

## SUBFLOOR INSTALLATION GUIDELINE

# Encompass



## CURBLESS LINEAR DRAIN SHOWER BASES

(Patent NO US 10,165,905 B2 and No US D792,954 S)

### SHIPPING / RECEIVING DAMAGE POLICY

On occasions when products are shipped via third party shippers, there is a chance of damage both outside and more importantly inside the carton. THE CUSTOMER IS RESPONSIBLE for claims as a result of handling unit shortages and damages NOT NOTED ON THE SHIPPING BILL OF LADING at the time of delivery. BEFORE YOU SIGN AND ACCEPT DELIVERY: unpack the carton in view of the delivery driver and thoroughly inspect for damage. If any damage is found, make NOTE OF THE DAMAGE ON THE BILL OF LADING AND RETAIN A COPY. Take pictures of the damage to the product and packaging material. Do NOT throw away the carton or any packing materials until told to do so. Claims for concealed shortages or damage must be reported immediately upon receipt Encompass shower bases at 303-798-5547 or to Sander and Sons, Inc. at (303) 347-1345.

### FOR EASY INSTALLATION

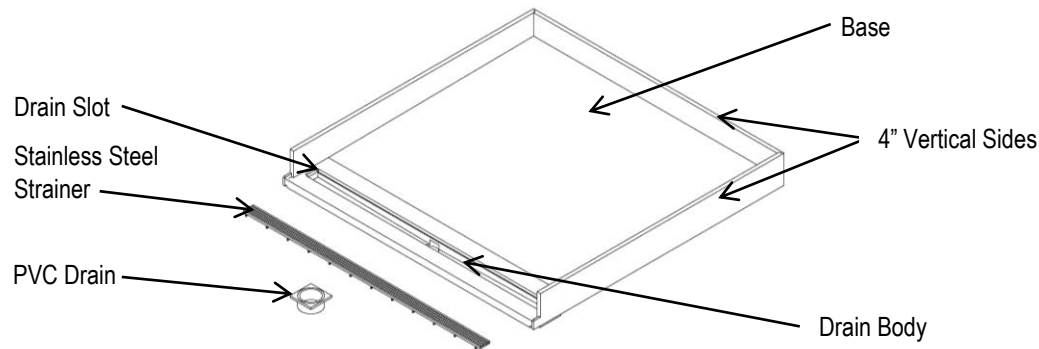
READ ALL the instructions completely before beginning installation.

READ ALL warnings, care, and maintenance information. We recommend professional installers be consulted on applications for the shower base install, check and observe local building codes.

Use appropriate safety practices and procedures.

Remove the stainless steel strainer and set aside. This component will NOT be installed until after shower wall finish materials are completely installed.

Do NOT use any screws in the installation of the actual solid surface shower base.



### RECOMMENDED TOOLS AND MATERIALS TO INSTALL SHOWER BASE

#### Tools:

- Measuring tape
- Drill
- 4'-0" level
- Carpenter's square
- Jig saw with wood and stainless steel blades
- Circular saw to cut subfloor
- Fine steel file

#### Expendable materials:

- (2-3) tubes 100% silicone caulk and 1/8" notch trowel
- (1-2) tubes wood construction adhesive
- 2" flat head wood screws for subfloor
- 3" wood screws for wood blocking
- (1-2) 8'-0" 2x4 wood studs for blocking floor

### STEP 1: ROUGH IN MEASUREMENT

Walls must be stripped to exposed wood studs and wood subfloor. Wood subfloor must be 3/4" for adjacent floor finish to be level with shower base. Clean and sweep the entire area where shower base is to be installed. Confirm all screws or nails in the subfloor are countersunk and flush.

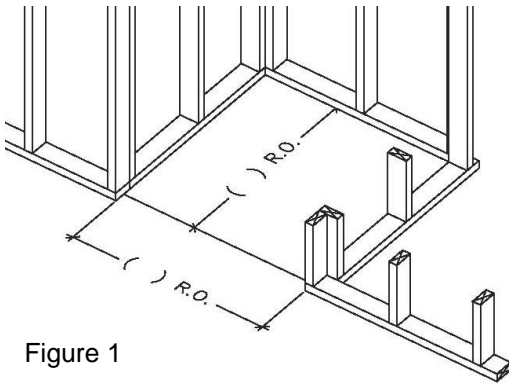


Figure 1

Measure shower base to verify dimensions. Verify rough-in dimensions from left to right (shower base width + 1/4") and front to back (shower base depth + 1/8"). Using a carpenter's square, verify all inside corners of the install location are square (90°). If the install location is not the correct size and square, make necessary corrections to enable shower base to be installed with a 1/8" gap on all sides. Shower base must NOT be wedged into place.

### STEP 2: LOCATE NEW DRAIN POSITION FOR EXISTING DRAIN TO BE RELOCATED

Dry fit shower base. Position shower base in install location with 1/8" gap on all exposed stud walls. Align shower base. Mark X on floor at center of 2" PVC drain pipe of shower base and on the right and left sides where the front of the base will be.

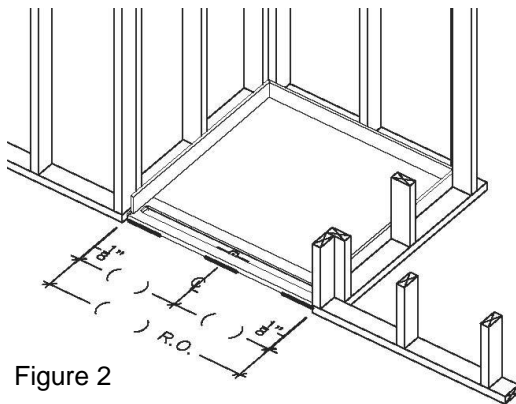


Figure 2

Carefully remove shower base. Confirm the drain and shower base floor markings. Including the 1/8" gap from the rear and side walls the drain center should be as follows:

Measuring from left OR right side stud wall:  
 Base drain center =  $\frac{\text{base width ( )} + 1/8"}{2}$   
 X base depth ( ) - 2-7/8"

### STEP 3: MARK NEW FLOOR DRAIN SLOT AND CHECK DRAIN CLEARANCE FROM JOISTS

Determine which direction the floor joists run. This can be done by viewing joists from below floor. If this is not possible, nail heads in the subfloor should indicate the centers of the joists. The spacing of the nail heads indicate the direction the joists run. The tightly spaced nails are where the joist is. The larger spaced nails indicate the spacing of the joists.

Measure the length of the 3/4" x 3" thick drain on bottom of the shower base. Draw a rectangle on the floor centered on the X centerline of the drain marked in Step #2 that is 3-1/2" wide x (length of the 3/4" thick drain lower body). Add 1/2" to the length of the cut out so the drain will fit into the floor easily. This slot will be cut out in Step #4.

Check drain and joist markings on the floor and confirm that:

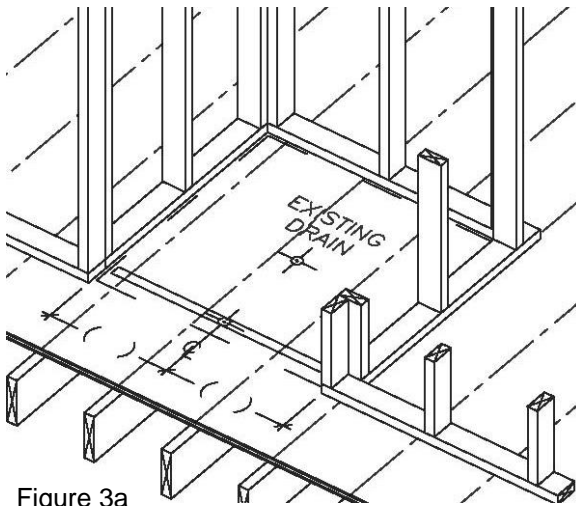


Figure 3a

If joists run **front to back** of shower base, verify no joist side is less than 3" from the centerline of the shower base's 2" pipe center. If a joist is too close to the drain output, it will interfere. The joist area may need to be boxed, see Figure Box Out.

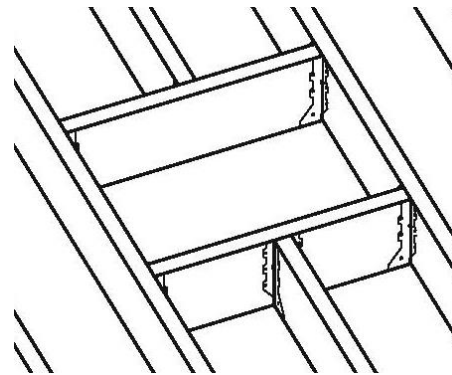


Figure Box Out

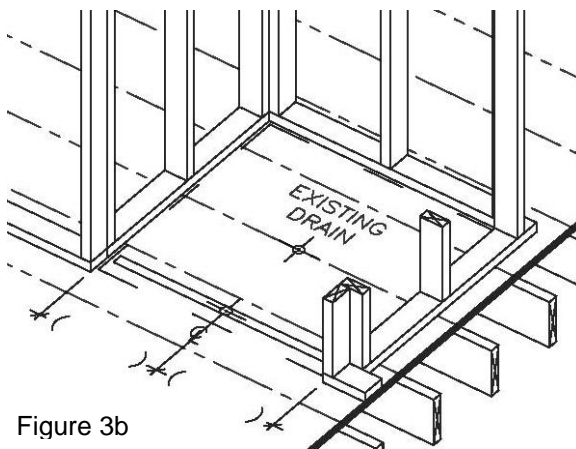


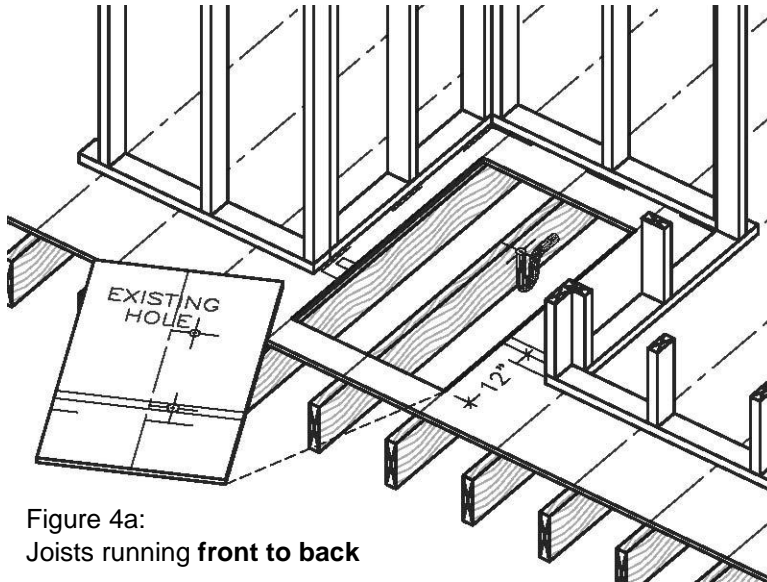
Figure 3b

If joist run **left to right** of shower base, verify no centerline of shower base's 2" pipe center. If it is less than 3" or more than 8" from the centerline of shower base's 2" pipe center OR if the drain will be behind a joist, it will prevent enough access from the front of the shower base area to do the final plumbing connection. Therefore, the joist area may need to be boxed, see Figure Box Out.

**If no joist interference is encountered OR you have access to the shower drain plumbing from a lower floor go to Step #4.**

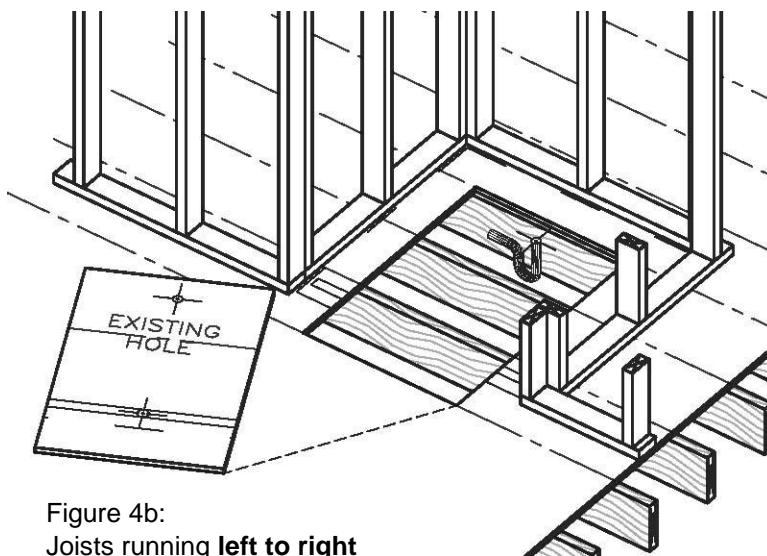
If drain interference with a joist is identified, the joists need to be boxed before proceeding with the install. See Figure Box Out for example of boxing joists. This is a common method used to resolve piping interference with joists during remodel work. Sander and Sons, Inc. recommend contacting and consulting with a professional contractor to determine the type of boxing needed and have contractor complete this task. Complete boxing joists before proceeding with the installation of the shower base. During the joist work, the existing drain is to be moved to the drain center lines identified in Step #2.

#### STEP 4: MARK AND PREPARE TO CUT SUBFLOOR FOR RELOCATING EXISTING DRAIN



Determine what joist and subfloor area needs to be cut to expose the existing drain location and new drain area to allow for the drain reconfiguration.

Cut a section of subfloor to include 12" in front of where the shower base will be. The subfloor section width must be wide enough to allow the install of sufficient wood 2x4 blocking support material on sections of joist that are exposed to the left and right of the shower base drain. The amount of drain blocking depends on the length of the drain. At a minimum on front to back joists, start cutout at the first joist from each side wall so that blocking can be installed between each joist along the length of the drain body. See Figure 5a. For left to right joists, start cut out 8-10" from each side wall so that drain blocking can be installed front to back between joists for support under drain. Drain blocking should be spaced every 8". See Figure 5b. The subfloor piece will be cut to expose the new drain pipe location and allow the PVC Drain connection to be made. See Figure 4a. This piece will be reinstalled after the additional wood 2x4 floor blocking is installed between the floor joists. See Figure 5a & 5b. Mark the floor area to be cut ensuring that all cuts will be on the centerlines of joists.



Before cutting subfloor, remove screws that saw may contact and set the circular saw depth STOP to the thickness of the subfloor to NOT cut into any floor joist. Cut along marked lines and remove the subfloor piece to expose the existing drain and new drain area. Set this piece aside for reinstallation later.

Figure 4b:  
Joists running left to right

## STEP 5: MOVE THE EXISTING DRAIN PIPE TO THE NEW DRAIN LOCATION

Consult with a professional plumber for the drain reconfiguration. Move and/or extend existing drain to new drain location identified in Step #2. In most situations, the existing drain p-trap can stay in place with a new pipe installed to extend from the p-trap to the new shower base drain output. Check with local codes to ensure it is allowed. Without compensating for any floor leveling compounds used, the top of the new 2" drain pipe should be approximately 2-3/4" from the top of the subfloor. This should flush it out with the shower base's 2" PVC drain pipe once the shower base is set in place.

## STEP 6: BLOCK DRAIN AREA

Dry fit subfloor piece cut out earlier. Ensure that it fits well and makes full contact around the perimeter of the joists. If there are large gaps and portions of it that are not in contact with the joists, the opening should be squared up and a new piece should be used. If a new piece of subfloor is used, repeat the joist center, drain center, and drain trough cutout area markings on the subfloor completed previously in Step #2. Verify the drain matches the center of the drain body 2" pipe output markings on the subfloor piece. If not, make adjustments in the floor area drain pipe.

Remove the subfloor piece and cut on the line which identifies where the front edge of the shower base will be in Step #2.

Using new wood 2x4 blocking between the joists to strengthen the floor, cut out areas and provide added support for the new base drain body that extends into the subfloor area. See Figure 5a & 5b. The wood blocking should be installed flush with the top of joist so that it provides direct support to the drain body and the old subfloor piece when reinstalled. Wood blocking running parallel to the drain body should be kept back 2-1/4" from the linear drain horizontal center.

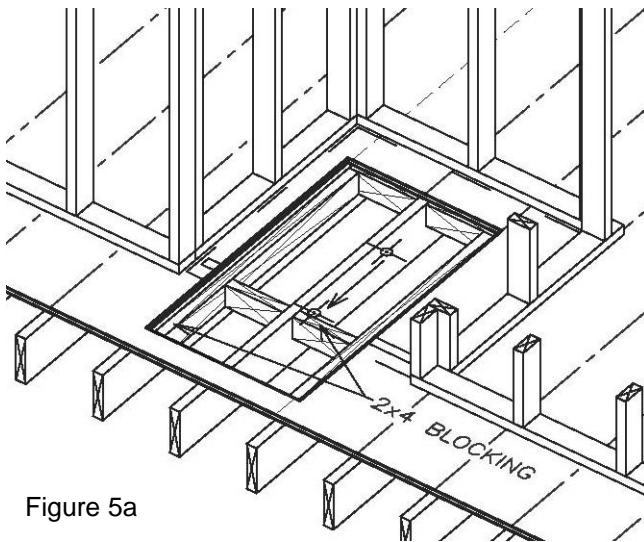


Figure 5a

### **For a joist system with joists running front to back:**

Wood blocking will run between joists running parallel to and along both sides of the drain body. Add blocking to all joist exposed openings in the subfloor and along perimeter areas where the subfloor was cut.

### **Wait until Step #9 to install the blocking in front of the drain body**

as it will be installed after an access piece is cut off of the loose subfloor. Blocking will then be installed directly under the seam of the two loose subfloor pieces.

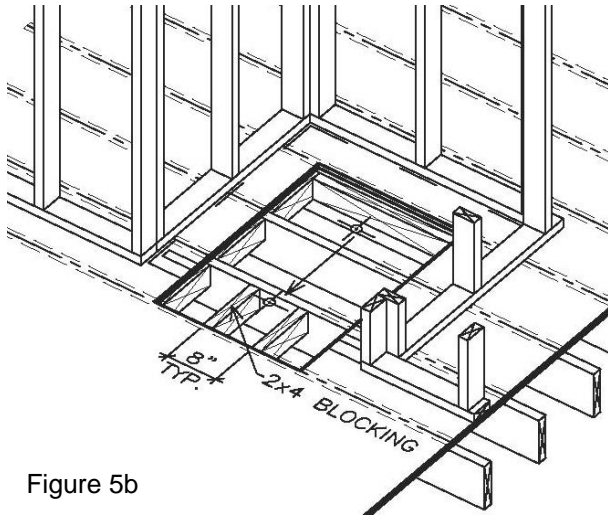


Figure 5b

**For a joist system with joists running left to right:**

Wood blocking will run between the joists perpendicular or across the drain body and should be at 16" on center joist spaces. Add blocking to all joist exposed openings in the subfloor and along perimeter areas where the subfloor was cut.

**Wait until Step #9 to install the blocking in front of the drain body** as it will be installed after an access piece is cut off of the loose subfloor. Blocking will then be installed directly under the seam of the two loose subfloor pieces.

**STEP 7: REINSTALL REAR SUBFLOOR PIECE**

Dry fit front and rear subfloor pieces. Ensure that pieces fit well and make full contact around the perimeter of the joists and blocking pieces and that floor is flush with the adjoining areas. Verify that ALL required blocking is in place. Verify the shower area subfloor is level in all directions with a 4'-0" level. The floor must be level and smooth so the underside ribs of the base are in full contact with the subfloor. If the floor is not level, the water may not flow to the drain evenly.

Carefully move the shower base to install location and lower in place. Adjust shower base to have a 1/8" clearance on the three exposed stud walls. Once this is achieved, confirm the shower base PVC drain output lines up with the house drain pipe. There should only be a 1/8" gap between the two 2" pipes so that the PVC connector will fit properly. The pipes should line up so the pipes are not forced in place. Make horizontally and vertically adjustments as necessary.

Once pipes line up, remove the shower base from the install location. Apply wood construction adhesive to the REAR subfloor joist perimeter, cross pieces and joist blocking.

Set the rear subfloor piece in place and verify that the drain cutout is parallel to the rear wall and square to a side wall. Secure piece down using countersunk wood screws. The floor area around cutout is to be flat and level with the surrounding subfloor. Walk on floor area. There must be no deflection in subfloor between the joists, especially where drain area recesses into the floor cutout. If there is deflection, determine cause and **make corrections before proceeding**.

**STEP 8: SET SHOWER BASE IN PLACE AND CONNECT TO HOUSE DRAIN PIPE**

Carefully move the shower base to install location. Test the new drain to make sure it was not damaged during installation: plug seal 2" drain opening in the bottom of the linear drain with a blow up test ball. Fill linear drain with water, mark fill level, and let stand for 1 hour. If level does not change, sponge out the water in the drain, remove plug and continue to final install steps.

Attach the PVC Drain to the shower base 2" PVC pipe outlet. Tighten the clamp screws @ 60 inch lbs. to secure it to the pipe. Carefully, lower the shower base and slip the no hub over the drain pipe so that NO stress is placed on the in home plumbing connectors OR the shower base 2" PVC drain pipe. Tighten the clamp screws on this portion of the PVC Drain. Check the shower base to ensure there is a 1/8" clearance on the three exposed stud wall sides.

## **STEP 9: INSTALL FLOOR BLOCKING PIECE IN FRONT OF SHOWER BASE DRAIN**

### **Front to back joists**

Cut wood 2x4 blocking pieces to fit parallel to and in between the exposed joists in front of the base drain. This piece is to be directly under a portion of the shower base front and the seam of the two cutout subfloor pieces. See Figure 5a. This piece of wood blocking will support the front of the base and support the two cutout subfloor pieces.

### **Left to right joists**

In most cases, the wood blocking pieces are already in place from an earlier step unless one of them would have interfered with the no hub install. Install any remaining wood blocking pieces.

## **STEP 10: INSTALL FRONT SUBFLOOR PIECE**

Slip front subfloor piece under the front of the shower base and set in place. Ensure that the subfloor piece is in full contact with shower base front wood blocking and other perimeter joist wood blocking. Make sure subfloor piece is flush with the adjoining areas. Walk on floor area. There must be no deflection in the subfloor. If there is deflection, determine cause and **make corrections before proceeding**.

Remove the front subfloor piece, set aside. Apply wood construction adhesive to the FRONT subfloor joist perimeter, cross pieces and joist blocking. Set front subfloor piece in place. Secure piece down using countersunk wood screws. The floor area around cutout is to be flat and level with the surrounding subfloor.

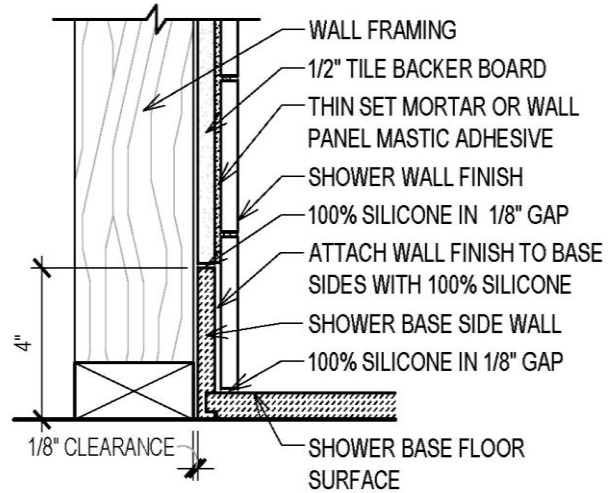
**Note: Do NOT install the stainless steel drain strainer** until the installation of wall board and wall finish (i.e. tile) is complete as you may trap it in place and will not be able to remove it for cleaning.

## **STEP 11: INSTALLATION OF WALL BOARD AND WALL FINISHES / FLOORING**

Install shower walls and flooring. Below are tips on installing flooring and wall materials that interface with the shower base.

- **Lay a piece of plywood on the base floor to help protect it from damage with dropped tiles, tools, etc.**
- Install tile backer board a minimum of 1/8" off the top of the 4" vertical sides of the shower base. Using 100% silicone caulk, fill the 1/8" gap between the base vertical side and tile backer board. See Figure 6a & 6b.
- Install wall finish slightly past the drain opening so water that runs down the side walls to the drain cannot escape at the side wall and drain interface. See Figure 6b.

- When shower wall finishes are installed, tile or other wall finishes used should be adhered to the shower base's 4" vertical sides using 100% silicone mildew resistant caulk. Do NOT use tile thin set mortar or any other mastic. These materials will not adhere as well or allow for expansion. See Figure 6a. Joint between base front and flooring must be caulked with 100% silicone, NOT grouted. See Figure 6b. Install tile or other wall finishes 1/8" off the shower base floor and flush to the front of shower base. Caulk the 1/8" gap with 100% silicone caulk. See Figures 6a & 6b.



- vertical side wall evenly from the top surface of the base to the top edge of the base's vertical side wall. It is recommended to use a 1/8 inch notch trowel to spread the silicone and insure the application of silicone is even and no voids are created. For full panel installations, apply silicone with the notch trowel a least 2 inches up the side of the base vertical side, from the rear to the front of the base. Once this is completed the side panel can be installed and pressure applied to the wall panel interface to the base to seal it to the base's vertical sidewalls. Then the 1/8" to 3/16" gap left between the base top surface and the underside of the tile or wall panel must be filled completely with caulk, then cleaned neatly with a caulking tool. This process will provide for a long-lasting seal of the wall panels to the base and insure that no rear tile / panel to base voids exist that could potentially allow water to escape the front linear drain.**
- A door sweep on the bottom of the shower door is recommended to direct water off the inside of the door to the drain and reduce splatter from getting to the outside of the shower.

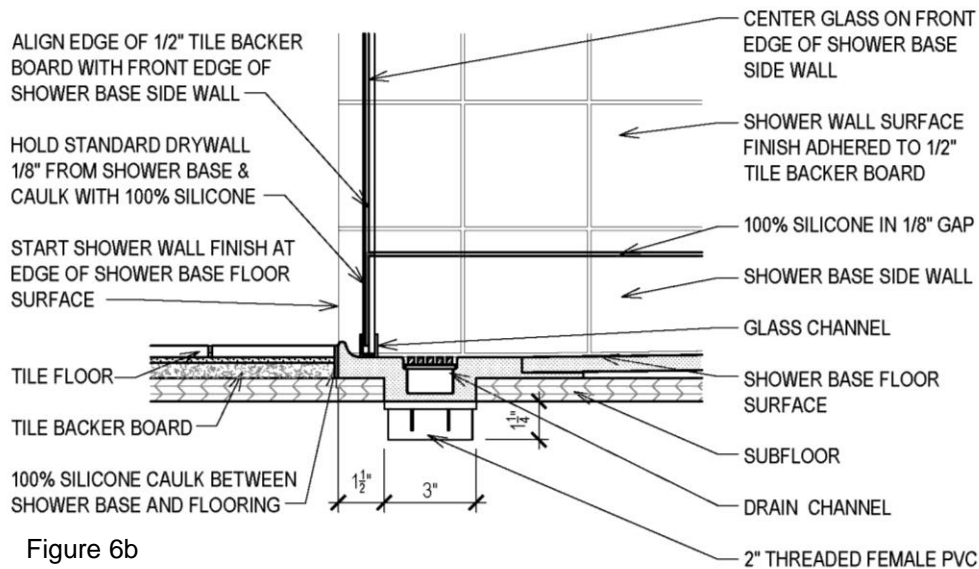


Figure 6b



- Remember the shower base floor has a 2% slope. It is best to have full tile pieces at the base interface in order for the finish material to be cut to follow the slope.
- Shower door and glass panels should be mounted at the front of the drain, centered between drain opening and front of shower base. See Figure 6b. Do NOT mount glass channels to shower base with screws. Use 100% silicone to mount glass channels.

## **STEP 12: INSTALL THE DRAIN STRAINER**

Do NOT place the drain strainer prior to the installation of wall finish (i.e. tile). It must be fitted and installed AFTER the wall finish is completely installed. The stainless steel drain strainer that comes with the shower base may have to be cut to size once wall finish (i.e. tile) is installed. It can be cut with a hack saw or jigsaw using high quality blade used for cutting stainless steel. After cutting use a steel file to smooth rough edges as needed.