

Construction Defect Claim

Resolved During Pre-Litigation Using Science

The Problem

The project was two six-story condominium buildings with a total of 96 one story units located within 200 yards of the sea. When the project was three years old, the Owners made a Builder's "Right to Repair" claim that included:

- Malfunctioning elevators
- Deteriorating paint
- Leaking drains in the parking garages
- Concrete sidewalks and pool deck settlement
- Stucco cracks
- Leaks and stains
- Buried weep screeds
- Reverse slope at flat roofs
- Corroding sheet metal
- Improper drainage at planters
- Soil issues
- Too much water on one side of the large fountain / water-feature

The most pressing allegation from the Owner's perspective were the malfunctioning elevators. The Owners hired a well-known and respected Mechanical Engineering Expert Consultant to examine the evidence, diagnose the problem, and prescribe a solution.

The Expert Consultant interviewed the Sole-Source Elevator Contractor who had originally installed the elevators at the time of construction. The Elevator Contractor had, from our perspective, a one-sided maintenance contract with the Owners which allowed him to charge the Owners for any repairs.



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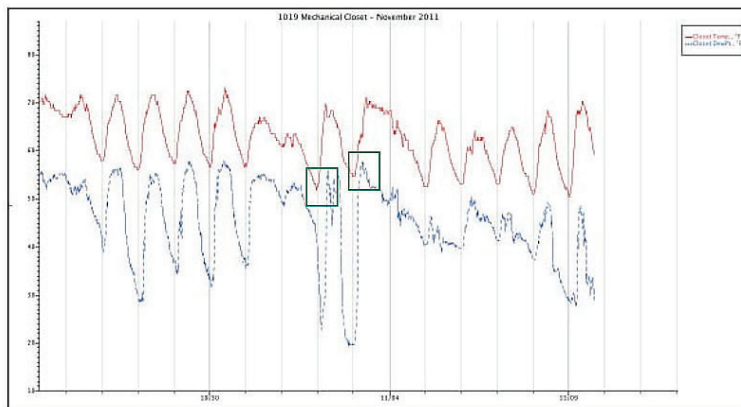
The Elevator Contractor claimed that the problem was condensation in the elevator closets which, in turn, was wetting the electronic equipment and causing the malfunctions. Because of the maintenance contract, they charged the Owners for every repair. The Owner's Consultant assumed that the claims by the Elevator Contractor were true and suggested adding expensive air conditioning units to the two elevator equipment closets.

The Solution

PFCS believed the elevator problem was misdiagnosed and that the addition of air conditioning units would not fix the issue. We also believed the Owners would be saddled with a permanent maintenance burden related to new air conditioning units. Condensation problems like these are common in hot, humid climates like Florida, but are rare in the West because humidity levels are much lower and the air typically does not hold enough moisture to turn into enough condensation (water) to cause a problem.

Luckily for us, there was a Physicist on the HOA Board of Directors. He understood our argument and allowed us to conduct testing. The HOA Board was convinced that we were thinking hard to create a solution that was in their best interest; so they trusted us.

We applied the PFCS Building Performance Analysis (BPA) Process, and after months of hygrothermal testing, we concluded that it was possible that a limited amount of condensation could have developed in the elevator closets. However, we were convinced (and so were the Owners) that the problem was primarily with the elevator installation and maintenance. Therefore, a much less expensive and more passive system was specified and installed to ensure no condensation would occur in the elevator closets. Our Elevator Expert directed repairs to the elevators that brought them into conformance with an acceptable standard of performance.



November 2011 - Condensation is possible... Dew point rises quickly in the morning, while surface may still be cool

In late October and November, the temperature and dew point still rise and fall together. But note how they are much closer. If the dew point rises quickly, surfaces inside the closet may have remained cool enough to condense moisture, as could have been the case during the highlighted periods.

PFCS made recommendations that were presented to and accepted by the Owners for many of the other issues. The Developer paid for the execution of these repairs, and in the end, the matter was settled without litigation. This was considered a great victory by our client.