When **NATURE** *called*, we answered.
Find *relief* with our **crackerjack**
build-it-yourself backhouse

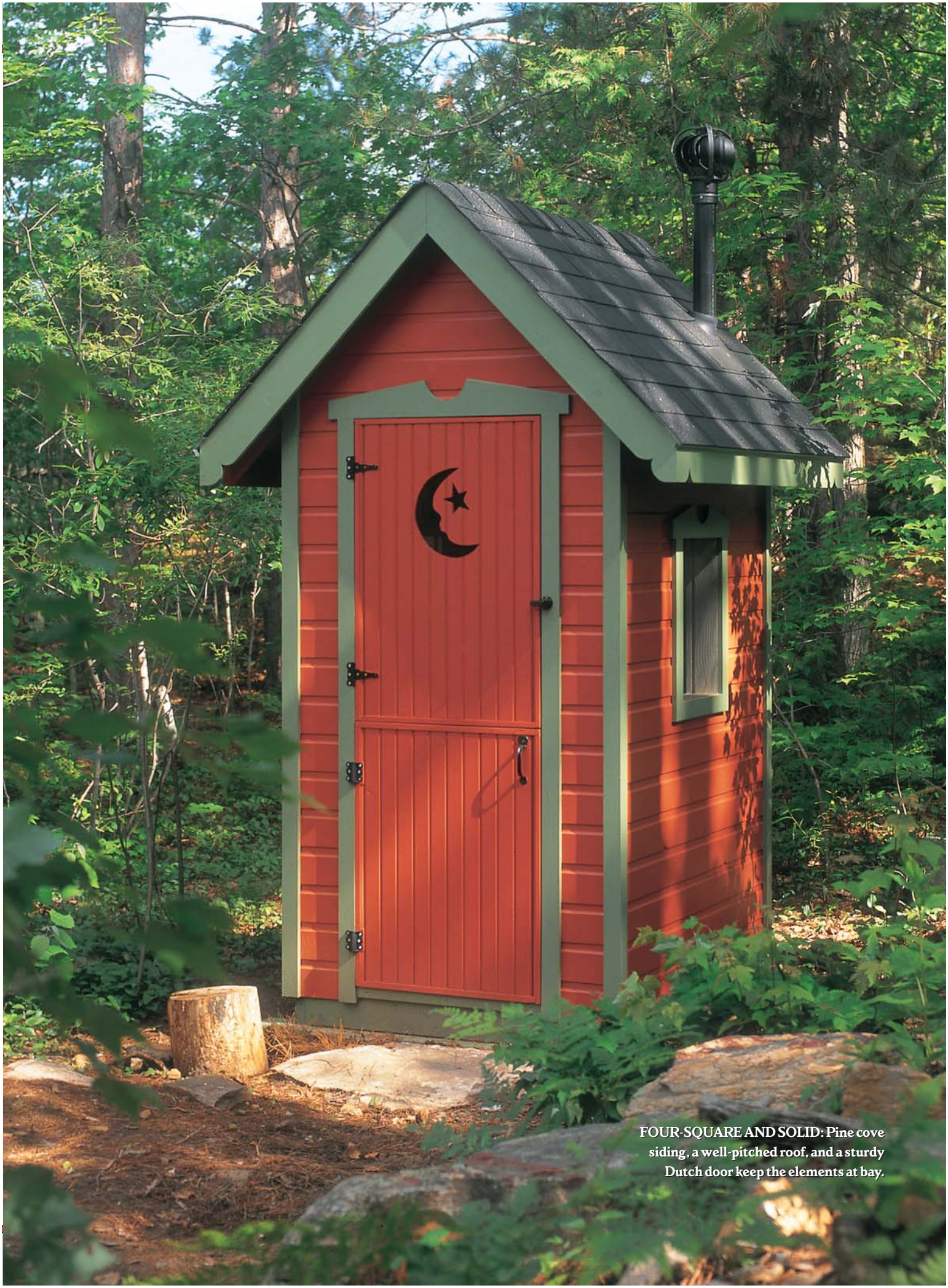
The PERFECT PRIVY

FIFTEEN YEARS AGO, WHEN WE BUILT OUR outhouse at the cottage on Wahwashkesh Lake's Shabbot's Bay, it was strictly a utilitarian structure erected mostly for the use of the menfolk. In my father-in-law's opinion, there was no need for the able-bodied males of the clan to be performing bodily functions indoors. As a result, no great care was taken in its construction. The only redeeming feature, other than the intended purpose of the outhouse, was the clear fibreglass roof we installed; it made for a rather bright environment in which to contemplate the mysteries of the universe as one engaged in more earthly business.

Diane and Duncan Robertson and their family have no indoor facilities (and no phone and no electricity, as Duncan proudly points out), so the outhouse is essential to cottage life across the lake at Sunset Point. It is a rather more tasteful edifice than the one at my cottage, and features a porcelain bowl – which seems to have been designed for outhouse use – instead of the standard bench and toilet seat. Meanwhile, though Jeanette and Bert Ellingham have a composting toilet in their cottage at the other end of Wahwashkesh on Shanty Bay, they maintain an outhouse to take the pressure off their system when they have guests (men and women both are required to share in the outhouse experience during the day). It is spotlessly clean, lit by an electric bulb, and even plays a tune when you enter (a pull-rope attached to the door is connected to a wind-up music box that plays the *William Tell* Overture).

Remarkably, despite the growing preference for indoor plumbing and modern conveniences, most cottagers on our lake still maintain outdoor johns. Also remarkable is the lack of similarity among outdoor facilities, except of course in the most obvious ways (they all have a hole, door, roof, walls, and so on). Perhaps the outhouse gives the average cottager a chance to be creative and/or ingenious, although this creative, ingenious diversity does not always ensure a quality product; in some cases, only a dire emergency

By Wayne Lennox // Photography by J. Michael LaFond
Technical illustrations by Terry Dovaston and Barb DiPietro



FOUR-SQUARE AND SOLID: Pine cove siding, a well-pitched roof, and a sturdy Dutch door keep the elements at bay.



would have encouraged me to linger for anything more than a cursory inspection.

But a well-designed, well-built outhouse like the one here does not deserve such a bad rap. Besides being a sound choice environmentally as an alternative to or support for a standard septic system, a carefully constructed outhouse – built with attention to critical details – won't have the problems of odour and creepy-crawlies you encounter in some slapdash privies. While the venerable outhouse can be a simple affair, the one we built here is clearly a deluxe version; solid, comfortable, and classy enough for year-round use. It's a privy outhouse-goers (and, with luck, outhouse converts) will actually enjoy visiting. Granted, the plans are somewhat elaborate and, at $1,000 for materials alone, it isn't a bargain-basement model. That's okay: If you don't want to build an exact replica of our perfect privy, the basic design can serve as inspiration for your own customized version. But we think the extra time and effort required to construct a biffy par excellence is worthwhile when you consider how much time the average family spends in it. It's a great place to sit and contemplate life – with the door kicked open to the breeze.

BUILDING THE FLOOR STRUCTURE (Figure 1, p. 106)

1. The floor structure is constructed of 2" x 6" pressure-treated spruce (see Materials List, p.105). Cut all the pieces to length according to **Figure 1A**. Treat the cut ends. The inner frame consists of two 43½" and two 55½" pieces nailed together with 3½" galvanized ardox spikes to form an interlocking framework.

2. Add the two 42" joists and the two 15" bridging pieces. This is one of the times we have taken a few liberties with accepted building practices: The joists are not 16" on centre.

3. Construct the outer frame from the remaining two 46½" and two 58½" pieces. An extremely strong corner is achieved by not only nailing the outside corners together, but also nailing through the outer frame corner into the inner frame. The outer header joists must also be nailed to the inner frame; 3½" spikes can be used if you drive them at an angle; otherwise, they will stick through.

4. Part of the material package for this project includes two sheets of ⅝" spruce sheathing. The sheets should be cut to create two 4' x 6' and two 2' x 4' pieces. Rip three 3" x 24" pieces from one 2' x 4' section, and then cut the balance of the sheet to 24" x 36". From the other 2' x 4' segment, rip one 3" x 24" strip, and then cut the sheet to 24" x 36". A table saw would have been ideal for this process,

BEFORE YOU DIG

An outhouse is categorized by the Ministry of Environment (MOE) as a Class 1 Sewage System and must conform to certain government standards. Though, in general, no approvals are required to build an outhouse (check with your local health unit or MOE office to be sure in your area), you must comply with the rules concerning placement of the pit and the design of the building itself. For example, an outhouse pit must be a minimum of 15 metres from a drilled well that has a watertight casing at least 6 metres deep. If you don't have a drilled well, the pit must be at least 30 metres from a spring used for drinking water or a dug well (a well without a watertight casing). Pits must be located at least 15 metres from any lake, river, pond, stream or reservoir, or any spring not used for drinking water, and 3 metres from a property line. In addition, the bottom of the pit must be at least 90 cm above the high groundwater table in your area, the sides of the pit must be reinforced to prevent collapse, the pit must be surrounded on all sides and on its bottom by not less than 60 cm of soil or leaching bed fill, and the soil around the sides of the superstructure – the part above ground – must be raised or mounded to a height of at least 15 cm above ground level.

We built our outhouse with regard to the *Ontario Building Code* (OBC), but due to its small size – just 20 sq. ft. – it did not require a building permit. Some of the OBC's conditions include at least one ventilation duct that is screened at the top, an impervious material on the inside of an enclosed bench, a self-closing door, and one or more screened openings for ventilation. In addition, the privy must be easily sanitized. However, because the OBC does not require a permit for structures less than 108 sq. ft., we have taken a few liberties with accepted building practices for the sake of convenience and common sense (under no circumstances did we compromise the structural integrity of this great edifice). All of the measurements provided are accurate for this structure. During construction, one can expect minor (I hope) variations to occur. That is only normal. Check your own building as you go.

but I used my circular saw and a guide made from an old particleboard shelf and two clamps.
5. Install the plywood floor according to **Figure 1B** (you will need to cut two of the 24" strips down to 21"). Use 2" galvanized ardox nails and nail the plywood to both inner and outer frame structures.
6. If you did not build the floor right on top of the pit foundation timbers in the first place, have someone help set it on top of the foundation. Level carefully.

FRAMING THE SIDE WALLS (Figure 2, p. 108)

1. Cut eight 76½" studs from four 2" x 4" x 14's. The remaining pieces, as shown in **Figure 2**, are cut from two more 2" x 4" x 14' pieces and two 2" x 4" x 10's.
2. Quite likely, you will be building one wall at a time, but for greater efficiency, lay out according to the diagram the location of the studs on the two 60" bottom plates and the two 60" top plates. Nail the studs to the bottom and top plates using 3½" spikes (two for the bottom and two for the top for each stud).
3. The blocking, windowsill, and window header, as well as the seat deck support can now be located on the studs and fastened with 3½" spikes; for greater strength you might choose to fasten the seat deck support in place with #8 x 3" screws.
4. The double top plate for the side wall measures 53", which leaves just the right gap to fit the top plates of the front and rear walls. Nail in place with 3½" spikes hammered in at an angle.
5. Are the walls square? Check the diagonal measurements: They must be equal for a structure to be square. The 1" x 3" x 8' spruce in the materials list is meant to be used as temporary wall bracing, which will let you move the wall section around without having it rack and twist. With your squared-up wall section lying flat, lay a 1" x 3" diagonally across the wall, then mark and cut so the bracing does not extend beyond the bottom or top plates. Attach the temporary bracing to the wall with 2" galvanized ardox nails (leave the nails sticking out so you can remove them later on). Repeat for the other side wall.



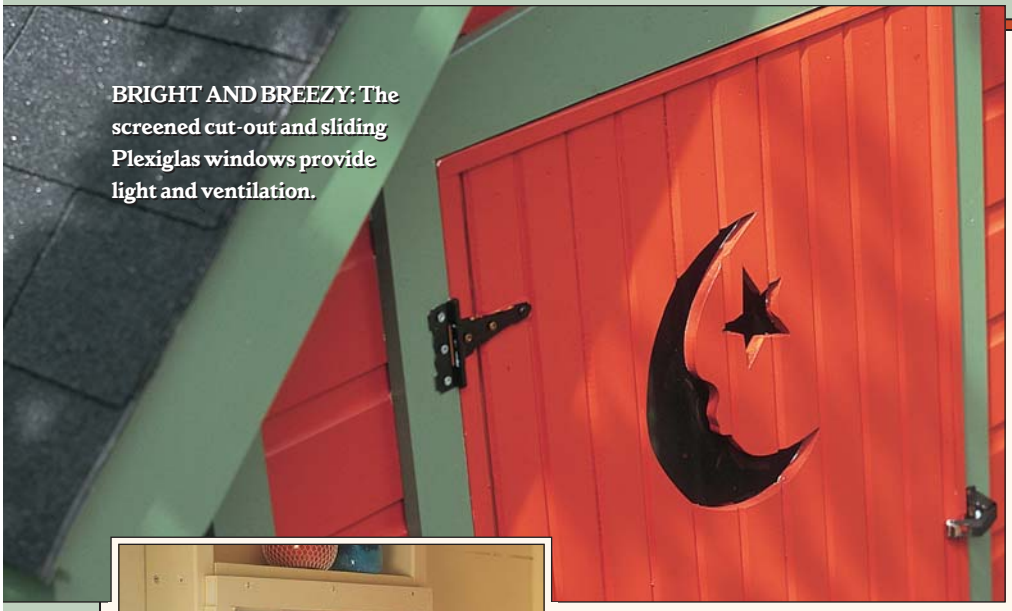
NICE PLACE TO VISIT:
No privy is complete without a toilet paper storage cupboard. The painted interior is easy to clean.

REAR WALL FRAME (Figure 3, p. 108)

1. Like the side walls, the rear wall is a very straightforward bit of framing. Note that the studs are 78" long because there is no double top plate. Lay out the location for the studs on the 48" top plate and the 41" bottom plate as in **Figure 3** (this time it was convenient and reasonable to use 16" centres). Nail in place with 3½" spikes.
2. Lay out the location of the 14½" blocking, and nail to the studs.
3. The 15¼" blocking pieces should be notched according to the detail drawings in **Figure 3**. Do not attach at this time; once all four walls are in place, these are designed to be secured with screws to the side walls to minimize racking. Likewise, do not attach the 21" gable stud, as it makes more sense to do so when assembling the roof structure.
4. You can choose to attach the rear seat deck support now with spikes or screws, or wait until later to make sure it fits between the side wall seat deck supports.
5. Secure a piece of 1" x 3" spruce as a temporary diagonal brace. Remember that it must be trimmed to provide clearance for the side wall top plate when the walls are erected.

FRONT WALL FRAME (Figure 4, p. 108)

The front wall is similar to the rear wall, except that the studs are 76½" long (like the side walls). Notice that the door header is laid flat and nailed to the top



BRIGHT AND BREEZY: The screened cut-out and sliding Plexiglas windows provide light and ventilation.



plate, as is often the case in smaller structures where strength above an opening is not as critical. Notch the blocking pieces (**Figure 4**), but do not attach until all four walls are in place (these too will be secured with screws).

Since the bottom plates are so short, I suggest that you drill clearance holes and attach to the studs with #8 x 3" screws to minimize splitting.

Diagonal bracing is very difficult to install on the front wall at this time, so just skip it. The bracing can be dealt with once the walls are in place (just be sure to handle the wall section carefully).

Put the gable stud aside until later.

SECURING THE WALLS TO THE FLOOR STRUCTURE AND TO EACH OTHER

(Figures 2, 3, 4, and Diagram 1, p. 110)

1. At this stage, it might be wise to look for a suitable helper (virtually anyone with a pulse will do). Position a side wall – brace side in – on the floor. Additional short temporary braces can be nailed diagonally from the ends of the wall to the outer frame of the floor for support; you can fine-tune for plumb once the bottom plate is nailed in place (**Detail 1, p. 108**).

2. The side wall bottom plate should be flush with the outside front and rear edges of the floor. Nail in place (about eight 3½" spikes should be adequate, evenly distributed between inner and outer floor frames). In turn, leave each short brace attached to the floor frame, but remove it from the end of the wall; then check for plumb and nail the brace back to the wall.

3. Position the rear wall – brace side in – on the floor. The top plate should fit in the gap that was provided in the side wall (**Figure 2**). Check for plumb. Nail the rear wall top plate to the side wall top plate.

4. The rear wall bottom plate should be flush to the rear outer edge of the floor and tight to the side wall bottom plate. Nail in place with six 3½" spikes.

5. Position the remaining side wall on the floor – brace side in. Nail the rear wall top plate to the side wall top plate. The walls should be plumb if the floor was levelled and the walls were squared during construction; however, you might have to make some minor adjustments, so check for plumb before nailing the top plates together for good. The bottom plate should be flush to the outside front and rear edges of the floor. Nail in place.

6. Carefully position the front wall on the floor. Nail the front wall top plate to the top plates of the side walls. The bottom plates of the front wall should be flush to the outside front edge of the floor and tight to the side wall bottom plates (make adjustments based on whether or not the studs for the door frame are plumb). Since they are so short, and might split if nailed, I suggest drilling two clearance holes in each bottom plate and screwing them to the floor frame with #8 x 3" screws.

7. As in **Detail 5** (p. 110), secure the two 15¼" blocking pieces to the rear wall studs and to the side wall studs with #8 x 3" screws. These pieces should rest on the side wall blocking.

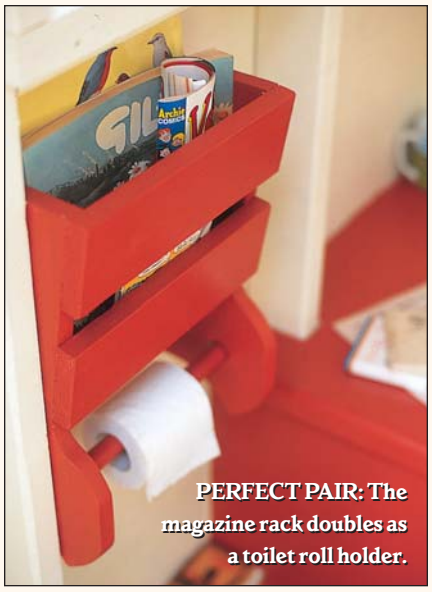
8. As in **Detail 2** (p. 110), secure two of the 7¾" blocking pieces to the front wall studs and to the side wall studs (these pieces should rest on the side wall blocking with #8 x 3" screws). Position the remaining four 7¾" blocking pieces and screw in place.

9. Attach a temporary brace to the inside of the front wall, and remove the short braces from the ends of the side walls.

INSTALLING SIDING TO TOP PLATES

The installation of the siding is easier if you can cut the siding to convenient 4' and 5' lengths. Since the front wall is mostly door opening, the 7¾" pieces for either side of the door can be cut from leftovers. When ordering siding, suggest to the staff at the lumberyard that you would prefer 10' and 16' lengths, since you need twice as many 5' pieces as 4' pieces for the outhouse.

The bottom edge of the first run of siding should begin 4" from the bottom edge of the floor framing. Use 2" galvanized ardox nails at the ends of each board, and 2" galvanized ardox finishing nails for the



PERFECT PAIR: The magazine rack doubles as a toilet roll holder.

THE PERFECT PRIVY MATERIALS LIST

LUMBER

MATERIAL	SIZE	QUANTITY
pressure-treated spruce	2" x 6" x 10'	3
"	2" x 6" x 8'	2
spruce	2" x 4" x 16'	1
"	2" x 4" x 14'	9
"	2" x 4" x 10'	10
"	1" x 3" x 8'	6
plywood spruce sheathing	5/8" x 4' x 8'	2
G1S plywood	5/8" x 4' x 4'	1
pine cove siding	1/2" x 6" thick	275 linear feet
pine	1" x 6" x 10'	2
"	1" x 6" x 7'	1
"	1" x 6" x 6'	3
"	1" x 6" x 4'	1
"	1" x 4" x 10'	1
"	1" x 4" x 7'	3
"	1" x 3" x 16'	1
"	1" x 3" x 12'	3
"	1" x 3" x 8'	4
"	1" x 3" x 7'	2
"	1" x 2" x 14'	1
"	1" x 2" x 12'	1
"	1" x 2" x 8'	3
"	1" x 2" x 7'	4
tongue-and-groove pine	1" x 6" x 6'	5
pine quarter-round	3/4" x 4'	1
pine trim	4' length	1
plywood strips	1/4" x 3/4" x 7 7/8"	4

TIM-BR Mart
Bring this materials list to your local TIM-BR MART. To find a location near you, click here.

APPROXIMATE COST: $1,000

HARDWARE

MATERIAL	SIZE	QUANTITY
galvanized ardox spikes	3 1/2"	5 lbs
galvanized ardox nails	2"	3 1/2 lbs
galvanized finishing nails	2"	1 1/2 lbs
"	1 1/2"	1/2 lbs
roofing nails	3/4"	1 1/2 lbs
screws	# 8 x 3"	25
"	# 8 x 2"	50
"	# 8 x 1 1/4"	100
"	# 6 x 1"	2
"	# 6 x 5/8"	6
fiberglass screen	24" x 60"	1 piece
Plexiglas panels	3/16" x 10" x 23 7/8"	4
drawer pulls		2
toilet seat assembly		1
galvanized eave starter	10'	2
shingles		2 bundles
roofing paper		
T-hinges	4"	2
spring-loaded hinges		2
foam weatherstripping	3/16" x 3/4"	1 roll
door handles		2
screen door spring catch		1
barrel bolt	4"	1
paintable caulking		1 tube
outdoor wood glue	150 ml	1
ABS pipe	3" x 12'	1 piece
roof flange (for vent pipe)	3"	1
end-cut treatment	small container	1
light galvanized sheet metal	21 5/8" x 41"	1
"	18" x 41"	1
"	18" x 20"	2
finishing nails	1"	12
whirly vent	4"	1

other studs. Remember that the groove is down and the tongue is up.

The last course of siding should be flush with the top edges of the top plates if you are using pine cove siding, as we are.

INSTALLING THE MAIN ROOF RAFTERS, RIDGE BOARD, AND GABLE STUDS (Figure 5 and Diagram 1, p. 110)

1. Cut eight roof rafters, complete with bird's-mouth notches where they sit on the top plate (**Figure 5**), and four rafters without notches from six 2" x 4" x 10's.
2. Lay out the position of the roof rafters on both sides of the 1" x 6" x 6' ridge-board, and also on the top plates of the side walls (the rafters should sit directly over the studs). See **Detail 3**, p. 110.
3. Tack four main rafters in place along the top plate of a side wall.
4. Tack the remaining four main rafters along the other side wall.
5. Slide the ridgeboard up between the rafters. Move one rafter from each pair slightly aside and nail the ridgeboard into its face with 2" nails. (The top edge of the rafter should be flush with the top of the ridgeboard.) Repeat with the three remaining pairs. Move the other rafter from each pair into position in line with the fixed rafter. Nail in place. (Nail at an angle through the rafter and into the ridgeboard.) Now you can finish nailing the rafters firmly to the top plates.
6. Position and nail the gable studs in place. (**Diagram 1**.)

INSTALLING THE SIDING ON THE GABLE ENDS

When you install the siding on the gable ends, simply centre the boards across the gable area so they extend past the gable framing. Once the siding is nailed in place, snap a chalk line that follows the slope of the rafters and cut off the excess siding with a circular saw.

INSTALLING THE FILLER BLOCKS BETWEEN THE MAIN RAFTERS (Diagram 1 and Detail 4, p. 110)

1. Cut six 18" pieces from a 2" x 4" x 10'. These are filler blocks for the space between rafters, top plates, and roof sheathing to keep out the elements and the beasties. Some outhouse builders

choose to put screen in this opening, but since this design has windows for ventilation, we decided to close in this space to reduce cold-weather drafts.
2. Position each filler block so that it will contact the roof sheathing when it is in place (**Detail 4**). Nail to the top plates and to the rafters using 3½" spikes.

INSTALLING THE ROOF SHEATHING

1. On each sheet of ⅝" x 4' x 6' plywood, locate and mark the lines for nailing to the rafters with chalk or pencil.
2. Slide a sheet up onto the rafters. The sheet should be flush to the ends and top edge of the ridgeboard and to the ends of the rafters. Adjust for square and nail in place with 2" nails spaced 6" apart.
3. Remove the brace from the other side if you have not already done so, and slide the remaining sheet up onto the roof. Nail the sheathing to the rafters.

INSTALLING CORNER AND GABLE END TRIM (Figure 6 and Detail 6, p. 110)

As stated earlier, normal variations during construction might result in slightly different measurements than those given. Always check your own building before cutting, or leave the assembled corner long at the bottom end, then fit, mark, and cut to the correct length.
1. Cut the corner trim pieces according to **Figure 6** while bearing in mind the note above. Remember that the 1" x 2" is cut at 45° across the edge, not across the face.
2. Pick a corner and pre-fit two trim pieces to determine the right match and fit. When assembled correctly, the 1" x 3" should be flush to the underside of the roof sheathing while the 1" x 2" should be flush to the underside of the rafter (**Figure 6**). Nail and glue the two pieces together with 2" galvanized finishing nails and outdoor glue.
3. Repeat for the other three corners.
4. Nail the corner trim to the building with 2" galvanized finishing nails.
5. Cut the gable end trim pieces from the 1" x 2" x 12' as in **Figure 6**. Cut to fit.
6. Nail the gable end trim in place with 2" galvanized finishing nails (the gable end trim should be flush to the underside of the roof sheathing).


WIND POWER: A mini whirly moves the bad air outside, where it belongs.

INSTALLING THE REMAINING FOUR RAFTERS

1. There should be four rafters that do not have a bird's mouth. Install one rafter at one end of the roof; nail or screw the rafter to the sheathing with 2" galvanized nails or #8 x 2" screws. It should be flush to the outside edge of the sheathing and tight to the ridgeboard.
2. Secure the rafter to the ridgeboard.
3. Install the opposing rafter by nailing or screwing it to the sheathing. Fastening to the ridgeboard presents a bit of a challenge, but that's part of the fun. (See **Detail 3**, p. 110.)
4. Repeat for the other end.

INSTALLING THE FASCIA

1. Nail the 1" x 6" x 6' fascia to the ends of the rafters on each side (**Diagram 1**).
2. Cut the two 1" x 6" x 10's into four equal lengths. Make a 45° cut at one end of each piece. These will be used on the rafter faces at the front and rear of the outhouse.
3. Temporarily install all four fascia pieces with a couple of finishing nails (leave the heads sticking out for easy removal). The top edge of the fascia should be flush with the top of the sheathing, and each set of fascia should meet neatly in the middle of the end of the ridgeboard (a little judicious trimming with a small plane can provide you with that expert fit). Draw a

FLOOR STRUCTURE

The PERFECT PRIVY

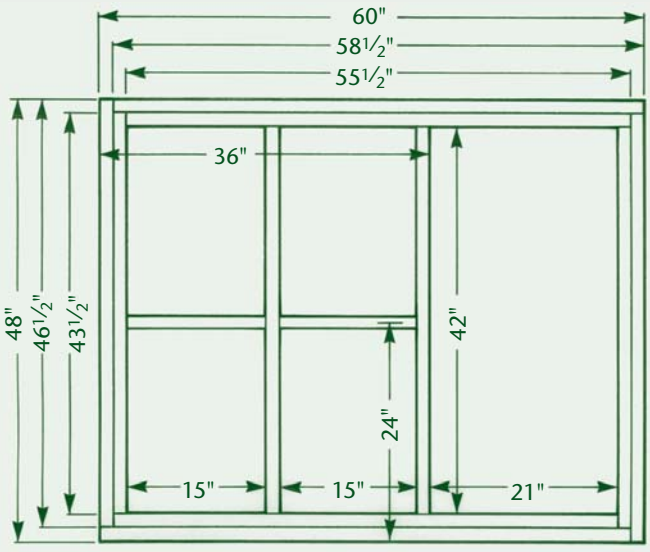


FIGURE 1A
(Floor frame)

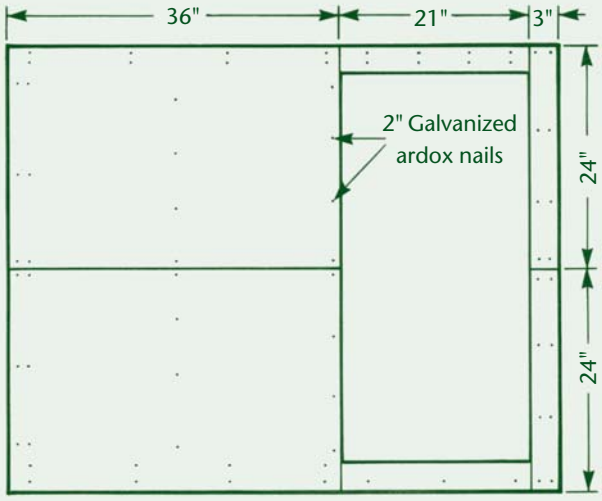


FIGURE 1B
(Subfloor)

line on the fascia where it meets the fascia on the rafter ends. Remove from the rafter faces.
4. Cut the fascia to length and add a design if desired. Then go up the ladder and nail it in place.

BUILDING THE SEAT BOX

(Figure 7, p. 112)

1. Remove the temporary braces from the inside of the outhouse.
2. The front panel of the seat box measures 21⅝" x 48", while the deck measures 24" x 48". Use a guide and your circular saw to cut the 4' x 4' piece of G1S plywood to size.
3. Cut the notches in each panel with a jig saw. The larger cutouts at the back of the deck were needed for manoeuvring the deck into place as one piece.
4. Place the front panel in the pit opening. The 3½" x 7¾" notches should allow it to rest on the bottom plates of the side walls; the top of the panel should be flush with the top of the side wall seat deck supports that you installed earlier. The panel should also be plumb when tight against the end of the support. If one or the other of these conditions is not satisfied, then the support(s) may have to be removed and adjusted. Screw the front panel to the 2" x 6" floor joist and to the ends of the seat deck supports with 2" screws.
5. Install the rear deck support if you have not already done so.



ROOM WITH A VIEW: The Dutch door lets you enjoy the scenery and still have some privacy. A barrel bolt connects the two halves.

6. Install the galvanized liner to the front and rear interior of the seat box. (You will need a few short – less than ⅝" – screws to secure the sheeting to the inside of the front panel. Use roofing nails for the rear.)
7. From a 2" x 4" x 10', cut two pieces 18½" long. Screw them in place, flush to the top edge of the front panel and flush to the top edge of the rear deck support (these will provide greater support around the hole).
8. Slide the deck into place. Sounds easy enough, but more than likely you'll include a few well-worn expletives during this operation; you might also have to enlarge one or more of the notches or plane an edge or two. Screw the deck to the supports and to the front panel. The latter job requires a half-dozen #6 x 1½" screws that you will surely have in your collection of fastening devices; #8s can split the laminations. Cover the gaps at the rear of the deck with two 1" x 3" x 5" pieces of pine. Nail and glue in place.
9. Round one edge of the piece of 1" x 2" x 4' pine (a plane and sandpaper will do a nice job). Fasten to the front panel with #8 x 1¼" screws; it must be flush with the top of the deck.
10. Locate the toilet seat on the deck. This is where personal preference plays a significant role. Once you have determined the sweet spot, so to speak, mark the location of the holes for the bolts, and trace a line around the inside of the toilet seat onto the deck. Move the seat and carefully trace a new line about ½" larger than the line you traced for the hole.
11. Cut the hole with a jig saw. Round the edge of the hole with sandpaper or with a router and a round-over bit. Drill clearance holes for the bolts. Position the seat and secure with the bolts provided.
12. Cut the ¾" quarter-round to length and nail in place where the face panel meets the floor with 2" finishing nails.
13. If you intend to paint the outhouse interior, then caulk around the seat box with a paintable caulking.

INSTALLING THE VENT STACK

A few sources have advocated the use of two vent stacks in cottage outhouses, though government specs only require one. Our old outhouse does not even have a vent, and yet there are few odour problems, so I must say that I have been a bit perplexed by this double-vent recommendation. I did not want this outhouse to

Continued on page 114

The PERFECT PRIVY

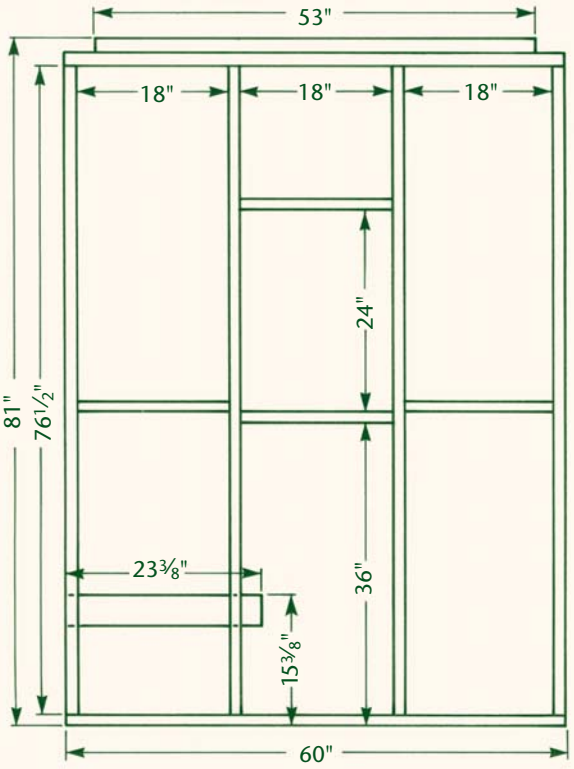
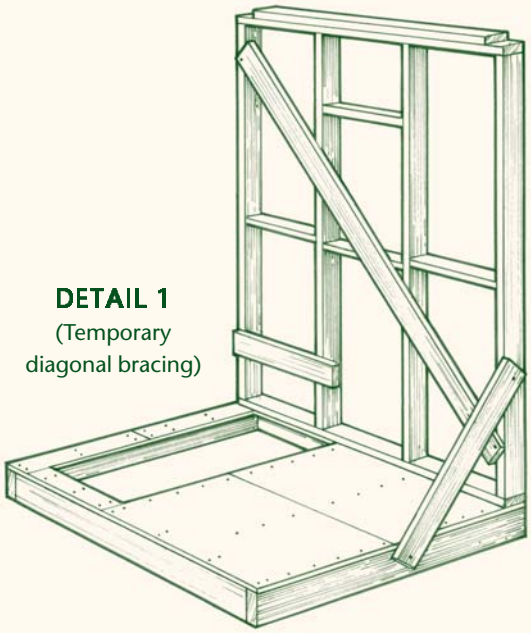


FIGURE 2
(Side walls)



DETAIL 1
(Temporary diagonal bracing)

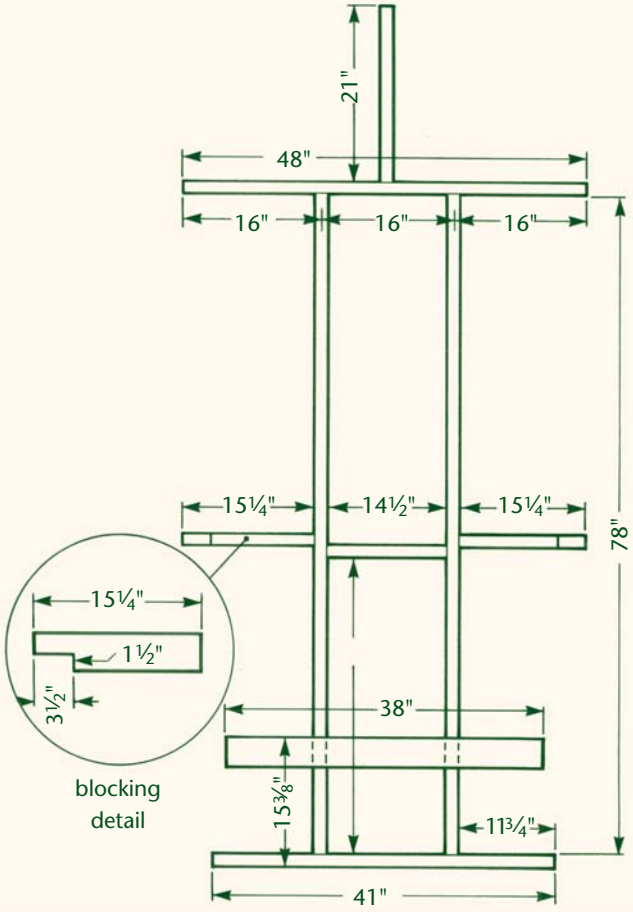


FIGURE 3
(Rear wall)

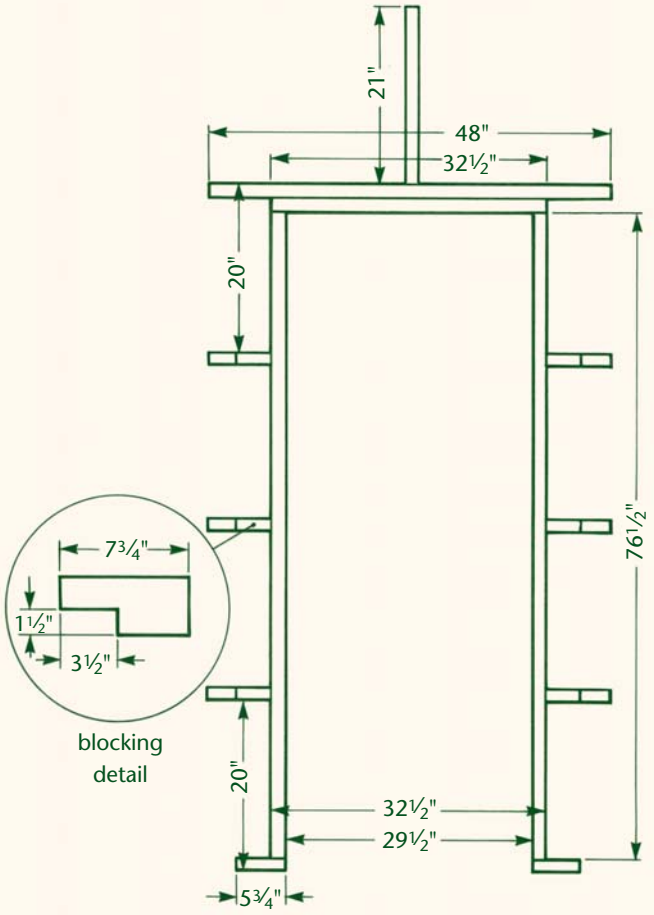
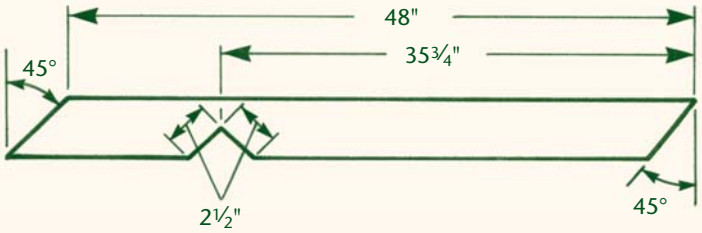
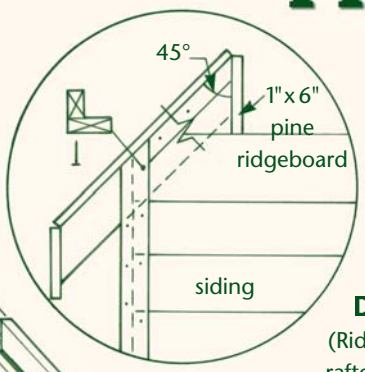


FIGURE 4
(Front wall)

The PERFECT PRIVY

FIGURE 5
(Rafter layout with bird's-mouth notch)





DETAIL 3
(Ridgeboard and rafter placement)

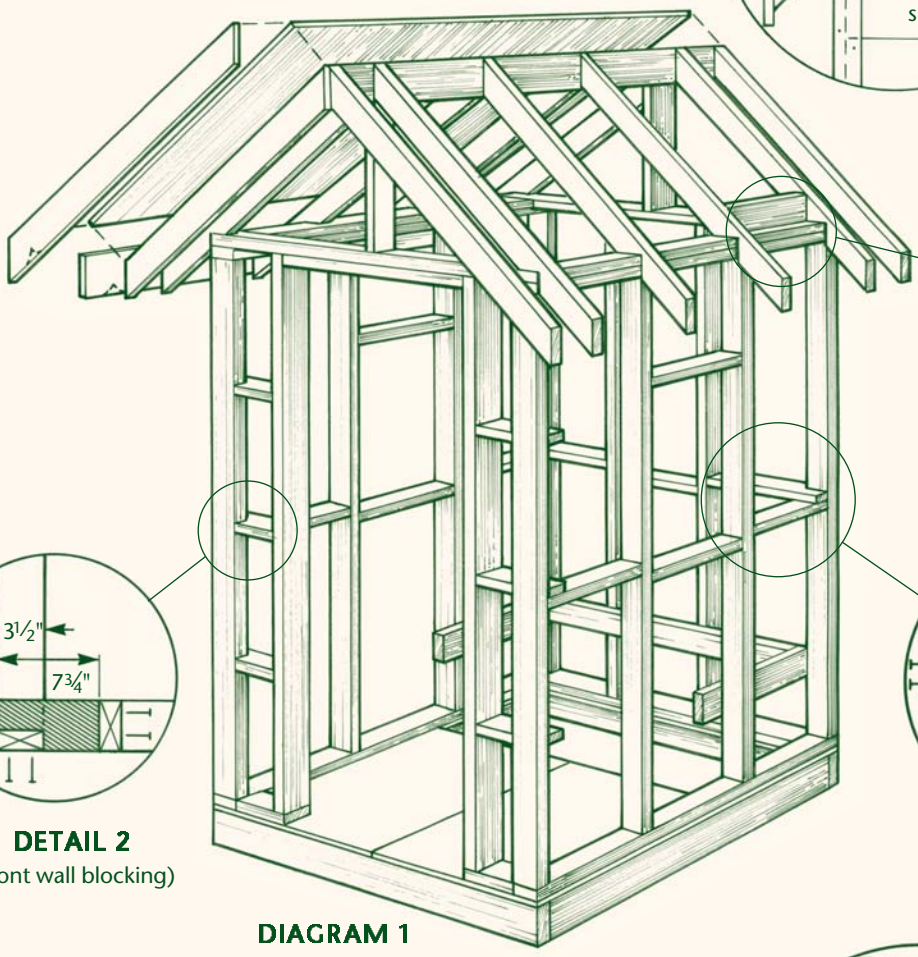
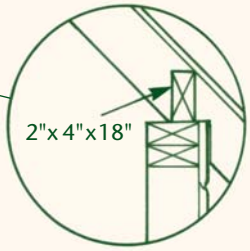
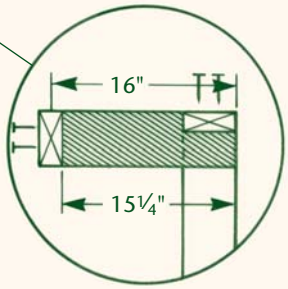


DIAGRAM 1



DETAIL 4
(Filler block placement)

DETAIL 2
(Front wall blocking)



DETAIL 5
(Rear wall blocking)

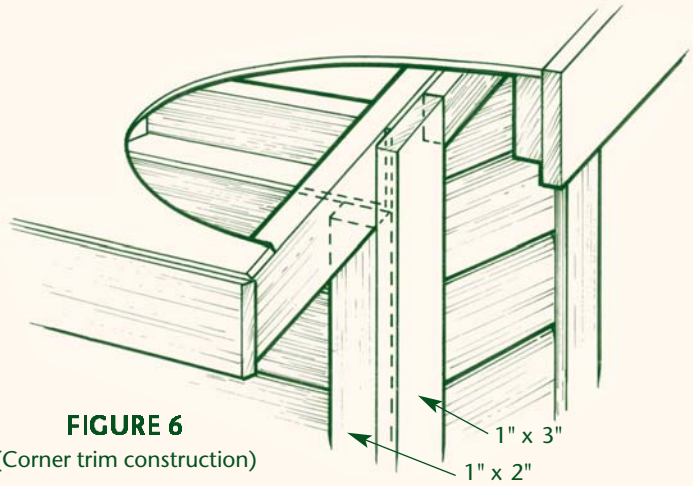
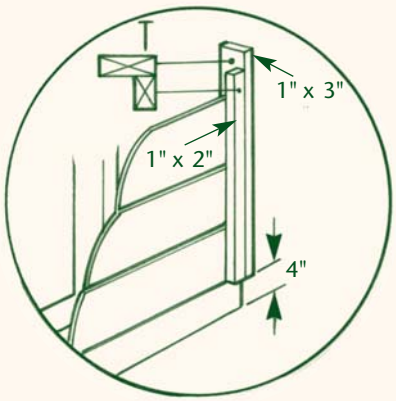


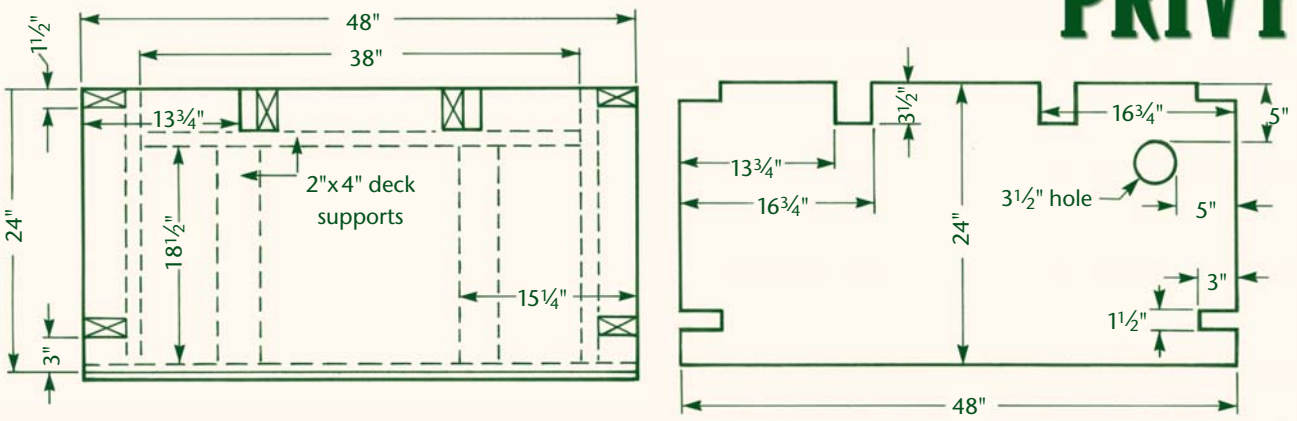
FIGURE 6
(Corner trim construction)

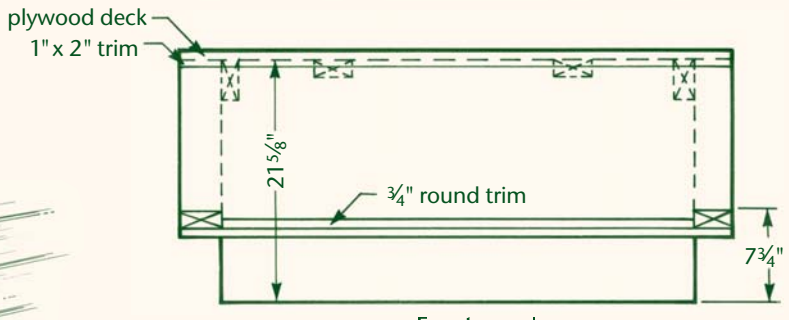


DETAIL 6
(Corner trim and siding)

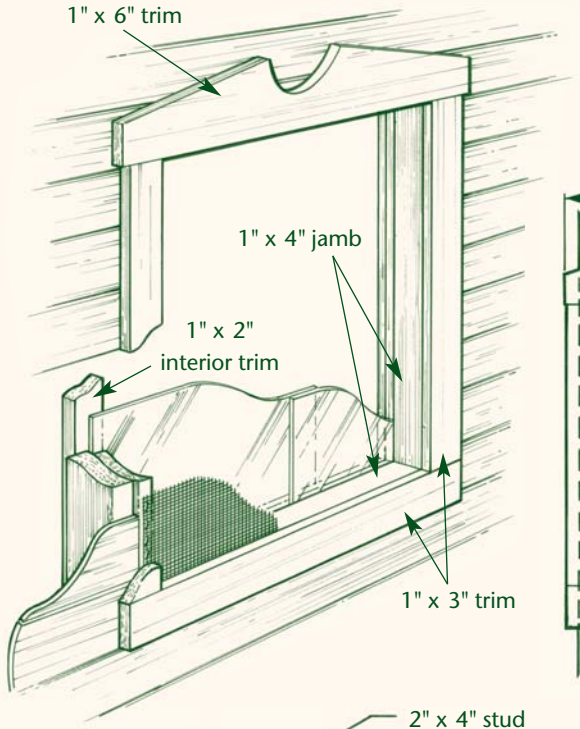
The PERFECT PRIVY

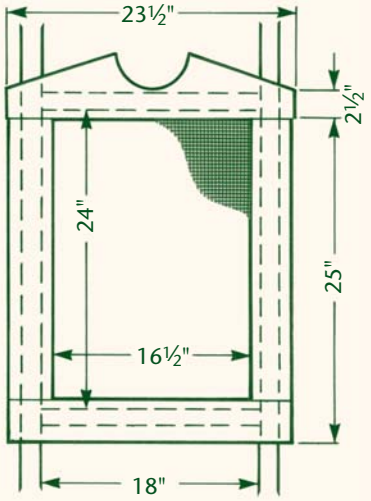
FIGURE 7
(Seat deck and supports)



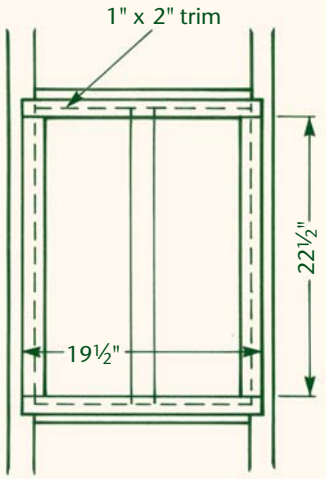


Front panel





(outside)



(inside)

FIGURE 8
(Window frame and trim)

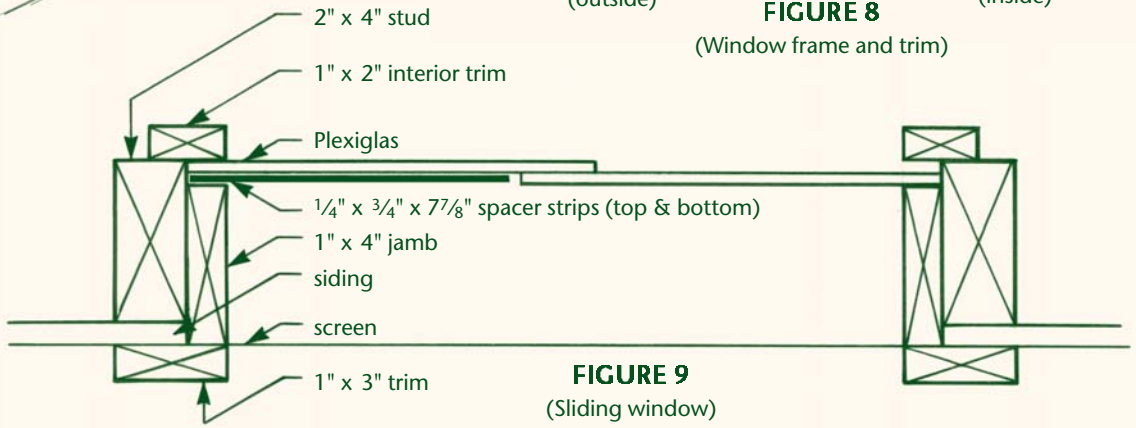


FIGURE 9
(Sliding window)

DUTCH DOOR AND TRIM

FIGURE 10
(Door frame and trim; from outside)

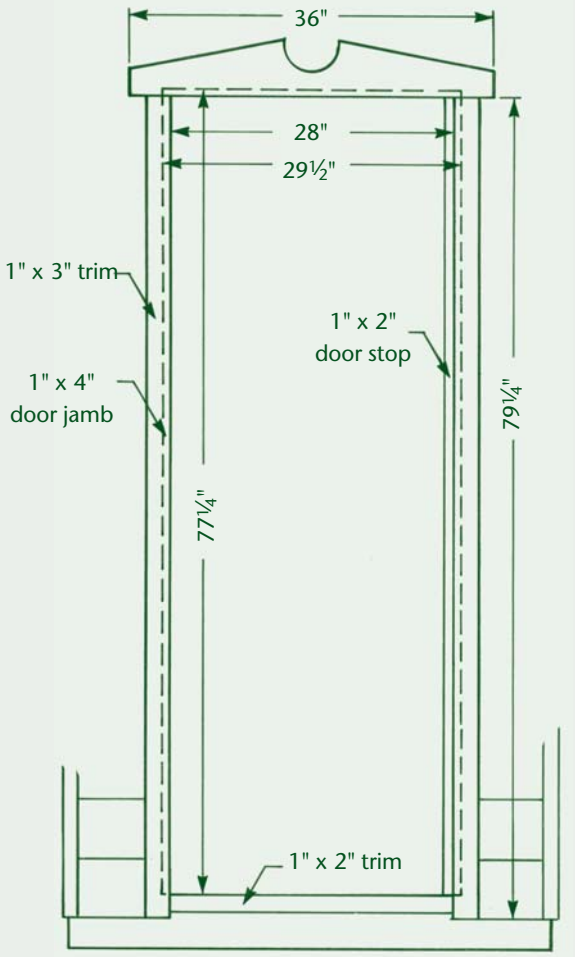
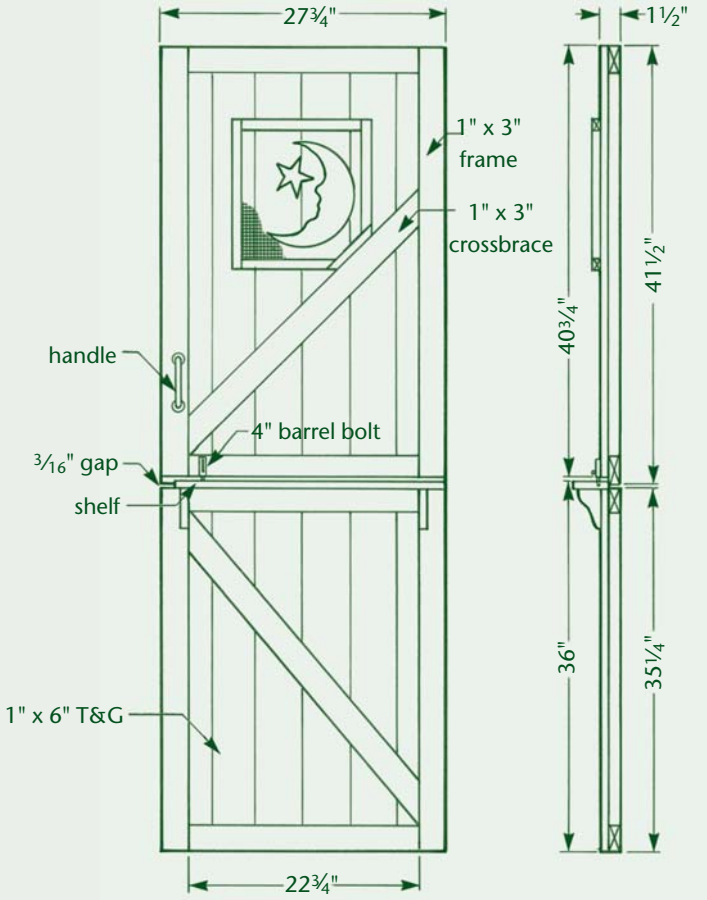


FIGURE 11
(Dutch door; from inside)



look like the cab of an eighteen-wheeler, but the opinions of eminent vent scholars must be respected. So I came up with a unique compromise. The vent stack on this outhouse is equipped with a mini whirly vent (similar to the larger ones on the roofs of countless cottages). It offers, to use an expression of the '90s, a proactive venting system, but it is a bit more difficult to come by. I purchased this one for about $60 at a local heating and air-conditioning outlet. The whirly's collar measures 4" in diameter while the outside diameter of 3" ABS pipe is only 3½", so I did have to shim the pipe (all praise duct tape) before screwing the collar to it. According to regulation, I added a piece of screen to keep the insects out.

If you should decide to opt for two stacks, they can be capped with 90° elbows (screen can be secured to the elbow with a large-diameter hose clamp).

1. Locate the hole in the roof sheathing for the vent stack. Here's a suggestion: Cut a short piece from the end of the 3" x 12' ABS pipe; make the cut at 45° (or as close to 45° as possible). Position the piece against the ceiling so that it is plumb. The piece should be 1½" from the rear wall and side wall top plates. Draw a line around the perimeter of the pipe.
2. Cut the hole in the roof sheathing. You will need a round file to taper the top edge of the hole, otherwise the pipe will not slide through.
3. Fit the pipe through the hole in the roof and down through the hole in the seat deck (the cut end should be in the pit). The pipe should extend to the bottom of the floor structure. You can secure it to the rear or side wall blocking with some pipe strap and a couple of screws.
4. Cut the stack so that it extends just an inch or two above the roof peak.
5. Caulk around the pipe where it passes through the seat deck.

INSTALLING THE EAVE STARTER, PAPER, ROOF VENT FLASHING, AND SHINGLES

1. Cut the galvanized eave starter to a length of 75½" (it extends 1" past each end of the sheathing). Install with roofing nails, parallel to the top edge of the sheathing. Staple roofing paper in place.
2. Shingle, working around the roof vent flashing. Install the whirly vent.

TRIMMING OUT THE DOOR
(Figure 10, above)

1. As in **Figure 10**, the header jamb consists of a 1" x 4" x 29½" length of pine, while the side jambs are 1" x 4" x 77¼". Install flush to the outside face of the siding with 2" finishing nails and shim for plumb if necessary.

Continued on page 149

Continued from page 114

2. The outside vertical trim is 1" x 3" x 79¼" (times two), while the horizontal piece is 1" x 6" x 36" (the leftovers will be used for the trim over the windows). Use a paint can or large coffee can for the half-circle in the centre of the horizontal piece. Install all three trim pieces flush to the inside faces of the jambs.
3. Cut the 1" x 2" door stop, but do not install at this time.
4. Cut and install the 1" x 2" x 28" trim piece at the bottom of the door frame. It should be flush to the surface of the plywood sheathing.

TRIMMING OUT THE WINDOW AND INSTALLING THE SCREEN AND PLEXIGLAS WINDOW PANELS (Figures 8 and 9, p. 112)

1. Each window jamb consists of two 1" x 4" x 22½" and two 1" x 4" x 18". Install flush to the outside face of the siding with 2" finishing nails.
2. Cut a piece of window screen to 18" x 24" and staple to the outside edge of the 1" x 4".
3. Cut and install the 1" x 3" and the 1" x 6" trim using 2" finishing nails, as in **Figure 8**.
4. There will be a ½" space between the edge of the jamb and the edge of the 2" x 4" studs, header, and sill. This will provide room for the Plexiglas window panels. Inspect the surface of the sill; if it is rough, sand smooth. Nail the plywood strips to the top and bottom edges of the 1" x 4" with a few 1" finishing nails.
5. Carefully drill a clearance hole in one of the Plexiglas panels (about 12" up – or down – and ⅜" in from the edge). Select a 5⁄16" bit and countersink the hole so that the head of a #6 screw will be flush with the surface of the Plexiglas when installed. Remove the protective paper and install in the window frame.
6. Install a drawer-type knob on the other Plexiglas panel, as described above, or glue in place (after the protective paper has been removed). Then, with a flat file, slightly round the four corners of this piece.
7. Install the bottom and two side pieces of 1" x 2" trim with #8 x 1¼" screws (use a countersinking drill bit to bore all the holes). These are flush with the surface of the jamb.
8. Slide the remaining Plexiglas panel into place and install the top trim piece of 1" x 2". God willing, you should have a sliding window.
9. Repeat for the other window.

BUILDING AND INSTALLING THE DUTCH DOOR (Figure 11, p. 114)

1. The inner frame of the Dutch door is constructed of 1" x 3". The bottom half consists of two pieces 35¼" long and two pieces 22¾" long. The top half consists of two pieces 40¾" and two pieces 22¾" long. The corners are simple butt joints screwed and glued together. Make sure the frame is square before the glue sets. Do not add the bracing yet.
2. The outer frame of the bottom half is constructed of 1" x 2": two pieces 32¼" long and two pieces 27¾" long. The top half consists of two pieces 1" x 2" x 37½", one piece 1" x 2" x 27¾", and one piece 1" x 3" x 27¾". The corners are simple butt joints screwed and glued together.
3. Screw (#8 x 1¼") and glue the inner frames to the outer frames. The top half outer frame is ¾" longer than the top half inner frame. There will be a 1" rim around the inside of each door half. The tongue-and-groove will be nailed to this rim.
4. Cut the 1" x 6" T&G to length for each door half. Generally, the back of 1" x 6" T&G has a bevelled channel that makes it look like 1" x 3" T&G. This will be the side facing the world. Start with the grooved edge of a piece against the outer frame. Glue and nail each piece in place with 1½" galvanized spiral finishing nails hammered in at an angle. The last piece will be too wide to fit in the remaining space; all you should need to do is plane the tongue off, though it might require a bit more shaving to fit properly.
5. Glue and screw (#8 x 1¼") the cross-brace to the inside of the bottom half of the door. Lay out the pattern for the cut-out on the upper half. (According to backhouse tradition, the moon was the marker for outhouses for women, while either the sun or a star signified a rest stop for men. We figured it would be easier and cheaper to adorn our privy with both symbols than to build a separate outhouse for each gender.) Staple a piece of screen in place; it should be big

Continued from page 149

enough to form a square or rectangle around the cut-out. Cut the trim to fit and nail in place. Remove the excess screen with a sharp utility knife. Glue and screw a crossbrace(s) to the inside of the upper half of the door.

6. Cut the shelf to length (1" x 6" x 26¾") and round the corners with a jig saw. (I used an empty Tim Hortons coffee can for the pattern for the curve.)

7. Glue and nail the shelf on the bottom half of the door so that the leading edge of the shelf is flush with the inner frame, creating a ¾" lip. There should also be a 1" gap on the opening side of the door to accommodate the stop. Cut the brackets from the remaining piece of 1" x 6" and install with #8 x 2" screws (use a #8 countersink to drill the holes in the brackets).

8. Since the regulations call for a self-closing door, spring-loaded hinges, the type often found on slamming screen doors at cottages, are right for this job. Screw a pair to the frame on the bottom half of the door. I substituted #8 x 1¼" screws for the little ones found in the package. Install the bottom half of the Dutch door in the opening.

9. Install 4" T-hinges on the upper half of the Dutch door (the upper half is not self-closing; however, when the bolt connecting them is in place, the whole door becomes a self-closing unit). Install the upper half in the door opening. The ¾" lip on the upper half should overlap the outside edge of the shelf on the bottom half to create a simple weather seal.

Now, as anyone who has ever installed a door knows, it is never quite that straightforward. Most often, a little work with the plane is a fundamental requirement. There was more toil than I expected in installing two halves to the same door.

10. Stick the foam weatherstripping to the 1" x 2" doorstop. Nail the doorstop in place with 2" finishing nails. The door – both halves – should be flush to the outside of the door trim.

11. Install the 4" barrel bolt on the back of the upper half, as in **Figure 11**. Carefully mark the location of the bolt where it meets the shelf. Open the door as a unit, and mark the new location of the bolt where it meets the shelf. An interesting phenomenon occurs as the door is opened: The bottom half actually travels farther away from the door in its arc than does the upper half. Drill two holes with a bit slightly larger than the bolt. With a small chisel or a utility knife, remove the wood between the holes to create a slot. When the door opens and closes as a unit the bolt can slide freely.

12. Install door handles on the outside of the bottom half and on the inside of the top half.

Install a screen door spring catch.

Now that construction has finished, you will want to consider a snappy paint scheme. I believe that keeping an outhouse clean and tidy, and therefore more attractive to all, begins with a paint job – inside and out. Consequently, this is also the occasion for the christening; there could be no better time to sit and give serious contemplation to the decorating scheme you will choose for your new *Cottage Life* outhouse.

A cottager on Lake Wahwashkesh, Wayne Lennox spends a lot of time sticking his nose into other people's backhouses.