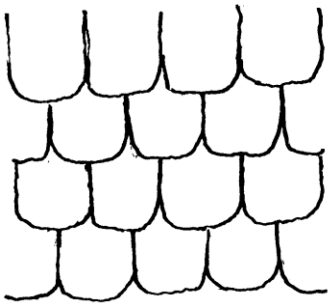
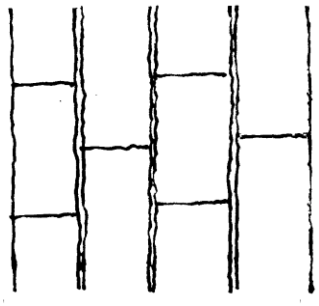
I.1 Roofing

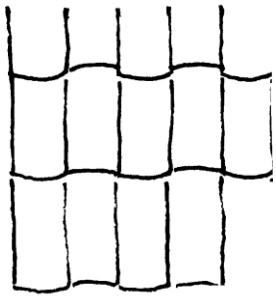
Original roof materials with distinctive character should be retained and repaired if possible. Many original roof materials, even early asphalt shingles, provide a building with significant character, and many can last a surprisingly long time if maintained. If original roofing must be replaced, the replacement material should be similar to the original in scale, color and texture. Some distinctive roofs and roof details include the following:



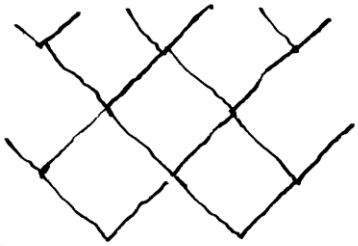
Beavertail shingles



Batten seam metal

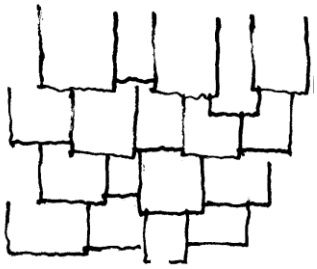


Mission or Spanish tile

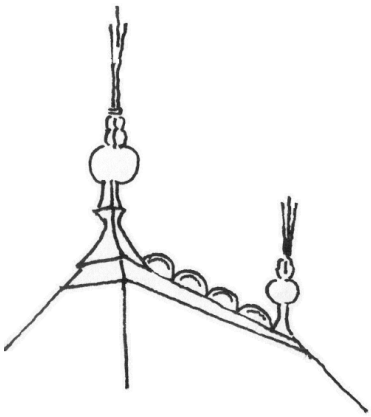


Diamond shingles

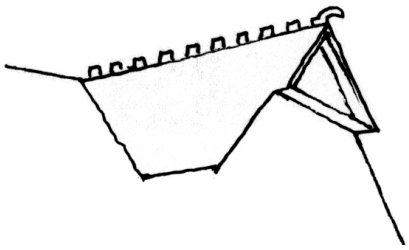
Hexagonal shingles



Random shakes



Finials with cresting between



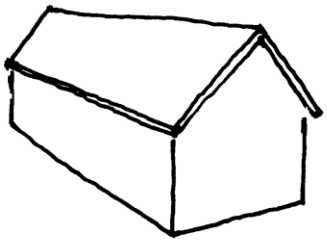
Cresting

I.2 Roofing continued

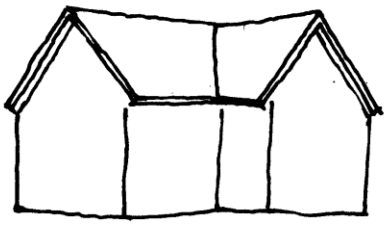
Roof Shapes and Appurtenances
The shape of a roof is one of a building's most significant character-defining elements. Efforts should be made to retain a roof shape in an uncluttered form, free of such appurtenances as satellite dishes, skylights, solar panels and mechanical equipment.

The Preservation Board does determine the appropriateness of all appurtenances. While these objects may be seen as necessities of modern life, they may not be acceptable everywhere. If they are proposed, all efforts should be made to conceal them from public view.

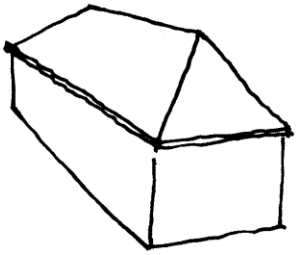
Some common roof types include:



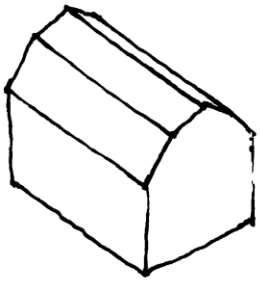
Gable



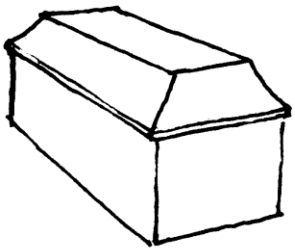
Cross gable



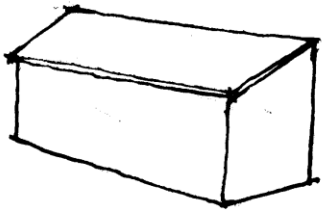
Hip



Gambrel



Mansard



Shed

I.3 Roofing continued

Alternate Roofing Materials
Although the Preservation Board does not review changes to properties where an existing material is to be replaced with a matching material, the Board does determine whether a new material matches. The question of what constitutes a 'match' is raised often with roofing. Several roofing products on the market today appear to match historic materials, but appearance may not be enough to qualify for a match. Before replacing a roof with a different material, it is best to check with the Board.

The National Park Service disfavors substitutes when the original is available. In Preservation Brief #16, *The Use of Substitute Materials on Historic Building Exteriors* (www.cr.nps.gov/hps/tps/briefs/brief16.htm), NPS states:

> "In general, four circumstances warrant the consideration of substitute materials:
> 1) the unavailability of historic materials;
> 2) the unavailability of skilled craftsmen;
> 3) inherent flaws in the original materials; and
> 4) code-required changes."

It should be noted that buildings can lose their historic status if altered too much, and may be disqualified from certain rehabilitation tax credits.

Architectural asphalt shingles in place of shakes, slate or tile
Architectural shingles are simply thicker versions of the standard asphalt shingles seen on roofs everywhere. Where standard shingles carry warranties of up to 30 years, the thicker shingles are warranted up to 50 years. New types of architectural shingles are meant to look like wood shakes, stone slate or clay tile, and some get relatively close. Thicker profiles yield shadow lines much like those of traditional roofing, and some provide the random patterns of shakes or slates. Shapes that match those of flat clay tiles are also available. Colors approximate those of the traditional materials, and some brands even mimic the randomness of natural materials.

There are, however, noticeable differences between the surface finishes of the shingles and of the shakes, slates or tiles. The shingles have the granular surface common to standard asphalt shingles but not to the others. The differences are apparent from the typical distance from the ground to a house roof. As a result, these materials may not be acceptable for use on historic buildings.

Synthetic slate shingles
This is a new family of materials intended to look like stone slate but at a lower cost and weight. Each brand is made in its own unique shapes, colors and textures, and from ingredients ranging from recycled tires and plastic to stone dust and fiberglass.

Some brands have impressive performance ratings for such things as impact resistance, wind uplift, flame spread and color retention. These high ratings are reflected in 50-year warranties, which match those of top-quality asphalt shingles.

While the marks for performance are high, the marks for authenticity are lower. While some products approximate the originals, many others are noticeably fake. Most lack

the distinct randomness in thickness, width, color and patina of natural slate and which gives character to a roof. Some brands try to suggest randomness by limiting a pattern repeat to every four to six courses vertically and four feet or so laterally. Diligent roofers optimize the randomness by laying out the slates on the ground, as is done with natural slates. Still, most roofs have a general blandness, especially on large expanses.

Most brands of synthetic slate don't come in graduated sizes as does natural slate. In many traditional roofs, slates become gradually larger moving down from the ridge to the eaves. This was done for practical reasons, but the aesthetic results are quite striking.

Finally, the color and finish of most brands are very uniform, which just doesn't happen in nature. Some brands have accent slates every so often with a different hue than the others, but they are typically too few and far between to make much difference.

However, synthetic slate may be appropriate in certain applications. It may be a better solution than asphalt shingles, especially if used in place of them. It could work on a roof that is high up, where the differences between faux and natural are less noticeable. Or it might work well on a roof without large expanses, such as one that is interrupted often with dormers, ridges and valleys.

I.4 Gutters

Most houses today have stock aluminum hung gutters of the "K" style (the letter K refers not to the shape of the gutter but to its designation in the manual of the *Sheet Metal and Air Conditioning Contractors National Association*). Most downspouts (also called leaders or conductors) are aluminum also, usually with a baked enamel finish to match the gutters. Aluminum is the least expensive metal for this purpose and the most easily installed, but it is also the most fragile. K-style aluminum gutters have been used on historic buildings for many years, and are acceptable in preservation districts. However, other metals and gutter shapes are sturdier and more historically accurate, and their use should be considered if replacing gutter systems.

Aluminum gutters and downspouts are usually hung with thin metal straps which can be torn when stressed, or with long spikes that can pull out under tension. Gutter and downspout sections are connected with pop rivets, which can fail rather easily and which don't seal the joints between sections. Ice, common in the Rochester climate, is the largest contributor to gutter and downspout failure. Evidence of these failures is seen everywhere each spring.

Copper and galvanized steel gutters and downspouts are stronger than their aluminum counterparts. They consist of thicker metal and are hung with stronger brackets. Furthermore, the joints between sections and down the back of downspouts can be soldered, eliminating areas of leakage. The most appropriate shape for houses of the late Victorian to the early 20th century are half-rounds. Half-round gutters are preferred by the Preservation Board over K-style gutters, although the latter are allowable.

Built-in gutters are still seen on some buildings in Rochester, despite their deficiencies in our climate. They were used mainly in high-style buildings beginning in the 18th century where water conductors were needed to prevent damage to elaborate cornices, but where hung gutters and downspouts would have detracted from a building's appearance. Locally, they appear most often on houses of the Greek Revival and Italianate styles, styles which have elaborate cornices and few places to hide downspouts. Built-in gutters can be problematic in this area because of their tendency to fill with ice, which can damage the gutters and send melt water up under roofing shingles. Leaks can go undetected, especially in houses where maintenance is not an owner priority. They work best where a roof is well insulated, so that ice is less likely to form, and where the owner does an annual inspection and cleaning. If they and their internal downspouts are maintained, their retention is encouraged by the Preservation Board because they neaten a building's appearance.