



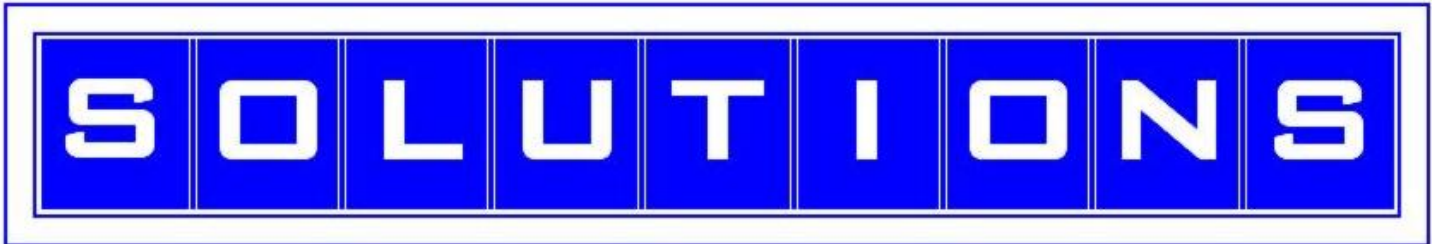
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Cracks

It is the nature of many construction materials to crack as they age, and as they expand and contract, particularly with exposure to moisture as they get wet and dry out. The more common of these materials include concrete, asphalt, stucco, stone, brick, mortar, concrete block, plaster, and drywall (also called sheetrock or Gypsum).

It is highly likely that your home, even if brand new, has what are considered common cracks in common areas, such as exterior walls, interior walls at corners of doors and windows, ceilings (usually in the middle), foundations (also usually in the middle of each foundation wall), garage floor, patios and porches, walkways, decks and balconies, retaining walls, and solid fences. It is virtually impossible for me to determine whether cracks are caused by structural failure or by some other cause, or, if caused by structural failure, whether the cause is active and ongoing. Cracks in patios and porches, driveways, walkways, fences, and planters TYPICALLY are not of a major concern to the structural integrity of the building. However, continued cracking could result in failure in those structures and, depending on the proximity to the house, damage to the structure. The closer other damaged structures are to the house, the more attention needs to be paid to those structures, their cracks, and the causes of those cracks.

Common definitions I use in documenting cracks

Common cracks are typically, but not always, defined as hairline cracks less than one-eighth inch wide or less than about eighteen inches in length, depending on location. Almost by definition, concrete and stucco will crack simply because the material cracks as it dries, cures, and ages. Common cracks in concrete and stucco are also called shrinkage cracks. Common cracks can appear at any time in the life of a structure, usually at door and window corners where they typically are of least concern. However, all cracks need to be monitored regularly to determine if they are expanding or lengthening, at which point other problems might be present. But you probably won't know until many months or years have passed since we tend not to notice incremental changes.

Major cracks are typically, but not always, defined as more than one-eighth inch wide, more than about eighteen inches in length, excessive in number, unusual (stair-step, V-shaped, straight horizontal, or straight vertical), or in unusual locations (such as middle of a wall with no doors or windows nearby). If major cracks are present or appear, you should seek additional evaluation from a qualified structural engineer specializing in foundations and structures. Some major cracks occur simply due to neglect and

lack of knowledge about how to take care of common cracks. In other words, a common crack can very easily become a major crack if it is ignored.

In most areas of San Diego County, due to the type of weather and rainfall patterns we have, if the affected structure is over ten years of age (what I consider an “[older home](#)”), cracks PROBABLY do not pose any threat of significant additional short-term damage with NORMAL CLIMATE, NORMAL RAINFALL, and NORMAL SEISMIC ACTIVITY. However, as we saw during the 2004-2005 rain season, rain can have a detrimental effect on our houses and foundations at any time. So it is best if cracks and areas around all cracks are patched, repaired, weatherproofed, and monitored on a regular basis, especially during periods of high rainfall or immediately after seismic activity. Any additional damage after such events should be evaluated by a licensed structural engineer.

If you are unfamiliar with common cracks, you should seek the specialized services of a licensed structural engineer for further evaluation and information before close of escrow. Major cracks, particularly in the foundation, walls, ceilings, and/or attached porches/patios, should be inspected BEFORE CLOSE OF ESCROW to help protect your investment in your home. Major cracks in driveways, walkways, garages (usually, but not always), and other areas typically are more cosmetic than of a critical failure nature but should still be evaluated by a qualified professional to weatherproof the cracks to help prevent additional damage and accelerated deterioration.

Note that in many areas of San Diego County (Mission Hills, Kensington, etc.), particularly with older lathe-and-plaster structures, cracks, even major cracks, are not only common, they are the norm. However, all cracks, regardless of their size and where they are located, should be sealed from the weather and regularly monitored to ensure that, if they are active, they don't cause major damage. Additionally, although you might be willing to accept a property with more than its fair share of undiagnosed and/or unrepaired common and major cracks in various areas, the person who wants to buy your property somewhere down the road may not be so accepting, thereby leaving you to make repairs then, at which time additional damage might have occurred due to ongoing neglect. It is in your best interest to take care of both common and major cracks now, before close of escrow and while the property belongs to someone else.

In a [newer home](#) (one that is no more than ten years old), cracks typically have not developed yet, but they will. Just wait. They will, and when they do, please re-read this section on cracks, and then weatherproof the cracks and monitor them for widening or lengthening. Since many builders provide a one-year warranty, I offer [BASIC](#) maintenance inspections to note problem areas which you can then take to your builder and ask him for repairs.

[Recommend further evaluation](#)

That sentence means that you might need a licensed structural engineer or a qualified foundation professional to look at the cracks, determine their causes, determine if they are active or have the potential to become active, and design appropriate fixes for the specific types of cracks and causes. After that, as with everything else in our homes, you will need to practice regular homeowner monitoring and maintenance. Remember that home inspectors are generalists and are not acting in any capacity as licensed engineers under State of California laws. Practicing engineering without a license can result in severe civil and/or criminal penalties. I only document cracks and where they are located. I must, by law, leave determination of the causes and appropriate fixes to licensed structural engineers, civil engineers, geotechnical engineers, or other qualified foundation professionals.

[Recurring cracks](#)

In some instances, cracks will reappear after being repaired. This condition sometimes is related to soil conditions rather than actual foundation problems. If the soil has a high clay content, cracks will be more prevalent in the home. If there are cracks in your home, particularly at door and window corners,

or recurring cracks, read this helpful article for possible causes and proper methods for repairing the cracks. If there are a lot of cracks and the home is old, the cracks might simply be the result of age. However, I do know that many of the foundations in areas such as Kensington and Mission Hills, where some of the homes are almost 100 years old, the foundations have deteriorated. Without repairing the foundation, repairing cracks in the home will simply be a band-aid rather than a cure; the cracks will reappear.

Please also do your own due diligence in trying to determine what type of soil your house has been built on. For example, if you look at a 1980 topographic map of Eastlake in Chula Vista, you'll find hills and valleys. Go out there now and you'll find one great big plateau. That's because the hills were chopped in half, and the resulting soil was used to fill in the valleys. Then they built homes everywhere. The homes built on the valley landfill are subject to greater movement and more cracks than the homes built on the hills that were chopped in half. Homes built on landfill are particularly susceptible to high rainfall, such as during an El Niño season, and during earthquakes, as was proven in San Francisco's Marina District during the 1989 Loma Prieta earthquake.

Sealing and weatherproofing cracks

Numerous products exist to seal such cracks, including, but not limited to, hydraulic cement, resilient caulks (easy to apply), and epoxy sealants (both a waterproof and structural repair).

If you have any questions about anything, simply [contact me](#).

Thank you for using The HomeTeam Inspection Service.