HOLLY PARK

HOLLY PARK DIVISION, INDIANA BUILDING SYSTEMS, LLC.

SET UP INSTRUCTION MANUAL

FOR MULTI SECTION HOMES

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KEEP THIS MANUAL WITH YOUR HOME

IM 2.1 (REV B)

SET UP INSTRUCTIONS - FOR DOUBLE WIDE HOMES

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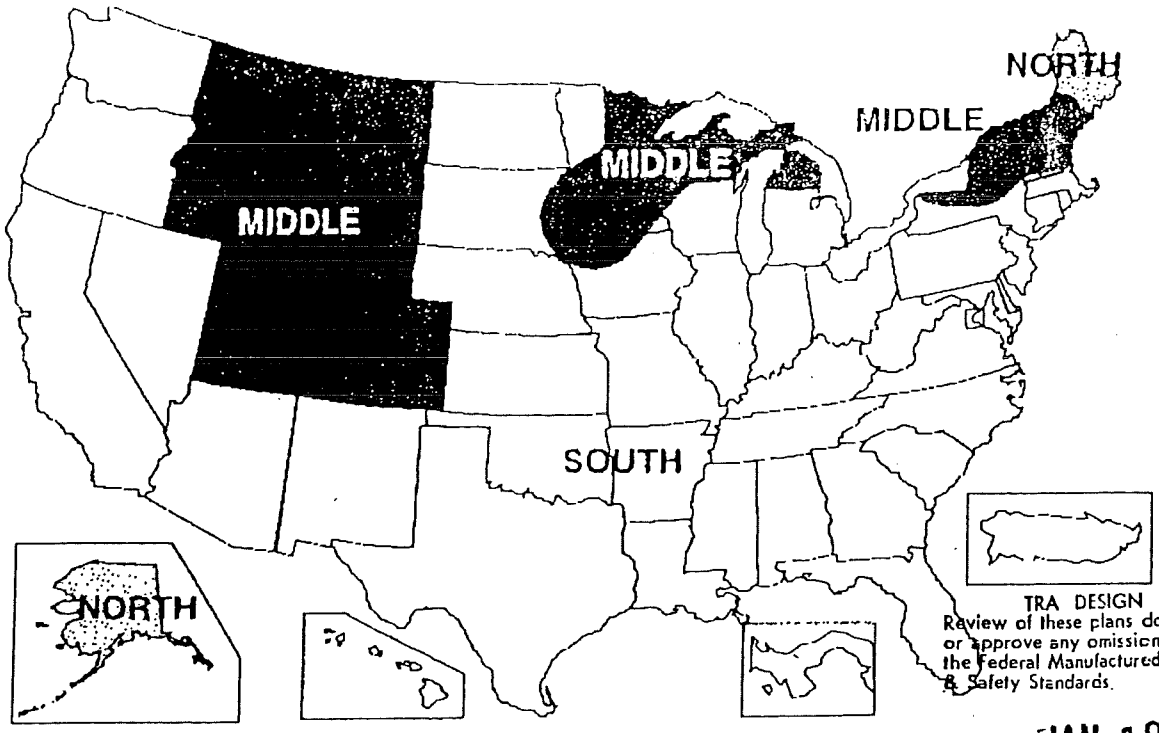
OPTIONAL

Appendix A Hinged roof On-site Set up Instructions
Appendix B Optional On-Site dormer Attachment

INTRODUCTION

Your Holly Park home has been thoroughly inspected and bears the label which indicates that all systems including structural, plumbing, heating, electrical, fire safety, and planning considerations are in compliance with the Federal Manufactured Home Construction and Safety Standards. We suggest that you contract the local building officials having

DESIGN ROOF-LOAD ZONE MAP



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DESIGN WIND-LOAD ZONES:

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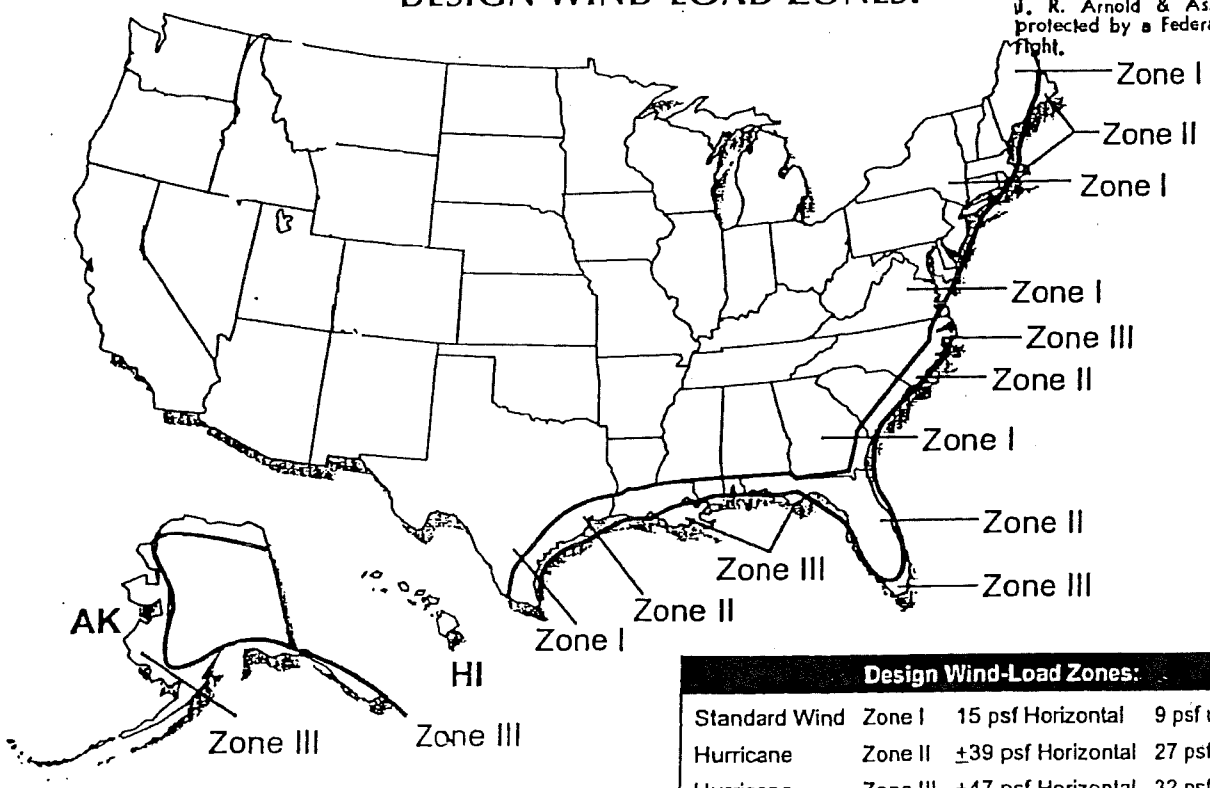
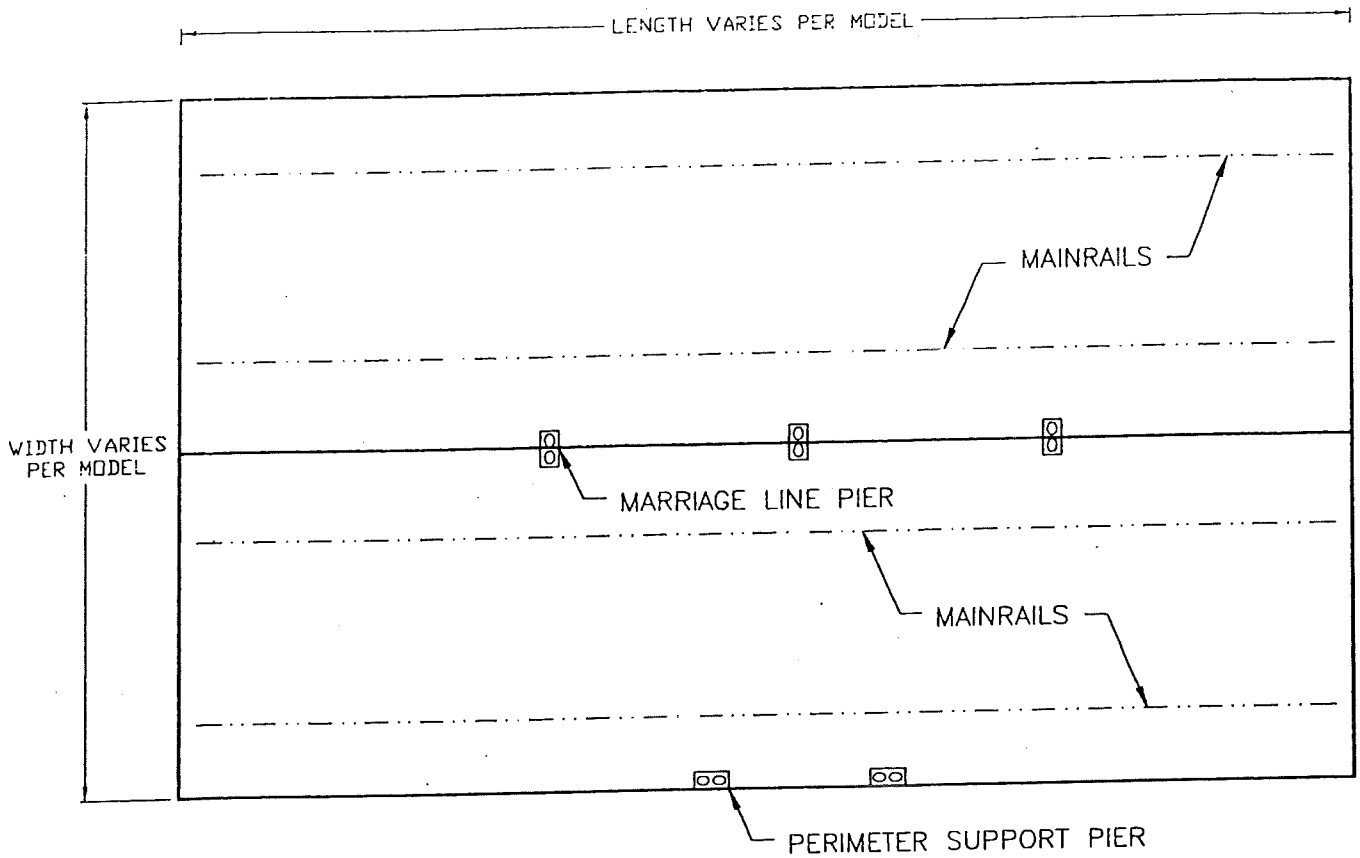


Design Wind-Load Zones:			
Standard Wind	Zone I	15 psf Horizontal	9 psf uplift*
Hurricane	Zone II	±39 psf Horizontal	27 psf uplift
Hurricane	Zone III	±47 psf Horizontal	32 psf uplift
			*net uplift
Note: psf: pounds per square foot			

NOTE: ALL MAINLAND STATES NOT SHOWN ARE WIND ZONE 1

(Rev A) IM 2.3



COLUMN SUPPORT LOCATIONS AT THE MARRIAGE LINE AND ALL OTHER PERIMETER & SHEARWALL SUPPORT PIERS ARE IDENTIFIED WITH A DECAL SIMILAR TO THE ONE BELOW ON THE UNDER SIDE OF EACH HOME AND ARE TO BE VISIBLE AFTER SET-UP HAS BEEN COMPLETED. A MODEL SPECIFIC COLUMN LAYOUT WILL ALSO BE SUPPLIED WITH EACH HOME.

SUPPORT PIER REQUIRED AT THIS LOCATION

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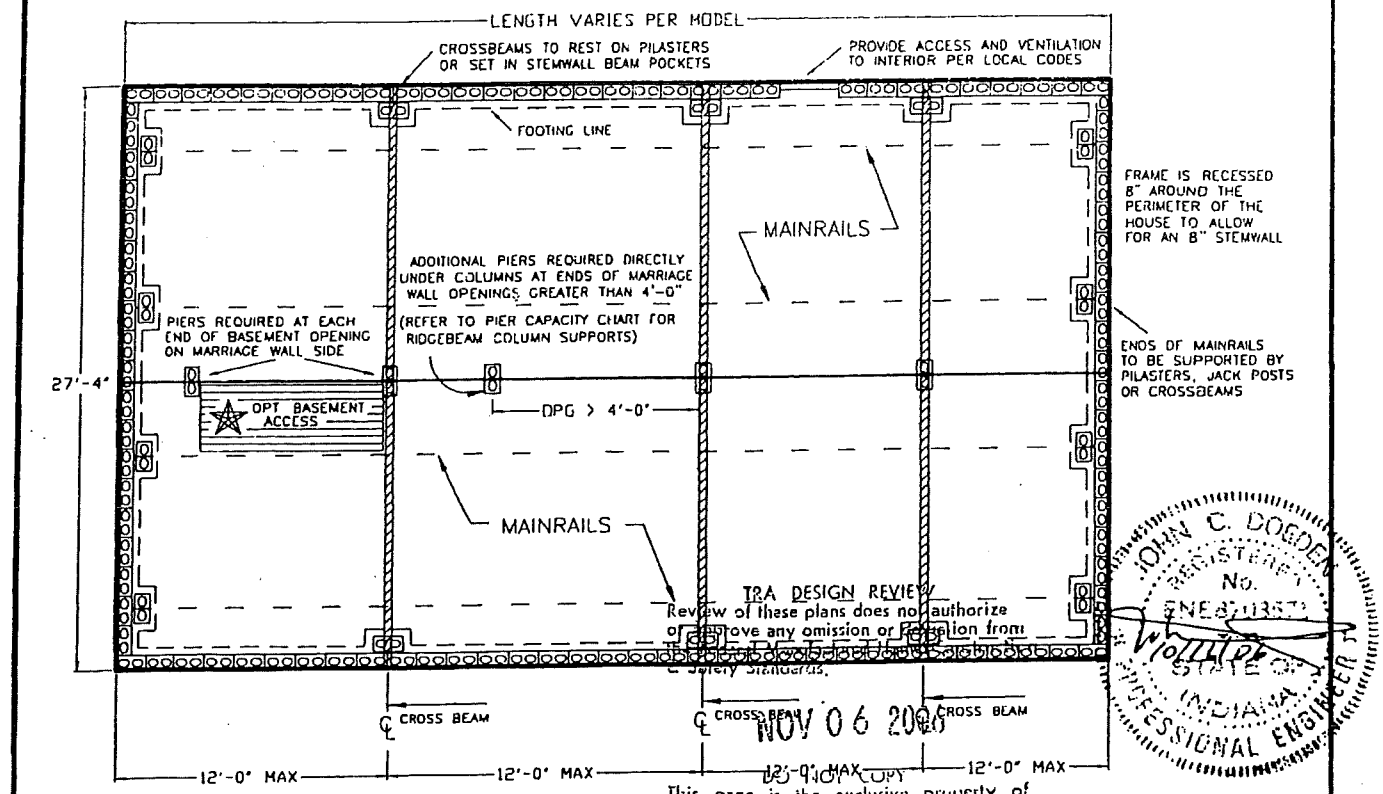
27'-4"-Wide Crossbeam Perimeter Foundation For 20# & 30# Roof Load Zones



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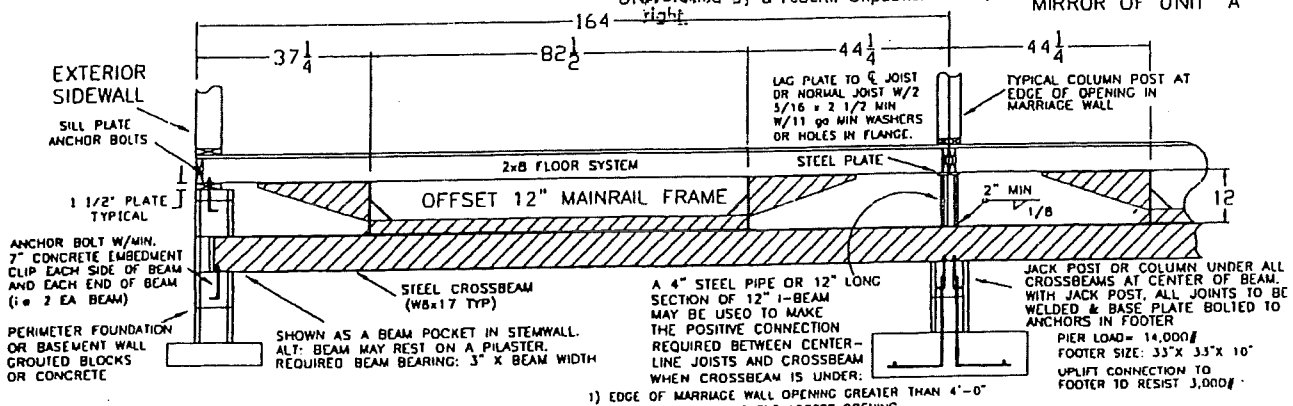
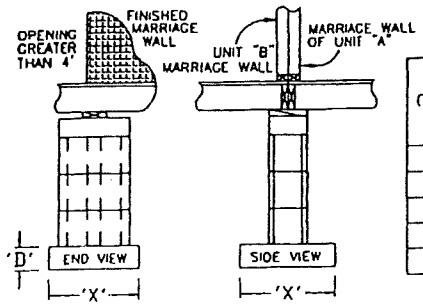
UNIT "B" SPACING MIRROR OF UNIT "A"



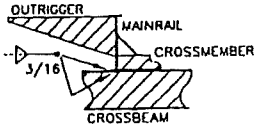


FOOTING SIZE: 'X'x'X'x'D'
PIER AND FOOTER CAPACITY

SOIL BEARING CAPACITY/SQ FT	STANDARD PIER 16"x16"x4"	STANDARD PIER 20"x20"x6"	STANDARD PIER 24"x24"x8"
1,000	1,778	2,778	4,000
1,500	2,667	4,167	6,000
2,000	3,556	5,555	8,000
3,000	5,334	8,333*	12,000*
4,000	7,112	11,111*	15,600*

*DOUBLE STACKED PIER REQUIRED WHEN LOAD EXCEEDS 8,000 lbs.

'D' MAY BE 6" WITH DOUBLE STACKED PIERS OR WHEN DESIGN CAPACITY IS NOT OVER 2,000 PSF



NOTE: OUTRIGGER AND CROSSMEMBER NEED NOT FALL IN SAME LOCATION AS THE CROSSBEAM

IM2-4-9 09-25-06

IM-2-4-9

27'-4"-Wide Optional Perimeter Frame System For 20# & 30# Roof Load Zones

DETAIL A

16d COMMON NAILS @ 24" O.C. MAX

SIMPSON (OR EQUAL) MAS CONNECTOR SPACED AT 6'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS (MAX) IN POURED CONCRETE WALL.

ALTERNATE CONCRETE BLOCK STEM WALLS: USE 1/2" DIA. x 15" ANCHOR BOLTS INTO MASONRY @ 6'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS.

DETAIL B

(4) 5/16" DIA. BOLTS FOR SUPPORT COLUMN TO I-BEAM EACH END OF STAIRWELL OPENING.

DETAIL C

1/4"x8"x8" STEEL PLATE ASTM A36 or EQUAL. DRILL HOLES IN PLATE FOR (4) 3/8" LAGS. PRE-DRILL 1/4" HOLE IN GANGLAM BEAM & INSTALL (4) 3/8"x4" LAGS ea COLUMN.

INSTALL BITUMINOUS BARRIER ON FOUNDATION WALL EXTERIOR

DETAIL D

MIN 8"x16" FOOTER

CONTINUOUS 4" DRAIN IN CONTINUOUS CRUSHED GRAVEL

MAX 6 12

MARRIAGE WALLS OF HOLLY PARK SECTIONAL MANUFACTURED HOME

OPTIONAL STAIRWELL OPENING NEXT TO MARRIAGE WALLS PROVIDED BY HOLLY PARK.

STAIRWAY TO BE PROVIDED BY & INSTALLED BY OTHER THAN HOLLY PARK PER LOCAL BUILDING CODES.

LAG BEAMS TOGETHER @ STAIRWELL w 5/16"x3" LAGS (3) ROWS @ 6" O.C. EA. (12" O.C. REMAINING LENGTH)

8" CEMENT BLOCK WALL OR POURED CONCRETE

3" DIA SCHEDULE 40 STEEL PIPE UNDER STEEL I-BEAM AT EACH END OF STAIRWELL OPENING.

3" DIA SCHEDULE 40 STEEL PIPE UNDER LSL or LVL BEAM AT EACH END OF STAIRWELL OPENING AND DESIGNATED INTERVALS. POSTS @ 8'-0" O.C. MAX. & AT COLUMNS PER MODEL.

MAX. SPAN FOR POSTS AT STAIRWELL IS 9'-5".

MAX MARRIAGE WALL OPENING w/o POST UNDER ENDS OF OPENING IS 7'-0".

MAX SPAN FOR POSTS WITH FLOOR LOAD ONLY IN MARRIAGE WALL OPENING IS 10'-8".

REFER TO PIER CAPACITY CHART FOR RIDGEBEAM COLUMN SUPPORTS

NOTE: FASTENERS & BRACKETS IN CONTACT WITH ACQ TREATED LUMBER MUST BE HOT DIPPED GALVANIZED TO THE APPROPRIATE ASTM STANDARD OR BE STAINLESS STEEL.

4" MIN CONCRETE SLAB OVER COMPACTED SAND

16"x16"x4"

30"x30"x8"

DETAIL E

CENTERLINE COLUMNS TO FOOTER WITH (4) 5/8"x4" LAGS IN BANTEM PLUGS

3/8" CONTINUOUS WELD COLUMN TO 5"x5"x1/4" STEEL PLATE (TYP).

CENTERLINE FOOTER SIZE: 30"x30"X8" MAX. PIER LOAD 12,300# WITH 2,000 PSF SOIL (MIN)

FOOTINGS TO BE DESIGNED FOR SPECIFIC SPECIFIC SOIL CONDITIONS OF YOUR SITE BY ENGINEER OR ARCHITECT.

MAX. ROOF LOAD 30 PSF
MAX. FLOOR LOAD 40 PSF
WIND ZONE 1 ONLY

HOLLY PARK
OPTIONAL PERIMETER FRAME
TYPICAL BASEMENT SET

IM2-4-11 DWG
09-25-06

JOHN C. DODDEN REGISTERED No. ENGINEER STATE OF INDIANA PROFESSIONAL ENGINEER

10/16/06

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IM-2-4-11

27'-4"-Wide Optional Perimeter Frame System For 20# & 30# Roof Load Zones

DETAIL A

16d COMMON NAILS @ 24" O.C. MAX

SIMPSON (OR EQUAL) MAS CONNECTOR SPACED AT 6'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS (MAX) IN POURED CONCRETE WALL.

ALTERNATE CONCRETE BLOCK STEM WALLS: USE 1/2" DIA. x 15" ANCHOR BOLTS INTO MASONRY @ 6'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS.

DETAIL B

(4) 5/16" DIA. BOLTS FOR SUPPORT COLUMN TO I-BEAM EACH END OF STAIRWELL OPENING.

DETAIL C

1/4"x8"x8" STEEL PLATE ASTM A36 or EQUAL. DRILL HOLES IN PLATE FOR (4) 3/8" LAGS. PRE-DRILL 1/4" HOLE IN GANGLAM BEAM & INSTALL (4) 3/8"x4" LAGS ea COLUMN.

INSTALL BITUMINOUS BARRIER ON FOUNDATION WALL EXTERIOR

DETAIL D

MIN 8"x16" FOOTER

CONTINUOUS 4" DRAIN IN CONTINUOUS CRUSHED GRAVEL

MAX 6 / 12

MARRIAGE WALLS OF HOLLY PARK SECTIONAL MANUFACTURED HOME

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3" DIA SCHEDULE 40 STEEL PIPE UNDER LSL or LVL BEAM AT EACH END OF STAIRWELL OPENING AND DESIGNATED INTERVALS. POSTS @ 8'-0" O.C. MAX. & AT COLUMNS PER MODEL.

NOTE: FASTENERS & BRACKETS IN CONTACT WITH ACQ TREATED LUMBER MUST BE HOT DIPPED GALVANIZED TO THE APPROPRIATE ASTM STANDARD OR BE STAINLESS STEEL.

4" MIN CONCRETE SLAB OVER COMPACTED SAND

A B C D E

16"x16"x4"

30"x30"x8"

CENTERLINE COLUMNS TO FOOTER WITH (4) 5/8"x4" LAGS IN BANTEM PLUGS

3/8" CONTINUOUS WELD COLUMN TO 5"x5"x1/4" STEEL PLATE (TYP).

DETAIL E

CENTERLINE FOOTER SIZE: 30"x30"X8" MAX. PIER LOAD 12,300# WITH 2,000 PSF SOIL (MIN)

FOOTINGS TO BE DESIGNED FOR SPECIFIC SPECIFIC SOIL CONDITIONS OF YOUR SITE BY ENGINEER OR ARCHITECT.

MAX. SPAN FOR POSTS AT STAIRWELL IS 9'-5".

MAX MARRIAGE WALL OPENING w/o POST UNDER ENDS OF OPENING IS 7'-0".

MAX SPAN FOR POSTS WITH FLOOR LOAD ONLY IN MARRIAGE WALL OPENING IS 10'-8".

REFER TO PIER CAPACITY CHART FOR RIDGEBEAM COLUMN SUPPORTS

MAX. ROOF LOAD 30 PSF
MAX. FLOOR LOAD 40 PSF
WIND ZONE 1 ONLY

HOLLY PARK OPTIONAL PERIMETER FRAME TYPICAL BASEMENT SET

IM2-4-11 DWG
09-25-06

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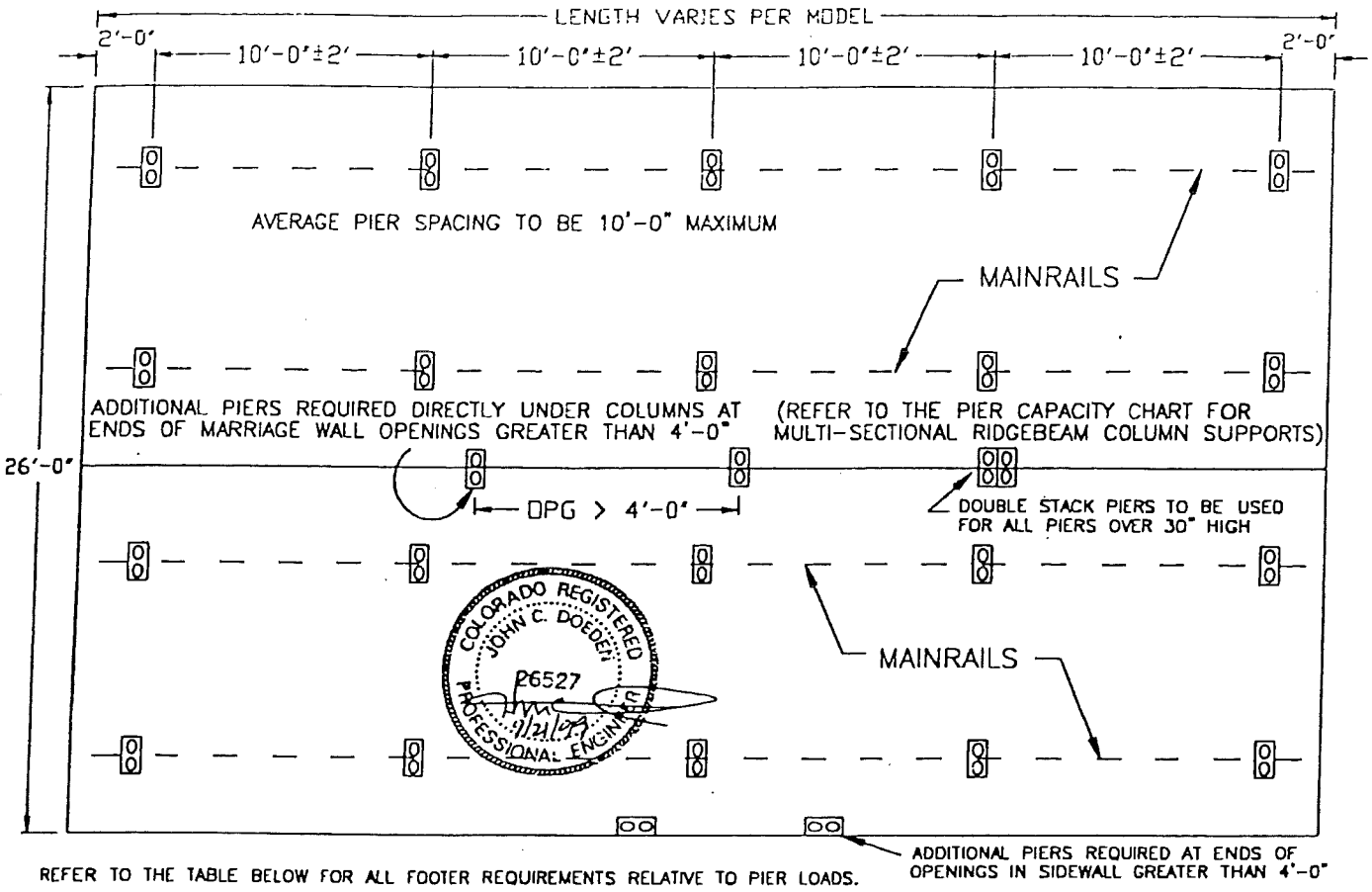
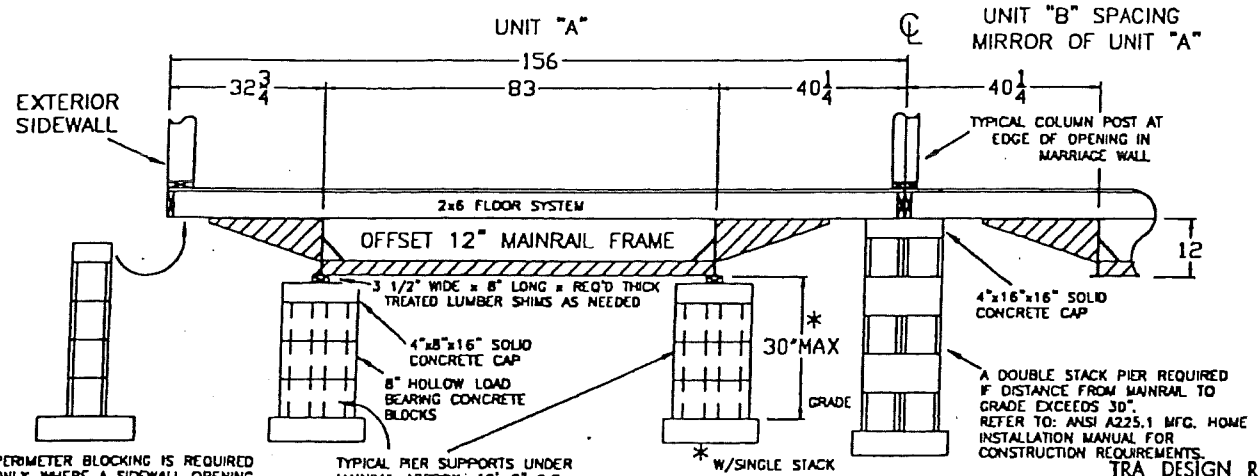
IM-2-4-11

28-Wide Mainrail Pier Set For 20# & 30# Roof Load Zones



REFER TO THE TABLE BELOW FOR ALL FOOTER REQUIREMENTS RELATIVE TO PIER LOADS.



PERIMETER BLOCKING IS REQUIRED ONLY WHERE A SIDEWALL OPENING GREATER THAN 4'-0" EXISTS.

MAX OPG:	8'-0"	12'-0"
LOAD:	1800#	2500#

BLOCK EACH SIDE OF PATIO DOOR AND BAY WINDOW OPENINGS.

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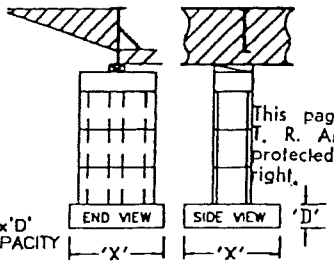
SOIL BEARING CAPACITY/SQ FT	STANDARD PIER 16"x16"x4"	STANDARD PIER 20"x20"x6"	STANDARD PIER 24"x24"x8"
1,000	1,778	2,778	4,000
1,500	2,667	4,167	6,000
2,000	3,556	5,555	8,000
3,000	5,334	8,333	12,000
4,000	7,112	11,111	15,600

'D' MAY BE 6" WITH 'DOUBLE STACKED PIERS OR WHEN DESIGN CAPACITY IS NOT OVER 2,000 PSF

FOOTING SIZE: 'X'x'X'x'D'
PIER AND FOOTER CAPACITY



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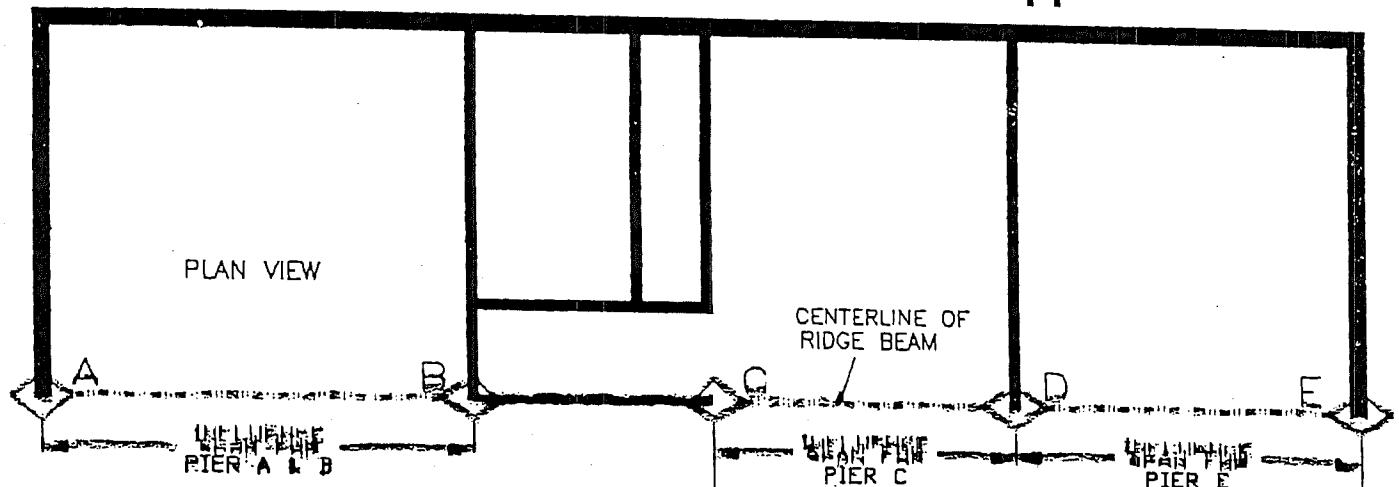
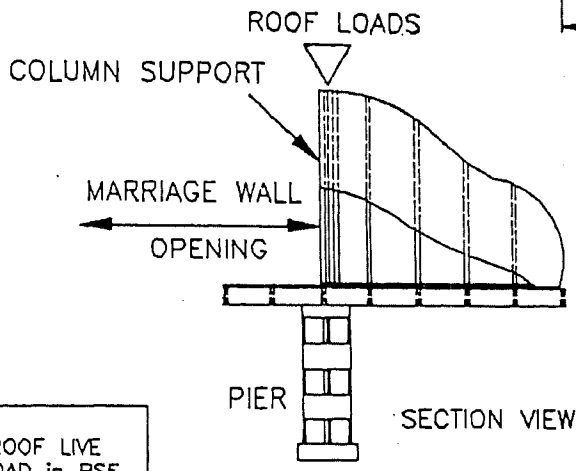
(Rev C) IM2.5

28-Wide Centerline Pier Capacity Chart For Ridgebeam Column Supports





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NOTES:
1) PIER LOADS BASED ON 10 PSF ROOF DEAD LOAD.
2) LOADS TABULATED ARE TOTAL FOR BOTH HAVES AT COLUMN SUPPORT.

TOTAL WIDTH (FEET)	ROOF LIVE LOAD in PSF (ROOF ZONE)	MINIMUM PIER CAPACITY in POUNDS — MAXIMUM SPAN TO NEXT SUPPORT in FEET								
		4'-0"	8'-0"	12'-0"	16'-0"	20'-0"	24'-0"	28'-0"	32'-0"	36'-0"
26'-0"	20 (SOUTH)	1,350#	2,240#	3,125#	4,015#	4,900#	5,790#	6,680#	7,570#	8,460#
	30 (MIDDLE)	1,715#	2,880#	4,040#	5,205#	6,370#	7,535#	8,700#	9,865#	11,025#

IM2-4-3
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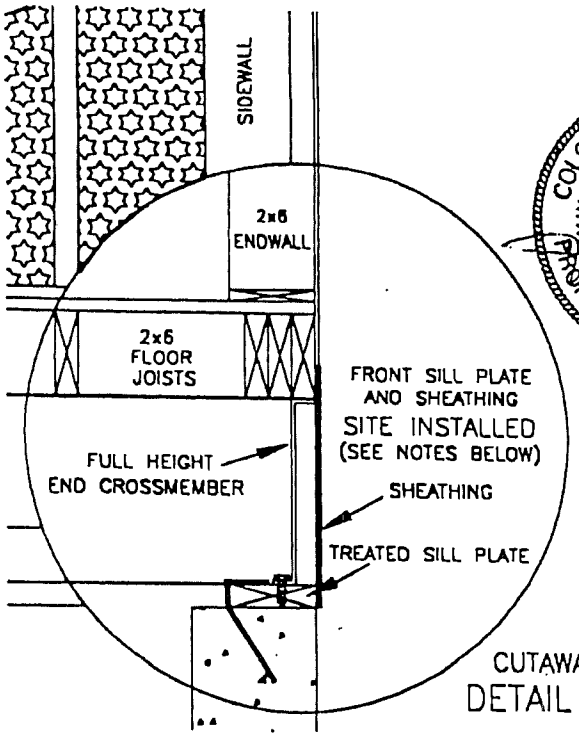
6

(Rev C)

IM 2.7

28-Wide Optional P. meter Frame System
For 20# & 30# Roof Load Zones

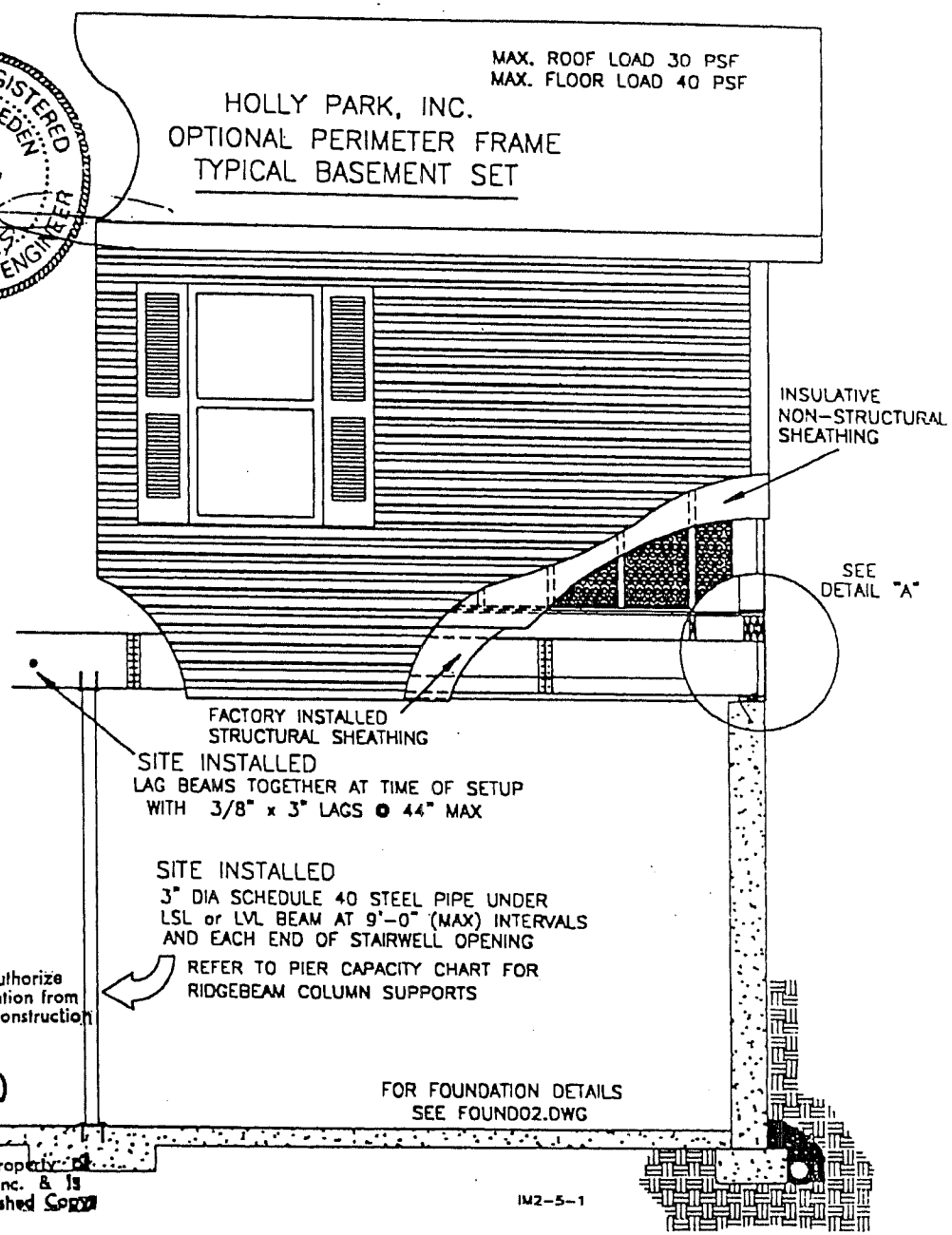


CUTAWAY
DETAIL A

COLORADO REGISTERED
JOHN C. DOEDEN
26527
9/21/99
PROFESSIONAL ENGINEER

MAX. ROOF LOAD 30 PSF
MAX. FLOOR LOAD 40 PSF

HOLLY PARK, INC.
OPTIONAL PERIMETER FRAME
TYPICAL BASEMENT SET



NOTES FOR SITE INSTALLED ITEMS FIGURE "A"

1) INSTALL 2x6 TREATED MUDSILL TO END CROSSMEMBER WITH (3) #8 X 1 1/2" SCREWS WITH WASHERS THROUGH HOLES IN CROSSMEMBER.

2) INSTALL 3/8" CONTINUOUS STRIP OF APA RATED SHEATHING TO MUD SILL AND FRONT FLOOR JOIST WITH 7/16" x 1 1/2" x 16 ga STAPLES @ 10" O.C.

3) SIMPSON (OR EQUAL) MAS CONNECTORS SPACED 8'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS IN POURED CONCRETE WALL.

ALTERNATE CONCRETE BLOCK STEM WALLS:
USE 1/2" DIA. x 15" ANCHOR BOLTS INTO MASONRY 8'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS.

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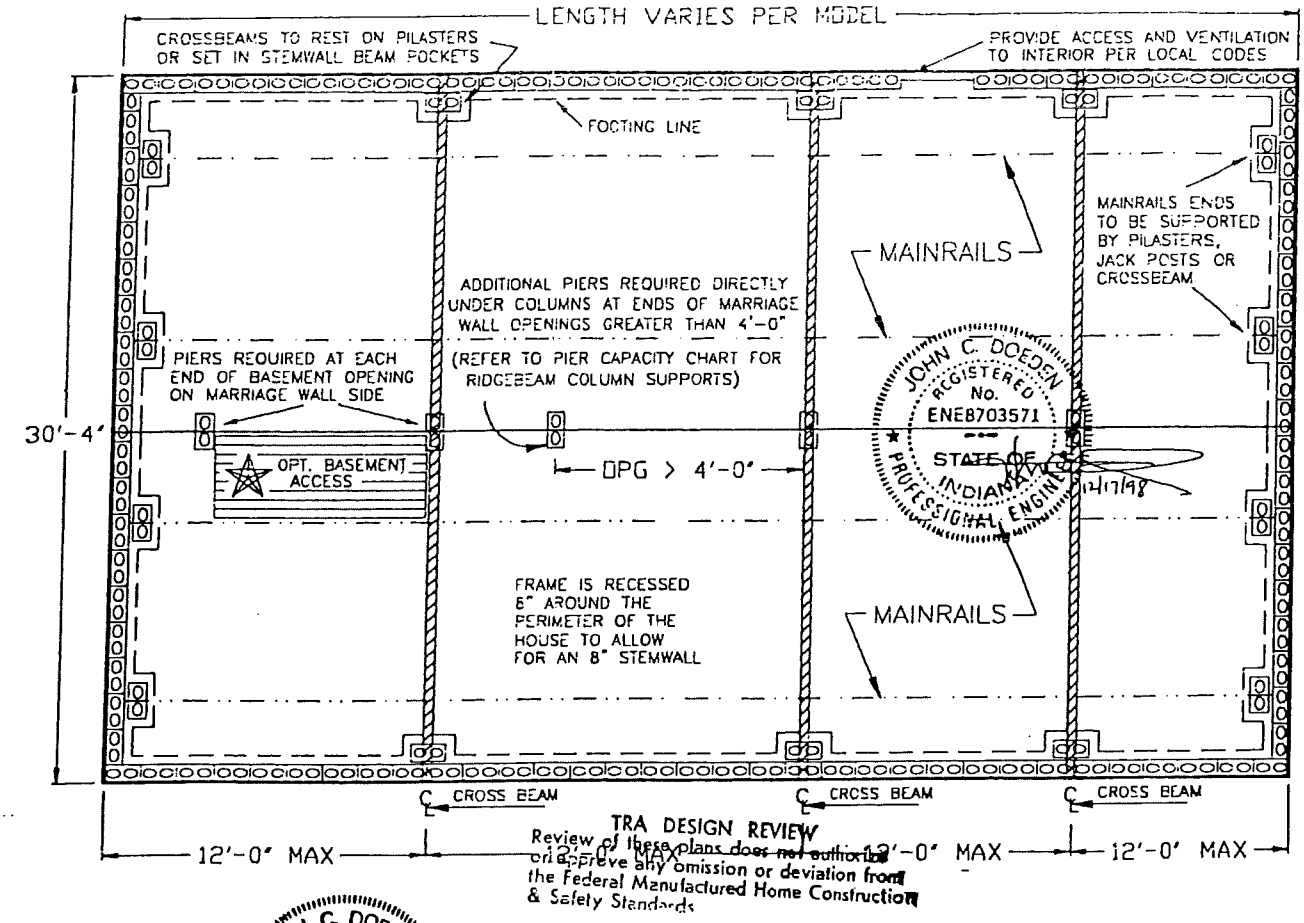
8

(Rev 8)

IM 2.9

32-Wide Crossbeam Perimeter Foundation For 20# & 30# Roof Load Zones



JOHN C. DOEDEN REGISTERED No. ENE8703571 STATE OF INDIANA PROFESSIONAL ENGINEER 12/17/98

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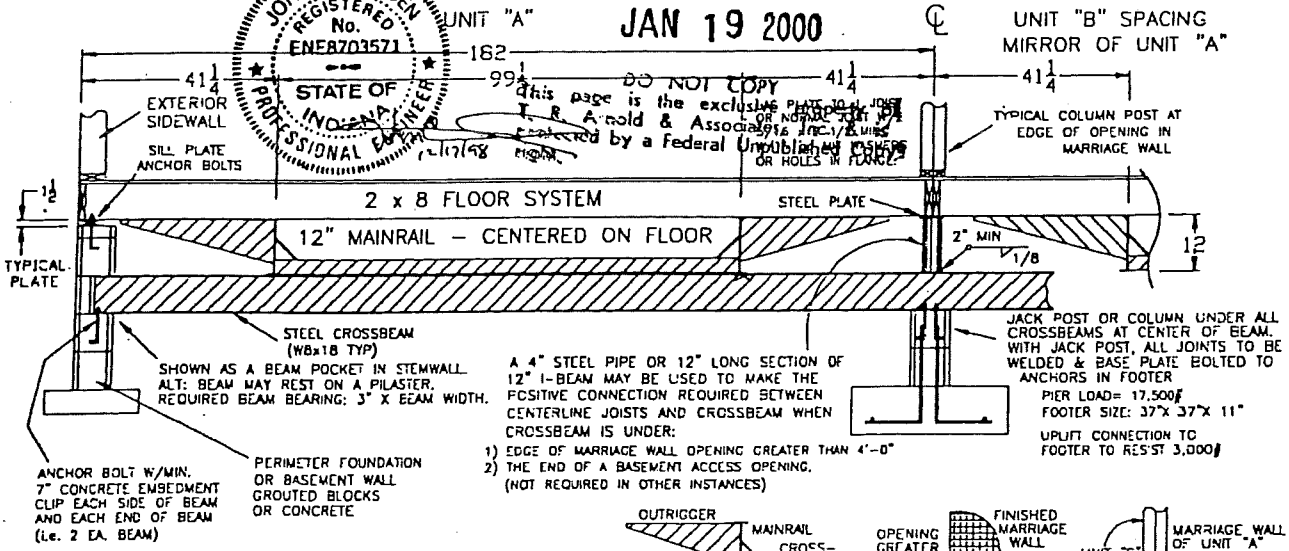

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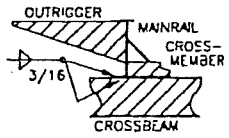
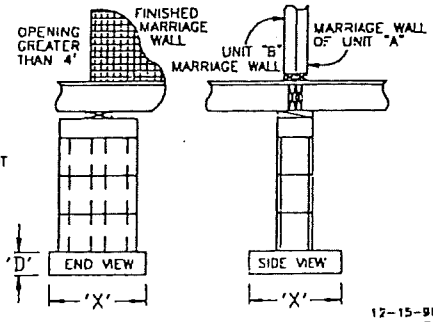


NOTE: OUTRIGGER AND CROSSMEMBER NEED NOT FALL IN SAME LOCATION AS THE CROSSBEAM



FOOTING SIZE: 'X'x'X'x'D'
PIER AND FOOTER CAPACITY

SOIL BEARING CAPACITY/SQ FT	STANDARD PIER 16"x16"x4"	STANDARD PIER 20"x20"x6"	STANDARD PIER 24"x24"x8"
1,000	1,778	2,778	4,000
1,500	2,667	4,167	6,000
2,000	3,556	5,555	8,000
3,000	5,334	8,333	12,000
4,000	7,112	11,111	15,600

'D' MAY BE 6" WITH 'DOUBLE STACKED PIERS OR WHEN DESIGN CAPACITY IS NOT OVER 2,000 PSF

12-15-98
IM2-4-7

APPLICABLE FOR: 20# & 30# ROOF LOADS PERIMETER FOUNDATION

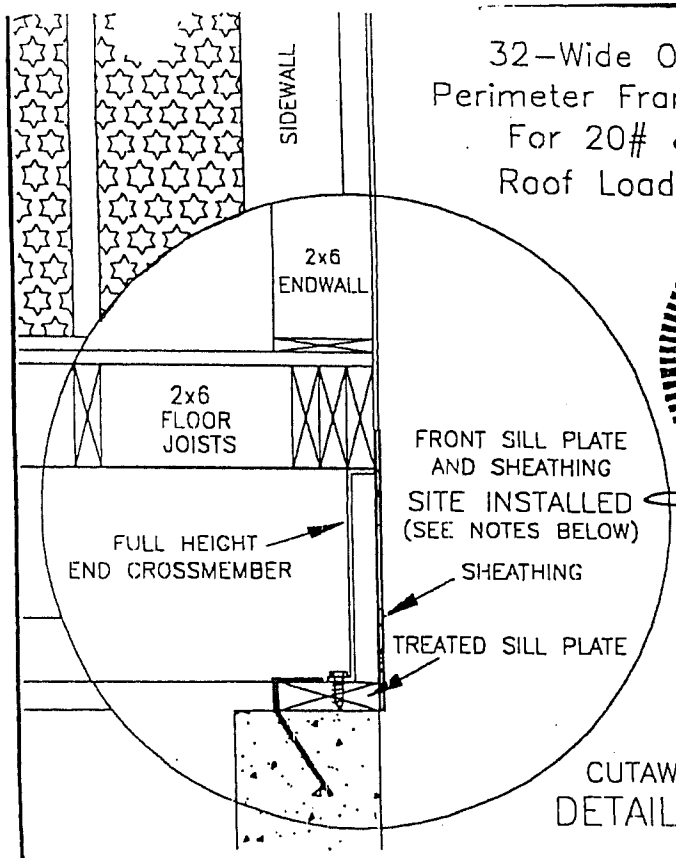
(Rev B)

IM 2.11

32-Wide Optional
Perimeter Frame System
For 20# & 30#
Roof Load Zones

MAX. ROOF LOAD 30 PSF
MAX. FLOOR LOAD 40 PSF

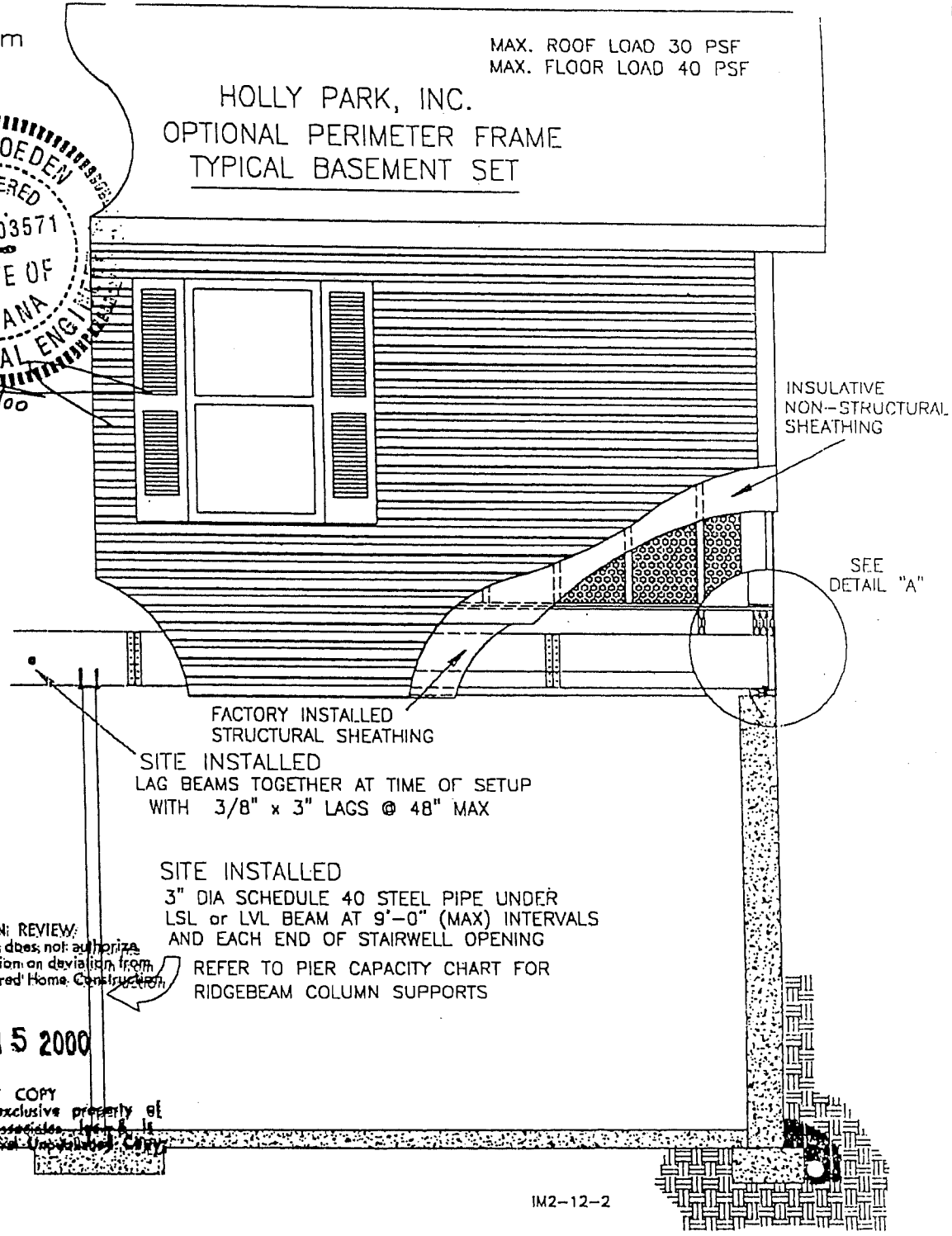
HOLLY PARK, INC.
OPTIONAL PERIMETER FRAME
TYPICAL BASEMENT SET



CUTAWAY
DETAIL A

JOHN C. DOEDEN
REGISTERED
No.
ENE8703571
STATE OF
INDIANA
PROFESSIONAL ENGINEER

6/5/00



NOTES FOR SITE INSTALLED ITEMS FIGURE "A"

1) INSTALL 2x6 TREATED MUDSILL TO END CROSSMEMBER WITH (3) #8 X 1 1/2" SCREWS WITH WASHERS THROUGH HOLES IN CROSSMEMBER.

2) INSTALL 3/8" CONTINUOUS STRIP OF APA RATED SHEATHING TO MUD SILL AND FRONT FLOOR JOIST WITH 7/16" x 1 1/2" x 16 ga STAPLES @ 10" O.C.

3) SIMPSON (OR EQUAL) MAS CONNECTORS SPACED 8'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS IN POURED CONCRETE WALL.

ALTERNATE CONCRETE BLOCK STEM WALLS:
USE 1/2' DIA. x 15" ANCHOR BOLTS INTO MASONRY
8'-0" O.C. (MAX) AND 1'-0" IN FROM CORNERS.

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IM2-12-2

IM2-12-2

DOUBLEWIDE SET UP PROCEDURE

A. CONNECTION AT CENTERLINE

The procedure for connecting the two halves together is as follows:

1. Remove factory installed closure materials. Temporarily fold back, onto roof surface, roofing underlayment draped over the ridge beam on both halves of doublewide.
2. Position the halves together in the desired location. Slick sheet metal or greased plywood under the tires may facilitate sliding the two halves together. "Comealong" type equipment may also aide in bringing the halves together. Take care not to damage structural members. Deflating the inside tires of the "light half" may be necessary to mate the ridge beam.
3. Jack each side of the home on inside of the I-beam of "light half" to align ceilings at front and rear endwalls. Secure ridge beams together at the peak of the roof above ONLY the front and rear endwalls with (2) 3/8" x 5" lags as shown on page 12.
4. Align ceiling edges at the centerline along the remainder of the home by jacking on the inside I-beam of "light half". Install 3/8" x 5" lags along the peak at 36" o/c. alternating from one side to the other as shown on page 12.
5. To properly align endwalls it may be necessary to pull either floor forward (preferably attaching to hitch). Secure endwalls together with #10 x 5" screws 10" o/c. as shown on page 12. NOTE: For some models these screws may have to be toe screwed (i.e. when siding or sheathing is installed to the home's centerline).
6. Bring floors of both halves together and in alignment by jacking on the inside I-beam of either half as necessary. From underneath the home, toescrew the mating centerline joists together with 3/8" x 5" lags at 48" o/c. as shown on page 12.
7. At door openings and clearspan openings of double marriage walls, secure the two halves together with #10 x 5" screws at 16" o/c. Screws to be places so the heads can be concealed by door trim or corner molding. Toescrewing is permitted.

Note: Under ideal conditions there will be no gaps between halves when joined together. A gap to 1/2" is acceptable when a filler is installed at each fastener and fastener length is adjusted to provide the same fastener penetration as if there were no gap. Filler fastener penetration as if there were no gap. Filler material to be rated sheathing (OSB or Plywood). Minimum receiving penetration of receiving member is 1 1/2" for 3/8" diameter lags and 1 3/8" for #10 screws.

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B. BLOCKING AND LEVELING

It is important that the home be level and properly supported a prescribed in this manual. After the footings are properly dry fo the pier design selected, follow the procedure below

1. Place a 6' level lengthwise on the floor of the home over the area where the axles are located. Turn the jack at the couple on the front of the home until the floor is level in the axle area.
2. Turn the level crosswise and see if the home is level from side to side. If not, put a hydraulic jack under the low side I-beam at the axle area and raise the side that is low.
3. Place blocks under the I-beams on each side immediately ahead and behind the spring hangers. Insert wedges as shown on the drawing so the blocks bear the weight.
4. Work towards each end, placing blocks and wedges under the I-beams at no more than 10' intervals. Make continued checks with the level. If jacking is required, jack only under the I-beams and only enough to keep it level. If the home is over-jacked serious damage may result.

NOTE: Due to natural soil properties, some settling may occur. Within 90 days of initial set up, the home should be checked and releveled if necessary.

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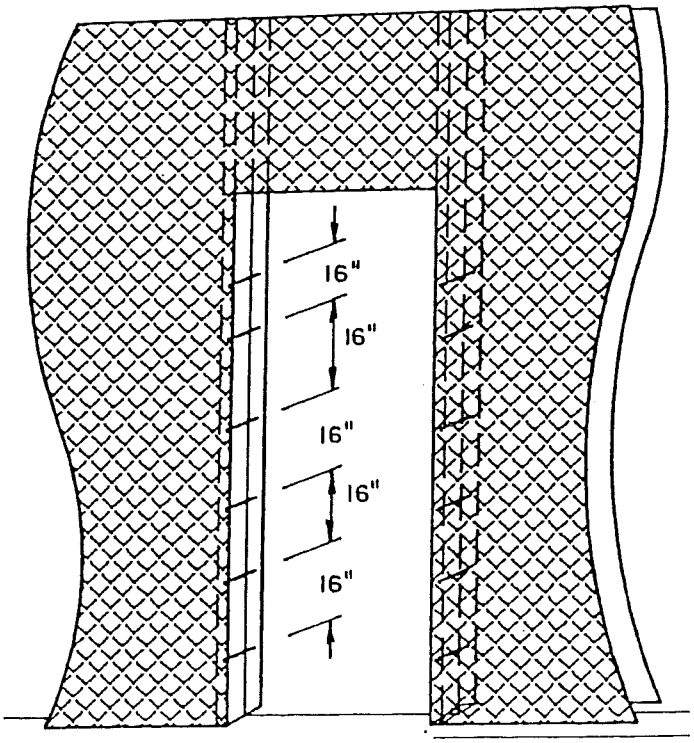


(Rev c)

IM 2.14

Minute Man anchors®, Inc

ANCHOR INSTALLATION

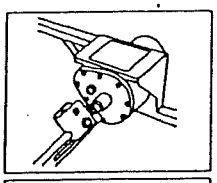
There are two basic methods of installing anchors, each equally effective in properly securing manufactured homes to the ground.

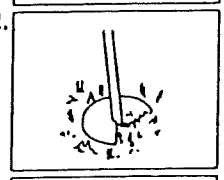
Warning: Before ground anchor installation, determine that the anchor locations around home wil not be close to any underground electrical cables, water lines or sewer piping. Failure to determine the location of electrical cables may result in serious personal injury.

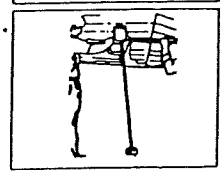
CAUTION: The installation of anchors with a drive machine is a two person operation.

MACHINE INSTALLATION

In this method, the anchor is turned to full depth into the ground by an anchor drive machine.

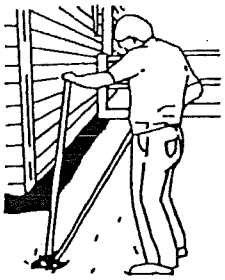
1. 
Attach anchor to machine.

2. 
Placed anchor in proper position in line with strap and machine.

3. 
Anchor should be installed at a slight angle as shown to assure head being positioned behind future skirting.

MANUAL INSTALLATION

A hole is dug to a depth of approximately two feet in the proper position as explained under machine installation.



After the hole is dug to 24" depth, the anchor is turned into the ground by hand, using a rod or length of pipe for leverage.

After anchor is installed full depth, earth is replaced six inches at a time.

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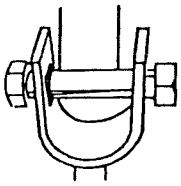
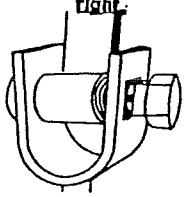
PROPER TENSIONING OF STRAP TO ANCHOR HEAD

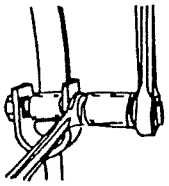


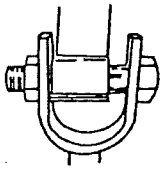
1. Insert bolt into head; attach nut loosely. Insert strap in slot of 5/8" bolt , or until strap is flush with far side of bolt.



2. Bend strap 90° and take at least three complete turns on bolt until strap is taut.

3. Bolt is turned with 15/16" socket wrench, or adjustable wrench, on hex head. With square hole in anchor head, hold bolt under tension while repositioning wrench: Place open-end wrench on 5/8" square shoulders of bolt. Align square shoulders of bolt with square hole in anchor head.





4. Holding hex head of bolt in position, tighten nut to draw square shoulders into square hole. Shoulders are now in locking position; continue to tighten nut. Tensioning device is now in locked, secure position.

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.

E-Z ANCHOR INSTALLATION METHOD

Note: With machine installation, a Minute-Man adapter designed to fit both the anchor head and drive machine shaft is available. Installers do not need additional or special equipment for E-Z Anchor Installation.

1. MACHINE INSTALLATION

The drive machine is started and the anchor is turned into the ground to a point where the top (stabilizer head plate) is flush with or slightly below ground level. This assures that the E-Z Anchor Stabilizer will be at its required installation position. **See Figure A.**

To achieve full potential, install the E-Z Anchor vertically. A 10° deviation from vertical is acceptable. **See Figure A.**

Note: A slightly greater angle may be used to start anchor to avoid contact with the home and straightened as anchor is ground set. The splitbolt is inserted, strap is fastened, and tightening adjustment made.

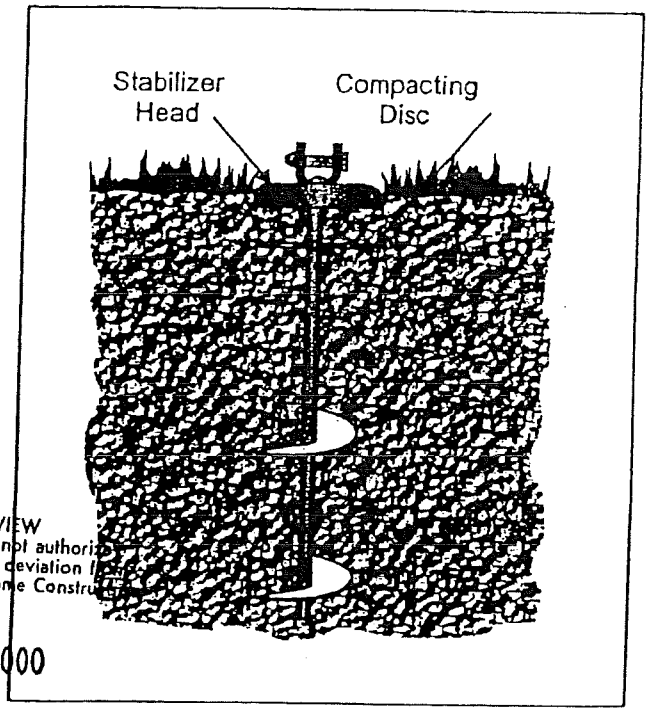


Figure A

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2. STANDARDS FOR INSTALLATION

- E-Z Anchors and all components are to be installed per manufacturer's instructions.
- E-Z Anchors are approved for designated Soil Class III.
- E-Z Anchor working load capacity is 3,150 pounds for a single tie or the load of (2) ties combined which is 40 to 50 degrees from vertical. **See Figure B.**
- Consult manufactured home set up instructions for number of frame tie downs and tie down spacing.
- Proper site preparation required removal of grass and sod prior to installation.

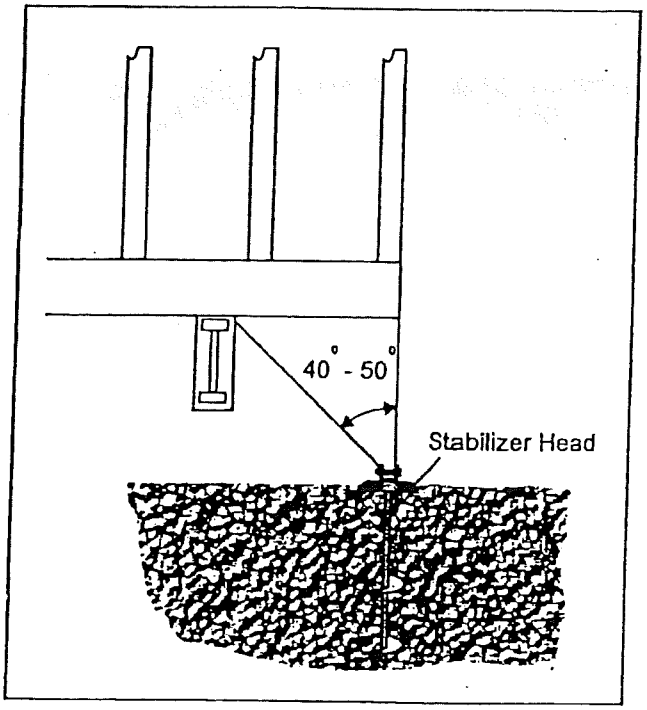

Figure B

For additional information, copies of engineering test(s) and report, Contact Minute-Man Anchors, Inc. (Revised: November 1998)

Following is a list of Minute-Man Anchors with a minimum holding power of 4,725 pounds (2143 kg.).

MARK	MODEL	DESCRIPTION	USE IN SOIL TYPE
MMA-2	650-DH 5/8	6" DISC, 50" ANCHOR	2,3,4
MMA-4	650-DH 3/4	6" DISC, 50" ANCHOR	2,3,4
MMA-38	650-DH 11/16	6" DISC, 50" ANCHOR	2,3,4
MMA-40	636-DH 5/8	6" DISC, 36" ANCHOR	2,3,4
MMA-28	636-DH 3/4	6" DISC, 36" ANCHOR	2,3,4
MMA-30	4430-DH 5/8	DOUBLE 4" DISC, 30" ANCHOR	2
MMA-36	4430-DH 11/16	DOUBLE 4" DISC, 30" ANCHOR	2
MMA-6	4430-DH 3/4	DOUBLE 4" DISC, 30" ANCHOR	2
MMA-35	35-XDH	36" CROSS DRIVE ANCHOR	1
MMA-8	48-XDH	48" CROSS DRIVE ANCHOR	1
MMA-71	1060-DH 3/4	10" DISC, 60" ANCHOR	4b (Fla.)
MMA-50	4442-DH 5/8	DOUBLE 4" DISC, 42" ANCHOR	2,3,4
MMA-52	4636-DH 3/4	4" & 6" DISC, 36" ANCHOR	2,3,4
MMA-54	4450-DH 11/16	DOUBLE 4" DISC. 50" ANCHOR	2,3,4
MMA-55	4450-DH 3/4	DOUBLE 4" DISC, 50" ANCHOR	2,3,4
MMA-92	4430-EZDH 3/4	DOUBLE 4" DISC, 30" EZ ANCHOR	2,3
MMA-94	636-EZDH 3/4	6" DISC, 36" EZ ANCHOR	2,3
MMA-95	660-EZDH 3/4	6" DISC, 60" EZ ANCHOR	2,3
MMA-96	650-EZDH 3/4	6" DISC, 50" EZ ANCHOR	2,3,4
MMA-98	650 EZVDH 3/4	DOUBLE 6" DISC. VERT. STABILIZER	2,3,4A (Fla.)
MMA-18	THDH	DOUBLE HEAD TENSION DEVICE	SLAB
MMA-18	THDHLS	DH TENSION DEVICE W/LAG	SLAB
MMA-10	36-DH	CORAL ANCHOR	CORAL
MMA-12	210-DH	CONCRETE ANCHOR	SLAB
MMA-14	210-PDH	WET CONCRETE ANCHOR	SLAB
MMA-42	210-JDH	SWIVEL HEAD WET CONCRETE ANCHOR	SLAB
MMA-BR	24 BA	BARB ROCK ANCHOR	1
MMA-22	100-DH	DOUBLE HEAD TENSION ADAPTER	
MMA-SDA2		STABILIZER	
MMA-SD2		STABILIZER	FLA.
MMA-29	FCIIW/S	FRAME CLAMP II W/STRAP	
MMA-29	FCIW/S	FRAME CLAMP I W/STRAP	
MMA-31	FRAME TIE	LONGITUDINAL FRAME TIE	FLA.
MMA-32	BUC/WS	BUCKLE W/STRAP	
MMA-33	FCII (LOCKING)	LOCKING FRAME CLAMP II	FLA.
MMA-71	CT/WS	CORNER TIE W/STRAP	
MMA-71	CT/WS	CORNER TIE II STRAP	FLA.
MMA	SBN	STRAP BOLT & NUT	
MMA-25	22 BUCKLE	DOUBLE SLOT BUCKLE	
MMA-32	SS BUCKLE	SINGLE SLOT BUCKLE	
	44RB	4X4" ROOF BRACKET	
	66 RB	6X6" ROOF BRACKET	
	POCKET PENETROMETER	POCKET PENETROMETER	
	SOIL TEST PROBE	SOIL TEST PROBE	
	PERIMETER JACK	PERIMETER JACK	
	JACKING PLATE	I BEAM JACKING PLATE	
MMP-6	6" PIER	STANDARD MOBILE HOME PIER	
MMP-8	8" PIER	STANDARD MOBILE HOME PIER	
MMP-10	10" PIER	STNADARD MOBILE HOME PIER	
MMP-12	12" PIER	STANDARD MOBILE HOME PIER	
MMP-14	14" PIER	STANDARD MOBILE HOME PIER	
MMP-16	16" PIER	STANDARD MOBILE HOME PIER	
MMP-18	18" PIER	STNADARD MOBILE HOME PIER	
MMP-20	20" PIER	STANDARD MOBILE HOME PIER	
MMP-22	22" PIER	STANDARD MOBILE HOME PIER	
MMP-24	24" PIER	STANDARD MOBILE HOME PIER	
MMP-26	26" PIER	STANDARD MOBILE HOME PIER	
MMP-28	28" PIER	STANDARD MOBILE HOME PIER	
MMP-30	30" PIER	STANDARD MOBILE HOME PIER	
MDP-16	16" DELUXE PIER	LOCKING HEAD HEAVY DUTY PIER	FLA.
MDP-20	20" DELUXE PIER	LOCKING HEAD HEAVY DUTY PIER	FLA.
MDP-24	24" DELUXE PIER	LOCKING HEAD HEAVY DUTY PIER	FLA.
MDP-28	28" DELUXE PIER	LOCKING HEAD HEAVY DUTY PIER	FLA.
MDP-32	32" DELUXE PIER	LOCKING HEAD HEAVY DUTY PIER	FLA.

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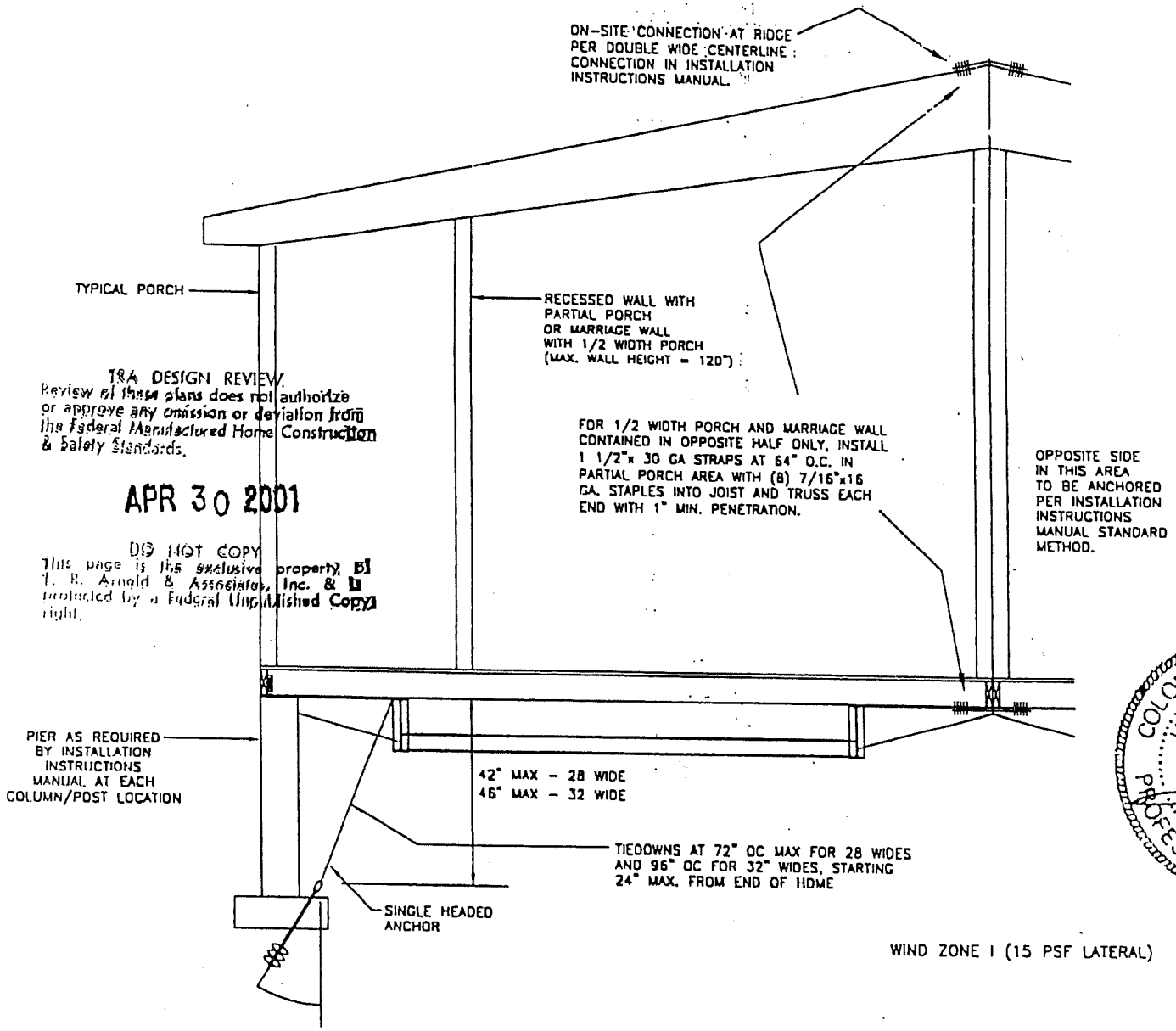

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COLORADO REGISTERED PROFESSIONAL ENGINEER
JOHN C. DOEDEN
26527
4/17/01

WIND ZONE I (15 PSF LATERAL)

ON-SITE INSTALLATION: RECESSED (PARTIAL PORCH) AREA ONLY

NOTES:
1. A COPY OF THIS DRAWING IS TO BE INCLUDED IN THE INSTALLATION INSTRUCTIONS.
2. THIS DESIGN BASED ON AN I-BEAM SPACING OF 99 1/2" ON 32-WIDES AND 82 1/2" ON 28-WIDES.
3. PIER BLOCKS INSTALLED AT COLUMNS PER INSTALLATION INSTRUCTIONS MANUAL.
4. THIS DESIGN FOR FLOOR WIDTH OF 182" PER SECTION FOR 32-WIDES AND 156" FOR 28-WIDES.
5. LONGITUDINAL TIEDOWNS ARE TO BE INSTALLED TO STANDARD REQUIREMENTS

HOLLY PARK
MIDDLEBURY, IN 46540

REVISIONS

C# PRCH11A	BY TOM V.M.	DATE 02-14-
TITLE: 28/32 WIDE ON-SITE SET-UP		NO. IM2-20-

IM 2-20-2

NOTES:

1) CONNECT ALL CROSSOVER AMP CONNECTORS

2) INSTALL 3/8 APA RATED SHEATHING TO NON-PORCH SIDE MATING WALL
FASTEN WITH 7/16"x1 3/8"x16 GA. STAPLE
6" O.C. EDGE & 12" O.C. FIELD

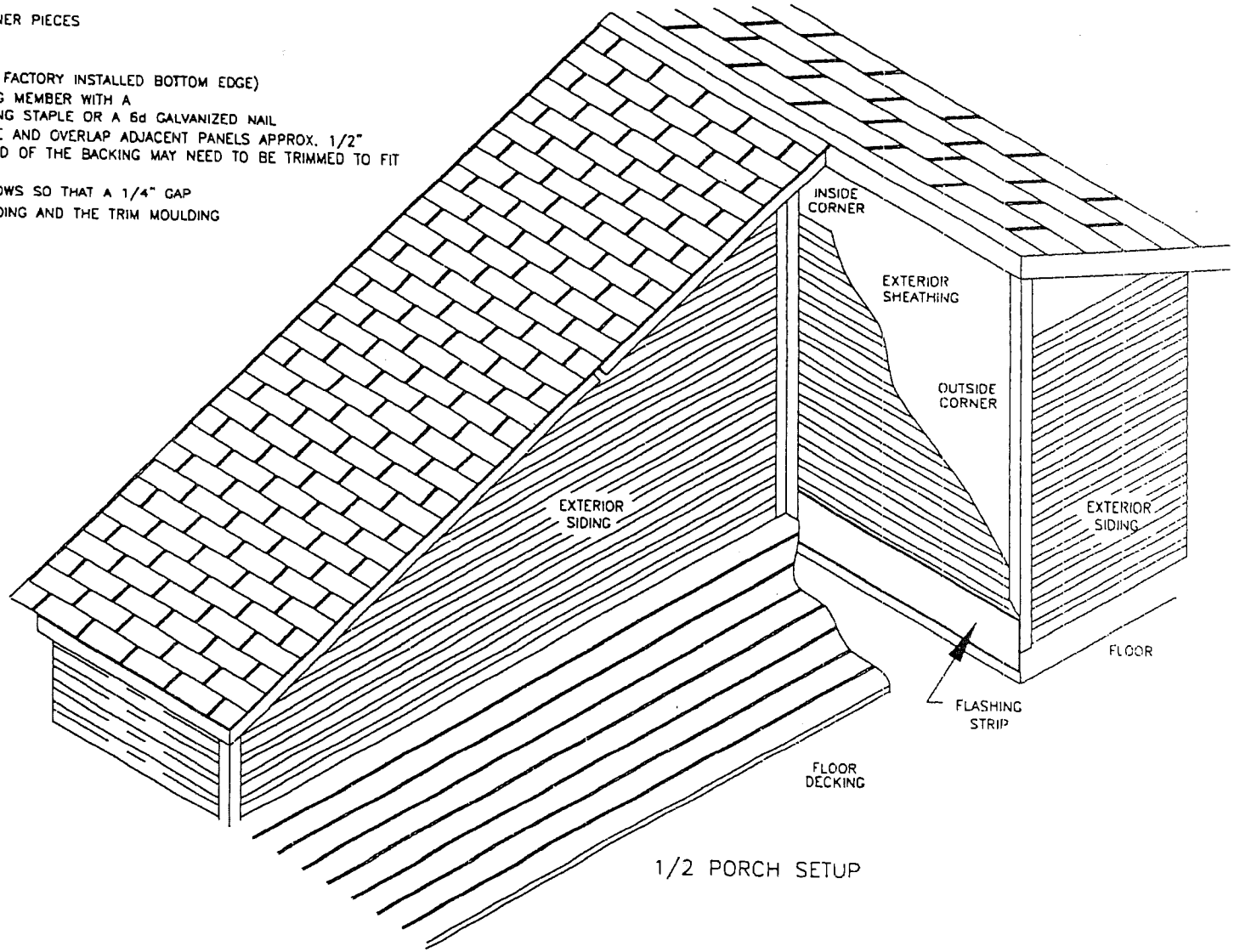
3) INSTALL A 12" MINIMUN FLASHING STRIP OF EXTERIOR GRADE MATERIAL TO NON-PORCH SIDE MATING WALL
(UNDERBELLY BOARD, ALUMINUM, VINYL, ROOF UNDERLAYMENT, OR PLASTIC)
CENTERED AT FLOOR AND WALL CONNECTION

4) INSTALL INSIDE AND OUTSIDE VINYL CORNER PIECES

5) INSTALL LAP SIDING

A) WORKING FROM BOTTOM (INLINE WITH FACTORY INSTALLED BOTTOM EDGE)
FASTEN THE SIDING TO EACH FRAMING MEMBER WITH A
7/16"x1 1/2"x16 GA ALUMINUM SIDING STAPLE OR A 6d GALVANIZED NAIL
INTERLOCK EACH SUCCESSIVE COURSE AND OVERLAP ADJACENT PANELS APPROX. 1/2"
IF BACKED SIDING IS USED, EACH END OF THE BACKING MAY NEED TO BE TRIMMED TO FIT

B) TRIM EACH LAP AT DOORS AND WINDOWS SO THAT A 1/4" GAP
FOR EXPANSION IS LEFT BETWEEN SIDING AND THE TRIM MOULDING



1/2 PORCH SETUP

IM2-20-4

F. INTERIOR FINISH

1. Install wide moulding or beam provided over the centerline joint and screw heads at cathedral beam inside.
2. Fit and secure carpet over joint at floor using a carpet stretcher. Seams should be properly bonded with heat bond tape and seaming iron.

Install wall mouldings, as necessary, for a finished appearance.

CENTERLINE CROSSOVER CONNECTIONS

WATERLINE AND DRAIN LINE CROSSOVER

Crossover connection is ONLY applicable to home designs in which plumbing exists in both halves. For drain line connection follow procedure under "Connecting Utilities - Drain Lines."

Water line procedure:

1. Remove any temporary caps from ends of lines at the unit centerline (both halves).
2. Install the provided connector(s).
3. Check for leaks.
4. Refer to freeze protection recommendations for exposed pipes. See "Fresh Water Supply" under "Connecting Utilities."

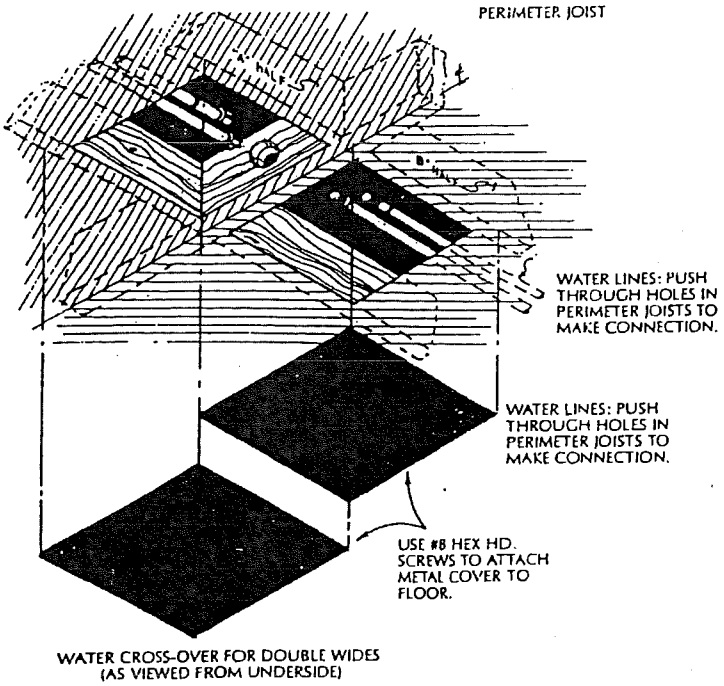
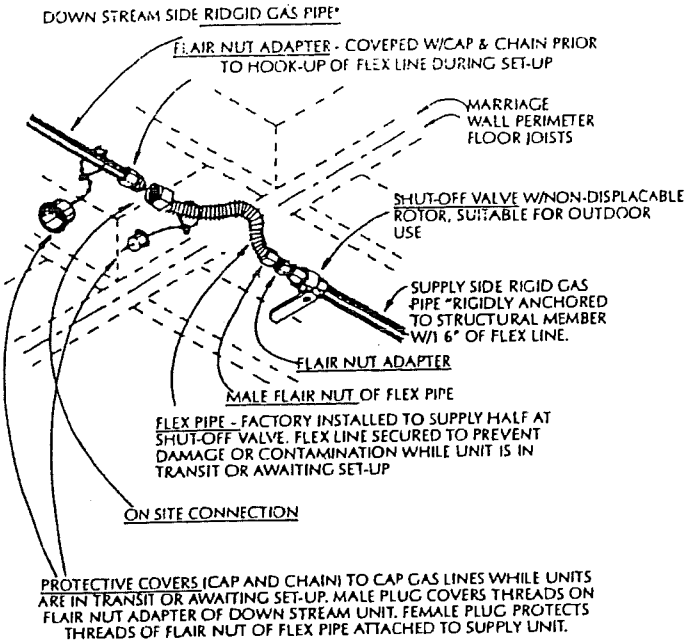


FIGURE 8A: PLUMBING DETAILS

GAS LINE CROSSOVER

Applicable only when gas appliances exist in both halves.

1. Remove protective caps from the connector provided with the home.
2. Connect the flex pipe to down stream rigid gas pipe.
3. Test for leaks with soapy water.



HEAT DUCT CROSSOVER CONNECTION

Your home has an in-floor duct crossover system. There are two (minimum) heat duct crossovers on each home.

1. Remove taped covers from heat duct crossovers at perimeter rails each half of marriage sides.
2. Install the fiberglass duct gasket provided with the ship loose materials in your home to one side only.

This completes the preparation work required for heat duct crossovers prior to moving the two halves together.

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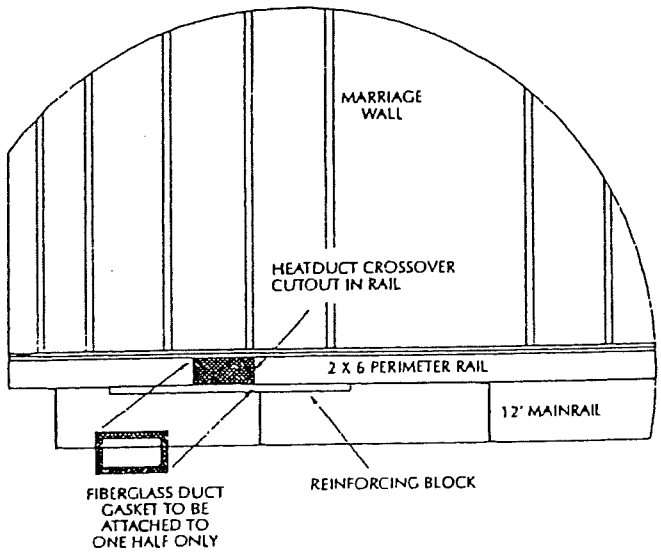


(Rev B)

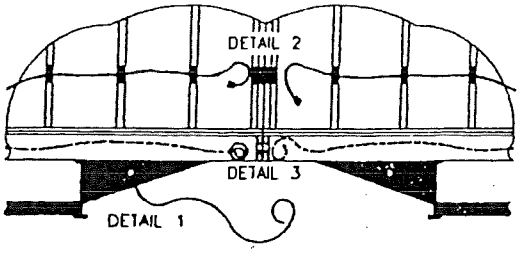
IM 2.22

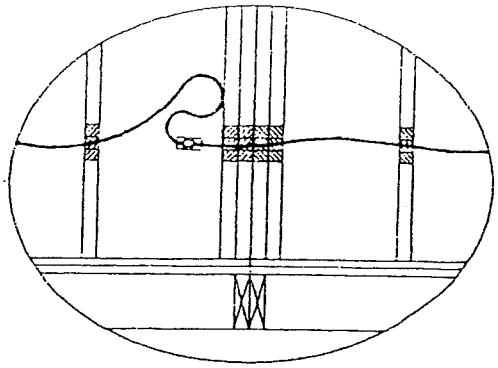
ELECTRICAL CROSSOVER CONNECTION

Before proceeding, heed 'CAUTION' notes under "Electrical Connection" in "Connecting Utilities" section.

The various methods of electrical crossover connections are shown below. The procedure for electrical interconnection is as follows:

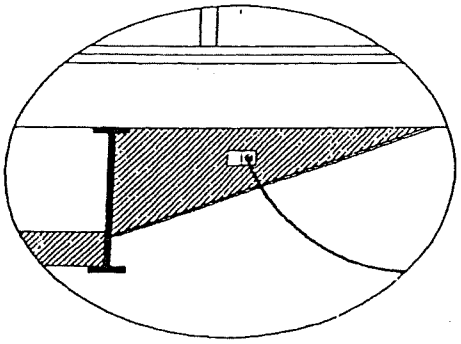
VIEW FROM END OF HOME WHERE TWO HALVES JOIN SHOWING ELECTRICAL CONNECTORS PRIOR TO ASSEMBLY





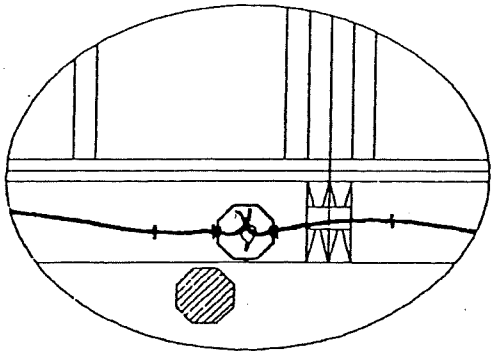
DETAIL 2: - 15 and 20 amp circuit connection with splicing device:

1. Locate connector ends in each half for splicing appropriate circuits. NOTE: If more than one circuit is to be spliced, match identified circuit connectors.
2. Push A half connector into B half connector until they lock together.



DETAIL 1: - Frame Bonding:

1. Neither the frame of the home, nor the frame of any appliance is to be connected to the neutral conductor in the manufactured home.
2. More than one solderless lug may be installed on the chassis to secure all grounding wires. In no case are grounding wires to be twisted or spliced together.
3. Connect the #8 bare copper wire to both halves where the saddle clamps are provided. (Typically on the front crossmember).



DETAIL 3: - 30 amp and larger circuit connections in a single junction box in the floor cavity.

1. Locate junction box by identifying marks on perimeter rail of marriage side (Usually located at marriage line directly across from panel box on panel box side) prior to fastening the two halves of the manufactured home together.
2. Assure all power is off at the main panel box.
3. Carefully open "bottom board" to access the junction box and coiled wire on opposite half.
4. Remove cover of the junction box.
5. Uncoil the wire(s) and feed them through the predrilled hole(s) in perimeter rails. (If no holes exist, a 1" hole must be drilled in the perimeter rails at the approximate center of width.)
6. Connect wires per applicable code and assure that any multiple wires are joined per the markings on the wires.
7. Recover the junction box and re-tuck the insulation to close all voids.
8. Repair "bottom board" to protect your home from the entrance of varmints.

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(Rev A)

IM 2.23

The electrical supply wires should be run in conduit from the home to the electrical source. The following table shows the proper size junction box and conduit to use, which depends on the type of wire used and the electrical demand of the home:

MINIMUM JUNCTION BOX AND CONDUIT SIZE, IN INCHES

Size of Main Circuit Breaker, in Home, in Amperes	75° C Rated Copper, Type RH, RHH RHW without Outer Covering THW or XHHW	Junction Box
100	1-1/4	8 x 8 x 4
150	1-1/2	10 x 10 x 4
200	2	12 x 12 x 4

CAUTION! Several things are very important concerning the electrical connection to your home.

- Only a qualified electrician should perform the electrical hook-up, or make any extensions or changes in the electrical system. Unqualified people could cause serious or fatal accidents.
- Be sure that the electrical power supply at your homesite is adequate to supply the electrical demands of your home. Inadequate power supply or wiring supplying electricity to your home can be hazardous.
- It is very important that proper polarity be maintained when the electricity is connected to your home. The white (neutral) wire should NEVER be connected to, or come in contact with, either one of the black or red (positive or "hot") wires. In addition, the white (neutral) wire should NEVER be connected to, or come in contact with the green (ground) wire.
- The home must be properly grounded, by running a proper sized wire from the grounding bar in the main service panel through the conduit to the outside of the home, and attaching it to a proper copper rod driven full length into the ground.
- Installation of any type of telephone wiring, TV antenna, or other service which includes penetrating the exterior siding and/or exterior side or end wall or interior partitions of the home should only be done by a qualified person, observing the following procedures.
  1. Disconnect the main circuit breaker, in the service panel.
  2. Do not pierce the side or end walls more than 12" from the bottom edge of the home, and do not pierce interior partitions more than 5" from the top of the floor.
  3. After completing the installation, complete a dielectric strength test of the entire electrical system in the home.
  4. Return the main circuit breaker to "On".
  5. Test all light fixtures, electrical receptacles and appliances for proper operation.

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GAS CONNECTION

If your home was built at the factory with a gas burning furnace, range or water heater, the inlet for the gas pipe is located underneath the home and is marked with a label fastened to the side of the home. The gas piping system of the home was tested for leaks at the factory; however, because of over the road vibration, etc., the entire system should again be pressure tested for leaks by a qualified person. The gas piping system for this home has been designed for the following pressures:

Natural gas — pressure of at lest 7 inches of water column, but not more than 10-1/2 inches of water column.

LP gas — pressure of at least 11 inches of water column, but not more than 14 inches of water column.

After the system has been determined to be leak free, the gas pipe should be connected to the gas supply, in accordance with local requirements.

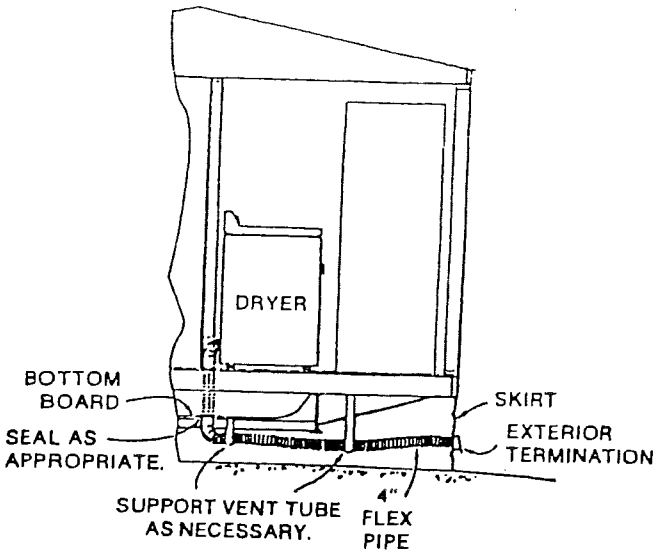
CAUTION! Several things are important concerning the gas connection to your home.

- If the home has a gas burning hot water heater installed at the factory, with the flue pipe and roof cap NOT installed but furnished with the home, do not operate the water heater until the protective covering has been removed from the roof and the flue pipe and cap have been properly installed in accordance with the water heater manufacturer's instructions. The water heater flue pipe and cap (when not installed, but furnished with the home) was not installed at the factory to prevent possible damage during shipment.
- Only a qualified person should check the system for leaks and connect it to the supply. Unqualified people could cause serious or fatal accidents.
- Install a gas shut off valve outside the home when connecting the system to the supply.
- In most cases, the orifices or settings included in the gas burning appliances (including furnaces and water heaters) at the factory are for NATURAL gas only. If you intend to use LP gas, a qualified person must convert the appliance in accordance with its manufacturer's instructions. Be sure to check all connections for leaks after the appliances have been converted.
- After the supply is connected, the installer should light the pilot light (if any) on each appliance and determine that the appliance is working properly.

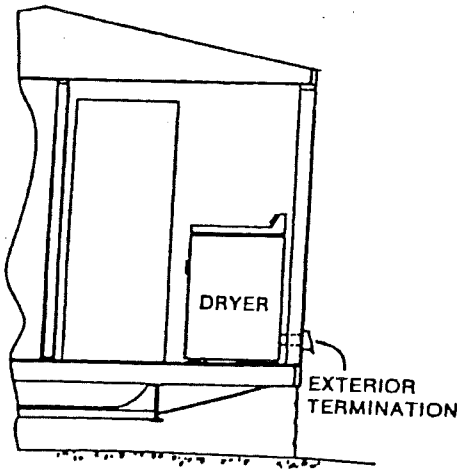
INSTALLING FLUE ON OPTIONAL WOOD BURNING FIREPLACE

CAUTION! If the home includes an optional wood burning fireplace installed at the factory, DO NOT START A FIRE IN IT until the protective covering has been removed from the top of the chimney and the remaining sections of the flue pipe and the flue top assembly have been properly installed in accordance with the fireplace manufacturer's instructions. The flue pipe and top assembly, which are furnished with the home, were not installed at the factory because of the possibility of damage while in transit. When a fireplace is installed in a home that is to be placed over a basement, the fresh air kit must be installed such that the fresh air will come from the exterior of the home. It is not acceptable that the fresh air come from the basement of the home.

CAUTION! Be sure to use the optional wood burning fireplace only in accordance with the manufacturer's instructions.



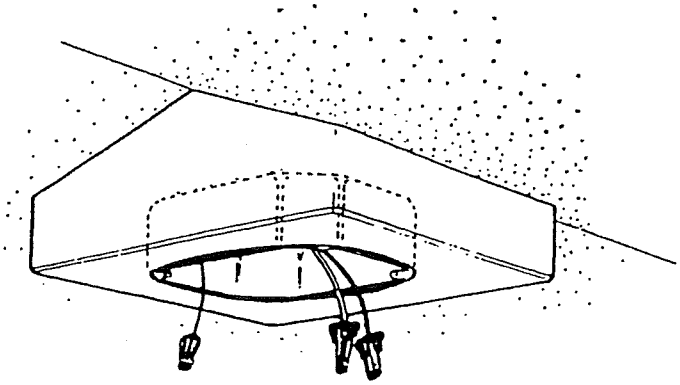
DRYER INSTALLATION AGAINST INTERIOR WALL



DRYER INSTALLATION AGAINST EXTERIOR WALL

OPTIONAL CEILING FAN

Fan mounting box shown on Cathedral ceiling
May be mounted on Flat ceiling or Ridge Beam



Three wires have been provided for Field installation of Ceiling Fan. Typically a Black (Hot), a White (Neutral) and a bare copper ground wire. Installation should be made by qualified Electrician.

Follow Instructions That Came With The Fan To Be Installed

PATCHING THE BOTTOM COVERING

It is important that any holes, tears, etc. in the bottom covering underneath your home be promptly repaired. Following are three alternative methods for doing this:

- Cut the patch to size out of any suitable material. Use a double-faced tape (such as 3M No. 950) and affix the sticky side to the patch. Remove the paper from the other side of the tape, and apply the patch to the area under repair.
- Use pressure sensitive tape, such as Tuck No. 91B, to mend occasional small holes, tears or cuts.
- Cut the patch to size out of any suitable material, and tape it in place. Use an air-operated outward flare tacker (Senco Products, Inc. – Model LN 3045) and fasten the perimeter of the patch at 3" intervals.

INSTALLING SKIRTING AROUND YOUR HOME

Skirting installed around the perimeter of your home will enhance its appearance, and help keep heating costs down in the wintertime. Several types of skirting are available, and may be found in the yellow pages under "Mobile Homes." If you have skirting installed around your home, be sure that the clothes dryer vent (if any) terminates OUTSIDE the skirting. Vents should be installed in the skirting and at least two such vents should be kept open throughout the winter.

THE WALK-IN-BAY WINDOW INSTALLED IN THE SIDEWALL OF THIS HOME IS TO BE PERIMETER SUPPORTED WITH A PIER AT EACH END OF THE OPENING – SEE RECOMMENDATIONS UNDER FOUNDATION SECTION.

PIER LOAD IS: 1,800 LBS. @ SOUTH (20 PSF) ROOF ZONE
3,025 LBS. @ MIDDLE (30 PSF) ROOF ZONE

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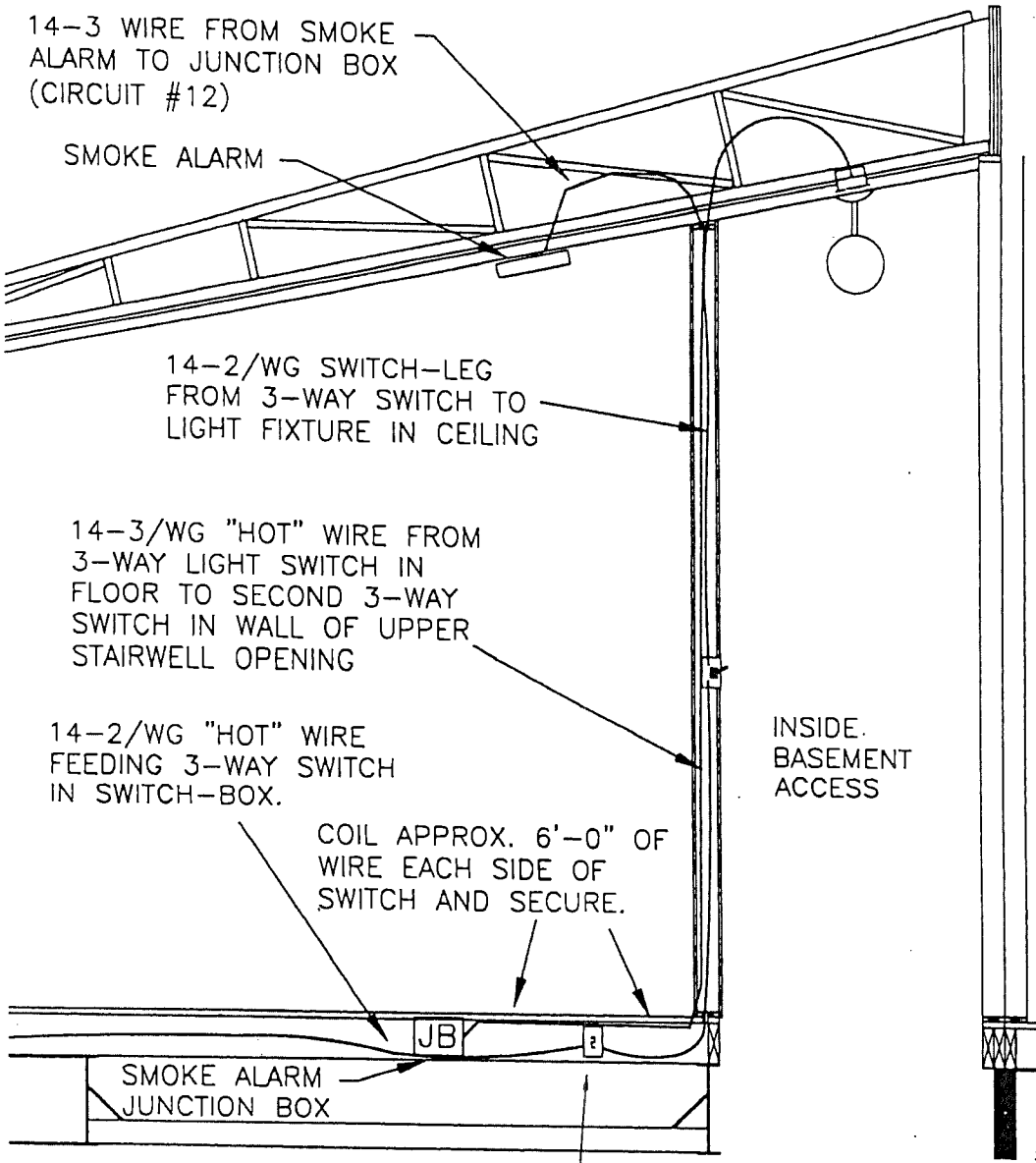

LOCATION OF SWITCH AND JUNCTION BOX TO BE IDENTIFIED ON ACCESS PANEL UNDER HOME FOR ON-SITE HOOK-UP.

14-3 WIRE FROM SMOKE ALARM TO SMOKE ALARM ON CIRCUIT #12

3-WAY SWITCHED LIGHT AND SMOKE ALARMS ARE ON SEPERATE CIRCUITS

TYPICAL WIRING METHOD SHOWN. OTHER CODE-COMPLIANT MEANS OF WIRING A 3-WAY SWITCH MAY BE USED

ON-SITE HOOK-UP OF SECOND 3-WAY SWITCH AND SMOKE ALARM TO BE PERFORMED BY QUALIFIED ELECTRICIAN IN ACCORDANCE WITH ALL APPLICABLE CODES.

JUNCTION BOX IS BETWEEN FLOOR JOISTS AND IS PROTECTED BY THE UNDER BELLY MATERIAL.

INSTALL AND TEST SMOKE ALARMS IN ACCORDANCE WITH THE SMOKE ALARM INSTRUCTIONS

OPEN STAIRWELL HOMES MUST BE SET OVER CONDITIONED AIR SPACE OR THE OPENING MUST BE ENCLOSED IN THE BASEMENT BY AN INSULATED DOOR AND WALLS.

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THIS PAGE TO BE INCLUDED IN SET-UP INSTRUCTIONS OF HOMES WITH OPT. BASEMENT ACCESS. ALSO HOME OWNERS MANUAL.

HOLLY PARK
MIDDLEBURY, IN 46540

REVISIONS		
ADDED SMOKE ALARM APPL. 8-8-02		
ADDED NOTES 9-13-02		
ADDED OPEN STAIR NOTE 1-27-06		
C/# IM 2.27.2	BY BJH	DATE 7-11-03
TITLE: BASEMENT		

RECOMMENDED LOCATION OF ALARMS

- Locate the first smoke alarm in the immediate area of the bedrooms. Try to protect the exit path as the bedrooms are usually farthest from an exit. If more than one sleeping area exists, locate additional smoke alarms in each sleeping area.
- Locate additional smoke alarms to protect any stairway as stairways act like chimneys for smoke and heat.
- Locate at least one smoke alarm on every floor level.
- Locate a smoke alarm in any area where a smoker sleeps or where electrical appliances are operated in sleeping areas.
- Smoke, heat and other combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction. However, in mobile homes, wall mounting on an inside partition is preferred to avoid the thermal barrier that may form at the ceiling.
- When mounting smoke alarm on the ceiling, locate it a minimum of 4" (10cm) from a side wall or corner (see Diagram A).
- When mounting smoke alarm on a wall, if local codes allow, use an inside wall with the top edge of the smoke alarm a minimum of 4" (10cm) and a maximum of 12" (30.5cm) below the ceiling/wall intersections (See Diagram A).

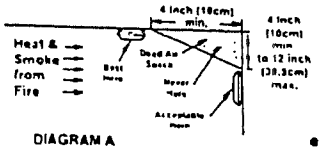
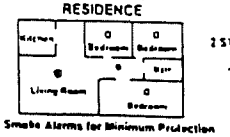


DIAGRAM A

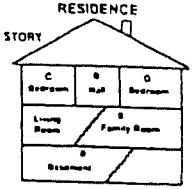
SINGLE STORY RESIDENCE



● Smoke Alarms for Minimum Protection

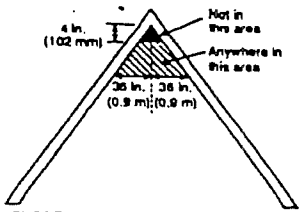
O Recommended Smoke Alarms for Additional Protection

TWO STORY RESIDENCE

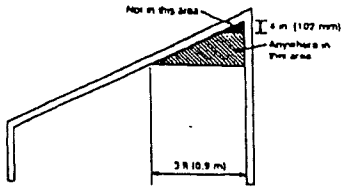


Existing Homes:
The NFPA requires a smoke alarm on every level and outside each sleeping area in existing construction. An existing household with one level and one sleeping area is required to have one smoke alarm.

New Construction Homes and Manufactured Homes:
The NFPA requires AC-powered, interconnected smoke alarms to be installed inside each bedroom, outside each bedroom area, and on every level of the home. They also require a minimum of two AC-powered, interconnected smoke alarms in any new construction home.



SLOPED CEILINGS (PEAKED CEILINGS)



SLOPED CEILINGS (SHED CEILINGS)

Sloped Ceilings (Peaked Ceilings)
Smoke alarms or smoke detectors mounted on a peaked ceiling shall be located within 36 in. (914 mm) horizontally of the peak, but not closer than 4 in. (102 mm) vertically to the peak.

Sloped Ceilings (Shed Ceilings)
Smoke alarms or smoke detectors mounted on a sloped ceiling having a rise greater than 1 ft. in 8 ft. (1 m in 8 m) horizontally shall be located within 36 in. (914 mm) of the high side of the ceiling, but not closer than 4 in. (102 mm) from the adjoining wall surface.

Mobile Home Installation:
For minimum protection, smoke alarms should be installed in compliance with H.U.D. Manufactured Home Construction Safety Standards, Title 24 CFR, Section 3280.208 and Section 3282. For additional protection, see Single Story Residence smoke alarm requirements/recommendations for Existing Homes and New Construction Homes.

Note: For mobile homes built before 1978, install smoke alarms on inside walls between 4" and 12" from the ceiling (older mobile homes have little or no insulation in the ceiling). This is especially important if the ceiling is unusually hot or cold.

Install a smoke alarm inside each bedroom and in the hallway outside each separate sleeping area.

AVOID THESE LOCATIONS

- the garage – products of combustion are present when you start your automobile.
- near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, gas hot water heaters). Use smoke alarms with Silence Control for these areas.
- in areas with high humidity, like bathrooms or areas near dishwashers or washing machines. Install at least 3 feet (0.9 meters) away from these areas.
- in areas of turbulent air such as air returns or heating and cooling supply vents. Install at least 3 feet (0.9 meters) away from these areas. The air could blow smoke away from the smoke alarm, interrupting its alarm.
- in extremely dusty, dirty or insect-infested areas. Loose particles interfere with smoke alarm operation.
- in areas where temperature may fall below 40°F (4.4°C) or rise above 100°F (37.8°C)
- closer than 5 feet (1.5m) from fluorescent lights, electrical "noise" and flickering may affect the alarm's operation.

THIS SMOKE ALARM WILL NOT WORK WITHOUT 120 VAC POWER AND A GOOD BATTERY PROPERLY INSTALLED. THE SMOKE ALARM SHOULD BE TESTED WHEN INSTALLED AND THEN TESTED WEEKLY AFTER THAT.

FALSE ALARMS

The smoke alarm is designed to minimize false alarms. Smoking will not normally set off the alarm unless smoke is blown directly into the smoke alarm. Combustion particles from cooking may set off the alarm if the smoke alarm is located close to the kitchen cooking surface. Large quantities of combustion particles are generated from spills or broiling.

If the smoke alarm does sound, check for fires first. If a fire is discovered, get out and call the fire department. If no fire is present, check to see if one of the reasons listed above may have caused the alarm. Use the "silence" feature if it is a false alarm.

⚠WARNING!

INSTALLATION

Installation of this unit must conform to the electrical codes in your area; Article 750 of the National Electrical Code, NFPA 72, 101; SBC (SBCCI); UBC (ICBO); NBC (BOCA); OTFDC (CABO), and any other local or building codes that may apply. Wiring and installation must be performed by a licensed electrician. Failure to follow these guidelines may result in injury or property damage.

This unit must be powered by a 24-hour, 120V AC 60Hz circuit. Be sure the circuit cannot be turned off by a switch, dimmer or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection.

IMPORTANT: Do not subject this smoke alarm to megger, high voltage or high-pot tests. Remove the smoke alarm(s) before high-potting tests occur on the circuit or system. (Ref. Section 550-17, National Electric Code, 2002 Edition).

⚠DANGER!

ELECTRICAL SHOCK HAZARD

Turn off power to the area where you will install this unit at the circuit breaker or fuse box before beginning installation. Failure to turn off the power before installation may result in serious electrical shock, injury or death.

TAMPER LOCKING PIN: To make your smoke alarm somewhat tamper resistant, a locking pin has been provided. Using this pin will deter children and others from removing the alarm from the mounting ring. To use the pin, insert it into the hole in the side of the alarm after it has been installed on the mounting ring. Note that the tamper pin will have to be removed in order to change the battery, which can be done easily with a pair of long nose pliers. Using the long nose pliers, pull the pin out of the hole. It is now possible to remove the smoke alarm from the mounting ring.

1. Turn the smoke alarm counterclockwise to remove it from the mounting ring. NOTE: The smoke alarm is sealed and the cover is not removable. Your smoke alarm is also equipped with a safety device which prevents mounting unless a battery is installed. If your smoke alarm will not lock onto the mounting ring, check to make sure a battery is installed.

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⚠CAUTION!

Before using the alarm "silence" feature, identify the source of smoke and be certain that safe conditions exist.

(UTHA) MAINTENANCE:

The smoke alarm is virtually maintenance free. However, under dusty conditions, a vacuum hose may be used to clear the sensing chamber of dust.

Clean the smoke alarm at least once a month to remove dust, dirt or debris. Always turn off power to smoke alarm before cleaning. Using a soft brush or wand attachment to a vacuum cleaner, vacuum all sides and cover of smoke alarm. Be sure all the vents are free of debris.

⚠WARNING!

BACKUP BATTERY REPLACEMENT

Disconnect AC power before changing battery. Shock hazard exists if AC power is miswired.

The smoke alarm uses a 9 Volt battery. The battery should last for at least one year under normal operating conditions. The smoke alarm has a low battery indicator, an audible "beep." It will operate at 30-40 second intervals for a minimum of 7 days. When this indication occurs, replace the battery with an Alkaline type (Radio Shack Cat. No. 23-553, Eveready Energizer #522, Duracell #MN1604), Carbon-Zinc type (Gold Peak #1604P [UL], Eveready #216), or Lithium type (ULTRALIFE U9VL-J).

Push and lift the battery door latch and remove the battery from the battery door. While observing polarity, push the replacement battery into the battery door until it is held securely in place. Carefully close and latch the battery door.

REPAIRS AND SERVICES

The smoke alarm contains less than 1 microcurie (37 kilobecquerel) of Americium 241, a radioactive material. This substance requires that the smoke alarm be returned to the manufacturer or the Department of Health for disposal. Do not dispose of in any other way. If the smoke alarm is defective in any way, do not tamper with the unit. Return the unit for servicing. (See warranty for instructions or in-warranty returns.) There will be a service charge for repairing out of warranty units.

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DEVELOP AND PRACTICE A PLAN OF ESCAPE

BASICS OF ESCAPE PLAN

- Make a floor plan indicating all doors and windows and at least two escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where all of you can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear the sound.
- Identify children's bedrooms with red stickers placed in the upper left corner of the windows. They are available from your local fire department.
- Practice a fire drill at least every six months. Practice allows you to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do!

WHAT TO DO WHEN THE ALARM SOUNDS

- Leave immediately by your plan of escape. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, ***don't open that door!*** Instead, use your alternate exit. If inside door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- Stay close to the floor if air is smoky. Breathe shallowly through a cloth, wet if possible.
- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the fire department from your neighbor's home – ***not from yours!***
- Don't return to your home until fire officials say that it is all right to do so.

NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION

For your information, the National Fire Protection Association's Standard 72, reads as follows:

"2-2.1.1.1 Smoke detectors shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit including basements and excluding crawl spaces and unfinished attics. In new construction, a smoke detector shall be installed in each sleeping room."

"A-2.5.2.1 Smoke Detection - Are More Smoke Detectors Desirable? The required number of smoke detectors might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke detectors. For this reason, it is recommended that the householder consider the use of additional smoke detectors for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke detectors. The installation of smoke detectors in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation."

The equipment should be installed in accordance with the National Fire Protection Association's Standard 72. (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269)

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IM 2.27.2.4

fast-burning, explosive, or intentional. Others are caused by carelessness or safety hazards. Smoke may not reach the smoke alarm QUICKLY ENOUGH to ensure safe escape.

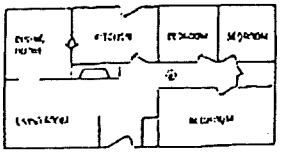
- Smoke alarms have limitations. This smoke alarm is not foolproof and is not warranted to protect lives or property from fire. Smoke alarms are not a substitute for insurance. Homeowners and renters should insure their lives and property. In addition, it is possible for the smoke alarm to fail at any time. For this reason, you must test the smoke alarm weekly and replace every 10 years.

SMOKE ALARM PLACEMENT

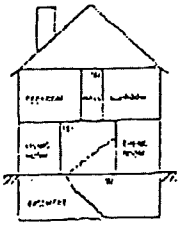
Maple Chase recommends complete coverage protection achieved by installing a smoke alarm in every room of your home. The National Fire Protection Association's (NFPA) minimum requirement, as stated in Standard 72, Chapter 2, reads as follows:

"2-2.1.1.1 Smoke detectors shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit including basements and excluding crawl spaces and unfinished attics. In new construction a smoke detector also shall be installed in each sleeping room."

Chapter 2 also reads as follows:

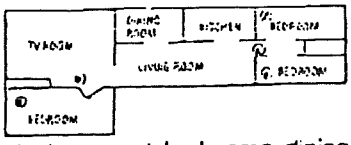


"2-2.2.1 In new construction, where more than one smoke detector is required by 2-2.1, they shall be so arranged that operation of any smoke detector shall cause the alarm in all smoke detectors within the dwelling to sound."



The NFPA, 1993 Edition, Appendix A further states:

"The required number of smoke detectors may not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke detectors. For this reason, it is recommended that the householder consider the use of additional smoke detectors for those areas for increased protection. The additional areas include: basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke detectors."



Also, as required by the California State Fire Marshal:

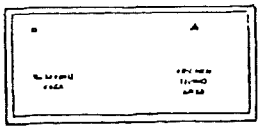
"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: a smoke detector installed in each separate sleeping area (in the vicinity, but outside the bedrooms), and heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages."

FOR BEST PROTECTION, WE RECOMMEND THAT YOU INSTALL A SMOKE ALARM IN EVERY ROOM.

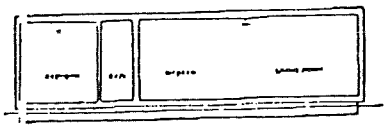
In addition, we recommend that all smoke alarms be interconnected.

Typical Efficiency Home (Apartment)

- Install a smoke alarm on the ceiling or wall closest to the sleeping area.



EFFICIENCY APARTMENT



MOBILE HOME

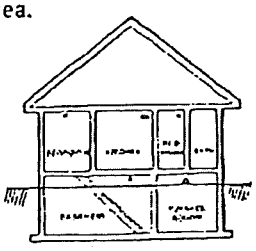
Typical Mobile Home

NOTE: For mobile homes built before 1978, install smoke alarms on an inside wall between 4 and 12 inches from the ceiling. (Older mobile homes have little or no insulation in the ceiling.) This is especially important if the ceiling is unusually hot or cold.

- Install a smoke alarm inside each bedroom and in the hallway outside each separate sleeping area.

Typical Single-Story Home

- Install a smoke alarm on the ceiling or wall inside each bedroom and in the hallway outside each separate sleeping area. If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end.



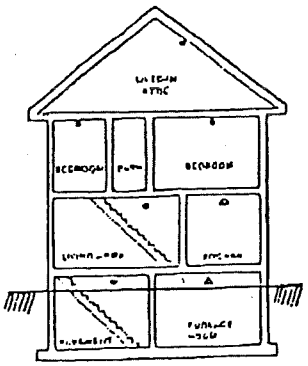
SINGLE STORY

If there is a basement:

- Install a smoke alarm on the basement ceiling at the bottom of the stairwell.

Typical Two-Story or Split Level Home

- Install a smoke alarm on the ceiling or wall inside each bedroom and in the hallway outside each separate sleeping area. If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end.
- Install a smoke alarm at the top of a first-to-second floor stairwell.



TWO STORY

If there is a basement:

- Install a smoke alarm on the basement ceiling at the bottom of the stairwell.

Key
- Smoke Alarm
△ Smoke Alarm with False Alarm Control™

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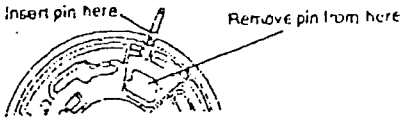
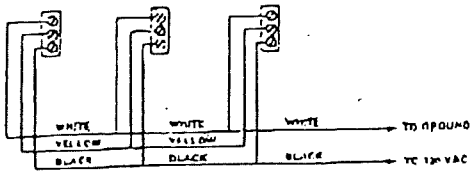
10. Position smoke alarm to mounting plate and turn clockwise to lock into place. For tamper-resist, use long-nosed pliers to remove thin plastic from notch on smoke alarm edge. Insert pin into notch on edge of smoke alarm after smoke alarm is positioned properly in base.



11. Remove arrow tab and close battery door. Smoke alarm may beep briefly as door is closed.
12. Turn on power at main fuse box or circuit breaker.
13. Test smoke alarm. See "TESTING THE SMOKE ALARM."



FOR INTERCONNECT: USE # 18 AWG MINIMUM WIRE

INTERCONNECTING SMOKE ALARMS

- Use #18 AWG minimum solid or stranded wire. When interconnecting, maximum wire length between any two is 1,500 feet for #16 AWG or 4,000 feet for #14 AWG (20 OHMS loop resistance).
- This smoke alarm may be interconnected with as many as 11 other Firex model FADC, AD, ADC, PAD or FX1218 smoke alarms, and as many as 6 Firex model ADH heat alarms for a total of not more than 16 interconnected devices. DO NOT connect to any other type or model smoke alarm.
- Connect smoke alarms to a single AC branch circuit. If local codes do not permit, be sure the neutral wire is common to both phases.

LED INDICATOR(S)

Model FADC features one combined LED indicator. The following section explains what condition the LED indicator is describing:

• Constant GREEN on	- AC power is present
• GREEN is off	- AC power is NOT present
• RED blinks once a minute	- testing for presence of good battery
• RED blinks once a second	- smoke alarm senses smoke and simultaneously sounds an alarm
• RED blinks once every 10 seconds	- smoke alarm is quieting an unwanted alarm (Models ADC and FADC only)
• RED is off and detector in alarm (interconnected systems only)	- another smoke alarm in the network has sensed smoke and is signaling this alarm.

Item 5000 only

• RED blinks 3 times every minute	- indicates this unit initiated an alarm in an interconnected system (press the test button to reset).
• RED blinks 4 times every minute preceded by an audible chirp	- indicates weak or improperly connected battery.

FALSE ALARM CONTROL™

Model FADC features a False Alarm Control™ that, when activated, quiets unwanted alarms for up to 15 minutes.

To use the False Alarm Control™:

Press and release the test button during an unwanted alarm. The alarm should stop within ten seconds. The RED LED will blink once every 10 seconds. This means the smoke alarm is in False Alarm Control™. For Item 5000, the initiating alarm RED LED in an interconnected system will continue to blink until reset by pressing the test button.

When there are multiple units interconnected, each alarm that is sensing smoke must have its test button depressed in order to silence the remaining alarms.

If the smoke alarm(s) does not go into False Alarm Control™ and continues to sound its loud alarm horn, or of it initially goes into False Alarm Control™ then resounds the alarm, the smoke is too heavy and could be a dangerous situation — take emergency action.

TESTING THE SMOKE ALARM

⚠ WARNING

- Test each smoke alarm to be sure it is installed correctly and operating properly.
- Test all smoke alarms in an interconnected system after installation.
- The Push-to-Test button accurately tests all functions. DO NOT use an open flame to test this smoke alarm. You may ignite and damage the smoke alarm or your home.
- Test smoke alarms weekly and upon returning from vacation or when no one has been in the household for several days.

Test all smoke alarms weekly by doing the following:

1. Observe the green LED. A constant green light indicates the smoke alarm is receiving 120V AC power.
2. Firmly depress the Push-to-Test button for at least five (5) seconds. On Item 5000, the smoke alarm will sound 2 short, reduced-volume beeps, and then 1 short loud beep, followed by a pause, then repeats. All other items will sound 3 short loud beeps followed by a 2-second pause and then repeats. The alarm may sound for up to 10 seconds after releasing the Push-to-Test button.

NOTE: If smoke alarms are interconnected, all smoke alarms should sound an alarm within three seconds after any test button is pushed and the tested smoke alarm sounds.

3. If smoke alarm does not sound, turn off power at main fuse box or circuit breaker and check wiring. Retest smoke alarm.

⚠ **DANGER: If alarm horn sounds, and smoke alarm is not being tested, the smoke alarm is sensing smoke. THE SOUND OF THE ALARM HORN REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.**

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TROUBLESHOOTING

⚠ DANGER: **Always turn off power at main fuse box or circuit breaker before taking troubleshooting action.**

⚠ WARNING: **DO NOT disconnect battery or AC power to quiet an unwanted alarm. This will remove your protection. Fan the air or open a window to remove smoke or dust.**

PROBLEM	SOLUTION
Smoke alarm does not sound when tested. NOTE: Push test button for at least five (5) seconds while testing!	1. Check that AC power is turned on. 2. Turn off power. Remove smoke alarm from mounting plate and: a. check that connector plug is securely attached. b. check that battery is properly attached to connector. 3. Clean smoke alarm.
The horn makes 2 quiet beeps and one loud beep when tested.	1. The alarm is operating correctly. Item 5000 has a ramp-up test horn feature. This allows you to release the test button before the alarm emits the loud beeps.
Smoke alarm beeps about once a minute.	1. Turn off power and replace battery. (See "Battery Replacement" in the "MAINTENANCE AND CLEANING" section.) 2. On Item 5000 only. Be sure red LED is extinguished after replacing battery.
Smoke alarm sounds unwanted alarms intermittently or when residents are cooking, taking showers, etc.	1. Hire an electrician to move smoke alarm to a new location. See "SMOKE ALARM PLACEMENT" 2. Clean smoke alarm. See "Cleaning" in the "MAINTENANCE AND CLEANING" section.
Interconnected smoke alarms do not sound when system is tested.	1. Press and hold test button for at least three seconds after the first unit sounds.

WARRANTY INFORMATION

5-YEAR LIMITED SMOKE ALARM WARRANTY AND
10-YEAR LIMITED ULTRALIFE U9VL-J LITHIUM BATTERY WARRANTY
(WHEN SOLD WITH MAPLE CHASE SMOKE ALARM)

Maple Chase warrants to the original consumer purchaser each new smoke alarm to be free from defects in material and workmanship under normal use and service for a period of five (5) years from the date of purchase. For Maple Chase smoke alarms sold with an Ultralife U9VL-J 9-volt battery, Maple Chase warrants to the original consumer purchaser each new Ultralife U9VL-J 9-volt battery to be free from defects in material and workmanship under normal use and service for a period of ten (10) years from the date of purchase. Maple Chase agrees to repair or replace, at its option, any defective smoke alarm or Ultralife U9VL-J 9-volt battery (when sold with Maple Chase smoke alarm) provided that it is returned with postage prepaid and with proof of purchase date to Maple Chase. This warranty does not cover damage resulting from accident, misuse or abuse or lack of reasonable care of the product. This warranty is in lieu of all other express warranties, obligations or liabilities. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF FIVE (5) YEARS FOR THE SMOKE ALARM AND TEN (10) YEARS FOR THE ULTRALIFE LITHIUM U9VL-J 9-VOLT BATTERY (WHEN SOLD WITH MAPLE CHASE SMOKE ALARM) FROM PURCHASE DATE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. IN NO CASE SHALL MAPLE CHASE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY ITS NEGLIGENCE OR FAULT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.

This smoke alarm's manufacture and distribution are licensed by the U.S. Nuclear Regulatory Commission.

This product meets all the requirements of U.L. Standard 217.

WHERE TO SEND YOUR SMOKE ALARM FOR SERVICE

To return smoke alarms under warranty, send the smoke alarm with postage prepaid, a note describing the nature of the difficulty, and proof of date of purchase to:

Maple Chase
28C Leigh Fisher Blvd.
El Paso, TX 79906
United States of America

To return Ultralife 10-year lithium batteries under warranty, include the lithium battery, a note describing the nature of the difficulty, with proof of date of purchase, postage and return postage prepaid to:

ULTRALIFE BATTERIES, INC.
c/o MAPLE CHASE
P.O. Box 622
1350 Route 86 South
Newark, NY 14513

Invensys. Maple Chase
191 E. North Avenue
Carol Stream, Illinois 60188
United States of America

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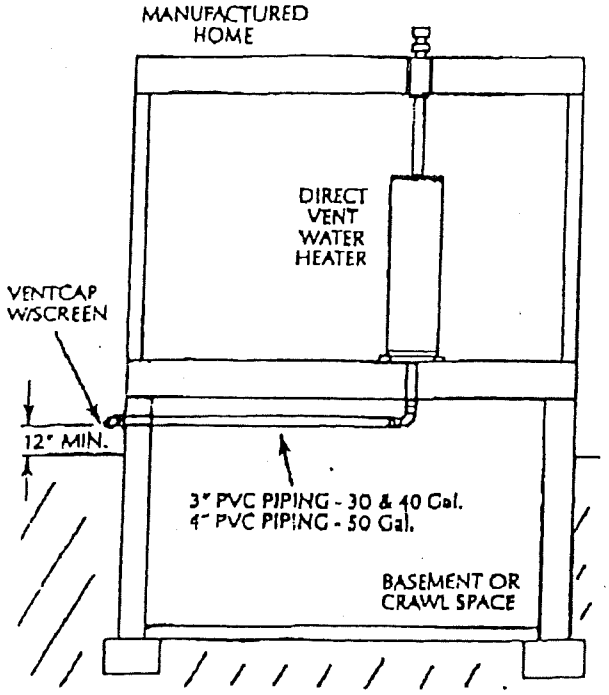
Installing the New Intake Air Vent

Facts to Consider About the Location

If the manufactured home is installed over a basement or crawlspace, combustion air must be supplied from outside the manufactured home. The combustion air intake piping can be 3" PVC for 30 and 40 gallon models and 4" PVC for 50 gallon models. The air intake piping cannot exceed a total of 30 feet including vertical and horizontal runs and have no more than 3 elbows. All horizontal runs require adequate support at 3½ feet intervals.



MANUFACTURED HOME INSTALLED OVER A BASEMENT OR CRAWLSPACE – AIR INTAKE THROUGH AN OUTSIDE WALL

ALL 30 AND 40 GALLON MODELS

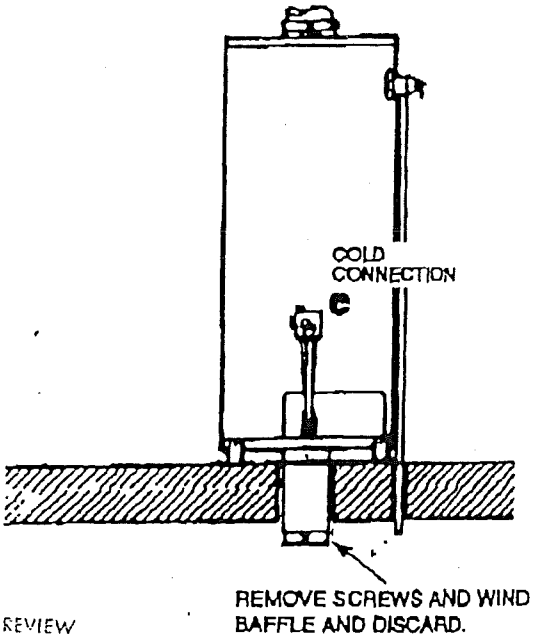
3" PVC Schedule 40 intake air vent piping:
Optional Kit No. 9002986 contains a 3" PVC Schedule 40-45° vent cap with screen and two 3" wall collars.

ALL 50 GALLON MODELS

4" PVC Schedule 40 intake air vent piping:
Optional Kit No. 9002987 contains a 4" PVC Schedule 40-45° vent cap with screen and two 4" wall collars.

ALL MODELS

1. PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the intake air vent system.
2. The intake air vent system must terminate horizontally to the outdoors.
3. Remove the screws which attach the wind baffle to the existing metal air intake vent pipe underneath the home. Discard the wind baffle and screws.



⚠ WARNING

A gas water heater cannot operate properly without the correct amount of air for combustion. Provide ventilation and combustion air by means of floor and wall openings as shown in the drawings. Never obstruct the flow of combustion and ventilation air. If you have any doubts or questions at all, call your gas company. Failure to provide the proper amount of combustion air can result in a fire or explosion and can cause DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.

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Installing the New Intake Air Vent

Cementing PVC, ABS OR CPVC Pipe and Fittings

Read and observe all safety information printed on primer, cleaner, and cement containers.

⚠ DANGER

Primer, cleaner, and cements are extremely flammable. They are harmful or fatal if swallowed. The vapors are harmful. They may irritate eyes and skin and can be absorbed through the skin.

⚠ PRECAUTIONS

Always store primers, cleaner, and cements in cool, dry, well ventilated places. Do not store them near heat, sparks, or flames. Keep containers closed. Use them in well ventilated areas. Wear impervious clothing while handling. Do not smoke, eat, or drink while handling. Wash thoroughly after handling and before eating. Wear eye protection when handling. If swallowed, drink water, do not induce vomiting, and call a physician or poison control center immediately. If inhaled, get fresh air and seek medical attention if ill feelings persist. In case of eye and skin contact, immediately flush with plenty of water for 15 minutes and seek medical attention if irritation persists. KEEP OUT OF REACH OF CHILDREN.

All primers, cleaners, and cements must meet all local codes and applicable standards of the American Society For Testing Materials Standards.

Before using primers, cleaners, and cements, stir or shake, making sure contents are liquid. Do not use if found to be lumpy or jelly-like.

1. Cut pipe ends squarely removing all burrs and dirt.
2. Dry fit pipe and fittings to be connected for proper fit.
3. Clean pipe and fitting with a primer/cleaner.
4. Apply a thin coat of cement to fitting, avoiding puddling inside.
5. Apply a liberal coat of cement to pipe leaving no voids.
6. QUICKLY assemble parts while cement is fluid! If you wait too long, re-coat pipes.
7. Push pipe completely into socket of fitting, turning as it goes until it bottoms.
8. Hold pipe and fitting together for 30 seconds. Then carefully clean off excess with a cloth. Allow connections a sufficient time to cure before disturbing.
9. Remember that vent pipes must be adequately and securely supported.

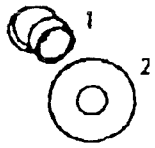
APPROXIMATE SETTING TIME FOR 2½" TO 4" PIPE JOINTS

	MOVEMENT OF JOINT	COMPLETE SET
90°F to 150°F	¾ hr.	8 hrs.
50°F to 90°F	1 hr.	15 hrs.
0°F to 50°F	1½ hr.	18 hrs.

Repair Parts

KIT #9002986 – For 30 and 40 Gallon Models – 3"

KIT #9002987 – For 50 Gallon Models – 4"



KEY NO.	PART DESCRIPTION	MODEL NUMBERS 9002986	9002987
		PART NUMBERS	
1.	Vent Cap w/Screen	9001957	9003005
2.	Wall Collar	9001993	9002786

Now that you have purchased this Intake Air Vent Kit, should a need ever exist for repair parts or service, simply contact the company it was purchased from or direct from the manufacturer listed on the rating plate on the water heater.

Be sure to provide all pertinent facts when you call or visit.

Selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

The model number of your Gas Water Heater will be found on the model rating plate located above the gas control valve.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

MODEL NUMBER — PART DESCRIPTION
SERIAL NUMBER — PART NUMBER

THIS IS A REPAIR PARTS LIST, NOT A PACKING LIST.

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Appendix - A

Hinged Roof On-site Setup Instructions

Before You Begin

1. Review the parts list and assure you have located all the parts and components necessary for completion. Do not uncover the roof until you have located all of the parts.
2. You will need certain tools before you begin:
   c. Five roof jacks capable of lifting the roof to the proper height or a boom truck capable of lifting the upper roof section which weighs between 1500 and 2000 pounds.
   d. Ladders for egress from the roof.
   e. Basic hand tools such as hammer, saw, etc.
   f. Manpower needed is a minimum of two people, however, five is preferred.

Step 1: Plastic Removal

1. We recommend that you remove only the weatherproofing necessary to raise the roof. This should be the fastening along the mate line wall. By removing only this area, the home could quickly be re-protected in case of rain or snow.
2. Fold the weatherproofing back out of the way being careful not to step on loose materials which could cause a fall from the roof.

Step 2: Preparing To Raise The Roof

1. Measure the length of the home and divide that by the number of lifting points you intend to use. (We require no less than five for a home larger than 56 feet.) (Example: 64 foot home divided by 5 lifting points = 12'-8")
2. Take the results of item 1 above and divide by 2. (Example: 12'-8" divided by 2 = 6'-4"). This will be where you place your first jack. The second jack will be placed 12'-8" from the first jack. Repeat for jacks 3, 4 and 5.
3. This should result in the last jack being the same distance from the end as the first jack was, in this example 6'-4".
4. Lift each jack equally until the roof is supported by the jacks, recheck for any problems before raising further.
5. If everything is still O.K., continue to raise the roof equally until the hinged king posts (hinged inside the roof to the top chord) fit into place and fasten per the included drawing. At this time, position the gable end wall wedges into the end trusses. Fasten to chords as shown on included drawing.

Step 3: Finish

1. For shipping purposes the factory has left a row or two or three of shingles out of the hinge area. Once the roof has been raised these shingles will need to be installed along with the necessary felt or ply-dry underlayment. Any holes left exposed when the shipping plastic was removed should be tarred.
2. Install the soffit, j-rails and fascia as needed.
3. Installed gable end sheathing and siding as needed.

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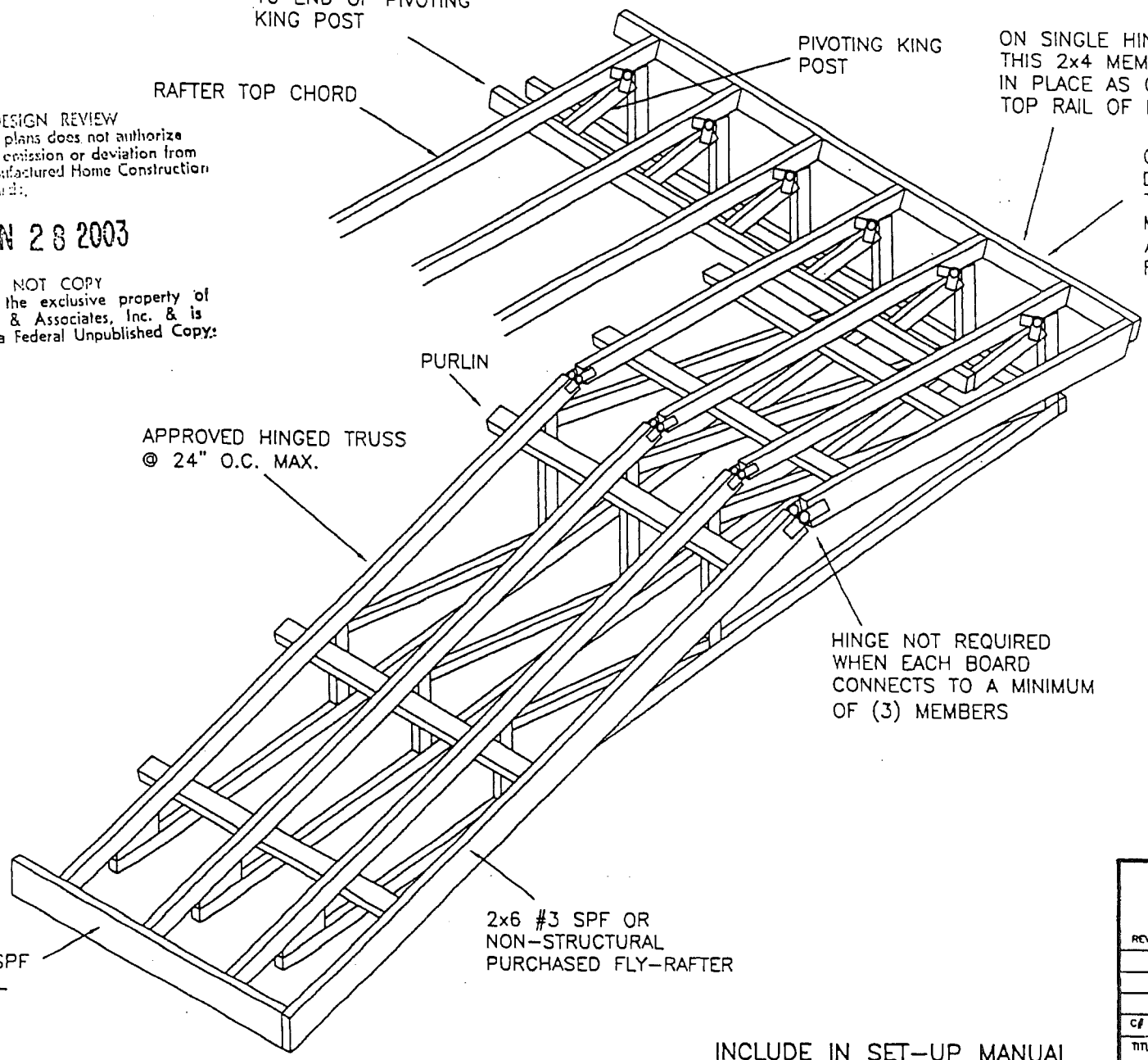
ROOF ILLUSTRATED IS A SINGLE HINGED SYSTEM



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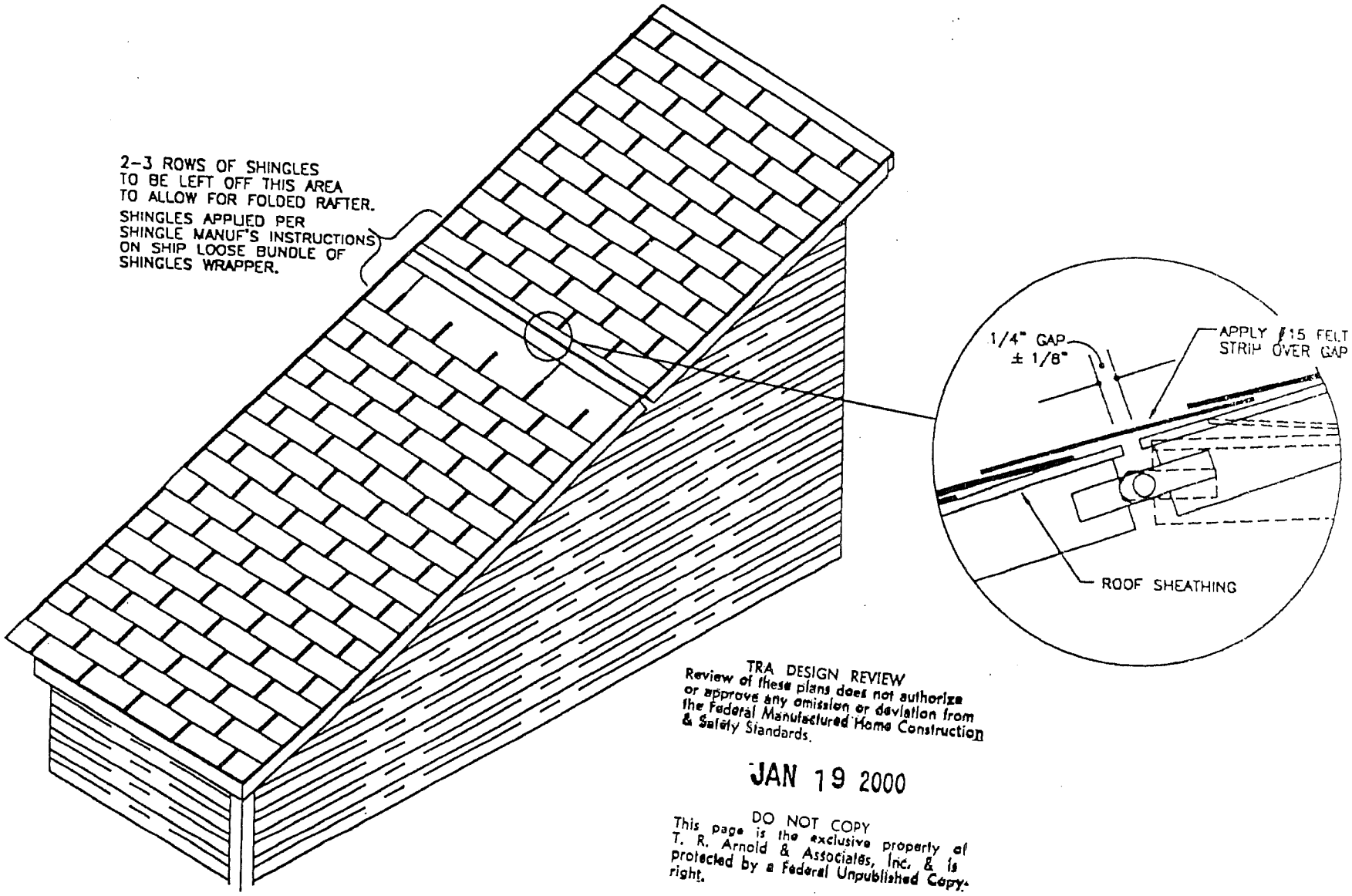
(Rev A)

IM2-30

INCLUDE IN SET-UP MANUAL

REVISIONS	HOLLY PARK MIDDLEBURY, IN 46540	
C# IM2-30	BY TOM V.M.	DATE 2-19-99
TITLE: HINGED ROOF		NO. IM2-30



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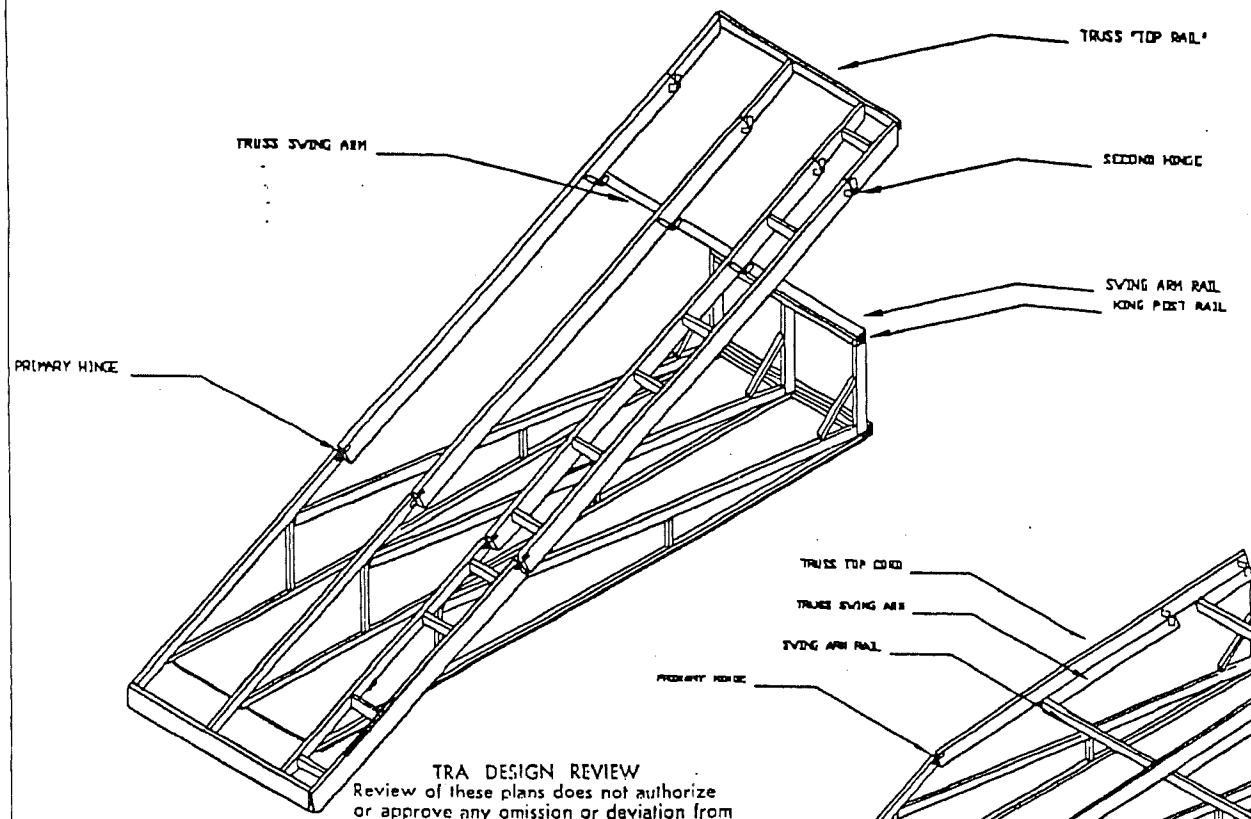

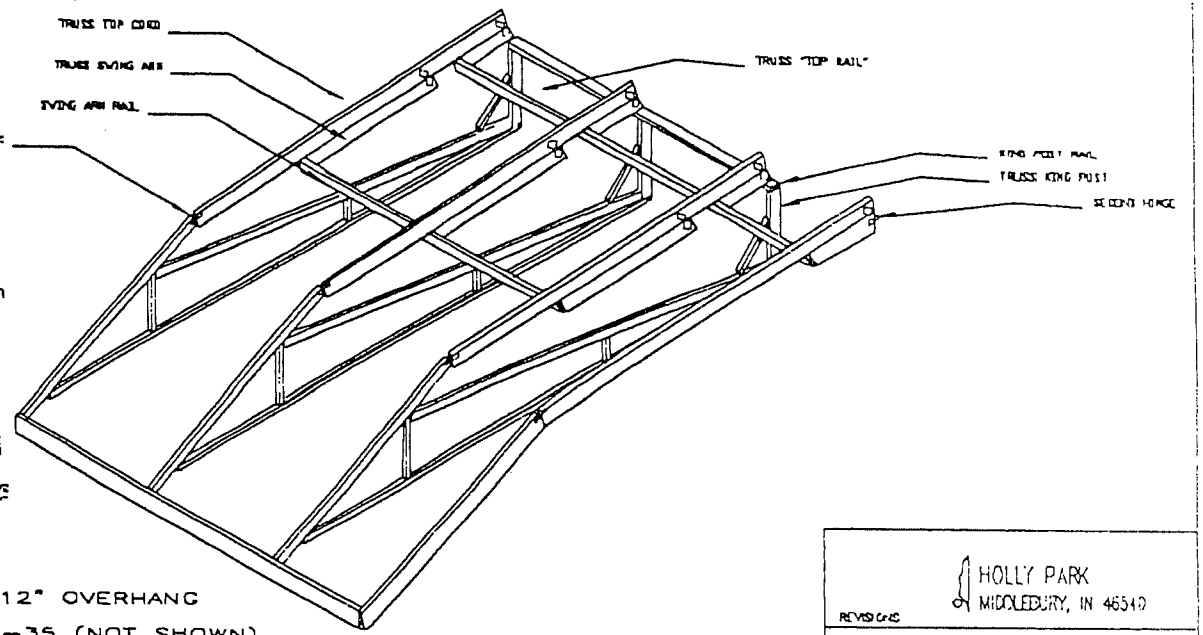

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IM 2.34 (Ref. CE 1-10)

182" FLOOR WIDTH 6/12 ROOF PITCH WITH 12" OVERHANG

NOTES:

1) OVERHANG BLOCKS INSTALLED PER IM 2-35 (NOT SHOWN).

2) FASCIA BOARD NOT FASTENED TO TRUSS TOP RAIL UNTIL ON-SITE SET-UP.

3) FLY-RAFTER TO BE SPF #3 OR NON-STRUCTURAL PURCHASED FLY-RAFTER.

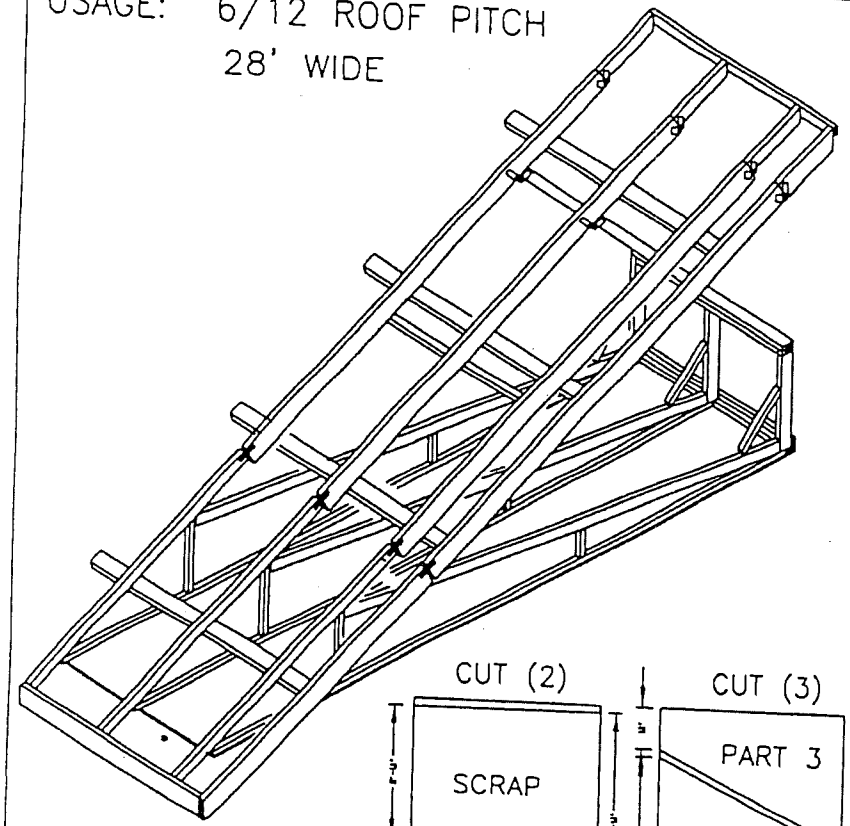
4) FLY RAFTER TO BE FASTENED TO FASCIA AND TO EDGE RAIL WITH (5)-7/16 X 2-1/2 X 15 GA STAPLES AT EACH CONNECTION (OR EQUAL).

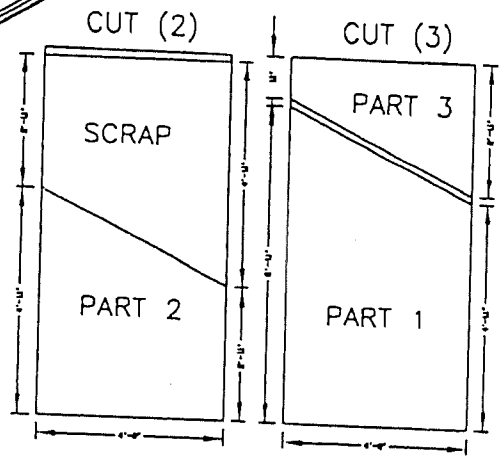
HOLLY PARK
MIDDLEBURY, IN 46540

REVISIONS

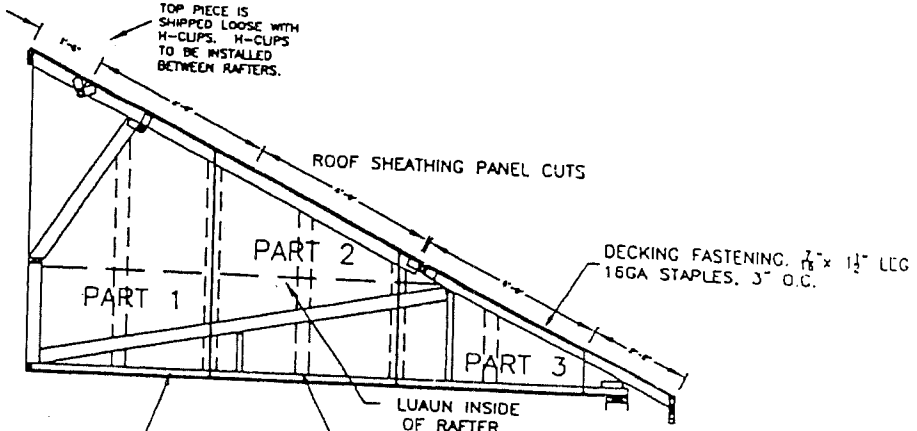
IM 2.34	BY BJH	DATE 07-11-03
TITLE: 6/12 TRUSS W/ BOXED OVERHANG		NO. IM 2.34

USAGE: 6/12 ROOF PITCH
28' WIDE





END–TRUSS SHEATHING CUTS



NOTES:
1) MATERIAL IS 3/8" OSB OR PLYWOOD

IM 2.36 (Ref. CE 1-9-2)

HOLLY PARK
MIDDLEBURY, IN 46540

REVISIONS

C/CE 1-9-2	BY MWW	DATE 10/24/03
TITLE: 6/12 HINGED ROOF		NO IM 2.36

Electrical Service Equipment Attachment

Holly Park, Inc., manufacturer of singlewide and multi-section homes produced under the Federal Manufactured Home Construction and Safety Standards (HUD code), provides the following guidelines for field installation of electrical service equipment.

The FMHCSS does not specifically provide for. However, inasmuch as some States and local governments allow the attachment of service equipment directly to a manufactured home, the following guidelines and information are provided.

1) The structural members of our manufactured homes (wall studs and top plates) are designed with sufficient load bearing capacities to support a mast weatherhead, meter base and disconnect when this equipment is directly attached to the wall structural members.
2) Any modification to the home such as cutting, and flashing shall be done in accordance with accepted building practices and local building codes.
3) All work involving installation of electrical service equipment should be done according to the National Electric Code and local building codes.
4) The New Holly Park will not be responsible for any damage done to a home by such installation and does not warrant any aspect of the home that has been altered by the attachment of the equipment.
5) The drawing illustrates a typical installation and is not a specific approval or plan for installation of electrical service equipment.
6) The service equipment (main electrical panel box) is to be grounded on site with a grounding electrode and a grounding electrode conductor (No 8 copper for 100 amp and No 4 copper for 200 amp).

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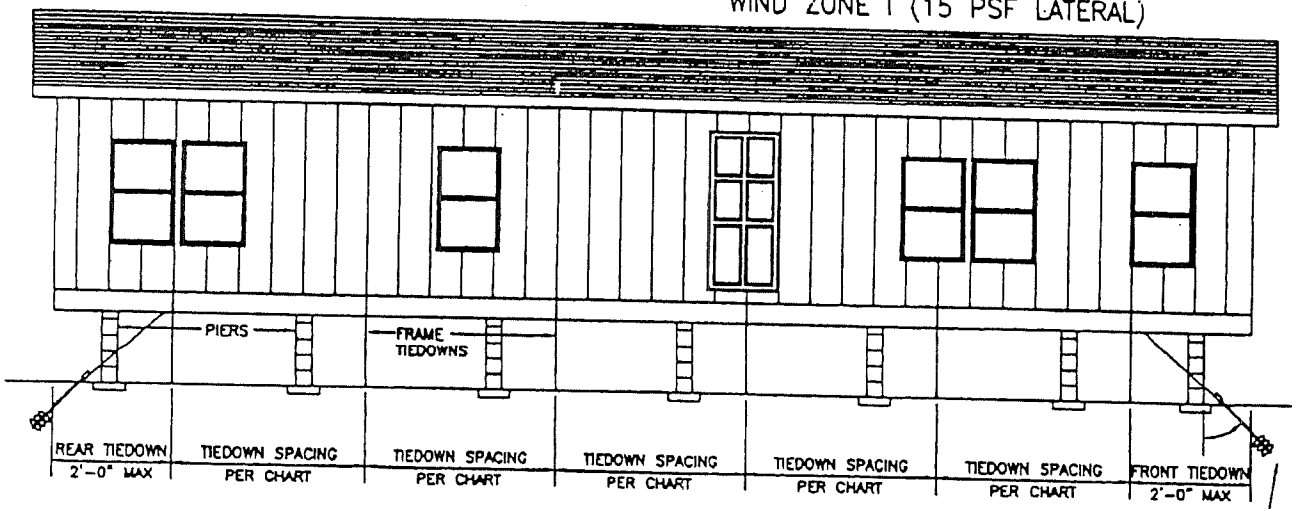
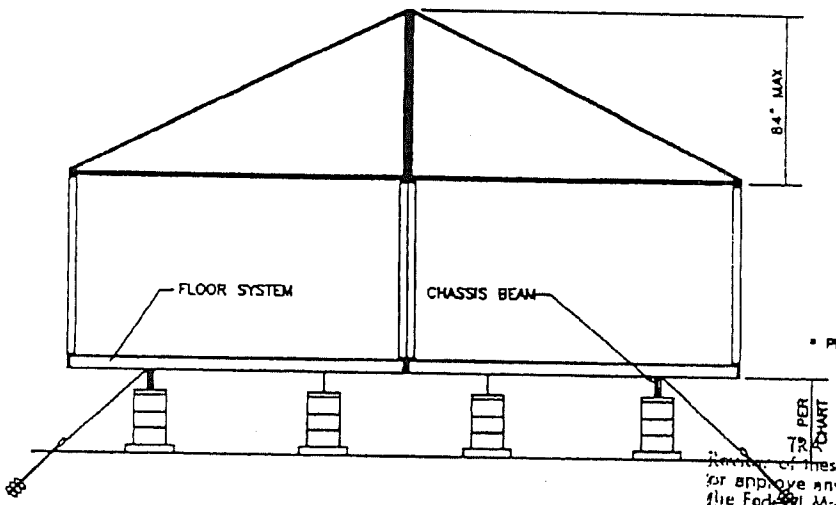
HOLLY PARK HOMES
RECOMMENDED TIEDOWN SYSTEM
6 ON 12 ROOF SLOPE
WIND ZONE I (15 PSF LATERAL)



TYPICAL SIDE ELEVATION SHOWING TIEDOWN SPACINGS

LONGITUDINAL TIEDOWNS SEE CHART ON LONGITUDINAL TIEDOWN REQUIREMENTS DRAWING



* PIER HEIGHT INCLUDES DEPTH OF I-BEAM

TYPICAL CROSS SECTION SHOWING TIEDOWNS

NOTES

1. FRAME TIE-DOWN SHALL BE INSTALLED TO PROPERLY SECURE THE HOME.
2. OVER-THE-ROOF TIES ARE NOT REQUIRED WITH PROPERLY SPACED AND INSTALLED FRAME TIEDOWNS. HOWEVER, IF OVER-THE-ROOF TIEDOWNS ARE REQUIRED BY THE LOCAL JURISDICTION THEY MAY BE INSTALLED.
3. OVER-THE-ROOF TIES (WHEN REQUIRED) MAY BE SECURED TO THE SAME GROUND ANCHORS AS THE FRAME TIEDOWNS
4. FRAME TIEDOWNS AND ANCHORS ARE NOT SUPPLIED BY HOLLY PARK HOMES.
5. OVER-THE-ROOF STRAPS (WHEN REQUIRED) ARE SUPPLIED BY HOLLY PARK HOMES. ANCHORS AND END TREATMENTS ARE TO BE SUPPLIED BY OTHERS.
6. GROUND ANCHORS AND FRAME TIES SHALL BE CAPABLE OF RESISTING A TENSILE LOAD OF 4725 POUNDS AND ARE TO BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, BUT ARE NOT TO EXTEND BEYOND THE SIDEWALL OF THE HOME.
7. STEEL ANCHORING EQUIPMENT EXPOSED TO THE WEATHER SHALL BE PROTECTED WITH AT LEAST 0.30 OZ. OF ZINC PER SQUARE FOOT OF STEEL.
8. PLACEMENT OF FRAME TIEDOWN STRAPS AND ANCHORS MAY BE OFFSET UP TO 1/2 THE REQUIRED SPACING PROVIDED NO DECREASE IN THE TOTAL NUMBER OF FRAME TIEDOWNS RESULTS.
9. DESIGN BASED ON 82 1/2" BEAM SPACING WITH OFF SET FLOOR AND AND A SIDEWALL HEIGHT OF 8'-0".
10. ANCHORS SHALL BE CERTIFIED FOR THESE CONDITIONS BY A PROFESSIONAL ENGINEER, ARCHITECT OR A NATIONALLY RECOGNIZED TESTING LABORATORY AS TO THEIR RESISTANCE, BASED ON THE INSTALLED ANGLE OF DIAGONAL TIE AND/OR VERTICAL TIE LOADING AND ANGLE OF ANCHOR INSTALLATION, AND TYPE OF SOIL IN WHICH THE ANCHOR IS TO BE INSTALLED:
11. GROUND ANCHORS SHALL BE EMBEDDED BELOW THE FROST LINE AND BE AT LEAST 12" ABOVE THE WATER TABLE AND
12. GROUND ANCHORS SHALL BE INSTALLED TO THEIR FULL DEPTH, AND STABILIZER PLATES SHALL BE INSTALLED TO PROVIDE ADDED RESISTANCE TO OVERTURNING OR SLIDING FORCES.
13. ANCHORING EQUIPMENT SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT TO RESIST THESE SPECIFIED FORCES IN ACCORDANCE WITH TESTING PROCEDURES IN ASTM STANDARD SPECIFICATION D3593-91, STANDARD SPECIFICATION FOR STRAPPING, FLAT STEEL AND SEALS.
14. STRAPPING TO BE TYPE 1, FINISH B, GRADE 1 STEEL STRAPPING, 1-1/4" WIDE AND .035 INCHES IN THICKNESS, CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM STANDARD SPECIFICATION D3953-91, "STANDARD SPECIFICATION FOR STRAPPING, FLAT STEEL AND SEALS".
15. ANGLE OF ANCHOR TO BE AT SAME ANGLE AS STRAP UNLESS APPROVED STABILIZER PLATE OR COLLAR IS INSTALLED.

JOHN C. DOEDEN
REGISTERED
No
ENE8703571
STATE OF
INDIANA
PROFESSIONAL ENGINEER

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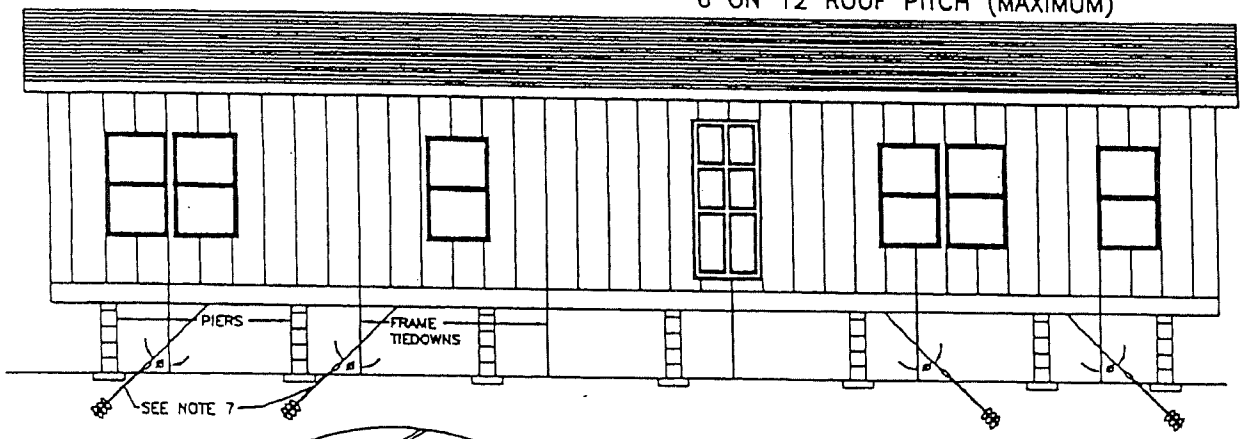
FRAME TIEDOWN SPACING CHART

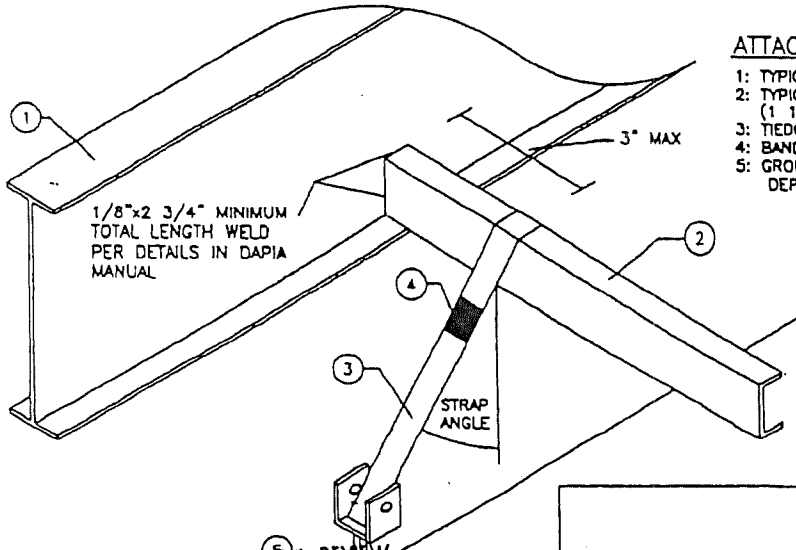
FLOOR WIDTH	SIDEWALL HEIGHT	EAVE OVERHANG	TIEDOWN SPACING	MAX * PIER HEIGHT
26'-0" (26 WIDE)	96" MAX	12" MAX	6'-0"	29"
26'-0" (26 WIDE)	96" MAX	12" MAX	5'-0"	40"

1M4.1 (REV. C)

HOLLY PARK HOMES
WIND ZONE 1 (15 PSF LATERAL)
RECOMMENDED TIEDOWN SYSTEM
LONGITUDINAL TIEDOWN REQUIREMENTS
6 ON 12 ROOF PITCH (MAXIMUM)

TYPICAL SIDE ELEVATION SHOWING TIEDOWN SPACINGS





ATTACHMENT DETAIL

1: TYPICAL LONGITUDINAL I-BEAM
2: TYPICAL FRAME CROSSMEMBER (1 1/2" x 2" x 1 1/2" x 13 GA MINIMUM)
3: TIEDOWN STRAP
4: BANDING SEAL
5: GROUND ANCHOR - INSTALLED TO FULL DEPTH OF ANCHOR HEAD

NOTES:
1. SEE OTHER DRAWINGS FOR FRAME TIEDOWN REQUIREMENTS. THIS DETAIL IS FOR LONGITUDINAL TIEDOWN DESIGN ONLY.
2. WHEN ANCHORS ARE NOT INSTALLED AT THE ANGLE SPECIFIED IN THE TABLE A STABILIZER PLATE MUST BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTRUCTIONS.
3. LONGITUDINAL TIEDOWNS AND ANCHORS ARE NOT SUPPLIED BY HOLLY PARK HOMES.
4. GROUND ANCHORS AND FRAME TIES SHALL BE CAPABLE OF RESISTING AN ULTIMATE TENSION LOAD OF 4725# & ARE TO BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, BUT ARE NOT TO EXTEND BEYOND THE SIDEWALL OF THE HOME.
5. STEEL ANCHORING EQUIPMENT EXPOSED TO THE WEATHER SHALL BE PROTECTED WITH AT LEAST 0.30 OZ. OF ZINC PER SQUARE FOOT OF STEEL.
6. DESIGN BASED ON A MAXIMUM SIDEWALL HEIGHT OF 8'-0".
7. LONGITUDINAL TIES ARE INSTALLED JUST INSIDE I-BEAMS AT CROSSMEMBERS IN ACCORDANCE WITH THE TABLE AND NOTES 3, 4, 5, 13 AND 14.
8. ANCHORS SHALL BE CERTIFIED FOR THESE CONDITIONS BY A PROFESSIONAL ENGINEER, ARCHITECT OR A NATIONALLY RECOGNIZED TESTING LABORATORY AS TO THEIR RESISTANCE, BASED ON THE INSTALLED ANGLE OF DIAGONAL TIE AND/OR VERTICAL TIE LOADING AND ANGLE OF ANCHOR INSTALLATION, AND TYPE OF SOIL IN WHICH THE ANCHOR IS TO BE INSTALLED:
9. GROUND ANCHORS SHALL BE EMBEDDED BELOW THE FROST LINE AND BE AT LEAST 12" ABOVE THE WATER TABLE AND
10. GROUND ANCHORS SHALL BE INSTALLED TO THEIR FULL DEPTH, AND STABILIZER PLATES SHOULD BE INSTALLED TO PROVIDE ADDED RESISTANCE TO OVERTURNING OR SLIDING FORCES.
11. ANCHORING EQUIPMENT SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT TO RESIST THESE SPECIFIED FORCES IN ACCORDANCE WITH TESTING PROCEDURES IN ASTM STANDARD SPECIFICATION D3593-91, STANDARD SPECIFICATION FOR STRAPPING, FLAT STEEL AND SEALS.
12. STRAPPING TO BY TYPE 1, FINISH B, GRADE 1 STEEL STRAPPING, 1-1/4" WIDE AND .035 INCHES IN THICKNESS, CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM STANDARD SPECIFICATION D3953-91, "STANDARD SPECIFICATION FOR STRAPPING, FLAT STEEL AND SEALS".
13. SELECT A CROSSMEMBER WHERE PIERS DO NOT INTERFERE WITH THE REQUIRED ANGLE OF THE STRAP. INSTALL THE STRAP JUST INSIDE THE MAIN BEAMS LOOPED AROUND THE CROSSMEMBER AND TIE TO AN ANCHOR LOCATED DIRECTLY UNDER THE MAIN BEAM AT THE ANGLE SPECIFIED IN THE CHART BELOW (SEE DETAIL).
14. WHEN THIS ANCHOR ANGLE IS NOT ATTAINABLE INSTALL ANCHOR PER MANUFACTURER'S INSTRUCTIONS WITH AN APPROVED STABILIZING PLATE.
15. LONGITUDINAL TIES ARE INSTALLED JUST INSIDE I-BEAM AT CROSSMEMBERS AT EACH END AND CANNOT BE DOUBLED.

JOHN C. DOEDEN REGISTERED NO. 10000071 STATE OF INDIANA PROFESSIONAL ENGINEER

DOUBLE WIDE UNITS (ALTERNATE WITH BLOCK PIERS*)				NO RESTRICTION AS TO PIER TYPE OR HEIGHT (EXCEPT AS LIMITED BY OTHER DETAILS)		
	MINIMUM UNIT LENGTH		NUMBER OF LONGITUDINAL TIES (TOTAL EACH END)		MINIMUM QUANTITY EACH END OF EACH SECTION	MINIMUM STRAP ANGLE (DEGREES)
FLOOR WIDTH	SINGLE STACK	DOUBLE STACK		FLOOR WIDTH		
26'-0" DOUBLE WIDE	62'-0"	54'-0"	0	156" DOUBLE WIDE*	2	35
	32'-0"	32'-0"	2			
30'-4" DOUBLE WIDE	68'-0"	60'-0"	0	182" DOUBLE WIDE*	2	45
	37'-0"	32'-0"	2			

* FOR USE IN ABOVE TABLE:
SINGLE STACK BLOCK PIERS = 24" MAXIMUM HEIGHT
DOUBLE STACK BLOCK PIERS = 55" MAXIMUM HEIGHT
MINIMUM ANGLE OF STRAP = 40 DEGREES.

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

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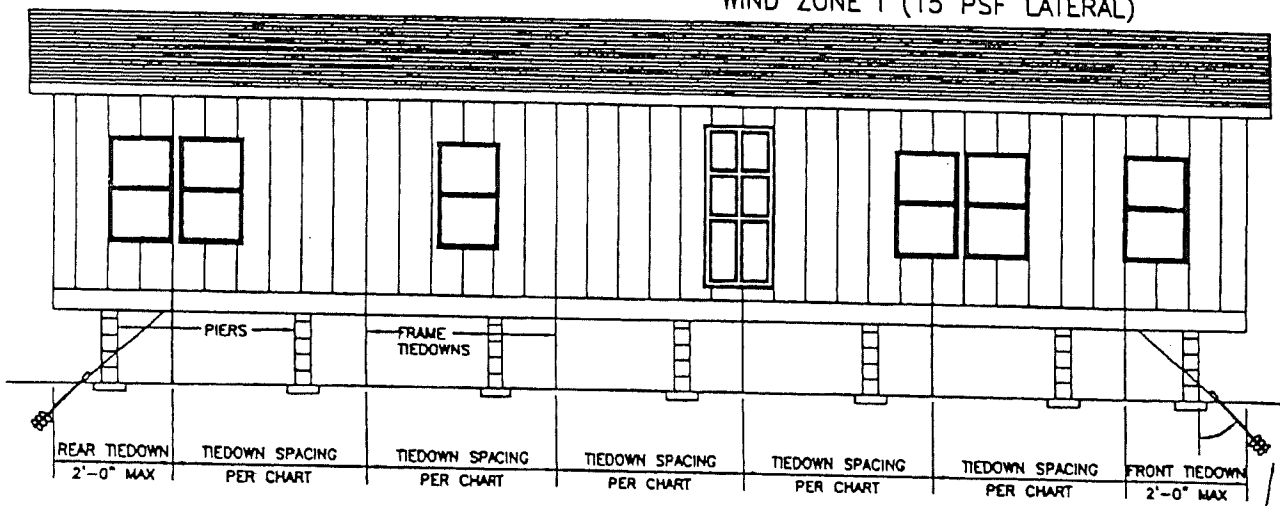
1M-4.3 (REV.4)

HOLLY PARK HOMES
RECOMMENDED TIEDOWN SYSTEM
20 DEGREE (MAX) ROOF SLOPE
WIND ZONE I (15 PSF LATERAL)



TYPICAL SIDE ELEVATION SHOWING TIEDOWN SPACINGS

LONGITUDINAL TIEDOWNS SEE CHART ON LONGITUDINAL TIEDOWN REQUIREMENTS

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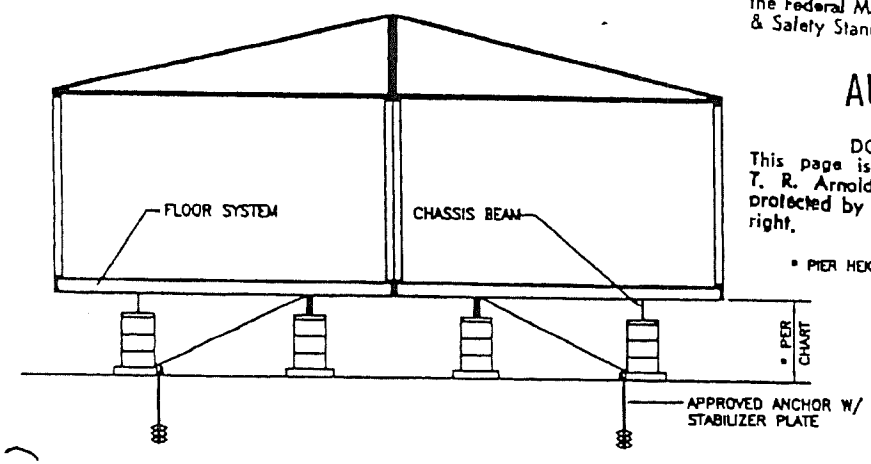

TYPICAL CROSS SECTION SHOWING TIEDOWNS

* PIER HEIGHT INCLUDES DEPTH OF I-BEAM

NOTES:
1. FRAME TIE-DOWN SHALL BE INSTALLED TO PROPERLY SECURE THE HOME.
2. OVER-THE-ROOF TIES ARE NOT REQUIRED WITH PROPERLY SPACED AND INSTALLED FRAME TIEDOWNS. HOWEVER, IF OVER-THE-ROOF TIEDOWNS ARE REQUIRED BY THE LOCAL JURISDICTION, THEY MAY BE INSTALLED.
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5. OVER-THE-ROOF STRAPS (WHEN REQUIRED) ARE SUPPLIED BY HOLLY PARK HOMES. ANCHORS AND END TREATMENTS ARE TO BE SUPPLIED BY OTHERS.
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7. STEEL ANCHORING EQUIPMENT EXPOSED TO THE WEATHER SHALL BE PROTECTED WITH AT LEAST 0.30 OZ. OF ZINC PER SQUARE FOOT OF STEEL.
8. RESERVED.
9. DESIGN BASED ON 82 1/2" BEAM SPACING WITH OFF SET FLOOR AND AND A SIDEWALL HEIGHT OF 7'-0".
10. ANCHORS SHALL BE CERTIFIED FOR THESE CONDITIONS BY A PROFESSIONAL ENGINEER, ARCHITECT OR A NATIONALLY RECOGNIZED TESTING LABORATORY AS TO THEIR RESISTANCE, BASED ON THE INSTALLED ANGLE OF DIAGONAL TIE AND/OR VERTICAL TIE LOADING AND ANGLE OF ANCHOR INSTALLATION, AND TYPE OF SOIL IN WHICH THE ANCHOR IS TO BE INSTALLED:
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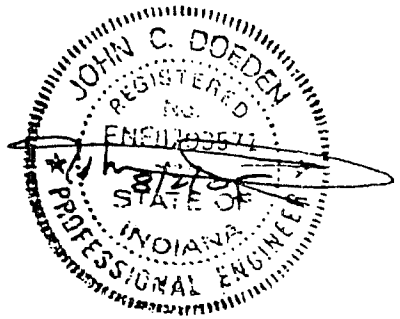
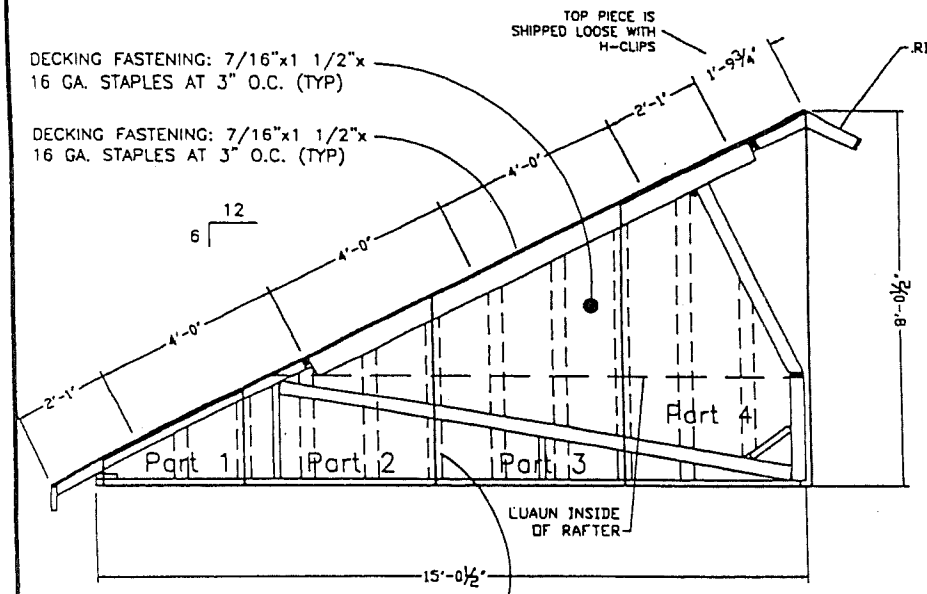


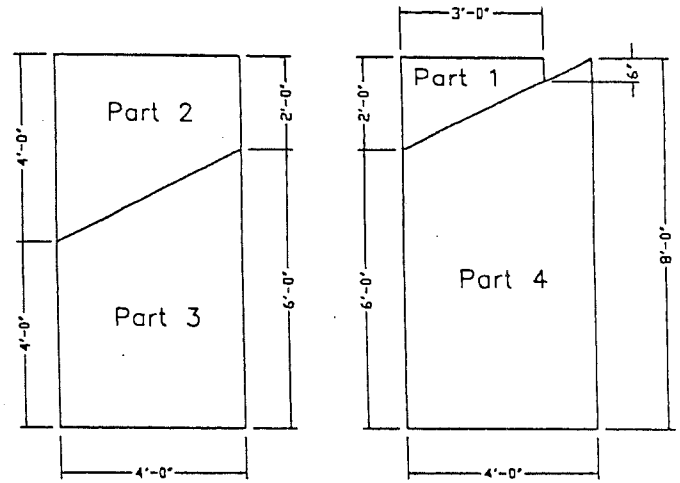
FRAME TIEDOWN SPACING CHART

FLOOR WIDTH	SIDEWALL HEIGHT	EAVE OVERHANG	TIEDOWN SPACING	MAX * PIER HEIGHT
20'-0" (20 WIDE)	84" MAX	12" MAX	16'-0"	45"
24'-0" (24 WIDE)	84" MAX	12" MAX	16'-0"	45"

IM-4.41

(RPVA)





900 SERIES

END-TRUSS SHEATHING CUTS

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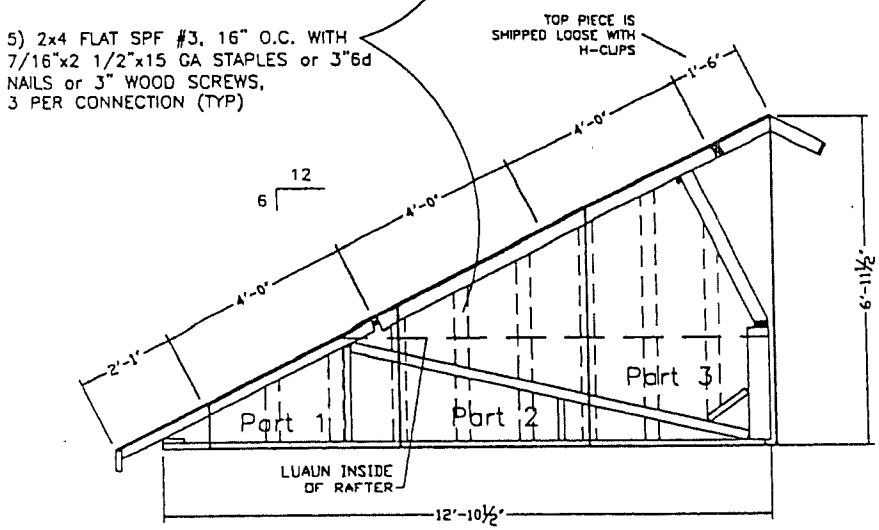

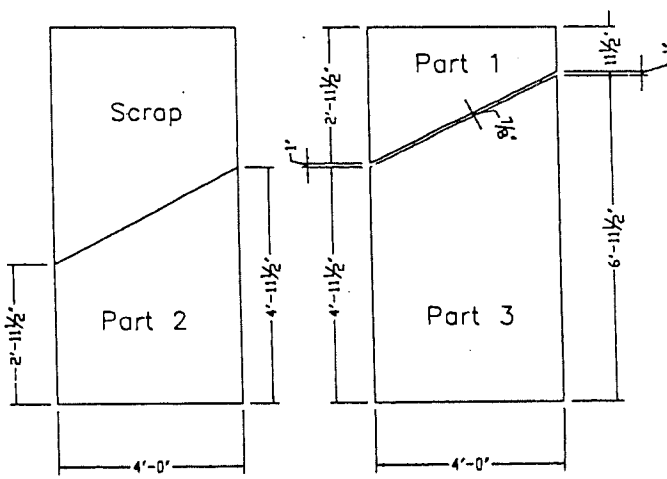

800 SERIES

NOTES:
1) MATERIAL IS 3/8" OSB OR PLYWOOD
2) ENDWALL SHEATHING IS NON-STRUCTURAL BUT NECESSARY FOR INSTALLATION OF VINYL SIDING.
3) BACKERS AT VERTICAL JOINTS RECOMMENDED BUT NOT REQUIRED.

HOLLY PARK
MIDDLEBURY, IN 46540

REVISIONS

C# CE-11-3	BY STH	DATE 12/08/03
TITLE: ROOF DECKING		NO IM4-5

IM4-5

Home Set Addendum

This Addendum to the Holly Park Set-up Manual is to provide the Home Owner whose home is located in a Manufactured Housing Park where the site is well established with the option to *not* require a "Frost-free Foundation System". A licensed professional engineer should establish that the site/design does not require a frost free foundation system.

The following criteria must be met for this type of home set:

1. Properly compacted soil
2. Ground water to be well drained away from home
3. Properly sized footings for correct loads and bearing.
4. Home must be checked annually (minimum) to ensure home is level and to adjust if needed.

The home owner must sign below to show that this option has been taken.

Home Owner _____ Date _____ Serial # _____

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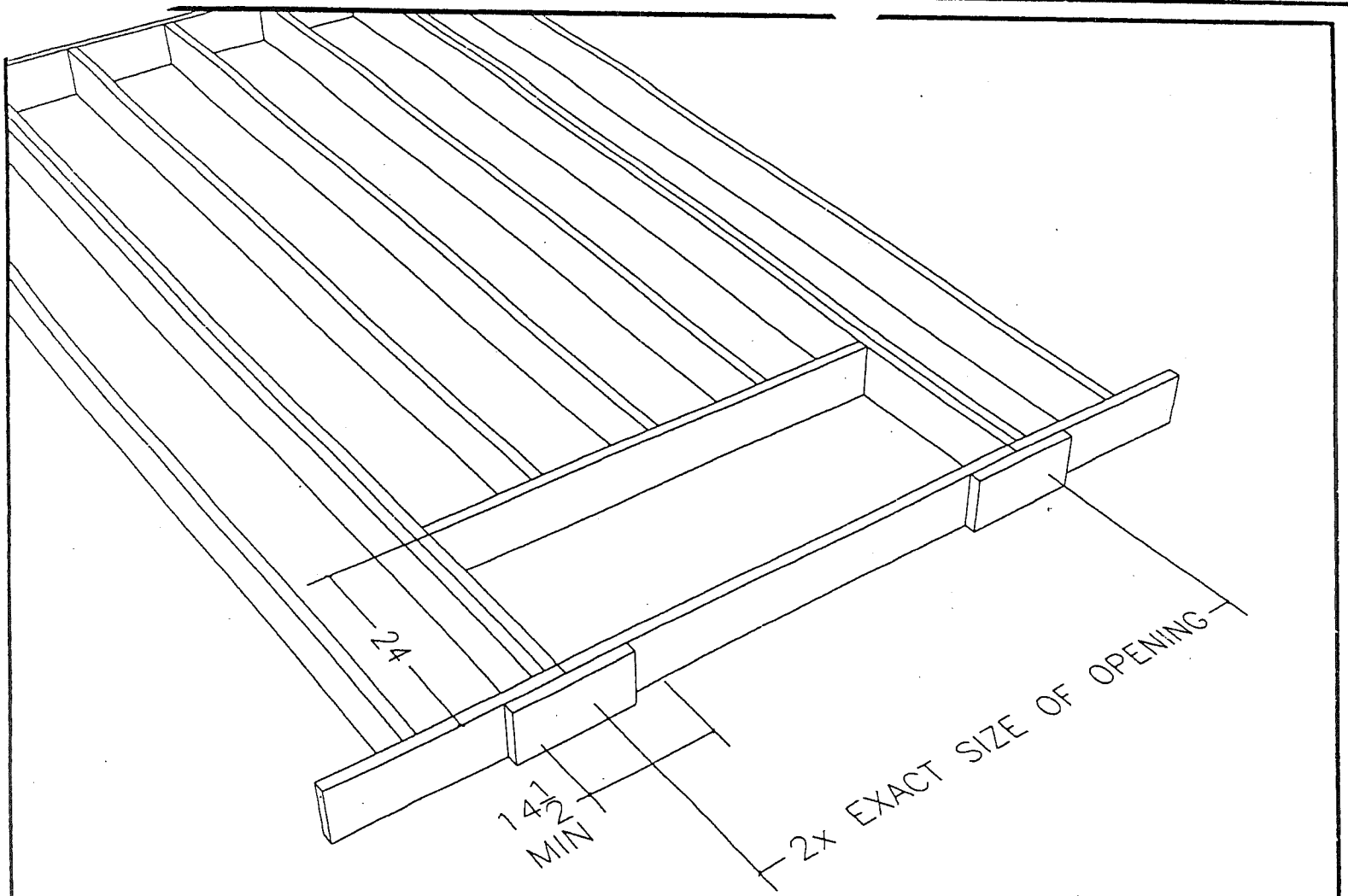

SPLICE BLOCK FASTENED WITH
(10) #8 x 2 1/2" SCREWS
5 EACH SIDE OF SPLICE

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HOLLY PARK
51700 Lovejoy Dr. Middlebury, IN 46540

802SP45	BY DH	DATE 3-24-05	
TITLE: RECESS ENTRY		NO. 802	

REPAIR FOR PERIMETER RAIL WHEN RETRANSPORTING HOUSE WITH RECESS ENTRY

9-MT