

# Insiders Guide to Home Inspections

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Buying a House Built in the 1980's or 1990's

Presented by



The San Diego Real Estate  
Inspection Company

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# 1980's – 1990's Houses

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“What issues should I be aware of when buying a house built in the 1980's or 1990's?”

## *Introduction*

Most of the Country experiences building booms every 20 - 30 years. This happened right after World War II with all the GI's returning from the war, and again in the 1980's. Our last building boom took place in the early 2000's and continued until about 2007. This paper focuses on houses built in the 1980 – 1990 time frame. Even though most of us don't think of the 1980's as that long ago, it has been about 30 years!

We love to use the car analogy. Every year cars get better. New safety features are developed, better materials are used, and techniques that proved to be inferior are no longer used. This is the case with homes, too. Remember the Chrysler K car?



If you are considering buying a house that was built 30 years ago there are some things you must consider so that you are not disappointed once you move in. We inspect many of these houses throughout San Diego. Many large planned communities were built during this time



period. Some of the largest growth areas were Carmel Mountain Ranch in Rancho Bernardo, The San Diego Country Estates in Ramona, and other developments throughout northern San Diego County. We are familiar with many of the anomalies found in these neighborhoods.

It is important for your home inspector to identify certain components of the house even if they are functioning properly. They may be old (20 years+), consist of old technology, or may not be what you expect – such as single pane windows or wood tilt-up garage doors.

## *Electrical Systems*

Generally speaking electrical systems that were installed in the 1980's are considered “modern” electrical systems. They consist of circuit breakers (instead of fuses), the systems are grounded with three-prong receptacles, conductors are copper, and they are much safer than older systems of the 1970's or before. There will also be far more receptacles than in older houses for convenience and safety.



It was during the 1980's that the use of Ground Fault Circuit Interrupters (GFCI's) began in areas of the house other than the bathrooms and garage. Prior to 1987 they were not required in kitchens, which is a question that is often asked. For a complete list of where and when GFCI receptacles were required, please visit our website at:



<http://sdinspections.com/when-and-where-are-gfci-receptacles-required>

Houses built after the 1970's do not have aluminum wiring at their branch lighting circuits (for receptacles and switches). Aluminum wiring was the cause of house fires, but its use was limited to the mid-1960's through the mid-1970's. For more information, please see our other publication in this series entitled "Buying a House Built in the 1970's". Aluminum wire is still used on dedicated circuits of 30 AMP's or more such as dryers, ranges, or AC condensers.

The standard capacity for an electric panel installed in the 1980's is 100 AMP's which is adequate for most homes. It will accommodate multiple computers, TV's, ceiling fans, and many other modern items. In some cases you may be limited if you want to add a hot tub, additional receptacles in the garage (for shop equipment), or a pool.

Some houses built in the early 1980's have electrical panels that are no longer considered safe. The two brands of panels that should be replaced were manufactured by Federal Pacific Electric (left) identified by distinctive orange-tipped breakers, and Zinsco panels which are typically horizontal, and have multi-colored breakers.



Both of these brands of panels have a poor reputation, and have been suspected of causing house fires by over-heating or breakers that fail to trip when over-loaded. If you have either of these panels your inspector will likely recommend further evaluation by a licensed electrician to provide you either with piece of mind or an estimate for replacement.

Many of the 100 AMP panels also had limited space for breakers. As the building code evolved, more dedicated circuits were required. A new house will have many more dedicated circuits such as one for the microwave, one for the refrigerator, one for the dishwasher, etc. In the 1980's many of these appliances were still sharing one circuit. You should take note to see if the panel is full, or has additional capacity. This is important if you want to add a hot tub or more receptacles in the garage. If the panel is full, a sub-panel may be required, or a new panel – both of which can cost hundreds or a couple thousand dollars.

## Heating Systems

Due to the moderate climate in San Diego, we often see original furnaces in old houses. Furnaces in San Diego outlast the national industry standards because they simply are not used as much and have less wear and tear. Most of the furnaces from the 1980's are in serviceable condition but some are nearing the end of their useful life, especially those by the beach.

Of primary concern are horizontal furnaces that were manufactured by a furnace company named Consolidated Industries that is no longer in business. They manufactured furnaces that were sold under many private labels, most notably Premiere. Some of these horizontal furnaces were the subject of a recall due to poor design and the presence of small rods above the burners called "NOX Rods". These rods were intended to reduce the nitrate emissions (and thus nitrous oxide) from the furnace in a similar way that a catalytic converter works in a car. But these rods over-heated and fell onto the wood platforms under the furnace causing fires.



Without going into exhaustive detail in this paper, these furnaces are a fire hazard with or without the NOX rods. Not only are they old at this point, but they have design flaws which cause failure of the heat exchanger which can cause Carbon Monoxide to enter the house air. These furnaces should be replaced. If you are interested in a detailed article about these furnaces, please visit our website for an article titled [Hazards of the Consolidated Industries H-Series Horizontal Furnace](#) written by Michael Whedon.

## Ducts

In the 1960's forced air units distributed heated air through rigid ducts which were wrapped in insulation. This was a big improvement over wall heater found in most pre-1960 houses, but rigid ducts were difficult to install and leaked at connections. In the mid 1970's the industry changed to using flexible ducts. These new ducts help speed the installation of heating systems and allowed the installer more flexibility to route the ducts around structural components.



The only problem with early flexible ducts is that the outer plastic shell was not UV stable. When exposed to sunlight, it deteriorated and caused the ducts to fall apart. This occurs even from the small amount of light that enters an attic through vents. These ducts require repair or replacement if UV damaged.

## *Plumbing*

To save money, many of the huge housing developments used a new type of plumbing in the 1980's and 1990's. It was a plastic product called Polybutylene (or Qwest) that was supposed to be the answer to many traditional plumbing problems. The plastic plumbing system was easier to install than copper and required no soldering. Because the plastic tubing is flexible, long runs could be installed quickly. The sections of tubing were fastened together using plastic connectors (much like a drip system) and crimps to hold the tubing onto the various connectors. In addition to the cost savings to the developer, the plastic tubing was supposed to be unaffected by corrosion.

Unfortunately many of these plumbing systems failed causing property damage. Although an exact cause could not be determined, it is expected that the chlorine in water caused the fittings to fail. In some early installations with aluminum crimps, the crimps failed due to thermal expansion. A huge class action lawsuit was settled with the manufacturers of the Polybutylene which paid to repair or replace plumbing systems which failed.



Many of the early systems were repaired by replacing the plastic fittings with brass or copper fittings and copper crimps (as shown in this picture). These upgrades were considered satisfactory, but these systems still can fail. If the house you are buying has Polybutylene plumbing, you should obtain a quotation for a whole house re-pipe prior to the end of your contingency period, as you will want to have the plumbing system upgraded.

One contributing factor to failed plumbing systems, (copper or Polybutylene) is high water pressure. The street pressure in many parts of San Diego is very high – as high as 130 psi. To keep the pressure below 80 psi in a house, a pressure regulator is installed at the main water line. These pressure regulators can fail. When they do fail, water pressure in the house can exceed 80 psi which puts tremendous stress on faucets, plumbing, toilet fill valves, etc. Your home inspector MUST check the water pressure as many regulators fail after 15 years.

## *Insulation*

Most of the houses built in the 1980's and after have ample insulation. The products used do not contain asbestos, and are most typically made of fiberglass.

## *Roof*

Everything in a house will wear out. This includes components of the roof. Even a tile roof has an underlayment commonly referred to as tar paper. This underlayment lasts 20-25 years

depending on installation and sun exposure. Many roofs that were installed in the 1980's are currently in need of having the underlayment replaced. This involves removing the concrete tiles, removing the tar paper, and replacing the paper with a new underlayment. The original tiles can be re-used if they are in good condition.



An asphalt-shingle roof is also likely at the end of its life. It is made of oil-impregnated fiberglass material, with an aggregate (which looks like kitty litter) pressed into the surface. The aggregate adds color, but its primary purpose is to protect the shingles from UV exposure. Once the aggregate is worn, the shingle deteriorates rather quickly. Most of these roofs are 20 or 30 years roofs. Do the math. If the roof looks worn it is likely in need of replacement.

### *Windows*

Most windows installed in the 1980's have aluminum frames. Higher-end houses may have double pane windows. Not all houses built in the 1980's have double pane windows. Double pane windows were considered an upgrade. We often have clients who are disappointed to find that the modern house they want to buy has single pane windows. Be sure to check this out.

The most common problem we see with older windows consists of worn glides or rollers. This makes the windows difficult to slide. This is considered a hazard. The added force required to slide these windows could cause the window to be slammed shut resulting in broken glass.

### *What should you do?*

Hopefully this guide will help set your expectations of what to expect from a home inspection performed on a 30 year old house. We don't want you to be surprised with the items in the report. You should ask the seller if any upgrades have been performed. If not, you may need to budget for upgrades after you move in. Of course this guide cannot cover every scenario as each house is unique. There is a lot more information on our website at [www.sdinspections.com](http://www.sdinspections.com) and on our blog. Just use the search box to find additional info.

*About the author:* Philippe Heller is the president of The San Diego Real Estate Inspection Company. His multi-inspector firm performs thousands of inspections a year in San Diego. The company uses state-of-the-art testing equipment and the best reporting system available.

To learn more about what should be included in a thorough inspection, please visit [www.sdinspections.com](http://www.sdinspections.com) or call us at (760) 203-9682.