# Seagrape Condominium Association, Inc

# Milestone Structural Inspection

5160 Las Verdes Circle, Delray Beach, FL 33484

September 16, 2024



*Prepared by:*

THE FALCON GROUP

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## 1.0 INTRODUCTION

The Falcon Group (Falcon) was retained by Seagrape Condominium Association, Inc (Seagrape Condominium) to perform necessary Milestone Structural Inspections - Phase One (nondestructive) at the above-referenced property located at 5160 Las Verdes Circle, Delray Beach, FL 33484, and prepare an Assessment Report with Falcon's findings and recommendations.

The purpose of the visual Milestone Inspections is to render an opinion on the life safety and adequacy of the structural components of the building and, to the extent reasonably possible, determine the general structural condition of the building as it affects the safety of such building, including a determination of any necessary maintenance, repair, or replacement of any structural component(s) of the building.

This report describes the work performed, Falcon's evaluations and findings, and the associated recommendations based upon such findings. The inspections were performed pursuant to Florida Statutes, Section 553.899 and standard engineering principles. The purpose of such inspections is not to determine if the condition of an existing building is in compliance with the current Florida Building Code or the Fire Safety Code but, rather, is focused on life safety and structural adequacy of the building elements. The budgetary estimates for repairing observed defects are included at the end of this report.

For your reference, the following definitions may clarify the ratings stated in this report:

- Excellent: Recently installed building system or site component with no repair or maintenance required. The full remaining useful life of this system/component is assumed.
- Good: A building system or site component exhibiting evidence of normal aging, and which appears capable of achieving its typical useful life. It may, however, need typical repair or maintenance work.
- Fair: A building system or site component that is approaching the end of its useful life or requires more than normal maintenance and repair to extend its remaining useful life.
- Poor: A building system or site component that is no longer functioning as designed and/or represents a safety concern. Replacement or major repair is recommended in the near term.

The ratings noted above (excellent, good, fair, poor) are determined by comparison to other buildings of similar age and construction type based on our professional experience.

## 2.0 EXECUTIVE SUMMARY

Based on Falcon's investigation and the information provided within this report, the building is in good condition with normal signs of wear and tear, and the deficiencies found in the structural members are **minor in nature and are considered "Less than Substantial"**. However, the findings necessitate that the Association undertake recommended maintenance measures to ensure the structural soundness and water-tight integrity of the building. Refer to the required and recommended work herein this report in section 9.

## 3.0 DESCRIPTION OF STRUCTURE

The information reflected in this section was inferred by the on-site evaluation of the property. Falcon did not verify the structure for adherence to the drawings; therefore, the actual conditions may be different from the drawings.

### 3.1 General

The Seagrape Condominium Association, Inc is comprised of a two (2) 3-story residential building and is located in Delray Beach, Florida. The building was constructed in 1981 for residential use and continues to serve as such. The building features an interior courtyard, and the parking is an open parking lot. There are a total of 72 residential units.

### 3.2 Exterior Envelope

The exterior walls consist of concrete masonry units (CMU) with painted stucco cladding. The fenestration system of the building is comprised of windows with aluminum frame and sliding glass doors.

The buildings also include exterior balconies located at each residential unit level, with aluminum railing. The guardrail is secured to the balcony's structure through posts embedded into concrete slab.

### 3.3 Building Framing

Based on visual observations during the inspection, the building framing consists of concrete slabs at each floor supported by reinforced concrete columns, beams, and shear walls.

## 4.0 QUALIFICATIONS

Falcon is a full-service Engineering and Architectural Consulting Firm with a primary focus in evaluation of existing facilities/building systems, providing analysis and recommendations, and performing engineering supervision during actual remediation/construction. Falcon has been around for 25 years, and currently has 160 employees across the East coast extending from Florida to New York. Falcon's Florida team consists of Professional Engineers, Licensed Architects, and Building Code and Construction experts. The company has in-house multidisciplinary civil, structural, and mechanical engineers, forensic and design teams, architects, and numerous other professionals with expertise relevant to determination of causation and identification of defects and damage in existing buildings. Falcon's experts have also testified in numerous lawsuits concerning damage to buildings.

The investigations were performed by qualified inspectors of Falcon. Said inspectors hold, at a minimum, a Bachelor's in Science in Civil Engineering, and are qualified by education and experience to act as delegated representatives of the Professional Engineer in charge. Sinisa Kolar of Falcon reviewed all inspection procedures, policies, and reports. Mr. Kolar holds a Master's in Science in Structural Engineering from the University of Belgrade and he is a Licensed Professional Engineer in the State of Florida. Mr. Kolar is also the Principal of The Falcon Group. Mr. Kolar's field of experience is in structural analysis, construction specifications, plan review, project management, cost eliminating, as well as field inspections and construction supervision.

In addition, Mr. Kolar has performed investigations, evaluated causation, and related damages, and provided repair/replacement recommendations for properties throughout South Florida, primarily in Palm Beach, Miami Dade and Broward Counties, for the last 14 years. He is also constantly involved in evaluation of existing structures as it relates to Structural Assessments, Recertifications, as well as damage resulting from age, negligence, human actions, etc.

## 5.0 METHODOLOGY

In order to determine the findings and formulate the opinions stated in this report, Falcon performed the following:

- Reviewed documentation submitted by the client (see section 7.0) in relation to the structural evaluation.
- Performed visual inspections of the areas of work described below, with the purpose of documenting and assessing the current conditions of the structural elements and identifying signs of damage, distress, or failure such as but not limited to cracking, spalling, rust, discoloration, stains and misalignment.
- Sounding of readily accessible areas (as accessible without scaffolds, ladders, and other equipment) of stucco and concrete elements for the discovery of any hollow areas that would indicate hidden damage, detachment, or voids, to identify deficiencies in the structural components. Sound testing was performed on stucco and concrete surfaces with the aid of metal tools. Sounding encompassed masonry walls, ceilings, and bare concrete floors.
- The findings and recommendations included in this report are based on limited documents evaluated and the information provided and available to Falcon at the time of the review. Falcon makes no guarantee that all possible deficiencies or probable causes of the deficiencies were identified. We reserve the right to modify our findings and recommendations based on any new information as it becomes available.

## 6.0 SCOPE OF INVESTIGATION

The scope of work included visual, non-invasive inspections of the following elements, where accessible and observable:

1. The evaluation was performed on the balconies that were accessed through the units. We evaluated approximately 8% of the residential unit balconies (6 units) for evaluation of the condition of the exterior façade and accessible structural elements. Units were randomly selected by property management to encompass different exposures and layouts of the balconies. The following areas were evaluated:
    a. Exterior façade of the building – stucco, concrete, and masonry
    b. Exterior sealants around the windows and other wall protrusions.
    c. Exterior side of windows and doors (as accessible).
    d. Catwalks and balconies with their corresponding railings.
2. Roof & roof structures.
3. Accessible & above-ground Structural Support Elements (exposed columns, beams, shear walls, load-bearing walls, slabs, etc.) at accessible common areas of the building.




**Figure 1: Site Plan with location of the Property –** *Aerial Photography from Google Earth*

## 7.0 MATERIALS REVIEWED

The following documents were requested and reviewed or not available as noted below:

a) Original Design Drawings
*Not available*

b) Original Geotechnical Borings and Report
*Not available*

c) Previous Inspection Reports, Structural Repairs, and/or Modifications
*Not available*

## 8.0 OBSERVATIONS

### 8.1 Structural Support Elements

#### a. Concrete Deficiencies

Falcon found the concrete elements to be in good condition with minor localized deficiencies throughout the catwalks, balconies, and slabs. Signs of cracks, concrete void, improper repair of slabs, and deteriorated slab edges were found, which must be addressed to avoid deterioration of the structural elements. (**Exhibit A)**.

The occurrence of cracks in buildings can be attributed to thermal variations, moisture changes, chemical reaction, creep, foundation movement, and settlement, to name a few. In general, all visible cracks on the building façade should be properly repaired in order to prevent moisture and water intrusion causing future stucco delamination and concrete spalling.

#### b. CMU Walls

Falcon found the limited areas observed with exposed concrete masonry unit (CMU) walls to be in good condition with no major signs of deterioration.

#### c. Rusting

Falcon noted no major signs of rusting throughout the building, corroded embedded metals were observed. However, all observed nails, rust spots, or ferrous materials should be removed and resulting voids properly patched.

### 8.2 Envelope Cladding

#### a. Stucco Deficiencies

Falcon sounded readily accessible structural elements (the stucco was tapped with the aid of metal tools to identify de-bonded stucco). Falcon found no major signs of deterioration; the stucco cladding appears to be in good condition with localized areas of hollow spots.

#### b. Paint Coating & Sealant Deficiencies

The inspection of the building façade revealed no coating deficiencies. Falcon found the paint coating to be in good condition. Based on the observations, the paint is deteriorated due to normal wear and tear and exposure to the weather. For maintenance purposes, painting works should be performed. Sealants (around windows and door) should also be repaired in order to keep the buildings watertight.

### 8.3 Balconies & Railings

The typical railing system is composed of aluminum members: top rail, bottom rail, posts, and pickets. The guardrail is secured to the catwalks' structure through the posts which are embedded into the concrete slab. Falcon found the railing system to be in compliance with the minimum height requirements of 42" from top railing to finished floor but not with the maximum 4" picket spacing (in some cases was more than 4").

Falcon noted minor signs of deterioration evidenced in deteriorated post pockets, biological growth and loose railing elements. **See Exhibit C**

Overall, the railing system appears to be in good structural condition.

### 8.4 Roof and Roof Structures

The building's roof is a low slope roofing system and appears to be a TPO Roof Membrane system. The roofing system is in good condition; however, various signs of deterioration was observed including water ponding due to poor slope and improper waterproofing application as well. (**Exhibit D**).

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based upon and limited by the data provided and the observable conditions.

Based on the information provided above, the building is in good condition with normal signs of wear and tear, and the deficiencies found in the structural members are **minor in nature and are considered "Less than Substantial."** As such, Falcon did not observe any visual condition or indication which would be considered a significant structural concern that would render the building unfit for its present use or occupancy.

As presented in Section 8, Falcon noted some concrete cracks, primarily at catwalks. Concrete void, deteriorated slab edges and improper repairs were also observed. Additionally, signs of water ponding were found in areas on the rooftop that were not properly sloped and poor waterproofing installation as well. Rusting signs were viewed due to embedded metals. Some deteriorated railing post pockets, biological growth and loose elements were found at catwalks railings. Overall, the building is in good condition and shows no signs of major deterioration. (**See Exhibit E**)

All detached stucco and concrete must be removed before proper repairs can be completed, since detached stucco/concrete could fall and cause injuries/damage.

The deficiencies listed above should be addressed as soon as possible to prevent further deterioration, restore affected elements, and maintain the property in a safe and habitable condition. Falcon recommends that the Association and/or property management continue to monitor and maintain all building structural elements. Should any changes in conditions such as cracks, settlement, sinkholes, or any other notable concerns be identified, Falcon shall be notified immediately so that we may evaluate the condition(s).

Based on our observations, Falcon recommends the following work:

**1. Required work:**

a. The Assessment of the property completed by the Falcon Group determined that no immediate structural repairs are necessary for the safety of the building. The building is currently complying with recertification requirements. The property should continue with regular maintenance of the structural and other components to ensure continual safety and stability of the structure.

**2. Recommended work:**

**a.** Falcon noted deficiencies on the property that should be repaired as a preventative maintenance. However, these recommendations are not critical to the recertification at this point.

i. Repair of concrete defects on the catwalks and balconies. All detached concrete must be removed before proper repairs can be completed.

ii. Repair all deficient areas on the roof, including improper installation, and areas of water ponding, to prevent further deterioration, thus ensuring structural integrity.

iii. Painting the exterior envelope of the building and railings at catwalks & balconies once all concrete/stucco/masonry deficiencies have been corrected, as needed. This also includes replacing deficient (cracked, peeled, missing) sealants as well.

iv. Repair/replace all deteriorated railing elements including post pockets and remove biological growth as well.

v. Removal of rust spots and repair of exposed and corroded structural metals. Corrosion of reinforcing steel and other embedded metals in concrete is the leading cause of concrete deterioration and must be addressed to prevent further damage.

Falcon recommends that your building should have an updated inspection performed every 8-10 years. In the event of a hurricane, flood, or other significant disaster upon or around the building, an updated inspection should also be performed.

This report was prepared for the benefit of the Seagrape Condominium and represents The Falcon Group's Milestone Assessment of existing conditions of the building and carports.

It should be noted that Falcon's assessment is based on visual observations and nondestructive investigations, and we have not performed any in-depth structural analysis. The possibility of hidden/latent deficiencies may exist in the covered structural elements of the building.

Falcon has used its best engineering judgment and ability to report the items presented herein, but Falcon cannot guarantee that all past, present, or potential deficiencies or defective conditions have been identified during its limited analysis/investigations. In performing this assignment, the Engineers involved relied upon publicly available information, information provided by the client, and information provided by third parties. Accordingly, the opinions in this report are valid only to the extent that the information provided was accurate and complete. Should new information or additional documentation

become available, Falcon reserves the right to amend its opinions and recommendations. No warranty, express or implied, is made as to the findings presented in this report.

As a routine matter, in order to avoid possible misunderstandings, nothing in this report should be construed directly or indirectly as a guarantee of any portion of the structure. Our opinions are based on our education and past experience with similar structures. Falcon did not perform any drawing or permit review. The information and opinions provided herein and in the evaluation report, were provided to the best of our knowledge and are a result of the information available at the time of the evaluation. Falcon retains the right to amend its opinions in part or entirely should new information become available.

To the best of our knowledge and ability, this report represents an accurate appraisal of the present condition of the Seagrape Condominium property based upon evaluation of observed conditions, to the extent reasonably possible.

Should you have any questions in reference to this report, please do not hesitate to contact The Falcon Group directly at (305) 663-1970.

Sincerely,

Prepared by

Shawqi Saad

Reviewed by

Sinisa Kolar, P.E.

# Exhibit A – Concrete


Photo # 1 Spalled Concrete

Photo # 2 Void Concrete Slab (Unit 318)

Photo # 3 Close up of Previous Photo

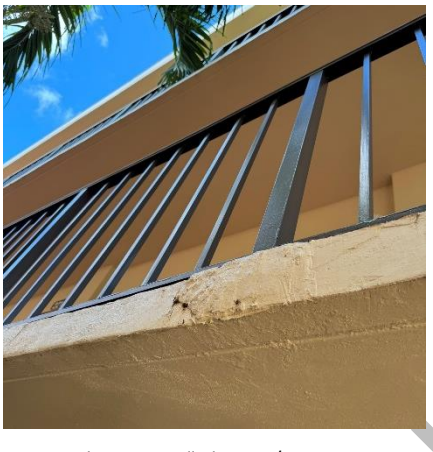

Photo # 4 Spalled Stucco/Concrete

Photo # 5 Close up of Previous Photo

Photo # 6 Improper Slab Cut for Pipe Installation.

Photo # 7 Deteriorating Expansion Joint

Photo # 8 Deteriorating Expansion Joint

# Exhibit B – Rusting & Corrosion

Photo # 9 Corroded Rebar Pop Out

Photo # 10 Close up of Previous Photo

# Exhibit C – Railings

Photo # 11 Deteriorated Railing Post Pocket

Photo # 12 Deteriorated Railing Bracket

Photo # 13 Missing Fasteners on Railing Bracket

Photo # 14 Biological Growth

# Exhibit D – Roof

Photo # 15 Signs of Water Ponding

Photo # 16 Signs of Water Ponding

Photo # 17 Improper Waterproofing Application

# Exhibit E – General Overview.


Photo # 18 Front View

Photo # 19 Side View

Photo # 20 Rear View

Photo # 21 Interior View

Photo # 22 Catwalks & Railing View

Photo # 23 Catwalks & Railing View