

# OC VIEW

CAI - ORANGE COUNTY REGIONAL CHAPTER

## 2017 HOME COLOR TRENDS



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## IS THAT BALCONY A DEATH TRAP?

Okay, maybe that is a little extreme, but people have a reasonable expectation when they walk up a set of stairs or out onto a balcony that there is no risk involved. And, of course, that's how we should feel, but after reading headlines like "2 Killed, 29 Hurt When Malibu Balcony Falls," or "6 Dead, 7 Hurt in Berkeley Balcony Collapse" maybe we should think again. According to the U.S. Consumer Product Safety Commission's National Electronic Injury Surveillance System it is estimated that over a five-year period 224,740 people were injured due to deck, porch or stairs accidents and of those 33,000 were "serious" injuries including head trauma, concussions, major fractures, and paralysis.

The North American Deck and Railing Association estimates half of the 40 million residential decks and 10 million commercial decks in the United States are more than 25 years old. Since most decks or balconies are continually exposed to the elements, the actual expected life span is likely to be 10-15 years, depending on the materials and methods used and assuming that there

is proper maintenance along the way. As these statistics demonstrate, this should be a serious issue for property owners or anyone involved in property management, considering the potential liability.

As construction management consultants we frequently encounter decks, balconies and stairs in homeowner associations that require substantial repairs and structural replacement, generally due to a lack of routine maintenance. On several occasions the balconies were such a hazard that city inspectors actually issued "red tag" correction notices until a plan was put in place to make the repairs. On one project which was less than 10 years old homeowners had actually stepped through the cantilevered decks, which were 20 to 30 feet out over a hillside. The original installation was improper and allowed water to become trapped within the structure. In this case, and likely the Berkeley collapse (see photos), the damage that has occurred to the structural members may not be readily evident by a quick visual inspection. That is where a trained and knowledgeable expert may be required

to make a thorough inspection of the balcony and all of the waterproof connections. Poor construction methods as well as lack of maintenance can lead to severe wood decay, which can occur in just a few years.

Another issue we see is dangerous stair conditions, either because they have started to rot and are not structurally sound or because they don't meet the code requirements for the height or the width of the treads and risers and as a result thereby creating a tripping hazard. Stair handrails and balcony railings which have become loose due to dry rot and/or lack of proper attachment are another common safety concern.

The good news is that structural failure of decks and balconies is preventable. If proper steps are taken (for the purpose of this article we will assume that the structure was properly designed and met all building codes at the time it was constructed). Knowing that all structures have a defined life expectancy but do require periodic maintenance, let's look at what the proper course of action should be when managing a property that includes decks, balconies or exterior stairs.

Some simple questions will help decide whether further investigation should be performed:

- How old is the property? This will provide some knowledge as to the life cycle of the structures and the building codes under which they were likely constructed. As a general rule of thumb, barring construction defect issues, the expectation would be that the newer the structure, the better condition it should be in. Age, gravity and exposure have an effect on structures much the same as they do with the human body.
- Does the association have a reserve fund for maintaining these structures and is it adequately funded? This is an indication of whether the association has a proper understanding of the importance of maintenance of these structures.
- Do the association's records indicate that these structures have been maintained on a timely basis? This will show whether the proper maintenance has actually been performed as recommended.



Damage found to structure following the Berkeley collapse in June 2015.  
Image: Jeff Chiu/Associated Press



Berkeley Balcony Failure (CBS)

Based on the answers to the above questions, what are the next steps that should be taken? Below is a quick and simple checklist of 10 items to consider when inspecting decks, balconies and stairs:

- Should a construction consultant or licensed contractor be included in the inspection, or is the community manager comfortable with this task? The answer to this question may depend on the construction knowledge of the community manager and his or her willingness to take on that liability, responsibility, and the age and general condition of the structures.
- Are the railings well attached and sturdy or are they weak and showing signs of deterioration at the deck connections?
- Are the railings adequately safe for small children, pets and adults alike? Do they meet the current code requirements for rail height and baluster spacing?
- Does the deck surface seem rigid and solid or is it soft and spongy in areas?
- If the decks or stairs have a waterproof coating is it in good condition or has it deteriorated - does it show signs of splitting, peeling, cracking or chipping? Are there cracks in the surface or is there any other deterioration that could be allowing water into the structure below? Is it keeping the water out of the structure below?
- If the deck is not a solid waterproofed structure and is open for water to pass through it, is the decking material in good condition, showing no signs of sagging, dry-rot, termites, etc.?
- Are the waterproofing connections around the perimeter of the deck in good and watertight condition? This would include the deck-to-wall transition, the thresholds at any door openings, and any post-to-deck connections.
- How is the structure supported? Is it an integral part of the building or is it self-supported? Is the structural support being kept dry or is it exposed to the elements? If self-supported, how does the structure under the deck look? Are there any signs of deterioration or termite damage at either the support-to-deck attachments or at the foundation-to-support attachments?
- Are the structural supports buried in the soil? The vertical support rising up from the concrete foundation should not be in contact with the surrounding soil.
- Are the foundations solid or have they been undermined by erosion or pests?

In general, it is recommended that decks, balconies and stairs be thoroughly inspected at least annually, property maintenance be performed as needed, and the inspection and maintenance expenses should be part of the association's annual budget. Needless to say, those costs are minimal compared to the expense and potential liability involved in structural failure of these components.

Properly maintained, your decks, balconies and stairs will be safe and sound for everyone to use and enjoy for years to come. ⚙️

*This article was written and submitted by Dennis Brooks of Design Build Associates.*