

## “The Ten Most Common Problems in Old Age Homes”

By way of definition, we consider any home built before 1900 to be an "old age" home.

Our comments are based on observations made in the thousands of homes that we've examined since 1990, primarily in Central and Western Pennsylvania. The ten conditions discussed are not meant to imply that these are the only ten problems one might encounter in an old age home. These are the most common we have seen and typically the most expensive to correct. Thus, in our opinion, these are the most important for consideration as the potential or current owner of an old age home.

Also, an important perspective with regard to old age homes should be mentioned. One does not own an old age home. Rather, one lives with an old age home and shares a portion of its life. The fact is, most old age homes have already existed for much longer than most human beings ever expect to live. Further, these homes (at least, many of them) will continue to survive much longer than the current period of "ownership."

Finally, when dealing with problems in old age homes, it is often best to live with that home for at least a year before deciding to make changes. It has taken a long time for that home to develop its current personality. Changes considered immediately important might soften with time.

Here, then, are the ten conditions we encounter most frequently in old age homes which often require repair or rehabilitation.

1. Old, obsolete, marginal waste water systems - If the home in question has a septic system more than twenty years old and there's no evidence of recent maintenance, the probability of having to upgrade or entirely replace that system within the next few years is very high. Current plumbing codes set different standards than would have applied many years ago.

Septic systems should be pumped out on a regular basis. Without that, the drainage beds plug and the system fails. The typical life of a leaching bed is often less than twenty years.

Old systems often have steel septic tanks which corrode and eventually fail.

Many old homes had only cesspools (no drainage bed) for waste water discharge. As demands on that system increase, it's likely that it will no longer serve satisfactorily. When it fails, a new system complying with current standards must be installed.

We strongly recommend a comprehensive, subsurface evaluation of any old septic system.

2. Old water supply systems - Our ancestors often found it adequate to have a shallow, dug well as their water supply. Their demand for water was much less than ours today.

Many of these old wells go "dry" during certain seasons of the year and periods of high demand.

Also, many of these old wells did not provide protection from contamination of the water. This could be caused by animals dying in the water source, debris falling into the water source and many other circumstances.

We recommend a comprehensive water test of any private well before taking ownership. If you already own the home, a water test should be performed on a regular basis - ideally, every year or at least every two years.

3. Dry rot - Perhaps of all of the problems one might encounter in an old age home, dry rot is often the most difficult to correct and the most difficult to detect.

Soft, deteriorating framing visible in the basement is usually clear evidence of the presence of dry rot. However, other dry rot, which cannot easily be detected, could exist behind the siding, along the sills and around the windows. If there is water or moisture and evidence of dry rot in the basement or crawl space, we suggest additional probing to explore for the possibility of dry rot behind the siding, especially around the windows and along the sills.

Repair of dry rot can be quite expensive and should be investigated to the fullest before undertaking a restoration project. It should also be recognized that additional dry rot is likely to be discovered once restoration is undertaken.

4. Inaccessible crawl spaces and attics - Frequently, portions of old homes were built over shallow, inaccessible crawl spaces. If there's even a hint of excessive moisture or dry rot in accessible basements and crawl spaces, it is highly likely that there will be more serious dry rot in inaccessible areas. Generous ventilation is one of the prime controllers of dry rot. If there's no access, there typically is no ventilation. Thus, the higher probability of dry rot.
5. Old electrical systems - Many old homes are literally a museum for old wiring. Knob and tube wiring is the oldest. BX (metal-sheathed) is next. Fabric-jacketed is the next; and finally, since the 1950's, we have used Romex (vinyl-jacketed) wiring.

Eventually, all old wiring should be phased out. The highest priority would be to phase out any BX (metal sheathed) wiring, which is generally considered to be the most frequent cause of house fires. Next in importance would be the knob and tube wiring. The third to be phased out would be the fabric-jacketed wiring, typically installed in the 1930's and 1940's.

When electrical services were first installed in many old homes, a minimal (often only 30 amperes) electrical service was provided. As time went on, that system may have been upgraded to 60 amperes. Often, we observe old homes that have never been upgraded beyond 60 amperes.

To meet the demands of modern living, most new homes are served by a 200 ampere electrical service. Thus, anything less than that may require upgrading for your benefit and safety.

6. Old plumbing - As central plumbing was first installed in old age homes, the most commonly used type of pipe was galvanized iron. This is identifiable by the threaded fittings at all joints in the pipe and by its attraction to a magnet. Some old homes have brass pipe which also has threaded fittings. However, a magnet will not be attracted to brass pipe, simplifying the identification process.

Eventually, galvanized pipe will both corrode and begin to leak, or it will build up internal mineral deposits that constrict water flow. Both of these conditions are unacceptable and virtually impossible to repair. Galvanized iron pipe in old homes must eventually be phased out.

If you see some newer piping in the basement of an old home and find that the water pressure seems to vary from one fixture to the next, it's likely that some galvanized pipe still exists. Water flow through portions of that pipe is likely to be constricted.

7. Old plaster - In most old age homes, the interior walls and ceilings were finished with plaster. The oldest plaster used horse hair to help bond the material together. Most of this old plaster was supported on wood lathe which in turn was attached directly to the framing.

Once plaster begins to deteriorate, repair is difficult. If you find walls or ceilings where the plaster is pulling away from the lathe, complete refinishing will soon be necessary. If you push gently on a wall and can feel flex in the wall surface, this is an indication that the plaster is pulling away from the lathe.

8. Incomplete heating systems - Most old homes were originally built with no central heating system. They relied on cook stoves and fireplaces for their heat.

As central heating became available and these homes were upgraded, the path of least resistance was often chosen and only portions of the house received the benefit of central heating. Thus, remote areas and second floors often went without central heat. Take the time to determine what parts of the home are heated.

9. Chimneys - Most old homes have chimneys. When constructed, these chimneys were usually built of brick, double or triple thickness, with no separate lining.

Typically, from the attic level up, these chimneys deteriorate more rapidly than one might expect. Thus, many old chimneys, while serviceable for such things as an oil-fired heating unit, are no longer serviceable for coal or wood stoves. In fact, the structural stability in many old chimneys is questionable if there has been no rehabilitation work done during the life of that chimney.

A careful examination of the inside and upper portions of a chimney are important to assessing its condition. If there's any doubt about its condition, a competent, qualified chimney sweep should examine it internally.

10. Windows - Minimizing heating cost is, of course, important in any home. In old age homes, the windows are often overlooked as the primary source of heat loss. Old, double-hung windows that have not received any rehabilitation are frequently the largest source of heat loss in an old home, particularly one which has had some insulation added.

Old windows with sash weights are particularly significant sources of heat loss through the large gap in the frame occupied by the sash weight. Upgrading and weatherstripping these old windows will typically minimize heating costs.

As a final note, peaceful coexistence is perhaps the best approach to a wet basement in an old age home. Most of the foundations were loosely laid stone with mortar packed in the joints; and, thus, any hope of keeping water out is usually futile. The best approach is to assure that water gets out once it gets in with a good drainage system and/or sump pump.

Old age homes can be wonderful to live in; however, they can also be demanding. It's important to understand their idiosyncrasies before committing to ownership. Working with your local Professional Engineer as a buyer or a seller of an older home will answer questions and provide peace of mind.