

240 - Roof Sheet

Materials Needed:

1. Nails gun(s)
2. 8D sinker gun nails for sheathing, 16D sinkers for subfascia and 16D galvanized for finish fascia.
3. Sheathing H clips
4. Chalk line
5. Circular saw
6. Drywall square
7. Carpenter's square
8. Extension ladders

Roles

1. Cut guy – down on the deck – cutting per direction from the nailing team
2. Place guys – nailing fascia and sheets in place on the roof trusses.

Most Common Mistakes:

1. Not staggering the seams of the sheathing.
2. Forgetting the H clips
3. Not push/pulling rafters to 24" alignment on lower sheets resulting in big problems up higher
4. Aligning sheathing with the edge of the roof rather than perpendicular to the rafters.
5. Attaching the sheathing wrong side up.
6. Inadequate nailing.
7. Panels not meeting in the center of a truss or a rafter.
8. Sub-fascia board not ending on the middle of a truss

Construction:

1. Currently, we are getting trusses with their tails accurately cut to the length we want for the overhang size we intend. This results in us not needing to trim rafter tails. If this should ever change, we will need to do the following;
 - a) Check the plans (or construction manager) to find out what the overhang length is to be on the house. Note that this length is a horizontal measure and is not the same as measuring out that far on the top chord. Use a carpenter's square (or make a wood guide block) with the leg against the house wall and measure out that far, minus 1 ½ inch for the thickness of the sub-fascia. After making this measurement at both ends, snap a line from end to end. Use a scrap cut to the roof pitch to mark a vertical line on each truss. Then, trim each rafter tail on that line.
2. The sub-fascia is 2x6. Breaks in the sub-fascia should occur in the middle of a truss. The sub-fascia should be set so that its outside top edge is on-plane with the top chord. That is so the 1st row of sheathing will run out past the rafter tail and to the outside edge of the sub-fascia.

On most homes, we have done flat soffit. Recently, on some homes, we are doing sloping soffit. If we are doing sloping soffit, the rafter tails were added on to make them 5.5 inches tall. The subfascia must be ripped at an angle to match the angle of the rafter tail. The sloping soffit will run over the rafter tail and extend out onto the bottom side of the subfascia.

3. Attaching the subfascia is the 1st opportunity to pull the rafters accurately to the 24OC pattern. Usually, the rafters are straight and on plan. But, sometimes a rafter may be leaning or a little twisted. If you attach the subfascia to a leaning or twisted rafter, you will make it harder for

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- those sheeting the roof to pull the trusses to 24OC. So, before placing your subfascia, put 24OC layout marks on it. As you as nailing it up, push and pull rafter tails to be on those layout marks.
4. After the subfascia is up, hang the finish fascia. Make the breaks in the fascia occur somewhere else than on the breaks in the subfascia. Join pieces of fascia using a 45 degree miter cut. Nail up with 16D galvanized nails.
 5. If you are sheeting the roof on a multi-family dwelling, fire resistant sheeting may be required for some number of feet on both sides of the firewall. Check with the supervisor about this.
 6. Before setting the 1st row of sheets, snap a chalk line at 48 1/8th inches from the sub-fascia. It is critical that the 1st row go down well aligned. If you hold this 1st row to the chalk line, the future rows should align themselves easily.
 7. Take off the 24 inch metal truss spacers when you reach that elevation in your sheeting. Do not sheet over the top of them. These are reused in subsequent builds. Also, remove the 2x4 diagonal braces as you reach that height in the sheeting.
 8. The 1st sheet running out to the gable overhang is typically an odd length. That is because the gable overhang is typically 1ft or 10 inches. After that, the spacing of the commons is 24 inches.
 9. It is best if the cut people down on the deck snap lines every 2 ft on the sheets they pass up. Sometimes this is unnecessary because the sheets come from the lumber mill with 2 ft markings. Using this marking, the people placing sheets can push or pull trusses to align with these 2 ft marks. And, the nail gun person has a good line to follow when he completes the nailing. If the cut people don't do this, the team placing the sheets will have to use their tape and pencil to mark the 2 ft intervals on the sheet. It is very important, especially on the 1st several rows of sheets to pull to 24 OC. A small error at the bottom will be a big error at the top.
 10. The usual process is that 2 people are placing the H clips, setting sheets and hand driving a few nails to secure the sheet. Then, a 3rd person follows up behind them fully nailing the sheet.
 11. Begin applying the sheets from the bottom of the roof (the eaves) and work your way up to the ridge.
 12. Use one H clips in between each roof truss, at the horizontal joint between 2 sheets.
 13. Nail every 6 inches on the edge and 12 inches in the field. Always consult plans for additional nailing.
 14. Do not nail the edge rafters where the sheathing meets until the adjoining sheet is in place. This will enable you to move the rafter a bit if needed, so that the sheathing meets in the center of the rafter.
 15. Carefully work your way up to the peak of the roof. Check for alignment and end support as you go. For safety, temporarily nail a 2 x 4 "toe board" horizontally across the lower panel of sheathing to brace yourself against as you add the second and subsequent courses of sheathing.
 16. We typically use a ridge vent in the shingles to allow attic ventilation. For this to work, the sheet is to end short of the ridge by 1-3/4 inches.
 17. The top row of sheets may need to be ripped. The top sheet must be no less than 12 inches tall. You may have to rip the 2nd to the top sheets to insure the top sheet row is at least 12 inches.
 18. If we have enough people willing to work on the roof, we sheet both sides at the same time. It works fine and gets the job done faster.
 19. Check with the construction manager to determine if there is any overframing (eyebrow details stick built on top of the main roof sheeting). This may affect how sheeting is done in that area. Similarly, check if there are any valleys or other intersections in the roof that will require more complex sheeting.

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Safety

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| 1 | Fall From Height | Fall while sheeting roof | Wear fall arrest harness, tie off to 5000lb strength tie off point at peak. Keep lanyard adjusted to minimum length necessary to allow you to move to the areas you must work in..

In case of fall, call 911 immediately. Do not attempt your own rescue. |
| 13 | Fall From Height | Fall while setting fascia on a new roof prior to sheeting | Set fascia from stepladders from within the 2nd floor walls |
| 40 | Struck By | Roof sheeting, fascia, whatever dropped from roof | Put up OSB or 2x4 on rake fascia spaced max every 3 ft to catch a sheet if it is dropped and slides down the roof during sheeting operations. Such wall is to be minimum 2 ft tall. During setting of fascia set caution tape to keep people away from the affected perimeter of the house. |
| 41 | Struck By | Roof sheeting dropped inside the house, possibly hitting workers on the floor doing cutting, pushing wood up to those nailing on sheeting, etc | Set some 2x4s on the roof truss bottom chord over the space(s) where the cutting will be done. Instruct those pushing sheets up to those of the roof to quickly step away from where the sheets are being set so as to be more safe from being hit by a dropped sheet |

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| 44 | Struck By | Nail gun | Safety Glasses Required |
| | | | All guns must be in single shot mode. No bump fire guns |
| | | | Air hose must be disconnected during any servicing, unjamming, etc |
| | | | Never shoot toward yourself or anyone else. Never have your free hand or the hand of another within 1 ft of the shooting tip |
| 47 | Tools - Hand and Power | Circular Saw - wood propped between 2 supports, cut in the middle, blade is pinched, kickback causes injury | When using a circular saw, short end of the cut is left to fall away. Do not make a cut inbetween 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 |
| 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. |