

## MEMORANDUM

---

**TO:** Harbor Bay Community Development District  
**FROM:** Christopher Gamache, PE  
**DATE:** 9/14/2017  
**RE:** Isolated Seawall Assessments

---

A site visit was conducted on September 13, 2017 to observe issues related to seawall movements. Properties observed were located at 5713 Tortoise Place, 536 Islebay Drive, 5705 Sea Turtle Place, 5614, 5616, & 5624 Skimmer Drive, and 5606 Seagrass Place.

In general, additional wall movements/rotations were noted at the properties observed. The movements/rotations are believed to be caused by the conditions produced by hurricane Irma. The hurricane simultaneously reduced the restraining pressure on the seawall by draining water out of the canal and increased the backfill pressure with excessive rainfall that was trapped behind the wall due to non-functioning existing weep holes.

Below is a breakdown of the conditions at the properties observed.



### 5713 Tortoise Place

Additional cap rotation was observed.  
Max cap rotation was measured at 9.1°.  
Minor voids were present behind the cap.

Recommendation:  
An emergency retrofit is recommended. New weep holes should be installed to relieve water pressure behind the wall.

## MEMORANDUM

---

### 536 Islebay Drive



Additional cap rotation was observed.  
Max cap rotation was measured at 7.3°.  
Minor voids were present behind the cap.

**Recommendation:**

No action at this time. The wall should remain on the priority list.

### 5705 Sea Turtle Place



Additional cap rotation was observed.  
Max cap rotation was measured at 9.1°.  
Minor voids were present behind the cap.  
Scour troughs were noted in the canal perpendicular to the wall.

**Recommendation:**

An emergency retrofit is recommended. New weep holes should be installed to relieve water pressure behind the wall.

### 5614 & 5616 Skimmer Drive



Significant changes were not noted.  
Minor voids were present behind the cap.

**Recommendation:**

No action at this time. The wall should remain on the priority list.

## MEMORANDUM

---

### 5624 Skimmer Drive



Additional cap rotation was observed. Max cap rotation was measured at 9.9°. Large voids were present behind the cap. The cap has twisted and fractured near the southern end of the property.

**Recommendation:**

An emergency retrofit is recommended. New weep holes should be installed to relieve water pressure behind the wall. Voids should be backfilled with free draining material.

### 5606 Seagrass Place



Additional cap rotation was observed. Max cap rotation was measured at 10.7°. Backfill has migrated under the toe of the wall leaving large full height voids behind the wall. The cap has twisted and fractured near the middle of the property.

**Recommendation:**

An emergency retrofit is recommended. New weep holes should be installed to relieve water pressure behind the wall. Rock or grout bags should be placed at the bottom of the voids prior to backfilling with free draining material.

**Additional Recommendation:**

It is recommended that all of the walls in Section I be re-inspected and measured for movement/rotation. Modifications to the list of priority or emergency properties should be made as necessary.