

# PROJECT MEXICO



# LATRINE PLANS

**Ventilated Improved Pit Latrine**

[www.projectmexico.net](http://www.projectmexico.net)

© 2004, 2005 Dave Bower, Team Casa de Dios, Baja Christian Ministries

## Notes For Latrine Construction Plans

1. IMPORTANT Note: As the most common dimension for block is 8"x8"x16", I have added a course layout for this block size. If a different size of block is used, adjust the course layout to insure proper inside dimensions. Detail 2 - 3
2. The latrine should be orientated so the vent pipe is facing the equator (South in Mexico). This one of the most important features as the block (DO NOT PAINT THE VENT PIPE) ABS pipe must be heated by the sun to promote ventilation.
3. The ABS vent pipe must be at least 3 1/2". The larger the better, however, the hole in the concrete cap should not be any larger than 4".
4. The entire vent must stay on the outside of the latrine to permit good heating by the sun.
5. The pit should be as deep as manpower and or money can provide.
6. If the soil is hard clay, it will fill much faster. This soil will not require as many courses of block.
7. If the soil is sandy, then the block should go as deep as possible.
8. Use mortar sparingly on the lower courses or leave hole in the block as to allow for liquid to pass into the lower levels of the soil.
9. Make sure the mortar is good and tight for the top five or six courses. This will prevent liquids from seeping into the topsoil around the latrine.
10. Latrine framing can be nailed to the cap via RAMSET (powdered actuated nailer) type nailer or bolts can be cast into the cap.
11. Toilet risers are available from Fiberfab in Azusa CA

Written & designed by:  
David C. Bower  
304 N. Mountain Ave.  
Monrovia, CA 91016  
dave@teamcasa.org

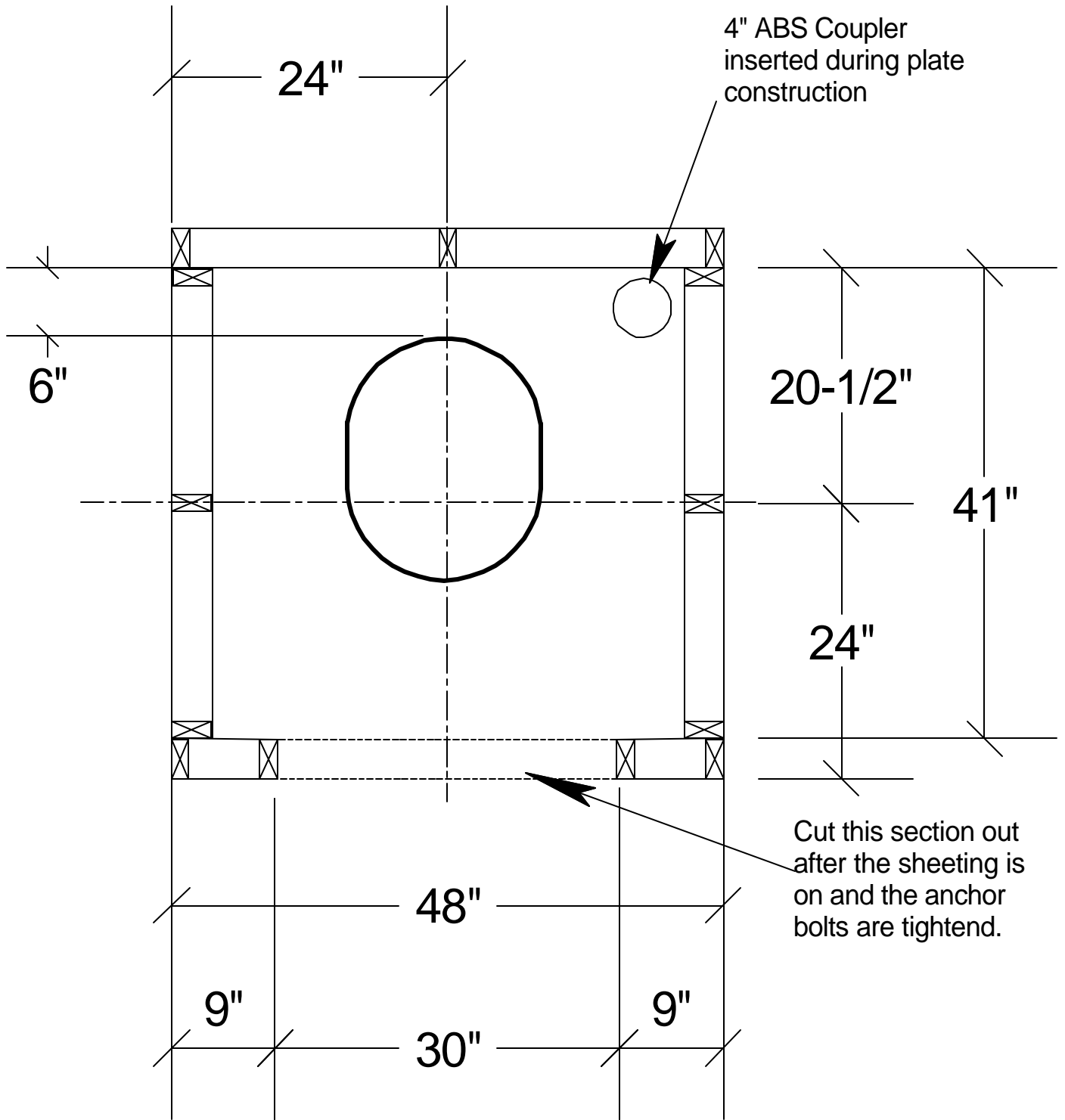
Footnotes:  
Toilet Risers  
Fibrefab  
1030 W. Foothill Bl  
Azusa CA  
+1 (626) 633-0288

## Latrine Materials List

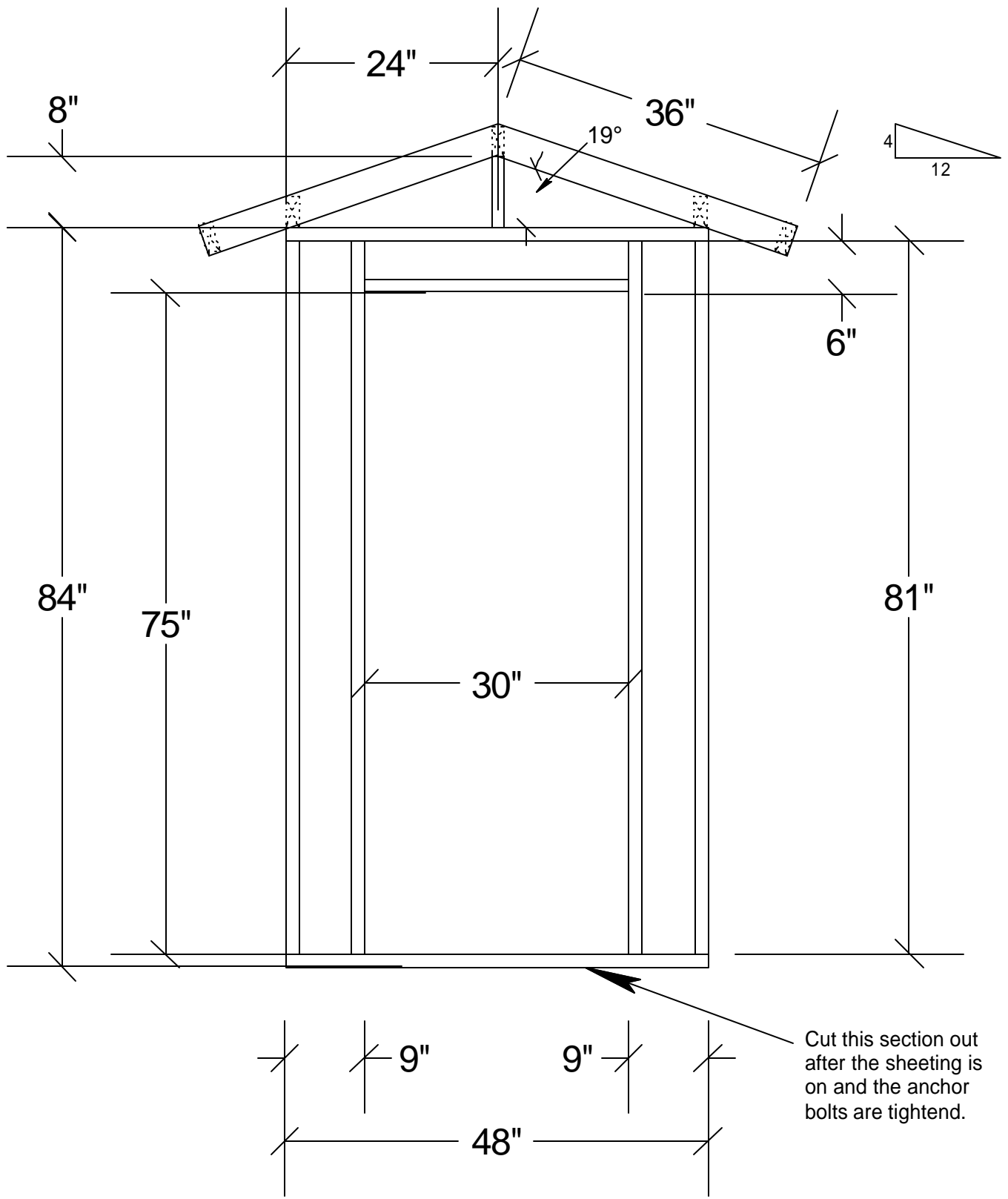
25 - 2"x4"x8' Studs  
15 - 1"x4"x8' Trim  
6 - 4'x8' plywood  
1 - 10' ABS 4" pipe  
2 - 4" ABS street L's 90 deg. Elbows  
1- 4" ABS connector  
1 roll of plumbers tape  
1 packet of roofing shingles  
3 yards of Felt Paper  
3 – 2" or 3" FLAT door hinges  
2 yards of flyscreen  
1 - screen door spring and latch  
1 can of ABS glue  
1 fiberglass taza  
1 plastic toilet seat  
2 tubes of caulk  
1 toilet paper holder  
5lbs 16p nails  
5lbs 8p nails  
5lbs roofing nails

## In Ground List

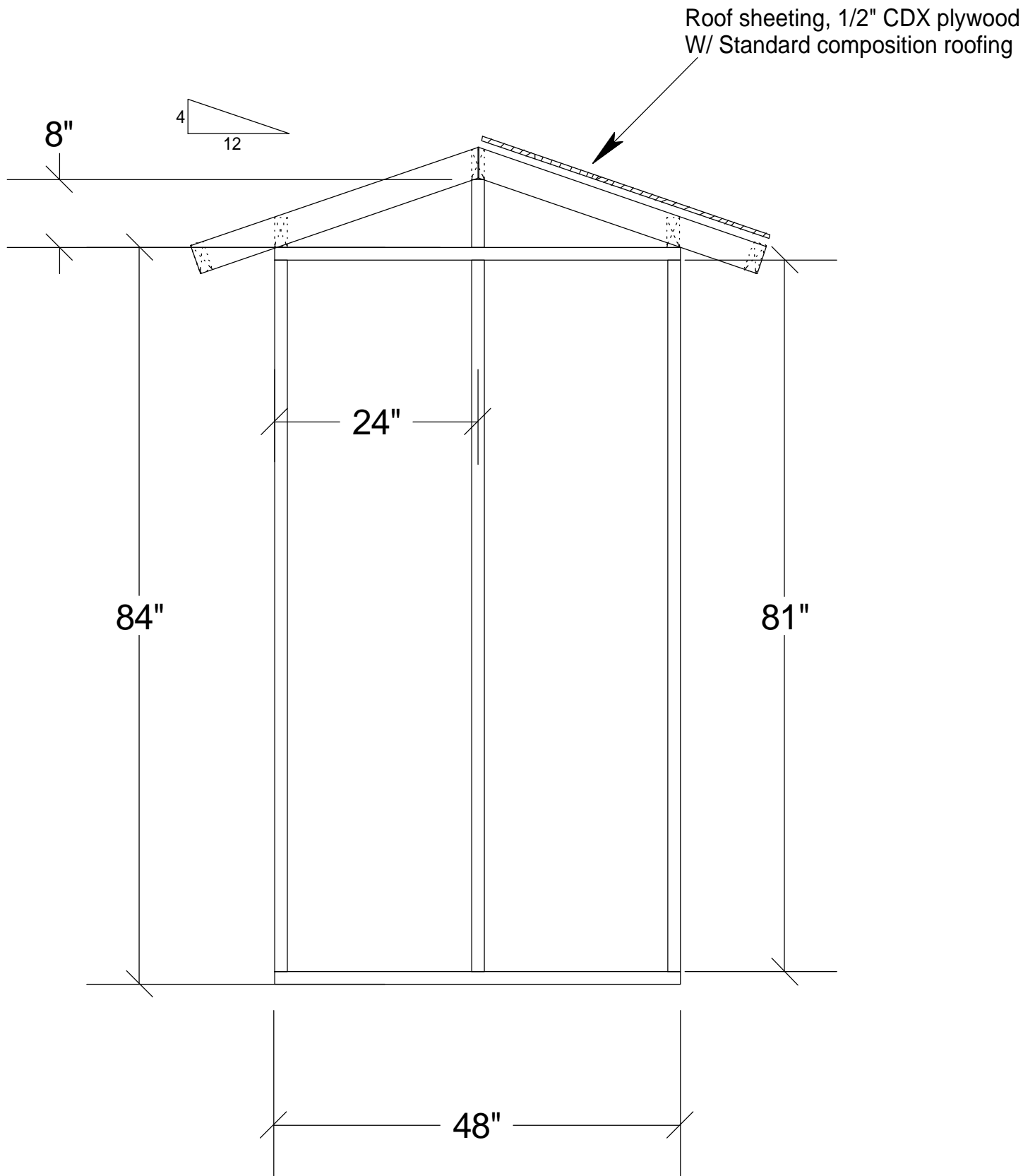
120 concrete blocks (+or-)  
4 sacks Portland cement  
1 yard of sand  
1/3 yard 3/4 rock  
4 -#3 or #4 rebar  
4 - 2"x4"x8' Studs  
1 - 4'x4' plywood  
10 - 6"x1/2" anchors with nuts and washers



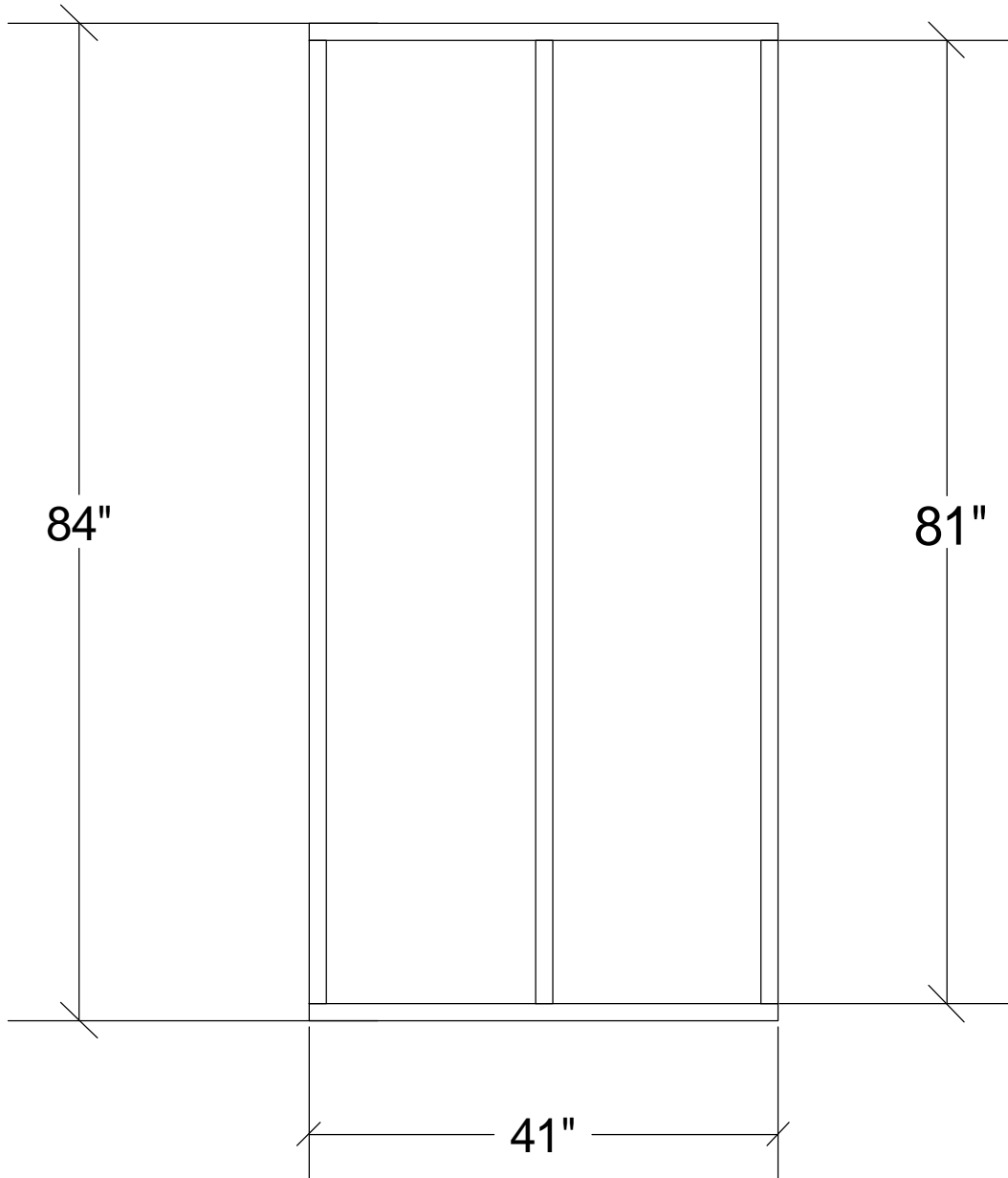
# Latrine Floor Plan



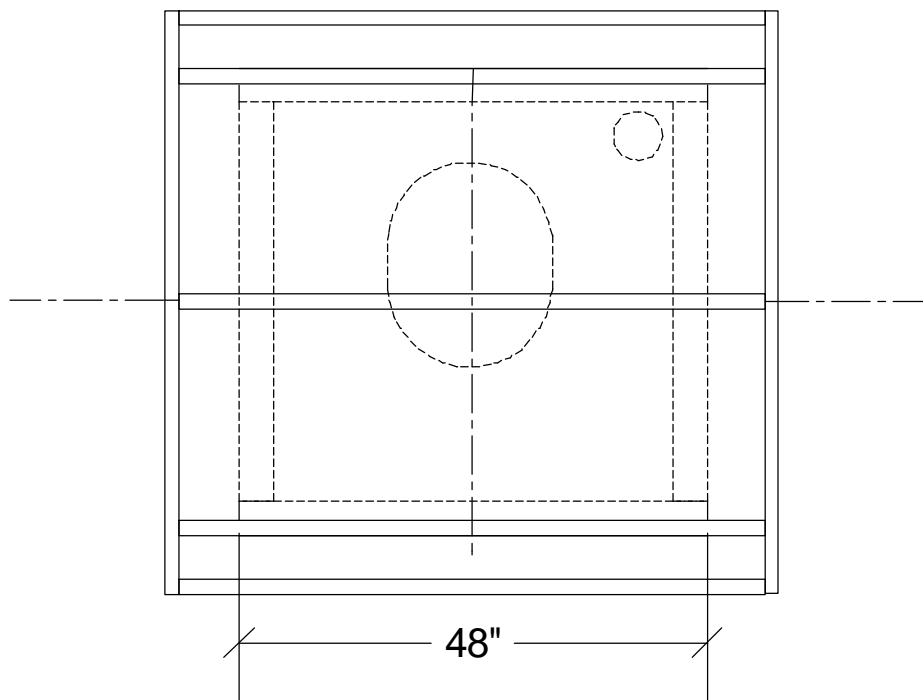
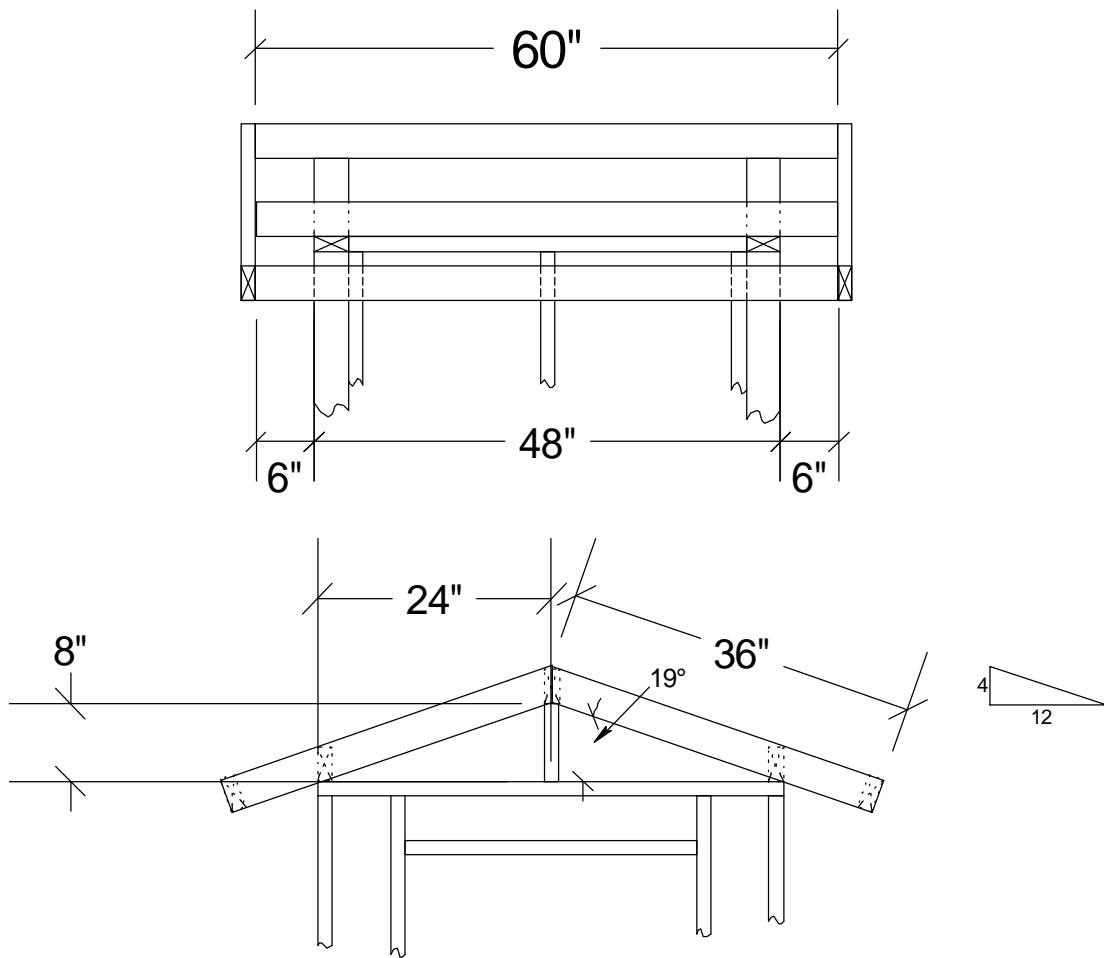
Front Elevation - Door



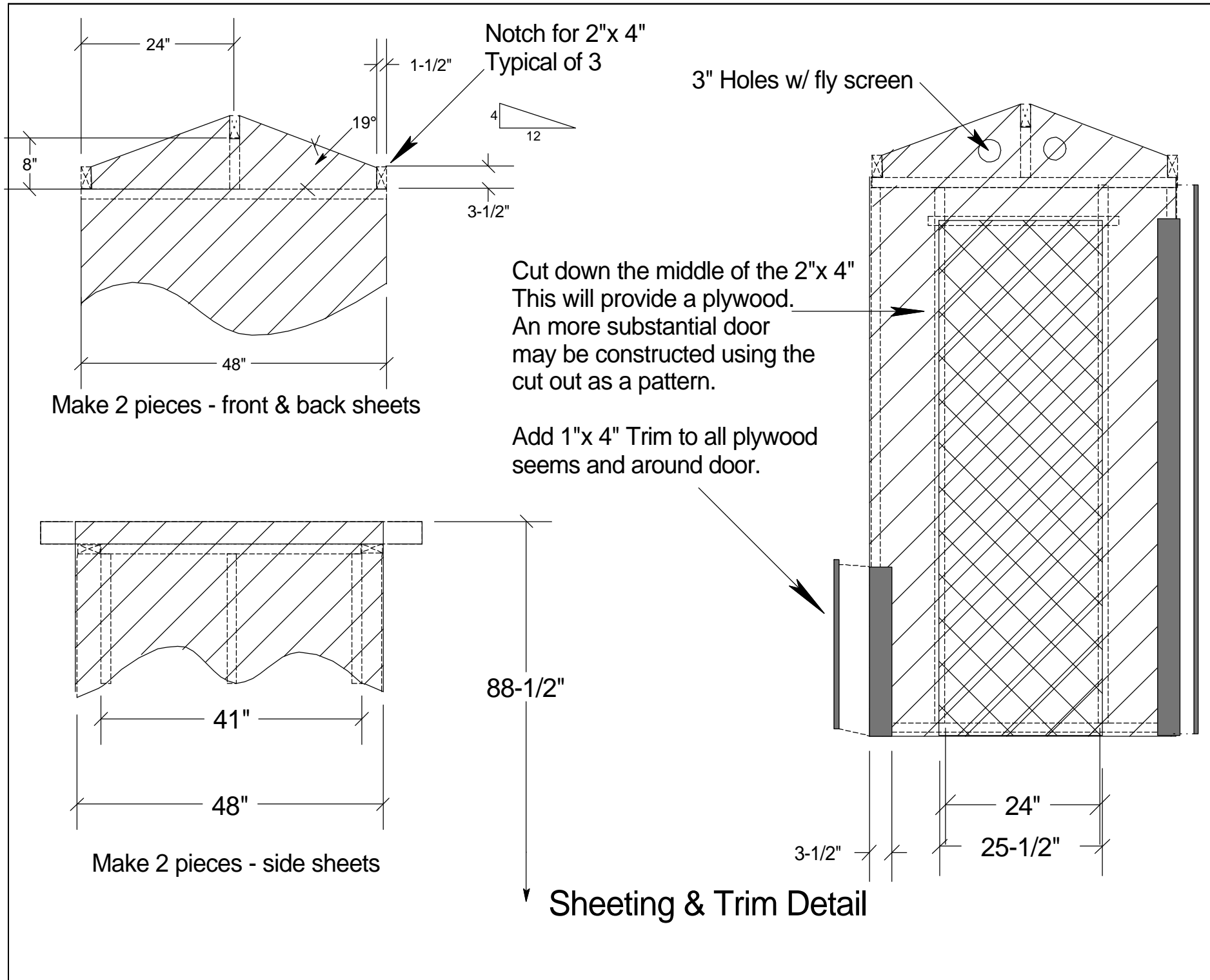
Rear Elevation



Side Elevation 2 Required



# Roof Framing



Rev. 12.1.2004

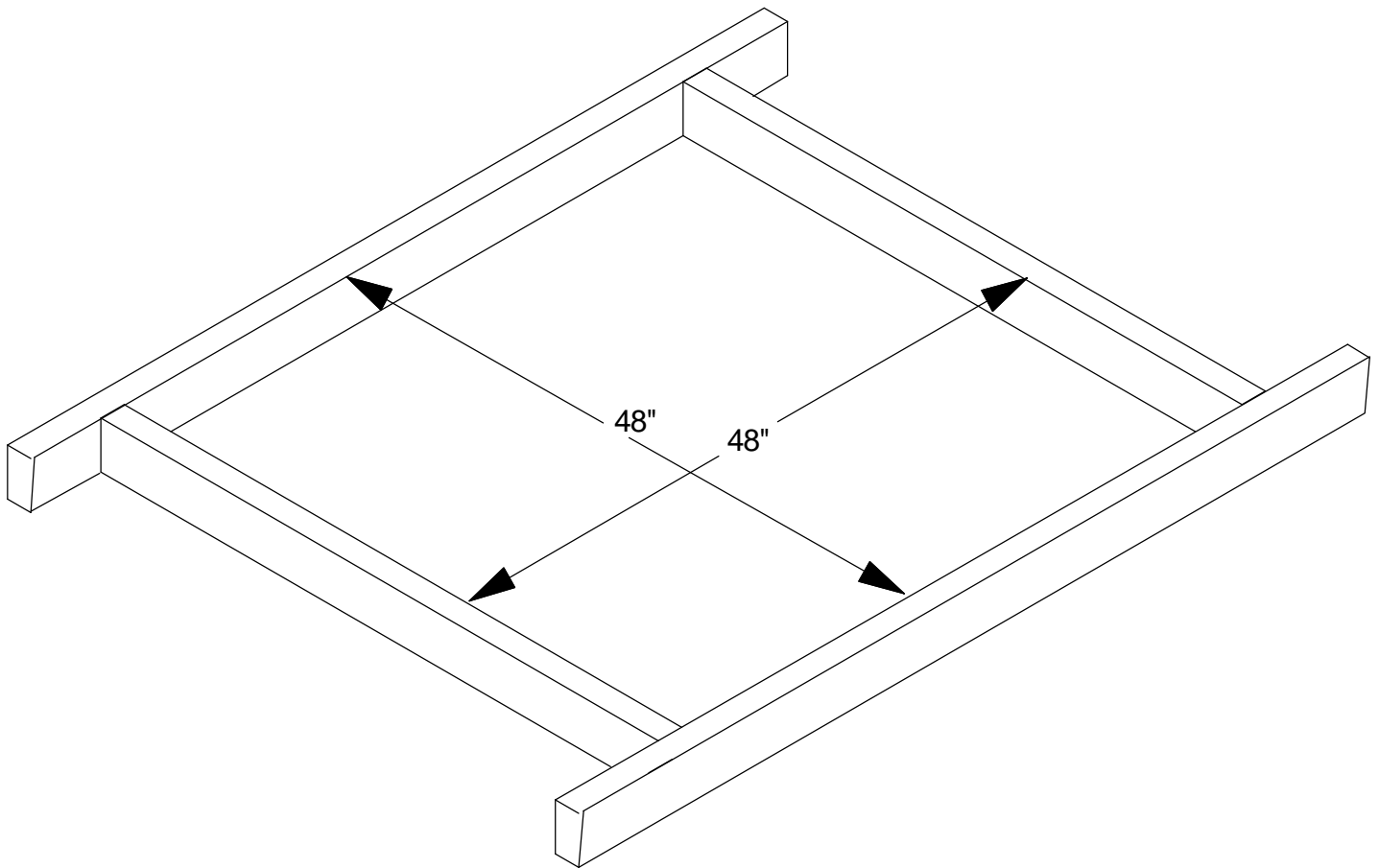
David Bower  
www.teamcasa.org

Stake 4'x 4' form onto a plastic sheet  
or flat/smooth ground.

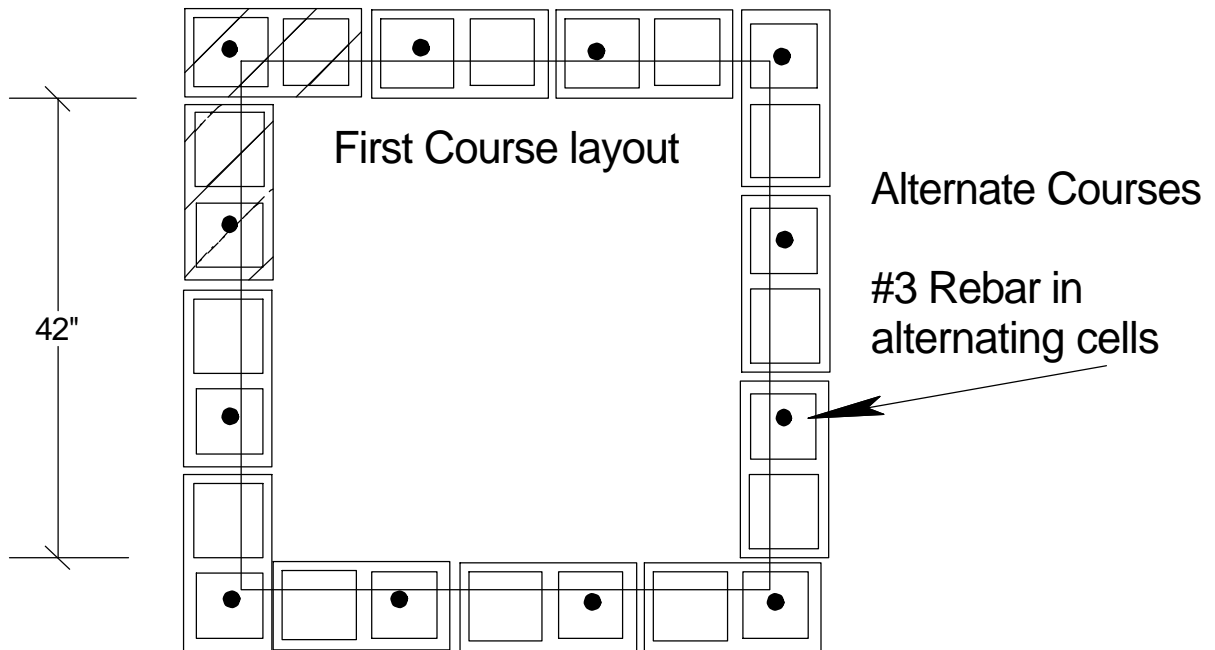
Soak inside of form w/ diesel fuel or  
other release agent.

Pour concrete as per DETAILS 2 and 3

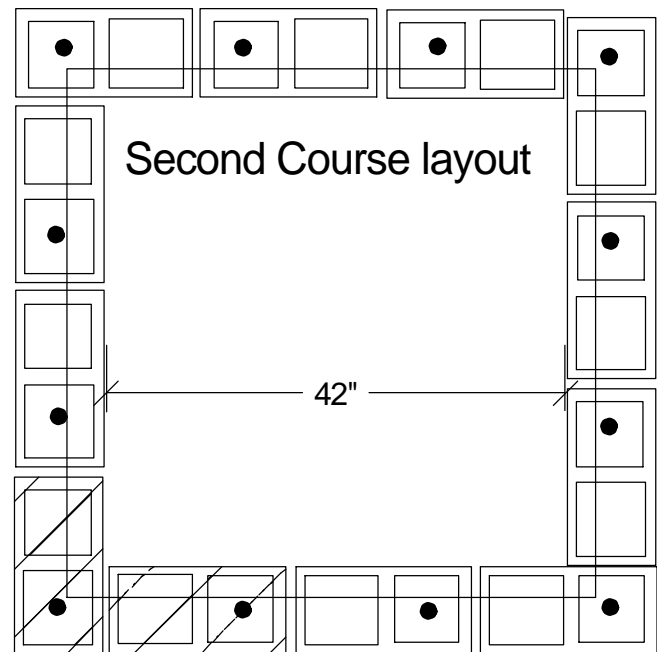
Allow concrete to cure 3 -5 days - keep wet.



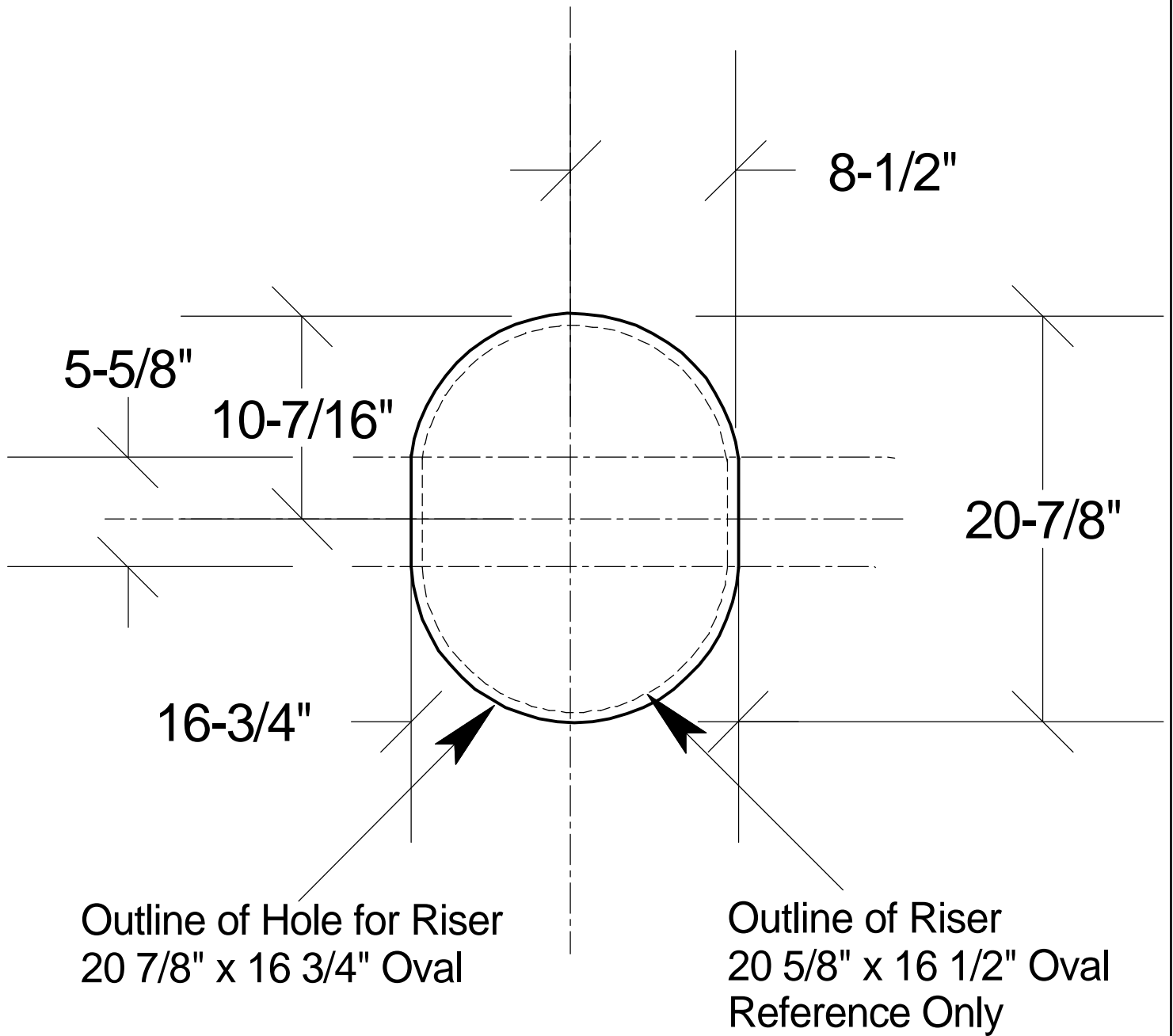
Latrine Plate Form



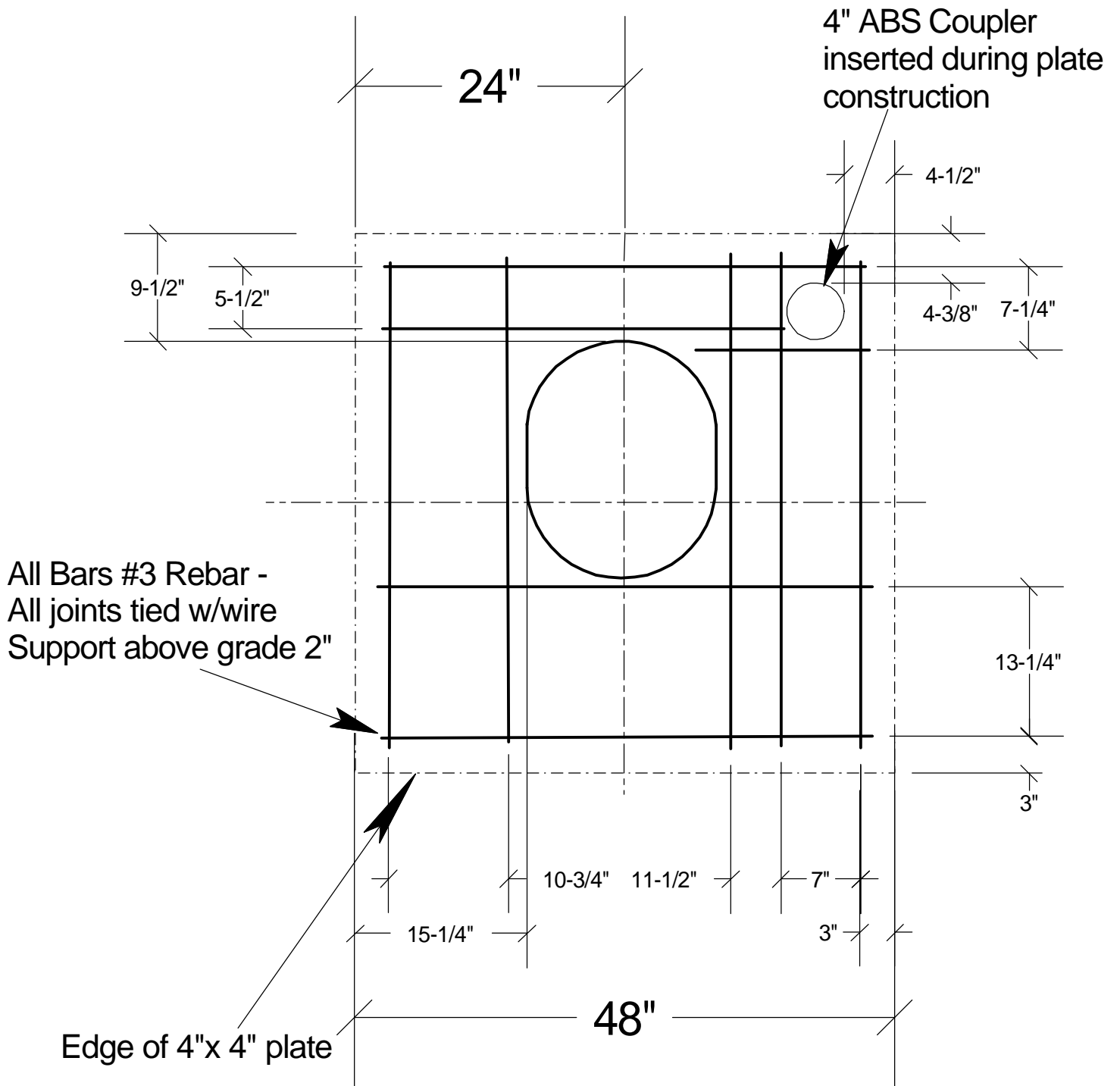
Blocks can be substituted  
 Provide a hole size of 3'-6" sq.  
 Depth is determined by soil types  
 typically 6' 8' deep.



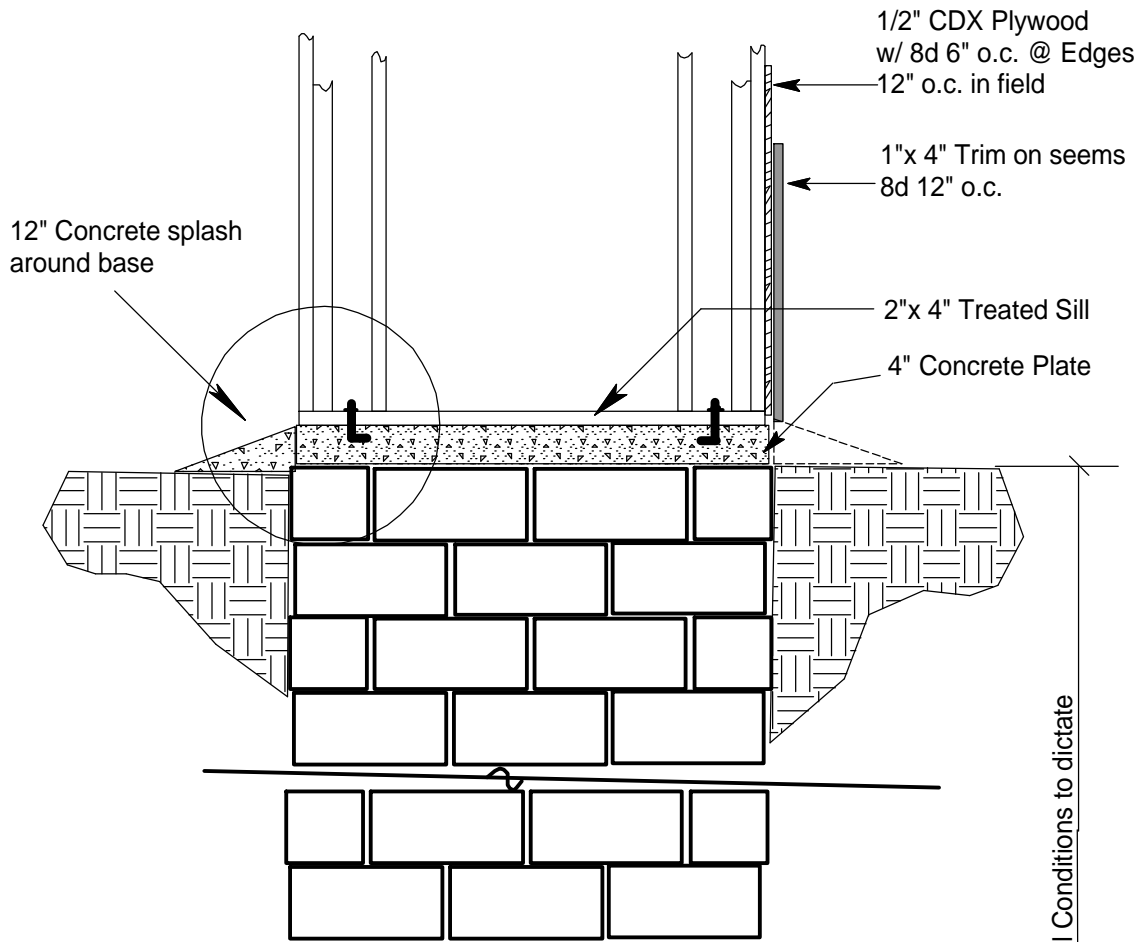
## Concrete Block Layout 8" x 8" x 16" Block



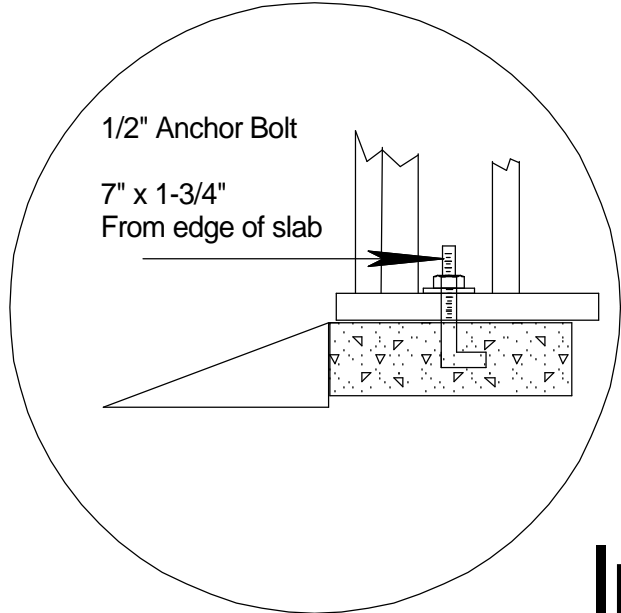
## Latrine Riser Hole Cut sheet



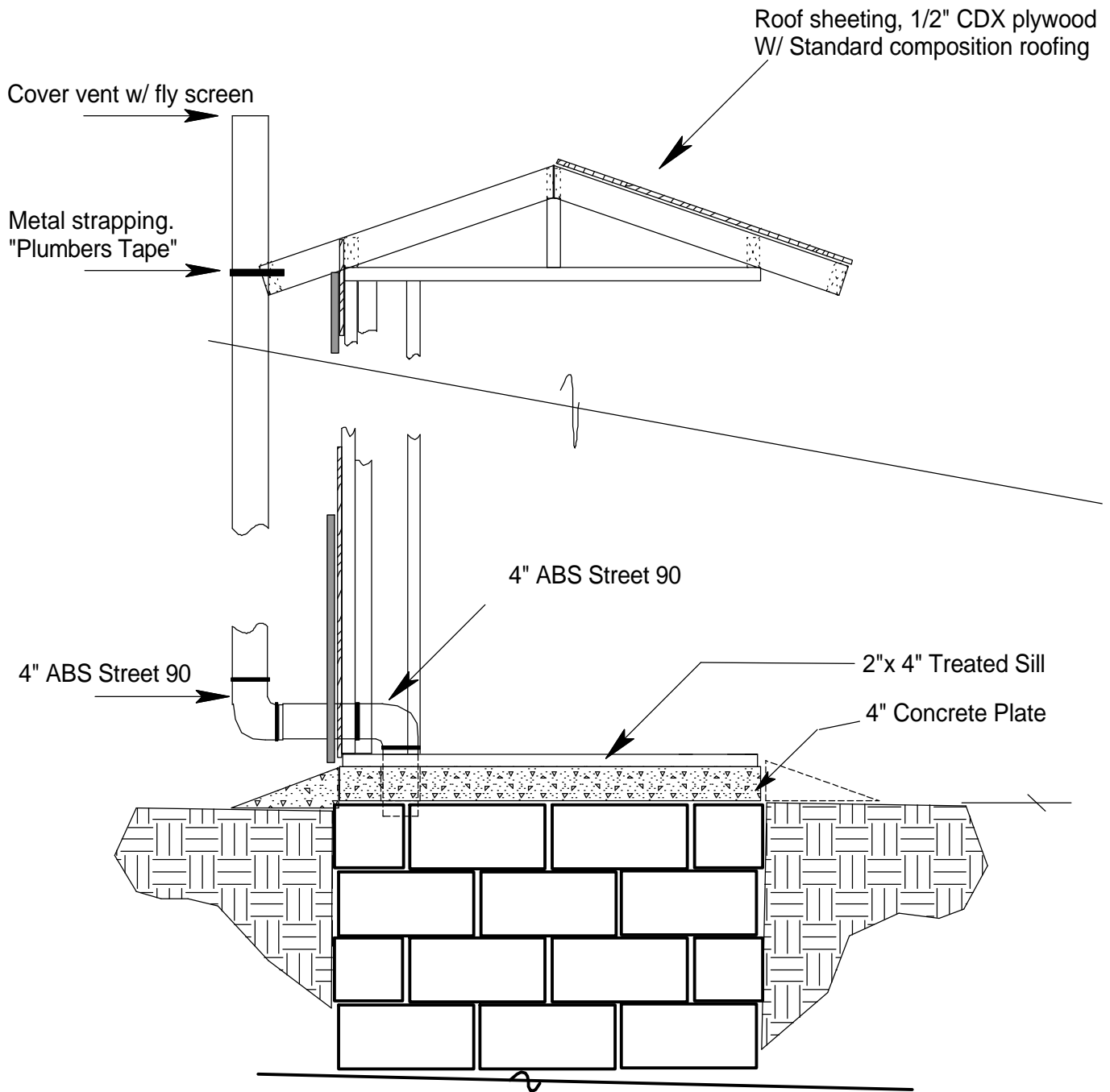
## Latrine Concrete Plate Rebar Layout



6' to 8' Deep - Soil Conditions to dictate



# In-Ground Section



Vent and In-Ground Section