  
OR DIMENSION 27'-4"

# SUPPORT BLOCKING

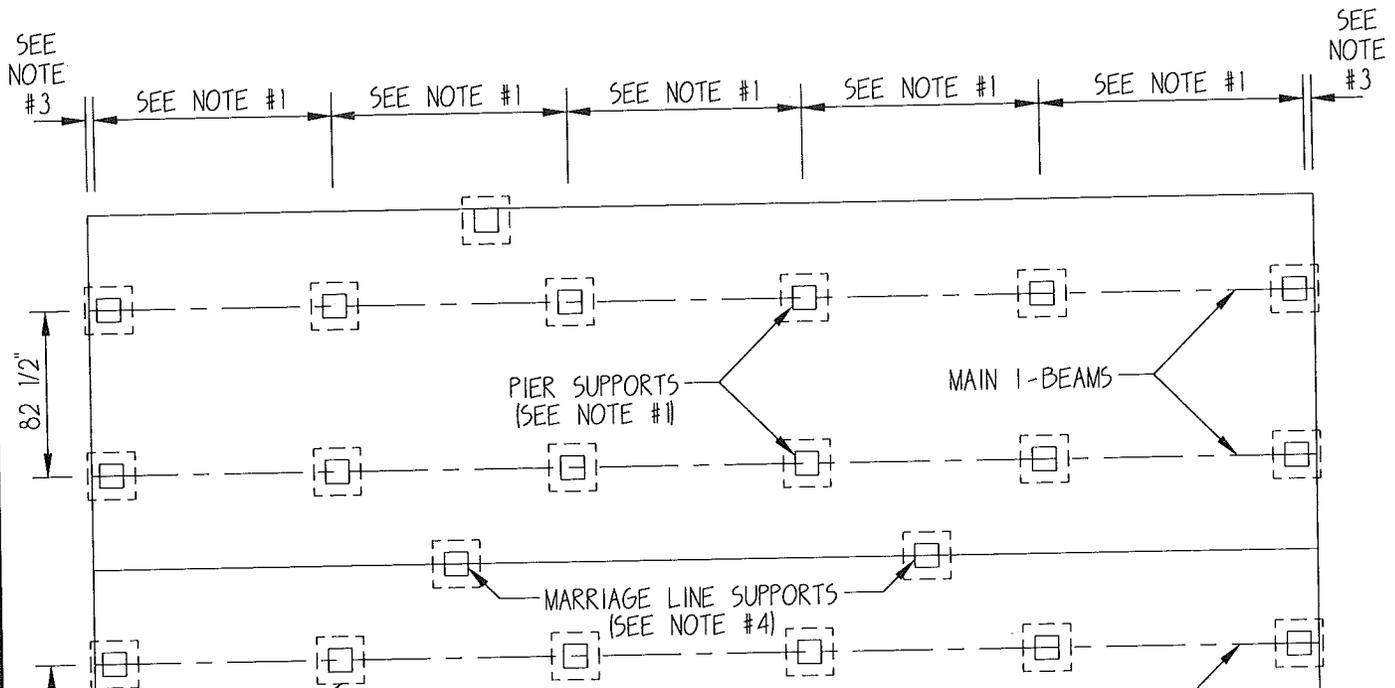
12 FT. ROOF LIVE LOAD



DOUBLE WIDE  
OR DIMENSION 29'-8"

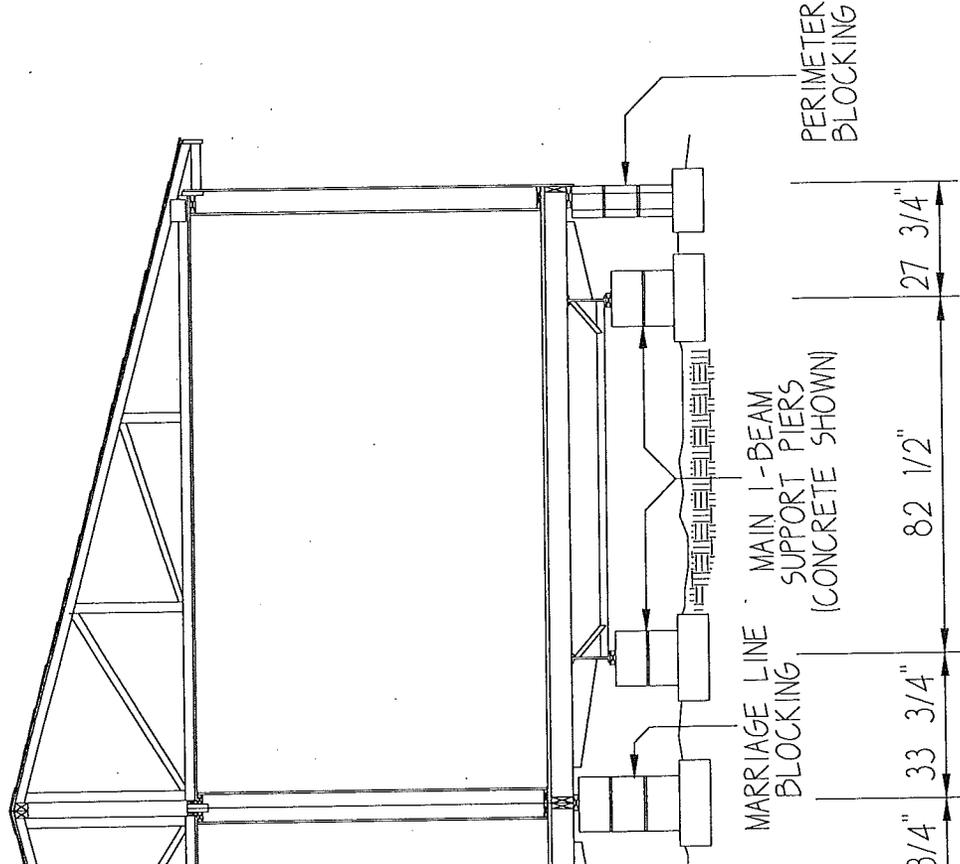
# TYPICAL BLOCKING LAYOUTS

DOUBLE-SECTION HOMES  
STANDARD BLOCKING AND 30 LB. ROOF LOAD



# SUPPORT BLOCKING

ADDITIONAL ROOF LOADS

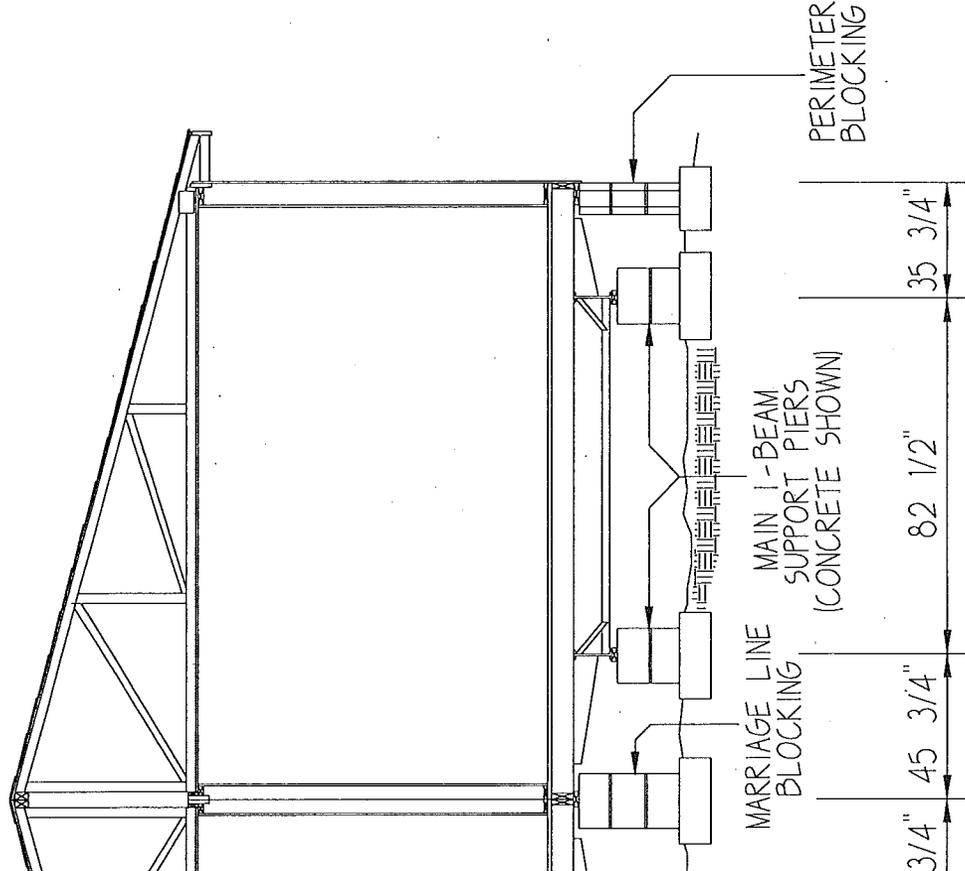


DOUBLE WIDE  
OR DIMENSION 24'-0"



# SUPPORT BLOCKING

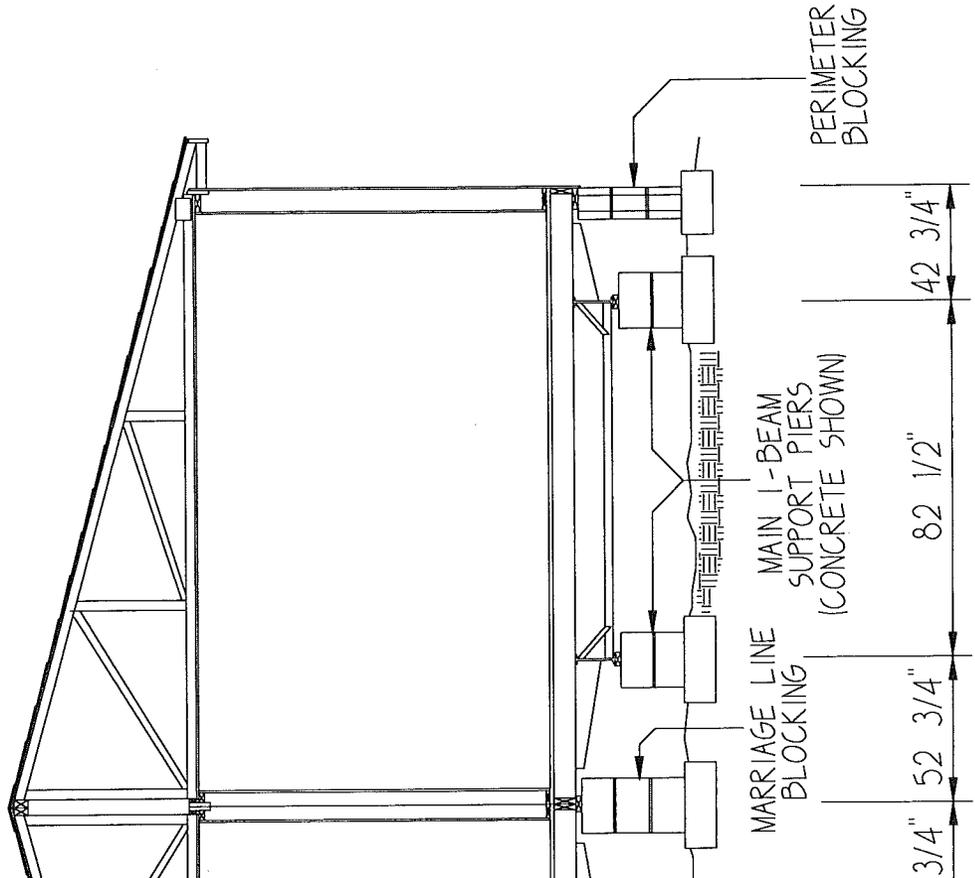
## ONAL ROOF LOADS



DOUBLE WIDE  
OR DIMENSION 27'-4"

# SUPPORT BLOCKING

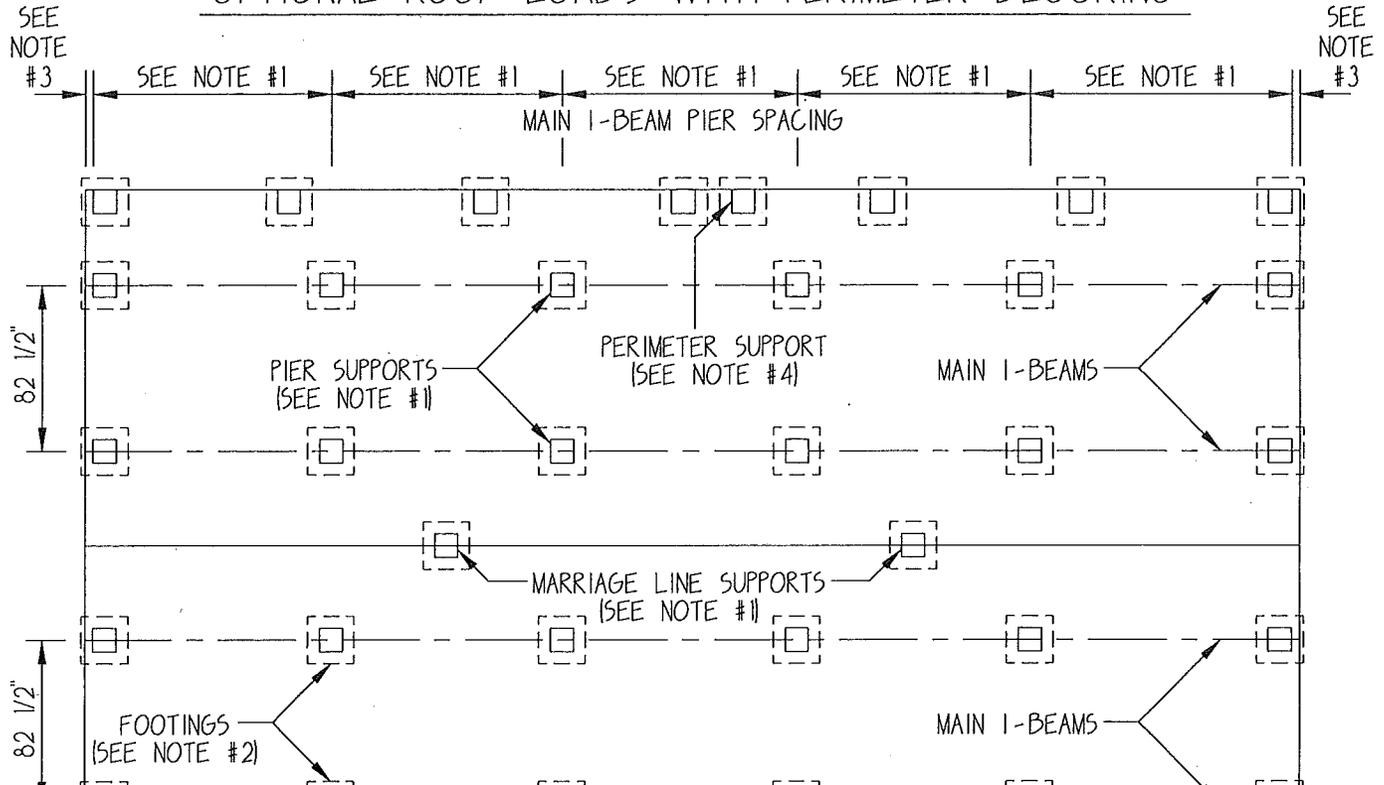
ONAL ROOF LOADS



DOUBLE WIDE  
OR DIMENSION 29'-8"

# TYPICAL BLOCKING LAYOUTS

## DOUBLE-SECTION HOMES OPTIONAL ROOF LOADS WITH PERIMETER BLOCKING



# MINIMUM PIER CAPACITY TABLES WITHOUT PERIMETER SUPPORT

DOUBLE-SECTION HOMES  
MAIN I-BEAM BLOCKING

SECTION WIDTH (FEET)	ROOF LIVE LOAD (PSF)	MINIMUM PIER CAPACITY (POUNDS)					
		MAXIMUM PIER SPACING (FEET)					
		4'-0"	5'-4"	6'-8"	8'-0"	9'-4"	10'-8"
26 WIDE (24'-0" FLOOR)	30 PSF	3010	3890	4770	5650	6530	7410
28 WIDE (26'-4" FLOOR)	30 PSF	3220	4170	5125	6075	7025	7975
30 WIDE (27'-4" FLOOR)	30 PSF	3310	4290	5270	6250	7230	8210
32 WIDE (29'-8" FLOOR)	30 PSF	3520	4570	5620	6670	7720	8900

TABLE 3.1

NOTES:

# MINIMUM PIER CAPACITY TABLES WITH PERIMETER SUPPORT

## DOUBLE-SECTION HOMES MAIN I-BEAM BLOCKING

SECTION WIDTH (FEET)	ROOF LIVE LOAD (PSF)	MINIMUM PIER CAPACITY (POUNDS)					
		MAXIMUM PIER SPACING (FEET)					
		4'-0"	5'-4"	6'-8"	8'-0"	9'-4"	10'-8"
26 WIDE (24'-0" FLOOR)	ALL LOADS	1290	1590	1885	2180	2475	2775
28 WIDE (26'-4" FLOOR)	ALL LOADS	1345	1660	1970	2285	2600	2915
30 WIDE (27'-4" FLOOR)	ALL LOADS	1365	1690	2010	2330	2650	2975
32 WIDE (29'-8" FLOOR)	ALL LOADS	1420	1760	2095	2435	2775	3115

TABLE 3.3

DOUBLE SECTION HOMES



# MINIMUM PIER CAPACITY TABLES

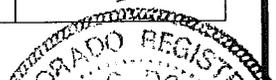
## WITH PERIMETER BLOCKING

### DOUBLE-SECTION HOMES

### ROOF LOAD MARRIAGE LINE (COMMONWALL) BLOCKING

SECTION WIDTH (FEET)	ROOF LIVE LOAD (PSF)	MINIMUM PIER CAPACITY (POUNDS)			
		MAXIMUM PIER SPACING (FEET)			
		4'-0"	5'-4"	6'-8"	8'-0"
26 WIDE (24'-0" FLOOR)	40	3580	4640	5700	6765
	60	4540	5920	7300	-
	80	5500	7200	-	-
28 WIDE (26'-4" FLOOR)	40	3920	5095	6265	7440
	60	4975	6500	8025	-
	80	6025	7900	-	-
30 WIDE (27'-4" FLOOR)	40	4065	5290	6510	7730
	60	5160	6745	8330	-
	80	6250	8200	-	-
32 WIDE (29'-8" FLOOR)	40	4400	5740	7075	8410
	60	5590	7320	9060	-
	80	6780	8900	-	-

TABLE 35

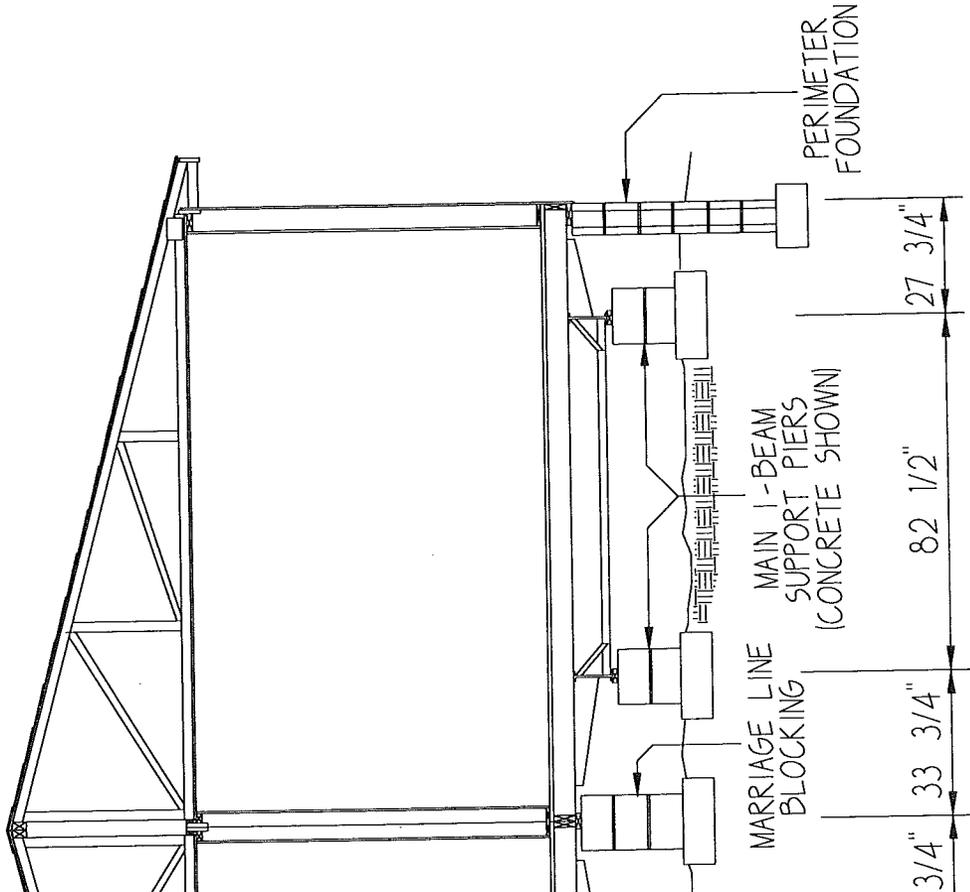


**SECTION IV**

**PERIMETER FOUNDATION**

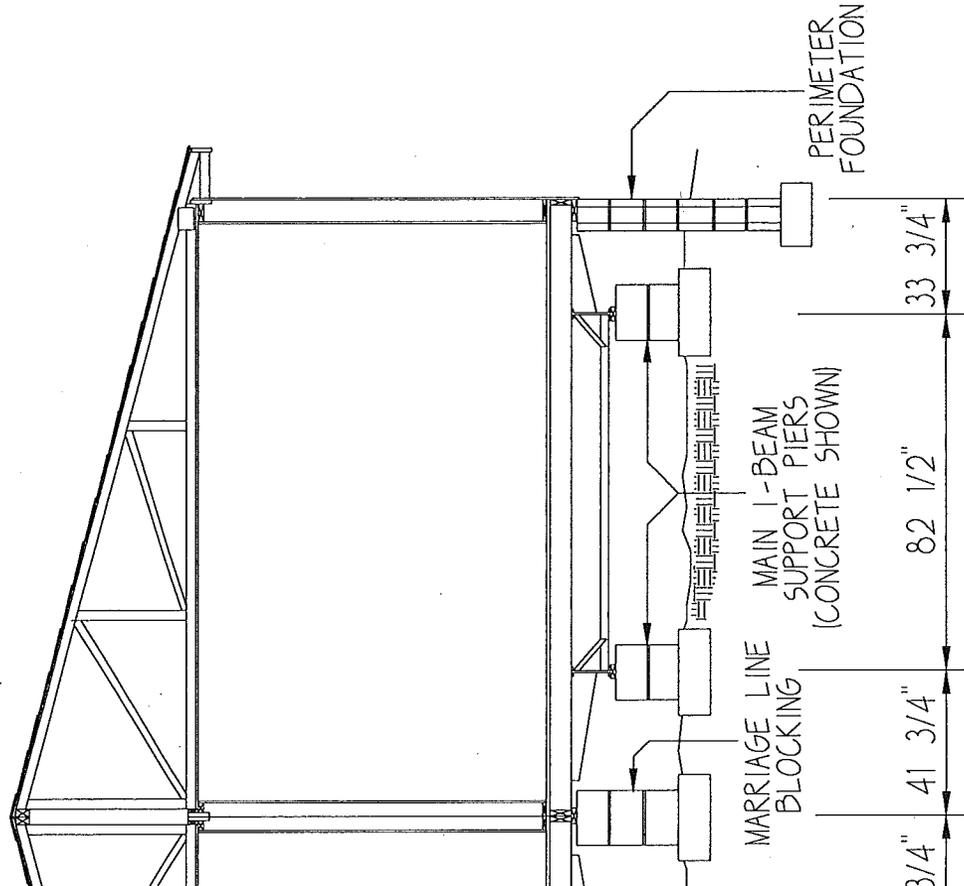
Double Section Homes

# R FOUNDATION



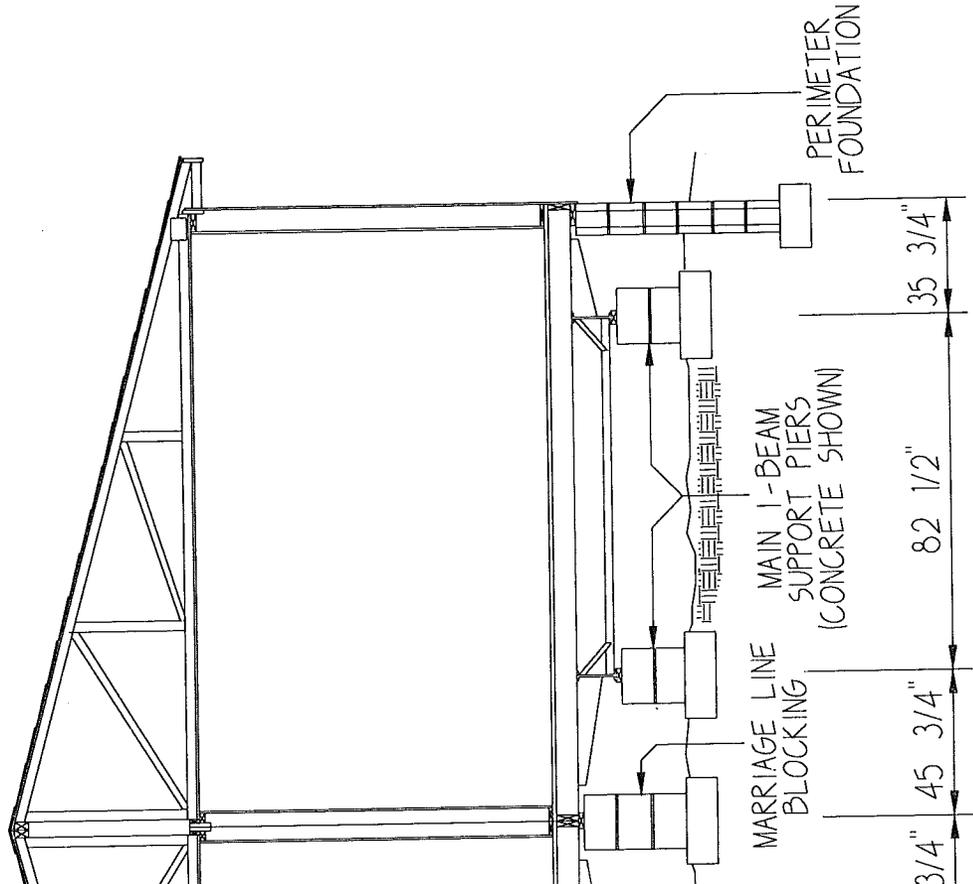
DOUBLE WIDE  
OR DIMENSION 24'-0"

# PER FOUNDATION



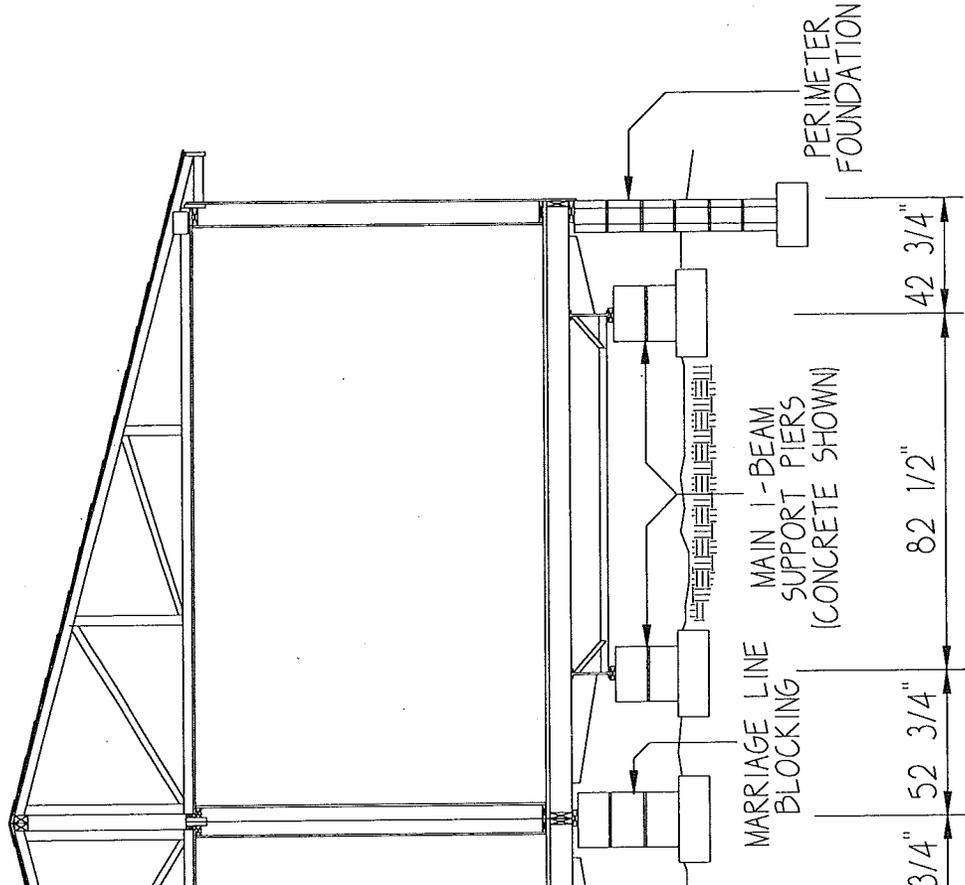
DOUBLE WIDE  
OR DIMENSION  $26' - 4"$

# PERIMETER FOUNDATION



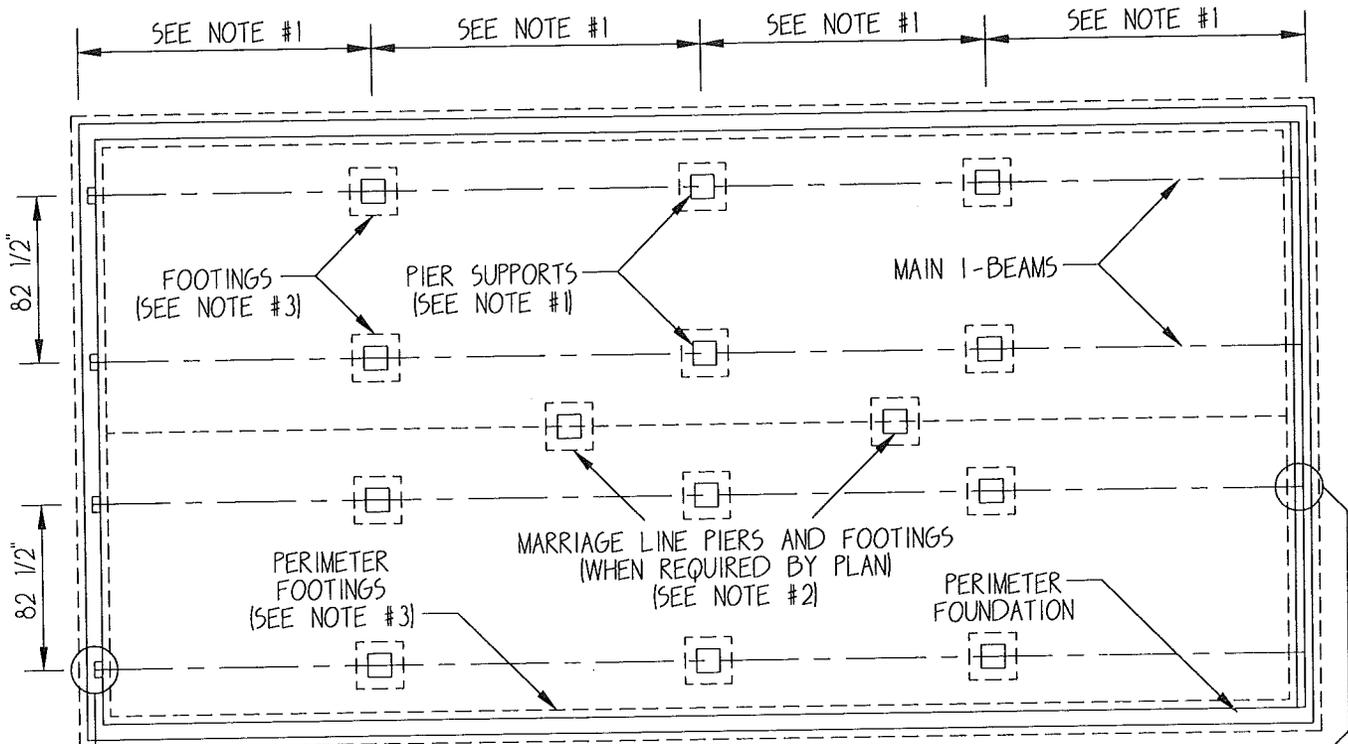
DOUBLE WIDE  
OR DIMENSION 27'-4"

# R FOUNDATION

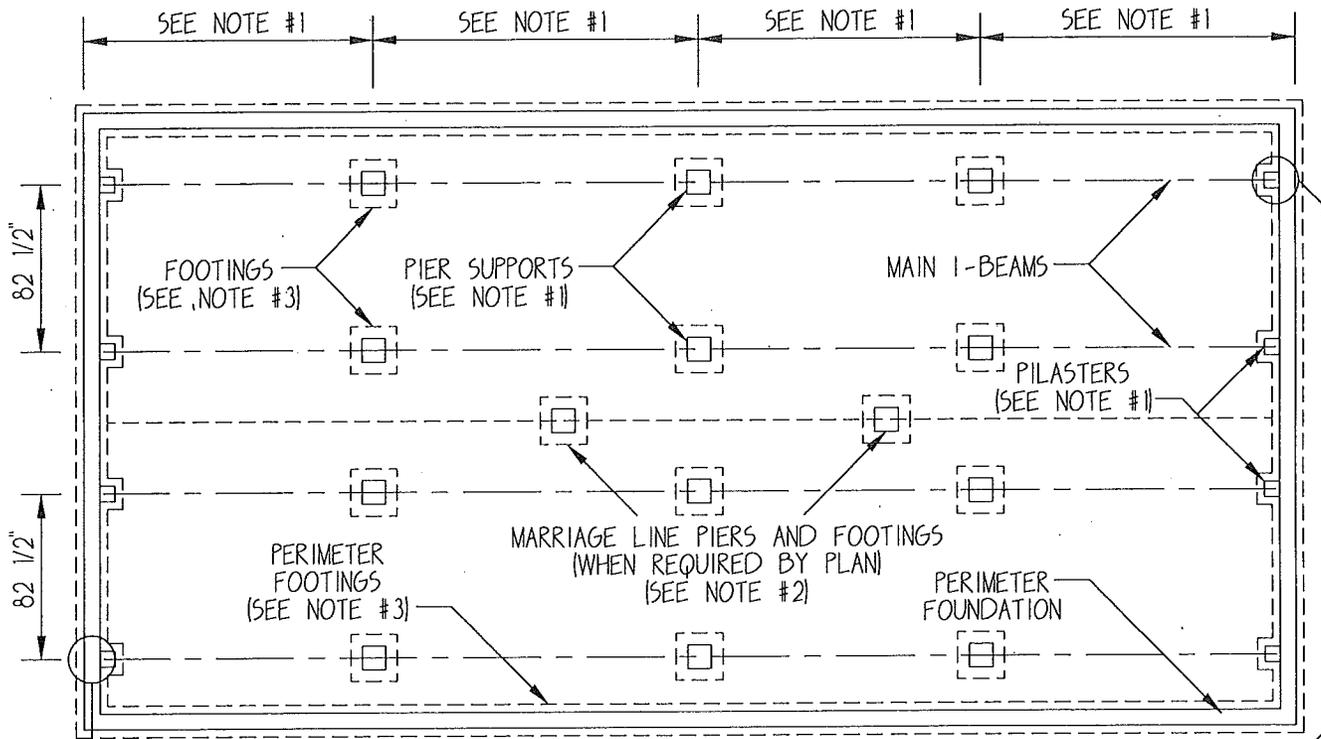


DOUBLE WIDE  
OR DIMENSION 29'-8"

# TYPICAL BLOCKING LAYOUT DOUBLE-SECTION HOMES PERIMETER FOUNDATION WITH 4" RECESSED FRAME



# TYPICAL BLOCKING LAYOUT DOUBLE-SECTION HOMES PERIMETER FOUNDATION WITH 10" RECESSED FRAME

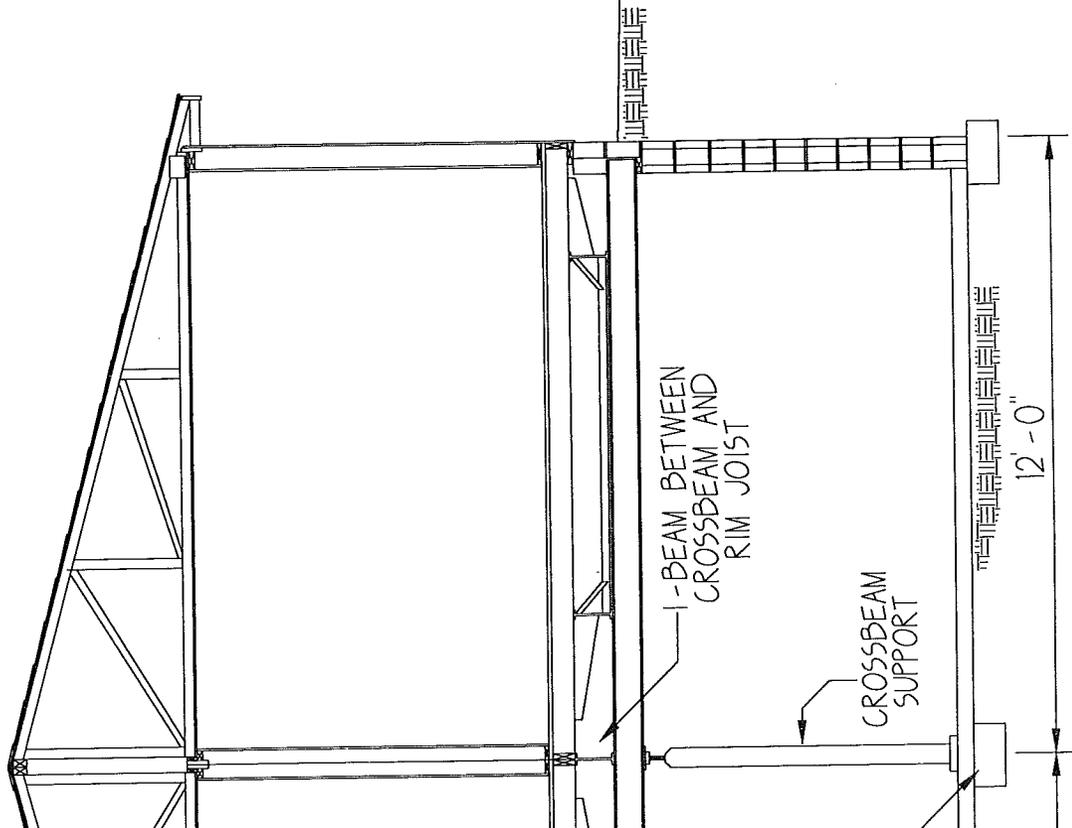


**SECTION V**

**BASEMENT CONSTRUCTION**

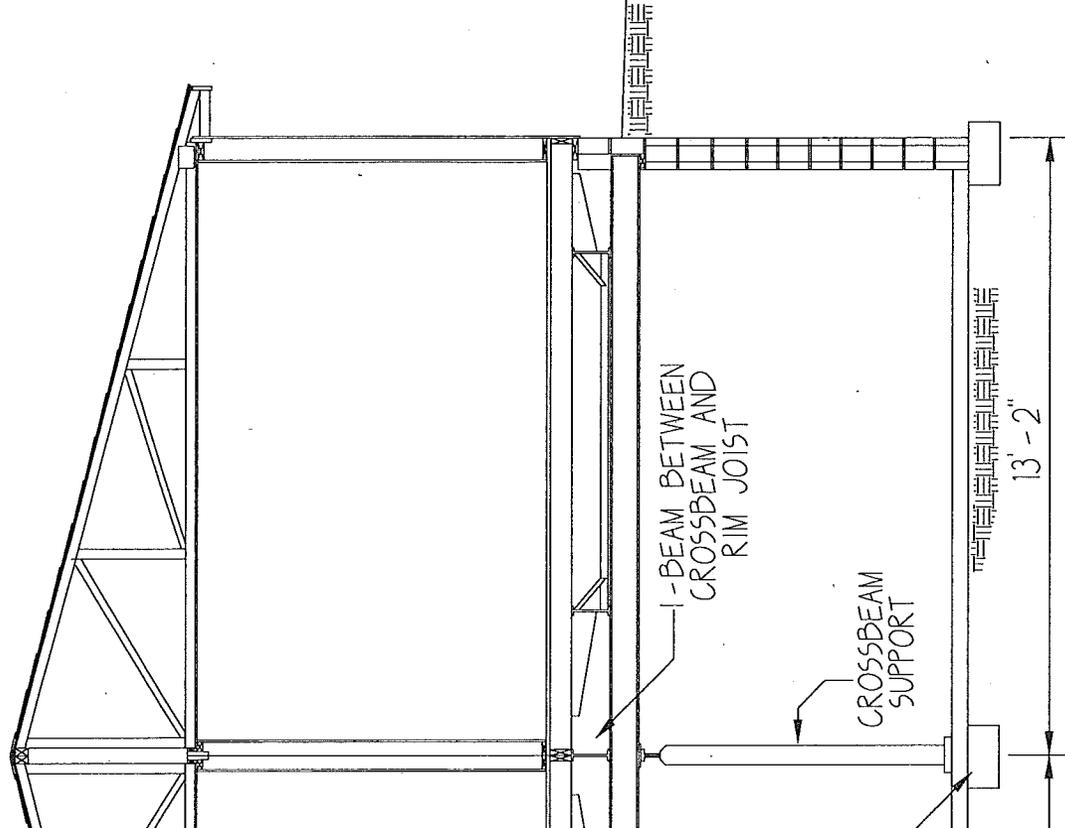
Double Section Homes

# CONSTRUCTION



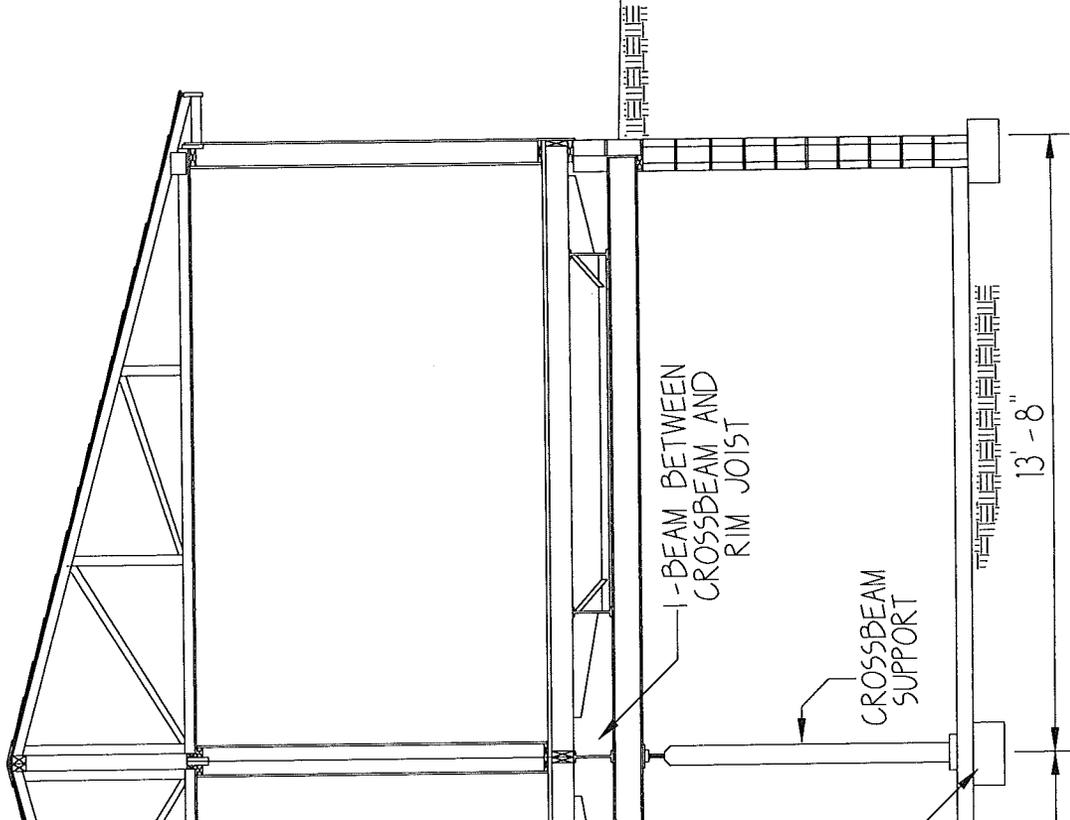
DOUBLE WIDE  
OR DIMENSION 24'-0"

# CONSTRUCTION



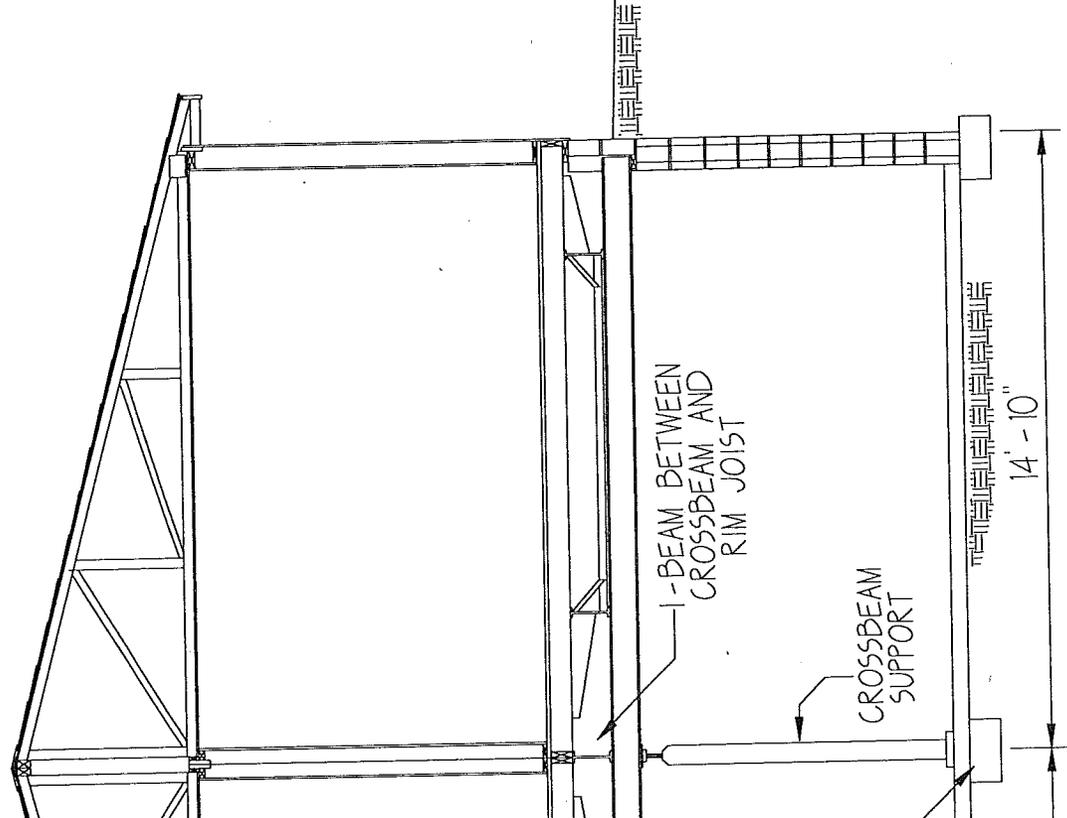
DOUBLE WIDE  
OR DIMENSION 26'-4"

# CONSTRUCTION



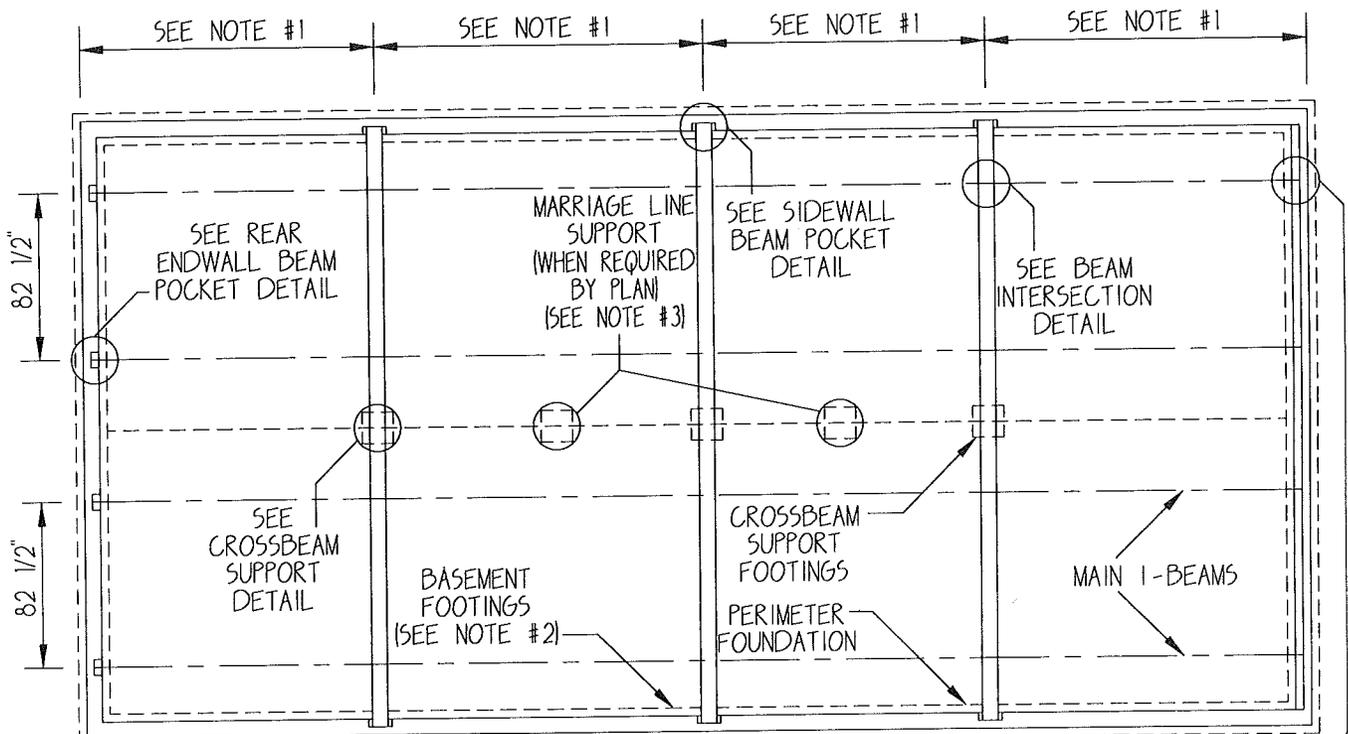
DOUBLE WIDE  
OR DIMENSION 27'-4"

# CONSTRUCTION

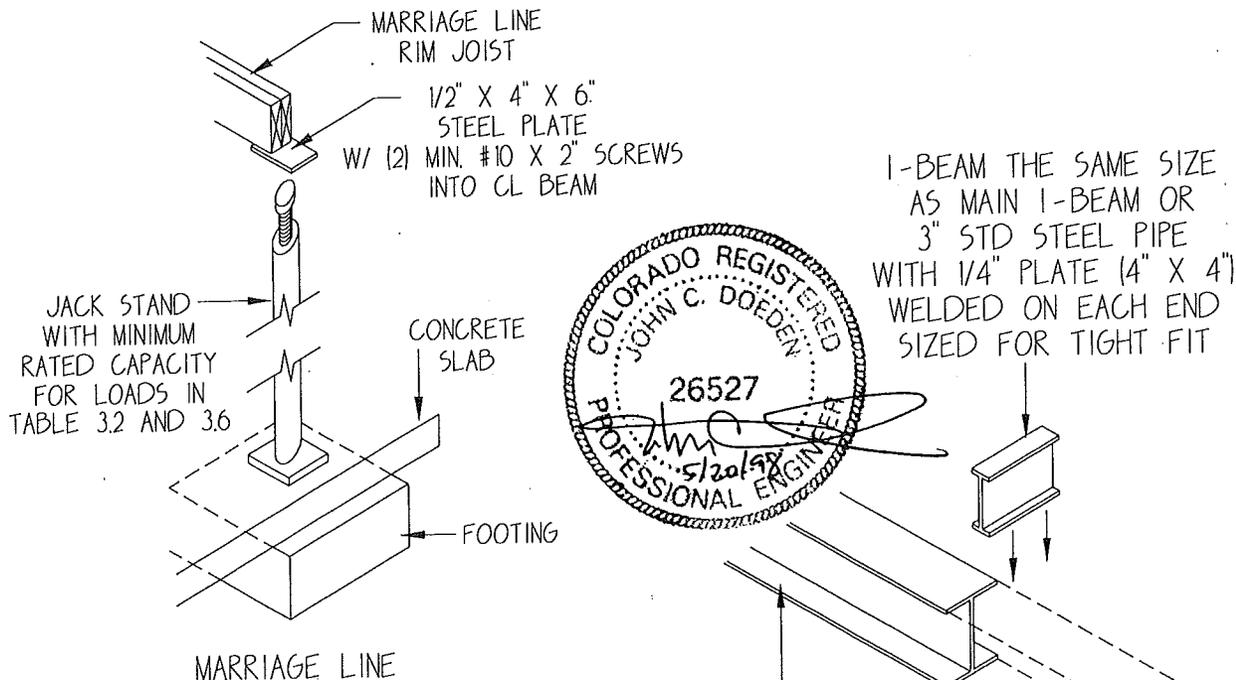


DOUBLE WIDE  
OR DIMENSION 29'-8"

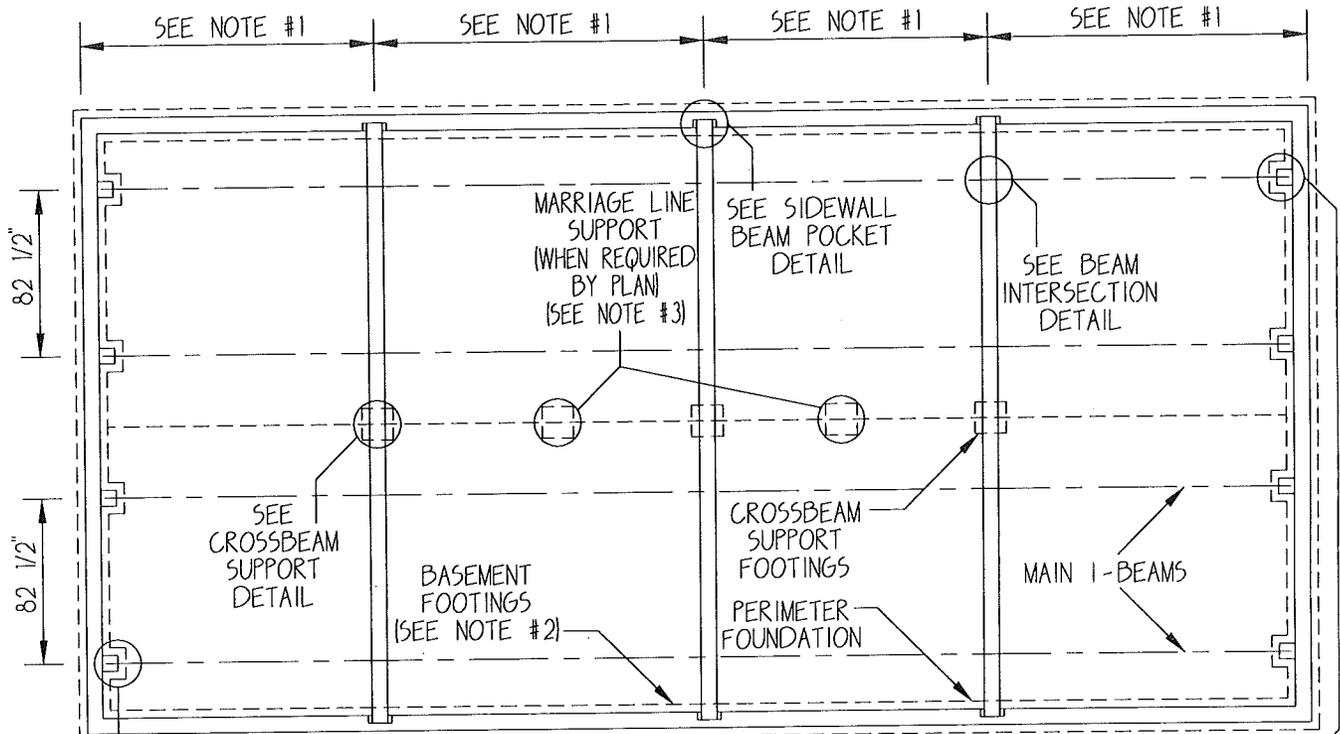
# TYPICAL BASEMENT LAYOUT DOUBLE-SECTION HOMES BASEMENT CONSTRUCTION WITH 4" RECESSED FRAME



# TYPICAL BASEMENT LAYOUT DOUBLE-SECTION HOMES BASEMENT CONSTRUCTION WITH 4" RECESSED FRAME



# TYPICAL BLOCKING LAYOUT DOUBLE-SECTION HOMES BASEMENT CONSTRUCTION WITH 10" RECESSED FRAME



# MINIMUM CROSSBEAM SIZE TABLE

## DOUBLE-SECTION HOMES CROSSBEAM SUPPORT



SECTION WIDTH (FEET)	ROOF LIVE LOAD (PSF)	CROSS BEAM DEPTH	MINIMUM CROSSBEAM SIZE						
			MAXIMUM CROSSBEAM SPACING (FEET)						
			4'-0"	5'-4"	6'-8"	8'-0"	9'-4"	10'-0"	
26 WIDE (24'-0" FLOOR)	ALL LOADS	8"	W8X24	W8X31	-	-	-	-	-
		10"	W10X21	W10X25	W10X33	W10X39	W10X39	W10X45	W10X49
		12"	W12X19	W12X27	W12X27	W12X31	W12X31	W12X36	W12X40
28 WIDE (26'-4" FLOOR)	ALL LOADS	8"	W8X24	W8X31	-	-	-	-	-
		10"	W10X25	W10X29	W10X33	W10X39	W10X45	W10X54	W10X60
		12"	W12X27	W12X27	W12X27	W12X36	W12X40	W12X45	W12X50
30 WIDE (27'-4" FLOOR)	ALL LOADS	8"	W8X26	W8X35	-	-	-	-	-
		10"	W10X25	W10X33	W10X39	W10X45	W10X49	W10X54	W10X60
		12"	W12X27	W12X27	W12X31	W12X36	W12X40	W12X45	W12X53
32 WIDE (29'-8" FLOOR)	ALL LOADS	8"	W8X31	-	-	-	-	-	-
		10"	W10X25	W10X39	W10X45	W10X49	W10X60	W10X66	-
		12"	W12X27	W12X31	W12X36	W12X45	W12X50	W12X58	W12X72

TABLE 5.1

1. USE ANY ONE OF THE BEAMS IN EACH CATEGORY
2. RIDGE BEAM COLUMN SUPPORTS FOR SPANS GREATER THAN GIVEN ABOVE FOR BEAMS LISTED MUST HAVE A SEPARATE PIER AND FOOTER SIZED PER TABLE 3.6. IN ADDITION, COLUMN SUPPORTS MUST BE DIRECTLY ABOVE A CROSSBEAM OR SEPARATE PIER/FOOTER.
3. MAXIMUM CROSSBEAM SPACING FOR 10" MAIN I-BEAM IS 12'-0". ALSO PER TABLE 5.2 AND FIGURE 5.2 WHICHEVER IS WORSE CASE.

# MAXIMUM SPANS BETWEEN CROSSBEAMS AND PIERS

## DOUBLE-SECTION HOMES CROSSBEAM SUPPORT

SECTION WIDTH (FEET)	MAIN I-BEAM SIZE	ROOF LIVE LOAD (PSF)			
		30	40	60	80
26 WIDE (24'-0" FLOOR)	10"	12'-0"	10'-8"	10'-8"	9'-4"
	12"	12'-0"	12'-0"	12'-0"	12'-0"
28 WIDE (26'-4" FLOOR)	10"	12'-0"	10'-8"	9'-4"	9'-4"
	12"	12'-0"	12'-0"	12'-0"	10'-8"
30 WIDE (27'-4" FLOOR)	10"	12'-0"	10'-8"	9'-4"	9'-4"
	12"	12'-0"	12'-0"	12'-0"	10'-8"
32 WIDE (29'-8" FLOOR)	10"	10'-8"	10'-8"	9'-4"	8'-0"
	12"	12'-0"	12'-0"	12'-0"	10'-8"

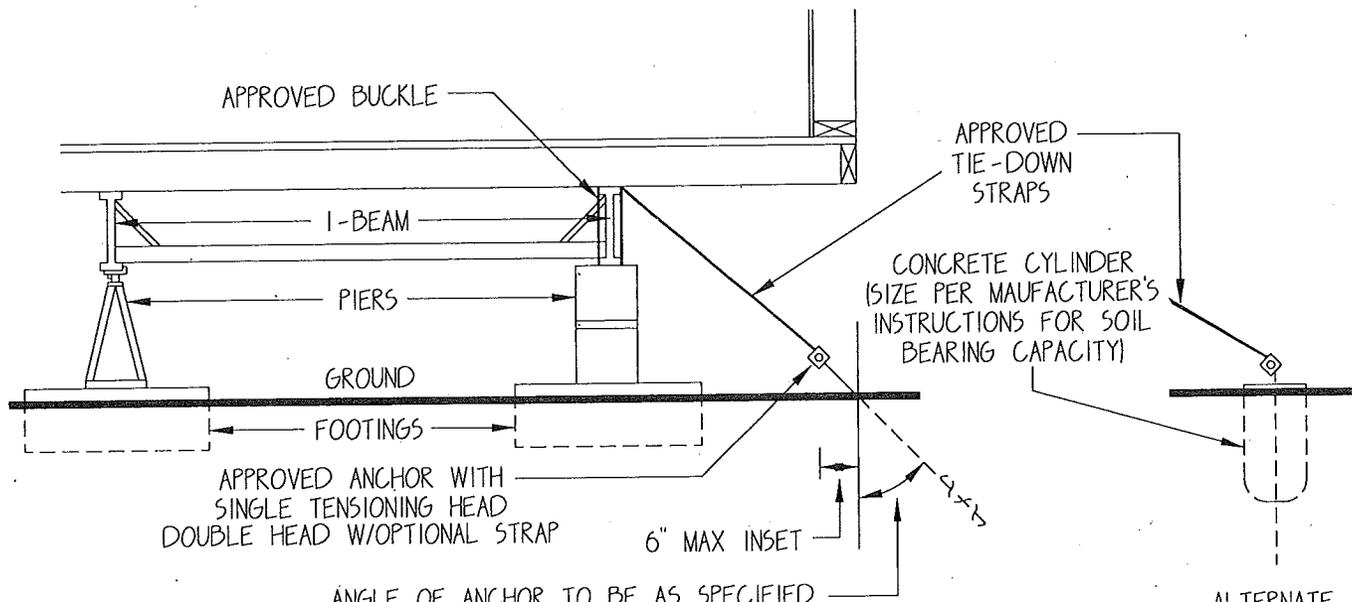
TABLE 5.3

**SECTION VI**

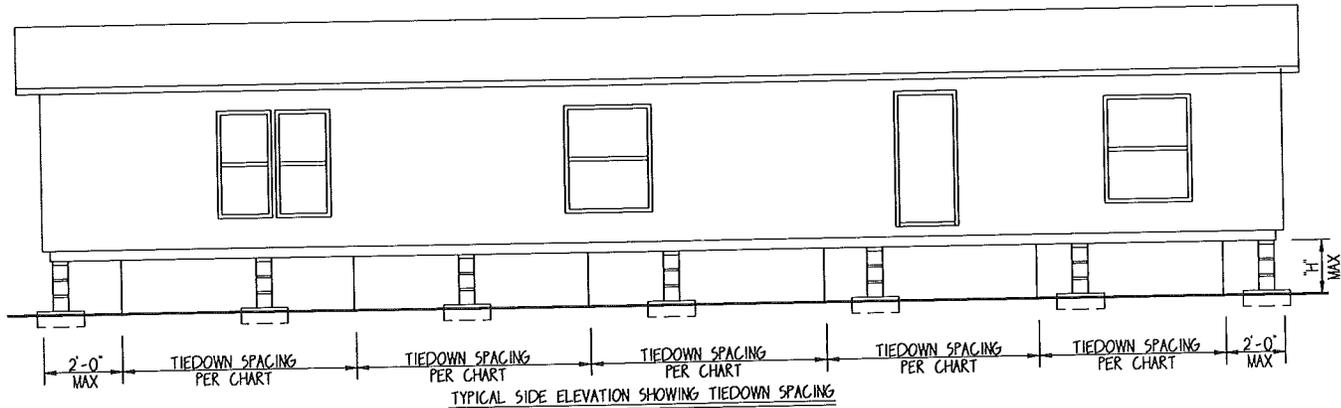
**TYPICAL ANCHORAGE & FOOTINGS INSTRUCTIONS**

Double Section Homes

# TIE-DOWN STRAP AND ANCHORING POSITION INSTALLATION WITHOUT VERTICAL TIES



# RECOMMENDED TIEDOWN SYSTEM WIND ZONE 1

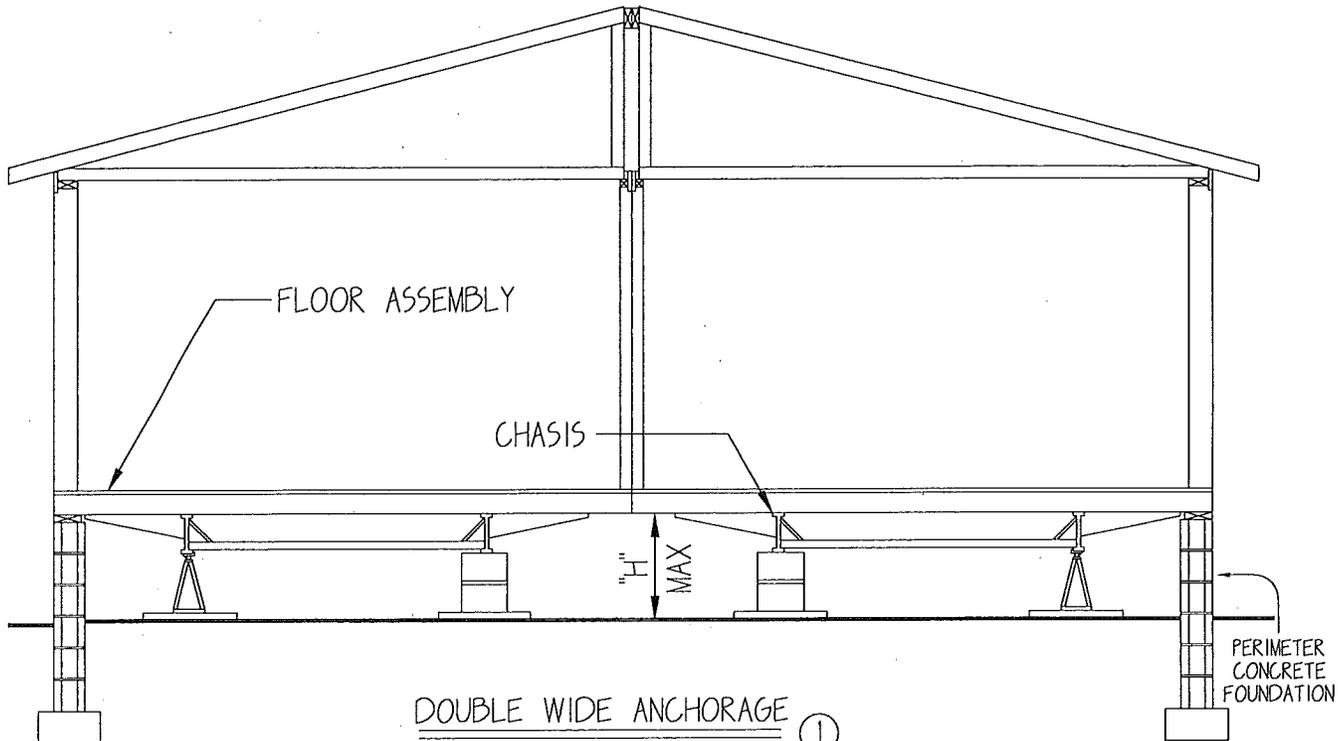


LOADS: HORIZONTAL = 15 PSF X 1.5 SAFETY FACTOR  
 UPLIFT = 9 PSF X 1.5 SAFETY FACTOR

FRAME TIE-DOWN SPACING CHART DOUBLE SECTION HOMES			
FLOOR WIDTH	WIND ZONE 1		
	SPACING	MAX. PIER HEIGHT (H MAX)	ANCHOR ANGLE
24'-0" MIN.	10'-0"	35"	40° - 50°
26'-4" MIN.	10'-0"	45"	40° - 50°
27'-4" MIN.	10'-0"	50"	40° - 50°
28'-8" MIN.	10'-0"	48"	40° - 50°



# DOUBLE WIDE HOME ANCHORAGE DETAILS



DOUBLE WIDE ANCHORAGE ①  
FOR PERIMETER FOUNDATION

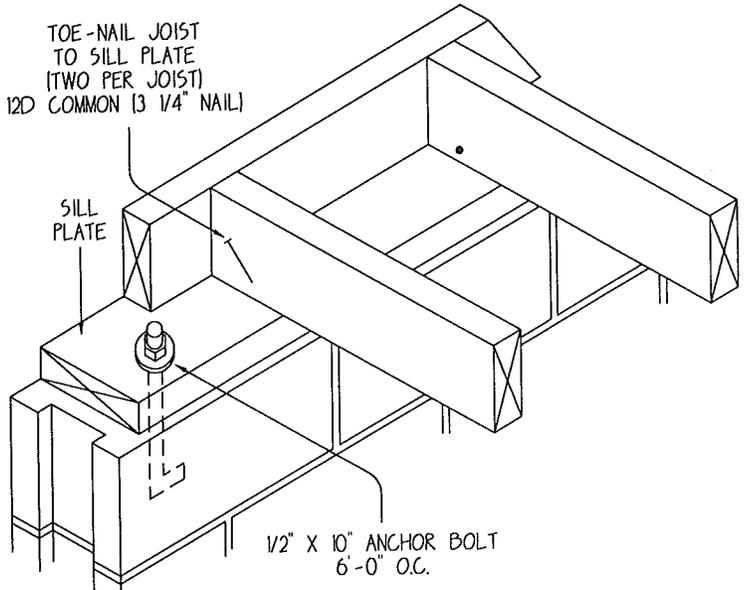
# DOUBLE WIDE HOME ANCHORAGE DETAILS FOR PERIMETER FOUNDATION

SECURE FRONT AND REAR  
RIM JOIST TO SILL PLATE  
WITH 1 - 12D COMMON NAIL @ 16" O.C.

TOE-NAIL JOIST  
TO SILL PLATE  
(TWO PER JOIST)  
12D COMMON (3 1/4" NAIL)

SILL  
PLATE

\* DETAILS 1 AND 2 APPLY  
TO BOTH PERIMETER  
FOUNDATION WITH PIERS  
AND BASEMENT CONSTRUCTION.



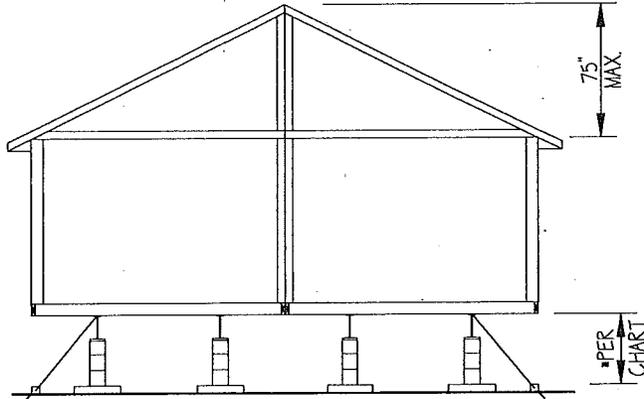
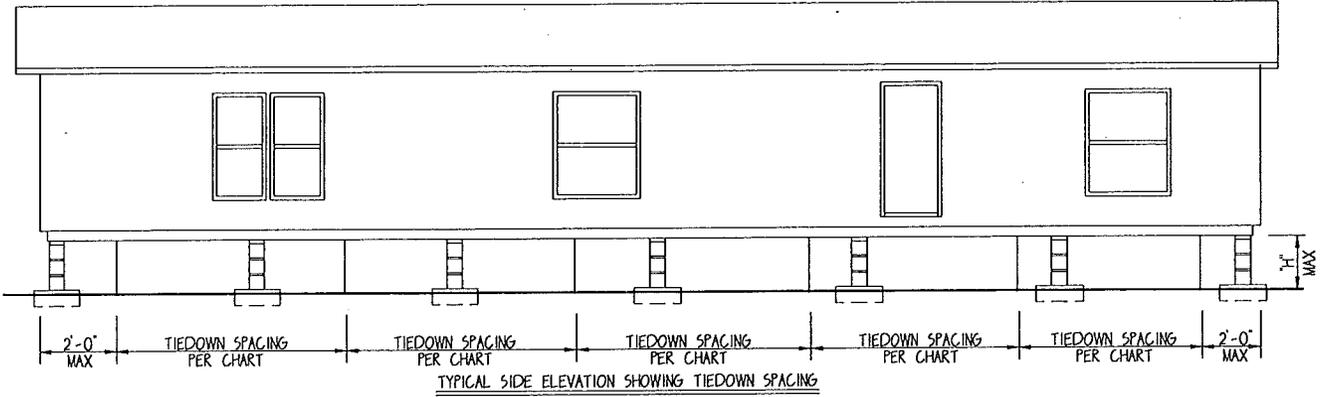
1/2" X 10" ANCHOR BOLT  
6'-0" O.C.

JOIST TO SILL CONNECTION

(METHOD A)

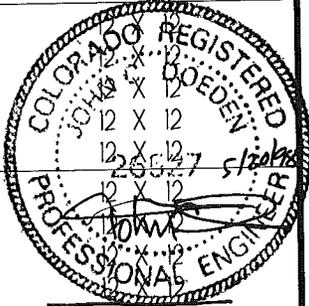
①

# RECOMMENDED TIEDOWN SYSTEM - 5:12 PITCH ROOF WIND ZONE 1 / 15 PSF LATERAL

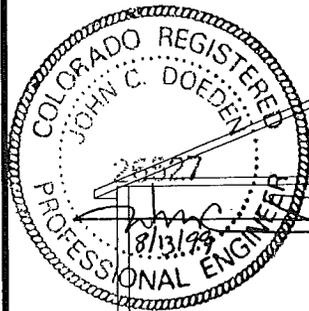
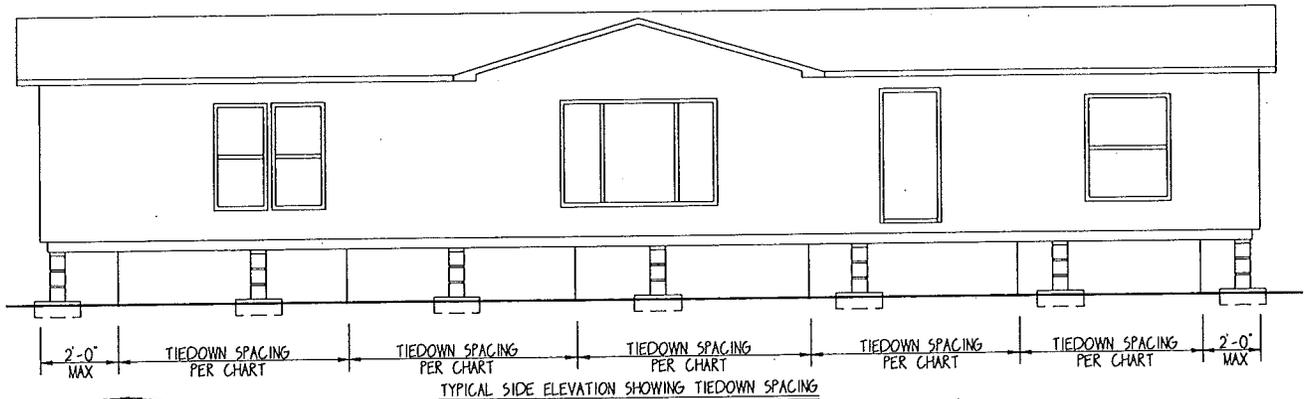


FRAME TIE-DOWN SPACING CHART			
WIND ZONE 1			
FLOOR WIDTH	SPACING	MAX. PIER HEIGHT (H MAX)	EAVE OVERHANG
27'-4"	4'-0"	58"	24" MAX.

\* PIER HEIGHT INCLUDES DEPTH OF I-BEAM

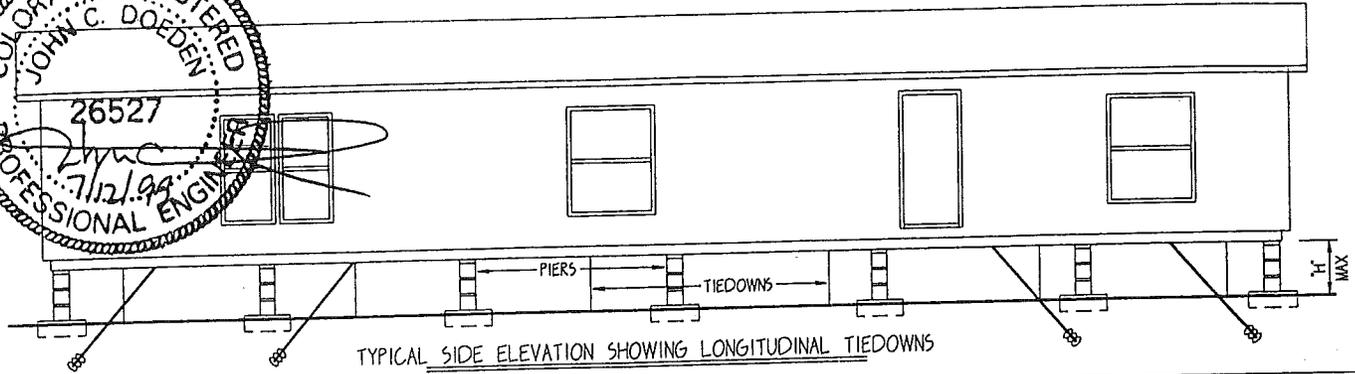
PIER CAPACITY (POUNDS)	MINIMUM FOOTING SIZE (OR EQUAL AREA) (INCHES)			
	SOIL BEARING CAPACITY (PSF)			
	1000	1500	2000	4000
600	12 X 12	12 X 12	12 X 12	
800	12 X 12	12 X 12	12 X 12	
1000	12 X 12	12 X 12	12 X 12	
1500	15 X 15	12 X 12	12 X 12	
2000	17 X 17	14 X 14	12 X 12	
2500	19 X 19	15 X 15	13 X 13	
3000	21 X 21	17 X 17	15 X 15	
3500	22 X 22	18 X 18	16 X 16	
4000	24 X 24	20 X 20	17 X 17	
4500	25 X 25	21 X 21	18 X 18	
5000	27 X 27	22 X 22	19 X 19	13 X 13
5500	28 X 28	23 X 23	20 X 20	14 X 14
6000	29 X 29	24 X 24	21 X 21	15 X 15
6500	31 X 31	25 X 25	22 X 22	15 X 15
7000	32 X 32	26 X 26	22 X 22	16 X 16
7500	33 X 33	27 X 27	23 X 23	16 X 16
8000	34 X 34	28 X 28	24 X 24	17 X 17
8500	35 X 35	29 X 29	25 X 25	17 X 17
9000	36 X 36	29 X 29	25 X 25	18 X 18
9500	37 X 37	30 X 30	26 X 26	19 X 19
10000	38 X 38	31 X 31	27 X 27	19 X 19
11000	40 X 40	32 X 32	28 X 28	20 X 20
12000	42 X 42	34 X 34	29 X 29	21 X 21
13000	43 X 43	35 X 35	31 X 31	22 X 22
14000	45 X 45	37 X 37	32 X 32	22 X 22

RECOMMENDED TIEDOWN SYSTEM  
 VAULTED DORMER  
 WIND ZONE 1 / 15 PSF LATERAL



FRAME TIE-DOWN SPACING CHART			
FLOOR WIDTH	WIND ZONE 1		
	SPACING	MAX. PIER HEIGHT (H MAX)	EAVE OVERHANG
26'-4"	10'-0"	32"	16" MAX.
27'-4"	10'-0"	35"	16" MAX.
29'-8"	10'-0"	42"	16" MAX.

# RECOMMENDED TIEDOWN SYSTEM WIND ZONE 1 (15 PSF LATERAL)



## 4.4:12 MAXIMUM ROOF SLOPE-DOUBLE SECTION HOMES (ALTERNATE WITH BLOCK PIERS\*)

FLOOR WIDTH	MINIMUM UNIT LENGTH		NUMBER OF LONGITUDINAL TIES (TOTAL EACH END)
	SINGLE STACK	DOUBLE STACK	
24'-0" MIN.	47'-0"	36'-0"	0
	32'-0"	32'-0"	2
26'-4" MIN.	56'-0"	40'-0"	0
	32'-0"	32'-0"	2
27'-4" MIN.	62'-0"	44'-0"	0
	32'-0"	32'-0"	2
29'-8" MIN.	NA	54'-0"	0
	36'-0"	32'-0"	2

\*FOR USE IN ABOVE TABLE

## 4.4:12 MAXIMUM ROOF SLOPE NO RESTRICTION AS TO PIER TYPE OR HEIGHT (EXCEPT AS LIMITED OTHER DETAILS)

FLOOR WIDTH	MINIMUM QUANTITY EACH END EACH SECTION	MINIMUM STRAP ANGLE (DEGREES)
158" SINGLE WIDE	2	26
182" SINGLE WIDE	2	31
▪ 144" DOUBLE WIDE	2	30
▪ 158" DOUBLE WIDE	2	30
▪ 164" DOUBLE WIDE	2	31
▪ 178" DOUBLE WIDE	2	35

▪ MAY REDUCE TO 0 OR 1 LONGITUDINAL TIE PER HALF WITH PIER RESTRICTIONS PER CHART TO LEFT.

# FOUNDATION DESIGN: GENERAL NOTES

## GENERAL NOTES:

1. THIS FOUNDATION HAS BEEN DESIGNED FOR SITES WITH AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF MINIMUM.
2. FOUNDATIONS TO BE CONSTRUCTED ON SOIL WITH A LOWER BEARING CAPACITY SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE BY A LICENSED ENGINEER TO LOCAL CONDITIONS AND CODES.
3. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS TO BE 3000 PSI MINIMUM.
4. REINFORCING STEEL SPECIFIED TO BE GRADE 60 BARS MEETING ASTM A615, A616, AND A617.
5. FOUNDATION WALL MAY BE POURED CONCRETE 8" THICK, REINFORCED WITH #4 REBAR AT 12" O.C. VERTICAL AND #5 REBAR AT 18" O.C. HORIZONTAL.
6. UNIT COLUMN SUPPORTS FOR CENTERLINE RIDGE BEAMS REQUIRE ADDITIONAL PIER SUPPORTS UNDER CENTERLINE BEAM LOCATIONS PER FLOOR PLAN.
7. THESE SPECIFICATIONS ARE TYPICAL. LOCAL CODES MAY CONTAIN ADDITIONAL REQUIREMENTS.
8. FOUNDATION WALL STEMS MAY BE CONCRETE OR CONCRETE BLOCK.
9. CONCRETE BLOCK SHALL CONFORM TO ASTM C-90.
10. IN CONCRETE BLOCK STEM WALLS A MINIMUM OF 12) #4 REBARS ARE TO BE INSTALLED IN BLOCK WITH MUD SILL ANCHORS. FULLY GROUT EACH CELL CONTAINING REBAR.
11. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE OF PRESSURE TREATED TYPE OR OF SPECIES APPROVED FOR USE IN DIRECT CONTACT WITH CONCRETE.
12. THE INSTALLATION SITE MUST BE GRADED SO THAT

## GENERAL NOTES:

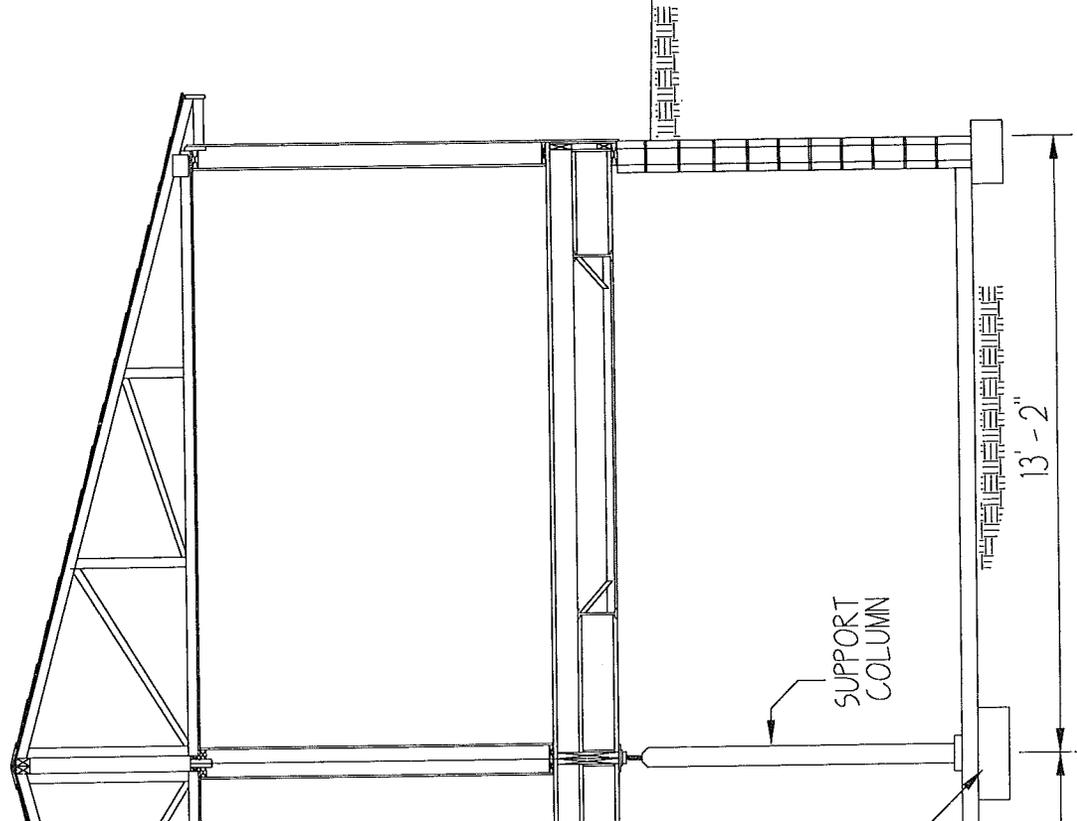
16. B. FOUNDATION WALL OF HABITABLE ROOMS LOCATED BELOW GRADE SHALL BE WATER PROOFED WITH MEMBRANES EXTENDING FROM THE EDGE OF THE FOOTING TO THE FINISH GRADE LINE. THE MEMBRANE SHALL CONSIST OF EITHER 2-PLY HOT MOPPED FELT, 6-MIL POLYVINYL CHLORIDE, 55-POUND ROLL ROOFING OR EQUIVALENT MATERIAL. THE LAP IN THE MEMBRANE SHALL BE SEALED AND FIRMLY AFFIXED TO THE WALL.
- C. FOUNDATION WALLS MAY BE DAMP PROOFED OR WATER PROOFED USING MATERIALS AND METHODS OF CONSTRUCTION OTHER THAN COVERED IN THIS SECTION WHEN APPROVED BY THE LOCAL BUILDING OFFICIAL.
17. DRAINS SHALL BE PROVIDED AROUND FOUNDATIONS ENCLOSING HABITABLE OR USEABLE SPACES LOCATED BELOW GRADE AND WHICH ARE SUBJECT TO GROUND WATER CONDITIONS. DRAINS SHALL BE INSTALLED AT OR BELOW THE AREA TO BE PROTECTED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM.
18. THE TOP OF OPEN JOINTS OF DRAIN TILES SHALL BE PROTECTED WITH STRIPS OF BUILDING PAPER AND THE DRAINAGE TILES SHALL BE PLACED ON 2 INCHES OF WASHED GRAVEL OR CRUSHED ROCK ONE SIEVE SIZE LARGER THAN THE TILE JOINT OPENING OR PERFORATION AND COVERED WITH NOT LESS THAN 6 INCHES OF THE SAME MATERIAL.
19. THE DESIGNS ON THIS AND ACCOMPANYING SHEETS ARE APPLICABLE TO SEISMIC ZONES 0, 1, AND 2.
21. THIS FOUNDATION DESIGN IS NOT FOR INSTALLATION ON

**SECTION VII**

**FOUNDATION READY SYSTEM**

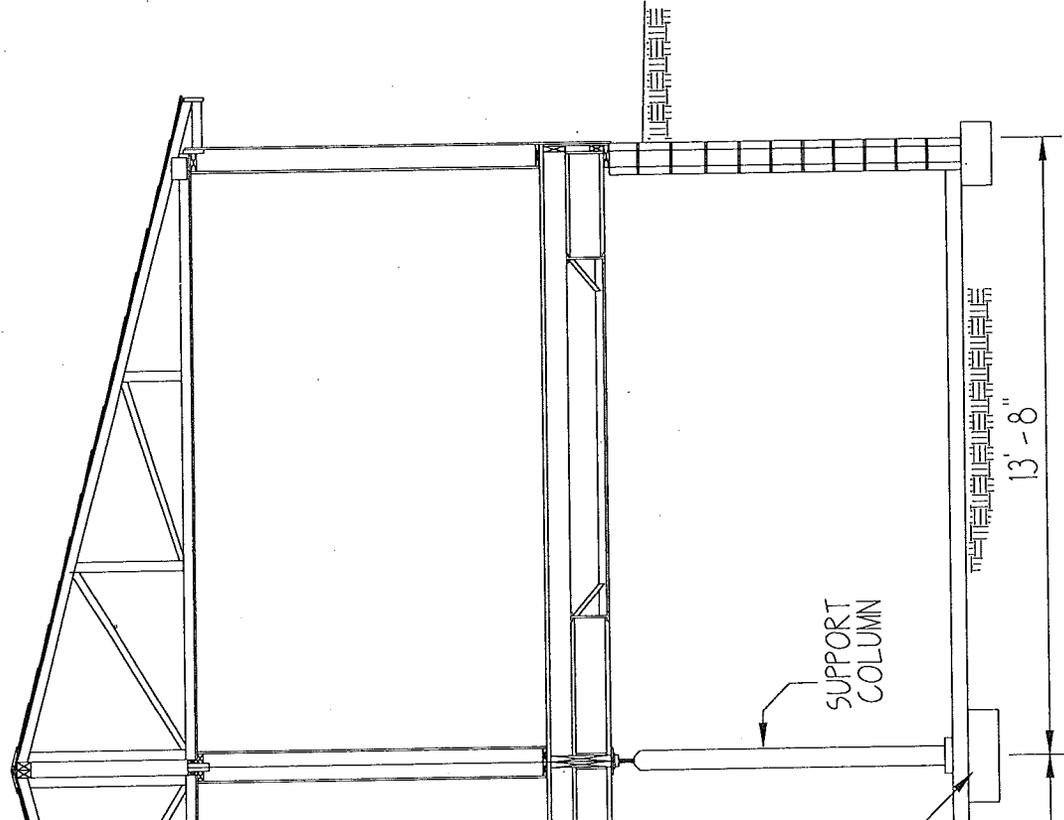
Double Section Homes

EADY CONSTRUCTION



DOUBLE WIDE  
OR DIMENSION 26'-4"

READY CONSTRUCTION



DOUBLE WIDE  
OR DIMENSION 27'-4"

# FOUNDATION READY DETAILS

MAXIMUM SPANS FOR GIRDER BEAM					
ROOF AND FLOOR LOAD AREAS UNDER MARRIAGE WALL (DENOTED BY "A")					
ROOF LIVE LOAD		30 PSF	40 PSF	60 PSF	80 PSF
15 3/8" BEAM	MAX. SPAN	9'-6"	9'-0"	8'-3"	7'-6"
	MIN. FOOTER SIZE	32" X 32" X 10"	33" X 33" X 10"	34" X 34" X 10"	34" X 34" X 12"
17 3/8" BEAM	MAX. SPAN	10'-2"	9'-8"	8'-9"	8'-2"
	MIN. FOOTER SIZE	32" X 32" X 10"	32" X 32" X 10"	34" X 34" X 10"	35" X 35" X 12"
FLOOR LOAD ONLY AREAS (CLEAR SPANS) (DENOTED BY "C")					
15 3/8" BEAM	MAX. SPAN	12'-3" FOR ALL ROOF LIVE LOADS			
	MIN. FOOTER SIZE	26" X 26" X 8" FOR ALL ROOF LIVE LOADS			
17 3/8" BEAM	MAX. SPAN	13'-0" FOR ALL ROOF LIVE LOADS			
	MIN. FOOTER SIZE	27" X 27" X 8" FOR ALL ROOF LIVE LOADS			

TABLE 7.1

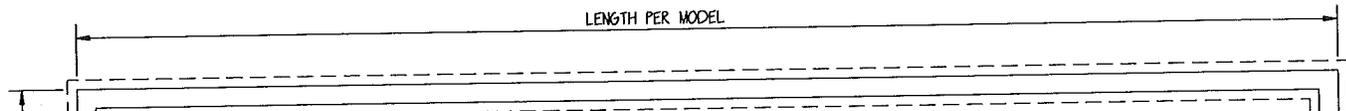
NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO FOUNDATION CONSTRUCTION  
NOTE: PLAN FOR FULL SPAN FLOOR SYSTEM



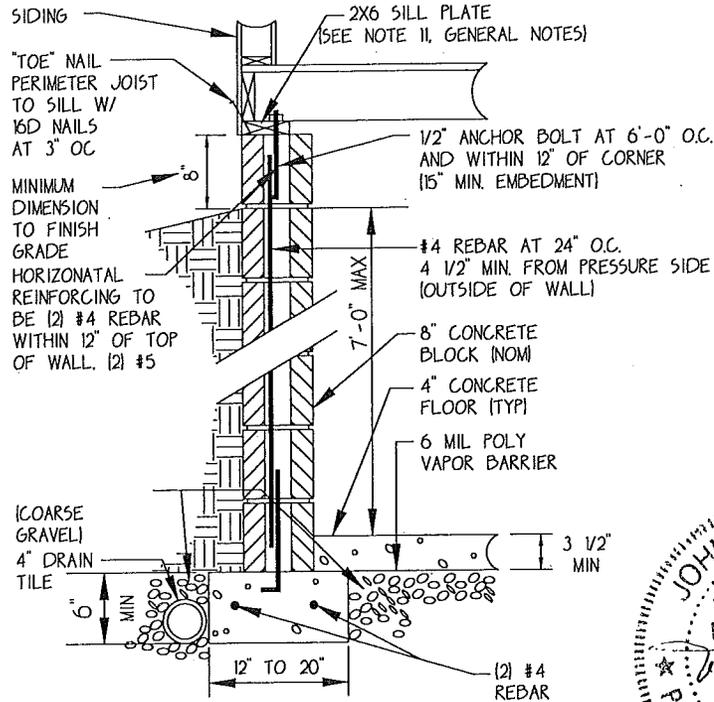
MAXIMUM SPANS FOR COLUMN SUPPORTS					
MAXIMUM RIDGE BEAM SPANS (DENOTED BY "B")					
FOOTER SIZE	GIRDER BEAM	30 PSF	40 PSF	60 PSF	80 PSF
40" X 40" X 12"	15 3/8"	18'-0"	18'-0"	18'-0"	14'-0"
	17 3/8"	18'-0"	18'-0"	18'-0"	12'-0"
43" X 43" X 13"	15 3/8"	18'-0"	18'-0"	18'-0"	18'-0"
	17 3/8"	18'-0"	18'-0"	18'-0"	18'-0"
48" X 48" X 14.5"	15 3/8"	18'-0"	18'-0"	18'-0"	18'-0"
	17 3/8"	18'-0"	18'-0"	18'-0"	18'-0"

TABLE 7.2

LENGTH PER MODEL



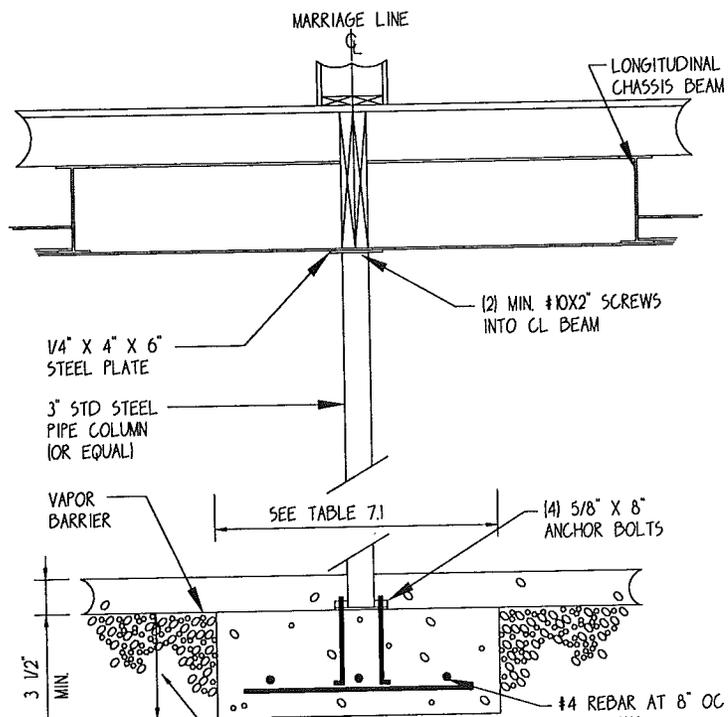
# BASEMENT DETAILS



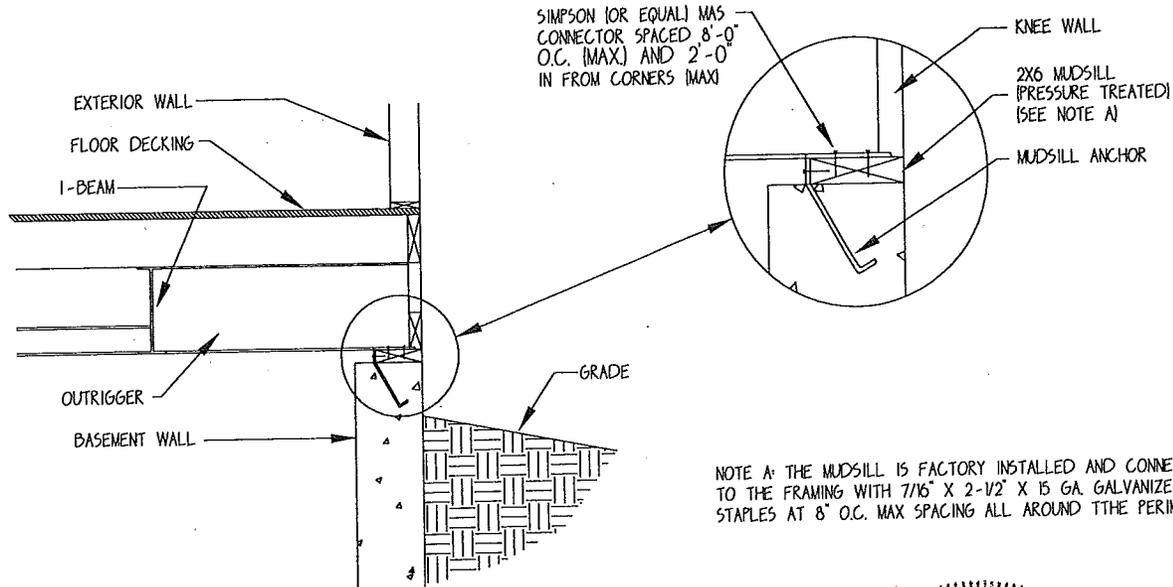
SECTION "A-A"



# BASEMENT DETAILS

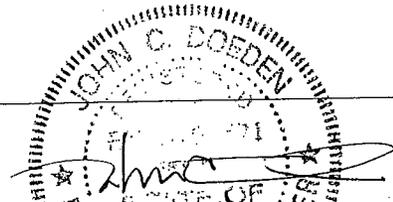


# FOUNDATION DESIGN: ANCHORAGE DETAILS



NOTE A: THE MUDSILL IS FACTORY INSTALLED AND CONNECTED TO THE FRAMING WITH 7/16" X 2-1/2" X 15 GA. GALVANIZED STAPLES AT 8" O.C. MAX SPACING ALL AROUND THE PERIMETER.

(A) MUDSILL ANCHORING METHOD: MAS ANCHOR



# FOUNDATION DESIGN: GENERAL NOTES

## GENERAL NOTES:

1. THIS FOUNDATION HAS BEEN DESIGNED FOR SITES WITH AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF MINIMUM.
2. FOUNDATIONS TO BE CONSTRUCTED ON SOIL WITH A LOWER BEARING CAPACITY SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE BY A LICENSED ENGINEER TO LOCAL CONDITIONS AND CODES.
3. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS TO BE 3000 PSI MINIMUM.
4. REINFORCING STEEL SPECIFIED TO BE GRADE 60 BARS MEETING ASTM A615, A616, AND A617.
5. FOUNDATION WALL MAY BE POURED CONCRETE 8" THICK, REINFORCED WITH #4 REBAR AT 12" O.C. VERTICAL AND #5 REBAR AT 18" O.C. HORIZONTAL.
6. UNIT COLUMN SUPPORTS FOR CENTERLINE RIDGE BEAMS REQUIRE ADDITIONAL PIER SUPPORTS UNDER CENTERLINE BEAM LOCATIONS PER FLOOR PLAN.
7. THESE SPECIFICATIONS ARE TYPICAL. LOCAL CODES MAY CONTAIN ADDITIONAL REQUIREMENTS.
8. FOUNDATION WALL STEMS MAY BE CONCRETE OR CONCRETE BLOCK.
9. CONCRETE BLOCK SHALL CONFORM TO ASTM C-90.
10. IN CONCRETE BLOCK STEM WALLS A MINIMUM OF (2) #4 REBARS ARE TO BE INSTALLED IN BLOCK WITH MUD SILL ANCHORS. FULLY GROUT EACH CELL CONTAINING REBAR.
11. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE OF PRESSURE TREATED TYPE OR OF SPECIES APPROVED FOR USE IN DIRECT CONTACT WITH CONCRETE.
12. THE INSTALLATION SITE MUST BE GRADED SO THAT

## GENERAL NOTES:

16. B. FOUNDATION WALL OF HABITABLE ROOMS LOCATED BELOW GRADE SHALL BE WATER PROOFED WITH MEMBRANES EXTENDING FROM THE EDGE OF THE FOOTING TO THE FINISH GRADE LINE. THE MEMBRANE SHALL CONSIST OF EITHER 2-PLY HOT MOPPED FELT, 6-MIL POLYVINYL CHLORIDE, 55-POUND ROLL ROOFING OR EQUIVALENT MATERIAL. THE LAP IN THE MEMBRANE SHALL BE SEALED AND FIRMLY AFFIXED TO THE WALL.  
C. FOUNDATION WALLS MAY BE DAMP PROOFED OR WATER PROOFED USING MATERIALS AND METHODS OF CONSTRUCTION OTHER THAN COVERED IN THIS SECTION WHEN APPROVED BY THE LOCAL BUILDING OFFICIAL.
17. DRAINS SHALL BE PROVIDED AROUND FOUNDATIONS ENCLOSING HABITABLE OR USEABLE SPACES LOCATED BELOW GRADE AND WHICH ARE SUBJECT TO GRAINED WATER CONDITIONS. DRAINS SHALL BE INSTALLED AT OR BELOW THE AREA TO BE PROTECTED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM.
18. THE TOP OF OPEN JOINTS OF DRAIN TILES SHALL BE PROTECTED WITH STRIPS OF BUILDING PAPER AND THE DRAINAGE TILES SHALL BE PLACED ON 2 INCHES OF WASHED GRAVEL OR CRUSHED ROCK ONE SIEVE SIZE LARGER THAN THE TILE JOINT OPENING OR PERFORATION AND COVERED WITH NOT LESS THAN 6 INCHES OF THE SAME MATERIAL.
19. THE DESIGNS ON THIS AND FOLLOWING ARE APPLICABLE TO SEISMIC ZONES 0, 1, AND 2.
21. THIS FOUNDATION DESIGN IS NOT FOR INSTALLATION ON

**SECTION VIII**

**SITE ASSEMBLY INSTRUCTIONS**

Double Section Homes

## **General**

The first step in properly maintaining your new manufactured home is to provide a solid support for it. Unlike a site-built house, your home does not need a perimeter foundation to support it. Your home has been designed with a steel chassis which will be supported by individual supports, or piers, together with tie down straps and anchors appropriate for local conditions. We recommend concrete piers for manufactured home blocking support and leveling. However, depending upon the site conditions and the judgement of your manufactured home installer, cement blocks, adjustable steel jacks or other support devices (such as tripod stands) may be adequate. If manufactured load bearing supports or devices are used, they shall be listed and labeled by an approved testing agency.

Data describing the roof and wind loads for which your home was designed may be found on the data plate in your home. Load zone maps of the United States showing roof load, wind load and thermal zones are also included in the Homeowners Manual. The support system must resist all vertical loads from the weight of your home, plus temporary extra roof loading, and it must resist side loads imposed on the structure by wind gusts.

All manufactured home installations shall comply with the requirements of local zoning ordinances and

Due to changes that are brought about by Chief Industries' continuing effort to improve our product and provide our customers with a wide variety features; there may be products in or on your home that are not thoroughly covered by this manual. Before starting the set up process, you should go completely through your home owner's information to see if there are supplemental details and/or information that will aid in the completion of the set up of your home. It is imperative that you check for and read these instructions and details carefully before any attempt is made in setting your home.

### **Set Up Responsibility**

Many local codes require that your home must be set up by a dealer, installer, or home mover specially licensed for this procedure. If your dealer is not licensed himself, he will make the arrangements with a contractor who is licensed. It is strongly recommended that the home be set and leveled by professional persons experienced in the construction of manufactured homes.

### **Site Implications**

When selecting a site some items to be considered are as follows:

- Is your site suitable for its intended use?
- Does this intended use act in accordance with any jurisdiction over it? (Federal, State, and Local laws)

Normally, the area of the site where you will locate the home should be relatively level. However, the area beneath the home should have enough slope to allow for good water drainage. The recommended slope is one (1) inch for every four (4) feet. The rest of the site should be graded in a manner that rainwater and melting snow will be diverted from the support or foundation of the house. A vapor barrier, such as a layer of polyethylene plastic sheeting or similar material must be placed on the ground under the home. Supports must rest on undisturbed soil or on fill that has been compacted and fully settled.

In addition, provision for utilities must be made before the home is set. Installation of lines and equipment supplying water, electricity, and fuel, plus sewage disposal systems must be completed and ready for connection in accordance with all local codes and regulations. Your county engineer, building inspector, or local utility company officials can advise you on the requirements in your community.

### **Footings & Piers**

Proper support for your home includes footings and blocking. The purpose of supports is to distribute the load of your home as evenly as possible on the footings, and to provide a sturdy base. The footings carry and distribute the weight of the home placed on the blocking. Piers are usually built of concrete block or

The third method is the use of perimeter blocking. The perimeter blocking could be constructed of either poured concrete or concrete blocks. This type of blocking allows the I-beam supports to be placed at larger intervals. This versatile foundation setup allows for either a crawlspace setup or a basement application.

You will have fewer problems maintaining a level home if the footings lie below the frost line in your community. This minimizes the heave and fall of the piers during the freeze and thaw cycle. To determine the size of piers and footings, refer to the sections dealing with pier construction and footing instructions.

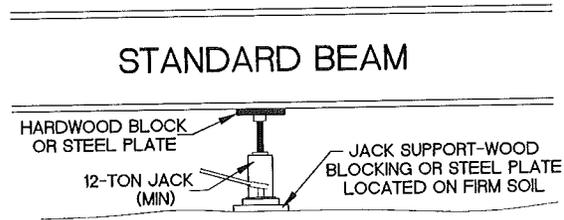
Pre-cast footings can be substituted for poured concrete footings. They simplify the process of blocking. These should be listed and labeled by an approved testing agency.

\*\*This next set of instructions is specifically for a snow load roof option. This option is not included with a standard specification house.\*\*

### **Snow Load Designed Roofs**

In order to support the snow load applied to the home, perimeter blocking becomes a necessity. To accommodate this additional blocking prints are provided with your installation manual.

- 1) The blocking prints provided will demonstrate proper pier spacing for your situation. Refer to the [prints section](#) for information on the



### Safe Jack Support

- 3) Leave tires and axles on the unit until all blocking is in place in order to reduce the hazard from collapse.
- 4) Distribute the concentrated loads created by the jacks by using 3/8" x 4" x 12" steel plates or 4" x 4" x 12" hardwood blocks between the jacks and the main I-Beam.



**WARNING: NEVER APPLY THE JACK DIRECTLY TO THE I-BEAM OR OTHER STRUCTURAL MEMBER.**

Such a concentrated load may cause the I-Beam or structural member to fail resulting in the home sliding off of the jack.

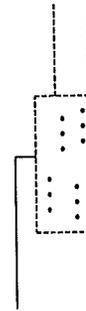
- 5) Position safety supports beneath solid members such as I-Beams or floor joists and never under an axle or other spring-mounted member.
- 6) Avoid overstressing structural members.

entire hinged section of the roof into place. Ensure that excessive structural racking is eliminated by raising the entire length of the roof at the same time. Failure to do so may cause decking and/or roof framing to separate. The recommended method of raising the roof system is to locate a post jack at intervals not exceeding twenty (20) feet. the roof section can then be raised to a reasonable height at each successive location until the entire roof is raised into final position.

- 3) After the roof section has been raised into position, move upper hinged kingpost into place. The upper king

post must fit into the pocket created by the dado in the fixed lower kingpost. Secure the upper hinged kingpost to the lower kingpost by reinforcing the joint with an APA rated osb gusset 3/8" x 3" x 12" in size. The gusset shall be secured with six (total of 12) 8d nails or eight (total of 16) 16 gauge, 7/16" crown by 1 1/2" leg staple (Senco N17 Typical) each side of joint.

- 4) Follow set up instructions per foundation type, making a special provision for the shingling completion as follows: Completely shingle the



**Gusset Construction**

backfilled earth on the exterior of the wall until the proper time.



**NOTICE:** These lists are Chief's recommended lists for home setup, however other methodology may be employed provided that these allow for complete structural integrity during the whole setting

process.

### List of Sets:

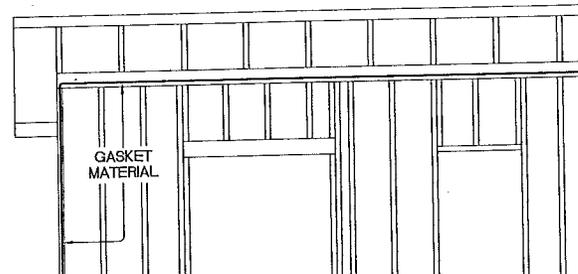
- Crawspace with Standard Blocking
- Foundation with Crossbeam
- Foundation Ready System

### Crawspace with Standard Blocking

- 1) The foundation footings must be completed.
- 2) Carefully remove plastic material covering the marriage wall from both halves. Make certain the marriage wall gasket material on the one half remains firmly secured around the perimeter of the living area. Should any of this material be loose, it should be re-attached to the home using 1 1/4" roofing nails.
- 3) Position appropriate half of home on desired lot. To prevent unit from moving block both sets of tires at front and rear.
- 4) Raise the hitch of the unit to be blocked and leveled approximately 2" higher than its final position with

into position on the pads. These piers should also be placed under the sidewalls at the exterior doors. Placement should be under the hinge side of the exterior door. For exact measurements, see the blocking print.

- 7) Slowly lower side of unit onto support blocks and level each pier. Some methods for leveling are listed at the end of this section.
- 8) After the sequence of leveling the piers is complete, lower the jacks so that the steel frame members rest on the threaded brackets of the piers.
- 9) Before moving the second half into position, make certain that the connection seal for the duct system as well as the marriage wall gasket is in place prior to joining the two halves. **CAUTION: THE JOINT FORMED BY THE CONNECTION OF THE TWO HALVES SHOULD BE TIGHT TO RESIST ANY AIR INFILTRATION.** Special care should be taken to assure that this step is performed.



- 13) By using a hand winch attached to the main I-Beams the two sections can be pulled tightly together.
- 14) WHEN ALIGNING HALVES KEEP EXTERIOR ENDWALLS FLUSH. DO NOT JUDGE BY INTERIOR DOORWAYS. This will allow the exterior endwalls to be sided with minimal shimming.

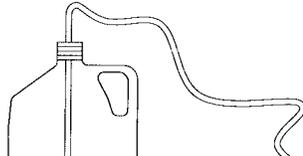
### Crawlspace Completion

Keep in mind when completing the skirting around the perimeter of the home (if it is not set on a perimeter foundation) that you must allow for ventilation underneath the house. There should be vents as close to the corners as possible to prevent "dead air pockets." One square foot of venting is required for every 150 square feet of floor space.

Example: a 30' x 80' house with actual dimensions of 27'-4" x 76'-0" equals 2078 square feet. Divide 2078 square feet by 150 which equals 13.85 square feet. Round up to 14 square feet of venting area within the crawlspace skirting.

### Leveling

There are many commonly accepted methods of leveling homes. Our recommended methods of leveling



above the adjustable clamp and the valve is opened. The top of the adjustable clamp on the pier is then adjusted to match the level of the water in the tube. When this operation is complete, then each succeeding pier is leveled in the same manner.

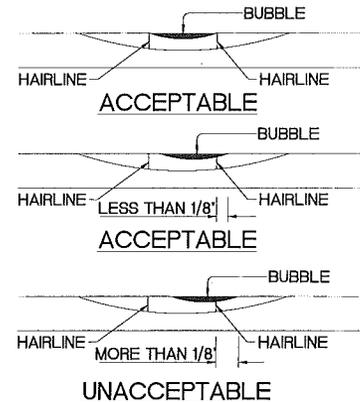
Another method of leveling is using a bubble level that is at least four (4) feet long. A deviation from level where part

of the bubble is less than 1/8" outside one hairline is usually acceptable, as long as the reading is not the aforesaid

consistently throughout the length of the house. Any deviation greater than 1/8" would suggest that the house should be releveled.

To achieve the best results, your home must stand as level as possible on its supports. If it does not, here are some of the problems that can result:

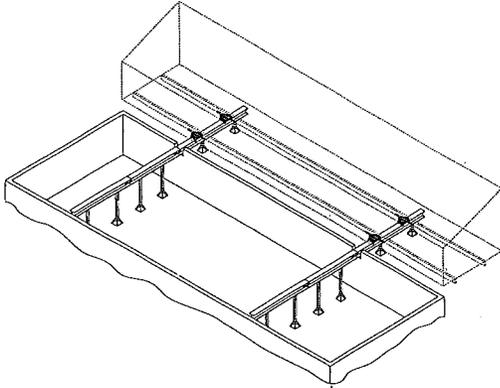
- Walls, partitions, and floors that buckle



**Bubble Level Reading**

remove temporary flooring over stairwell area. Make certain the marriage wall gasket material on the one half remains firmly secured around the perimeter of the living area. Should any of this material be loose, it should be re-attached to the home using 1 1/4" roofing nails.

- 3) Set up the "Roller Beam" or I-Beam within the



*Roller Beam Setup*

foundation walls per *Setting System* manufacturer guidelines. Place roller devices on the proper beams. Place a support beam on top of the roller devices to help distribute the weight of the home evenly. Make sure that appropriate jacks or temporary blocking are spaced as listed. If the floor length of your house is 60'-0" or longer, we

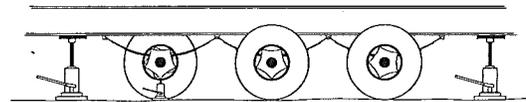
- 6) Adequate blocking should be placed under the hitch assembly to prevent it from falling to the ground. Make certain that temporary support blocking is in place to prevent house from falling to the ground in the event that the jacks fails. Place a 12-ton jack under each main frame member just to the rear of the rear spring hangers. These two jacks should be operated simultaneously to raise the home. A third 12-ton jack should be placed under



the hitch. **WARNING: SITTING UNDER A MANUFACTURED HOME WHEN IT IS SUPENDED ON JACKS IS DANGEROUS. IF**

**THE HOME SLIPS OFF OF THE JACK, YOU COULD BE SERIOUSLY OR EVEN FATALLY INJURED.**

- 7) To remove the axles, supports should be placed tightly under the frame members to prevent the home from dropping should the jack fail. When



*Jack Placement for Axle*

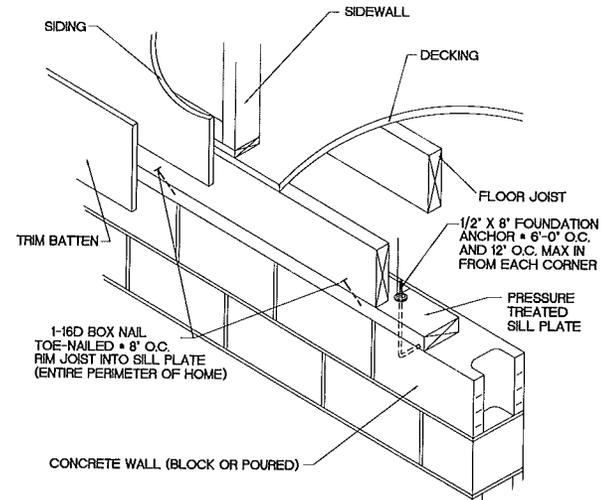
removing axles, one jack should be located directly in front of the first spring hanger and another directly behind the last spring hanger. It would also

marriage wall openings, temporarily fasten away from edge of home to prevent material from getting caught between the two sections.

- 11) Before moving the second half into position, make certain that the connection seal for the duct system as well as the marriage wall gasket is in place prior to joining the two halves. CAUTION: THE JOINT FORMED BY THE CONNECTION OF THE TWO HALVES SHOULD BE TIGHT TO RESIST ANY AIR INFILTRATION. Special care should be taken to assure that this step is performed.
- 12) Repeat steps 4-9 for the second half of home. Slide the second section to within a few inches of the first section.
- 13) Pull halves as tight as possible together with hand winch.
- 14) When aligning halves keep exterior endwalls flush DO NOT judge by interior doorways. This will allow the exterior endwalls to be sided with minimal shimming.
- 15) Lower houses simultaneously to the foundation.
- 16) Nail flooring system to sill plate in one of these manners:
  - a) Toe-nail two 12d common nails from each floor joist into sill plate and one 12d common nail every 8" on center through the length of each

driven at an angle of approximately thirty (30) degrees with the rim joists. After the home has been secured to the foundation, apply lower trim batten. Caulk all horizontal siding joints, then paint to match home.

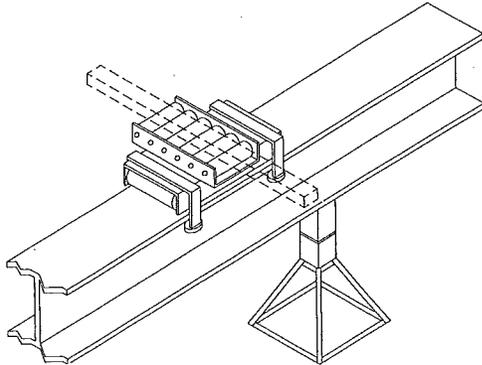
- 17) Lag together the rim joist located directly underneath the marriage wall.
- 18) Place columns along marriage wall line spaced as shown on the *Foundation Ready* print. After



**Exterior Sill Plate Connection (method b)**

remains firmly secured around the perimeter of the living area. Should any of this material be loose, it should be re-attached to the home using 1 1/4" roofing nails

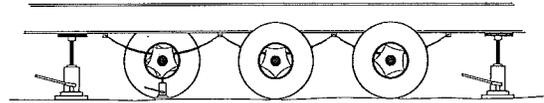
- 3) Set up the "Roller Beam" or I-Beam within the foundation walls per *Setting System* manufacturer guidelines. Place roller devices on the proper beams. Place a support beam on top of the roller devices to help distribute the weight of the home evenly. Make sure that appropriate jacks and temporary blocking are spaced as listed. If the floor length of your house is 60'-0" or longer, we



***Roller Device on Beam***

recommend the use of three beams for setting the

home from dropping should the jack fail. When

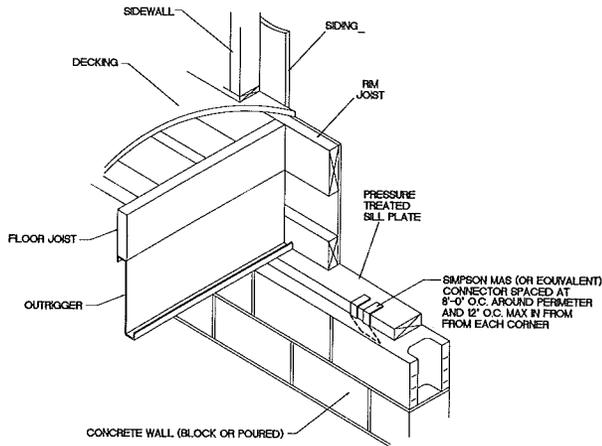


***Jack Placement for Axle Removal***

removing axles, one jack should be located directly in front of the first spring hanger and another directly behind the last spring hanger. It would also be wise to position a jack under each end of the axles when removing bolts. To remove the hitch, block under the A-frame to prevent it from falling to the ground. Remove the bolts from all frame to hitch connection plates. Lower the A-frame safely to the ground. Store the A-frame for possible future movement when it can be reattached.

- 8) Lower the home onto the support beams.
- 9) Slide section to final position over foundation.
- 10) To prevent damage to electrical wiring and interior floor coverings (carpet and linoleum) in marriage wall openings, temporarily fasten away from edge of home to prevent material from getting caught between the two sections.
- 11) Before moving the second half into position, make certain that the connection seal for the duct system as well as the marriage wall gasket is in

- 14) When aligning halves keep exterior endwalls flush. DO NOT judge by interior doorways. This will allow the exterior endwalls to be sided with minimal shimming.
- 15) Lower houses simultaneously to the foundation.
- 16) Fasten the factory installed sill plate to your foundation in one of these manners:



#### ***Sill Plate Connection (method a)***

- a) A Simpson MAS (or equivalent) connector should be installed in your foundation wall spaced at

toe-nailing 12d common nails every 3" on center around the entire perimeter of the home. Toe-nails should be driven at an angle or approximately thirty (30) degrees with the rim joist. For this method the home must be ordered with the lower siding trim shipped loose. After the home has been secured, apply lower trim batten, caulk all horizontal siding joints, and paint to match the home.

- 17) Lag together the laminated beams located directly underneath the marriage wall.
- 18) Place columns along marriage wall line spaced as shown on the *Foundation Ready* print. After columns are placed as outlined, then remove the temporary house supports.

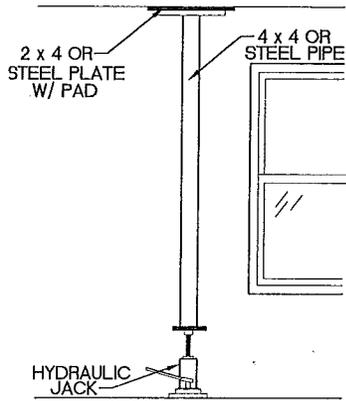
## **Post Foundation (Finish) Setup**

- 1) Each 120V wire that crosses the marriage line has been fitted with a special cable splicing device. Orient the splices so the mating ends align.

**WARNING: BEFORE CONNECTING THE ELECTRICAL WIRES, BE POSITIVE THE POWER HAS**

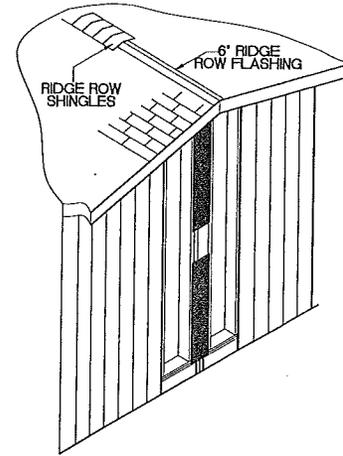
the marriage line has been fit into a covered junction box. Using a cutting blade, split the cable sheathing back approximately 1 1/8". Remove the sheathing back to the cable split. Attach the two ungrounded or "black" wires together with a locknut. Repeat this step for the two neutral or "white" wires and the two grounded or "bare" wires.

- 2) To level all ceiling sections set a jack at the lower section. Carefully raise the jack until the two ceiling sections are flush. Then finish fastening the two ridge beams together on the outside of the home with #8 x 3 1/2" woodscrews at 16" on center. This procedure should be followed at each location if one part of the ceiling is low. By carefully inspecting the ceiling or using a straight edge, low points can be determined. To raise the low portion, use a wood member such as a 4" x 4" or a steel pipe placed on the top of a hydraulic jack.



**Interior Jack Placement**

screws at 16" on center throughout the length of the home. Alternate angles for every screw installed ensuring the screws run through any fill material that may be used. After completion of this task, repair the moisture barrier with the sealing tape provided.



**Endwall & Roof Finishing**

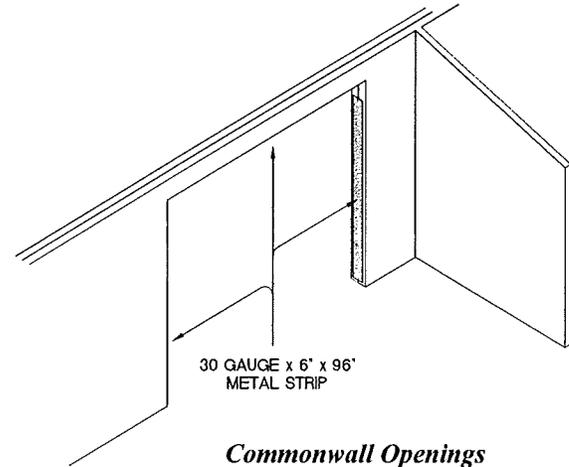
- 6) The front and rear endwalls should now be fastened and finished. The home will be shipped to you with the endwall sheathing or hardboard siding held back from the marriage line approximately 16". To secure the sections, use the 3 strips of 6" x 7' metal. Cut for length and space the metal along the height of the endwall, fastening to the studs with 1 1/4" galvanized roofing nails every 8" along both edges. To finish securing, cut a piece of sheathing

enough to cover manufacturers precut lap joint. The edges of the fiberboard siding should also be remedied to properly fit the manufacturers lap joint. This can be accomplished by cutting the panel with a circular saw with the blade set at the appropriate depth. Complete eave by installing the ridge soffit panel. This panel must be cut to fit for length between the two factory installed soffit panels.

**For Cedar Siding**—If your home has cedar siding, endwalls will need to be completely sided. The first step will be to remove all shipping plastic that remain on the endwalls. Start a row of siding at the bottom of the endwall. Subsequent rows of siding should be applied up the endwall with a 1" overlap. Fasten siding through the sheathing and into the studs at 16" on center using the 2 1/2" stainless steel nails provided.

**For Vinyl Siding**--The endwalls will need to be completely sided. To begin, nail a vinyl starter strip to the bottom edge of the wall. The corner trim piece will already be in place when the home is shipped. Trim will need to be fitted next to the soffit before piece can go up to the peak of the wall. Start a piece of siding by snapping it into place and then nailing it about every 8" to allow for expansion and contraction of the vinyl. Manufacturer's installation instructions for vinyl siding are shipped with or on the home. If you cannot find these instructions, call your dealer for this information.

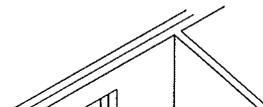
- 12) Openings that have a door installed should be secured with 6" x 48" on the side jambs and a 6" x



*Commonwall Openings*

24" piece on the top jamb. Care should be taken to predrill all holes as close as possible to the edge in order that trim moulding will cover screws.

- 13) Doors in the marriage wall that have been installed will now be completed. After securing opening as outlined in step 12, apply a 1/2" wrapped stile directly to stud on side of opening. Now mount



moulding provided.

- 14) All archway openings should now be paneled and trimmed with the material provided. Refer to trim schedule for proper trim placement.
- 15) Completion of all plumbing should be made. Check all work for leaks, improper sizing or slope with instructions provided in owners manual.
- 16) The electrical system should be wired to supply and then checked for operation.

### Anchorage Instructions

In accordance with the Federal Manufactured Housing Construction and Safety Standard in effect on date of construction, the following anchorage requirements for all Wind Zones are in addition to any requirements covered under the previous standard:

Design of anchors should be certified for their installation by a professional engineer or a nationally recognized testing laboratory as to their resistance based on the installed angle of diagonal tie and/or vertical tie loading and type of soil in which the anchor is to be installed.

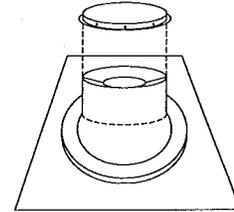
Anchoring equipment should be certified by a registered engineer or architect to resist these specified forces in accordance with testing procedures in ASTM specification D3953-91; "Standard Specification for Strapping, Flat Steel, and Seals."

Tie Downs must start no more than two (2) feet from each end of unit (i.e. open end anchorage).

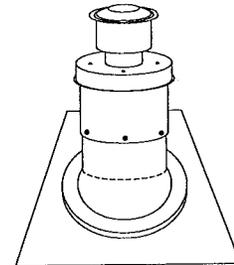
### Heating, Ventilation, and Air Conditioning

It is imperative that you read and understand the owners manual provided by the manufacturer of each piece of equipment in the house. In the event that there is a discrepancy between this manual and the appliance manufacturers' provided manual, follow the instructions given by the manufacturer of the appliance.

It is mandatory that the combustion air and flue tube assembly be fully engaged at back sides and front, and combustion air tube securely fastened to the furnace with sheet metal screws in the screw holes provided.



*Step 1*

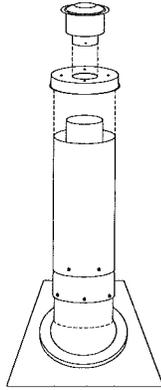


*Step 2*

**Installation of  
Exterior Roof Jack**

both caps aside for later use.

- 4) Install Extension. Place the roof jack extension on top of the crown assembly base, pushing down firmly to assure a snug fit. **IMPORTANT:** Make sure that the pipes are connected. Using the 4 holes at the base of the extension as a guide, drill 4 holes 1/8" in diameter into the crown assembly base. Secure the extension to the crown assembly base with the 4 screws provided.
- 5) Reinstall Upper and Lower Cap to Extension. Install the lower cap on top of the extension so that the center pipe sticks through the hole in the lower cap. Using the 3 screws removed in step 3, attach the lower cap to the extension upper cap over the center pipe of the extension. Using the 2 holes located at the base of the upper cap as guides, drill 2 holes 1/8" diameter into the center pipe. Finally, attach the upper cap to the center pipe using the 2 screws removed in step 3 to the center pipe.



*Step 5*

duct system. This crossover system consists of a rigid duct that connects the two main duct trunks. This rigid crossover duct is sealed together at the commonwall line with insulation. Be sure that the commonwall insulation that is placed when setting the house is not constricting the air flow between the two halves.

Branch circuits installed at the factory for the purpose of energizing exterior air conditioning panel through the floor. You must connect the air conditioning equipment according to the instructions given in the owners manual provided by the equipment manufacturer. The supports or slab built for the air conditioner must be freestanding. The condensation tubing for the air conditioner must drain to the exterior of the house.

Check all air intakes and outlets regularly to make sure that they are completely free from any constrictions. Be sure to check the return air filter which must also be kept clean.

### **Air Quality Improvement System**

Federal standards require that an air quality improvement system be made available to all prospective mobile home purchasers. The Coleman Blend-Air system is offered in the Chief Industries protect line, which has been explained to you by your dealer.

If you purchased the Blend-Air system with your home, the operation of this system is completely

Use 1/2" blunt or sharp end metal screws to fasten roof jack combustion air pipe to furnace combustion air

through the roof and must be at least 2 feet above the roof within a 10 foot horizontal span. **IMPORTANT:** If an exposed portion of chimney is greater than 4 feet above the roof line, use support wires to keep chimney secure. The support wires may be attached to the outer pipe of the chimney with screws, provided the screws do not penetrate the inner flue pipe.

To install the glass doors that are shipped with your house, refer to the fireplace owner's manual. When starting a fire in the fireplace remember to fully open the glass doors and flue damper for sufficient air combustion. Always keep the fire from coming into contact with the glass doors. Clean the glass with any commercial glass cleaner or soap and water. Do NOT use any abrasive material to clean glass. Do NOT clean glass with cool water if it is still hot from fire.

The damper control lever should be located inside the fire chamber. Pull down to close, push up to open. The damper must be open when lighting a fire, not doing so will cause smoke spillage into the room. When the fireplace is not in use, close the damper to prevent down-drafts to enter the room.

The grate in the fire chamber is there to provide air combustion space beneath the solid fuel. Remember to keep the ashes cleaned out for this reason.

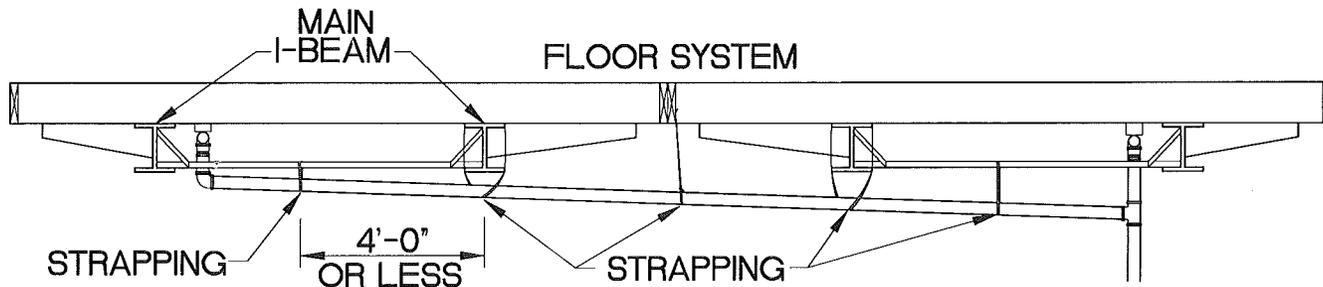
## **Electrical System**

Your home is designed to be connected to an electrical supply source rated at 240 volts, 3 pole, 4-wire

It is also critical for the protection of the occupants of the home that all non-currant-carrying metal parts be properly grounded. The only safe and approved method of grounding your home is through an electrical-isolated grounding bar in the manufactured home power supply panel which grounds all non-currant-carrying metal parts to the electrical system in your home at a single point.

The ground conductor of the power supply feeder cable connects the grounding bar to a good electrical ground. Insulate the grounded circuit conductor (neutral or white) wire from the grounding conductors (green wires) and from equipment enclosures and other grounded parts. Bonding screws, straps or buses in the distribution panel board should have been removed and discarded at the manufacturing facility.

Homes with a factory-installed service meter base must be grounded differently. The exterior equipment and enclosure must be weatherproof, and conductors must be suitable for use in wet locations. When a meter is provided on the home, connect the neutral (white) conductor to the system grounding (green) conductor on the supply side of the main disconnect. The grounding electrode conductor is run from the meter to the grounding electrode. The homeowner must provide the grounding electrode conductor(s). The grounding electrode should be an 8' length of 1/2" dia. copper rod or 3/4" galvanized steel pipe. Drive it into the ground at least 12" below the surface and 2' from the foundation.



*Drain Line Strapping Diagram*

### **Water System**

Your home's water system has been designed for an inlet water pressure of 80 psi. Should the home be installed in an area where the water pressure exceeds 80 psi, a pressure reducing valve should be installed.

A 3/4" threaded inlet is provided by the manufacturer for the water supply systems connection. This inlet is located below the home and usually near the water heater compartment. A tag on the side of the home indicates the location of the water inlet. A shutoff valve must also be installed between the water supply and the house inlet. The valve must be a full port gate valve or a full port ball valve. **CAUTION: THE MAIN SHUTOFF VALVE IS NOT SUPPLIED BY THE**

assemble the fittings and the drain pipe provided should be cut to size.

Due to the possibility of transportation damage, the manufacturer has provided the drain line fittings, the drain line pipe sections and the assembly instructions (shown on the Drain Line print in dashed lines) and are shipped loose to complete the plumbing system at the setup site.

The drain lines shall be assembled using the pipe, cement, and supports shipped with the home. Assembly of the system shall be in accordance with state and local codes.

Final drain connections are made at the 3" outlet located in the center portion of the home. Approved 3"

After the gas system has been installed, it must be checked over meticulously to insure absence of leaks. To avoid damage to the lines or possible injuries to oneself use a mixture of soap and water to check these lines for leaks.

To avoid possible damage to associated gas valves and regulators incorporated on appliances, do not pressurize the gas line in excess of 8 ounces maximum after final connections are made.

After final testing of the gas supply lines, the home can be connected by using a listed gas connector of the capacity indicated on the label by the gas inlet.



## Interior Finishing

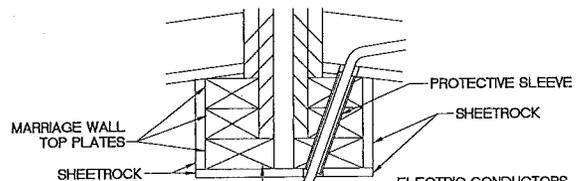
### **Large Light Fixtures**

If your home has large light fixtures or ceiling fans, you will have to complete installation on site. The light fixtures will be shipped loose with the home. Locate the junction box that has been placed where your light fixture will be attached. Remove the cover plate from the junction box, this will expose the wires for assembly. Remove the wire nuts from the end of the wires and complete as follows:

### **Ceiling Fan on Marriage Wall Beam**

If you have ordered a ceiling fan that should be placed on the marriage wall beam, your home has been constructed with provision for the installation of the fan. This installation shall be completed following the setting and fastening of your home. This fan shall be installed as follows:

- 1) Once the sections have been fastened together, you should make sure the electricity has been turned off at the circuit breaker or panel box to reduce the risk of electrical shock.
- 2) Remove the wire nuts from the electrical conductors and take the electrical box from the bottom of the marriage wall beam before removing shipping wall components. This should allow the conductors to pass through as the shipping wall top plate is removed.
- 3) Finish the marriage wall opening as detailed, but remember to allow electrical conductors to pass through the finish material.



- 6) From this point, there are several options in mounting your ceiling fan. Consult the ceiling fan manufacturer's installation instructions, decide which ceiling fan mounting you will use, and proceed with the appropriate instructions per their manual. Where necessary, each section will note the different procedures for the various types of mounting and wiring.

## Appliance Installation

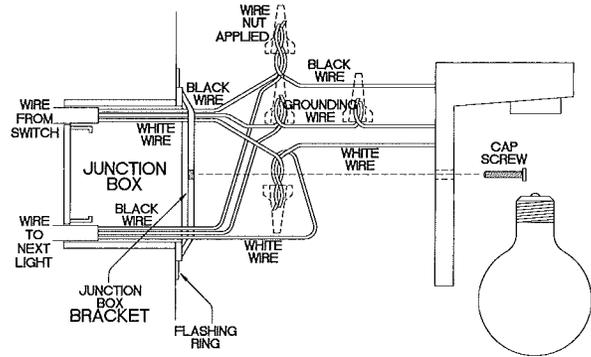
### General

A gas or electric clothes dryer installed in the home must be exhausted on the outside by a moisture lint exhaust duct and termination fittings. Ducts shall not terminate beneath the home.

### Clothes Dryer

Your home has been constructed with provisions for a dryer vent. This installation shall be completed prior to the use of your appliance. The dryer vent shall be installed as follows:

- 1) A four (4) inch diameter access has been provided in the floor directly behind the dryer. The access hole has been covered with a plywood cover.
- 2) Select a length of 4" dryer hose to complete the vent. This hose will be required to



*Exterior Light Connection*

- Grounding wires may be either bare or color coded green.
- 3) Grounding of the junction box bracket must be made by attaching the grounding conductor to the bracket grounding screw or if no screw exists, a listed clamp must be used. This connection must be made prior to the connection of the fixture.
  - 4) Fold wires over the junction box bracket back into junction box.
  - 5) Place light fixture over junction box and using a cap screw, secure the fixture into the threads in the junction box bracket.
  - 6) Furnish bulb and attach globe.

# **Final Inspection**

## **General**

After your home has been completely set up, it is imperative to have a final inspection to insure no items have been overlooked. Any missed step could cause a service problem. Special emphasis should be placed on the following items:

## **Air Infiltration Barrier**

A special material is fastened to the bottom side of your new home. It was installed at the factory to protect against moisture, rodents and unconditioned air. This covering was inspected at the factory, but could have been damaged during transit. It is important that the areas that are damaged be resealed.

Using vinyl patching tape designed to repair tears or holes. If a hole is large, use a patch of the same or similar material as the bottom covering and tape the edges for an airtight seal. Specifications for the sealing tape are listed in the Homeowner's Packet.

## **Exterior Siding and Trim**

A through check should be made of all portions of the exterior siding to make certain that it is not cracked, split, buckled, or loose in any manner. Any siding observed to be in this condition should be repaired or

The shingles should be checked for proper attachment, making certain that none are loose or have been displaced during transit.

## **Clearances**

If there are any low-hanging trees or bushes adjacent to your home which could cause damage the exterior or the roof, they should be trimmed out or cut accordingly. Future growth of these bushes or trees should be considered in connection with possible movement during wind conditions or under snow or ice loads.

## **Caulking**

There are many good brands of caulking material and roof sealers which can be purchased from local retail stores. Whatever brand of caulking and/or sealer is purchased, the instructions regarding application should be read closely. This will include any special preparation of the surface to be coated. Observe the labeling on this material for any notes concerning resistance to running or streaking the sides of the home. This can be very unsightly and in many cases extremely difficult to remove.

## **Interior**

At this time all furniture, carpet, fixtures, or other loose items should be installed. All clamps or brackets installed on windows and doors for shipping purposes