

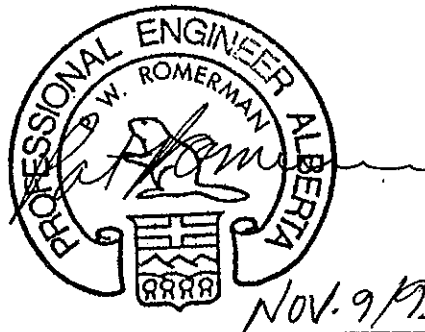
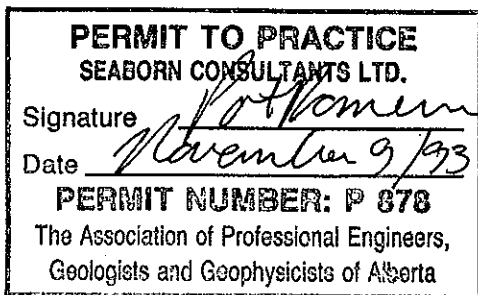
Certificate of Acceptance

Summer Village of Chestermere
Box 54 Site 2 RR7

Attention: Building Inspector

DATE: November 9, 1993
MUNICIPAL:
LEGAL: Lot: 23, Block: 4, Plan: 9211945
BUILDING: Single Family Detached
BUILDING
PERMIT NO.: 93-CVII

This is to certify that I have reviewed the construction of the Preserved Wood Foundation for the above-noted project, and it has been completed to my satisfaction and, to the best of my knowledge, complies with the Alberta Building Code requirements in force at the time this certificate was signed.



SIGNATURE AND SEAL OF PROFESSIONAL ENGINEER

PAT ROMERMAN
PRINT NAME

SEABORN CONSULTANTS LTD.
NAME OF FIRM

Permanent Wood Foundations

A permanent wood foundation (PWF) is an engineered construction system that uses load-bearing exterior light-frame wood walls in a below-grade application. A PWF consists of a stud wall and footing substructure, constructed of approved preservative-treated plywood and lumber, which supports an above-grade superstructure. Besides providing vertical and lateral structural support, the PWF system provides resistance to heat and moisture flow. The first PWF examples were built as early as 1950 and many are still being used today.

A PWF is a strong, durable and proven engineered system that has a number of unique advantages:

- energy savings resulting from high insulation levels, achievable through the application of stud cavity insulation and exterior rigid insulation (up to 20% of heat transfer can occur through the foundation);
- dry, comfortable living space provided by a superior drainage system (which does not require weeping tile);
- increased living space since drywall can be attached directly to foundation wall studs;
- resistance to cracking from freeze/thaw cycles;
- adaptable to most building designs, including crawl spaces, additions and walk-out basements;
- one trade required for more efficient construction scheduling;
- buildable during winter with minimal protection around footings to protect them from freezing;
- rapid construction, whether framed on site or pre-fabricated off-site;
- materials are readily available and can be efficiently shipped to rural or remote building sites; and
- long life, based on field and engineering experience.

PWFs are suitable for all types of light-frame construction covered under Part 9 'Housing and Small Buildings' of the National Building Code of Canada (NBC), that is, PWF can be used for buildings up to three-storeys in height above the foundation and having a building area not exceeding 600 m². PWFs can be used as foundation systems for single-family detached houses, townhouses, low-rise apartments, and institutional and commercial buildings. PWFs can also be designed for projects such as crawlspaces, room additions and knee-wall foundations for garages and manufactured homes.

SOURCE:

<https://cwc.ca/why-build-with-wood/durability/durability-applications/permanent-wood-foundations/>



(<https://www.nordichomeinspection.com>)



WOOD FOUNDATION, A DISASTER WAITING TO HAPPEN?



Posted September 7, 2016 by Lars Knobloch (<https://www.nordichomeinspection.com/author/nordic-admin/>) & filed under Home Inspection (<https://www.nordichomeinspection.com/category/home-inspection/>).

I feel sorry for the wood foundation. Not because it's terribly unsound – because it's not. Not because it's known to settle or have chronic moisture problems, because that's not true either. I am not sure where it's coming from, but we commonly hear concerns about the wood foundation from home buyers. I have even seen home buyers walk away from the purchase when I made them realize it was a wood foundation and not a poured concrete foundation as they thought it was.



(https://www.nordichomeinspection.com/wp-content/uploads/2016/09/IMG_3766.jpg)

“I can honestly say that I have seen less than five failed foundations built with wood. What's common with all of them have been excessive negative grade over several years”

In case you didn't know; accelerated laboratory testing of modern pressure treated materials indicates a lifetime of over 100 years with no serious deterioration, and the durability of the systems has been amply demonstrated over the long-term by in-ground tests conducted over the past 40 years by various Federal agencies.

A 100 year life expectancy or not, I have personally inspected thousands and thousands of homes – several hundred of them with a wood foundation. So let me share some facts based on my experience:

- A block foundation is much weaker, and fails at a much higher rate in our area than a wood foundation
- A poured concrete foundation will crack from settling or pressure from the soil, and it's common to see water leaking through these cracks. Poured foundations also commonly start leaning due to pressure from the soil
- It is very important to keep water away from any foundation, not only to prevent from moisture intrusions in the basement, but also to take pressure from your foundation. You do that by having a positive slope away from the foundation (dirt, concrete slabs etc. should slope away from the foundation wall – NOT towards it)
- I can honestly say that I have seen less than five failed foundations built with wood. What's common with all of them has been excessive negative grade over several years
- We have no contractors in our area specializing in repairs on wood foundations. Simply because the demand is very low or not present

We don't know exactly how long a wood foundation will last, but we know that the most common options to wood are poured concrete and concrete blocks, and I have seen those foundations fail in homes ranging from 10 to 50 years old.

My final conclusion is: wood foundations are probably not any worse than any other type of foundation as long as you keep the water draining away from the foundation

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REVIEWS

DIANE B @ 10/04/2015 02:59

Lars at Nordic was very helpful explaining every step of the way. He answered all my questions in a way...

Read more (<https://www.nordichomeinspection.com/testimonial/diane-b-10-04-2015-0259/>)

Diane B



GREAT FOUNDATIONS



Get More Living Space that's Warm, Dry, Energy Efficient

***Crawford
Homes***

consider the advantages . . .

Here are other compelling reasons why you should consider a PWF System:

- * PWF will withstand $8\frac{1}{2}$ times the Uniform Building Code requirements for earthquake forces - $2\frac{1}{2}$ times UBC requirements for lateral shift and uplift due to wind.
- * Because the wood is pressure treated with permanent Timber Specialties C-50 (CCA) preservatives, it is impervious to termites, rot or decay.
- * A PWF can be erected in any season - there is no concrete or mortar to freeze.
- * A PWF can be installed in half a day at considerable savings in construction time and costs. Prefabricated PWF walls go up even faster.
- * Because the builder's own carpentry crews install the foundation, there are no delays due to uncertain weather or concrete/masonry deliveries and curing times.
- * Truss-like construction of PWF panels span any soft spots in sub-soils. Walls will not crack like concrete.
- * With a PWF you can gain an extra level for comfortable living. You get an affordable home with more living space that will appreciate fast, providing equity and have higher resale appeal.
- * A PWF system, using crushed stone around and under the basement area, is the driest system of all. Subterranean waters drain off quickly preventing the water pressure buildup responsible for cracks, leaks and basement dampness common in conventional basements.
- * A PWF can be built to accommodate virtually any architectural or homeowner design for single or multiple units.

Preserved Wood Foundations

The affordable way to turn basements into dry, comfortable lower level living areas.

The development of Preserved Wood Foundations (PWF) is one of the most significant and practical new ideas to hit the residential construction industry in years.

This remarkable concept in foundations for housing not only offers potential homeowners and developers the advantages of lower construction costs and on-time building schedules... it also ensures more comfortable living space, lower heating/cooling costs and higher resale value for single or multiple family dwellings.

The Preserved Wood Foundation also offers homeowners, builders and developers another big advantage... design flexibility. Wood Foundations can fit right in with the plans for almost any "dream house" ... single level, multilevel, solar, rectangular, T or L shape, crawl space... even homes buried in the earth. All single or multiple units can be constructed on the PWF. It is the most significant advance in one, two or three storey home building design this century.

The Wood Foundation is also admirably suited to today's growing demand for more affordable housing.

Wood is a material everyone can work with. Using common household tools, the homeowner can easily adapt the wood foundation to fit changing needs. Rooms can be added, changed, finished or refinished without expensive professional assistance.

Plus, the PWF lends itself to major renovations. Wood foundations can be expanded or altered with relatively little of the difficulty which might be encountered with a concrete structure. Doors, windows, even full rooms and larger additions, in terms of modifications to the existing wood foundation walls, require only basic carpentry skills, tools and pressure treated wood foundation materials. Once the basic engineering and design structural code criteria are established, the renovations are easy.

The Liveable Basement !

2

Because of PWF's low thermal conductivity and ease of insulation, over 80,000 homeowners in Canada and the United States are enjoying warmer, dryer basements... basements free of the damp, musty odors experienced in traditional concrete/masonry basements.

So great is the insulating value of the system, these same PWF homeowners are experiencing up to 50% savings in heating costs. A 1/2" thick PWF system for instance, provides the same insulation value as an 8" thick concrete block wall. In fact, a PWF wall with 6" fiberglass insulation between the studs achieves an R-20 insulation factor.

With a PWF system, construction costs can be lower than a conventional foundation. Cost savings don't stop there! Because nailable studs are already in place, a PWF is easier and less expensive to finish. Installation of electric, heating and water service lines is simplified. No furring is needed to install insulation or paneling. It is easier and less expensive to remodel or add-on at a later date.

PWF walls are strong and thin and provide more energy efficient insulating qualities than conventional block or concrete walls. They often yield more than 100 sq. ft. of additional warm and dry basement living space.

PWF is one of the fastest growing developments in residential, commercial and light industrial construction. More than 40 years have been devoted to the research, testing and perfection of this construction concept, a concept that is proving its advantages daily in thousands of homes throughout North America.

The National House Builders Association (now the Housing and Urban Development Association of Canada), in cooperation with Central Mortgage and Housing Corporation, the Division of Building Research of the National Research Council and the Eastern Forest Products Laboratory first built experimental PWF homes in 1961 and 1963 near Ottawa. Since then the use of the PWF has expanded in both Canada and the United States, gaining rapid acceptance and approvals of major associations, agencies and code officials.

Better Homes Start with a Better Basement

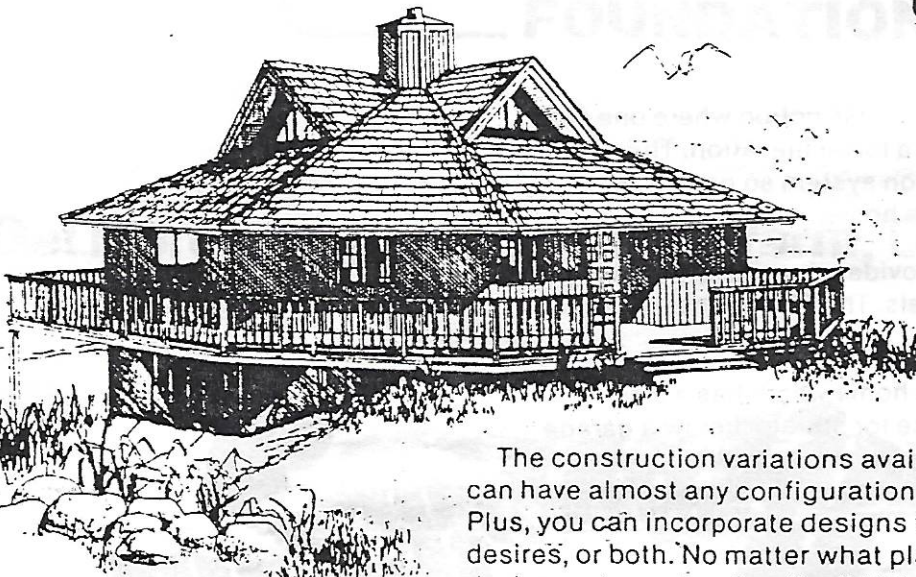
The Central Mortgage and Housing Corporation (CMHC) accepts wood foundations for houses built with National Housing Act financing. In the United States, wood foundation homes have been financed through FHA, the Farmers Home Administration and countless banking institutions.

Fire and Homeowner's insurance policies make no distinction in base premiums between homes with PWF, concrete or masonry block foundations.

These are only a few of the reasons PWF is enjoying growing popularity - reasons why you should consider a Preserved Wood Foundation for your new home.

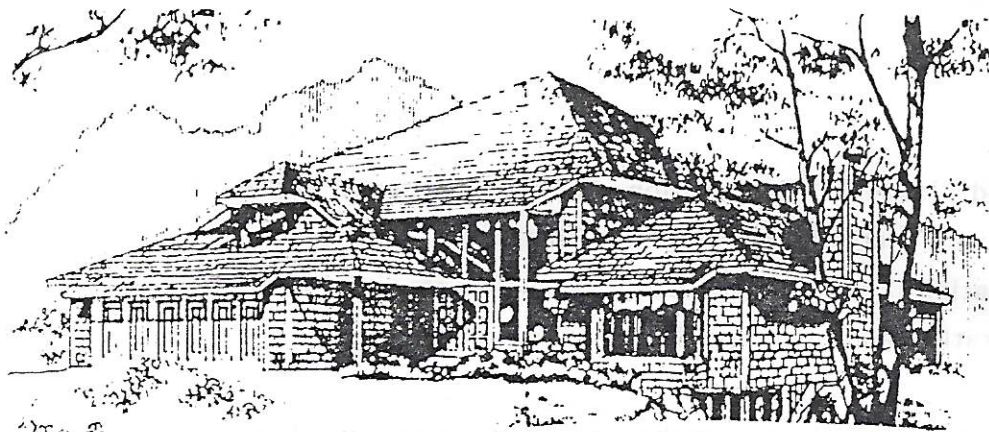
A few words of caution concerning treated wood. FIRST, not all treated wood is pressure treated. SECOND, few "off the shelf" brands of pressure treated wood can match the strict Canadian Standards Association standards for PWF. Since there is a growth of "look alike" material now available, be sure to specify 'Timber Specialties Pressure Treated Wood' bearing the CSA stamp for your foundation. It is your assurance of product and manufacturing integrity... your assurance that the preservatives in the wood will provide permanent resistance to decay and termites.

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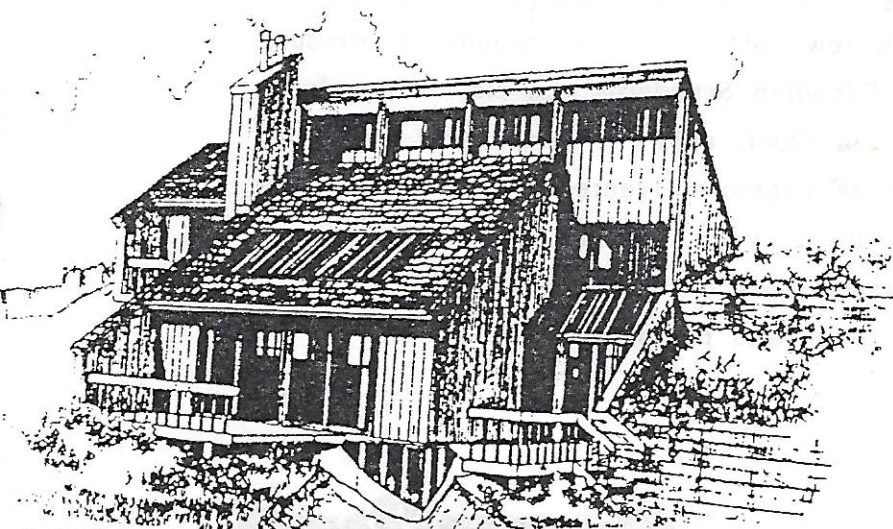
Shaped to Suit

The construction variations available with the PWF are virtually limitless. You can have almost any configuration you wish, L, T, box or octagon ... whatever. Plus, you can incorporate designs for multiple levels to suit the terrain, or your desires, or both. No matter what plan you choose, the wood foundation offers design and construction flexibilities that other materials systems cannot match.



Lower Level Life Styles

A conventional basement gives you room for storage, water heaters, heating/cooling systems, laundry and possibly some work or living areas. A PWF provides all this and more. With PWF you're assured of having another complete level for living that is warm, dry and comfortable for bedrooms, family rooms... whatever. The stud walls are already in place. All you have to do is insulate them for increased energy efficiency and finish them off to the design that best fits your living needs... whether your home is on a level grade or situated on the side of a hill.



**Materials
Performance
Guaranteed!**
with a
**60 Year
Limited Warranty**

Hillside Exposure

The PWF works extremely well for side elevation construction where one side of the house is below grade and the other opens to a lower elevation. The same type of construction that makes the wood foundation system so practically efficient adds even more dimensions to any hillside home.

A two story structure on a PWF automatically provides three levels of living area. Add another story to give your house four levels. The PWF gives you more room to expand, to enjoy and to sell.

Enjoy the convenience and extra living area in a home which has a PWF structure on or below grade and a PWF crawl space for storage below a garage or living area.

**Crawford
Homes**

Crawford Manufactured Homes Ltd.