

# 120 Floor Sheet

## Materials Needed:

1. Nail gun with 8d rink shank for subfloor
2. As necessary, ladders to get up onto floor. If sheeting 2<sup>nd</sup> floor, step ladders and scaffold will be needed to raise and place the sheets in the 1<sup>st</sup> row.
3. Circular saw
4. ¾ 4x8 OSB subfloor sheeting
5. Long and short handle subfloor adhesive guns. Two cases of subfloor adhesive.
6. Sledge hammer
7. Router with flush cut piloted bit to trim the perimeter of the finished floor flush to the rim joist.

## Roles

1. Cut person – cuts sheets as needed for sheet stagger layout
2. Glue person – lays down subfloor adhesive ahead of sheet being placed
3. Sheet placement team – 2 people to drop a sheet in place on the floor trusses Twist trusses as necessary to keep 24 inch on center.
4. Pounding person – use a sledge hammer and a scrap 2x4 to drive the tongue & grooves together
5. Nailing person – after sheet placement, fully nail each sheet in place.

## Most Common Mistakes:

1. It is very important that the 1<sup>st</sup> row of sheeting align very precisely to the 48 inch chalk line. If this 1<sup>st</sup> row is very well lined up, the subsequent rows will also line up well. If the 1<sup>st</sup> row is not straight, you will have trouble getting tongues and grooves of future rows to be tight and strong.
2. Insufficient adhesive. Adhesive is very important for eliminating floor squeaks. Be generous
3. Dried out adhesive. If adhesive extended beyond the sheet put down, wipe it off apply new
4. Trusses not pulled/pushed to 24 OC. Trusses are very limp and will sag left or right. If trusses are not held to 24OC on the 1<sup>st</sup> few rows, it will be nearly impossible to pull them to centers on the later sheets.

## Construction:

Before subfloor is sheeted, the floor joist and rim joist where installed.

Make sure the rim joist on all sides are plumb. Toe-nailing it to the mudsill tends to make the rim lean outward a little. If you nail sheeting to it while it is leaning outward, the floor will not be as strong as it should be and the floor dimensions will be wrong. As necessary, plumb the rim-joist.

1. Sheet subfloor
  - a. Subfloor is set with its 8 foot dimension perpendicular to the floor joist.
  - b. If you are sheets a unit that butts up to an existing common wall, start sheeting from the common wall side. If you are sheeting a floor that has a stairway cutout, start on the side away from this cutout – the side that has sheeting the full length of the house.
  - c. Snap a line at 48 inch from end to end. Set the 1<sup>st</sup> sheet on the top, with its tongue toward the rim. Apply adhesive to the floor joist where the 1<sup>st</sup> sheet will go.
  - d. If the subfloor is going down on joist that are in hangers, you will have to drill clearance holes for all the nuts on the foundation bolts. Prior to sheeting, cut all the excess length of

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- the foundation bolts flush to the nuts.
- e. With 3 people, lift the 1<sup>st</sup> sheet in place. Adjust position.
  - f. Push/pull floor joist to 24 inch centers and nail 6 inches in from the edge using 8D ring shank nails
  - g. Repeat above for each sheet in the 1<sup>st</sup> row.
  - h. The last sheet in a row may be an odd length. If overhang is a foot or so long, nail it up and leave it long. Excess will be routed off later. If overhang is 4 or more feet long, cut, before placing
  - i. After the 1<sup>st</sup> row is up, the team can climb up and place subsequent rows from on top. A supply of sheets can be stacked on top of the 1<sup>st</sup> row.
  - j. If you are sheeting the 2<sup>nd</sup> floor, the preferred solution is that the entire house is ringed with scaffolding. This supplies a good work surface for setting the 1<sup>st</sup> and last rows of subfloor sheets. It also handles the risk of falling outward off the partially complete floor. If you cannot ring the entire house with scaffold, you will need at least one section to raise the 1<sup>st</sup> sheet. Set this scaffold section adjacent to the house in the neighboring house or garage. Run the adjusting screws all the way up to make the scaffold almost 8 ft high. 2 workers stand on the scaffold to lift sheets for the 1<sup>st</sup> row. A 3<sup>rd</sup> worker stands on a step ladder inside to help drop the 1<sup>st</sup> row sheets in place and very accurately line them up on the chalk line. After setting a sheet, move the scaffold down to line for the next sheet.
  - k. If you are sheeting the 2<sup>nd</sup> floor and you do not have the house surrounded with scaffold, as quick as you have access to an area, nail up the 2x4 safety rails onto the posts put up when the 1<sup>st</sup> floor walls were set. One at 42 inches above the deck, another at 24 inches.
  - l. The sheeting rows must be staggered, bricklayer style. Measure the 1<sup>st</sup> ½ sheet. It will nominally be 48 inches, but there may be reasons for a different length.
  - m. After a sheet is dropped in place, someone steps out on it and places a 6ft 2x4 scrap against the sheet. One person steps out on the sheet and pounds it in place using a long handle sledge hammer.. The tongue and groove will not totally close. A small gap is engineered in to support expansion and contraction. When it is pounded in place, someone puts a couple nails in it to keep it from moving.
  - n. Every sheet is to be nailed, 12 inches on center in the body and 6 inches on the perimeter. Before nailing, make 24 inch pencil marks on the leading edge of the sheet and push/pull joist to align to those marks. Do not nail the house perimeter (into the rim joist) until after the excess is routed off. A few nails sticking out through the rim will destroy the router bit.
  - o. If you are on the 2<sup>nd</sup> floor, as soon as the floor is complete around the stairway hole, put up a safety railing around that stairway opening. Rails at 42 and 24 inch above the deck
  - p. After the floor is complete, using a flush cut trim router bit, trim the excess around the house perimeter. If applicable, also trim the stairway cutout (but 1<sup>st</sup> check if a portion should stay for an overhanging closet). Then, nail the sheeting to the rim.

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## Safety

32	Hazardous Material	Subfloor adhesive used in subfloors	<p>Wear Safety glasses</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. Wash your hands with soap and water promptly after use</p> <p>When adhesive is used in confined space (crawlspace), be sure to use on the low/no VOC version. Use the crawlspace blower (set on low speed) to insure a flow of fresh air</p>
47	Tools - Hand and Power	Circular Saw - wood propped between 2 supports, cut in the middle, blade is pinched, kickback causes injury	<p>When using a circular saw, short end of the cut is left to fall away. Do not make a cut in-between 2 supported ends. If someone is holding the drop-away end, he/she must lightly support it, letting it sag as the cut is made</p> <p>No cutting with wood propped over a worker's foot or supported by hand.</p>
48	Tools - Hand and Power	Circular Saw - arms, legs etc too close to cut	Common practice among carpenters is to support the cut with their foot. This is not accepted practice at Habitat. Cut to be done on saw horses or otherwise supported away from body
51	Tools - Hand and Power	Defective or dull power tool	Red tag defective or dull tools. Do not put back such tools back in the POD exposing some other worker to the same risk.

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8	Fall From Height	Fall through openings in subfloor	We use the crawlspace hatch as a vent for the blower that is drying the crawlspace. As soon as this hatch is cut out, trim it, put hinges on it and only prop it open when volunteers are not on site. Paint "hole" on the lid
			Put up a temporary guardrail around the stairway hole as soon as the 2nd floor subfloor is up. Also set a temporary railing on the stairway. Both must have a top rail and a mid rail.
4	Fall From Height	Fall while sheeting 2nd floor subfloor	<p>The preferred solution is that the entire house is ringed with scaffolding. This supplies protection from falling outward off the 2<sup>nd</sup> floor deck.</p> <p>Alternately, set a railing around the perimeter. Attach vertical posts while the 1<sup>st</sup> floor walls are being raised. Attach the railing to these posts as soon as enough of the floor deck is up to access those posts. Stand on a scaffold section when lifting and setting first couple floor sheets. Do not stand on wall tall top plates or while setting sheets. Do not attempt to push a sheet up through the 2ft space between floor joist. It will fall uncontrollably when about 6 ft of it is above the joist, possibly falling, crushing fingers, etc</p> <p>Fall through the fall trusses, toward the inside of the house is still a risk that must be mitigated by wearing a fall arrest harness, setting a fall anchor point and using an SRL.</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

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72 Power Tools	Lose control of router and cut arms, hands, etc	The router is a dangerous tool. The router bit is exposed. If a worker comes in contact with the spinning tip of the router, he/she could be badly hurt. Be careful that you not drop the router and that it has stopped before you set the tool down.
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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