

# Independence™

# 13

**YOUR OBJECTIVE:**

To learn the correct method for installing Independence™ roofing.

This shingle is a “better” quality roofing product. This means that when offering a choice of “good,” “better” and “best” products, this shingle would fall in the “better” category.

## INDEPENDENCE™

Independence™ is a “designer” or “architectural” style shingle product built on a full-size base shingle that has randomly applied laminated overlay tabs and its design is exclusive to CertainTeed. The benefits of this design are its simplicity of application, secure double coverage without risk of delamination, and more variation in design options. **Independence shingles are built to meet dimensional tolerances of ±1/16”.**

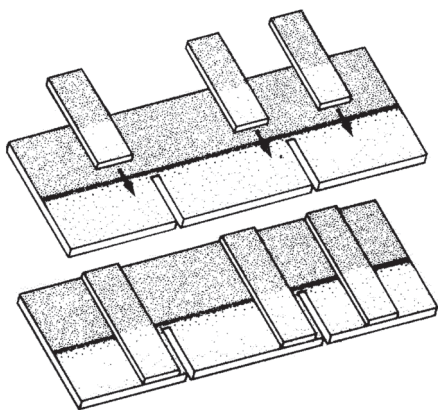


Figure 13-1: Independence™ construction.

**FOR UL FIRE RATING,** underlayment may be required. Apply flat and unwrinkled.

**STANDARD OR STEEP SLOPES:** CertainTeed recommends DiamondDeck™ Synthetic Underlayment, Roofers’ Select™ High Performance Underlayment, or shingle underlayment meeting ASTM D226, D4869 or D6757. Always ensure sufficient deck ventilation, and take particular care when DiamondDeck or other synthetic underlayment is installed. Follow manufacturer’s application instructions.

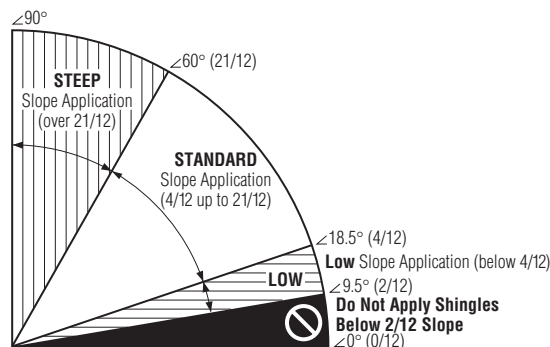


Figure 13-2: Slope definitions.

**LOW SLOPES:** One layer of CertainTeed’s WinterGuard™ Waterproofing Shingle Underlayment (or equivalent, meeting ASTM D1970) or two layers of 36" (914 mm) wide felt shingle underlayment (Roofers’ Select or underlayment product meeting ASTM D226, D4869 or D6757) lapped 19" (483 mm) must be applied over the entire roof; ensure sufficient deck ventilation. When DiamondDeck or other synthetic underlayment is installed, weather-lap at least 20" (500 mm) and ensure sufficient deck ventilation. Follow manufacturer’s application instructions.

**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):** Application of WinterGuard or its equivalent is strongly recommended whenever there is a possibility of ice build-up. Follow manufacturer’s application instructions.

**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.

\* 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-RPG Technical Services 800-345-1145	✓	✓	✓

## FASTENING

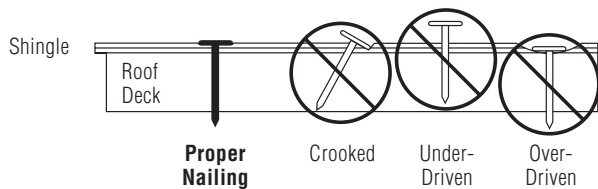


Figure 13-3: Proper and improper nailing.

**IMPORTANT:** 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 Independence shingle (Figure 13-4).

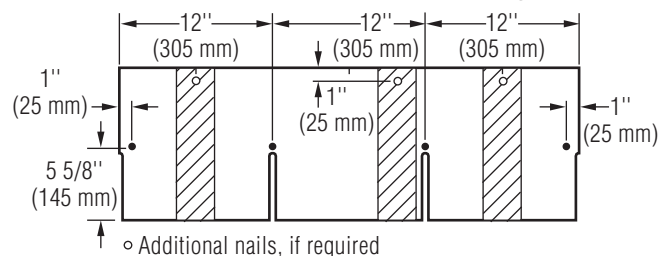
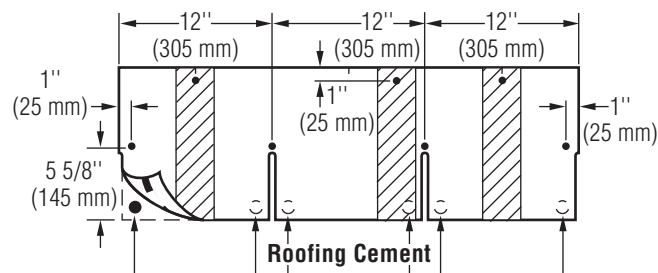


Figure 13-4: Use **four** nails for every full shingle.

### STEEP SLOPE

Use seven nails and six spots of asphalt roofing cement for every full shingle (Figure 13-5). Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



Apply 1" (25 mm) spots of asphalt roofing cement under each tab corner.

Figure 13-5: Use **seven** nails and six spots of asphalt roofing cement on steep slopes.

**NOTE:** To prevent slippage of laminated tabs when individual shingles are cut to meet a wall or ridge, each laminated tab at the junction must be fastened individually with an additional fastener. Fasteners applied in this manner are to be horizontally centered on the laminated tab and placed within  $1\frac{1}{2}$ " of the upper edge of the shingle. During hot weather, using an extra fastener in each laminated tab may be necessary to prevent slippage even at slopes below  $21/12$ .

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

## TWO CLEAN-DECK APPLICATION METHODS

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

**NOTE:** "Six off, four up" is the preferred method for installing Independence. Use of other installation methods such as racking may result in less-than-designed performance or appearance. You should start from the lower left corner of the roof; otherwise the laminate may create an objectionable pattern.

#### PREPARING THE DECK:

- Apply underlayment as required. CertainTeed suggests that a layer of shingle underlayment be applied. For UL fire rating, underlayment is generally required. Apply flat and unwrinkled.
- Snap horizontal and vertical chalklines to assure shingles will be correctly aligned. Expose all shingles 5" (125 mm).

#### STARTER COURSE:

**NOTE:** The starter course method described here can be used with both the standard "Four-Course, Six-Inch, Stepped-Off Diagonal Method," and the alternate "Five-Inch, Stepped-Off Diagonal Method," explained later in this chapter.

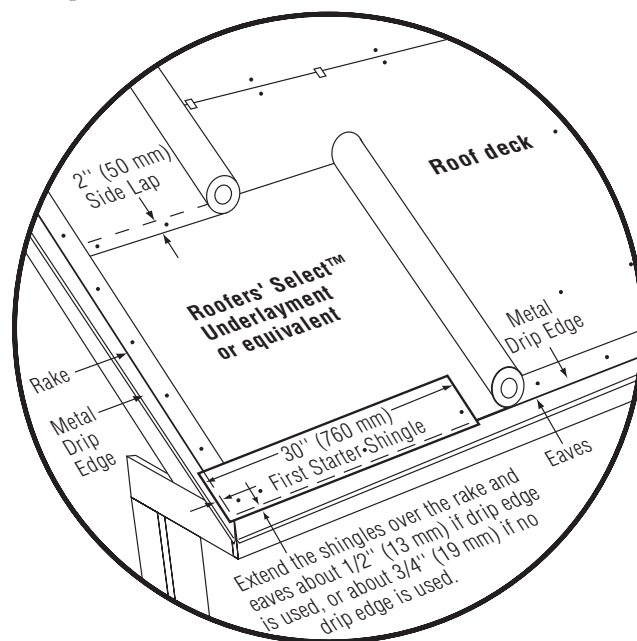


Figure 13-6: Standard slope underlayment and starter drip edge details.

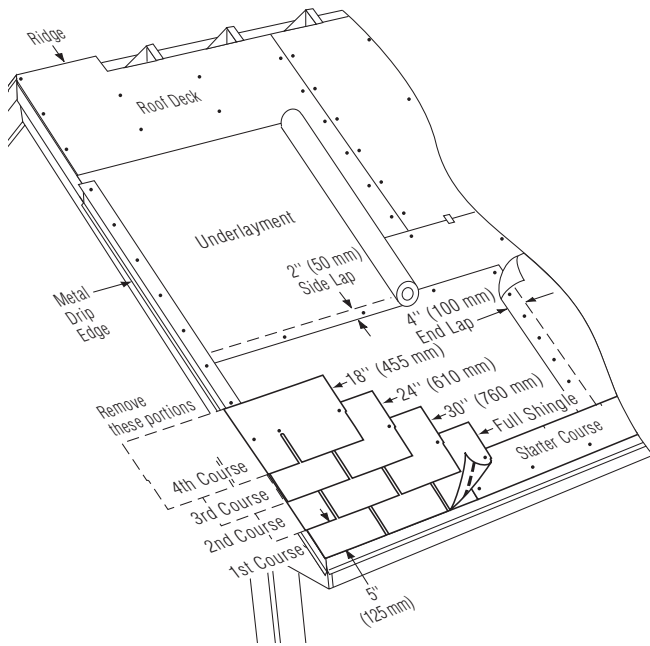


Figure 13-7: Applying the first 4 courses on a standard slope.

1. The starter course is made from Swiftstart or Universal Starter, or Independence shingles that have had the 5" tabs cut off.

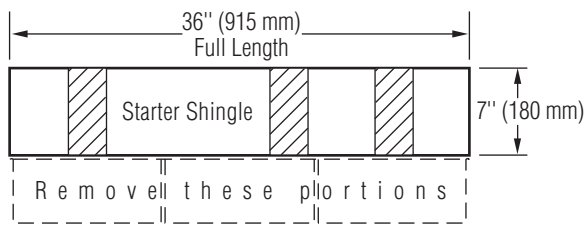


Figure 13-8: Make starter shingles by removing the lower 5" tabs.

2. Cut 6" off the length of the first starter shingle and apply the 30" piece to the lower left corner of the roof (Figure 13-6).
3. The starter strip should overhang the rakes and eaves  $\frac{1}{2}$ " when drip edge is used, or  $\frac{3}{4}$ " when no drip edge is used.
4. Continue with full-length starter-strip shingles along the eaves.

**1ST COURSE:** Apply a full shingle at the lower left corner of the roof. Make the tabs flush with the starter-course shingle at the eaves and rake (Figure 13-7).

**2ND THROUGH THE 4TH COURSES:**

1. Start the second course by first cutting 6" off the left end of a full shingle, then installing the 30" piece over the first course. Leave 5" of the first course exposed, and make the left edge flush with the first-course shingle at the rake (Figure 13-7).
2. Start the third course by cutting 12" off a shingle. Install the 24" section over the first shingle in the second course, exposing 5" of the second course and making the left edge flush with the second-course shingle at the shingle rake.
3. Start the fourth course by cutting 18" off the first shingle. Install the 18" piece over the first shingle on the third course.
4. Install a full shingle against each of these four courses (Figure 13-10 –see A).

**SUCCEEDING COURSES:** Repeat the "Four-Course, Six-Inch, Stepped-Off Diagonal Method" up the left rake. Complete courses across the roof using full-size shingles (Figure 14-10 – see B).

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

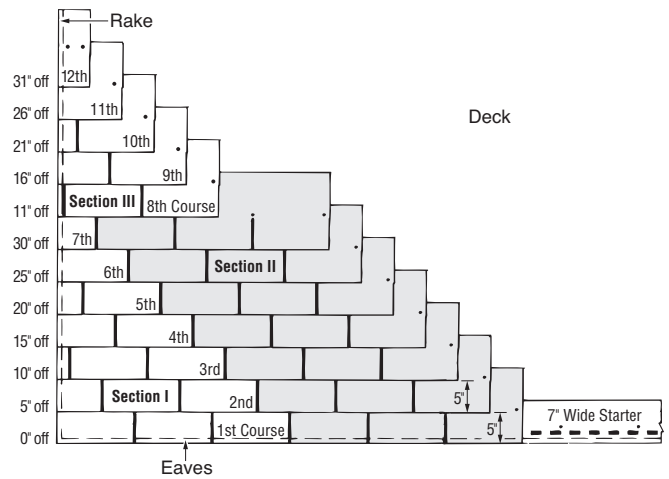


Figure 13-9: Five Off, Twelve Up.

**STARTER COURSE:** Use CertainTeed Swiftstart or Universal Starter™ or a starter course consisting of the shingles from which the 5" tabs have been removed (Figure 13-8).

**"SECTION I" SHINGLES:** "Section I" is made up of the first shingles used to start courses one through seven.

1. Start the first course with a full shingle at the lower left corner of the roof. Make the tabs flush with the starter course and be sure to use four fasteners in each shingle (Figure 13-9).
2. Begin the second course by cutting 5" off the left end of a shingle and applying the 31" piece over the first-course shingle. Keep the shingle flush with the left edge of the first-course shingle, and expose 5" of the course below to the weather. Fasten at the three standard locations (over the cutouts and 1" inside the right edge, and 1  $\frac{1}{4}$ " inside the left edge).
3. To finish "Section I" (make each course, up to and including the seventh course) start with a shingle that has been cut 5" shorter than the first shingle of the previous course. Remember to measure and cut only from the left end of the shingle. Fasten at the standard locations, plus 1  $\frac{1}{4}$ " inside the left edge.

**"SECTION II" SHINGLES:** All "Section II" shingles are left uncut. These shingles are to be butted-up against the "Section I" shingles that started courses one through seven. Fasten all shingles in the standard fashion (Figure 13-9).

**"SECTION III" SHINGLES:**

1. Begin "Section III" in the eighth course with a shingle having 11" cut off its left end. Install the 25" piece above the seventh-course shingles, making it flush with the left edge of the seventh-course shingle and leaving 5" of the seventh course exposed. Fasten at the two standard locations, plus 1  $\frac{1}{4}$ " in from the left edge (Figure 13-9).

Figure 13-10: "Four Up, Six Off" installation schematic.

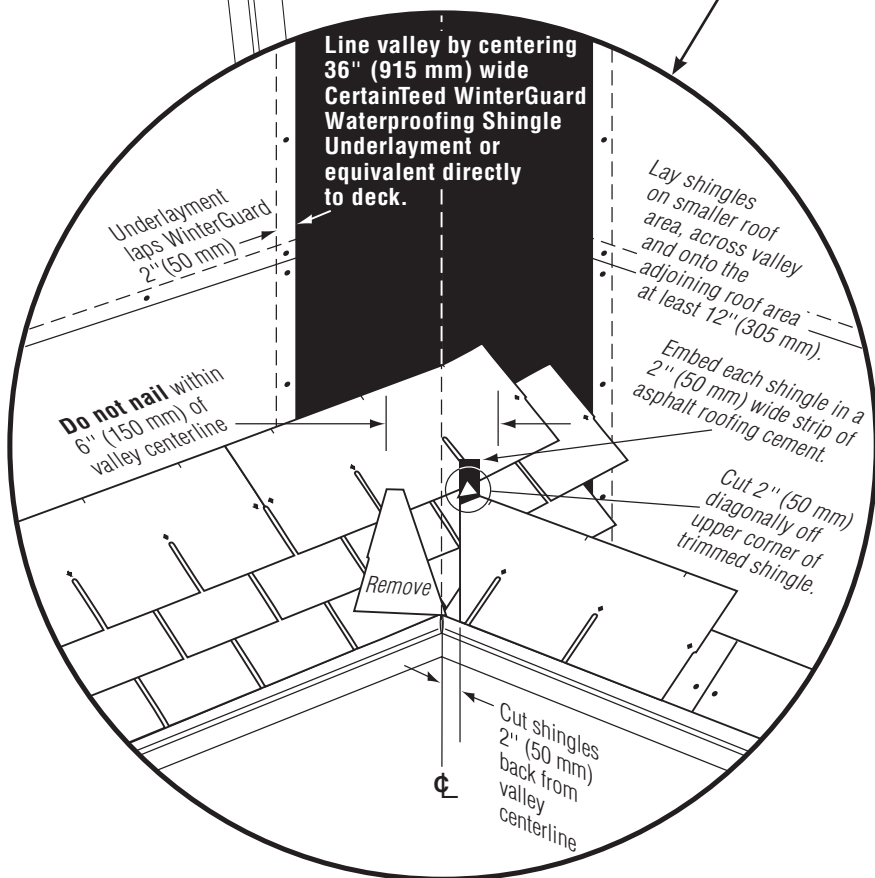
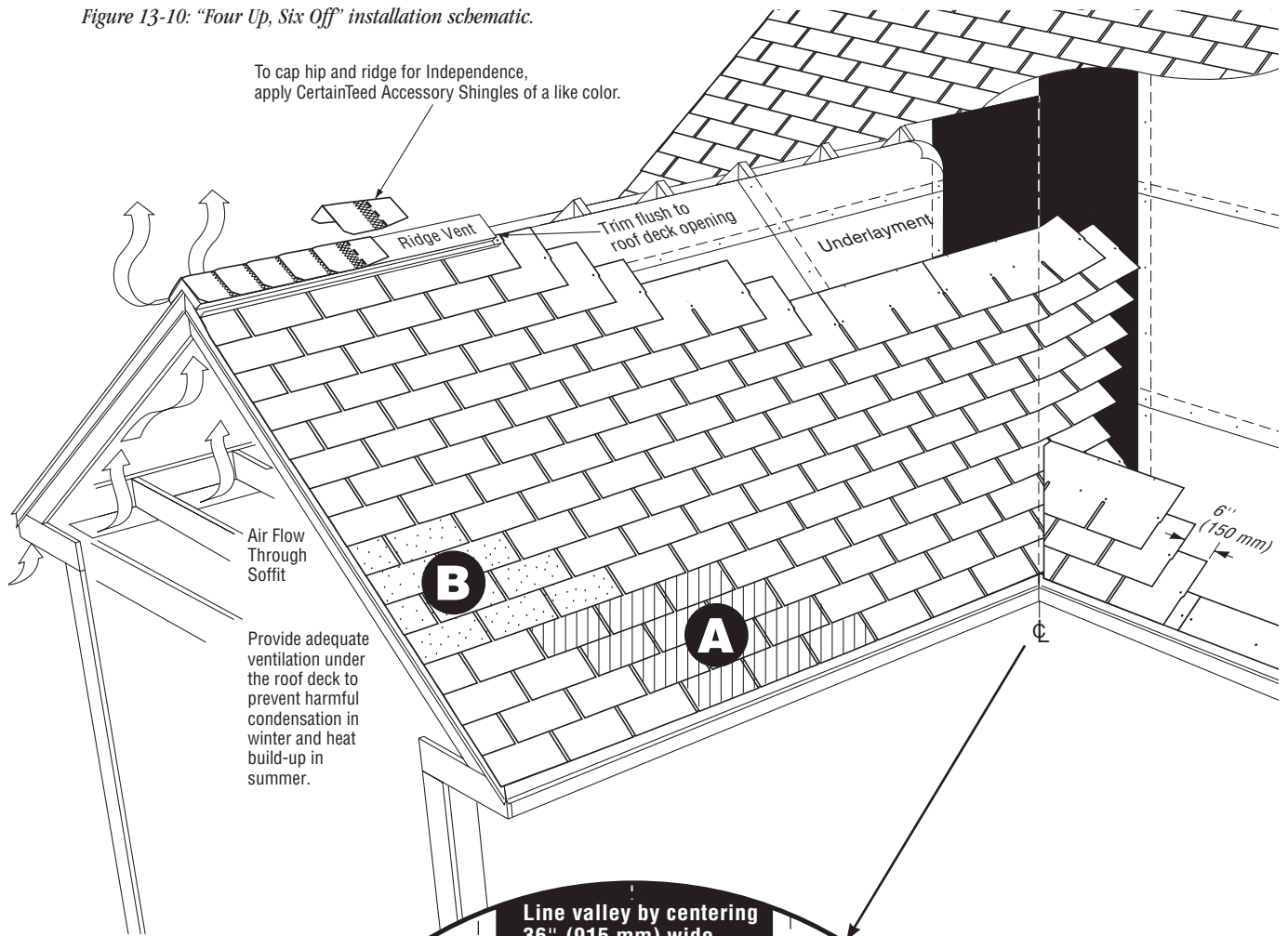


Figure 13-11: Highlight of closed-cut valley details.



- The next four courses, up to and including the twelfth course, will start with a shingle 5" shorter than the first shingle of the course just below it. This means that the first shingle for the ninth, tenth, eleventh and twelfth courses will be 20", 15", 10" and 5" long, respectively. Study the diagram in *Figure 13-9* if you're not sure what to do. Remember to expose each course 5" to the weather, and fasten at the standard locations and 1 1/4" in from each edge. Complete courses across the roof with full shingles.
- For the additional courses needed up the rake to complete the roof, repeat this "Five-Off, Twelve-Up" type installation, applying shingles in courses across the roof as needed.

## CHIMNEY FLASHING

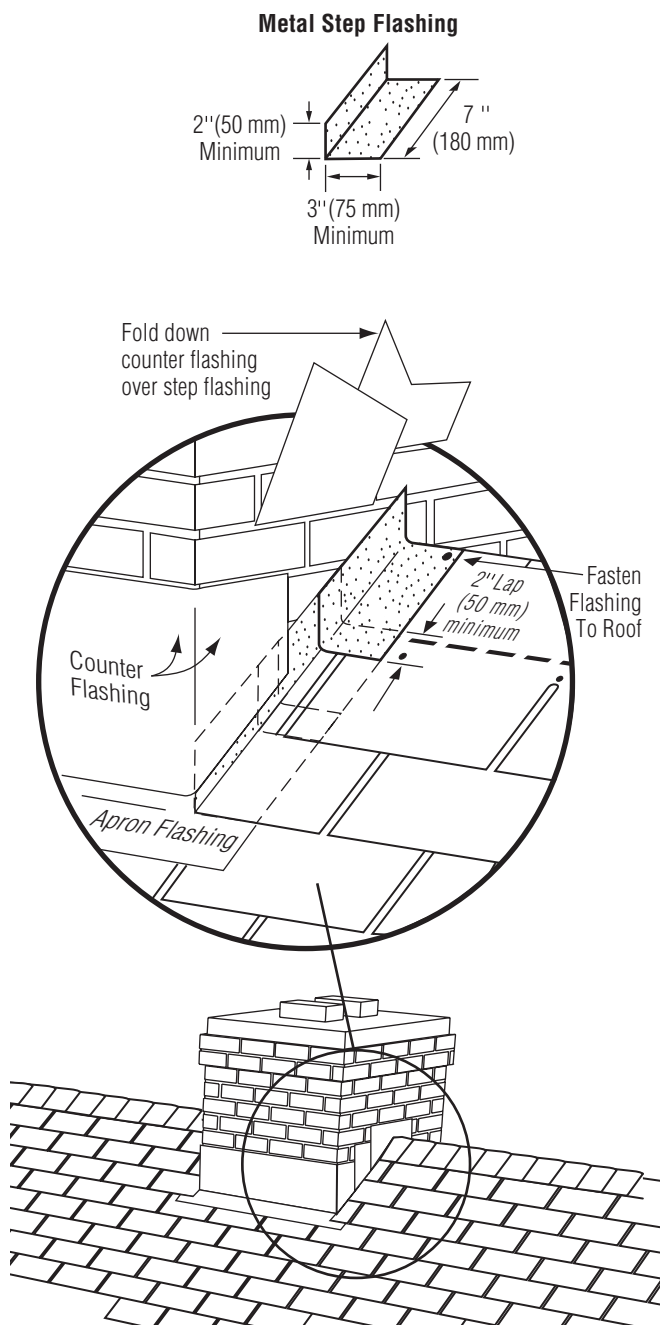


Figure 13-12: Flashing around a chimney.

## TWO ROOF-OVER METHODS

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

#### PREPARING THE OLD ROOF:

- 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 and straight edge that will help prevent water seepage under the shingle edges.

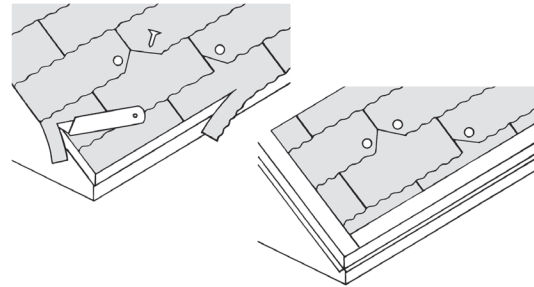


Figure 13-13: Preparing an old roof for reroofing.

**NOTE:** Nesting is preferred over "bridging" methods when reroofing because nesting provides a smoother application, sheds water best and looks better. Nesting, as described below, is an easy application process over square-tab asphalt strip shingles with a 5" exposure. If you are covering a different type or size shingle, you may need to cut back the old shingle 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 1/2" by the new shingles. This permits a flat nested application that avoids lifted edges and slumps.

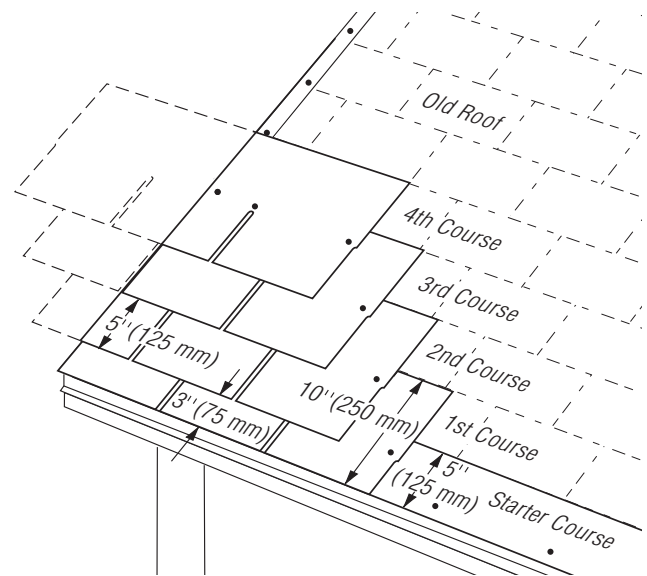


Figure 13-14: Nested Reroof.

**STARTER COURSE:**

1. Use 5" by 36" shingles for the starter course. To make a starter shingle, cut the tabs off of an Independence, then cut off a strip 2" across the top of the same shingle.
2. Cut 6" off the length of the first starter shingle and install the resulting 30" piece at the lower left corner of the roof, over the first course of old shingles. If you are using drip edge, let the starter course extend out over the edge of the rakes and eaves by 1/2". If no drip edge is used, let the starter course extend over the rakes and eaves by 3/4" (Figure 13-14).
3. Continue with full 36" lengths of these 5" high trimmed shingles along the eaves.

**1ST COURSE:**

1. The first course is made of 10" by 36" shingle strips made by cutting 2" off of the bottom of the tabs of regular shingles (Figure 13-14).
2. Align the top edge of the strips so they butt up against the tabs of the shingles in the old third course. Make left and bottom edges flush with the starter course.

**2ND COURSE:**

1. Cut 6" off the left end of a full shingle and align the top edge of this 12" by 30" shingle with the bottom edge of the old shingle in the old fourth course. Make the left edge align with the first-course left edge (Figure 13-14).
2. Exposure of the first course (only) is 3". All succeeding course exposures will duplicate the exposure of the existing roof (about 5").

**3RD, 4TH AND SUCCEEDING COURSES:**

1. Begin the third course by cutting a 12" piece off the left end of a full shingle and applying this 24" piece above the new second-course shingle (Figure 13-14). Align the top edge of the new shingle with the bottom edge of old shingles in the course above it (the old roof's fifth course).
2. Begin the fourth course by cutting 18" off the left end of a full shingle and apply the right-hand piece above the new third-course shingle. Align the top edge with the bottom edge of the old roof's sixth-course shingles.
3. Install full shingles against these first four courses.

**COMPLETING THE INSTALLATION:** Continue up the rake, putting new courses over the old shingles using the same "Six-Off, Four-Up Nested Method." Begin each set of four courses with a full shingle. Complete all the courses across the roof with full shingles.

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

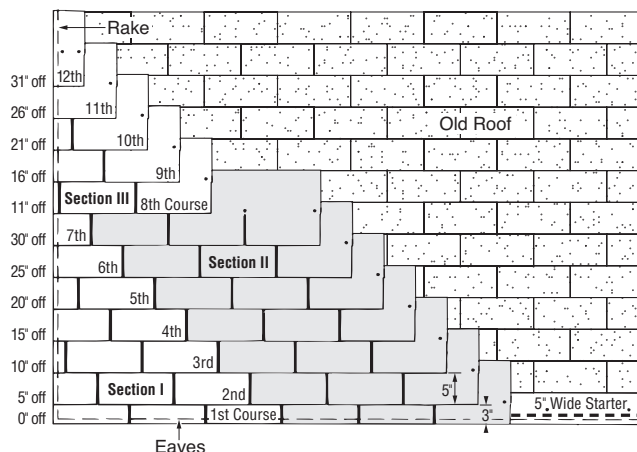


Figure 13-15: Five Off, Twelve Up, Nested.

**STARTER COURSE:**

1. Use 5" by 36" shingles for the starter course. To make a starter shingle, cut the tabs off of a standard three-tab shingle, then cut off a strip 2" across the top of the same shingle.
2. Cut 5" off the length of the first starter strip, and align the 31" piece over the first course at the lower left corner of the existing roof (Figure 13-15).
3. The starter strip should overhang the rakes and eaves 1/2" when drip edge is used, or 3/4" when no drip edge is used.
4. Continue with full 36" lengths of prepared starter strips along the eaves.

**1ST COURSE:**

1. The first course is made of 10" by 36" shingle strips made by cutting 2" off the bottom of the tabs of regular shingles (Figure 13-15).
2. Align the top edge of the strips so they butt up against the tabs of the shingles in the old third course. Make the left edge 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 aligning the top edge with the butt edge of the shingle in the old fourth course (Figure 13-15).
2. Exposure of the first course (only) is 3". All succeeding course exposures will duplicate exposure of the existing roof (approximately 5").
3. Start each succeeding course, up to and including the seventh course, with a shingle 5" shorter (off the left end) than the first shingle of the previous course.
4. Align the top edges with butts of old shingles. Remember, exposure of each course will duplicate exposure of the existing roof.
5. This completes "Section I" (Figure 13-15) – the first seven courses of the 12-course repeating cycle.
6. Install full shingles against these seven courses.

### 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 the seventh-course shingle, flush with the left edge of the seventh course (Figure 13-15).
2. Each succeeding course, up to and including the twelfth course, starts with a shingle 5" shorter (off the left end) than the previous course.
3. Align all top edges with butts of old shingles. Exposure of each course will duplicate exposure of the existing roof.
4. Install full shingles against all 12 courses.

### REMAINING COURSES:

1. Moving up the rake edge, repeat the two-part, 12-course pattern, alternating Sections "I" and "III" up the roof.
2. Complete courses across the roof using full shingles, working from the eaves up the roof.

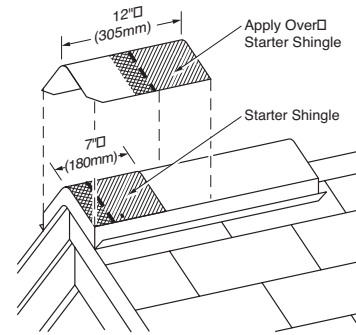


Figure 13-17: Apply a full cap shingle over the starter piece, flush with the bottom and side edges of the starter.

3. Apply a full cap shingle over the starter (Figure 13-17), and place fasteners at 5<sup>5</sup>/<sub>8</sub>" up from the exposed bottom edge and 1" in from each side. Nails must not be exposed and must not cut into the shingle surface.

**NOTE:** Each cap has a centering notch at the top edge, and a notch on each side to indicate the 5" exposure. The side notches of the cap being applied should be aligned with the top edge of the previously applied cap.

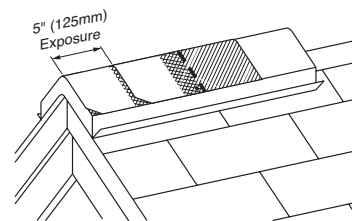


Figure 13-18: Expose cap shingles 5" and cover all fasteners.

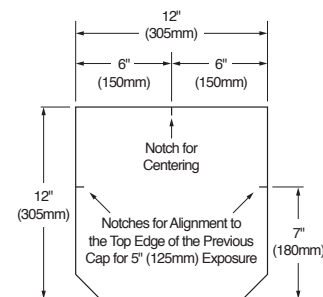


Figure 13-19: Each Shadow Ridge accessory shingle has a centering notch and two side-alignment notches to help ensure proper placement.

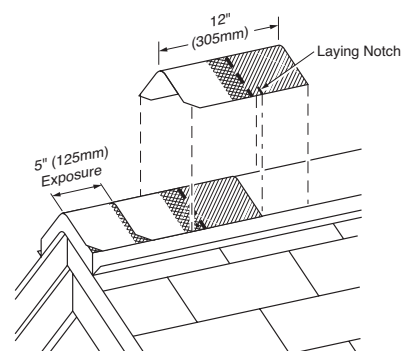


Figure 13-20: Use laying notches to center shingles on hips and ridges, and to locate the 5" exposure.

## HIPS AND RIDGES

### INSTALLING SHADOW RIDGE™ ACCESSORY SHINGLES FOR INDEPENDENCE™

CertainTeed Shadow Ridge accessory shingles are designed to be used with Independence to cap hips and ridges. Simply fold accessory shingles along the pre-cut lines and detach individual cap pieces.

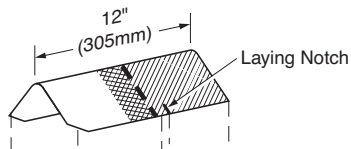


Figure 13-16: Shadow Ridge accessory shingles detach easily from three-piece units to make 72 individual cap pieces.

There are 24 three-piece units in each Shadow Ridge 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.

### APPLICATION IS AS FOLLOWS:

1. Apply Independence 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 roofing is very similar. To assist in proper alignment when ridge vent is not used, snap a chalk line parallel to the hip or ridge where the side edges of the Accessory shingles should be.

2. Install caps beginning at the bottom of a hip or at either end of a ridge. Apply a starter piece that has the bottom 5" removed (Figure 13-17). 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 <sup>3</sup>/<sub>4</sub>" into or through the decking.