

PREPARED BY DAN CRONK, PRESIDENT
DECK AND BALCONY INSPECTIONS



Deck and Balcony Inspections Inc.

A MAINTENANCE GUIDE FOR APARTMENT EXTERIORS

This guide will decrease maintenance expenses...Guaranteed!

A MAINTENANCE GUIDE FOR APARTMENT EXTERIORS

As a contractor and building inspector, my experience over the last 40 years has revealed a genuine need for a maintenance guide that will equip maintenance personnel with a better understanding of **when**, **where**, and **how** maintenance should be applied to apartment exteriors.

Before we dive into the **whens**, **wheres**, and **hows**, let's answer a couple of questions first.



WHAT IS MAINTENANCE?

When it comes to apartment facilities, **maintenance is many things including:**



- The timely application of sealants (paint) and fillers (caulk) designed to prevent moisture intrusion.



- The knowledge of where to look and how to treat the various types of moisture intrusion location.
- The ability to recognize and treat the early stages of dry rot.





WHAT IS DRY ROT?

The term “dry rot” is a bit of a misnomer. This is because the fungus that causes wood decay needs moisture to grow and thrive. It is during the wet, rainy season that the fungus is actively feeding on the wood’s cellular structure. The damage caused by the fungus is often not noticed until the dry summer months when the compromised wood begins to collapse in on itself.

WHEN TO APPLY MAINTENANCE...

Applying maintenance at the correct time of year is extremely important.

By far the best time is after the heat of summer and before the wet winter rains. Wood products tend to shrink during the summer heat and swell during the wet season. Due to the shrink effect, maintenance applied in the spring is likely to develop cracks and will allow moisture to seep in during the wet season.



Additionally, it is important to understand that maintenance is nothing more than a 12-month temporary band-aid. Unless an annual maintenance schedule is adhered to, any gains made will be short-lived.

Take time to develop a maintenance schedule and stick to it. The expense of doing that is exponentially less than the repairs that are certain to come if it is neglected.



WHERE TO APPLY MAINTENANCE...

There are hundreds, if not thousands of potential areas to apply maintenance. The trick is finding the “wheres” and prescribing the correct “hows” when found. The purpose of this section is to help maintenance personnel identify and apply solutions that are designed to extend the life of apartment exteriors.

Dry rot caused by moisture intrusion is the #1 enemy to apartment exteriors. Locating and resolving the points of moisture entry are 90% of the battle.

Some certain areas and conditions are more conducive to moisture intrusion than others. The purpose of the following examples is to train maintenance personnel to identify these areas.



ROOF EAVES, OVERHANGS, AND BEAMS

Due to the high volume of extreme weather conditions these areas endure, the likelihood of developing dry rot is quite high if left unattended. Here’s what to look for:



EAVE ROOF SHEATHING

Veneer cross-checking caused by the repeated cycle of moisture being absorbed by the plywood and drying out again.

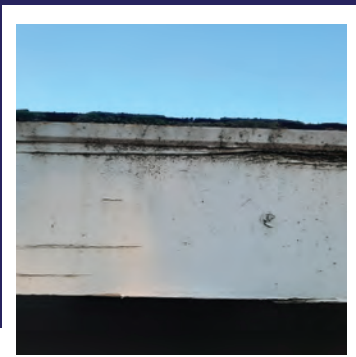


There are four potential causes of this:

- Plugged gutters and downspouts
- Missing, loss of damaged roof flashing
- Leaks in the roof's surface
- Breakdown of the protective coat

✓ MAINTENANCE SOLUTION

Clean gutters and downspouts and paint the plywood where cross-checking has occurred. Revisit this area at the next annual maintenance tour. If the work remains stable, then problem solved! If a cross-check returns, worsens, or water straining appears, contacting a roofer is the next advisable step.



EAVE FASCIA BOARD

Cracks appearing in fascia board is a common appearance. These cracks are especially prevalent next to corners and seams. Sealing these openings as soon as they are found is essential to preventing the onset of dry rot.

✓ MAINTENANCE SOLUTION

With a small flat-bladed screwdriver, pick and poke at the wood immediately adjacent to the crack. If it is firm and not easily removed, then it is fairly certain that dry rot has not yet set in. Proceed with filling the crack with suitable caulking (*see the "How-To" Guide*) and paint all sides of the repaired area.

If the wood easily flakes away, you must continue scraping until sound wood is found. If the crack grows in width to a ½" or more, stop and replace the damaged board. Otherwise, seal and paint the area as previously described. Re-inspect and re-treat annually as needed.



EXPOSED BEAMS



Exposed beams are vulnerable to moisture intrusion, especially on their top side. The tops are rarely painted, and a flat surface is a perfect place for water to sit and work its way into the interior of the beam.

RAFTER TAIL ENDS

Rafter tail ends are no stranger to dry rot if cracks are left untreated. This is especially true with rafter tails that are exposed without a fascia covering.



✓ MAINTENANCE SOLUTION

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SIDING AND TRIM

There are several commonly found types of siding on apartment exteriors. Regardless of the type, siding takes a beating, especially from wind-driven rain on the south and west exposures. These areas will need maintenance in much greater frequency than the north and east exposures. What to look for with each of the different types of siding and trim is as follows:

T-1-11 SIDING

T-1-11 siding has been around a while. Due to its low price and ease of installation, it was a popular choice amongst developers during the '70s, '80s, and the '90s. And that's where its advantages end. It is highly susceptible to dry rot. The method of installing trim requires installing wood trim boards (on corners and around doors and windows) that are overlayed on top of the siding. The only barrier that prevents moisture from becoming trapped between the trim and siding is caulking. To be clear, I am not talking about the kind of caulking that painters apply to make their finished product look good. I'm talking about the kind of caulking that stops moisture intrusion. It is the latter that is almost always overlooked.



✓ MAINTENANCE SOLUTION

Apply caulking to all gaps, cracks, joints, and seams. Pay special attention to the tops of the trim boards over doors and windows. These areas are almost always overlooked. When caulking trim that is perpendicular to the grooves in the siding, be sure to work the caulking into each groove. Re-inspect and touch up as needed or on an annual basis.



In addition to trim boards, it is important to check the vertical seams of the plywood siding. You can find them at every 3 vertical grooves.

One last thought, be sure to check and caulk any plumbing or electrical penetrations through the siding. Paint all caulked areas. Re-inspect and re-treat as needed on an annual basis.

STUCCO SIDING

Stucco siding is fairly durable and has relatively low maintenance. However, there are a few things to look for:

As shown in the picture, cracks in the stucco can be problematic, especially if the stucco is old. The moisture barrier that is installed between the stucco and wood frame becomes brittle over time and begins to deteriorate. If your stucco is over 30 years old, it is probably a good idea to caulk and seal all cracks and apply a coat of paint over the entire surface. If your stucco has wood trim at the doors and windows, it is important to check these areas for gaps and cracks.



As shown in the picture, cracks in the stucco can be problematic, especially if the stucco is old.

✓ MAINTENANCE SOLUTION

Apply a suitable caulking sealant in all gaps and cracks (see “caulking in the “how-to” guide of this report). When painting stucco, it is best to use an “elastomeric” type paint that can stretch over reoccurring cracks or use a paint specifically designed for a stucco application. Re-inspect and touch up as required on an annual basis.



CEMENT FIBERBOARD

Cement fiberboard came on the scene in a big way at the turn of the century. It is strong, durable, and some brands carry an 80-year warranty from the factory. Most of the early installations used a pre-primed engineered wood trim at doors, windows, and corners. Using the wood trim has opened the door for dry rot to take hold.



In this image, you can see the dry rotted wood trim adjacent to the cement fiberboard siding. With maintenance, this type of damage is 100% avoidable. Notice the horizontal seam immediately above the dry rotted area. This is where the moisture entered and caused the damage to the unprotected wood.



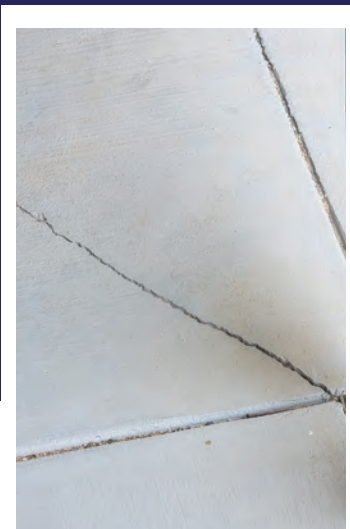
In this image, you can see the dry rotted wood trim adjacent to the cement fiber board siding.

✓ MAINTENANCE SOLUTION

Apply a suitable caulking sealant at all gaps and cracks. Be sure to inspect the seams where the cement fiberboard siding adjoins the wood trim and caulk these areas as well. Paint all areas where caulking was applied. Re-inspect and re-treat as needed on an annual basis.

DECKS, BALCONIES, AND WALKWAYS

Due to their horizontal design, it is difficult to keep moisture out of the unprotected areas of decks, balconies, and walkways. Due to the different types of deck surfaces, different types of dry rot mitigation need to be implemented. The two most common deck surfaces are addressed in this section.



CONCRETE SLAB

A concrete slab over an elevated wood frame such as a walkway or an apartment entry is common. So is surface cracking, as shown in this image. This could be the sign of a serious underlying problem. A couple of things need to be checked out before maintenance is applied.





Look for gaps and buckling as shown in this image.

BUCKLING SOFFIT

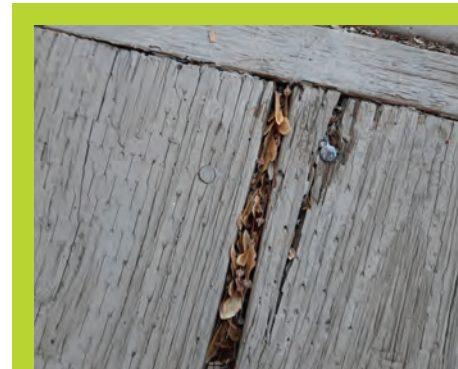
Inspect the underside of the concrete deck and look for gaps and buckling as shown in this image. This means that moisture has breached the moisture barrier and dry rot is likely to have taken hold of the supporting structure. In situations like this, further investigation by trained personnel is warranted.

✓ MAINTENANCE SOLUTION

Fill all cracks with caulking designed for this type of application (see “how-to” guide for this type of situation). If the concrete has any grooved seams or metal edge flashing, be sure to check and treat these areas as well. Touch up as needed during subsequent annual inspections. Always include the underside of the decks as part of the annual inspection.

PLANKED DECK SURFACE

In this image, leaves and debris have filled the gaps between the planks of the deck surface. These need to be cleared out so that dry rot prevention measures can be performed.



In this image, leaves and debris have filled gaps between the planks of the deck surface.

✓ MAINTENANCE SOLUTION

Fill a 50 ml syringe with Copper Green Wood Preservative. Apply about 10 ml of preservative between the gaps that are over each framing joist. Repeat this process on an annual basis.





PLANKED DECK RAISED NAILS

Raised nail heads on plank-type decks are usually a sign of the early stages of dry rot. The fungus that causes dry rot makes its way into the frame below by riding the moisture down the shaft of the nail and into the deck framing.

✓ MAINTENANCE SOLUTION

Remove (pry out with a hammer or flat bar) all raised nail heads. Fill a 50 ml syringe with Copper Green Wood Preservative. Apply about 10 ml of the syringe into the nail hole. Next, install a screw in the hole in place of the nail. The twisting motion of the screw will push the preservative sideways and downwards, killing all the fungus it comes in contact with. Repeat this process on all raised nail heads on an annual basis.

LANDSCAPING

It seems a bit silly to be discussing landscaping with regards to building maintenance and dry rot prevention; however, it can be a big problem. I have yet to see an apartment building with adjacent landscaping that did not have at least one, if not both of the following issues.



RAISED SPRAY-TYPE IRRIGATION HEADS

Raised spray-type irrigation heads can be a big problem when it comes to dry rot prevention. Their proximity to the wood siding combined with the force and upward direction of the spray wreaks havoc on wood siding and trim.





EARTH-TO-SIDING CONTACT

Every facility I have seen with adjacent landscaping has this problem. You are **guaranteed** to have both termites and dry rot if this is allowed to remain.

✓ MAINTENANCE SOLUTION

- Change spray head sprinklers to drip or bubbler heads.
- Educate your groundskeepers on the damage that earth-to-wood contact will cause. Provide a minimum 4" space between earth and siding and create a drainage slope away from the building.

NEW WORK AND NEW PAINT

The sooner moisture intrusion is stopped, the better. There is a tendency amongst management and maintenance personnel to relax their maintenance (such as with new siding, new balconies, and new paint). Don't allow the "new look" to lull you into complacency. **Here are some examples of what I have noticed over the years.**



NEW SIDING AND TRIM

This is a 3-month-old fiberboard siding against wood trim. Notice the cracking that has already started at the seam. This is guaranteed dry rot if it is not corrected.



SIDING MEETS TRIM

You don't have to look close to see the issues here. There is a large gap above, besides, and below where the edge of the new deck meets the new siding. The end of the trim is unpainted, and there is a gutter downspout seam immediately adjacent to the exposed areas. If left untreated, this area is a perfect candidate for major structural damage.



NEW TRIM CRACKS

Look closely, and you will see the cracks already beginning in the new trim board. The moisture intrusion will only grow in scope if left untreated.



PAINTED DECK RAIL

This building was painted three years before this picture was taken. Notice the crack at the top of the deck rail. Also, notice the ink pen inserted into the dry, rotted wood. The crack probably reopened the first summer following the repaint. The dry rot that is now in the rail was 100% avoidable.



EARTH-TO-NEW WORK



Once again, we have landscaping against new siding and paint. The contractors went to great lengths to install the siding and paint around the raised dirt. This area is guaranteed to have dry rot and termites in the future.

✓ MAINTENANCE SOLUTION

Don't allow the look of new work to lull you into complacency. Stay vigilant, especially with new work. **The cost of not doing so is just not worth it.**

HOW TO DO MAINTENANCE

The actual techniques for performing maintenance are not that difficult. Over the years I have learned what products and techniques have worked the best for me in given situations. They are as follows:

CAULKING

Caulking is by far the number one task performed while doing maintenance. When applying, take your time. Allow the caulk to penetrate deep into the gaps and cracks. Always have the appropriate cleanup materials on the ready. With a little practice, you will have things looking good in no time. **Here are some of the products and techniques I recommend:**





SIKA FIX CONCRETE CAULK

When it comes to staying power, this stuff rocks! It's a bit harder to work with than latex caulking. Make sure you have the correct cleaning solvent when using. Do your best to fill the cracks completely without too much excess. Minimal tooling is recommended.

SIKA FIX MULTIPURPOSE CAULK

For those hard to get to places where staying power is needed, this caulk sticks and stays put. This also works well with masonry-to-wood transitions.



QUAD MULTIPURPOSE CAULK

Works great for rafter tails, eaves, beams, or any other area where exposure to wet conditions is high.



ALEX PLUS LATEX CAULK



When it comes to workability, you can't beat this stuff. It's easy to apply, easy to tool, and cleans with a damp sponge or rag. It doesn't last as long as other sealants, but it does provide a nice smooth finish. As long as you are performing annual maintenance, you can get away with its shorter lifespan.

DRY ROT PREVENTION

In areas where moisture is a constant concern where painting or sealing with caulk is not an option, applying a fungicide wood preservative is important. Always follow manufacturer's precautions when using this stuff.



A syringe filled with Copper Green Wood Preservative works well to get into tight places such as gaps between deck boards or nail holes.

REPAIRING STUCCO CRACKS

Latex caulk is best when looks are important. To begin, fill the crack with caulking. Using a small, fine bristle paintbrush (about 2" wide), dip in water and lightly brush back and forth, with strokes being perpendicular to the crack. Be sure to keep the brush wet.





THANK YOU FOR READING A MAINTENANCE GUIDE FOR APARTMENT EXTERIORS

Apartment exterior maintenance is a continuing and repetitive endeavor. The examples presented in this guide are in no way a finite list of required maintenance. We have done our best to highlight areas that have a high probability of developing dry rot if left unattended. The important takeaway is to become a detective. Learn to look where others don't. When you see a crack, fill it, paint it, and repeat. Repetition is the key to any successful maintenance campaign. Remember, maintenance is exponentially cheaper than repairs.



DAN CRONK,
PRESIDENT

**FOR ALL YOUR DECK AND BALCONY
INSPECTION NEEDS...**

CALL: (916) 238-0618

EMAIL: DAN@DECKANDBALCONYINSPECTIONS.COM

VISIT: WWW.DECKANDBALCONYINSPECTIONS.COM

P.S. We provide free maintenance training during our deck and balcony inspections.