

Background: After many years of minimal repairs, in order to protect our owner's assets, the HOA has now spent 8+ years repairing the siding and trim on approximately 6 buildings per year, using two different companies. This document aims to consolidate the knowledge and lessons learned and create some "performance specifications" or requirements for future work.

Some of the repair challenges involve the original architectural design of the buildings:

- The architectural detailing with trim boards around the base of the building, around windows and carport openings created innumerable ledges on which moisture accumulates and eventually makes its way through the paint and caulk to sometimes rot what's underneath.
- The siding and trim on buildings with roof overhangs have fared considerably better over the years compared to facades without roof overhangs.
- The extent of repairs needed often depends on the orientation of the building - which side faces the prevailing winter weather or the southern sun.
- The original design of the D unit balcony railing creates a perfect place for wasps to nest.
- The original design of the D unit plumbing in a chase and soffit in the carport creates opportunity for frozen pipes in the winter.



Old carport trim detail

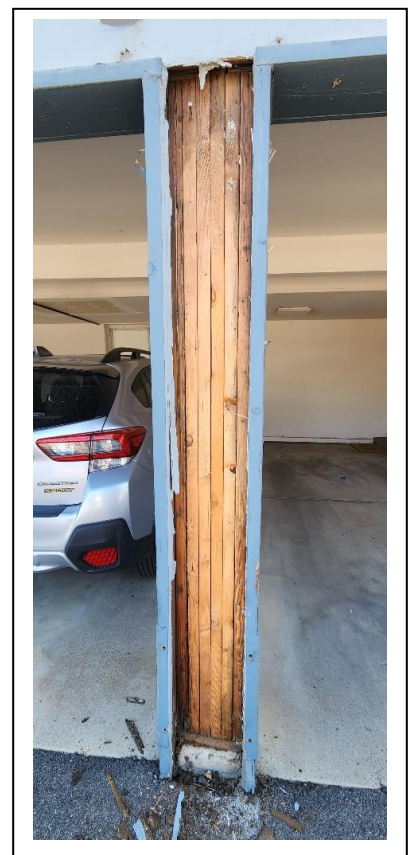
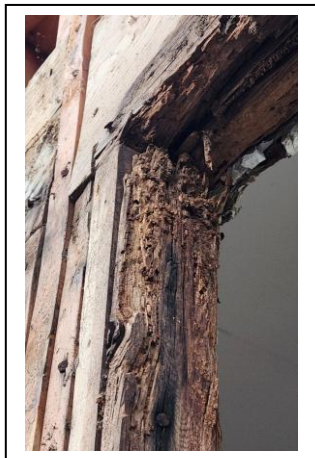


New carport opening detail without ledges and with flashing to prevent moisture intrusion

- In addition, building codes have changed. For example, the D unit stairs and railings no longer meet code. When these are re-built, they must be brought up to code.

Repairs on the Carport Side of Building:

- Repairs are begun by removing the carport trim boards, some of the siding above the carport opening, and on the carport posts to check and ensure the structural integrity of the posts and headers. Typically there is one header over each carport opening. Occasionally the carport headers are discovered to be rotten, but more often the headers are still structurally sound with only a few checks (cracks) and moisture staining. Occasionally we discover anomalies in the “standard” building construction – see photo of carport header that spans two carport openings. In this case, the header was bowing outwards a bit and required inspection by a structural engineer, who provided instructions on how to correct the bowing with metal straps.
- The “celotex” material underneath the siding is only removed when it is swollen, rotting, or warped. The posts consist of king studs in the center which support the second story rim joist, and studs that support the carport headers, which also indirectly support the second story rim joist. As a rule, the posts generally aren’t structurally compromised, but if they are, the studs are easily replaced.
- New carport opening trim boards (2 x 6’s) are re-installed to be flush with the siding and trim, and the trim is flashed to prevent future moisture intrusion. Metal L-brackets (often salvaged from the old trim boards) are attached to the 2 x 6’s at car bumper height for reinforcement.



- The trash room door is often re-built, and the trim over the entry opening is re-done and properly flashed. The trash room door swing should be examined and changed if necessary so that it swings closed with the West or NW wind. New substantive hardware is required, secured with through-bolts, not just screws.



- The concrete pier supports with re-bar centers and support plates for the posts are often somewhat crumbled around the outside edges, but are not usually structurally compromised. A metal form should be created to surround the concrete pier and new concrete poured within to provide a flat stable surface to support the king studs.



Repaired concrete piers



Crumbled concrete pier

Window Repairs:

- All windows and trim are checked for moisture intrusion. The original trim designs (with vertical or horizontal “tabs”) should be corrected to deter moisture intrusion, either by replacing the trim if rotten, or removing the water-catching pieces if the trim is in good shape. When trim is replaced, the top piece should extend all the way across (and be flashed), the bottom piece should be just under the window, and the side pieces should extend to the bottom of the bottom trim. See photo with white trim below.



- Owners often choose to replace windows or sliding doors in advance of the building repair effort as a result of the annual architectural survey and/or subsequent HOA notification that their windows or sliding doors are in disrepair. The most common issue discovered over the years are windows manufactured specifically as “replacement” or “remodel” windows. These windows do not have the flanges found on “new construction” windows. Both new and remodel windows are typically thicker than the original window, and inserted into an existing opening as far as the window will go before it bumps into the drywall and sill. The screws used to secure the window frequently end up between the siding & the trim or in the cellotex, but not in the studs. The exterior window trim was not removed or replaced and the window is simply caulked – a guarantee of future leakage when moisture eventually invades the dried out caulk and paint.
- Exterior window trim must be removed, and interior drywall and sills must be cut back so the new window can be fully inserted into the opening, ensuring that the screws go into the studs. A small strip of siding around the window opening must be removed to accommodate the nailing flange, which is then taped and caulked before the exterior trim is replaced. If the new construction window does not come with flashing above, then flashing should be added, in addition to flashing above the trim board.



*Screw between
siding and trim*

*Rotten siding
underneath trim
below window*





Trim not removed, window not inserted far enough into wall opening, so extra trim added.



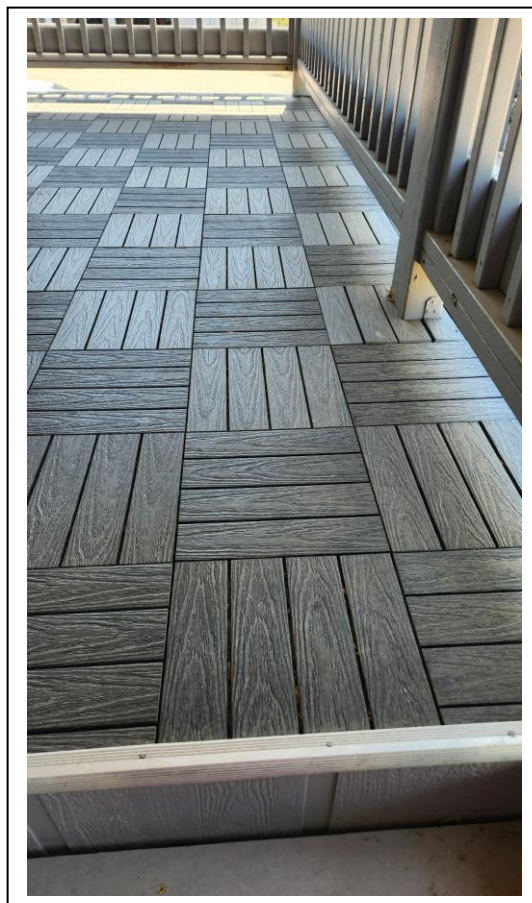
Window flanges & siding cut back



Flanges caulked & taped

D Unit Decks

Although the HOA hasn't yet had the funds to begin replacing D Unit decks, we experimented with a new decking system after the fire at building 4232. This new system which includes a new membrane over the trash room to prevent moisture from damaging the trash room ceiling, new stringers to support the decking, and new modular decking as shown in the photo.



Other General Building Repairs

- Fascia boards holding gutters, and trim and siding adjacent to downspouts are checked and replaced as necessary. Non-structural wing walls are repaired, especially at the bottom where they may be rotten. A



Bowed fascia board



Trim board under downspout in bad shape – often an indicator that the old downspout split on the back and needs to be replaced



Wing wall deterioration

detail that sheds water should be used.

- Gutters and downspouts are evaluated on all buildings each year and are handled by a separate contractor. For the most part, the old 4 inch steel gutters (that rust and develop holes) are being replaced by 5 inch aluminum gutters, especially on long runs. In addition, the old “spike” hanging system is replaced with a more discreet hanging bracket. Old downspouts with seams on the back (which, when clogged with leaves, freeze and split) are replaced with seamless downspouts.
- The ends of the beams over the B & C unit patios are frequently rotten or infested with insects. The beam ends are cut, treated, and filled to prevent further insect and moisture intrusion.
- The siding and trim of the columns that support the B & C unit patio roof are sometimes compromised by fences that have been attached over the years. These are corrected and repaired so that the fences do not attach to the siding, but are supported by posts 4 inches from the column.
- Existing decks that are attached to lower trim boards or attached through the trim boards to the rim joists are examined for rotten trim or rotten rim joists by removing one or two deck boards. If there is no rot, the siding above the trim is cut and flashed so that moisture no longer has access to the trim boards or rim joists. Then the deck boards are replaced. If there is rot, then the deck is disassembled as required to permit removal of the rotten trim board, then it is reconstructed and properly flashed. This is at the owner’s expense. Occasionally the rim joists underneath the trim boards are found to be rotten, and are replaced at the owner’s expense.

- Buckled or rotten siding due to sun or moisture is replaced. The wall of the B unit next to the A unit is frequently rotten. Unfortunately, the original building used 9 foot sheets of siding, and only 8 foot sheets are now available. So some horizontal joints (see photo below) are now required with proper flashing. OSB is used to replace rotten cellotex. Then Tyvek building wrap is installed under all new siding.



- Trim boards near the ground are often replaced and flashed due to being rotten, with Tyvek house wrap underneath. It's important to pull soil and rock away from the trim boards.

- Meter wall siding exposed to the elements (outside of D unit stairs, and A units) are occasionally rotten. We call Couper Electric to disassemble the electricity for a few hours while we replace the siding and reattach the utility boxes. Gas must be handled with Xcel.



- Crawl space vents are inspected. Ensure that crawl space vents are operable or replaced and replace rotten trim around vents. Inspect dryer vents and alert owner to any problems discovered.



*Inadequate crawl space vents
In disrepair*



*Proper operable crawl space vent
that opens and closes*

- Attic/gable vents and trim are inspected and replaced if needed. Occasionally, the HOA contractor gets a good view of an owner's attic and the HOA notifies the owner of any problems such as fallen drywall in the attic that impedes insulation effectiveness.



Attic vents with rotten trim



Fallen drywall in attics, crushing insulation

- Inspect roofs for missing shingles, improper step/rake flashing installation, and missing gutter apron or improper pitch of gutters. Where the unit siding abuts adjacent roofs, proper flashing is sometimes needed, and old, ineffective trim boards are removed. Siding should be at least 1.25 inches above the roofline to prevent siding from wicking moisture up the wall. The same holds true for the small decorative roofs over A and C unit front doors and sliding doors. If stovepipes are no longer in use, Owners are encouraged to pay for their removal and restoration of the roof.



- Soffit undersides are occasionally repaired where panels have shrunk and cracks have allowed insect intrusions. Soffit vents should be inspected to ensure airflow – they are often painted over.

D Unit Stairs and Railing Repairs: As buildings are identified for repair, the stairs, stair railings, and balcony railings are evaluated, prioritized, and contracted for separately, depending on budget availability. The original open stairs with only two stringers, metal stair railings with balusters too far apart, and the wood balcony railings do not meet current codes. Each set of stairs is unique and evaluated individually to determine what is needed. As a rule, the stair landing will also be replaced.



Original balcony railing top showing dished top which catches rain and promotes rot



New railing design which meets code & deters wasps



New stairs with three stringers and closed risers and proper balusters & handrail.