



• DESIGN • REVIEW • GUIDE •

Slate Roofs

Burlington is well known as a community with a high quality of life, small and cohesive neighborhoods, a vibrant downtown and waterfront – all within a spectacular setting on the shores of Lake Champlain. This deserving reputation is due in part to the City's small size, entrepreneurial spirit, civic-minded citizens and activist government. One of the many factors that makes Burlington such a great place to live, work and visit is the community's attention to detail, and respect for its setting, heritage and quality urban design.

Burlington's Design Review process strives to protect the city's unique qualities and strong sense of place by carrying out citywide development and design objectives. The purpose of this *Design Review Guide* is to help applicants in preparing projects to be reviewed by the City's Design Advisory Board and Development Review Board. Through materials such as this, the Department of Planning & Zoning seeks to make information available well before the final design of a project saving the applicant, and the city, time and money.

Your roof is one of the most important parts of your building. If something goes wrong, it can have a devastating impact on the entire structure and what's inside. Like anything-else, regular inspection and preventive maintenance can save you from a large expense down the road. This is especially true if you are fortunate enough to have a slate roof. While slate is long lasting and relatively maintenance free, it does need a little TLC from time to time.

Typical of many New England communities, Burlington has a wealth of buildings with slate roofs. Slate roofs are an important design feature of many historic buildings, and many still have their original slate roof more than a hundred years later. This *Design Guide* is intended to help you appreciate the value of slate, outline some of its maintenance needs, and offer a few sources for additional information.

WHY SLATE?

Slate roofs first appeared in North America as early as 1625, and well before that in



Europe. By 1876, the US was the world's leading exporter of slate with quarries in Vermont, Maine, New York, Virginia and Pennsylvania. Here in Vermont, most of us think of Fair Haven in the southern Champlain Valley as a source for slate. Slate from different parts of the country vary in color, with red, blue, gray, or black being most common. Vermont slate is typically green, red, purple, or mottled.

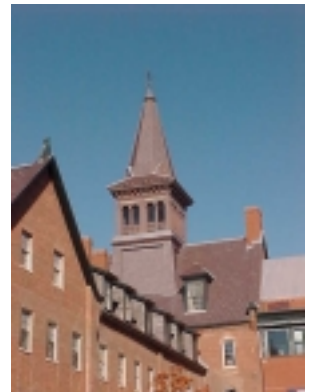
Slate has been a preferred roofing material across the globe. It is waterproof, fireproof, attractive, and **very** durable. Typically Vermont slate, the most common in Burlington,

will last on average 125 years. Depending on where it came from and how well it was installed, slate can last for as long as 200 years if properly maintained.

Because most of Burlington's slate roofs were installed around the turn of the century, many if not most, still have **many** more years of useful life if they're treated well. With a life expectancy of well over 100 years - as compared to 20 to 30 years for an asphalt roof - it makes financial sense to take care of your slate roof.

CHARACTERISTICS OF SLATE ROOFS

Slate can be found on roofs of everything from small simple homes in the Old North End, former estates in the Hill Section, commercial buildings downtown, to academic buildings at the University. Even slate sidewalks and curbs can still be found in some parts of the City.



Slate roofs are beautiful works of craftsmanship.

Many of our historic buildings have an applied or decorative color design in their roofs. These are not only attractive, but make each building distinctive and unique.



DESIGN OBJECTIVES

- ✓ **The style and configuration of historic slate roofs are important design elements that should be preserved whenever possible.**
- ✓ **New slate should match the size and texture of the slate being replaced.**

CARE AND REPAIR OF SLATE

Like any other part of your building, your slate roof requires inspection and preventative maintenance. Regular maintenance should include cleaning gutters every fall and spring, and every 5-7 years inspect your roof for broken, loose or deteriorated slates.

Working with slate requires specialized skills. For this reason, it's always best to contact someone who specializes in slate - a slater. While a slater is a roofer, a roofer is not necessarily a slater. To find a skilled slater, start with a recommendation from a slate wholesaler, and then talk with former clients.



- ◆ Keep foot traffic on the roof to a minimum. If you must walk on the roof, use a ladder hooked over the ridge to better distribute your weight. If you must walk directly on the slates, wear soft soled shoes and step on the lower-middle portion of the slate.

- ◆ As soon as you notice broken, cracked or missing slates - have them repaired at once. Water damage can become costly and serious in no time at all. It's very easy (and economical) for a slater to spend less than an hour replacing the damaged slate. This small step can prevent a larger problem in the future.

- ◆ If you discover leaks, don't necessarily blame the slate. Always check the flashing and gutters - they are usually the weakest point on your roof. Given the longevity of slate it makes sense to use a comparably long lasting flashing material. Copper is your best choice. Don't use tar or other mastic sealants to fix leaks. They become hard and crack, resulting in more damage in a short amount of time.

- ◆ When repairing leaks, always check the sheathing - or roof undercoating. If it needs to be replaced - don't use plywood. Plywood is very hard, and hammering nails into it causes vibrations that can loosen other slates. Pressure treated materials should also be avoided as they shrink over time causing cracking and damage to the slates as the wood dries out.

WINTER ICE DAMS



An ice dam is created when snow and ice melts on the upper portion of the roof and re-freezes as it reaches the eave. This creates a "dam" that prevents water from getting past. As it grows, the ice works its way under

the slates causing them to brake and loosen. It also probably means that warm air is escaping from your living space into your attic. This buildup of ice will also likely migrate into the cornice line and work its way down the side of your building - under or over your siding - causing even more water damage. Telltale signs include shadow lines from dirty water running down the building, icicles on the siding, and/or chronically peeling paint.

Typical solutions include installing heating cables along the eave and gutters to prevent the ice from forming (check first with the City Fire Marshal). Another involves creating a "cold" roof by venting the roof structure through a system of eave and ridge vents. While more costly, this offers an additional benefit of preventing potential moisture buildup within the roof and walls. Never use an axe or hammer to breakup the ice as this will likely cause more damage than the ice itself.

ADDITIONAL INFORMATION

city zoning permits & general information

- **Burlington Dept. of Planning & Zoning**

149 Church St., Burlington, VT 05401

802.865.7188 www.ci.burlington.vt.us/planning/index.html

city building permits

- **Burlington Dept. of Public Works**

645 Pine St., Burlington, VT 05401

802.863.9094 www.dpw.ci.burlington.vt.us/

historic building rehabilitation

- **VT Division for Historic Preservation**

National Life Bldg., Drawer 20

Montpelier, VT 05620-0501

800.622.4553 www.uvm.edu/~vhnet/hpres/org/vdhp/vdhp1

vt slate roofing industry

- **Slate Roof Quarterly**

c/o Vermont Slate & Copper Services, Inc.

P.O. Box 430 • Stowe, VT 05672-0430

888.766.4273 www.slateroofquarterly.com

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