

# Lake Tarpon Sail and Tennis Club

## *Milestone Inspection*



Prepared for:

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RE: Phase 1 – Milestone Inspection  
Lake Tarpon Sail and Tennis Club

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# **REPORT OF FINDINGS**

## **INTRODUCTION**

Belt Restoration Engineers was contracted to perform a visual, non-destructive structural evaluation of the structure located at the address listed above. Mohamed Diaa and Ivan Bitorajc, performed the investigation on January 3<sup>rd</sup> and 4<sup>th</sup> of 2023. The investigation was limited to the structural condition of accessible portions of the above referenced property at the time of our site visit. Belt recorded select cladding and waterproofing observations encountered during our structural evaluation.

## **PURPOSE**

The purpose (scope) of our structural evaluation was the following:

- A. Identify any apparent condition of structural concern that was, or could become, a hazard to the health and safety of the building occupants.
- B. Collect data of the condition of the structure for the design of repairs to the structural, roofing, cladding, and waterproofing systems.

## **PROPERTY DESCRIPTION**

The property consisted of garage in the first level and multiple story residential buildings located on Lake Tarpon Sail and Tennis Club. The structure consisted of independent units with balconies on all levels. The site had parking carports near the building on the asphalt lot and also on the 1<sup>st</sup> floor of the building. The structure of the building was constructed of concrete and CMU.



**Picture 1:** Typical Front Elevation



**Picture 2:** Typical back Elevation



**Picture 3:** Typical left Elevation



**Picture 4:** Typical right Elevation



## TYPICAL INSPECTION METHODS

Aside from conventional measurements and visual inspection, the following method was used to inspect select structural and non-structural elements at the property.

### Surface Sounding

Surficial sounding was performed using a metal object (golf club or hammer) to locate areas of hollow sounding substrate consistent with delamination.

Belt Restoration Engineers performed a visual inspection of accessible and visible structural and non-structural building components. We systematically surveyed the conditions and used the above methods where applicable to locate damage that was not visually discernable. We noted these conditions via photographs and field notes presented in *Appendix A*.

## DEFINITIONS AND DESCRIPTIONS

The following definitions and descriptions are provided to as an aid to interpreting the information include in this report.

**Sounding** – method to determine areas of delamination that may not be visibly apparent. This is performed by tapping on the surface with a hard object, usually a hammer or golf club. The objective of these methods is to detect regions of the cladding or substrate where the sound from tapping changes from a clear ringing sound (sound substrate) to a somewhat mute and hollow sound (delaminated substrate).

**Spall** – A fragment, usually in the shape of a flake, detached from a concrete member by a blow, the action of weather, by pressure, by fire, or by expansion of the larger mass.

**Delamination** – A separation along a plane parallel to the surface, as in the case of a concrete slab, a horizontal splitting, cracking, or separation, within a slab in a plane roughly parallel to, and



generally near, the upper surface and can often only be detected by nondestructive tests, such as tapping or chain dragging.

**Pop out** – the breaking away of small portions of a concrete surface due to localized internal pressure that leaves a shallow, typically conical, depression with a broken coarse aggregate at the bottom.

**Craze Cracks** – fine random cracks or fissures in a surface of plaster (stucco) cement paste, mortar, or concrete.

**Hairline Cracks** – cracks in an exposed to view concrete surface having widths so small as to be barely perceptible.

**Stairstep Cracking** – cracks in finish, cladding, or masonry construction that follow the underlying mortar joints in the underlying masonry construction.

**Shrinkage and Temperature Crack** – Cracks in concrete or a concrete finish resulting from shrinkage of the concrete due to the curing process or thermal expansion and contraction of the concrete.

**Reinforcement (Concrete)** – General term for ferrous metal (steel) rebar, post tensioning cables, or welded wire mesh installed within a member. Reinforcement can be installed before the concrete is poured (cast in place) or after the concrete has been cast in place (post-tensioning).

**Environmental Corrosion** – corrosion to a material due to the exposure to include (but not limited to) sunlight, temperature changes, humidity, moisture, chemicals, and overspray.

**Mechanical Damage** – general term for damage caused by dynamic forces or human activities (i.e. impacts, surface wear, etc.)



## **SUMMARY OF OBSERVATIONS**

### **STRUCTURAL**

At the time of our visit, we did not note any visible structural conditions that were indicative of imminent catastrophic failure of the main structural components. There were conditions of secondary structural components that were of immediate concern. These are presented below.

#### **Walkways (ceiling)**

1. Delamination was observed in multiple areas along corridor walkways.
2. Spalling

#### **Walkways (floor)**

Delamination, hairline cracks, pop out and spalling in the concrete under the carpet

#### **Balconies**

Delamination, spalling and hairline cracks were observed

#### **Exterior Façade**

1. Delamination, and hairlines cracks were observed in multiple areas
2. Stucco spalling was observed in multiple areas

#### **1<sup>st</sup> floor (garage)**

1. Spalling at the corner of the base of the concrete column
2. Hairline crack in the concrete beam
3. Stairstep cracks in the CMU wall

#### **Stairs**

Overall good, except few places, where there's corrosion in the steel frame.

#### **Technical room**

Overall good, except one hairline crack in the concrete slab



## RECOMMENDATIONS

Minor structural damage to structural members was observed at the subject property. Belt Restoration Engineers believes that, as of the time of our site visits, an immediate unsafe structural condition does not exist. No Phase 2 is required at this property at this time.

Based on observations made during our site visits, Belt Restoration recommends the following as a maintenance plan, but not require:

1. Repair all cracked, delaminated balcony walls
2. Remove the walkway carpet followed by an inspection then install new waterproofing and flashing
3. Repair spalling and delamination in the walkways
4. Repair all corroded reinforcement areas
5. Repair and seal all hairline and stair step cracks.

## LIMITATIONS

The opinions expressed herein are based on the information collected during our assessment, our present understanding of the former site conditions, and our professional judgment in light of such information at the time of this Report. The Report is a professional opinion, and no warranty is expressed, implied, or made as to the conclusions, advice, and recommendations offered in this report. Belt reserves the right to update this Report should additional information become available. In expressing the opinions stated in this report, Belt has exercised a reasonable degree of care and skill ordinarily exercised by a reasonably prudent Engineer in the same community and in the same time frame given the same facts and circumstances.



## REFERENCES

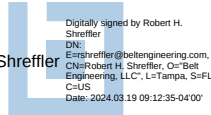
1. 2023 Florida Building Code, 8<sup>th</sup> Edition - Existing Building (FBC EB).
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3. ACI 562-16, Code Requirements for Assessment, Repair and Rehabilitation of Existing Concrete Structures
4. ACI 201.1R-08 Reported by ACI Committee 201 Guide for Conducting a Visual Inspection of Concrete in Service

## CONTACT

Should you have any questions or concerns, please do not hesitate to contact us at (813) 961-3075 or e-mail [rshreffler@beltengineering.com](mailto:rshreffler@beltengineering.com)

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