



August 19, 2021

Rod Middleton  
**Suitor, Middleton, Cox & Associates Inc.**  
15751 San Carlos Blvd. #8  
Fort Myers, FL 33908

**RE: Bay Harbor Club of Bonita Beach Condominium Association, Inc.**  
**ASCE File No. 210995**  
**40-Year Plan**

Dear Rod,

As requested, **Arnold/Sanders Consulting Engineers (ASCE)** has been asked for our professional opinion to determine the current condition of the structures.

The purpose of our site visit was to observe existing conditions at the buildings and related elements, and to determine what remedial work will be required, if any. Additionally, the association would like to know the design capacity of the existing slabs and to determine if a glazing system could be applied to the edge of the slabs.

The findings and recommendations below are based upon our limited visual observations of the buildings and related elements. Original construction or other documents were available for our review. This report is not intended to take in to account hidden defects, mechanical, plumbing, electrical systems, architectural features, code compliance issues, or other areas of the project not specifically mentioned.

ASCE offers the following:

#### **General**

#### **Structure**

Based on our observations and the plans, the existing structural systems are pre-cast pre-stressed concrete floors over conventionally reinforced beams, columns, and shear walls over a combination pile and grade beam and conventionally reinforced concrete foundations.

#### **Scope of Structural Inspection**

The fundamental purpose of the required inspection and report is to confirm in reasonable fashion the building or structure under consideration is safe for continued use under the present occupancy. As implied by the title of this document, this is a recommended procedure, and under no circumstances are these minimum recommendations intended to supplant proper professional judgment. In general, unless there is obvious overloading or significant deterioration of important structural elements there is little need to verify the original design. It is obvious this has been "time tested" if still offering satisfactory performance. Rather, it is of importance that the effects of time with respect to deterioration of the original construction materials be evaluated. It will rarely be possible to visually examine all concealed construction, nor should such be generally necessary. However, a sufficient number of typical structural members should be examined to permit reasonable conclusions to be drawn.

Visual Examination will, in most cases, be considered adequate when executed systematically. Surface imperfections such as cracks, distortion, sagging, excessive deflections, significant misalignment, signs of leakage, and peeling of finishes should be viewed critically as indications of possible difficulty.

In this marine climate, highly aggressive conditions exist year-round. For most of the year, outside relative humidity may frequently be about 90 or 95%, while within air-conditioned buildings; relative humidity will normally be about 35 to 60%. Under these conditions moisture vapor pressures ranging from about 1/3 to 1/2 pounds per square inch will exist much of the time. Moisture vapor will migrate to lower pressure areas. Common building materials such as stucco, masonry, and even concrete, are permeable even with these slight pressures. Since most of our local construction does not use vapor barriers, condensation will take place within the enclosed walls of the building. As a

result, deterioration is most likely adjacent to exterior walls, or wherever else moisture or direct leakage has been permitted to penetrate the building shell.

Structural deterioration will always require repair. The type of repair, however, will depend on the importance of the member in the structural system and degree of deterioration. Cosmetic type repairs may suffice in certain non-sensitive members such as tie beams and columns, provided that the remaining sound material is sufficient for the required function. For members carrying assigned gravity or other loads, cosmetic type repairs will only be permitted if it can be demonstrated by rational analysis that the remaining material, if protected from further deterioration can still perform its assigned function at acceptable stress levels.

Failing that, adequate repairs or reinforcement will be considered mandatory.

### **Observations**

#### **Main Structure**

Representatives of ASCE performed visual observations of the exterior of the structure and some of the interior elements of the garage area at the ground floor. We did not observe any surface imperfections such as cracks, distortion, sagging, excessive deflections, significant misalignment, signs of leakage, and peeling of finishes. We did observe some minor areas cosmetic repair.

#### **Slab Capacity**

Based on the plans it appears the balconies have been designed to support a 100 psf design live load. Typically, glazing systems have a load of 10 psf or in this case 80 plf. Based on this information and in our professional opinion, the slabs will safely support these additional loads.

As a routine matter, in order to avoid possible misunderstanding, nothing in this report should be construed directly or indirectly as a guarantee for any portion of the structure. To the best of ASCE's knowledge and ability, this report represents an accurate appraisal of the present condition of the building based upon careful evaluation of observed conditions, to the extent reasonably possible.

Due to the limited scope of this investigation, we cannot attest to the structure's compliance with building codes or accepted construction techniques, except as noted herein. ASCE has not and is not attempting to supplant the responsibility of the Engineer of Record. 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 ASCE.

If you have any questions or require additional information regarding this report, please do not hesitate to call.

Sincerely,

**Arnold/Sanders Consulting Engineers**

*Mark A. de Stefano, PE*

Mark A. de Stefano, PE  
President / Principal

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