

GRAND HARBOR COMMUNITY ASSOCIATION

Property Condition Assessment Report of Findings

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EXECUTIVE SUMMARY

Kimley-Horn, a large national engineering firm, has conducted a thorough visual inspection of the physical assets for which Grand Harbor Community Association, Inc. (GHCA) is responsible in preparation for the residents of Grand Harbor taking control of the Board of GHCA on 1/1/2021. The full inspection report is included below. In addition, soil and ground water sampling and analysis of a site adjacent to the former golf maintenance facility was performed and, through a separate contractor, all pond interconnections were inspected. Finally, a review of all regulatory permits applicable to Grand Harbor was undertaken. Inspections took place in the summer and fall of 2019.

Construction and regulatory permits for Grand Harbor were issued beginning in late 1986 and construction began in 1987. All of the ponds, the estuary, the first roads, and the marina sea walls were built between 1987 and 1990 and are now over 30 years old. Various other roads, ponds and other parts of the community were developed in stages over the last 30 years. All observations took into account the various ages and expected normal wear and tear of each asset.

Below is a summary of the findings.

Soil and Ground Water Testing

The golf course maintenance facility was once located adjacent to the Harbor Course practice area. GHCA owns the right of way next to Via Marbella Blvd that is immediately adjacent to the old maintenance facility. In light of the possibility that there were spills of hydrocarbons, herbicides or pesticides on or near that location, soil and water samples were collected. These samples tested negative for any of these contaminants. No cleanup is required.

Roads and Road Right of Ways

The road surfaces are generally in good shape with no sign of base deterioration other than at a few locations that are likely the result of root invasions from nearby trees. There are some sections that are in need of repair to avoid major deterioration. A few curbs and gutters sections need to be repaired. A complete resurfacing will be required in about 10 years. The streetlights are in reasonable condition with only 14 needing either new fixtures or bulb replacement. Many of the streetlights are 30 years old and will likely need replacing in about 10 years.

The sidewalks and guardrails are in need of substantial repair. The entire length of the Via Marbella asphalt sidewalk needs to be replaced now. In addition, there are a large number of panels of concrete sidewalk throughout the community that have gaps exceeding ADA standards and pose a serious tripping hazard. They need to be replaced or repaired. The majority of the guardrail posts and the wood fascia have rotted. There have been repairs in the past but the majority is beyond their useful life and need to be replaced.

There is extensive landscaping along all the roads and in parcels of land that are owned by GHCA. In addition to the roads within Grand Harbor, GHCA currently maintains the Right of Way along Indian River Blvd, and Hyw 1 (behind the Falls) and 45th Street. There were many areas

where there are missing plants and plants and trees that need attending to. Stumps of removed trees were noted and should be removed and replaced with new trees. A number of trees along the roadways are infested and an arborist needs to determine what treatments are required. In addition, there are large sections of overgrown weeds along the perimeter fence that need to be removed and downed or broken fencing along the perimeter that needs to be repaired.

A section of South Harbor Drive that was transferred to Oak Harbor and the road and right of way from the beginning of Oak Harbor by St Margaret's east to St Anne's and out to the Indian River Boulevard and 45th St exit are the responsibility of Oak Harbor and not GHCA and were therefore not included in this review.

Bridges and Tunnels

There are 2 bridges and 4 tunnels for which GHCA is responsible. One bridge was determined to be structurally unsound and a life safety issue. It is being rebuilt. The second bridge (south of the damaged bridge on East Harbor Village Drive) is in satisfactory condition but requires maintenance to prevent further deterioration. All of the tunnels are in good condition with some minor repairs required.

Fountain, Walls, Fishing Pier, Buildings, and Other Miscellaneous Assets

The structure and mechanicals of the fountain are in good condition with minor repair needed. The lighting system in the fountain is not working and needs to be replaced or repaired.

There are a number of walls in the community. There are 2 sections of seawall in the marina that are GHCA property and are in good condition save some minor maintenance items. All other seawalls in the marina are owned by either the marina operator or by the residents adjacent to those walls.

The fishing pier (in River Village) requires extensive repairs to replace missing cross bracing. There are a number of wooden bulkheads (walls) elsewhere that are in reasonable condition except for one wall east of the fountain mechanical room entrance that needs to be replaced. The fascia on the wall adjacent to the River Village clubhouse holding back the front pond needs to be replaced.

The main guardhouses are in good condition, subject minor repairs. The guard shack at the 53rd St entrance is at the end of its useful life and needs to be replaced. Some security cameras need to be replaced and there is an issue with communication for some cameras that might require upgrading the repeater system on the property to make sure all cameras are functioning at all times.

Irrigation System

The portions of the irrigation system for which GHCA has responsibility are the irrigation pumps and pump house in Oak Harbor, the recycled water reservoir near the 16th tee of the Harbor course, and timers that operate irrigation sprinklers covering all the common areas owned by GHCA. The timers and the Oak Harbor pumps and pump house are in good condition. The recycle reservoir is not. That reservoir is actually a tank with steel sheet piling as a wall and a rubber liner on the bottom to prevent the recycled water from contaminating the ground water.

The steel sheet piling appears to be in good condition with very little soil subsidence around the outside. The liner has multiple tears around the shelf near the walls. The wooden fascia is beyond its useful life and needs to be replaced. The liner could be patched but it is within 5 years of needing replacement so replacement is recommended when the fascia is replaced so that the new liner can be attached to the metal sheet piling.

Conservation Easement

The estuary was constructed as part of the storm water management system and is the subject of a conservation easement. The conservation easement was required by government agencies as part of their permitting process and required of the first developer in exchange for building on environmentally restricted land. The easement is to GHCA by the state of Florida.

The inspections found significant non-compliance with certain conditions of the easement. While the majority of vegetation within the estuary is mangrove trees, there is extensive non-native vegetation around all of the periphery of the conservation easement that is not permitted. Secondly, there are 4 flushing channels connecting the estuary with the Indian River (not including the large channel between River Front and St. Andrews) that is essential for the estuary to flush to the river. Two are blocked. Lastly, significant portions of the internal waterways, pools, and ditches are silted in and are no longer in the state required by the conservation easement or a related maintenance agreement with Indian River County. All of these issues need to be rectified for GHCA to be in compliance with this easement.

Storm Water Management

Probably the largest and certainly one of the most important parts of the infrastructure GHCA is required to maintain is the storm water management system. The system is integral to the community and has four functions: it manages all runoff through swales, catch basins, exfiltration trenches and ponds to prevent flooding from major storms, it treats the runoff that picks up hydrocarbons, excess nutrients, and herbicides and pesticides before the water is released into the Indian River, it is the source of most irrigation water, and it is habitat for many animals. There are many elements to this system.

There has been significant deterioration in the state of these systems and there are a number of permit conditions with which the system is not in compliance. Notably, there have been modifications to some control structures that have not been authorized by the permitting authority. There is extensive erosion around the ponds that have eliminated the swales and berms that are required to force runoff to percolate through soil before going into the ponds. The ponds should have 30% (22.7 acres) of the total area as planted littoral zones (shallow shelves). The ponds currently have at best 9 acres and those acres have noxious plants that must be removed. The silting has significantly affected the flow of water between ponds and reduced the permanent volume of water the ponds hold, adversely affecting retention time and irrigation storage. Lastly, there is no aeration system before the water is released to the estuary near the Grand Harbor clubhouse as required by the permits.

The extensive network of interconnecting pipes (culverts) was inspected, revealing a number requiring cleaning to assure proper water flow. Four of the pipes are significantly damaged and in need of repair or replacement.

There is one water management subsystem that needs complete replacement. That is the system that manages all the runoff around St Andrews and a portion of Harbor Village Drive leading to St. Andrews. Three structures need complete replacement. One is the pond adjacent to the 14th River green. The control structure is in the wrong place, the side filter that allows the excess water to drain to the estuary is not working, silting is excessive and flooding occurs frequently. Another is an exfiltration trench that is 890 feet long and is completely blocked and needs rebuilding. The last is a dry retention well that is silted in and blocked.

The 4 ponds in the Reserve area, which are relatively new and show no evidence of the kind of issues in the other ponds, were not inspected.

The cost to remediate all the deficiencies found in the inspections has been estimated and is presented in the full report below. It is the position of Grand Harbor and Oak Harbor Transition LLC, on behalf of all of the Class A Members of GHCA, that these matter are the developer's responsibility and must be repaired prior to the turnover of control of the GHCA board to resident members.

Reserves

Following the completion of the inspections, a reserve requirement for GHCA's assets was calculated based on 2109 replacement costs. Unit cost values from published sources like FDOT and RS Means were used where applicable.

Not all items were included in the Reserve Requirement Table. Some items have very long lives and, if properly maintained should last much longer than the horizon of a reserve study. Examples of this are the tunnels or the newest ponds in the Reserve area. It was also assumed that some assets would be replaced in a regular capital or maintenance budget. Landscaping is an example of this type of item. Plants have a finite lifetime and need to be replaced periodically. There should be an annual budget item to cover the replacement of plants that die or require replacing and a separate reserve fund would not be needed. The OH irrigation pumps are another since they are under \$10,000 to replace and can be covered in a normal budget.

The Reserve calculation covers reserves for future repair or replacement of more than \$19,500,000 of assets at today's cost. The reserve requirement calculated for 1/1/21 is only about \$3,000,000 because it is assumed that major assets that need to be replaced or repaired at this time are timely replaced or repaired. If these assets were not remediated as assumed, the reserve requirement would be significantly higher than the table reflects.

Below are the items included in the reserve requirement calculation:

Reserve Requirement Items

Category	Sub Category	Item
Bridges and Tunnels	Bridge #1	Bridge #1 Repair/ Replace
	Bridge #2	Bridge # 2 Repair/Replace
Buildings	IRB	East Guardhouse Roof
		West Guardhouse Roof
Conservation Easement	Hydrology	Flushing Channel Repair 2 channels
		Flushing Channel Repair other 2 channels
		Water Courses Repair - Narrow
		Water Courses Repair - Wide
Irrigation	Recycled Water Reservoir	Pond Liner Fabric Replacement
		Sheet Piling Retaining Wall Repairs/Replacement
		Wooden Facade Retaining Wall Repairs/Replacement
Misc.	Misc.	River Village Pier Replacement
Right of Way	Guardrails	Guardrails Repair/Replacement
	Lighting	Lighting Poles and Fixtures
	Roadways	Patching (1" Mill and Resurfacing)

	Sidewalks	Concrete Sidewalk (8'X5' Panels)
Security	Gates	7 Electric Bar Gates
		45th Street Gate
Storm water Management	Exfil Trenches	Exfiltration Trenches
	Ponds	Storm Pipe Lining
		Pond Bank Restoration (Single Bag)
		Pond Bank Restoration (Double Bag)
Walls	Bulkheads	Bulkheads Repair/Replacement
	River Village Retaining Wall (Retaining Wall #5)	River Village Retaining Wall Wooden Facade Replacement
		River Village Retaining Wall Sheet Piling Replacement
	Seawalls (Retaining Walls #1-#2)	Seawalls Repairs/Replacement