

March 11, 2022

Mr. Ronald Reily, Property Manager
Ultimar Three Condominium Association, Inc.
ultimar@rocketmail.com

RE: Ultimar Three Condominium
1560 Gulf Blvd.
Clearwater, FL 33767
KEG File #22RP-0135 Ultimar Three - Column

Dear Mr. Ronald Reily and Board of Directors:

As requested, an engineer from Karins Engineering Group, Inc. (KEG) visited the above referenced condominium on March 3, 2022. The purpose of our visit was to evaluate the current state of the Column at Gridline PAA-23 for deficiencies, problems and/or ongoing maintenance concerns that can be linked to the concrete spalling and deterioration of the column and surrounding concrete slabs, along with gathering information that would enable us to make recommendations for any noted deficiencies.

Our review was limited to visible surfaces of accessible areas. Neither our observations nor this report are intended to cover hidden defects, mechanical, electrical, architectural features or other areas of the building not specifically mentioned.

GENERAL INFORMATION



Site Photo of Property with the Approximate Area of Subject Column Identified

Firm Registration Number 8371
www.karins.com

OBSERVATIONS:

The structure was observed to be multi-story residential structure constructed of post tension reinforced concrete slabs supported by reinforced concrete columns on a deep pile foundation. The building structure was constructed adjacent to the garage/parking structure with an expansion joint between the two structures. The garage slab was finished with a paver system on top. The expansion joint appeared to have been sealed with backing rod topped with a sealant. At the time of the observation, the sealant and stairwell door threshold were removed exposing the backer rod allowing for passage of water to seep down the expansion joint and to the column PAA-23 below.

The owner conducted a water test prior to our observation in January and the videos of the water test were sent to KEG for our review. The videos indicate water ponding on the interior of the stairwell and seeping under the stair door threshold with water dripping out of the cracks on the underside of the slab. The stair door was observed to have corrosion at the base of the door and frame.

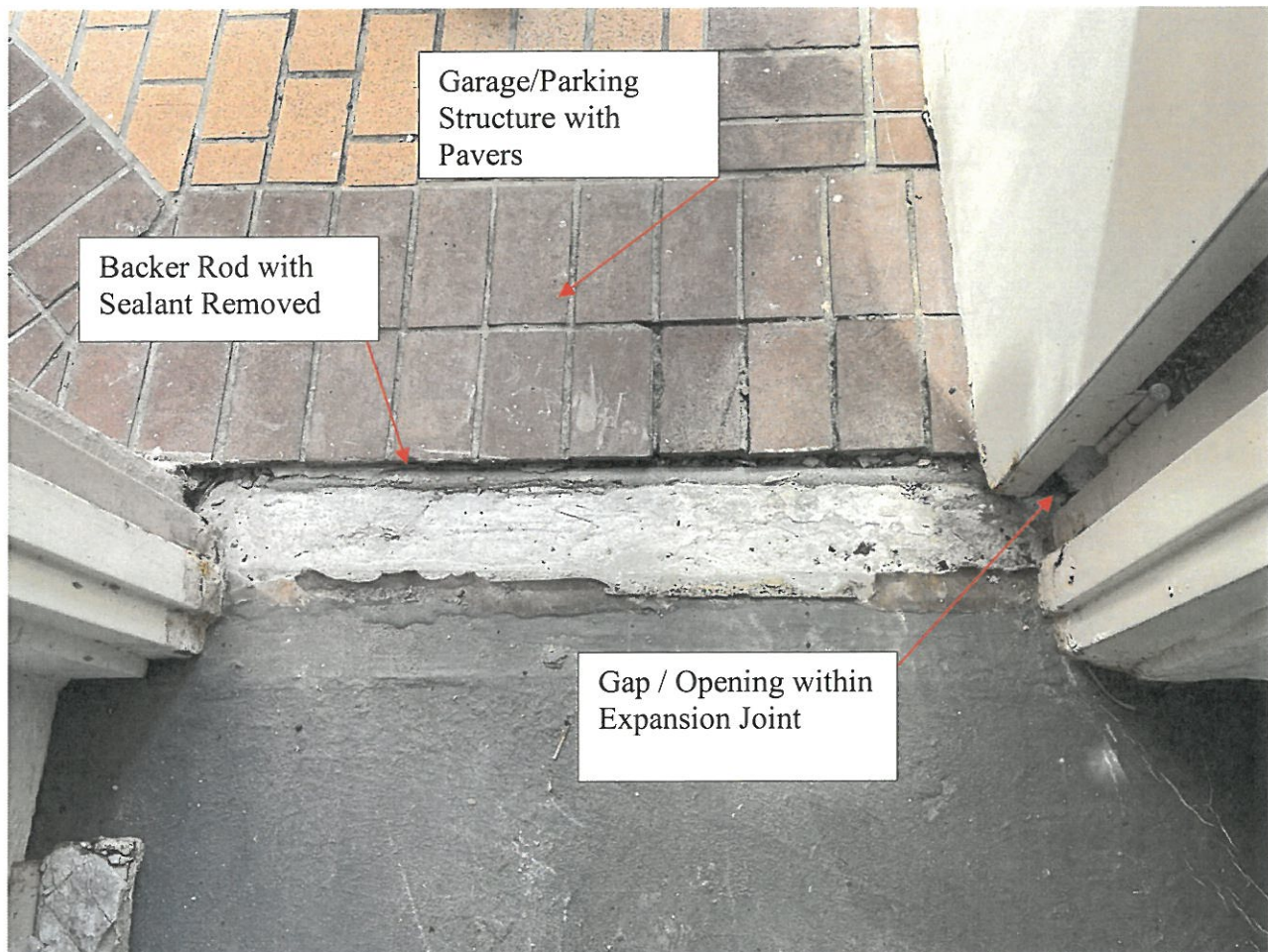


Figure 1: Stair Door Threshold Removed and Expansion Joint Sealant Removed (Corroded Door Frame)



Figure 2: PAA-23 Concrete Column and Slab near Expansion Joint Observed to be Cracked/Spalled



Figure 3: Close up of Exposed Column Reinforcement with Concrete Spall Removed

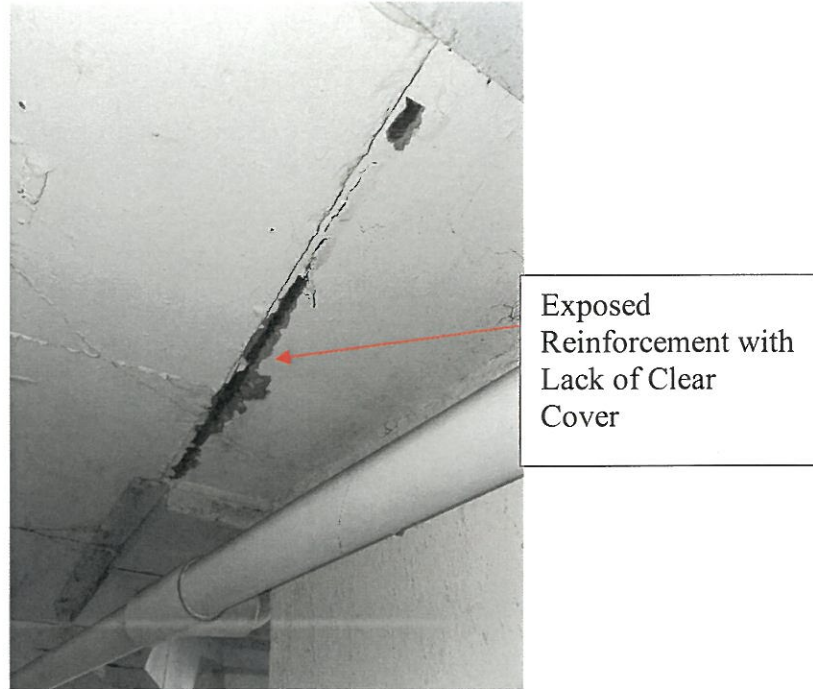


Figure 4: Exposed Reinforcement and Cracks on Garage Structure Side of Expansion Joint

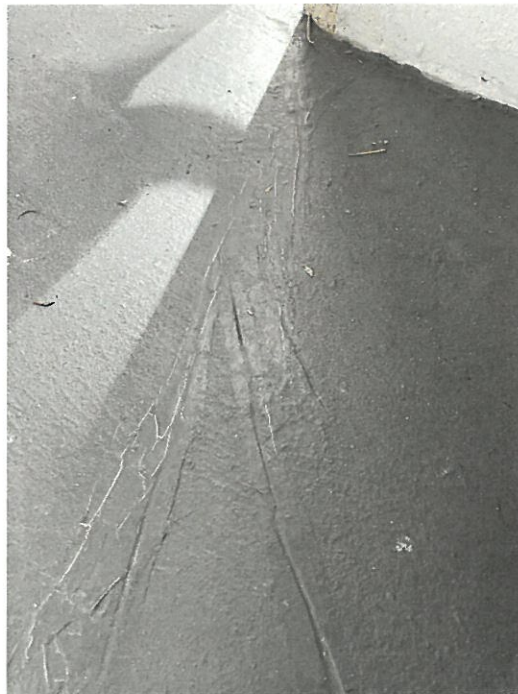


Figure 5: Previously Repaired Cracks within Stairwell

Conclusion and Recommendation:

The current condition of the expansion joint must be addressed initially to avoid further water intrusion into the building concrete slab and column. The water intrusion passes thru the concrete structure, which can ultimately deteriorate the post tension cables and steel reinforcement. The main objective should be for the Association to stop the water intrusion into the structure and worsening the existing conditions.

The expansion joint should be removed and replaced with a pre-formed fire rated watertight traffic durable primary seal at the expansion joint. EmShield DRF2 is a 2-hour UL rated fire- and water-resistant expansion joint system for floors and decks for expansion joint of 1/2" to 4" wide with +50% / - 50% movement capability. The pre-formed expansion joint should be installed at the top of the two structure concrete slabs.

In addition to the expansion joint replacement, KEG recommends that the pavers in the parking deck are removed within the area to observe for cracking and concrete repair requirements. Once the pavers are removed, KEG recommends flood testing is completed to determine the adequacy of the existing sloping and make any modifications to promote positive drainage to the existing deck drains. Once sloping is correct, KEG recommends the addition of a traffic bearing waterproof membrane prior to the reinstallation of the pavers. The waterproofing membrane will provide additional protection to the top side of the structural slab. Waterproofing membrane should also be installed on the interior of the stairwell ground floor. Repairs to the cracks prior to the waterproofing installation would consist of routing and sealant from the topside of the slab. The cracks could have developed from movement based on the geometry of the structure and filling the cracks with epoxy potentially will crack again if additional movement occurs after the repair.


The spalled concrete of column PAA-23 appears to be cosmetic currently with the steel having minimal corrosion and the remainder of the concrete appeared to be sound when mechanically sounded. International Concrete Repair Institute (ICR) guidelines should be followed in repair of the column. The column supports multiple stories, and the spall appears to be cosmetic, therefore chipping of the existing concrete should be minimal to prevent additional damage to the structure or post tension cables. The concrete slab spalls on both sides of the expansion joint should be shored and repaired per ICRI guidelines. Prior to chipping the concrete, the contractor shall GPR the post tension slab to locate post tension cables to avoid damaging the cables with the chipping hammer or drills.

If the association of Ultimar Three and the association of the common elements would like to move forward with the repair recommendations, KEG can provide a service agreement to provide repair documents for a general contractor to complete repairs.

Our statements referencing the structural integrity of the building are in reference to the original installation. Our statements are not intended to verify compliance with building codes or accepted construction techniques, except as noted herein. This report is prepared for the sole benefit of the client. Any unauthorized use without our permission shall result in no liability or legal exposure to Karins Engineering.

We trust this information is helpful. Should questions arise, please do not hesitate to call.

Sincerely,


Thomas Buffington, PE
Florida Registration #67546
St. Petersburg Area Manager
Karins Engineering Group, Inc.

