

ROOFING REVIEW

An Overview of Current LIGHTGUARD Applications

LIGHTGUARD Passes All The School Tests In New York State. With Honors.

When school administrators and architects specify roof systems for schools, they are looking to solve some very specific problems: long-term budget concerns, limited in-house maintenance staffs, damage to the waterproof membrane caused by contracted workers and vandals, and energy costs that are literally going through the roof. If those schools are in upstate New York, they must also concern themselves with the high cost of asbestos abatements and the shock to the membrane from temperatures that can range as much as 70° in a 24-hour period and reach lows of 30° to 40° below zero.

What's more, they need a roof system that can be installed quickly and easily. As roofing contractor Mike Monahan of Monahan & Loughlin, Inc., puts it, "With schools, you're working in a restricted time period. You start when school's out and you best be out of there before school comes back."

LIGHTGUARD Solves Problems

So, how do you find the right roof system for your school. If you are Philip Fortsch, Building and Transportation Superintendent for Chazy Central Rural School, you take the time to walk on as many as 20 different roofs until you find the system that can solve your problems. For Fortsch, that system was a LIGHTGUARD Protected Membrane Roof System.



L to R: T. Clear approved contractor Mike Monahan, Pres. Monahan & Loughlin, Inc.; T. Clear agent Ken Ross, Pres. Styro Moisture Protection; Randy Windell, V.P. /General Manager, T. Clear Corp.; Brian Monahan, Supervisor, Monahan & Loughlin, Inc. standing on a LIGHTGUARD Protected Membrane Roof System atop the Ausable Valley Middle High School .

A LIGHTGUARD Protected Membrane Roof System is comprised of 2-foot by 4-foot panels of 2-inch or 3-inch high-compressive strength polystyrene with a 3/8-inch latex-modified concrete facing that can be installed over any type of waterproof membrane. Mike Monahan, a T.Clear approved contractor, has installed LIGHTGUARD systems on at least 100 buildings in the last 16 years. "I've got them over Carlisle and Firestone. I've got them up there with Manville, too. There's a case where I've got LIGHTGUARD over three different membranes on the same

plant and I haven't been back on any of them. The tight, closed-cell structure of the foam insulation panels resists all forms of water penetration and protects the membranes from heat, ultra-violet rays, temperature swings and freeze-thaw cycles. Christopher B. deGrandpre, Superintendent of Schools for the N.E. Clinton School District, had seen

LIGHTGUARD®
Protected Membrane Roof Insulation



Top Left: (L to R) Bob Chase, Dodge-Chamberlin-Luzine -Weber; Philip Fortsch, Building/Transportation Superintendent, Chazy Central Rural School and Ed Luzine, R.A., Dodge-Chamberlin-Luzine-Weber, discuss the LIGHTGUARD Protected Membrane Roof System recently installed on the Chazy Central Rural School.



Top Right: Overlooking the small lake on the grounds of the Chazy Central Rural School.

his share of unprotected membranes. "With the old built-up roofs, it was hard to go on the roof to maintain a rooftop unit, particularly in cold weather. You'd get those bubbles in the tar membrane. Of course, if you broke that barrier you had a leak. We have extremes of temperatures here. Could be 90° one day and 30° the next day. In winter, it can be as low as 30° or 40° below zero. And winds...tremendous winds...that has a lot to do with temperature change. This system has worked out extremely well for us." And he should know. Previously, deGrandpre had a gravelled roof with a built-up membrane. "We had leaks. Lots of leaks. There were problems with expansion and contraction in joints and so forth. All that's been eliminated." That portion of the roof has been down since 1982. So, when the rest of the roof needed replacement, he insisted on a LIGHTGUARD Protected Membrane Roof System.

The LIGHTGUARD panels, tongue and grooved on the long edges and installed in a staggered arrangement, serve as both insulation and ballast. Once installed, LIGHTGUARD offers an attractive appearance and a smooth, easy-to-walk-on surface.

Stone-ballasted PMR systems weigh 11 lbs. per sq. ft. Monahan says, "Actual field experience of what you got on that roof area, by the time you get done, is somewhere in the neighborhood of 12 to 14 pounds." LIGHTGUARD weighs 4.5 lbs. per sq. ft. and is ideal for installation over single-ply and built-up roofing requiring a lighter weight roofing system, especially on older buildings. Ed Luzine, Registered Architect, with Dodge-Chamberlin-Luzine-Weber, has been specifying LIGHTGUARD for almost 20 of his 35 years in practice. "We do a lot of school work and a lot of reconstruction work. Old buildings need new roofs. A lot of the older buildings, you can't put on a ballasted roof without using LIGHTGUARD because of the problem with the weight."

In this part of New York State, roofing contractors have another problem with gravel-ballasted roof systems. According to Mike Monahan, "Good round river-washed gravel... it doesn't exist. I'm looking at \$40 a ton for gravel. I've got as much as \$24,000 in gravel sitting on some roofs. \$24,000 in stone just holding the roof membrane down. I'd rather incorporate that cost in LIGHTGUARD, which is an insulating ballast."

LIGHTGUARD Insulates And Saves Energy

LIGHTGUARD ballasted roof panels are made with extruded polystyrene and carry an R value of 5 per inch of foam. And that translates into reduced energy costs. Just ask Bruce Sample, Building Maintenance Supervisor for N.E. Clinton Schools. "Yes, it's reduced our oil consumption, I would say almost in half."

Similar results were found at Chateaugay Central Schools. Patrick Calnon, Superintendent of Schools, checked his reports and determined that in the first year, his energy costs dropped a third. Brian Monahan of Monahan & Loughlin, Inc., who had supervised the installation, quickly added, "We put in 2 1/2" underlayment and the LIGHTGUARD, so we put in an R30 on this building." In the second year, after expanding the building by 20,000 sq.ft., replacing skylights and windows, oil consumption was almost half of that first year. Is Calnon satisfied with his results? "I've recommended it (LIGHT-GUARD) to a couple of other schools," he says. "People that have come and asked and have come to understand what's involved agree. It doesn't take a whole lot of explanation to convince people that, yeah, this ought to work."



As you can see for yourself, LIGHTGUARD protects the waterproof membrane from punctures caused by dropped tools, vandalism or even this broken pop bottle found on the N.E. Clinton School.



Above: A workman walks on this LIGHTGUARD Protected Membrane Roof while doing repairs to the chimney at left.

Top Right: A LIGHTGUARD Protected Membrane Roof System installed on the N.E. Clinton School. On the far end of the building, is an older LIGHTGUARD system installed 10 years ago that is still performing at the top of it's class.

Right: Christopher B. deGrandpre, Superintendent of Schools, N.E. Clinton School District.

And it does. Bill Doyle, Business Manager for Ausable Valley Schools, reports that after LIGHTGUARD was installed on the Keeseville Elementary School, oil consumption was cut in half. "They saved 36,000 gallons of oil at Keeseville. I think it came to something like

.92 or .93 gallons of oil (before LIGHTGUARD) to heat one sq. ft. of building." It's no wonder that there is now a LIGHTGUARD Protected Membrane Roof System atop the Ausable Valley Middle High School and the Ausable Forks Primary School.



Left: (L to R) Mike Monahan, Pres., Monahan & Loughlin, a T.Clear approved contractor and his customer, John Gratto, Superintendent of Schools, Ausable Valley Schools stand atop the Ausable Forks Primary School.

Right: (L to R) Dave Torrance, Clerk of Works and Project Rep; Bill Doyle, Business Manager; John Gratto, Superintendent of Schools, and Joe Kahn, Principal, Ausable Forks Primary School.

LIGHTGUARD Is Easy To Install And Maintain

LIGHTGUARD is easy to apply. There is no need to adhere panels to the roof membrane or use fasteners that can puncture the membrane. In the case of older felt membranes that were manufactured using asbestos, Mike Monahan recalls a job where a fully-adhered roof was switched to a LIGHTGUARD system. "We only did flashings and overlaid LIGHTGUARD. We were able to eliminate the removal costs, landfill charges and the asbestos abatement. The school saved \$180,000." There is also an opportunity to reuse the LIGHTGUARD panels in the event of membrane failure, renovation or vertical expansion.



Top Left: A brick thrown or fallen from a nearby chimney does no damage to this LIGHTGUARD Protected Membrane Roof at Chateaugay School.

Top Right: (L to R) Frank Boadway, Head of Building Maintenance for Chateaugay Central Schools walks up to join Patrick Calnon, Superintendent of Schools, Chateaugay Central Schools and Brian Monahan, Monahan & Loughlin, Inc. as they discuss the LIGHTGUARD installation that Brian supervised.

Because a LIGHTGUARD system protects the waterproof membrane, there is virtually no maintenance involved. Christopher B. deGrandpre of N.E. Clinton Schools testifies, "Because we had so many problems with the old roofing systems, we wanted a system that would be as close to maintenance-free as possible." His Building Maintenance Supervisor, Bruce Sample will tell you, "We had poor roofs and now we don't." Dave Torrance, Clerk of Works at Ausable Valley Schools, says about his previous roofs, "You had a real deletion of stone at the edges of the roof. The felt just faded away and the janitorial staff and the custodians just patched and patched and patched." No more.

Total Performance Warranties

T.Clear Corporation set the standard with the first single-source, Total Performance Warranty in the industry. LIGHTGUARD Protected Membrane Roof Systems are warranted to insure water tightness, insulating value, product integrity and wind disturbances up to 70 mph. T.Clear also offers

15- and 20-year extended warranties and warranties for high-wind areas.

T. Clear can assure you of long-term value and performance because LIGHTGUARD systems are installed only by authorized contractors and assessed at regular intervals by a nationwide network of independent advisors.

LIGHTGUARD has been used on commercial buildings, government installations, schools and universities, medical facilities and textile mills in the United States since 1976, when FinPan Inc. first began manufacturing the product. LIGHTGUARD is now sold, marketed and distributed by FinPan's subsidiary, the T. Clear Corporation.

Vandalism, limited maintenance, thermal shock, energy savings, quick and easy to install, cost-effective, long-term performance. A LIGHTGUARD Protected Membrane Roof System passes all the tests.

Architect Ed Luzine specified his first LIGHTGUARD roof in the late 70's. "We did a combination of LIGHTGUARD and EPDM on a wing of a high school where the owner said they'd be willing to try it. It's been without a leak for nearly 20 years now. We get

no callbacks. It solves problems and saves energy and owners are happy not to have to worry about people up on their roof."

From contractor Mike Monahan's point of view "it's a quality installation with a proven performance record that's easy to install."

Superintendent Christopher B. deGrandpre says, "It's worked out well for us. Obviously, because we've used the system again and again."

If you'd like to know more about LIGHTGUARD, you can call the contractor for these school projects, Mike Monahan, Monahan & Loughlin, Inc. at 1-518-561-6036 or the architect, Ed Luzine, Dodge-Chamberlin-Luzine-Weber, at 1-518-463-6611.

For technical information or a list of nationwide manufacturer's agents or a list of other schools that have installed LIGHTGUARD Protected Membrane Roof Systems, just call T. Clear Corporation at 1-800-544-7398.



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