

Professional Services

- + Roof consulting
- + Construction documentation and administration
- + Condition assessment reports
- + Leak investigations
- + Cost estimating
- + Hands-on surveys and test probes
- + Historic building restoration and rehabilitation
- + Facilities maintenance plans
- + Materials analysis and selection
- + Preservation planning

Steep-Slope Roofing

- + Slate
- + Wood shingles
- + Clay tile
- + Standing seam and batten seam copper
- + Asphalt shingles
- + Flashings
- + Rainwater conduction systems

Low-Slope Roofing

- + Flat seam copper
- + Built-up roofing
- + Modified bitumen systems
- + EPDM
- + Fluid-applied systems
- + Flashings

Building Envelope

- + Exterior masonry
- + Windows and doors
- + Stained and leaded glass
- + Architectural woodwork
- + Ornamental ironwork
- + Steeples, parapets, and cornices

Competence

- + Expertise in roofing technology and building pathology
- + Holistic approach to identifying and treating deterioration
- + Hands-on, up-close surveys from ladders and high reach equipment
- + Principal involvement in all projects
- + Attention to detail
- + Close client collaboration
- + Frequent site visits during construction to monitor quality
- + Continuously refining our understanding of building technologies

SOLUTIONS FOR THE ENTIRE BUILDING ENVELOPE

An Innovative Approach to Built-in Gutter Liners

Copper is an excellent material for built-in gutter liners with many advantages, such as durability (offering a service life of at least 50 years), ease of soldering, and the ability to be formed into a wide variety of profiles. What do you do, however, in situations where a copper gutter liner just won't work?

In 2008, Levine & Company designed a gutter replacement project for the Frederick Ferris Thompson Library at Vassar College, Poughkeepsie, New York (see Figure 1). The built-in gutters were enormous, with a total girth of more than nine feet. Multiple modified bitumen gutter liners had failed in the past. Flat seam copper would have been prohibitively expensive given the gutter's size, to say nothing of the improbability of soldering miles of locked seams perfectly. EPDM would not have conformed well to the numerous changes in plane and would not have lasted more than ten years in a gutter. Fluid-applied membrane waterproofing offered an ideal solution that was cost effective

(about half the cost of a flat seam copper gutter liner), durable (having a service life of about 20 years which can be extended another 10 to 15 years by re-coating), self-terminating (eliminating the need for termination bars and mechanical fasteners), and fully covered by a 20-year manufacturer's warranty (EPDM and modified bitumen systems are not eligible for warranties when installed in gutters). Best of all, fluid-applied systems have no seams to open up, split, or crack.

Since then, Levine & Company has found fluid-applied membrane gutter liners to be a reasonable alternative in several other projects where copper gutter liners would have been impractical. On one project, for instance, dormer window sills protruded into the built-in gutter, thereby hindering thermal movement in the existing lead coated copper gutter liner (see Figure 2 on reverse). Installation of numerous additional expansion joints and eighteen new downspouts would have been required to make a new

copper gutter liner work in this case. Fluid-applied membrane systems, unlike copper, are not subject to significant thermal movement. The gutter and dormer window sills were covered in one seamless, monolithic layer without the need for additional expansion joints or downspouts.



Figure 1: Built-in gutter at Thompson Library; winner NRCA 2009 Gold Circle Award for Innovative Solutions

AN INNOVATIVE APPROACH TO BUILT-IN GUTTER LINERS

In another case, a fluid-applied membrane system was installed to line an existing lead coated copper built-in gutter which was leaking after only two years in service due to the installer’s misguided design approach. Levine & Company assisted the owner and the original contractor in determining an appropriate repair. Fluid-applied membrane offered an affordable (compared to replacing the gutter liner entirely), watertight, solution which satisfied everyone.

With its time-tested record and unbeatable longevity, copper is still our first choice for built-in gutter liners when conditions permit. In those rare instances, however, when copper is not an option, fluid-applied membrane systems can be a sensible alternative.

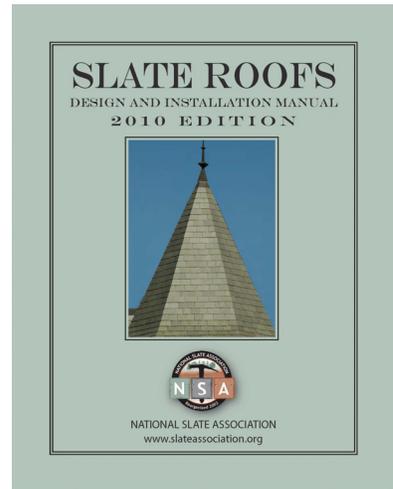


Figure 2: Dormer window sills within the built-in gutter. ▶

SLATE ROOFS: DESIGN AND INSTALLATION MANUAL

The National Slate Association’s publication *Slate Roofs: Design and Installation Manual* is a fantastic resource for designers and contractors, alike. Jeff Levine, founding principal of Levine & Company, is co-chair of NSA’s Manual Committee and played a key role in authoring/editing the 250 page Manual. Julie Palmer, an architectural conservator at Levine & Company, assisted the Manual Committee in the production of 140 detail drawings included in the publication.

For more information on the Manual and to view the table of contents, please visit the NSA’s website at www.slateassociation.org.



Ridgewalker News



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