



SINGLE WIDE INSTALLATION INSTRUCTIONS

TABLE OF CONTENTS

	Page No.
INTRODUCTION.....	1
SITE PREPARATION.....	1
ZONE MAPS	1
PIER & FOOTING SELECTION.....	2
PRE-MANUFACTURED PIER AND FOOTING	
INSTRUCTIONS AND DETAILS.....	2
INSTRUCTIONS FOR PIERS AND FOOTINGS.....	2
PERMANENT FOUNDATIONS	3
TIE DOWN INSTRUCTIONS	8
UTILITY HOOK-UP & TESTING	10
WATER SUPPLY SYSTEM.....	10
DRAINAGE SYSTEM	10
ELECTRICAL SYSTEM.....	12
GAS	13
OIL	13
BOTTOM BOARD PATCHING	13
OPTIONAL ITEM INSTALLATION	
ELECTRIC CLOTHES DRYER.....	13
FIREPLACE	14
AIR CONDITIONING	15
EVAPORATIVE COOLER	15
HEAT PUMP	16
HITCH & WHEEL REMOVAL	16
SKIRTING	16
CARPORTS & AWNINGS	16

INTRODUCTION

This Schult home was engineered, constructed and inspected for conformance to the Federal Manufactured Home Construction and Safety Standards in effect on the date of manufacture. This National Standard sets forth comprehensive requirements for design construction, fire safety, plumbing, heating systems and electrical systems for factory built homes designed to be used as dwellings.

Consult with building officials in your area to determine necessary permits, licenses and inspections required for installation of this home.

The step-by-step instructions which are required for the correct installation of a Schult home are presented in this booklet. Alternate methods may be covered in separate documents.

Before attempting to install the Schult home, these instructions must be carefully read and understood.

The drawings contained in these instructions are intended to be representative of the product. Designs and specifications are subject to change without notice.

Alternate systems and installations are acceptable only if approved by a properly licensed architect or registered professional engineer or approved by the engineering department of Schult Homes Corporation.

NOTE: This manual is intended to instruct and to assist already qualified personnel in the proper installation of a Schult home. It is not intended to enable someone unfamiliar with home set-up to perform the installation.

NOTE: The words "should" or "may" in this manual indicate recommendations but not requirements. The words "shall" or "must" indicate requirements that must be adhered to.

SITE PREPARATION

The selected home site must be graded and sloped to provide proper drainage.

The bottom edge of wood siding must be kept at least six (6) inches above the ground level and at least two (2) inches above any surface where water might collect. Never allow siding to come in contact with the soil, masonry, or concrete.

NOTE: The area under the home must be sloped to prevent water accumulation. This is to prevent excessive humidity in the home.

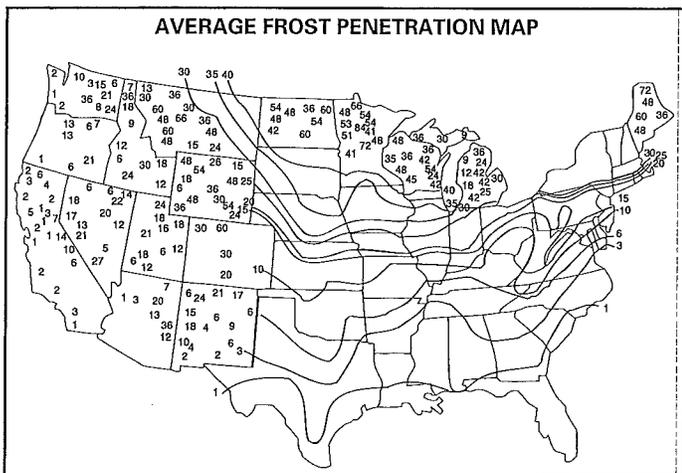
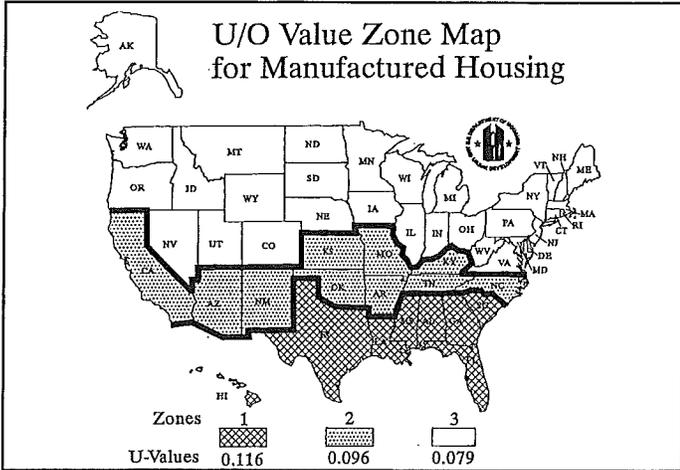
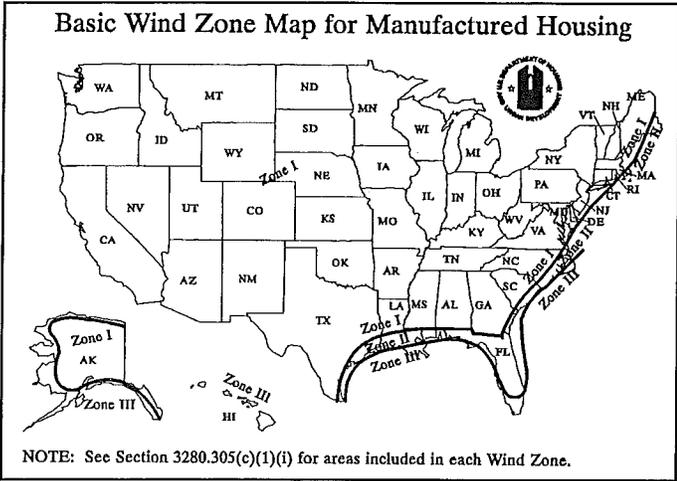
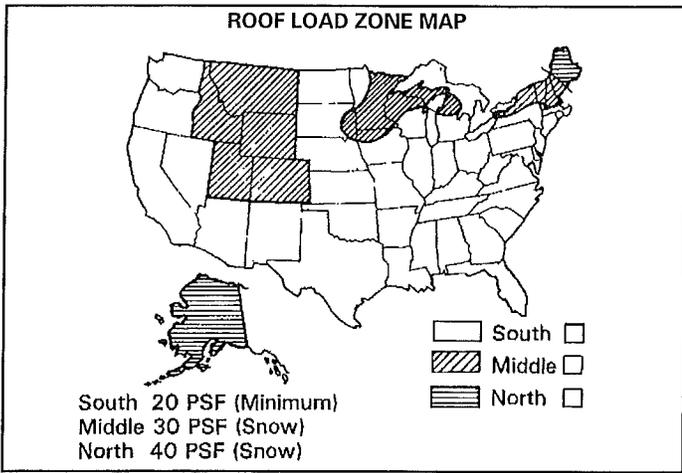
NOTE: If skirting is to be installed, it is recommended that the entire area under the home be covered with a blanket of Visqueen. This is to prevent excessive humidity in the home. The Visqueen should be a minimum of 6 mil thick and be overlapped 6" at all joints.

ZONE MAPS

The following Zone Maps will help you make installation decisions with regard to prevailing weather in the zone where the home is to be located:

NOTE: Do not install your home in a zone that requires greater loads or greater climate zone requirements than those on the Compliance Certificate. You may, however, install a home in a zone requiring lesser loads or climate requirements.

1. From the following maps, determine and mark the zones where the Schult home is to be located. This information will be required to determine information from other charts and tables in this manual.



PIER AND FOOTING SELECTION

The piers used must have a capacity great enough to transmit the vertical load, which includes the weight of the home, its furnishings, and temporary roof loading to the foundation surface below it. If the load imposed is greater than the capacity of the pier, then two or more piers may be used. The total capacity of the piers must be equal to or greater than the load to be transmitted.

PRE-MANUFACTURED PIER AND FOOTING INSTRUCTIONS AND DETAILS.

The following details and instructions were created to assist the setting and placement of a manufactured home using the many pre-manufactured piers and footings available to retailers and home installers.

For some time, many states and regional authorities have recognized the availability of such material and have written state or local approved instructions on how to properly set a manufactured home using these materials.

The following instructions are generic in nature. These may be used when there are no state or regional approvals available. If there are state or regional approvals available, and if they reflect the local conditions and are less restrictive than these requirements, they may be used in place of these instructions. In all cases, these instructions pre-empt other more restrictive state rules and regulations regarding the use of pre-manufactured piers and footing.

This method of pier support is suitable for FHA Title I financing. Do not use this method for homes financed under FHA Title II.

A form has been included to assist you in determining pier and footing sizes and loads based on the following instructions. Completing the form as you go will help to avoid confusion since this gets somewhat technical.

INSTRUCTIONS FOR PIERS AND FOOTINGS

- 1) First you must determine the design load criteria for the site where the manufactured home will be installed. The soil bearing capacity must be determined. This is usually determined by the local building official. If there is no building official or the soil bearing capacity is unknown, refer to the chart entitled "TYPES OF SOILS AND THEIR DESIGN PROPERTIES."
- 2) Determine the roof load for the area where the home is being installed from the "ROOF LOAD ZONE" map.
- 3) From the "I-BEAM PIER SPACINGS" chart, select the home width and determine the footing size you wish to use. A pier and footing must be installed within 16" of the end of each I-beam near the endwalls of the home. Using the chart, move horizontally in the row reflecting the footing size chosen until you find the column listing the proper roof load zone and soil bearing capacity. The value listed in the chart is the maximum allowable spacing of the remaining intermediate piers and footings. If the spacings do not please you, select another footing size and repeat the process. Once the footing are installed, select a pier type from the Typical I-beam pier supports chart and place them on the footings.

- 4) Additional footings and piers are required along the sidewall(s) at each side of individual windows and doors with rough opening greater than 48" wide.

NOTE: This is not required if an outrigger has been installed by the factory at each side or if a support wall is installed between the footing or slab and the floor of the home.

Proper support for the home must allow for soil conditions in the immediate area. Pier footings must be placed on firm undisturbed soil (not loose fill) or soil which has been compacted to at least 90 percent of its maximum relative density. Pier supports may also be placed directly on concrete slabs designed for the home's placement.

Climate conditions must also be taken into account. If footings are to be placed on well drained non-frost-susceptible soil, such as coarse sand or gravel with the water table below maximum frost depth, shallow footings may be placed on firm soil, provided local jurisdiction will allow. Schult Homes Corporation should be contacted for a typical footing design under these conditions. Request alternate footing detailed drawing 34HU-4.

If footings are to be placed on frost susceptible soil, such as clay or silt, heaving or settlement may occur. Under these conditions the pier footings should be located below the frost line or the home should be provided with insulated skirting having sufficient insulation to prevent the soil under the home from freezing. Be sure to check with local authorities to verify this alternative. Schult Homes Corporation should be contacted for a typical insulated skirting design. Request alternate footing detailed drawing 34HU-4.

PERMANENT FOUNDATIONS

In the event you are considering a permanent foundation for the home, Schult Homes Corp. has a system available that would be acceptable in most areas. Drawings may be obtained by contacting the Schult Homes Corporation.

Once obtained, the drawings must be submitted to the local jurisdiction for permission, soil conditions, type of foundation construction allowed and other requirements relative to the installation.

FORM FOR DETERMINING PIER AND FOOTING LOADS AND SPACINGS

Design load criteria

FILL IN

Soil bearing capacity (psf)	
Roof load zone (psf)	
Home width (Ft.)	

I-beam piers and footings

Footing size	
Maximum spacing of piers and footings (ft.)	

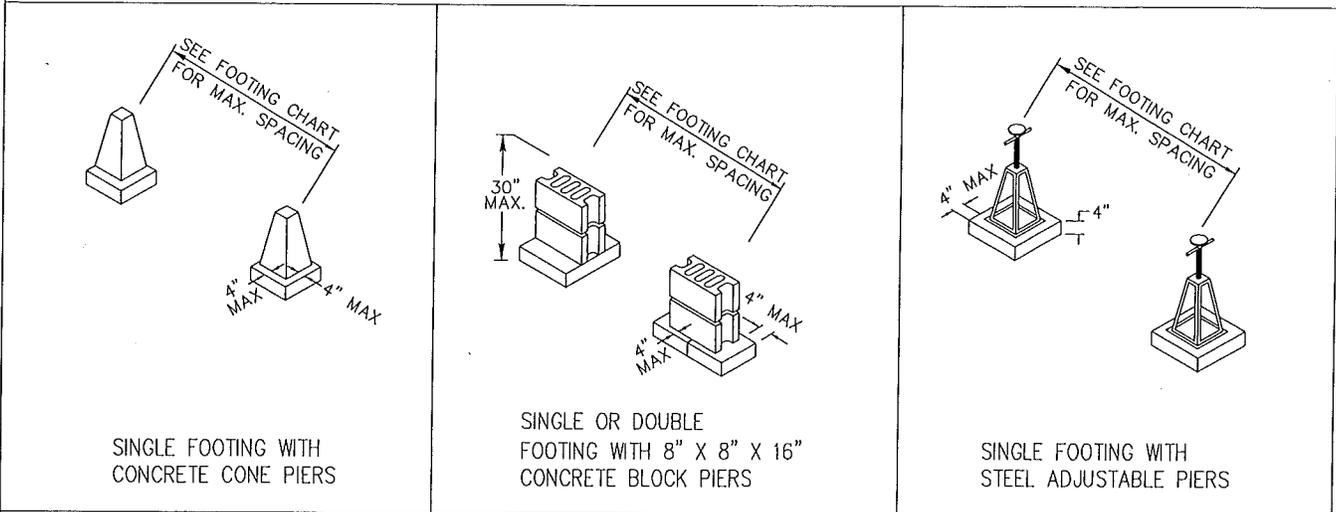
TYPES OF SOILS AND THEIR DESIGN PROPERTIES
(SOIL BEARING CAPACITY MUST BE VERIFIED BY A QUALIFIED PERSON AT EACH SITE).

Unified soil classification system symbol	Soil description	Allowable bearing in pounds per square foot with medium compaction or stiffness ³	Drainage Characteristics ²	Frost heave potential	Volume change potential expansion
GW	Well graded gravels, gravel sand mixtures, little or no fines.	8000	Good	Low	Low
GP	Poorly graded gravels or gravel sand mixtures little or no fines.	8000	Good	Low	Low
SW	Well graded sands, gravelly sands, little or no fines.	6000	Good	Low	Low
SP	Poorly graded sands or gravelly sands, little or no fines.	5000	Good	Low	Low
GM	Silty gravels, gravel-sand-silt mixtures.	4000	Good	Medium	Low
SM	Silty sand, sand-silt mixtures.	4000	Good	Medium	Low
GC	Clayey gravels, gravel-sand-clay mixtures.	4000	Medium	Medium	Low
SC	Clayey sands, sand-clay mixtures	4000	Medium	Medium	Low
ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.	2000	Medium	High	Low
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	2000	Medium	Medium	Medium ¹
CH	Inorganic clays of high plasticity, fat clays.	2000	Poor	Medium	High ¹
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	2000	Poor	High	High

- 1) Dangerous expansion might occur if these two soil types are dry but subject to future wetting.
- 2) The percolation rate for good drainage is over 4 inches per hour, medium drainage is 2 to 4 inches per hour, and poor is less than 2 inches per hour.
- 3) Allowable bearing value may be increased 25 percent for very compact, coarse grained gravelly or sandy soils or very stiff fine grained clayey or silty soils. Allowable bearing value shall be decreased 25 percent for loose, coarse-gravelly or sandy soils, or soft, fine-grained clayey or silty soil. The following method is suggested for determining the allowable soil bearing capacity to be used in the sizing of footings. Such a method is only an approximation, and the results should be properly interpreted.
 - a. Obtain a pocket penetrometer, such as model CL-700A by Soil Test. Contact Cal-Cert Co. P.O. Box 416, Clackamas, OR 97015 or call 1-800-356-4662.
 - b. Test an area adjacent to, or within 10 feet of, the perimeter of the home.
 - c. Dig down to undisturbed soil a minimum of 4 inches. Uncover an area of at least one square foot.
 - d. Using the pocket penetrometer, take at least seven readings.
 - e. Take an average of the middle five readings, disregarding the highest and the lowest readings. Round this average down to the nearest soil bearing value. Use this value for determining minimum footing sizes.
 - f. Drive a wooden stake beside the test area so that an inspector will be able to verify the results, should the inspector desire to do so.

TYPICAL I-BEAM PIER DETAILS

ALSO MAY BE USED FOR EXTERIOR WALL SUPPORT IF REQUIRED.



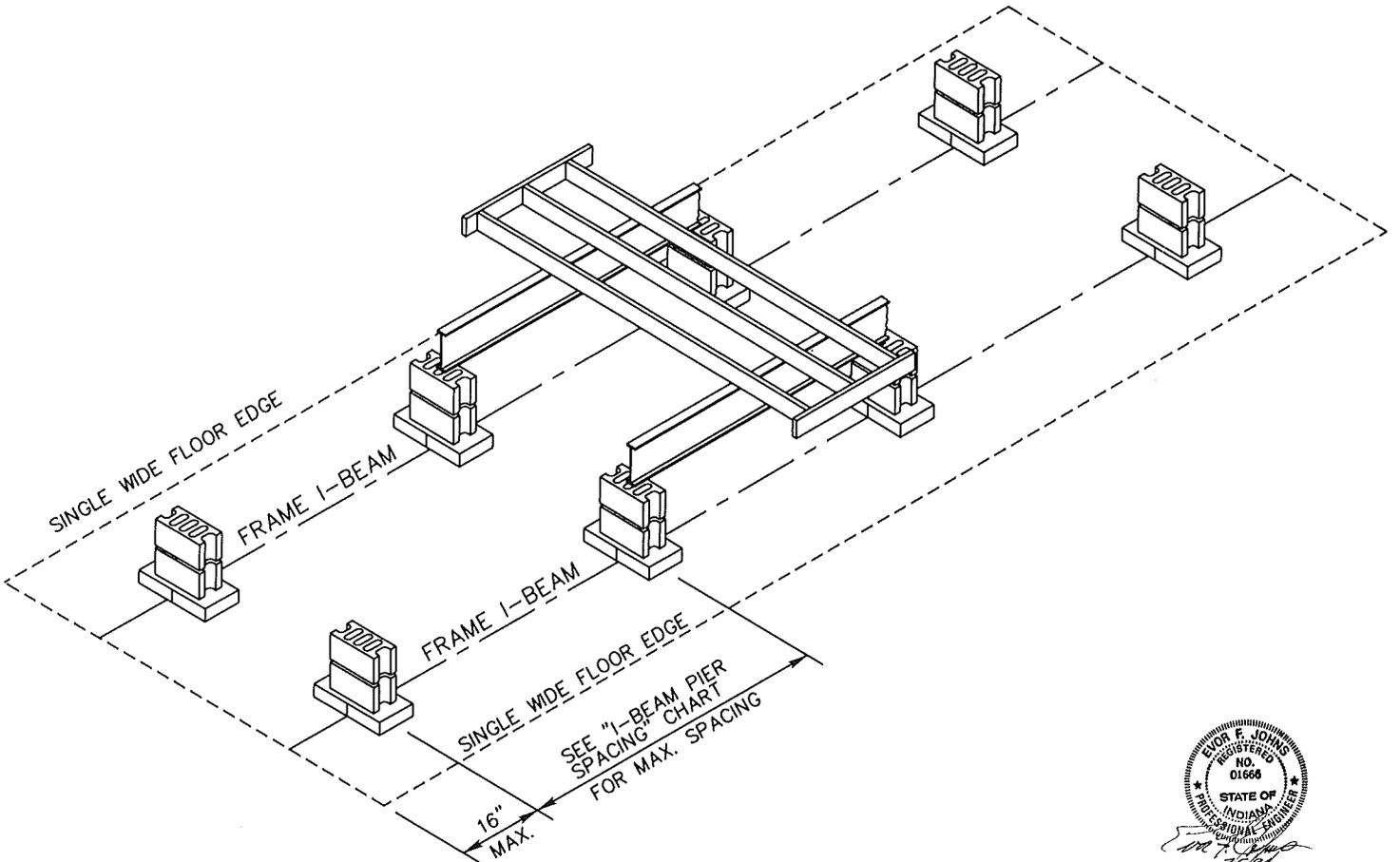
GENERAL NOTES:

- 1) These are typical examples of readily available footings and precast piers. Any combination or example may be used providing they meet the minimum requirements and are designed for supporting a manufactured home.
- 2) The footing must not extend beyond the periphery of the pier base more than it's depth (4" typically) without reinforcement.
- 3) Maximum pier height from top of footing to bottom of I-beam (or floor at marriage line.) shall be 30" for single stack of concrete blocks and 48" for double stack of concrete blocks
- 4) See Treated Wood Footing detail for alternate.
- 5) Piers over 48" high from grade to bottom of frame (or floor at marriage line) must be designed by a qualified architect or engineer.



TYPICAL PIERS AND FOOTINGS

<p>LONG DIMENSION OF PIER TO BE PLACED PERPENDICULAR TO TOP LAYER JOINT</p>	<p>12" X 12" X 4" PRECAST CONC. FOOTING</p>	<p>16" X 16" X 4" PRECAST CONC. CONC FOOTING</p>	<p>18.5" X 18.5" ABS PLASTIC FOOTING</p>	<p>8"X8"X16" CONCRETE BLOCK</p>	<p>WEDGES: NOT MORE THAN TWO SETS OF 1" THICK OR ONE SET OF 2" THICK X 4" WIDE X 12" LONG WOOD WEDGE FITTED PERPENDICULAR TO I-BEAM. WEDGES TO BE CEDAR OR REDWOOD.</p> <p>PIER CAP: 4" THICK SOLID CONCRETE, #2 OR BETTER 2" NOMINAL PRESSURE TREATED LUMBER, COVERING THE ENTIRE AREA OF THE PIER BLOCKS.</p> <p>PIER SHIMS: 2x6x16 #2 OR BETTER PRESSURE TREATED LUMBER</p>
<p>Two layers of 2x lumber laid in alternate directions are required for footings on 2000 psf soil or less. Three layers are required for soils above 2000 psf soil bearing values. Wood shall have an AWPB-FDN grade mark. Any cut made after treatment shall be re-treated per APA product guide: Pressure Preserved Plywood, Form Q220.</p> <p style="text-align: center;"><u>PRESSURE TREATED (PT) WOOD FOOTINGS</u></p>	<p><u>STEEL ADJUSTABLE PIERS - 5000 LBS. MINIMUM CAPACITY</u></p>	<p><u>PRECAST CONCRETE PIER 2800 PSI MIN.</u></p>	<p>I-BEAM OR MARRIAGE LINE FLOOR)</p> <p>9" MAX.</p> <p>SHIMMING CONCRETE PIERS</p>		



SINGLEWIDE PIERS & FOOTINGS

SEE "INSTRUCTION FOR PIERS AND FOOTING"

TIE-DOWN INSTRUCTIONS

After blocking and leveling, the home should be made secure to the foundation. The requirements will vary depending on which wind zone your home is located in (see the wind zone map shown on page 2).

In Wind Zone I, tie-down is accomplished by installing frame ties only supplied by the owner or installer. These straps are wrapped around the frame I-beams and anchored to the ground.

In Wind Zone II, vertical tie-down straps installed by the factory along the sidewalls must also be connected to ground anchors in addition to the frame ties.

The number of frame and vertical ties required varies depending on the wind zone and the strapping method selected.

Ground anchors should be certified by a professional engineer, architect or a nationally recognized testing laboratory as to their resistance, based on the maximum 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. The need for stabilizing devices shall be determined by the ground anchor manufacturer's requirements.

Ground anchors should be embedded below the frost line and be at least 12" above the water table.

Ground anchors should be installed to their full depth, and stabilizer plates should be installed to provide added resistance to overturning and sliding forces.

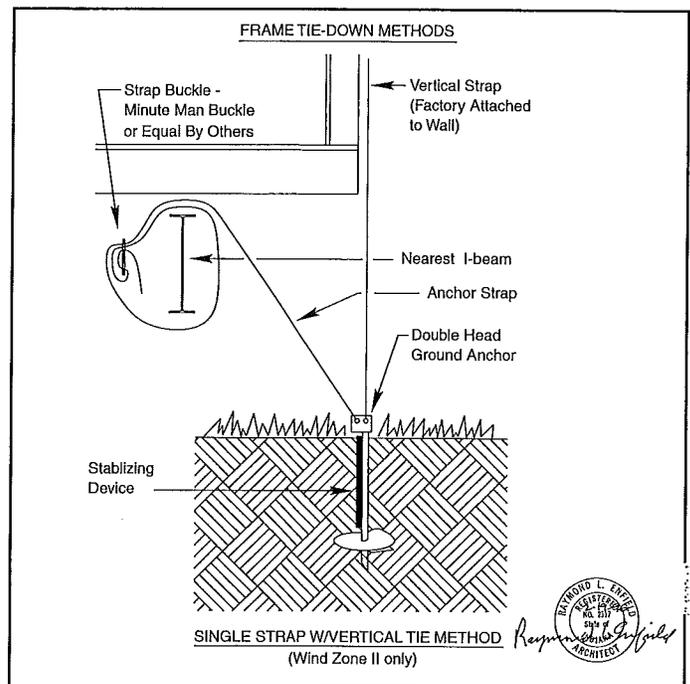
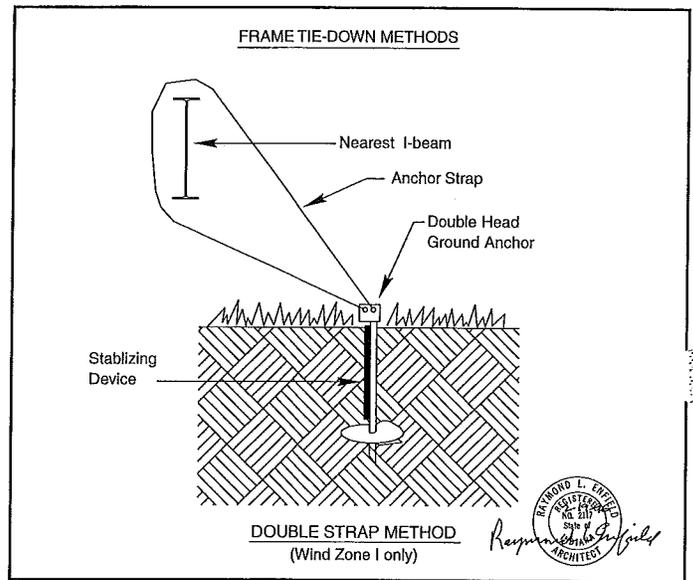
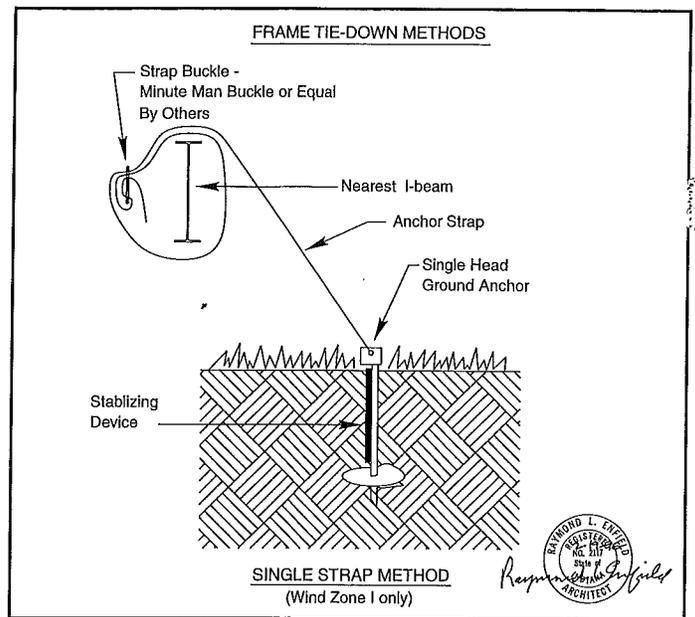
Anchoring equipment should be certified by a registered professional engineer or architect to resist the applicable wind forces in accordance with testing procedures in ASTM Standard Specification D3953-91, standard specification for strapping, flat steel and seals. Minimum anchor capacity required is as noted and indicated on P.E. certified Ground Anchor/Frame Tie Strapping Requirements detail.

The following instructions are for installing tie-downs on a Schult home.

- From the chart and details below, select either the single or double strap method (Note: Double strap method is not available in zone II). Be sure to use ground anchors equal to or stronger than the minimum load capacities listed in the chart for the method selected.

STRAP METHOD	ANCHOR MIN. ULT. LOAD CAPACITY	WIDTH OF HOME (FT.)							
		14'	16'	18'	20'	14'	16'	18'	20'
		MAXIMUM ANCHOR SPACING (FT.) ZONE I				MAXIMUM ANCHOR SPACING (FT.) ZONE II			
SINGLE	4725 LBS.	9'	11'	14'	14'	6'-8'	8'	8'	8'
DOUBLE	9450 LBS.	20'	23'	28'	28'	NA	NA	NA	NA

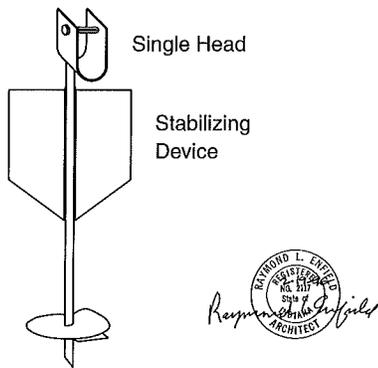
NA - Not Applicable, use single strap method



GROUND ANCHOR / FRAME TIE STRAPPING REQUIREMENTS

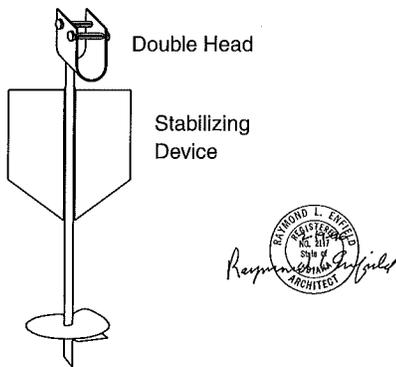
Anchoring equipment should be certified by a registered professional engineer or architect to resist the applicable forces in accordance with testing procedures in ASTM Standard Specification D3953-91, Standard Specifications for strapping, flat steel and seals. Anchor straps should be Type 1, Finish B, Grade 1 steel strapping, 1 1/4" wide and .035 inches in thickness. Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than .03 ounces per square foot of surface coated.

SINGLE HEAD GROUND ANCHOR WITH STABILIZER PLATE
(Required in Wind Zone I)

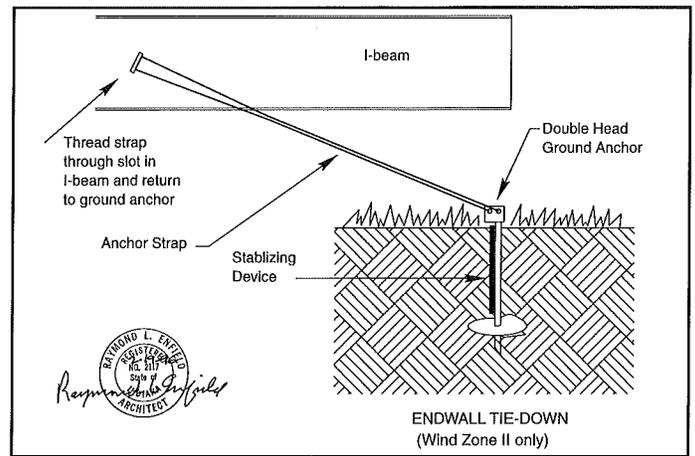


Single Head Minute Man Anchor or Equal - by Others
Minimum Ultimate Load Capacity - 4,725 lbs.

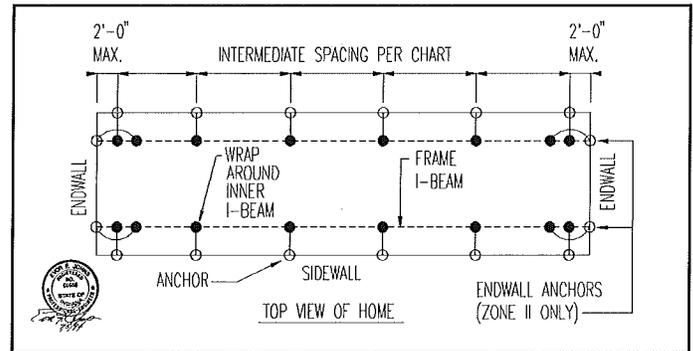
DOUBLE HEAD GROUND ANCHOR WITH STABILIZER PLATE
(Optional in Wind Zone I
Required in Wind Zone II)



Double Head Minute Man Anchor or Equal - by Others
Minimum Ultimate Load Capacity -
9,450 lbs. with Double Strap Method
4,725 lbs. with Single Strap W/Vertical Tie Method



2. Install ground anchors at the required locations per the details shown below. Anchors should be installed per the manufacturer's instructions.



In Zone I, install single head ground anchors at all "frame-tie-only" locations when using the single strap method. Install double head ground anchors at all "frame-tie-only" locations when using the double strap method.

In Zone II, install double head ground anchors at all vertical tie locations.

3. The first and last frame ties must be installed within 2'-0" of the ends of the home.
4. In Zone II, endwall tie-downs are required at each I-beam. Run anchor straps from a double head anchor through angled slot cut in I-beam web, then, return to double head anchor.
5. Connect frame ties to the frame I-beam at all ground anchor locations (double and single head) on both sides of the home. In Zone II, connect both the vertical tie-down straps and the diagonal frame straps to double head anchors. Straps should not be tight at this point. Construct the tie-down system with adjustable devices in order that the strap tension may be periodically adjusted to compensate for heaving and settling.
6. With one man on each side of the home, start at the front and tighten straps on both sides at the same time. The home could be pulled off its piers if all straps are tightened on one side at a time.
7. Due to uplift forces, some homes may have tie-down straps located along the mating side of the home. These straps should be anchored to the ground the same as a vertical tie down. Note that only a single head anchor is necessary, however.

RECESSED ENTRY, PORCH

The floor of your recessed entry or porch has been built to protect it from moisture deterioration. A waterproof rubber membrane may be installed under the carpet to protect the wood floor below. Care must be taken not to penetrate this membrane with fasteners when replacing carpeting. Replace carpet by gluing it to the top of the rubber membrane.

EXHAUST SYSTEMS

1. Visually inspect bathroom & kitchen exhaust vents to see that they are free & clear to the outside of the home & that nothing has been disturbed due to in-transit vibrations.

UTILITY HOOKUP AND TESTING

This section of the manual deals with the connections of the water supply, drainage, gas, oil and electrical systems of the home to the site service.

NOTE: The connection and testing of these systems, on site, are to be made by qualified personnel only.

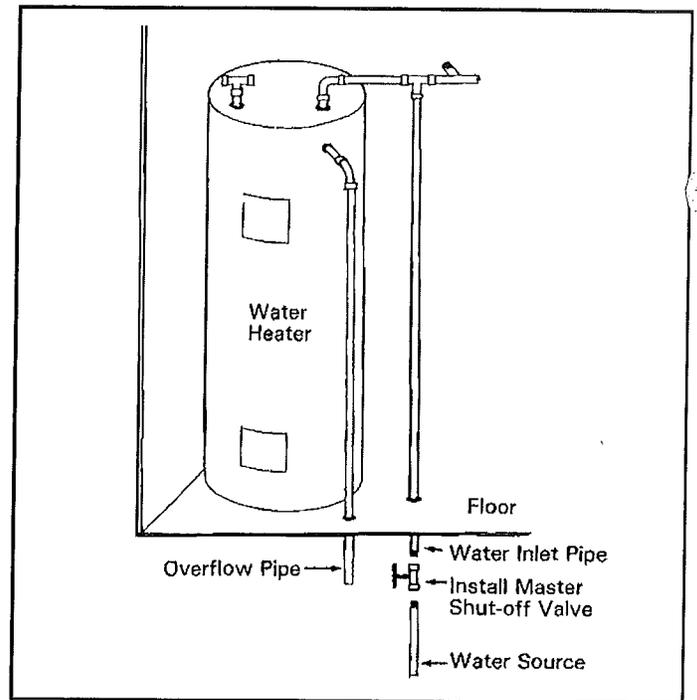
The information on the following pages will assist in determining the proper connection procedures for which the home was designed and serve as a guide for inspection of the system upon completion.

Upon completion of your utility installation, it is important that access to connections be provided for periodic inspection and possible future service.

WATER SUPPLY HOOKUP & TESTING

NOTE: Water heaters must be by-passed during test. Test involves use of pressurized air which can permanently damage the water heater or may even cause rupture or explosion which could result in serious injury. Water heater is by-passed by disconnecting both the cold water line inlet and the hot water line outlet from the water heater and then connecting the hot and cold water lines together through the use of appropriate connection fittings. The water system was tested at the factory; however, it is essential that it be rechecked at the site for leaks that may have been caused by in-transit vibrations.

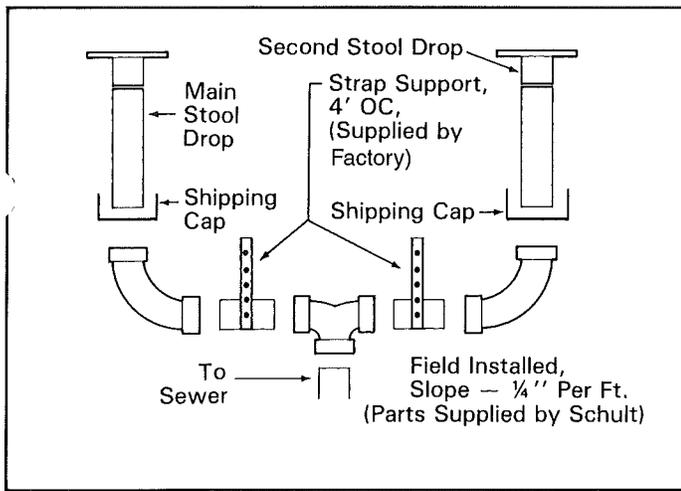
1. Install a master shut-off valve at the bottom of the water inlet pipe (either a full port gate or a full port ball valve, with threaded or solder joints). Install a pressure reducer if site pressure goes over 80 P.S.I. These items to be supplied by the installer or owner.
2. To prevent the possibility of fresh water contamination, all exterior faucets shall have an anti-siphon valve installed by the installer or owner.
3. Proceed with test as follows:



- A. Close all water faucets, spigots and stool tank float valves.
- B. Pressurize the system to 100 psi.
- C. Isolate the pressure source from the system.
- D. The gauge must stand 15 minutes with no drop.

DRAIN SYSTEM HOOKUP & TESTING

1. The drainage system was checked for leaks at the factory; however, it is essential that it be rechecked at the site for leaks which may have been caused by in-transit vibrations.
 - A. With the stool drop(s) under the home tightly capped and the tub and shower drains plugged, fill the drainage system until the toilet bowl(s) are full to the rim(s). The water should stand without dropping for fifteen minutes.
 - B. Fill fixtures which are higher than the toilet bowl (lavatories, sinks, etc.) with water. Check these fixture connections for leaks as you allow the water to flow through the system.
2. Secondary bath stool drops must be connected to the main stool drop with a 3" drain line and fittings shipped loose with the home. These installations are many and varied; the drawing below is typical. The main drain connection to the sewage system should be made with 3" drain line sloped at 1/4" per foot. This connection material is supplied by the owner or the installer.



ELECTRICAL SYSTEM HOOKUP & TESTING

NOTE: Electrical tests and connections should be made only by qualified personnel.

The home was tested at the factory, but must be retested after set-up, because of the possibility of connections loosening due to in-transit vibrations.

EXTERIOR LIGHT FIXTURES AND OTHER 110V APPLIANCES

1. Connect wires, black to black, white to white, and ground to ground, using wire nuts.

Push wires into box and secure fixture in position. Install the bulb.

2. Apply caulking around base of light fixture to insure a water-tight seal to the wall.

NOTE: All site installed drain lines must be supported by straps attached to the home 4' OC maximum.

3. Access to fittings in the drainage system subject to freezing, such as P-Traps in the floor, have been protected with insulation by the manufacturer. Insulation must be replaced if removed during the testing.

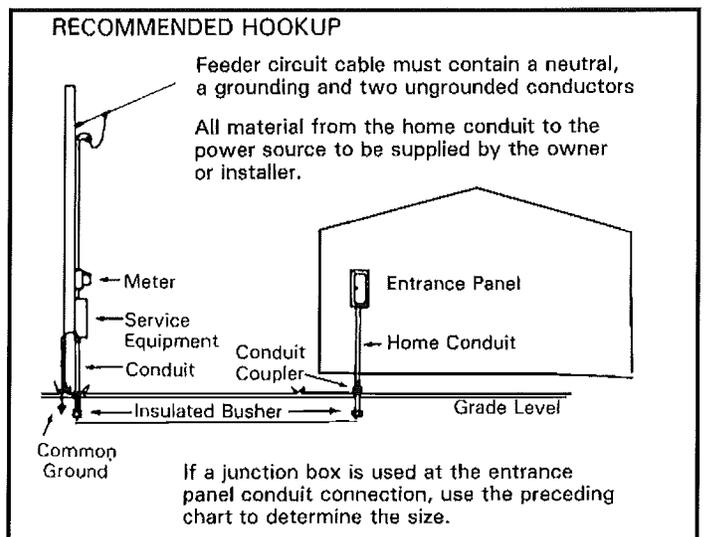
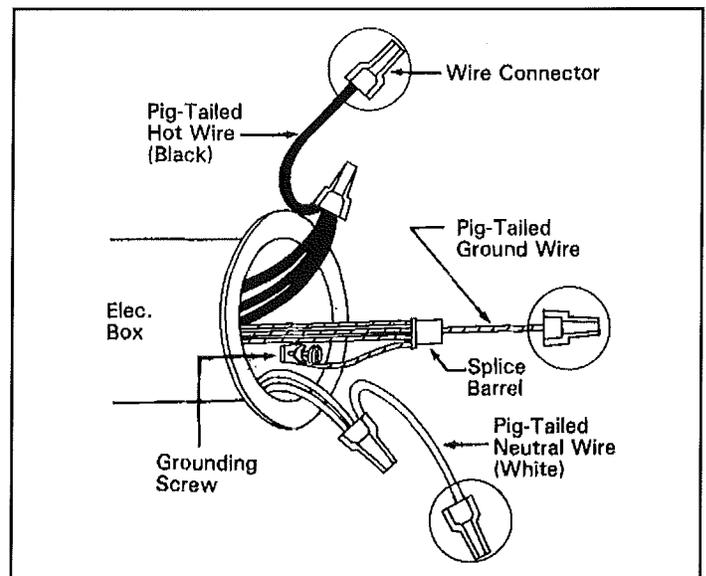
PROTECTION FROM FREEZING

4. If the home is to be left unheated in cold weather after the above tests, it is necessary to drain the entire system to prevent damage from freezing.

P-Traps at all fixtures and stools can be protected by pouring 1/2 cup of antifreeze into each one.

5. If the home is installed in an area subjected to freezing temperatures, the exposed section of the water supply piping, shut-off valve, and pressure reducer must be protected. The most efficient and recommended means of accomplishing this is by the use of a thermostatically controlled heat tape. For this purpose, Schult homes are equipped at the factory with an electrical receptacle under the home in the vicinity of the water supply inlet.

THE HEAT TAPE USED MUST BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR USE WITH MOBILE HOMES, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



CONNECTION OF THE ELECTRICAL SERVICES

3. To determine applicable feeder size amperage, see Main Breaker and the label on electrical distribution panel.
4. Using this information, determine the required feeder size from the following table.

ELECTRICAL FEEDER AND EQUIPMENT SIZES					
Feeder Size (Amps)	Maximum Neutral Feeder Load (Amps)	Minimum Required Junction Box Size (Inches)	Feeder Sizes Based on Use of 75 Degree "C" Insulated Copper Conductors		
			Black - "Power" Red - "Power" White - "Neutral"	Green or Bare Ground	Conduit Size (Inside Dia.)
50	50	NA	#8 THW (Cu)	#8 (Cu)	1"
100	100	10x10x4	#4 THW (Cu)	#8 (Cu)	1 1/4"
150	115	10x12x4	#1 THW (Cu)	#6 (Cu)	1 1/2"
200	130	10x16x4	#2/0 THW (Cu)	#4 (Cu)	2"

Conductor sizes are in accordance with the National Electric Code, Table 310-16, and do not take voltage drop into consideration. Allowable ampacities are based on ambient temperature of 30°C, 86°F.

CAUTION: If the home has an electric water heater, it must either be filled with water or have the circuit breaker turned "OFF" before energizing the home electrical system or severe damage to the heating element will result.

5. With the main panel box circuit breaker and all individual circuit breakers in the home turned off, make electrical service connections. When connections are complete, turn on power at electric meter source. Do not turn on the main panel box circuit breaker in the home until the grounding and continuity testing has been performed.

6. Grounding the Home

NOTE: The grounding bar in the main home electrical distribution panel box must be grounded through the green colored conductor in the feeder wiring to the service ground in the service entrance equipment, provided by the utility company. If grounding through service equipment is impractical, the green colored conductor must be grounded to an approved grounding rod sunk directly into the earth to a depth as specified by authority having jurisdiction.

If the home has an add-on-room, make all electrical connections before performing the following tests.

7. If the home has an add-on-room, the add-on-room must be properly grounded to the home. Connect the ground lug installed on the main unit with the ground lug installed on the add-on-room with the supplied bare copper wire.

GROUNDING AND CONTINUITY TEST

8. Perform the following test after all structural assembly, metal and trim installation is finished.

A. Connect one clip of a flashlight continuity tester to a convenient ground (metal skin, window frame on metal skinned units, floor duct riser, screw head on receptacle or switch plate, etc.) and touch the other clip to each light fixture canopy (where the light is mounted to ceiling or wall). The continuity tester should light if each fixture is properly grounded.

B. Using the continuity tester, check every direct connected appliance or fan. The tester must be hooked to a convenient ground and to the metal frame of the appliance.

C. Using the continuity tester, check the continuity between the following:

- (1) Between one riser of furnace duct and convenient ground.
- (2) Between metal roof and steel frame.
- (3) Between metal skin and steel frame.
- (4) Between metal gas piping and steel frame.

(NOTE: Continuity to ground is not required on metal inlet of plastic piped water system.)

- (5) Between metal raceway below distribution panel and steel frame. When plumbing fixtures such as metallic sinks, tubs, faucets and shower risers are connected only to plastic water piping and plastic drain piping, continuity to ground is not required.
- (6) Any loss of grounding continuity found in the above will require investigation and correction.

POLARITY & OPERATIONAL TEST

9. Turn on main panel box circuit breaker and then one at a time, turn on the individual home circuit breakers and perform the following test. Should any breaker trip, this indicates a problem with the circuit that must be located and corrected.

A. Plug an AC receptacle wiring tester into each receptacle in the home to check for reversed polarity, open grounds and shorts.

Any reversed polarity, open grounds or shorts found will require investigation and repair.

B. Install light bulbs and fluorescent tubes in all light fixtures. Make sure each light fixture is operable by turning the appropriate switch to the "ON" position.

C. Repair or replace any defective light fixtures or switches.

GAS SYSTEM HOOKUP AND TESTING

The gas piping system was tested at the factory; however, it is essential that it be rechecked at the site for leaks that may have been caused by in-transit vibrations.

Pressurize the entire system to at least 10 inches of water column (3/8 PSI) but not exceeding 14 inches of water column (1/2 PSI). Apply a soapy water or bubble solution to all appliance connections, valves, and pipe fittings.

NOTE: Do not apply more than the specified pressure as damage to gas valves and/or regulators may result. Prior to making connection to site supply, gas inlet orifices of furnaces, water heaters, and other gas appliances must be checked to insure they are set up for the type of gas to be used—L.P. (liquefied petroleum) or natural gas.

OIL PIPING HOOKUP & TESTING

Homes produced by Schult which are equipped with oil burning furnaces must have the oil supply piping installed on site. Piping is not supplied by Schult.

The furnace manufacturer's instructions must be consulted for proper pipe sizing and installation procedures.

In addition, unless the home is installed in a park with a centralized oil distribution system, an oil storage tank of suitable capacity must be installed outside the home in a location accessible for service, and safe from fire and other hazards.

Oil tanks that feed vaporizing type oil furnaces must be installed so that oil flows by gravity. To achieve efficient gravity flow the tank must be installed so that the bottom of the tank is at least 18 inches above the level of the furnace oil control, while top of the tank is within 8 feet of the oil control level.

For gun type oil furnaces the location of the oil storage tank is left to the discretion of the homeowner. Since the furnace includes a fuel pump, the tank may be installed above or below ground. For tanks installed below ground the filler neck should extend 1 foot above grade and a 1/4 inch diameter minimum vent pipe extending at least 2 feet above grade must be provided.

Regardless of the type of oil furnace served, or the tank location, the tank should be installed to provide a gradual slope toward the fill end or drain plug (if so equipped) to facilitate pumping or draining of water and sludge.

An accessible and approved manually operated shut-off valve must be installed at the oil tank outlet. Additionally it is recommended that a suitable filter be installed in the fuel line near the tank to help trap dirt and water.

NOTE: All oil storage tank and oil piping installations must meet all applicable local regulations and should be made only by experienced, qualified personnel.

BEFORE setting the system in operation, the tank installation and supply piping must be checked for leak-

age. The tank must be filled to capacity with the fuel to be burned and all joints in the system checked visually for leakage.

BOTTOM BOARD PATCHING

Below are listed some of the different patching methods which offer the dealer, or home buyer, a means of resealing the bottom board:

Affix the patch with an approved bottom board tape. Schult Homes Corp. recommends either CS-12 from Shepherd Products of Kalamazoo, Michigan or #620 from First Line Corp. of Valdosta, Georgia.

The outward Flare Tacker is an air operated tool Model LN3045 manufactured by Senco Products, Inc., suitable for either transverse or longitudinal floor construction. The patch should first be affixed to the bottom, using an approved tape to secure the perimeter and then fastened near the perimeter at 3" intervals. Use the staples described in Senco Bulletin M-100.

OPTIONAL ITEM INSTRUCTIONS

CAUTION: Schult Homes cannot be responsible for any damage resulting directly or indirectly from installation of accessories, nor any modifications to the home subsequent to shipment from the factory. Such alterations are undertaken at the risk of the installer and/or homeowner.

Local building officials should be consulted prior to making any alterations to the home to insure compliance with all applicable codes and requirements. Your dealer should be consulted as he is a specialist in the proper installation of accessories.

ELECTRIC CLOTHES DRYER VENTING

NOTE: The dryer vent must not exhaust into the skirted area under the home. This is to prevent excessive humidity in the home.

Homes factory equipped with an electric dryer receptacle will also have the moisture-lint exhaust system roughed-in. To complete the moisture-lint exhaust system, the following must be performed:

1. Remove the covers over the vent hole.
2. Check the duct provided to see that it is clear and connect to the dryer in accordance with the dryer manufacturer's instructions.
3. Secure the termination fitting to the outside edge of the floor or wall.
4. Secure the flexible duct to the termination fitting with clamps. (Do not use sheet metal screws or other devices which extend into the interior of the duct.)
5. Seal the hole where the duct goes through the floor or wall with a good grade of caulking or heat duct tape.

Schult Homes Corp. will not be responsible for damage to home resulting directly or indirectly from failure to install the dryer moisture/lint exhaust system in accordance with the instructions presented herein and those of the dryer manufacturer.

The installation of a gas dryer requires substantial modification of the home, including the provision of gas supply piping and adequate venting as specified by the dryer manufacturer,

NOTE: Gas dryer installation must be handled by fully qualified, experienced personnel only. Cutting of major structural elements of home such as rafters or floor joists to facilitate installation is not permissible and any resulting weakening of the structural integrity of the home is not the responsibility of Schult Homes Corp.

FIREPLACE CHIMNEY INSTALLATION

Homes equipped with fireplaces require that the installation of additional section(s) of chimney pipe and a rain cap assembly be made on site.

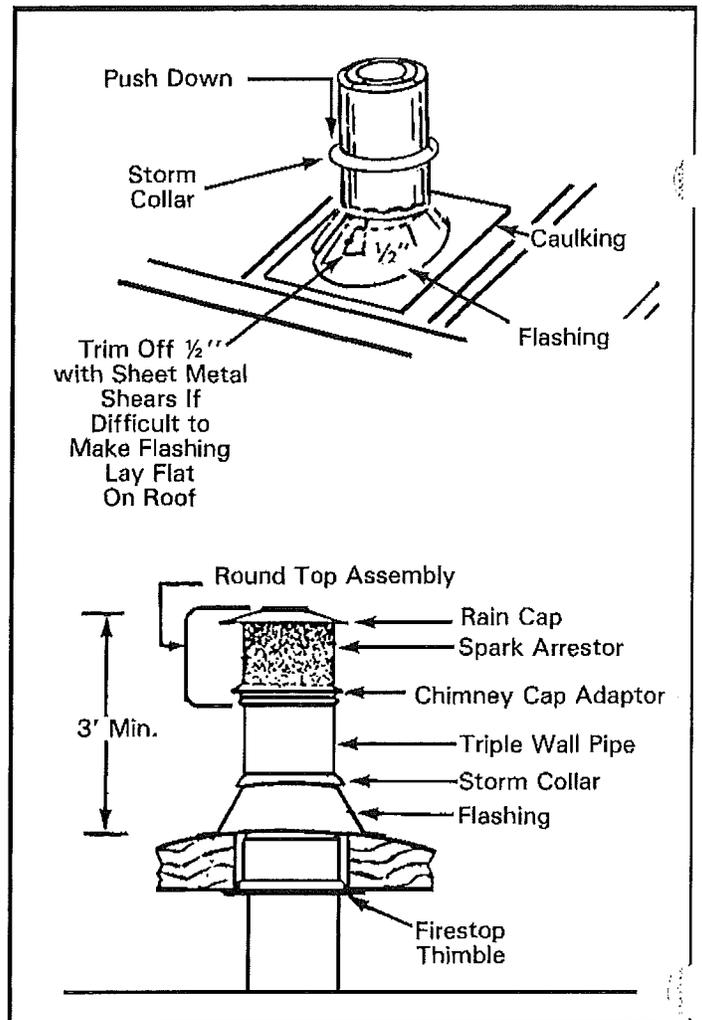
To insure sufficient draft for fireplace, the finished chimney **MUST** extend 3 feet above the highest point where it penetrates the roof and must be at least 2 feet higher than any building or other obstruction located within a horizontal distance of 10 feet.

Parts necessary to complete installation are provided. Note, however, that chimney section(s) provided will be sized of sufficient length to meet the above stated requirement for the home only.

If the site has obstructions extending higher than the home's roof peak within 10 feet of the chimney, an additional section of chimney pipe may have to be provided by installer.

Chimney installation must be made in accordance with fireplace manufacturer's instructions. Typical chimney installation is as follows:

1. Remove transit protective covering from over the chimney.
2. Install additional chimney section(s) provided and secure.
3. Install spark arrester.
4. Install rain cap assembly.



AIR CONDITIONING

NOTE: The installation should be made only by qualified personnel. The completed installation must conform to the National Electrical Code and applicable local codes.

Schult Homes Corporation does not recommend the installation of window air conditioning units.

Optional factory installed circuits for air conditioning are indicated on the electric entrance panel.

The maximum full load ampere draw for the desired air conditioning unit must not exceed the indicated circuit rating.

The electrical connection is via a circuit terminating in a junction box beneath the home.

The electrical supply, if not factory installed, may have to be from an outside source as electrical equipment within the home may not have been sized for the additional air conditioning load.

The field installation wiring beyond the junction box must incorporate a fused disconnect (sized in accordance with NEC Article 440) located within sight of the condensing unit. The maximum fuse size to be used with the fused disconnect is marked on the condenser data plate. The acceptability of the air conditioning equipment, rating the location of disconnect means, fuse type branch circuit protection, and connections to the equipment are to be determined by the local inspection authority.

The compliance certificate posted in the home will specify the U-Values necessary to calculate heat gain and the maximum capacity of air conditioning allowable for the home. The equipment you select should not exceed the maximum BTU HR rating on the compliance certificate.

“A” coil air conditioning units installed must be listed for use with the furnace in the home; for air conditioning installation, see the instructions shipped with the air conditioner.

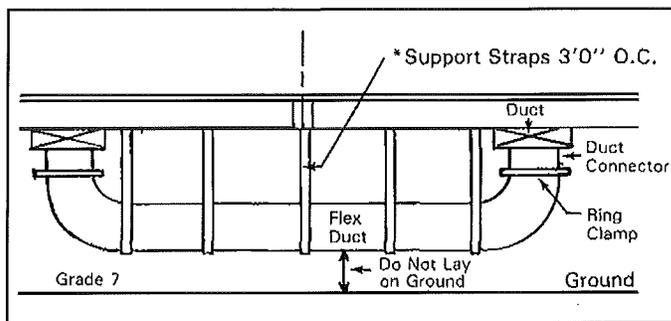
If a remote air conditioner is to be installed and connected to the heating supply duct the installation must include an automatic damper or other means to prevent the cooled air from passing through the heating appliance.

It is important when installing the return air system and supply system that no floor joists are cut or damaged. The return air and supply ducts are sized to fit between the floor joists. Joists are located 16 inches on center throughout the home.

It is important to replace insulation that may have been removed during the installation—also to seal the bottom board around the duct connections.

This home is intended to accommodate air conditioning. If air conditioning is not installed, a switch for manual control of the whole-house ventilation system (available through NORDYNE distributors – a listing is included with the furnace) must be installed per NORDYNE installation instructions or some other means for activating the ventilation system remotely must be installed.

Do not allow air conditioner condensate lines to terminate under the home.



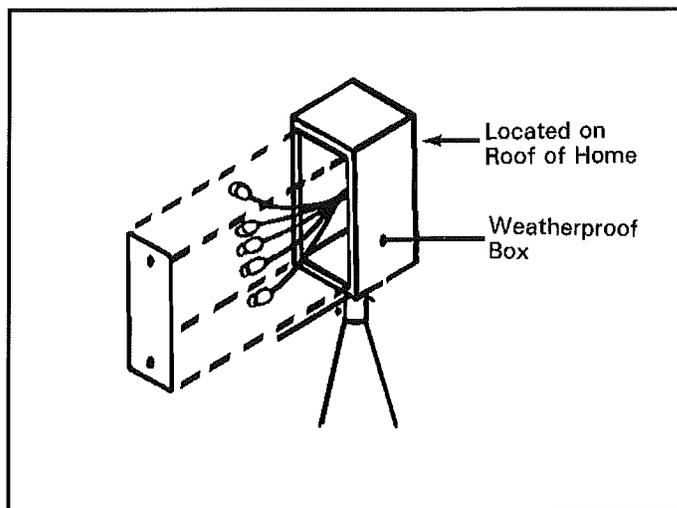
EVAPORATIVE COOLER

NOTE: The electrical connection should be made only by qualified personnel.

1. On models equipped for installation of optional evaporative cooler, install the roof-mounted cooler according to the instructions with the cooler. For coolers without an integral air duct the cooler box shall be lined with .016 in. metal. The factory installed branch circuit for the cooler is sized for a maximum cooler electrical load of 12 amperes, 120 V. AC, 60 Hz.
2. Remove the cover from the roof-mounted junction box and make the connection of the color-coded wires using the provided wire nuts. The electrical portion of the installation is now complete.

COLOR CODE

White	Neutral
Yellow	Pump
Black	Low Fan
Red	High Fan
Green.....	Ground



HEAT PUMP INSTALLATION

Due to the fact that heat pump designs vary considerably between manufacturers, it is impractical to give detailed installation instructions in this manual. The manufacturer's installation instructions provided with the specific system to be installed must be followed. Necessary information for the correct sizing of the system can be found on the home's Compliance Certificate (Data Plate) located in the area of the electrical power distribution panel and explained in earlier parts of this manual. Installation should be handled by qualified heating/air conditioning professionals.

The following are some general considerations for the installation of heat pumps:

1. If heat pump is not supplied by Schult, the installer is responsible for making all necessary calculations based upon site conditions and information presented on the home's Compliance Certificate (Data Plate) to insure that the unit selected is adequately sized.
2. Equipment selected must meet all applicable codes and be specifically approved for use in mobile homes.
3. Major structural elements of the home, such as wall studs or floor joists, must not be cut to facilitate installation.
4. All necessary electrical modifications and installations must be handled by a qualified electrician.

HITCH AND WHEEL REMOVAL AND STORAGE

If the front hitch used to transport the home is designed to be detachable, for aesthetic purposes it may be removed after set-up. However, the hitch should be retained in the event the home is ever relocated. Common practice is to store the hitch under the home where it will be protected from the elements and concealed by the skirting.

During or after set-up, it is common practice to remove the wheels and tires. The axles and complete suspension system may be removed in some states and localities, but in others they must remain attached as installed. In some states and localities, owners are allowed to dispose of this equipment, while in others they may not. Before removing axles and suspension systems be sure to check carefully with the dealer and/or local authorities.

Although it may be permissible to dispose of the wheels, tires and suspension system, Schult Homes recommends they be retained in the event the home is ever relocated.

This equipment is commonly stored under the home on a waterproof substance, like vinyl sheeting, where it is protected and concealed by the skirting. After wheel removal, hub surfaces should be coated with heavy grease to resist rust and corrosion.

The tires, wheels and suspension systems are designed **ONLY** for use to transport this manufactured home. They are not designed for any other purpose.

SKIRTING

Schult Homes Corporation recommends the use of skirting.

Skirting not only increases the value of the home but has other benefits. Skirting helps keep the floor warmer in the winter, cooler in the summer, and helps prevent plumbing freeze-ups in winter.

NOTE: Before skirting is installed, it is suggested that the entire area under the home be covered with a blanket of Visqueen. This is to prevent excessive humidity in the home. The Visqueen must be a minimum of 6 mil thick and be overlapped 6" at all joints.

It is also suggested that the skirting around the home be provided with non-closing vents.

The free area of the vents should be equal to not less than 1/300th of the floor area of the home (divide sq. ft. of home by 300).

The vents should be located to provide cross ventilation to the entire area under the home.

1. If the home is equipped with a fuel burning fireplace or sealed combustion water heater, additional vents in the skirting must be provided adjacent to the intake vents for these appliances. Vents must be sized in accordance with the equipment manufacturer's instructions.
2. A removable panel should be provided in the skirting to allow crawl space access.

CARPORTS AND AWNINGS

Points to remember when selecting and installing carports and/or awnings:

1. Awnings and carports of a self-supporting design should be installed to minimize the possibility of damaging the home.
2. Follow installation instructions of accessory manufacturer.
3. Make sure all connections are to structural members of the home such as floor joists or rafter end rails. All penetrations through siding must be properly sealed and caulked.
4. Exercise extreme caution that no fastener penetrates any electrical cables. It is recommended all power be disconnected during installation and all circuits tested after installation is completed.
5. Insure that fasteners and support railings used are capable of handling the intended loads without damaging the home structure.
6. Insure all seams are properly sealed.