

# NEW HORIZON SHANGLE®



**YOUR OBJECTIVE:**

To learn the correct method for installing New Horizon Shangle.®

**WHAT IS A SHANGLE®?**

This shingle is a “better” quality roofing products. This means that when offering a choice of “good,” “better” and “best” products, this shingle would fall in the “better” category. A Shangle® is a “designer” or “architectural” style shingle product built on a full-size base shingle. The benefit of the Shangle design is its simplicity of application, secure double coverage without risk of delamination, and more variation in design options. Shangle products are built to meet dimensional tolerances of  $\pm 1/16$ ".

**WHAT TYPE OF PRODUCT IS NEW HORIZON?**

New Horizon Shangles offer the same exclusive construction as Classic Horizon Shangle® with the difference that New Horizon have no “cutouts.” New Horizon are built on a fiber glass base to provide a Class A fire resistance rating, a 60 mph wind warranty, and tear resistance that exceeds ASTM D3462 requirements.

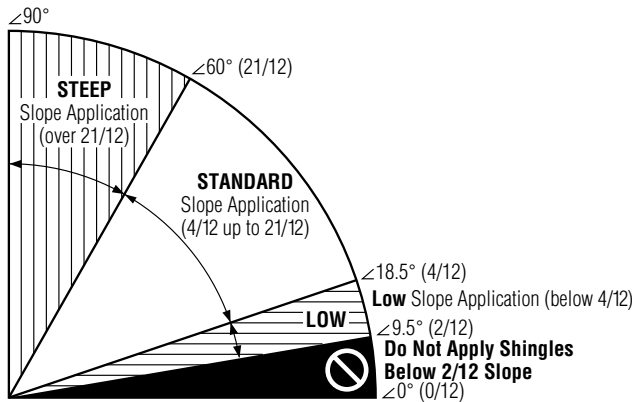


Figure 14-1: Slope definitions.

**STANDARD OR STEEP SLOPE UNDERLAYMENT:** Shingle underlayment\* meeting ASTM D4869 Type I standards is suggested. CertainTeed’s Roofers’ Select™, ShingleFelt™, or RoofWrap™ is preferred.

**LOW SLOPE UNDERLAYMENT:** One layer of WinterGuard™ Waterproofing Shingle Underlayment or its equivalent\*, or two layers of 36" (915 mm) wide felt shingle underlayment lapped 19" (485 mm), must be applied over the entire roof.

**THE ROOF DECK\* MUST BE AT LEAST:** 3/8" (9.5 mm) thick plywood, or 7/16" (11 mm) thick non-veneer, or nominal 1" (25 mm) thick wood deck.

**COLD WEATHER CLIMATES (ALL SLOPES):** Applying WinterGuard or its equivalent\* is strongly recommended wherever there is a possibility of ice build-up.

**FLASHING:** Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof.

**SEALING:** Shingle sealing may be delayed if shingles are applied in cool weather and may be further delayed by airborne dust accumulation. If any shingles have not sealed after a reasonable time period, hand sealing may be necessary.

**CAUTION:** To prevent cracking, shingles must be sufficiently warm to allow proper forming for hips, ridges and valleys.

**WARRANTY:** These shingles are warranted against manufacturing defects and covered by SureStart™ protection. See the warranty itself for specific details and limitations.

**NOTE:** Some roofers choose to apply shingles at 4" exposure (vs. standard 5") at slopes less than 4/12 in order to increase the wind-driven rain resistance. In some cases, this can be an acceptable practice, but there are risks for which CertainTeed will not take responsibility. A shortened exposure can harm the appearance of the applied roofing, especially those with shadow lines, and it can reduce shingle ability to resist wind blow-offs by shifting the adhesive seal line away from the bottom edge of the shingles.

\* For technical questions, information on acceptable alternative application methods and materials, or a copy of the product warranty, contact the sources listed below:

	Warranty	Alternate Instructions	Technical Questions
Your supplier or roofing applicator	✓		
CertainTeed Home Institute 800-782-8777	✓	✓	
CertainTeed Fax-on-Demand 800-947-0057	✓	✓	
CertainTeed-RPG Technical Services 800-345-1145	✓	✓	✓

## FASTENING

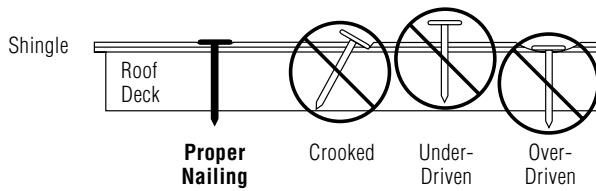


Figure 14-2: Proper and improper nailing.

For decks  $\frac{3}{4}$ " (19 mm) thick or thicker, nails must go at least  $\frac{3}{4}$ " (19 mm) into the deck. On thinner decks, nails must go at least  $\frac{1}{8}$ " (3.2 mm) through the deck.

Nails must be 11- or 12-gauge roofing nails, corrosion-resistant, with at least  $\frac{3}{8}$ " (9.5 mm) heads, and at least 1" (25 mm) long.

### LOW AND STANDARD SLOPE

Use **four** nails for every full shingle located as shown below.

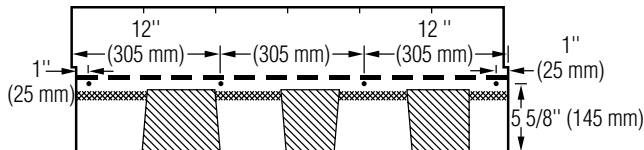
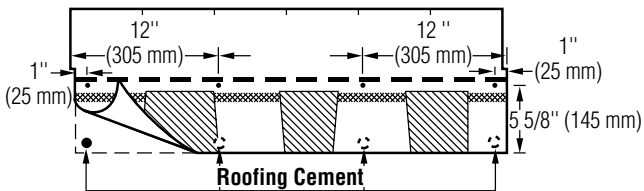


Figure 14-3: Use **four** nails for every full shingle.

### STEEP SLOPE

Use **four** nails and four spots of asphalt roofing cement for every full shingle. See below. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



Apply 1" (25 mm) spots of asphalt roofing cement under each corner and at about 12" (305 mm) in from each edge.

Figure 14-4: Use **four** nails and four spots of asphalt roofing cement on steep slopes.

**CAUTION:** Excessive use of roofing cement can cause shingles to blister.

## TWO CLEAN-DECK APPLICATION METHODS

Install on new roofs and tear-offs using the following methods:

- ◆ The standard "Six-Course, Six-Inch, Stepped-Off Diagonal Method"; or
- ◆ The alternate "Five-Inch, Stepped-Off Diagonal Method."

## PREPARING THE DECK

**UNDERLAYMENT:** Apply as required. CertainTeed suggests that a layer of shingle underlayment be applied. For UL fire rating, underlayment is generally required. Apply flat and unwrinkled.

**ALIGNMENT:** Snap horizontal and vertical chalklines to help assure consistent 5" (125 mm) exposure of all shingles and to align diagonal offsets from course to course. Use the shingle's "shiplap" feature to obtain 5" (125 mm) exposure by aligning the shingle's  $\frac{3}{8}$ " (9.5 mm) shiplap edge with the top edge of the shingle beneath. Offsets from course to course should target 6" (150 mm), but may fall between 5" (125 mm) and 7" (180 mm). Fasten all shingles as shown in "Fastening" section.

### (1) SIX-COURSE, SIX-INCH, STEPPED-OFF DIAGONAL METHOD ("SIX OFF, SIX UP")

#### STARTER COURSE:

1. Use CertainTeed Starter™ (10" x 36") or a starter course consisting of the shingles from which the lower 5" tabs have been removed (Figure 14-5).

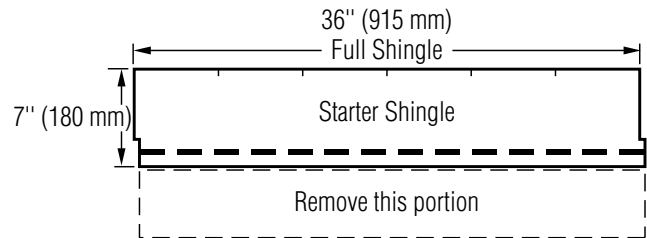


Figure 14-5: Make starter shingles by removing the lower 5" tabs.

2. For the first starter, cut 6" from the left end of one of the starter shingles.
3. Apply the 30" piece to the lower left corner of the roof. Make sure there is  $\frac{1}{2}$ " overhanging rakes and eaves if drip edge is being used. If you are not using drip edge, make the overhang  $\frac{3}{4}$ " (Figure 14-7).
4. Continue with full-length starter course shingles along the eaves.

**1ST COURSE:** Remove the  $\frac{3}{8}$ " x 5" shiplap piece from the upper left corner of a full shingle. Apply this shingle at the lower left corner of the roof. Make the lower edges and left edge lie flush with the edge of the starter course (Figure 14-8).

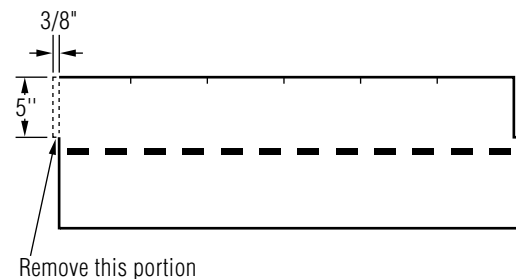


Figure 14-6: Remove the shiplap notch on the upper left corner of the first shingle of the first course.

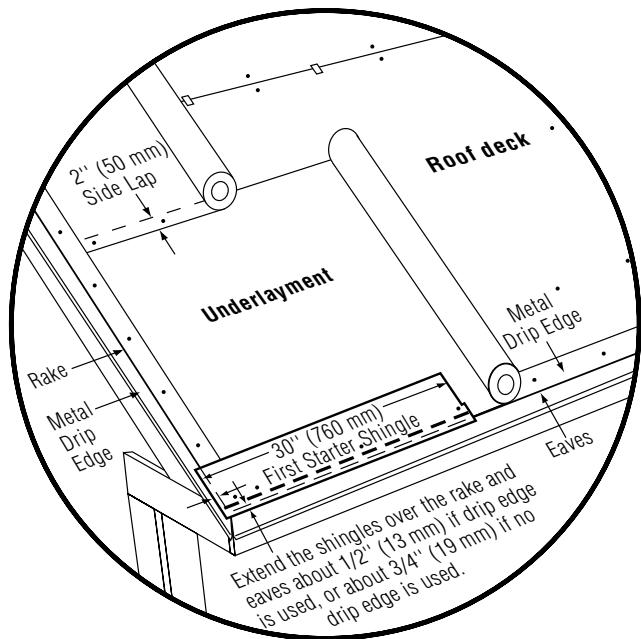


Figure 14-7: Standard slope underlayment starter and drip edge details.

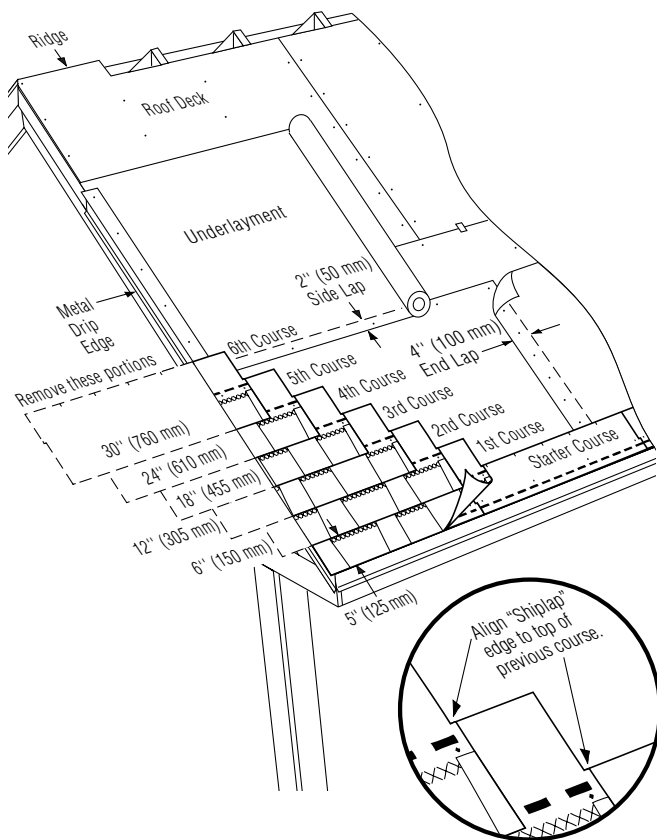


Figure 14-8: Applying the first six courses on a standard slope.

**2ND THROUGH 6TH COURSES:**

1. Cut 6" off the left end of the first shingle and apply the remaining 30" piece over and above the first course shingle. Leave the bottom 5" tab portion of the first course shingle exposed (Figure 14-8).

**NOTE:** Within each set of six courses, the diagonal offset between first and second courses only is 5<sup>3</sup>/<sub>8</sub>".

2. Cut 12" off the left end of the first shingle of the third course and install the remaining 24" long piece over and above the second course shingle.
3. Cut 18" off the left end of the next shingle and apply the right-half 18" piece over and above the third course shingle.
4. Cut 24" off the left end of the next shingle and apply the remaining 12" piece over and above the fourth course shingle.
5. Cut 30" off the left end of the next shingle and apply the remaining 6" piece over and above the fifth course shingle.
6. Install a full shingle against the right edge of each shingle in courses one through six (Figure 14-10 – see A).

**SUCCEEDING COURSES:** Beginning again with a full shingle with its left-hand <sup>3</sup>/<sub>8</sub>" by 5" shi lap piece removed, repeat the six-course pattern up the left rake. Finish the courses with full shingles, working from the eaves up the roof (Figure 14-10 – see B).

**(2) FIVE-INCH, STEPPED-OFF DIAGONAL METHOD ("FIVE UP, TWELVE OFF")**

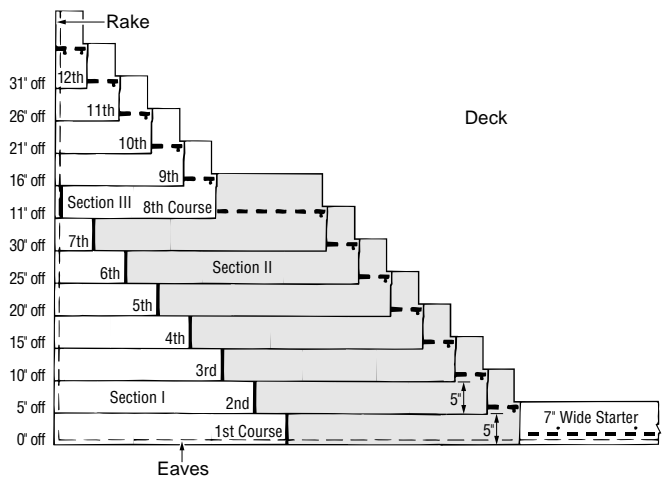


Figure 14-9: Five Off, Twelve Up.

**STARTER COURSE:**

1. Use CertainTeed Starter™ (10" x 36") or a starter course consisting of the shingles from which the lower 5" tabs have been removed (Figure 14-5).
2. Cut 6" off the length of the first starter strip and apply the remaining 30" piece at the lower left corner of the roof. Overhang the rakes and eaves 1/2" if drip edge is being used. If you are not using drip edge, make the overhang 3/4" (Figure 14-7).
3. Continue with full length starter course shingles along the eaves.

**1ST COURSE:**

1. Begin the first diagonal, "Section I," by taking a full shingle and removing its left-hand <sup>3</sup>/<sub>8</sub>" by 5" shi lap piece (Figure 14-9).
2. Apply this shingle at the lower left corner of the roof, left and lower edges flush with the starter course.

Figure 14-10: "Six Off, Six Up" installation schematic.

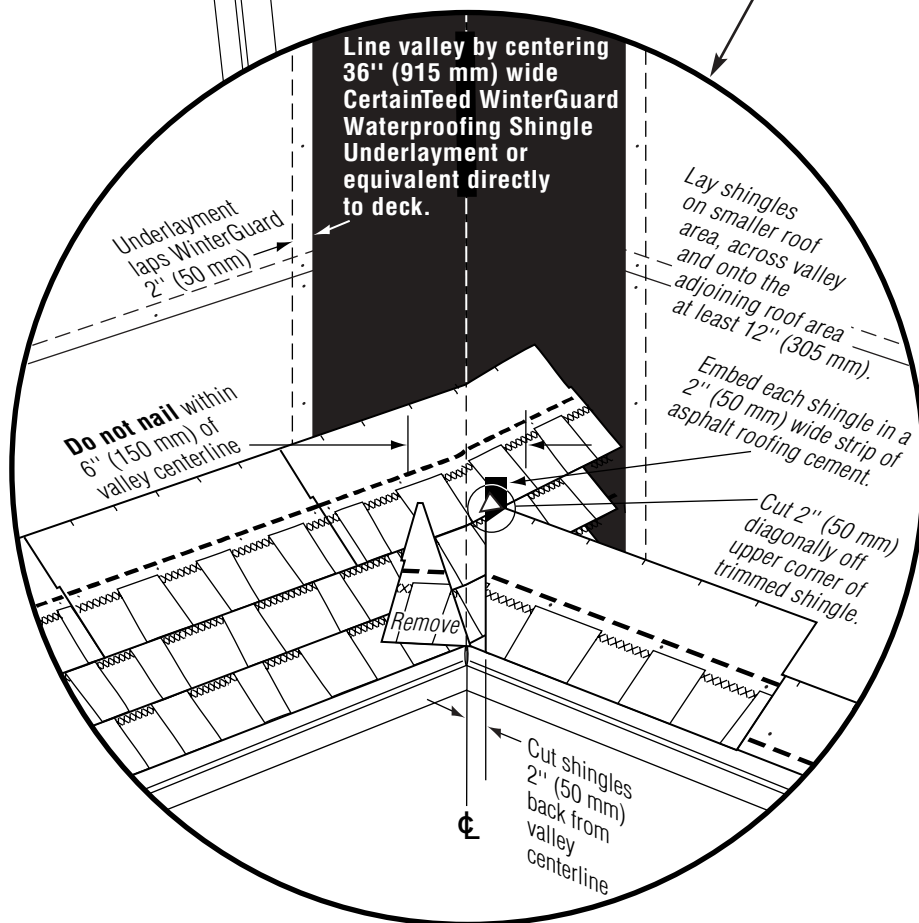
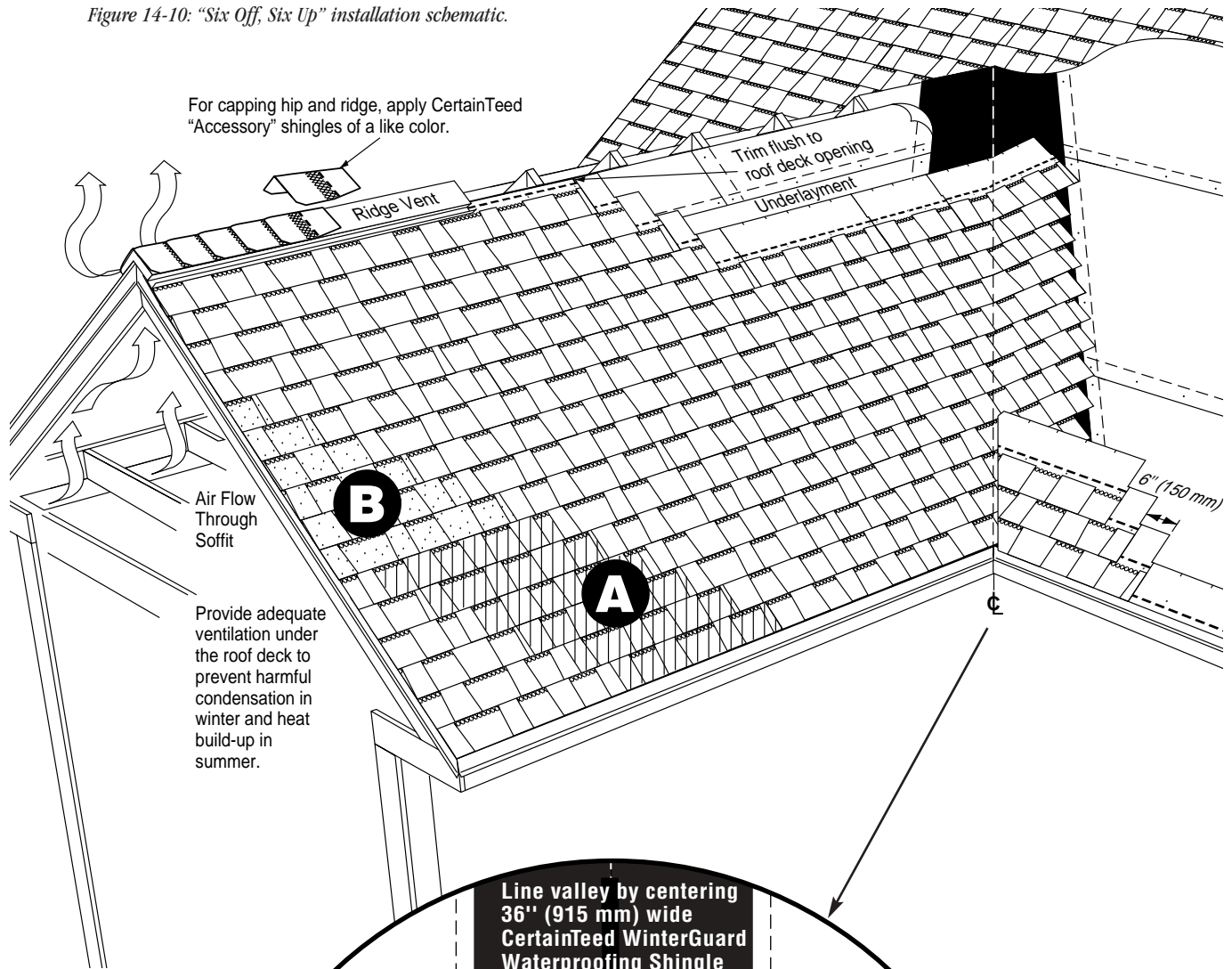


Figure 14-11: Highlight of closed-cut valley details.

## CHIMNEY FLASHING

### 2ND TO 7TH COURSES:

1. Begin the second course by cutting 5" off the left end of a shingle and applying the 31" piece over and above the first-course shingle, flush with the left edge of the first-course shingle, and exposing the first course 5" (*Figure 14-9*).
2. Each succeeding course, up to and including the seventh course, should begin with a shingle 5" shorter (off the left end) than the previous course. Make each course flush with the left edge of the preceding shingle, and expose each course 5". This completes "Section I" and establishes the first seven courses of the 12-course repeating cycle.
3. Install "Section II" as shown in *Figure 14-9* using full shingles against the seven courses in "Section I." This must be done before continuing with courses eight through twelve ("Section III"). These "Section II" shingles are to be butted up against the "Section I" shingles that started courses one through seven. Fasten all shingles in the normal fashion.

### 8TH TO 12TH COURSES:

1. Begin the eighth course by cutting 11" off the left end of a shingle and applying the 25" piece over and above the seventh-course shingles. Shingle should be flush with the left edge of the first seventh-course shingle, and exposing it 5" (*Figure 14-9*).
2. Each succeeding course, up to and including the twelfth course, begins with a shingle 5" shorter (off the left end) than the previous course. Each course is exposed 5".
3. This completes "Section III" and establishes the final five courses of the two-part, 12-course pattern.
4. Install full shingles against the right end of all 12 courses of shingles (not shown in diagram).

### SUCCEEDING COURSES:

1. Repeat the above two-part, 12-course procedure, starting with the seven-course "Section I" up the roof.
2. Start each "Section I" with a full shingle and each "Section III" with a 25" shingle (11" cut off the left end).
3. Complete courses across the roof using full shingles.

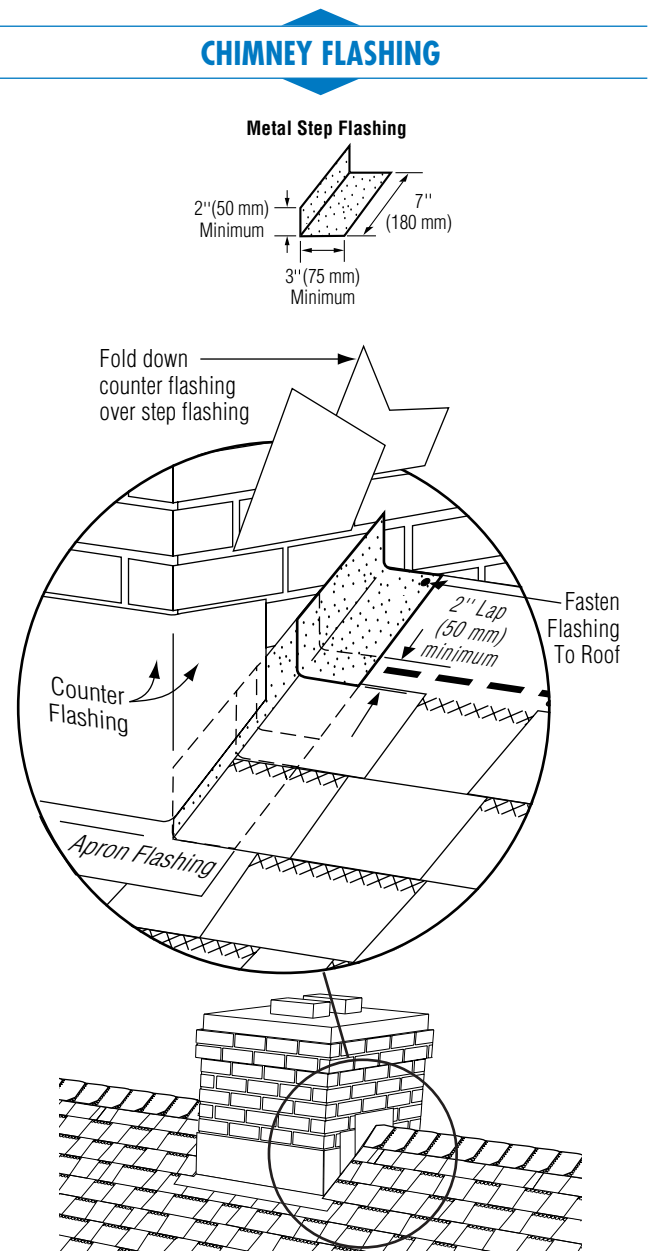


Figure 14-12: Flashing around a chimney.

## TWO ROOF-OVER METHODS

### REROOFING OVER EXISTING SQUARE-TAB ASPHALT STRIP SHINGLES WITH 5" TABS USING THE FOLLOWING METHODS

- ◆ The standard approach of “nesting,” sometimes called “butt and run,” combined with the “Six Off, Six Up Method”; or
- ◆ The alternate approach of “nesting,” combined with the “Five Off, Twelve Up Method.”

**NOTE:** Nesting is preferred over “bridging” methods when reroofing because nesting sheds water best and looks better. Nesting, as described below, is an easy application over square-tab asphalt strip shingles with a 5" exposure  $\pm 1/8$ ". If you are covering a different type or size shingle, you may need to cut back the tabs so that nesting is possible. To do this, simply cut off the leading edge of all old shingles when they are lapped less than 2" by the new shingles. This permits a flat nested application that avoids lifted edges and slumps.

### PREPARING THE ROOF SURFACE FOR REROOFING

- ◆ Make the surface of the old roof as smooth as possible by replacing missing shingles. Split and nail flat all buckled, raised tabs, and curling shingles.
- ◆ It's a good idea to cut old shingles back flush to the rakes and eaves.
- ◆ We suggest that you apply corrosion-resistant drip edge along the rakes and eaves, covering the edges of the old shingles. This will provide a uniform straight edge that will help prevent water from seeping under the shingle edges.

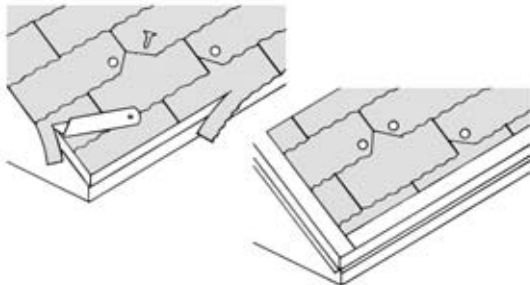


Figure 14-13: Preparing a roof for reroofing.

### (1) COMBINING THE "NESTING METHOD" WITH THE SIX-COURSE, SIX-INCH STEPPED-OFF DIAGONAL METHOD ("SIX OFF, SIX UP")

Offsets from course to course should target 6" but may fall between 5" and 7".

#### STARTER COURSE:

1. Make starter shingles by cutting the tabs off of the shingles; then cut a 2" strip off the top of the same shingle. Pre-cut starter course shingles are available from CertainTeed in 5" and 7" sizes in many locations.
2. For the first starter, cut 6" from the left end of one of the starter shingles.

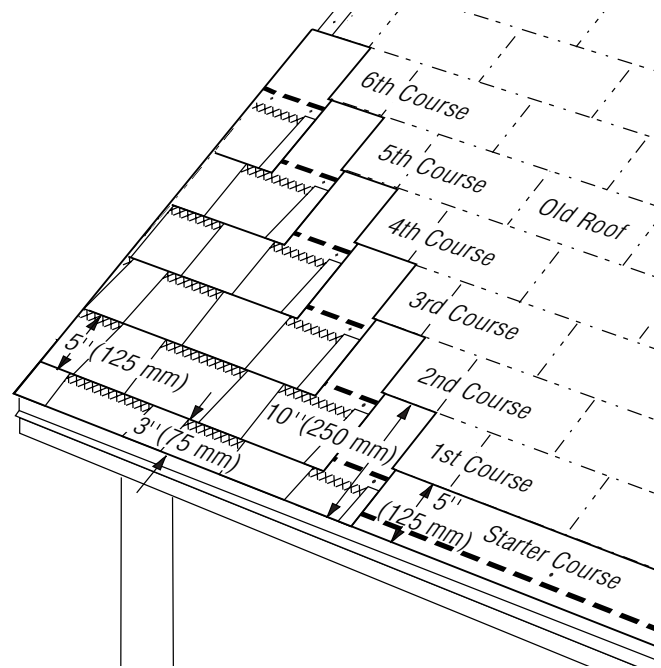


Figure 14-14: Six Off, Six Up, Nested.

3. Apply the 30" piece to the lower left corner of the roof. Make sure there is  $1/2$ " overhanging the rakes and eaves if drip edge is being used. If you are not using drip edge, make the overhang  $3/4$ ".
4. Use full 36" long, 5" wide starter shingles for the rest of the course.

#### 1ST COURSE:

1. Remove the  $3/8$ " by 5" shi lap piece from the upper left corner and a 2" strip from the bottom edge of a full Highlands or New Horizon shingle.
2. Apply this 10" wide shingle at the lower left corner of the roof. Make the lower edges and left edge lie flush with the edge of the starter course.

#### 2ND THROUGH 6TH COURSES:

1. Cut 6" off the left end of the first shingle and apply the remaining 30" piece over and above the first-course shingle. Exposure of the first course (only) is 3" (Figure 14-14).
- NOTE:** Within each set of six courses, the diagonal offset between the first and second courses only is  $5 5/8$ ". This, and all other shingles, will nest with the butt edges of the old shingles.
2. Cut 12" off the left end of the first shingle of the third course and install the remaining 24" long piece over and above the second-course shingle.
  3. Cut 18" off the left end of the next shingle and apply the right-half 18" piece over and above the third-course shingle.
  4. Cut 24" off the left end of the next shingle and apply the remaining 12" piece over and above the fourth-course shingle.
  5. Cut 30" off the left end of the next shingle and apply the remaining 6" piece over and above the fifth-course shingle.
  6. Cut a 2" strip from the bottom of a full shingle for each first-course shingle.
  7. Install a full shingle against the right edge of each shingle in courses one through six.

### REMAINING COURSES:

1. Beginning again with a full shingle with its left-hand  $\frac{3}{8}$ " by 5" shiplap piece removed, repeat the six-course pattern up the left rake.
2. Complete courses across the roof using full shingles.

### (2) COMBINING THE "NESTING METHOD" WITH THE FIVE-INCH, STEPPED-OFF DIAGONAL METHOD ("FIVE OFF, TWELVE UP")

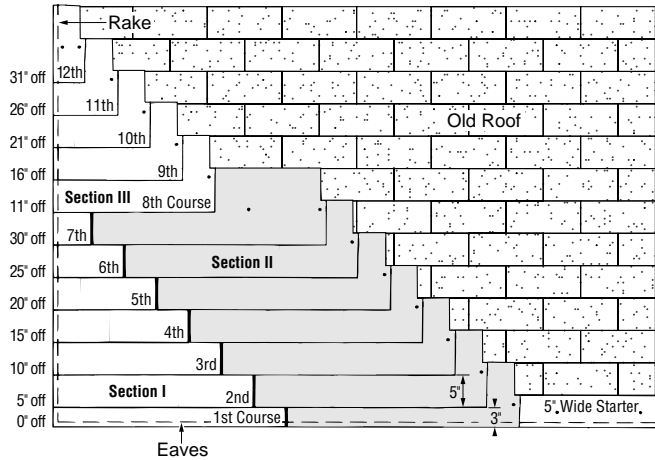


Figure 14-15: Five Off, Twelve Up, Nested.

### STARTER COURSE:

1. The starter course consists of shingles with the lower 5" tabs and a 2" strip from the top removed. Pre-cut starter course shingles are available from CertainTeed in 5" and 7" sizes in many locations.
2. Cut 6" off the length of the first starter strip and apply the remaining 30" piece at the lower left corner of the roof. Overhang the rakes and eaves  $\frac{1}{2}$ " if drip edge is being used. If you are not using drip edge, make the overhang  $\frac{3}{4}$ ".
3. Continue with full-length starter course shingles along the eaves.

### 1ST COURSE:

1. Begin the first diagonal, "Section I," by taking a full shingle and removing its left-hand  $\frac{3}{8}$ " x 5" shiplap piece and a 2" strip from the bottom edge (Figure 14-15).
2. Apply this 10" wide shingle at the lower left corner of the roof, left and lower edges flush with the starter course.

### 2ND TO 7TH COURSES:

1. Begin the second course by cutting 5" off the left end of a shingle and applying the 31" piece over and above the first-course shingle, flush with the left edge of the first-course shingle, and exposing the first course only 3". This, and all other shingles, will nest with the butt edges of the old shingles (Figure 14-15).
2. Each succeeding course, up to and including the seventh course, should begin with a shingle 5" shorter (off the left end) than the previous course. Make each course flush with the left edge of the preceding shingle, and expose each course 5". This completes "Section I" and establishes the first seven courses of the 12-course repeating cycle.

3. Install "Section II" as shown in Figure 14-15 using full shingles against the seven courses in "Section I." This must be done before continuing with courses eight through twelve ("Section III"). These "Section II" shingles are to be butted up against the "Section I" shingles that started courses one through seven. Fasten all shingles in the normal fashion.

### 8TH TO 12TH COURSES:

1. Begin the eighth course by cutting 11" off the left end of a shingle and applying the 25" piece over and above the seventh-course shingles. Shingle should be flush with the left edge of the first seventh-course shingle, and exposing it 5" (Figure 14-15).
2. Each succeeding course, up to and including the twelfth course, begins with a shingle 5" shorter (off the left end) than the previous course. Each course is exposed 5".
3. This completes "Section III" and establishes the final five courses of the two-part, 12-course pattern.
4. Install full shingles against the right end of all 12 courses of shingles (not shown in diagram).

### REMAINING COURSES:

1. Repeat the above two-part, 12-course procedure, starting with the seven-course "Section I" up the roof.
2. Start each "Section I" with a full shingle and "Section III" with a 25" shingle (11" cut off the left end).
3. Complete courses across the roof using full shingles.

## HIPS AND RIDGES

### SHADOW RIDGE™ ACCESSORY SHINGLES

CertainTeed Shadow Ridge is designed to be used with New Horizon Shingle to cap hips and ridges. Accessory shingles can save valuable installation time; simply fold along the pre-cut lines and detach individual cap pieces.

Shadow Ridge shingles have accented shadow lines that offer an appearance of depth and dimension.

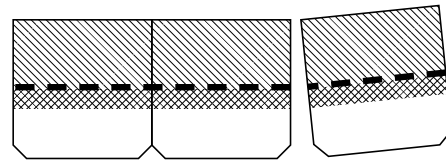


Figure 14-16: Shadow Ridge accessory shingles detach easily from three-piece units to make 72 individual cap pieces.

There are 24 three-piece units in each bundle, providing 72 individual caps that will cover 30 linear feet of a hip or ridge. Each cap piece is 12" by 12" and features clipped corners on the bottom edge of the exposed portion.

To make a 12" cap from New Horizon shingles, begin the cut at the second 6" notch from each side at the top of the shingle.

**APPLICATION IS AS FOLLOWS:**

1. Apply New Horizon shingles up to the hip or ridge on both sides; then trim flush.

**NOTE:** The last course of shingles should have an exposure of 5" or less when the shingle cap or ridge vent is fastened in place. Otherwise, a potential water leak could occur at exposed shingle end joints.

The figures used in this section illustrate the application of accessory shingles over a ridge vent; application directly to the roof deck is very similar.

2. Install caps at the bottom of a hip or at either end of a ridge. Apply a starter piece that has the bottom 5" removed (Figure 14-17). Fasten the starter with two nails located about 3" from the rake edge, and 1" in from each side edge. Make sure fasteners used to apply caps are of sufficient length to penetrate at least 3/4" into or through the decking.

**NOTE:** To assist in proper alignment when ridge vent is not used, snap a chalk line parallel to the hip or ridge along the line where the side edges of the accessory shingles should be.

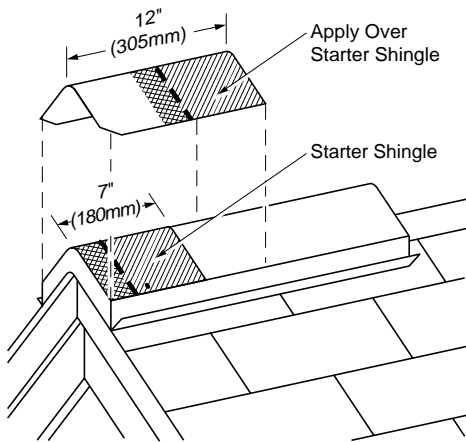


Figure 14-17: Apply a full cap shingle over the starter piece, flush with the bottom and side edges of the starter.

3. Apply a full cap shingle over the starter (Figure 14-17), and place fasteners at 5 5/8" up from the exposed bottom edge and 1" from each side. Nails must not be exposed on the finished roof. All nail heads must be driven straight and must not cut into the shingle surface.

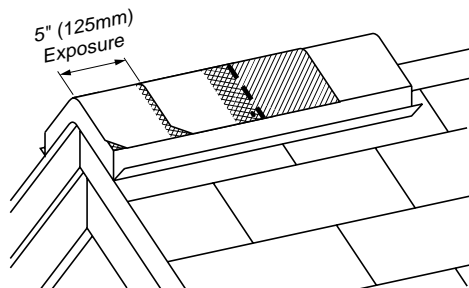


Figure 14-18: Expose cap shingles 5" and cover all fasteners.

**NOTE:** Each Shadow Ridge cap has a laying/alignment notch at the top edge to center the piece on the ridge line, and two notches on each side to indicate the 5" exposure and correct shadow-line placement. The side notches of the cap being applied should be aligned with the top edge of the previously applied cap.

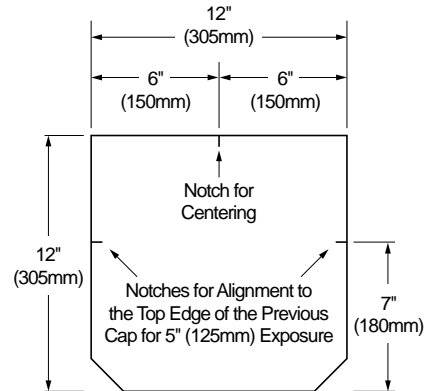


Figure 14-19: Each accessory shingle has a centering notch and two side-alignment notches to help ensure proper placement.

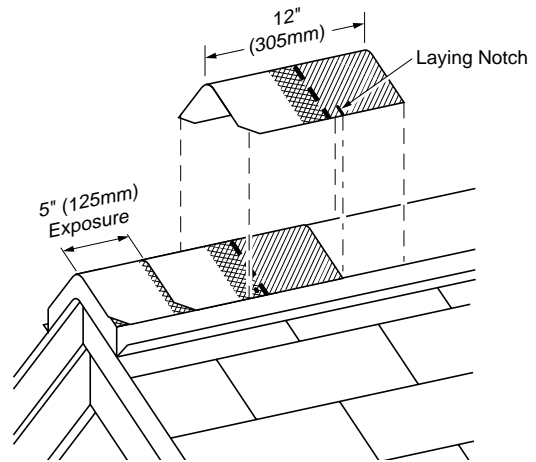


Figure 14-20: Use laying notches to center shingles on hips and ridges, and to locate the 5" exposure.

To add more definition and visual appeal to the rooflines, use one of CertainTeed's enhanced profile hip and ridge caps. See Chapter 15 for illustrations of ContourRidge™ and Chapter 19 for ElevationRidge™.