

50 - Installing Exterior Doors

Tools and Materials Needed:

1. Drill driver with 3 inch gold screws
2. Wood shims
3. Pre-hung doors
4. 2 ft level
5. 6 ft level

Most Common Mistakes:

1. Door set in wrong opening.
2. Door set backwards. Hinges always face the inside of the building. The threshold should always be on the outside.
3. Reveal around the top and sides is not consistent.
4. Door does not close uniformly snug to the weather stripping.
5. Door binds on hinge and doesn't easily close or open.
6. When you release it, the door swings one way or the other on its own.
7. Door frame is not set so it will align with drywall on interior.

Roles:

1. One person checks plumb and reveal while another person holds the door steady from the outside.

Door Installation:

1. Insure the doors we received have the right jam thickness. The door jam must be such that it will be flush with drywall on the inside and flush with sheeting on the outside. Flush with drywall means set with inside edge ½ inch in from framing. With our use of 1 inch foam wall sheeting, the jam thickness we require is different than builders who sheet with 7/16 OSB. The jam should be 7 in deep.
2. Distribute doors to proper rough openings. Consult the door schedule on the architectural drawings. Insure they are properly located. A door into the garage has the self-closing hinges and is fire resistant. The back door typically has the window. Insure they all swing in the correct direction.
3. For each door;
 1. If not already done, cut out the 2x6 bottom plate that spans the bottom of the door opening. Clean any debris from the area.
 2. Verify the height and width of the rough opening is sufficient for the door frame.
 3. Verify that the door rough opening is acceptably square. Minor out of square will be handled by shims.
 4. Seal the bottom of the rough opening with the butyl tape. This is to protect the door framing from mold and rot should any water get into that space. With the way we do door trim (trim boards on top of siding), there is less protection from water getting into the frame compared to the traditional approach (exterior trim runs up to edge of door trim). The tape should extend ½ inch minimum onto the face of the foam sheeting and then wrap around and extend onto the subfloor. Small patch piece is typically required to plug the corners. For the patch piece in the corner cut an 8 inch piece of tape and then from the middle of the piece

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you have just cut, take a triangle of material out of each side so that you end up with a piece that looks like a butterfly, this is called a butterfly cut.

5. If there is any loose hardware or documents attached to the door, remove and hang on a nail driven into a neighboring wall stud.
6. Remove the weather-stripping from the door jamb; keep the weather-stripping close as you will need to replace it once the door is set.
7. Remove the shipping blocks on the bottom of the threshold. Remove the plastic nut/bolt that runs through the lock hole in the door and into the strike hole in the jam. **When you remove the nut/bolt, the door can swing in the jamb. So, someone needs to keep a hand on it so that it does not hurt someone or break the jamb.** Remove any rubber or plastic adhesive pads that are attached between the door and the jam.
8. On each side of the door, tack up a 7/16 OSB scrap to use as a guide to setting the door flush to the eventual drywall. On each side, tack one scrap high and one low.
9. "Dry-fit" the door in the opening as a final check that it will fit. When satisfied, remove it and shoot an entire tube of silicon caulk on the floor where the door threshold will sit. This is the one chance in the life of the house to thoroughly air and water seal under the door.
10. Insert the door into the rough opening, being careful to not scrape the caulk away. One or two people need to hold the door from the outside and respond to directions from another person inside to push/pull top/bottom/side until the door is properly located, flush to the OSB scraps previously set..
11. When you are satisfied that the door is plumb and properly located, set 1 screw by each hinge on that side of the door. Set the screws close to the space where the weather-stripping will be so that when you replace the weather stripping they will be hidden but still accessible should the door need re-working. Leave them slightly proud pending further evaluation.
12. Evaluate the door to see if reveal is consistent, if door operates correctly, if the lock hole is aligned with the strike, etc. Insure the gap between the door and the jam near the lock hole is about 1/8 inch. A gap larger than that will result in poor engagement of the lock to the jam. Adjust using shims to make the gap smaller, and screws to make the gap larger. The door should close snug to the weather stripping, but it should not take excessive force to push it closed. Insert wood shims adjacent to each hinge and 2-3 places on the opposite site. Adjust the shims until the reveal is correct.
13. Drive screws into both sides of the door and in the top. These screws or nails should go through shims or other suitable spacers and be countersunk.
14. Either install the temporary construction locksets or otherwise secure the doors from swinging and being damaged by the wind. One choice is to put a lockset on one door and brace the others closed with a 2x4 spanning from side to side, nailed to adjacent wall studs.
15. To protect the thresholds from damage by construction traffic, cover the threshold with temporary masking or a premade threshold cover. There is a specific easier to remove blue protective material we use for this.
16. Attach a 2x4 or other suitable material to the house, under the outside lip of the door threshold. This is to protect the threshold from being bent by construction traffic. This will later be replaced with more appropriate exterior trim material.
17. On both sides and top, run butyl tape spanning from the foam wall sheeting to the middle of the door casing.

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18. Fill the space between the door frame and the rough opening with door and window expanding foam. Be sure it is door and window foam. Other foam expands with such force that it could twist the door frame

Safety

57 Lifting	lift too much, lift with back instead of knees, cause back strain	Site supervisor brief team to be cautious
33 Hazardous Material	Expanding foam, caulk, etc	<p>Wear Safety Glasses and gloves. This material does not wash off and will only wear-off over an extended period of time.</p> <p>Check MSDS. Check that workers are not particularly sensitive to this material.</p> <p>Keep your head (eyes, nose, mouth) well away from these substances. If you get it on your hands, keep your hands well away from your eyes, nose, mouth.</p>
49 Tools - Hand and Power	Drills, especially with large hole saws can jam in the material, the handle spins instead of the bit. Handle wrenches workers shoulders or hits worker in face	Hold drill with 2 hands. Use light pressure so jam is less likely. Keep face and other body parts well back from the drill. If on a ladder, be braced so a sudden jerk by the drill does not throw you off the ladder

I have heard and understood the briefings on how to use the tools required for this activity. I have heard and understood the methods we use to do this activity

Date _____

_____ Instructor Name _____ Signature

_____ Name _____ Signature