



If you are contracting a SHINGLED ROOF REPLACEMENT

When obtaining bids to replace your house roof, you should discuss with each contractor several important issues. It's important to clarify the composition and quality of materials that will be used – especially the roof felt, flashing, and shingles – as well as the way these materials will be installed. You'll want to make sure the roofer you use is familiar with the product to be installed, is experienced with the installation methods that will keep the warranty in force, and promises to use those methods in the written contract. A permit may be required; check with your city's Building Department for details. (In Cleveland Heights, you need a permit only if the job involves replacing any of the supporting structure of the roof – joists, beams, etc. – or if all the sheathing will be replaced. If the roofer will be applying a second layer of shingles over an existing layer or replacing only part of the roof sheathing, no permit will be needed, although the contractor must still be registered with the City of Cleveland Heights.) Note: If a permit is required, make sure that the job has passed inspection with your Building Department before you make your final payment.

MATERIALS:

Make sure the roofer will use 15# or 30# **roof felt**. The difference between the numbers is in the weight of the paper; 30# paper is thicker than 15# paper. A type of **waterproof roofing underlayment** (usually referred to as *Ice Guard* or *Ice Shield*) should be applied to specific areas that are prone to ice dam and/or water build-up, to prevent water from getting underneath the shingles and entering the house. (It is a little bit more expensive, so it's not generally used throughout the roof, but only in trouble areas – usually the bottom three to six feet along the roof line, and sometimes in the roof valleys.) **Drip edge** (a metal strip that prevents water from working its way back up under the shingles) is generally installed along the bottom edge of the roof, but in some cases may be recommended along the "rake edges" (the sides sloping down from the peaks), as well. Your contract should specify whether waterproof roofing underlayment and/or drip edge are included, and where they will be installed.

Flashing is the metal used to seal the roof where it joins other roof sections, house walls, or around obstructions such as chimneys. It's best to get all new flashing with a roof replacement, rather than allowing the roofer to re-use the existing flashing. The contract should specify use of coated aluminum flashing (a width of 24" is standard) with a gauge of .025 or heavier; if you desire a different flashing material (i.e., copper), make sure it is specified in your contract.

The contract should also specify the manufacturer, style, composition, and weight of the **shingles** to be installed. Shingles are generally described as asphalt or fiberglass. The difference can be confusing – even for roofers. Part of the confusion lies in the fact that fiberglass shingles are made from asphalt, and really should be called "fiberglass-asphalt shingles." Both types have a base mat that is surfaced with mineral aggregates. In organic asphalt shingles, that base mat consists of felt, made from rags, and paper wood pulp that is saturated and coated with asphalt. In fiberglass-asphalt shingles, the mat is made from glass fiber mat coated with asphalt. Although fiberglass shingles have a better fire rating than organic asphalt, both are considered acceptable.

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Both types of shingle are commonly used today. Your choice will generally depend on aesthetics, availability, and cost. Generally, the more expensive shingles, whether organic asphalt or fiberglass-asphalt, come with a longer warranty, some extending to 25 - 30 years.

The difference between asphalt and fiberglass-asphalt shingles will usually be of greater concern to the roofing contractor than to the homeowner. Fiberglass-based shingles are coated (not saturated) with asphalt, and don't get as soft during hot-weather installations – and thus aren't so easily damaged. On the other hand, fiberglass shingles are more difficult to work with in very cold weather because they can become brittle and can crack if flexed. For that reason, organic shingles may be a better choice if your roof will be installed during the late fall or winter months; fiberglass, for a summer installation.

Traditional three-tab shingles are most common, although some homeowners prefer the look of inter-locking shingles or the newer “dimensional” style that simulates the look of wooden shakes. In addition to appearance, your selection of a shingle style should take into consideration both current price differences and future costs. For example, dimensional shingles, because of their nature, should not be covered over with a second layer and should be removed before your next roof is installed (although HRRC *always* recommends stripping off to the roof deck – see below.) The choice of shingle style and color is usually left to the homeowner, but should be in the final contract (as should the color of the flashing, which should closely match that of the shingles.) The shingles should all be from the same manufacturer's lot number, to ensure consistent coloration.

Venting of roofs has become a virtual necessity in the last ten years, as a way of allowing hot, moisture-laden air to escape from beneath the roof and extend the life of the shingles. There are many types of vents to choose from, each with a “best application” and a different installation method (*see separate handouts on attic vents.*) Make sure you discuss the reasons for each contractor's recommendation for venting, and that your contract specifies the type and location of each vent to be installed.

The contract should specify that materials are to be delivered to the job site no more than three days before they are to be installed.

INSTALLATION:

It is always best that a new roof be installed directly on top of the roof sheathing (the wood deck that covers the rafters). Many contractors, however, will assume that you want a tear-off only when you already have two layers of roofing material and would be adding a third. If you have a single layer of roofing now, you might wish to ask about the cost of stripping off that layer, especially if your present roof has a lot of irregularities.

If your top layer of roofing covers an old slate or wooden shingle roof, there may not be any sheathing under it. Roofs of those types were often installed on “nailers,” planking with four-inch gaps between them. In such cases, a base of plywood sheathing must first be installed over the entire roof surface after the old shingles are removed and before the new ones are installed. *Be aware that this will add to the cost of the job,* but it's important that the new shingles be nailed into wood – not air – so they will hold.

If your roof has had leaks, show those areas to the contractor. (A quick peak at water stains inside a closet or wet rafters up in the attic will give an idea of the problems involved.) Make sure you ask the contractor for a *best estimate* of the wood replacement that will be necessary, as well as a per-foot cost for any additional wood deck repair that may be discovered when the shingles are removed. It's important to know both figures, so you can plan for the extra cost.

Ask the contractor to specify how the shingles will be fastened. As a rule, hand nailing is preferred over power nailing. (Power stapling is *not* recommended.) If power nailing is used,

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it is important that the contractor control the amount of pressure being applied, so that the nail heads are not driven into or through the shingles. (Overdriving the nails can radically shorten the life of a new roof.) Regardless of the method to be used, the contract should specify that all installation requirements from the manufacturer will be followed, so as to keep the material warranty in full force.

If your work will be done during cooler weather, you may wish your contract to specify that the shingles will be installed only when the temperature is at least 50°.

Installation of the flashing is one of the most important parts of any roofing job. Be sure that your contract specifies that the contractor will install valley flashing *under* adjacent roofing shingles, and slip step flashing behind the wood siding or cedar shingles along house walls and dormers. In addition, the contract should call for the contractor to counter-flash all chimneys and imbed the flashing in mortar joints (grind and tuck method, using reglets). These installation methods will help prevent water from getting under the metal flashing and entering the house.

Finally, include in your contract that the contractor will be responsible for a thorough clean up, for damage if the roof is left uncovered and it rains, and for any damage to siding or gutters during the course of the roofing job.

TIP: If you are having the old roof torn off, it's almost guaranteed that debris will come through and make a mess in your attic. We strongly suggest that you take time to cover any items you have stored in an unfinished attic (or in the knee wall areas of a finished attic) so they are protected during the re-roofing – or include in your contract that the roofer will tarp and clean up in the attic.