



Quality Craftsmanship | Stowe, Vermont

the craftsman

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Applied learning equals energy savings

Making old and new homes energy efficient

By Kate Carter

It's 2016 and carbon emissions are higher than ever. Research has shown that housing accounts for approximately 40 percent of energy usage. If everyone took steps to make their homes more efficient, that number could be cut in half.

One of the best ways for homeowners to reduce their carbon footprint starts with a home energy audit. Within hours they learn how efficient their home is and what they can do to improve it. Another way is to build a home that meets or exceeds state energy efficiency requirements.

In 2010, when the country was reeling from the Great Recession, Sisler Builders created a division within their company that focuses on energy efficiency in current and future homes. "I've always been interested in making our building envelopes as tight as possible," says president Steve Sisler. "I saw the energy efficiency training for my staff as a symbiotic benefit. We would learn methods to make our new home projects better, while learning how to enhance older homes. We were in a recession and this seemed to me an excellent alternative to layoffs."

Sisler Builder's energy division has grown to include six employees. Mike D'Muhala is the technical



A recent new home project with exceptional energy efficiency.

"If a house is already tight, we can still find ways to make it even tighter."

and "science guy," while Brian Irwin is the business manager and marketing director. A crew of four does installations and retrofits.

Since 2010 they have performed several hundred energy audits, resulting in over 160 home and commercial energy retrofits. To date D'Muhala estimates that these customers have saved 16 billion BTUs and 109 thousand kilowatt hours of electricity. This equates to about a quarter million dollars in savings and a 2,000-ton reduction in CO2 emissions, roughly the same as removing 500 cars from the road for one year.

"The most common problem we see when we do an audit is air leakage," says D'Muhala. "We partner with Efficiency Vermont, and they will give a \$1,000 rebate if a client reduces air leakage by 35 percent. This can be done primarily through blower

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Mountain biking's changing landscape

The evolution of singletrack trail riding in Stowe

By Peter Merrill



Steve, re-energizing with a mountain bike ride in Waterbury.

About 15 years ago I took my bike into Irie Cycle (now Irde). I was new to mountain biking and having trouble getting in and out of my clipless pedals. Hardy Avery, the young co-owner of Irie, looked disdainfully at my new Italian mountain biking shoes and then at me: “Well it’s certainly not the shoes, man.” Hardy was part of a dedicated group of riders who were cutting and riding trails around Stowe, and in our brief exchange he let me know that he was on the in the know, and I, decidedly, was not.

Such was the mountain biking culture at the time. If you were new to town or visiting, and looking for a place to ride, the bike shops were happy to point you to the Rec Path or a nearby dirt road. The good stuff was guarded like the location of a skier’s secret powder stash.

Thankfully, much has changed since then. Stowe and Waterbury currently have over 30 miles of fully signed and mapped singletrack managed by the Stowe Mountain Bike Club (SMBC). The non-profit has over 710 members and 90 trail work volunteers whose mission is “to cultivate a vibrant mountain bike culture with a world-class multi-use trail network, supported by and engaged with the local community.”

People had begun to realize that a more inclusive approach meant greater receptivity on the part of the town and private landowners and greater access to financial resources to fund trail construction and maintenance. We now have trails on private, town, and state land that are better-designed and built, and they’re suitable for a broad range of riding abilities.

Mountain biking is bringing visitors and revenue to Stowe. SMBC has raised almost \$75,000 for trail construction and maintenance, and a recent partnering with the Stowe Land Trust (SLT) has resulted in the permanent preservation of Cady Hill Forest, now an extensive multiuse area with great singletrack in town. Another SMBC/SLT partnership is Adams Camp, where two exceptional trails, Kimmer’s and Hardy’s Haul make for some of the best riding in the area.

“I used to think of riding my bike in the woods as just a way to get exercise, but it’s so much more,” says Steve Sisler. “Maybe it’s a change in perspective that comes with age, and maybe it’s the change in attitude towards mountain biking that’s taken place over the years, but I really feel a greater sense of community and connectedness when I’m out biking. At Sisler Builders, we try to promote healthy lifestyles and give back to the community, and I am proud of our sponsorship of the Stowe Mountain Bike Club and the volunteer support that members of our staff provide.”

Riding from the heart

In August of 2014, Sisler Builders lost a friend and crew member in a mountain biking accident. Andrew Langlois came to Vermont to fill his life with all the adventure, enjoyment, and work that the Green Mountains offer. Avidly outdoors in every season, Andrew was a steadfast reminder to get outside and enjoy every day to the fullest.

To honor Andrew’s enthusiasm and love of mountain biking, Steve envisioned a new trail to replace the dangerous section of the Perry Hill trail where Andy and many others have had serious accidents. With multi-faceted effort, cooperation, and generosity we can finally say that work on the new trail in memory of Andrew began on June 1, 2016.

Whether we see you on the trails or the roads, on the fields or the rivers, let’s tip a hat (or a helmet) to the memory of our friend and adventurous soul Andrew.

Custom cabinet displays Stowe's skiing history



Sisler Builders collaborated with Vermont Ski & Snowboard Museum to create a cabinet that displays, in a unique way, ski artifacts from the museum's collection. The cabinet is located in the Adventure Center at Spruce Peak, where visitors can walk right up, view the items at eye level, and get a sense of the history and evolution of Alpine skiing.

Seth Allen, custom woodworking division manager for Sisler Builder, said it took about four weeks to design and build the cabinet and another week to install it. Master woodworker Glen Waller finalized measurements and the design, and built it with Craig Gants and Allen. "Everything was built with blind fasteners. You can't see any screws or hanging devices," Allen explains.

The team took measurements of each individual ski item and built "boxes" sized precisely to each item's dimensions. Like assembling a puzzle, they organized the boxes to create a final display measuring approximately 20 feet long by 8 feet high. They



used prefinished maple and whitewashed raw maple plywood, with exquisite attention to detail.

The museum provided materials, while Sisler Builders donated the design, knowledge, and craftsmanship to create the custom display case. Owner Steve Sisler, a longtime skier and ski history enthusiast, was happy to donate his company's expertise to build the cabinet for the Vermont Ski & Snowboard Museum so that visitors to Stowe Mountain Resort could enjoy, a different perspective of Alpine skiing.



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door-assisted air sealing of the attic deck, basement, and living spaces.” Additional incentives are available for upgrading insulation and heating systems.

Sisler Builders charges \$450 for an audit and Efficiency Vermont gives an instant \$100 rebate, so the cost to the customer is \$350 for a typical house. D’Muhala conducts the audit, spending an average of three to four hours on site, inspecting and conducting tests. He uses a blower door, a machine that measures the air tightness of buildings, and a thermal camera to locate air leakage sites.

D’Muhala then puts together an energy model of the home which he uses to generate a list of recommendations including their costs, energy savings, and estimates of Efficiency Vermont rebates. This model can be tweaked to meet budget, lifestyle, and aesthetic preferences.

“If a house is already tight, we can still find ways to make it even tighter,” D’Muhala says. “Once a house is pretty tight it requires a heat recovery ventilator, which brings fresh air into the house through a heat exchanger.

It’s all about ventilation. Send the stale, moist air out and bring the fresh air in.”

D’Muhala has been imparting the lessons he’s learned to the site supervisors and carpenters involved in Sisler Builders’ new home and significant remodel projects. The symbiotic relationship Steve Sisler was hoping for in 2010 has borne fruit! Of the six new homes they completed since 2012, all have exceeded the rigorous state-mandated testing amounts by at least 300 percent. One earned kudos from Efficiency Vermont Senior Energy Consultant TJ Holloway when he noted, “The air density (temperature) corrected blower door number is 509 CFM. This is really, really tight! Passive house tight.” This attention to detail results in reduced energy consumption, pollution, and maintenance coupled with increased interior comfort.

Sisler Builders is a member of Efficiency Vermont’s Home Performance with ENERGY STAR program and their Efficiency Excellence Network. To schedule an energy audit or for information about reducing your carbon footprint call Brian Irwin at Sisler Builders, 802-253-5672.