



## *Approved Methods*

*August 22, 2020*

# CRAWL SPACE DOOR



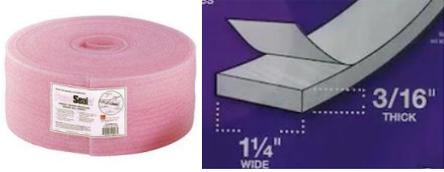
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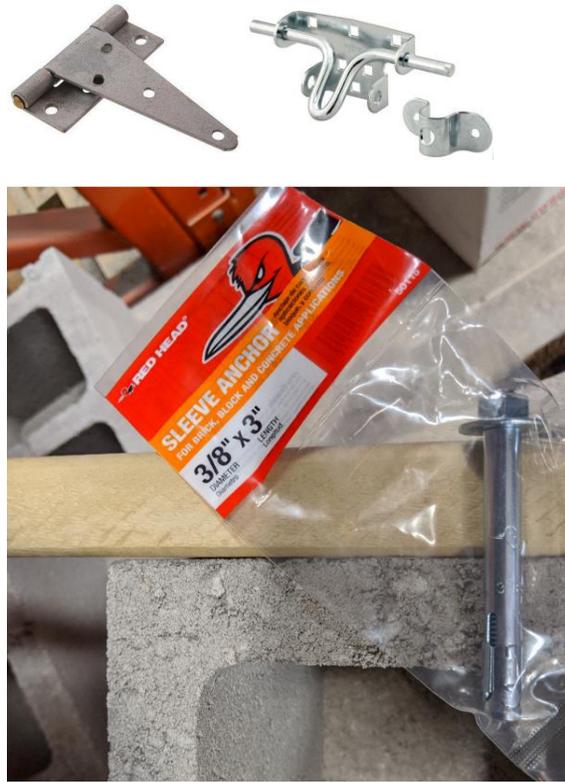
# Material List, Supplies and Tools

<p><b>Material List:</b></p> <p>(2)-2x8x8 Pressure treated *</p> <p>(5)-2x4x8 Pressure Treated *</p> <p>(1)- 4x8 sheet of 5/8 inch Texture T-111 abraded plywood preferred (or 3/4 inch Pressure Treated Plywood)</p> <p>(3)- Door hinges (6" heavy duty Galvanized "T" Hinges)</p> <p>(2)- 1/2 inch dia. Galvanized, lockable barrel bolt latch</p> <p>* Use 10 foot length if combined width plus height of door exceeds 8 feet but is less than 10 feet</p>	<p><b>Supplies Needed:</b></p> <p>Construction deck screws in sizes: 2 inch, and 3 1/2 or 4 inch</p> <p>Pack of Composite Shims</p> <p>Owens Corning FoamSealR 5 1/2 in. x 50 ft. Sill Plate Gasket or equal (Procure 7 1/2 inch width if available)</p> <p>~ (6) - 2 1/2" by 1/4" carriage bolts with nuts and washers</p> <p>(15-Pack) Red Head 3/8 in. x 3 in. Hex-Head Sleeve Anchors (alternate 1/4" by 3 1/4 " Tapcons)</p> <p>T50 1/2 in. Stainless-Steel Staples Model # 508SS1 H-Depot SKU #409918</p> <p>(2)-Tubes of Clear Siliconized Paintable Caulk</p> <p>20 foot roll of 1 1/4" * 3/16" Grey Foam Door Weather strip</p> <div></div>
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### Tools Needed:

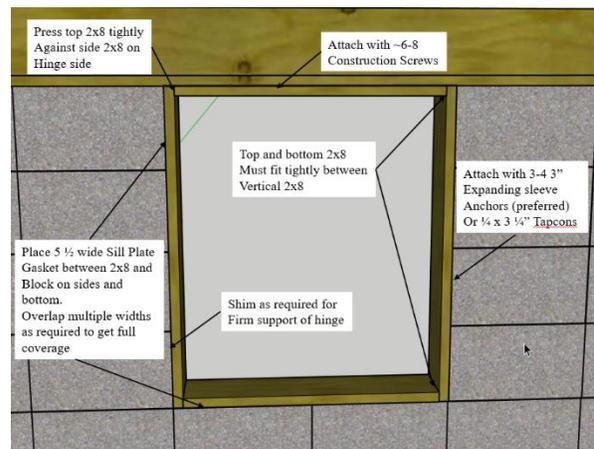
- Portable Circular Saw
- Reciprocating saw with metal cutting blades
- Smart Square
- Tape Measure and Chalk Line
- Hammer
- Impact Driver with Torx bits (T-25)
- Hammer Drill (Preferred to drill holes with Masonry bit)
- Portable Drill and ¼ inch metal/wood, 3/8 inch masonry, and ¾ inch spade bits, ¼ " Tapcon bit.
- Stone Chisel
- Caulk Gun
- Ratchet, Extension and socket set (7/16" & ½")
- Staple Gun

### Graphics of Procured Items



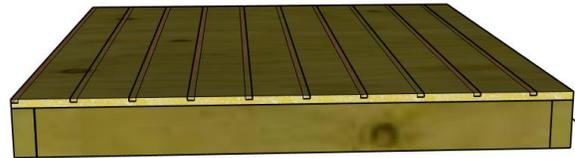
## General Instructions:

- 1) Prepare opening by chiseling away any excess mortar that will prevent the 2x8 pressure treated lumber framing the opening from laying "flat" on the surface of the block
- 2) Measure the opening and cut the vertical pieces of 2x8 to fit the frame opening. Trial fit the pieces in the opening and "machine" or plane away wood or chisel concrete block or mortar in any local places that would prevent wood from lying flat on surface of the block.
- 3) Staple sill plate gasket to block side of the vertical 2x8's.
- 4) Install the left and right side 2x8's using 3 to 4 sleeve anchors or 1/4 x 3 1/4" tapcons for each 2x8. Keep the outside edge of 2x8 flush with the outside surface of the block wall. Shim the 2x8 as required to get a square opening and to ensure that the hinge point near the bottom of the vertical 2x8 is securely supported to bear the load of the door. Counter bore sleeve anchor holes nominally ½ inch deep with a spade bit so hex head nuts of sleeve anchor are nominally flush with inside surface of the vertical 2x8 to avoid interference with door frame. Drill using a hammer drill with the proper masonry bit. Be sure to avoid drilling into the mortar joints.



- 5) Cut the top and bottom 2x8's to fit tightly between the vertical 2x8's. The top 2x8 must be pressed or forced tightly against the vertical 2x8 on the hinge side. Secure the top 2x8 to the bottom of the wood plate with 6-8 construction screws.
- 6) Staple sill plate gasket to the bottom of the lower sill and counter bore sleeve anchor holes with a spade bit. Secure the sill with 3-4 sleeve anchors, shim as required to ensure it is level.
- 7) Cut off any protruding threaded fasteners from the sleeve anchors with reciprocating saw.
- 8) Toe screw top and bottom part of the frame to the left and right sides, using 2-2" construction screws on each corner.
- 9) Measure opening and cut framing for the door. Door shall fit within the opening and it is recommended that the outside dimensions of the door frame be nominally ½ inch less than the opening dimensions. Cut Door framing with vertical 2x4 for the door height and insert the top and bottom horizontal 2x4 between the vertical 2x4's. Use 2- 3.5-4 inch construction screws at each corner to attach the 2x4's.

- 10) Cut a door panel from the 4x8 sheet of T-111 or pressure treated plywood. Carefully measure the width of the door and choose where to make the cuts on the T-111 panel so that the portion of the panel at the edges of the door (where the panel is fastened to the 2x4's) is the full thickness. Avoid the "thin" groove over frame shown in figure.



- 11) Place the door panel on the 2x4 frame, square the frame and secure it to the frame with 2 inch construction screws at nominal 8 inch spacing.
- 12) Cut a diagonal door brace. This brace shall connect between the lower corner at the hinge side to the upper corner at the latch side. Attach the brace to the door frame with 2 3.5-4 inch construction screws at top and bottom. Note: Be sure the brace is pressed tightly against the frame (loaded in compression) before screwing in the second set of screws. Fasten the brace to the door panel with 2 inch screws on nominally 12 inch centers.
- 13) Cut and install re-enforcement plates made from 2x8 or 2x4 at locations where the hinges and door latches will be installed. Press re-enforcement plates tightly against the side 2x4 and secure with 2 inch construction screws.

- 14) Support the door in the opening with the outside surface of the T-111 flush with the outside of the block wall. Ensure that there is an equal gap top and bottom and that there is enough gap on latch side so that the door frame does not hit latch side upon closing. Use shims to create the needed spacing. Try to allow a bit of extra gap as door may settle a bit. It may be desirable to cut a bevel on the vertical door frame 2x4 if the edge of the 2x4 contacts the framed opening when closing. The bevel should be 45 degrees, ¾" from the edge of the 2x4.



**Door Bevel**

- 15) Attach the hinges with the two hinges nominally 6 inches from top and bottom of door. The 3<sup>rd</sup> hinge should be centered on the side of the door. Attach to door panel with 2– 2.5" carriage bolts and construction screws and install barrel bolts latch assembly with both 2 inch screws and 2 ½ by ¼ carriage bolts with bolts located so latch covers them when in closed position. Install the "Loop" that the barrel bolt slides into and allow some space for the door settling.
- 16) Fabricate door stops by cutting two 2x4's to the height of the door opening and two which are equal to the width of the opening remaining after the two vertical door stops are in position.
- 17) Staple foam weather strip to the vertical door stops.

- 18) Position door stops in the opening and start 3 inch construction screws at 3-4 locations along length of each door stop. Have an accomplice close and latch the door and then press each door stop firmly against the door before screwing door stops into frame of the opening.
- 19) Cut the top and bottom door stops to the proper length and staple the foam weather strip to these. Attach these to the door frame.



- 20) Trim any exposed sill plate gasket from both the inside and outside of the 2x8 framing of the door opening. Caulk any gaps between 2x8 frames and block wall and any gaps between the doorstops.
- 21) Paint or stain door and exposed frame.  
Do not paint the hardware.