

# EMA ENGINEERS, INC.

## **Consulting Engineers**

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February 27, 2023

Mr. Alan Stoddart, President  
Beach Palm Assoc  
18450 Gulf Blvd #510  
Indian Shores, Fl

by email: alanstod@gmail.com

RE: 18450 Gulf Blvd  
Indian Shores, Fl

Dear Mr. Stoddart:

Pursuant to your request, I visited the above-referenced property on February 2, 2023 and on February 9, 2023 with regard to the Structural Engineering Milestone Inspection. The purpose of this inspection was to determine the conditions of the building and to provide a report based upon my findings. As you know, I met with you, Mr. Angelo Occhipinti and Mr. Scott Dumas from the Management Company on each of those days. I was able to walk through each unit with Mr. Occhipinti and Mr. Dumas, whereby we viewed the balconies, roofs, staircases, electrical rooms, fire rooms, elevator rooms, private garages, the walkways (breezeway) of each floor and the parking levels of the building. Attached are a total of 82 photographs which identify and describe the areas. These photographs are marked Fig. 1 thru Fig. 82, and are attached to this report.

The extent of this report is limited only to the areas inspected, and the observations are limited to the visual and physical accessibility to the structural components. Non-destructive testing and investigative techniques were used which were limited to the visual observations of the framing components.

### **I. General Description**

The building is a five-story condominium project (see Fig. 1), with parking levels under the building. This condominium project has concrete floors and roof slabs. The building is constructed with post-tension concrete slabs, which were built in 1999, making the building approximately 32-years old. The slab is supported by concrete columns and concrete walls (shear walls). The columns and shear walls are supported by piles (deep foundation) and concrete pile caps. The exterior walls of this building were constructed by metal stud walls and stucco finish. There is a total of 62 units in this condominium complex. There are 10 units on the 5<sup>th</sup> floor and 13 units on each floor (1<sup>st</sup> floor through 4<sup>th</sup> floor). All the units have balconies and some of them have more than one balcony.

## **II. Discussion and Recommendation:**

We walked in each unit and examined the balconies by hitting them with a golf club in order to determine whether the balconies' slabs had any damages (concrete deterioration, concrete spoiling, cracks, rusting reinforcement or exposed rebar and post-tension cables.) Using a golf club will also determine if there is a hollow sound in the concrete. The hollow sound is usually an indication of concrete deterioration which is caused by the rebar or post-tension cables that are rusted and losing the bond with the concrete. When the reinforcing components inside the concrete are rusted; it will create energy which will make the concrete lose the bond with the reinforcing components and finally spoil the concrete. Most of the balconies are covered with floor tiles which make it very difficult to determine if the concrete slabs have any damages or not because when the balconies' slabs are covered with tiles, the hollow sound that you might be hearing may not be accurate for identifying the possibility of concrete damages. Sometimes the hollow sound is due to the lack of the correct amount of a thin set mortar set under the tile. For this reason, I recommend that all the tiles on the balconies be removed in order to determine the condition of the slab. In some of the balconies the tiles around the railing posts have been removed and I was able to examine those areas. In this report I will discuss those units with tile minimally because there is limited discovery of the balconies' slab conditions due to the balconies being covered with tiles.

### **Unit 501:**

The balconies were covered with tiles. The tiles around the railing post were removed (see Fig. 2). I did not find any defective slabs however; this does not mean the slab is 100% sufficient because it has been covered with tiles.

### **Unit 502:**

The balconies were covered with tiles. There is a crack at the corner of the sliding glass door of the living room (see Fig. 3). This crack is at the exterior wall and maybe caused by a lack of good caulking. There is a crack at the master bedroom balcony wall (see Fig. 4). This crack maybe caused by insufficient stucco or from water getting behind the stucco. I did not find any defective slabs; however, this does not mean the slab are 100% sufficient because they have been covered with tiles.

### **Unit 503:**

The balcony was covered with tiles. The stucco at the corner of the balcony is in poor condition and it appears that is has been patched in the past and is losing the bond (see Fig. 5). I did not find any defective slabs; however, this does not mean the slab are 100% sufficient because they have been covered with tiles.

### **Unit 504:**

The balconies were covered with limited flooring (see Fig. 6). The flooring stopped before the edge of the balcony slab and I was able to examine it (see Fig. 6). I did not find any defects in the slab. The framing around the sliding glass door in the living room's balcony has a crack (see Fig. 7). This crack maybe caused by insufficient stucco or possibly a lack of sufficient caulking. I did not find any defects in the slab; however, this does not mean the slab is 100% sufficient because it has been covered with limited flooring.

**Unit 505:**

The balcony was covered with tiles. I did not find any defects in the slab; however, this does not mean the slab is 100% sufficient because it has been covered with limited flooring.

**Unit 506:**

The balconies were covered with tiles. The edge of the balcony slab sounded hollow. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 507:**

The balconies were covered with tiles. The stucco corner bead at the master bedroom door to the balcony is rusted (see Fig. 8). The left side of the edge of the balcony slab has some cracks (see Fig. 9). However, the concrete was not spoiling. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 508:**

The balconies were covered with tiles. The edge of the balcony slab close to the railing post has some cracks and did not sound solid (see Fig. 10). However, the concrete was not spoiling. I did not find any defective slabs. This does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 509:**

The balconies were covered with tiles. The edge of the balcony slab close to the railing post has some cracks and it did not sound solid (see Fig. 11). However, the concrete was not spoiling. I did not find any defects in the slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 510:**

The balconies were covered with tiles. The edge of the corner master bedroom's balcony slab close to the railing post has some cracks and did not sound solid (see Fig. 12). However, the concrete was not spoiling. I did not find any defective slabs, however, this does not mean the slab is 100% sufficient because it has been covered with tiles.

**Unit 401:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 402:**

The balcony was not covered with tiles. I did not find any defective slabs. Waterproof membrane is required.

**Unit 403:**

The balcony was covered with tiles. I did not find any defective slabs, however, this does not mean the slab is 100% sufficient because it has been covered with tiles.

**Unit 404:**

The balcony was not covered with tiles. I did not find any defective slabs. Waterproof membrane is required.

**Unit 405:**

The balcony was covered with tiles. The edge of the balcony slab close to the railing post has some cracks and it did not sound solid (see Fig. 13). There is a crack on the wall at the corner (see Fig. 14). This crack maybe caused by insufficient stucco or water is getting behind the stucco. However, the concrete was not spoiling. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 406:**

The balcony was covered with tiles. The slab close to the edge of the balcony slab sounded hollow. However, the concrete was not spoiling. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 407:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 408:**

The balcony was covered with tiles. There is a crack on the wall where the railing is connected to the wall and there is a screw is coming out of the wall (see Fig. 15). This crack maybe caused by defective stucco or water is getting behind the stucco. However, the concrete was not spoiling. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 409:**

The balcony was not covered with tiles. I did not find any defective slabs. Waterproof membrane is required.

**Unit 410:**

The balcony was covered with tiles. Some areas of the balcony slab sound hollow. The concrete was not spoiling. I did not find any defective slabs; however, this does not mean the slab are 100% sufficient because they have been covered with tiles.

**Unit 411:**

The balcony was covered with tiles. The edge of the balcony slab close to the railing post at the corner has some cracks and did not sound solid (see Fig. 16). I did not find any defective slabs, however, this does not mean the slab is 100% sufficient because they have been covered with tiles.

**Unit 412:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slab is 100% sufficient because it has been covered with tiles.

**Unit 413:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slab is 100% sufficient because it has been covered with tiles.

**Unit 301:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 302:**

The balcony was covered with tiles. The edge of the balcony slab close to the railing post at the corner has some cracks and did not sound solid (see Fig. 17). I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 303:**

The balcony was covered with tiles. The edge of the balcony slab close to the railing post at the corner has some cracks and did not sound solid (see Fig. 18). I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 304:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 305:**

The balcony was covered with tiles. The tile at the south end of the balcony sounded hollow and did not sound solid. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 306:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 307:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 308:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 309:**

The balcony was covered with tiles. The tile at the edge of the balcony slab close to the railing post has some cracks and did not sound solid (see Fig. 19). I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 310:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 311:**

The balcony was covered with tiles. The tile at the edge of balcony slab close to the railing post at two locations has some cracks (see Fig.20 and 21). The base plate at one of the posts has a crack (see Fig. 21). I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 312:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 313:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 201:**

The balcony was not covered with tiles. At the corner of the balcony, the concrete was loose, able to be removed and exposed the rusted rebar (see Fig. 22). I did not find any defective slabs at any other areas. Waterproof membrane is required.

**Unit 202:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 203:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 204:**

The balcony was covered with tiles. The base plate at one of the posts at the left side has cracks (see Fig. 23). The tile around the post base was removed. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 205:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 206:**

The balcony was covered with tiles. The tiles around the post are loose (see Fig. 24 and 25). The base plate at one of the posts has cracks (see Fig. 24). I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 207:**

The balcony was not covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 208:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 209:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 210:**

The balcony was not covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 211:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 212:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

**Unit 213:**

The balcony was not covered with tiles. The right side of the balcony slab was repaired in the past, however, it still sounds hollow (see Fig. 26). I did not find any defective slabs on other areas. Waterproof membrane is required.

**Unit 101:**

The balcony was not covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

## **Unit 102:**

The balcony was not covered with tiles. There were some cracks in the slabs at 3 locations (see Fig. 27, 28 and 29). I found hollow sounds at those locations and after beating the slab the concrete was spoiling (see Fig. 27, 28 and 29). The slab is defective at the concrete that is spoiling.

## **Unit 103**

The balcony was covered with tiles. The tile around the post was removed. There are some cracks around the edge of the slab by the railing post (see Fig. 30). It appears that in some areas the tiles were replaced with tiles of a different color (see Fig. 31). Sounds of hollowness in most parts of the concrete were found. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

## **Unit 104:**

The balcony was covered with tiles. I did not find any defective slabs; however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

## **Unit 105:**

The balcony was not covered with tiles. There were some cracks in the slab at 3 locations (see Fig. 32, 33 and 34). The tiles around the post were removed and there are some cracks at the edge of the slab (see Fig. 35). The slab may be defective because of those cracks. Waterproof membrane is required.

## **Unit 106:**

The balcony was covered with tiles. The tile around the post was removed (see Fig. 36). There is a crack between the edge of the concrete slab and the wall from below (see Fig. 37). It appears the exterior finished wall surface below does not line up with the edge of the slab (see Fig. 37). I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% efficient or have been covered with tiles.

## **Unit 107**

The balcony was covered with tiles. There was calcium build up by the sliding glass door (see Fig. 38) This is an indication that water is not draining correctly and may cause concrete deterioration. The tile around the edge of the slab has been removed (see Fig. 39) There is a crack between the edge of the concrete slab and the wall from below (see Fig. 39). It appears the exterior finished wall surface below does not line up with the edge of the slab (see Fig. 39). Some of the tiles have cracks which may be an indication of concrete deterioration (see Fig. 40). I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

### **Unit 108:**

The balcony was not covered with tiles. There was patching done on the slabs (see Fig. 41 and Fig. 42). There is a crack on the slab close to the patching area (see Fig. 41). Concrete is spoiling by the patching area (see Fig. 42). The concrete is spoiling close to the railing (see Fig. 43). The patching or caulking between the edge of the slab and the wall below is in poor condition. (see Fig. 43) There is also a crack at that area which causes the water to penetrate through the crack into the wall below which will damage the wall materials (see Fig. 43). It appears the exterior finish wall surface below does not line up with the edge of the slab (see Fig. 43). The slab has been affected by those cracks. It appears the patching material that had been used was not adequate. The concrete deterioration must be fixed with the right material and details. Waterproof membrane is required.

### **Unit 109:**

The balcony was covered with tiles. The tile around the railing post has been removed (see Fig. 45). The tiles around the railing post are loose and about to fall down (see Fig. 45 and Fig. 46). This may be an indication that the tiles are losing the bond with the concrete and the concrete under the tile may have cracks. The tiles that are in some areas close to the railing post have some cracks (see Fig. 47). This may be an indication that the tile is losing the bond with the concrete and the concrete under the tile may have cracks. I did not find any defective slabs, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

### **Unit 110:**

The balcony was covered with tiles. The base plate at one of the posts at the right side has a crack (see Fig. 48). I found hollow sounds in some areas of the slab. These hollow sounds could sometimes be due to the thin set mortar at the bottom of the tile. It did not cover the full area of the tile and sometimes this is due to the defective concrete slabs which causes the tile and slab to lose the bond. This is the reason we recommend that all tiles be removed in order to examine the slab more efficiently and more adequately. The tile around the railing post was removed (see Fig. 49). In this area a rusted rebar mark appears (see Fig. 49). I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

### **Unit 111:**

The balcony was covered with tiles. The base plate at the corner post at the right side has cracks (see Fig. 50). The tiles around the railing post are loose and about to fall down (see Fig. 50, Fig. 51 and Fig. 52). This may be an indication that the tiles are losing the bond with the concrete and the concrete under the tiles may have cracked. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

### **Unit 112:**

The balcony was covered with tiles. I did not find any defective slabs, or concrete spoiling however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

## **Unit 113:**

The balcony was covered with tiles. The tiles around the railing post were removed. I found hollow sounds in some areas of the slabs. These hollow sounds could sometimes be due to the thin set mortar at the bottom of the tiles. Sometimes this is due to the defective concrete slabs which cause the tiles and the slabs to lose its bond. This is the reason we recommend that all tiles be removed in order to examine the slabs more efficiently and adequately. I did not find any defective slabs, or concrete spoiling, however, this does not mean the slabs are 100% sufficient because they have been covered with tiles.

## **ROOF SLAB:**

The roof is constructed with Post-Tension concrete slab that are covered with tapper insulation (see Fig. 53 through Fig. 59). There is a great deal of patching that has taken placed over the roof areas (see Fig. 53 through 59). At some locations the patching materials are losing the bond and are peeling (see Fig. 58 and Fig. 59). The age of this roof was not determined at the time of my inspection. The roof is supporting the A/C units (see Fig. 55) and has some amount of roof drainage (see Fig. 56) along different parts of the roof.

## **BREEZEWAY (WALING AREA) OF EACH FLOOR:**

### **5<sup>th</sup> Floor:**

The breezeway slab of the 5<sup>TH</sup> floor was examined by the same method as described above. I did not find any defective slabs, or concrete spoiling.

### **4<sup>th</sup> Floor:**

The breezeway slabs on the 4<sup>TH</sup> floor were examined by the same method as described above. The edge of the slab across unit 413 has a crack (see Fig. 60). The edge of the slab across the east elevator next to the railing post has a crack (see Fig. 61). A rusted spot was found at the edge of the slab (see Fig. 62 and 63). I did not find any defective slabs, or concrete spoiling.

### **3rd Floor:**

The breezeway slabs on the 3rd floor were examined by the same method as described above. The stucco at the edge of the slab across unit 303 fell off after I hit it with a golf club (see Fig. 64). There is a rust spot at that area. I did not find any defective slabs, or concrete spoiling.

### **2<sup>nd</sup> Floor:**

The breezeway slabs on the 2nd floor were examined by the same method as describe above. I did not find any defective slabs, or concrete spoiling.

## **1st Floor:**

The breezeway slabs on the 1st floor were examined by the same method as describe above. There are mechanical rooms (elevator room, fire room and an electrical room) at the center of this breezeway (see Fig. 65). It appears that some repairs took placed in the past on this breezeway (see Fig. 66 through 69). The repairs in some areas include Post-Tension cables. However, the repair areas were left without applying the waterproof membrane. We recommend waterproof membrane to be placed over this area in order to protect and reinforce the slabs from rusting. I noticed some rust spots on the slab by the west elevator wall (see Fig. 70). I did not find any defective slabs, or concrete spoiling.

## **MECHANICAL ROOMS:**

The mechanical rooms are located at the 1<sup>st</sup> floor breezeway (see Fig. 65). The mechanical rooms consist of two elevator rooms, one fire room and one electrical room. The slabs at these mechanical rooms are about 4 steps lower than the 1<sup>st</sup> floor breezeway (see Fig. 71). The slabs at the mechanical rooms were examined by the same method as describe above. I did not find any defective slabs, or concrete spoiling.

## **PARKING GARAGES:**

There is parking under this building. Some of the parking areas are enclosed and have garage doors. I was able to go to each of these garages and visually examine the ceiling slabs in them which are the 1<sup>st</sup> living level slabs. The parking garages numbered 1-15 with the exception of one without the number which is most likely it number 7. There are some water marks located in the garage #2 (see Fig. 72), #11 (see Fig. 73), and #13 (see Fig. 74). I also noticed some oil marks on the ceiling of the garage #12 (see Fig. 76) and garage #14 (see Fig. 75). The water marks are caused by the plater above these areas and the oil marks are most likely from the elevator rooms above these garages. I did not find any defective slabs, or concrete spoiling in these garage ceilings. I then walked around the parking lots under the building and inspected the exposed structural elements such as the bottom of the 1s floor's slabs, columns and shear walls. There is a rust spot at the two columns next to the parking at #307 (see Fig. 77). I noticed hollow sounds and cracks on the shear wall (see Fig. 78). The concrete is spoiling at the column close to parking #8 (see Fig. 79). It appears that the repair that took placed at the column close to parking #313 is in poor condition (see Fig. 80). At the expansion joint (see Fig. 81 and Fig. 82) there is a serious crack. However, I have been told that these structural elements do not belong to this building. These columns and beams that are shown on Fig. 81 and Fig. 82 belong to the condominium next door (south side). Even some of the parking under the building next door is used by this condominium complex. However, the repair and maintenance of it belong to the next-door condominium association. It is my professional obligation to bring this to the attention of the people that are involved in these two condominiums. The repairs of the defective areas that I have mentioned are very important and need to take place as soon as possible. The immediate need is because the maximum load of this building is at the 1<sup>st</sup> lift of columns and shear walls (garage level) of the structural.

## **CONCLUSION:**

I have indicated in this report the conditions of the structural elements of this building floor by floor and unit by unit. In General, the building is in good shape. There are areas that need to be on the priority list for repairs such as the 1<sup>st</sup> lift of columns and shear walls that were listed in this report. I found that some of the balconies on 1<sup>st</sup>

floor are in much worse condition than other on floors. I believe the evaluation of the balconies shall take place after all the floor tiles are removed in the balconies. It is up to the association as to whether or not they want to have of all balconies' evaluation completed before starting the repair, or if they want to start with the repair of some of balconies that are listed in this report. The method of repairs and specifications shall be prepared by a Structural Engineer licensed in the State of Florida. The Structural Engineer shall do the inspection during the repair.

If you have any questions, please feel free to contact me

Very truly yours,  
EMA Engineers, Inc.



PE 40197 2/27/23  
Mohammad A. Mostajabian  
President



Fig.. 1



Fig..2



Fig. 3



Fig. 4



Fig. 5



Fig. 6