

**CERTIFIED**  
INSPECTORS

# Seawall Inspection Report

## Aston Martin Residences

**Property Address:**

300 Biscayne Blvd Way  
Miami FL 33131



### Certified Inspectors, LLC

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# 1. Seawall or Bulkhead

## Styles & Materials

**Seawall Type:**

Vertical

**Seawall Construction:**

Extra Info : Heavyweight Steel Sheet Piles

**Seawall Deck:**

Concrete

**Cap Hight to Water Line:**

Extra Info : 4-5 LF

**Cap Height to Bottom of the Ocean:**

Extra Info : +/- 15 LF

**Tide at Inspection Time:**

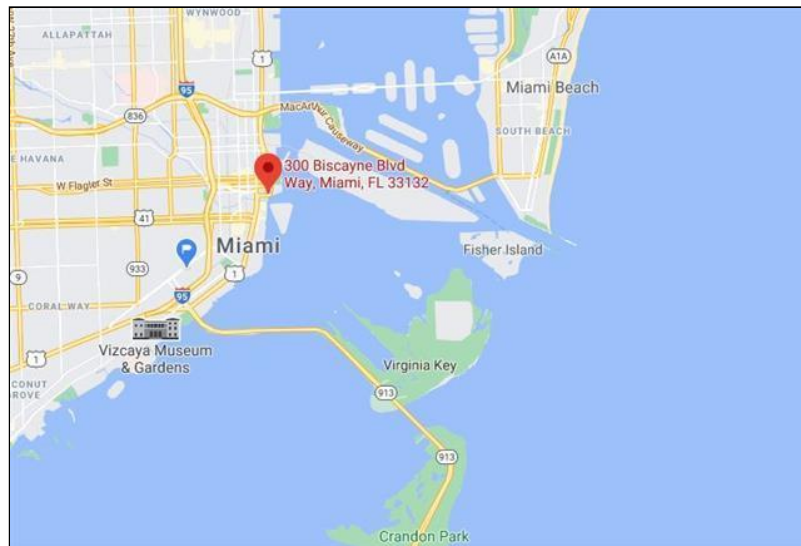
## Items

### 1.0 Grounds

**Inspected**

The property is located at the mouth of the Miami River. The Miami River drains out of the Everglades and runs through the City of Miami. The river flows from the terminus of the Miami Canal at Miami International Airport to Biscayne Bay. The mouth of the river is home to the Port of Miami and many other businesses. This river has strong current during Incoming and outgoing tides, accounts for heavy boat traffic, and is subject to strong wave and wind action.

The inspection was done from both the water and the land side of the seawall. Water visibility was +/- 5LF depth at the wall, +/- 10 LF depth outside of the dock piles, clear skies. Inspector found the grounds on the land side to be leveled, well kept, and undergoing major construction with the construction of the Aston Martin Residences.



1.0 Item 1(Picture)



1.0 Item 2(Picture)



1.0 Item 3(Picture)



1.0 Item 4(Picture)

**1.1 Seawall Face - Above water line**

Inspected, Repair/Replace

This seawall is built with Heavyweight Steel Sheet Pile measuring approximately 15 LF from the bottom of the river bed. Heavyweight Steel Sheet Pile can have different grades and different life expectancy. Determination of the grade of the sheet pile that went into this seawall is beyond the scope of this inspection. Life expectancy of Heavyweight Sheet Pile can range anywhere between 40 and 75 years.

Moisture and oxygen represent the two main factors that cause corrosion, with the presence of moisture increasing the electrical conductivity of the environment in contact with the metal surface.

Inspector observed the face of the seawall above the water line (splash zone). The splash zone is where the most serious corrosion activity occurs. The splash zone comprises the area of steel pilings at and immediately above the high tide line, which is subject to frequent wetting from splashing water. The splash zone on this 470 LF seawall is showing minor to moderate levels of pitting corrosion. Pitting corrosion is a localized attack on a metal wherein the corrosion rate is higher in some exposed areas. Pitting corrosion can create shallow craters or deep holes. Item 1(Picture) Item 2(Picture) Item 3(Picture) Item 4(Picture) Item 5(Picture) Item 6(Picture) Item 7(Picture) Item 8(Picture) Item 9(Picture)

Inspector was unable to determine the precise age of the Heavyweight Steel Piles on this seawall. Historical images with the Miami Dade Property Appraiser shows extensive work went into the project between 2006 and 2007. Recommend consulting a qualified marine contractor and begin seawall mitigation plan by encapsulation or application of protective coating.

Observation: The segment of the seawall that continues east of the Aston Martin Project known as the Miami Riverwalk is severely deteriorated when compared to the subject's wall. Item 10(Picture) Item 11(Picture) Item 12(Picture)



1.1 Item 1(Picture)



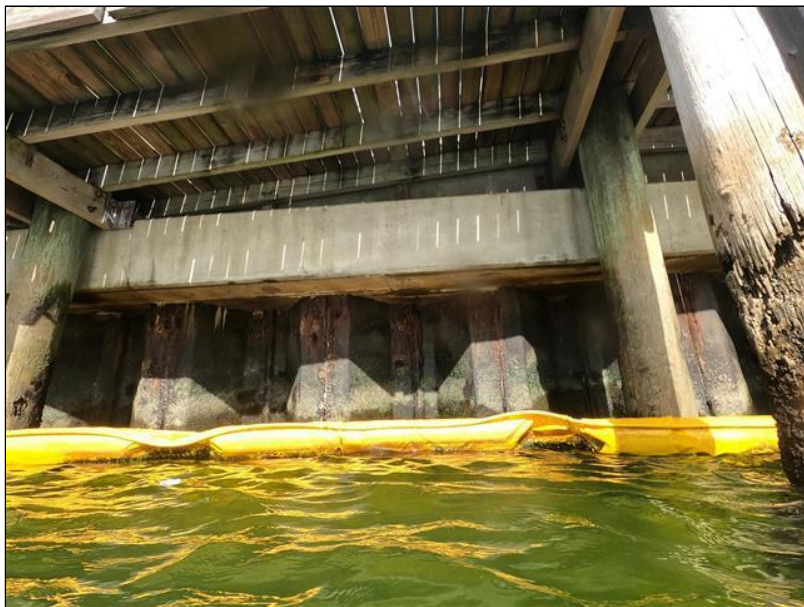
1.1 Item 2(Picture)



1.1 Item 3(Picture)

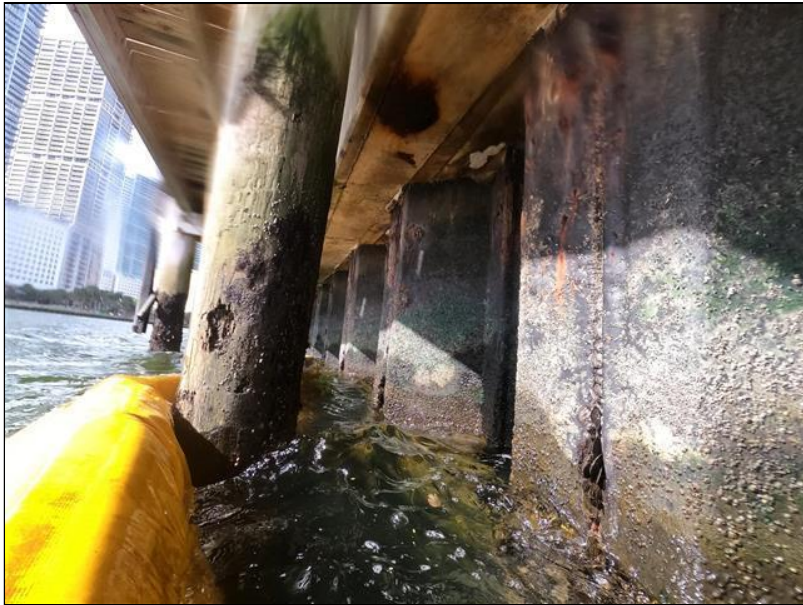


1.1 Item 4(Picture)



1.1 Item 5(Picture)





1.1 Item 6(Picture)



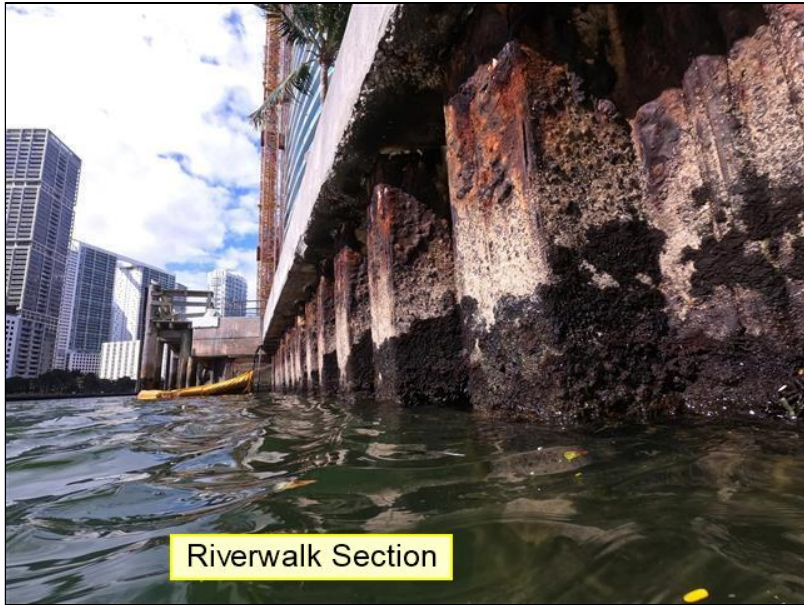
1.1 Item 7(Picture)



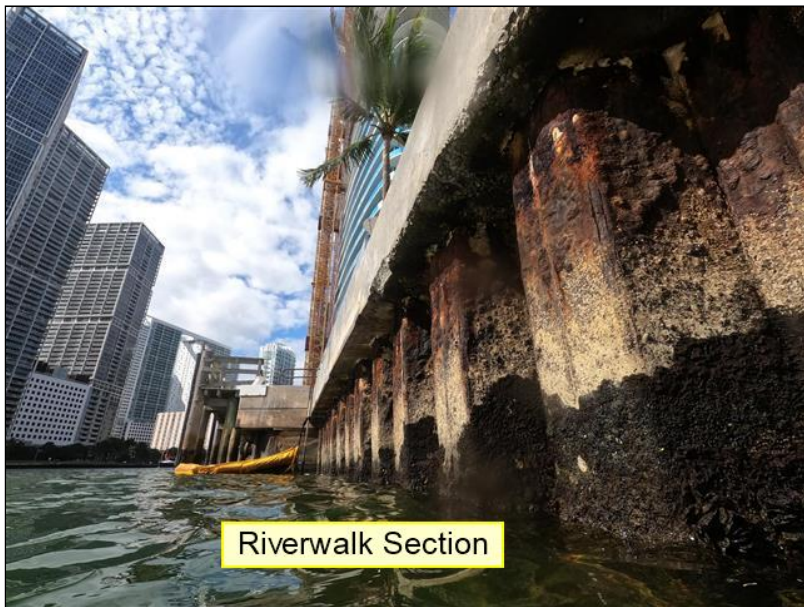
1.1 Item 8(Picture)



1.1 Item 9(Picture)



1.1 Item 10(Picture)



1.1 Item 11(Picture)



1.1 Item 12(Picture)

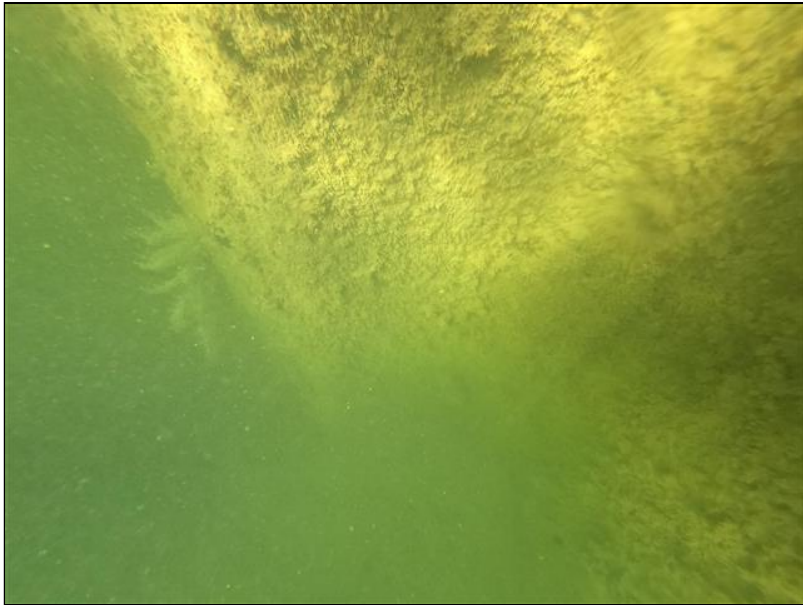
**1.2 Seawall Face - Under water line**

**Inspected**

Inspector observed the face of the seawall below the water line. Below the water line (tidal zone), is the area that is continuously submerged. Shortage of oxygen at the water-metal interface equates to a low corrosion rate in areas that are fully immersed. While underwater, inspector found the submerged piles to be in serviceable condition at the time of the inspection. Inspector found moderate levels of marine growth such as barnacles, worms, and other types of biological organisms attached to the steel piles. This marine growth can lead to fouling which can impede or interfere and cause adverse wear of the panels. Item 1(Picture) Item 2(Picture) Item 3(Picture) Item 4(Picture) Item 5(Picture) Item 6(Picture) Item 7(Picture) Item 8(Picture) Item 9(Picture)



1.2 Item 1(Picture)



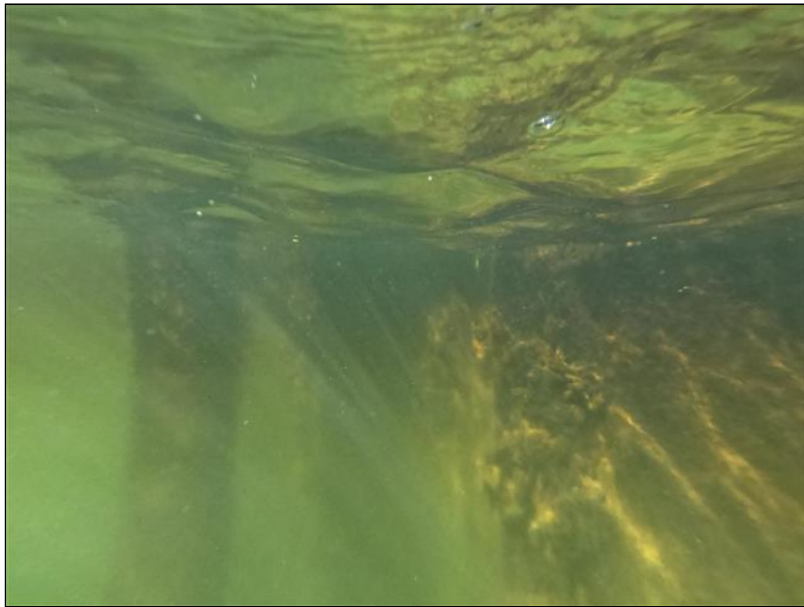
1.2 Item 2(Picture)



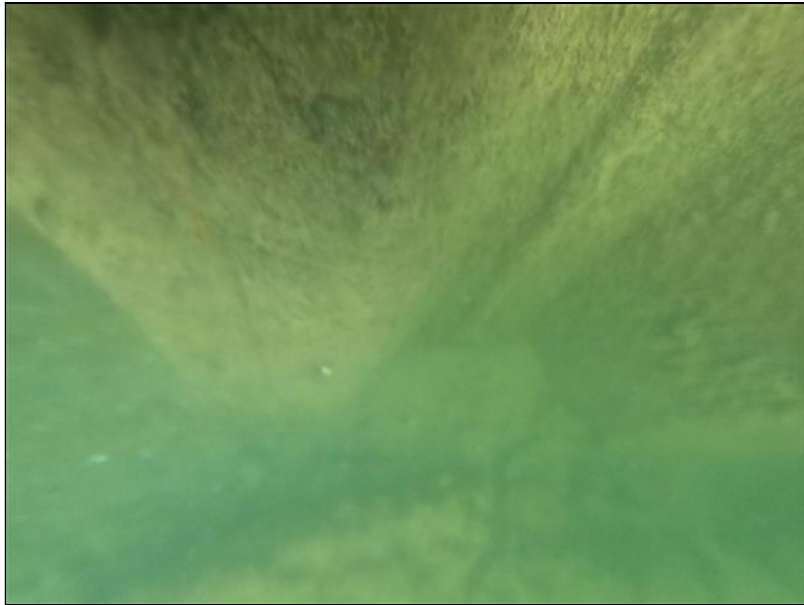
1.2 Item 3(Picture)



1.2 Item 4(Picture)



1.2 Item 5(Picture)



1.2 Item 6(Picture)



1.2 Item 7(Picture)



1.2 Item 8(Picture)



1.2 Item 9(Picture)

**1.3 Footings or foundation**

Inspected



This seawall is buried deep into the bottom of the river. Structures built of sheet piling obtain stability from being embedded into the buried zone. In this area, corrosion is insignificant. Inspector found no need for new footer at this time.

Observation: The segment of the seawall that continues east of the Aston Martin Project known as the Miami Riverwalk is severely deteriorated when compared to the subject's wall. A cinder block stack was laid out at the bottom, at the junction between the two walls in what appears to be an attempt to protect this section of wall. Item 1(Picture) Item 2(Picture)



1.3 Item 1(Picture)



1.3 Item 2(Picture)

**1.4 Seawall Cap**  
Inspected

This seawall has a concrete CAP that measures +/- 470 LF in length and is 48" h x 24" w. The CAP is positioned +/- 15 LF tall measuring from the berm (bottom of canal). There is no sign of CAP rotation or movement at this time. The CAP shows minor signs of deterioration with very minor concrete spalling. The seawall CAP was in serviceable condition at the time of the inspection.



1.4 Item 1(Picture)



1.4 Item 2(Picture)



1.4 Item 3(Picture)

**1.5 Vertical Pilings**

Not Present

**1.6 Batter Pilings**

Not Present

**1.7 Seam Sealing**

Not Present

**1.8 Reinforcements**

Not Present

**1.9 Concrete Pillings**

Not Present

**1.10 Tie-Backs**

Not Inspected

Inspector found no evidence of deficiency with the condition of the tie-back rods as there are no signs of sagging of the structure or backfill settlement. Inspector disclaims responsibility for determining the precise condition of the tie-back rods because they are hidden underground.

**1.11 Anchors**

Not Inspected

Inspector found no evidence of deficiency with the condition of the anchors as there are no signs of sagging or backfill settlement. Inspector disclaims responsibility for determining the precise condition of the anchors because they are hidden underground.

**1.12 Retaining Walls**

Not Present

**1.13 Drainage or Storm sewer**

Not Present