Introduction

Think like a **rain drop**!



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Materials

The **slope** of a roof is measured by the proportion of **rise to run**; a roof that rises 4” over 12” of run has a slope of 4:12. A **low slope** roof is 1:12 to 4:12. **Medium** to **high slope** roofs are from 4:12 to 12:12.

Low slope roofs, 1:12 to 4:12, require roll roofing. Roll roofing comes in rolls 36” wide by 36’ long.

If you have doubt about what kind of roofing to use, a good rule of thumb for SSP roofs is to replace the roofing material with what existed before (but also call Megan or McKenna with questions!)

All roofing is sold by the 100 square feet, or **square**. The square footage of the roof divided by 100 is the amount of roofing you will need in squares.



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Roll Roofing

- Install edge strips.
- Apply the first course with a full width strip of roll roofing so that its lower edge and ends are flush with the edge strips.
- Lift the lower edge of the first course and cover the edge strips with tar.

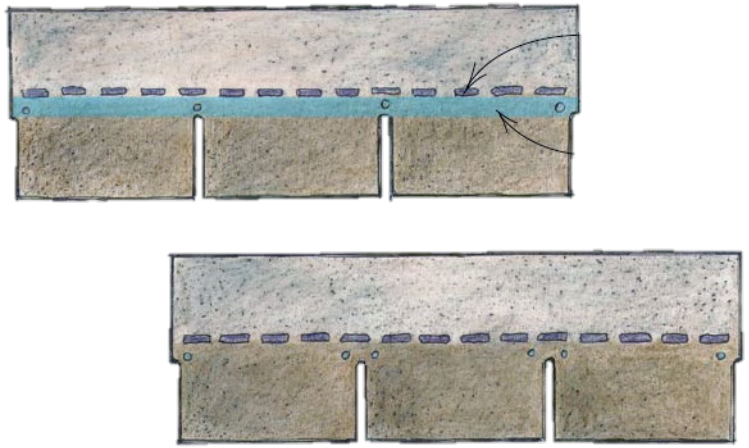


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Three Tab

- Start the first course with a full shingle, placing it completely over the 9” starter course.
- Place full shingles all the way across the first course.
- To start the second course, cut off half of a tab from the first shingle in the course so that the cut edge is against the edge of the roof.
- Keep installing until you reach the peak.





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A complete roofing project consists of the following steps:

1. Remove old roofing material
2. Replace any sheathing that is rotted or damaged
3. Install bottom drip edge
4. Install ice and water shield (not for sheds or awnings)
5. Install synthetic underlayment to the bottom of the roof
6. Install side drip edge
7. Install first course of roofing material
8. Remove old roofing on other half of the roof and repeat steps 1-6
9. Install ridge vent and cap shingles over the peak (if applicable)

THINK LIKE A RAIN DROP!

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1. Remove old roofing material

- Place a tarp down where you will throw trash off the roof so it's easy to haul away.
- Use hammers, flat bars, and roofing shovels to tear off the roofing materials down to the sheathing.
- Tear old roofing material off on one side of the roof.



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1. Remove old roofing material

If re-sheathing the entire roof, take only a few pieces off at a time and tarp well overnight. If a roof is completely unsheathed it is very vulnerable and serious damage can happen to the home if it rains.



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Rafters

Rafters are usually 2x6, 2x8, 2x10 or 2x12 with spacing usually of 16” or 24” on center.

Rafters must be tied by ceiling joists spanning between walls or supported by a structural ridge beam at the peak.





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2. Repair the sheathing

- Use a circular saw to cut the sheathing to size.
- Screw into rafters 6” along the edges, and 12” in the field.
- Use 6d ring-shank nails for panels up to ½” thick and 8d nails for up to 1” thick panels.
- Panel edge clips can be used between rafters to provide support between the long edges of the sheathing.
- Space the sheathing **⅛”** apart to allow for swelling from moisture.



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3. Install bottom drip edge

- Along the bottom edge of the roof, install the drip edge. Attach using 1” roofing nails every foot.
- One side of the drip edge will have a slight flare to it; that is the side which hangs off of the roof.





Nailing drip edge to the bottom of the roof underneath the underlayment.

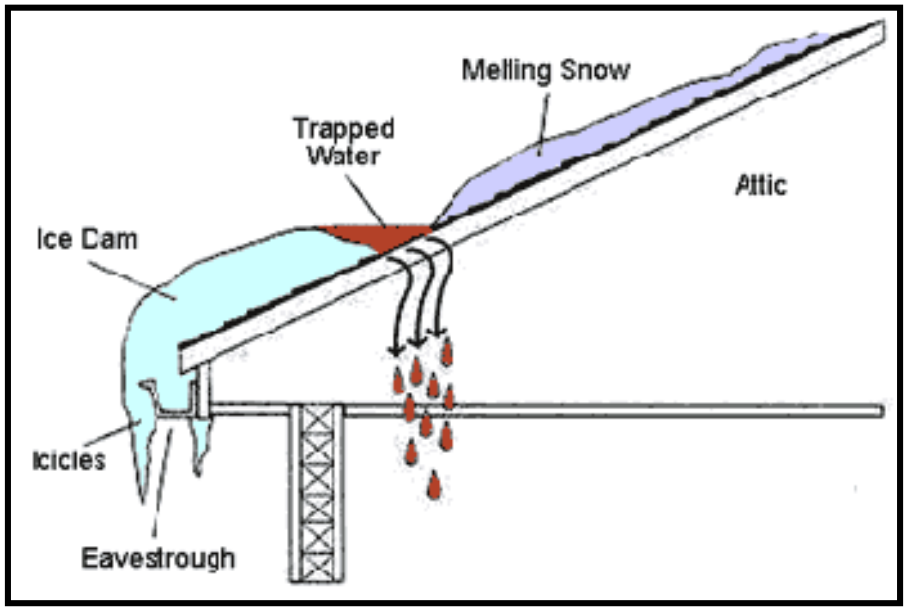
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4. Install ice and water shield (not for sheds or awnings)

- Cut the material into 10 to 15’ long pieces, overlapping pieces 6” on the ends.
- Fold over 2 to 3 feet of your first length to be installed so that you expose the underside.
- Reach underneath and grab the release liner and pull it toward the un-adhered end of your piece.



Applied ice and water shield
Tsaile 2016



Ice and water shields prevent trapping water underneath roofing

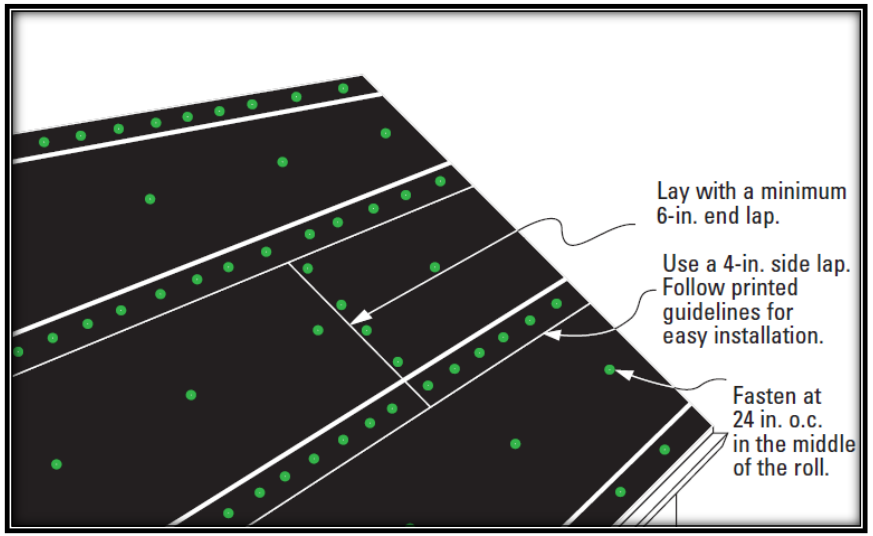
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5. Install synthetic underlayment

- Snap a chalk line across the roof to roll the underlayment as straight as possible across the roof, printed side facing up.
- Secure the underlayment with plastic cap nails every 8” around the perimeter and 24” on center in the middle of each row (see diagram below).
- Overlap 4” between courses and 6” between pieces in the same course.



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6. Install side drip edge

- Install the drip edge on the sides on top of the underlayment so that the wind will not be able to get underneath.
- Nail this drip edge the same way as the bottom drip edge, starting at the bottom and working up to the peak (overlapping 2” so water will run off).



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7. Apply courses of roofing material from bottom to peak

8. Remove old roofing on other half of roof…

…and repeat steps 1-6.



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9. Install ridge vent and cap over the peak (if applicable)

- After roofing to the edge of the sheathing at the peak of the roof on both sides, install the ridge vent using 2 ½”- 3” roofing nails. Please watch this video tutorial on ridge vents.
- Cut peak shingles from 1/3 of a shingle tab (use scraps first). Taper each piece so that the next covers it completely.
- Fold these over the ridge vent and nail with 2 ½”- 3” roofing nails with one nail on each side of the peak just below the tar strip.





Roll roofing folded over peak

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