

PMT GUIDE # 9

Book of Order Section G-10.0102o: "The session is responsible for the mission and government of the particular church. It therefore has the responsibility and power . . .to provide for the management of the property of the church, including determination of the appropriate use of church buildings and facilities, and to obtain property and liability insurance coverage to protect the facilities, programs, and offices, including members of the session, staff, board of trustees, and deacons."

PURPOSE OF THIS GUIDE

Property Ministries Team has received inquiries from churches about how to deal with leaks of ground water into basement spaces

- 1) Through basement wall (concrete cracks, concrete masonry joints)
- 2) At the junction of basement walls and floors
- 3) Through on-grade basement floors and drains.

The sources of the water are generally temporarily high ground-water levels around the building due to excessive rain, roof and gutter run-off and occasionally storm sewer or (worse) combined storm-sanitary sewer back-up.

The problem cracks generally derive from concrete shrinkage especially in the period immediately after original construction. In a few cases, water stops may have been inadequate or omitted between the concrete floor and concrete footings during original construction.

Remedies from persistent problems include:

DEALING WITH THE WATER BEFORE IT BECOMES A PROBLEM

If dimensions (entrance way thresholds, window sills, light wells, etc.) permit, sloping away the ground adjacent to the exterior walls

Extending downspouts further from the building. With large volumes or velocity of water, some care is needed to scatter the water's force (stones or other) and avoid soil erosion

If storm drains are blocked below grade, rodding out the drains (preferable) or disconnecting downspouts to release water on the ground away from building dealing with water volumes as above.

DEALING WITH THE PROBLEMS OF LEAKS IN BASEMENT WALLS

Other mechanical remedies for addressing leaks often proposed by contractors include:

Application of hydro-cement (or other coatings) to interior face of walls (see WARNINGS below).

Injection of expanding epoxy directly into holes drilled into the interior face of cracks

Injection of expanding urethane foam directly into holes drilled into the interior face of cracks

Excavation adjacent to the presumed exterior face of cracks and injection of water-activated sealants (e.g bentonite slurry or panels) from the exterior.

OVERVIEW: The mechanical means are often impermanent solutions and in some cases ineffective. The reputation and past experience and input from clients of the contractor are critical in evaluating these options. Of these options, the one most frequently reported successful is the injection of expanding epoxy into holes drilled into the interior face of leaking cracks.

WARNINGS:

Faced with unhappy owners of leaks, small general contractors will frequently suggest the application of hydro-cement (or other material) to the inside face of the basement wall. These are usually unsuccessful beyond the next rain due to continued water pressure from outside and a waste of money.

Similarly, some contractors perhaps hired to inject may propose installation of interior drain tile systems cut into floors to catch the water after it is in the building and to take it to drains and sump pumps . Because of the persistence of leaks and the difficulty of dealing with them, evaluation of the seriousness and volume of the water problem and wariness about expensive solutions is appropriate before embarking on them. (see LAST WORD below).

CONTRACTORS: It is best to look for contractors for whom stopping these leaks is among their primary business and to get recommendations from past clients at least 5 years previous.

There are few contractors with records of success.

Contractors using the epoxy-injection system from inside basements:

U.S. Waterproofing (www.seepage.com) has a good reputation with this but also works with other systems.

Kost Concrete Specialties, Inc., 902 Sorrel Court, Carol Stream, IL 60188-4801, 630-682-8811 receives a recommendation from Greg Whitacre of Wildwood Presbyterian Church, who reported:

“We haven't used a service like this at our church, but I did for my home and was pleased with the work. The contractor was Kost Concrete Specialists in Glendale Heights. 630.682.8811. We first used them in 1996 for a crack in the foundation wall that was leaking. They drilled holes in the crack and injected it with a 2-part expanding epoxy. The job had a 10 year warranty and it did leak again in 2001. No questions asked, they came back out and fixed it. All good since then.”

Structural Services, 40401 N. Lake Blvd., Antioch, IL 60002 (David Meisinger, owner, 847-609-1346) is recommended by Pris Shepard (Deerfield First Presbyterian Church). His region is Lake and north Cook Counties; he says he “will help church evaluate the sources of water (e. g. slopes and downspouts near building)”

I have communicated with Dave Meisinger (847) 609-1346. I think he is fantastic for foundation leaks. I'm a contractor and had Dave repair a foundation joint on a space where old meets new. I have no water, drips or leaks. He's a nice man and very ethical. I'd recommend him for any leaks in any foundation.” Pris Shepard

A LAST WORD REGARDING LEAKS THROUGH BASEMENT FLOORS:

These are rarer than leaks through basement walls and usually a sign of high water levels below the building. In such cases, it is worth investigating trenching drains into the floor to take water away to a sump pump (a plumbing solution). If there is no sump pump, one is probably needed.

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