

# RESERVE STUDY

## Moss Creek of Hillsborough Homeowners Association, Inc.



**Riverview, Florida**

**April 6, 2021**



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Moss Creek of Hillsborough Homeowners Association, Inc.  
Riverview, Florida

Dear Board of Directors of Moss Creek of Hillsborough Homeowners Association, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Moss Creek of Hillsborough Homeowners Association, Inc. in Riverview, Florida and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 6, 2021.

This *Reserve Study* exceeds the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level II Reserve Study Update."

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Moss Creek of Hillsborough Homeowners Association, Inc. plan for a successful future.

As part of our long-term thinking and everyday commitment to our clients, we are available to answer any questions you may have regarding this study.

Respectfully submitted on April 20, 2021 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Nancy Daniel, RS<sup>1</sup>

Review by: Alan M. Ebert, RS, PRA<sup>2</sup>, Director of Quality Assurance



<sup>1</sup> RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.

<sup>2</sup> PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at <http://www.apra-usa.com>.



Long-term thinking. Everyday commitment.



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## 1. RESERVE STUDY EXECUTIVE SUMMARY

**Client:** Moss Creek of Hillsborough Homeowners Association, Inc. (Moss Creek of Hillsborough)

**Location:** Riverview, Florida

**Reference:** 080231

**Property Basics:** Moss Creek of Hillsborough Homeowners Association, Inc. is responsible for the common elements shared by 68 single family homes. The community was built in 2001.

**Reserve Components Identified:** 17 Reserve Components.

**Inspection Date:** April 6, 2021. We conducted previous inspections in 2008 and 2018.

**Funding Goal:** The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2037 due to repaving of asphalt pavement.

**Cash Flow Method:** We use the Cash Flow Method to compute the Reserve Funding Plan. This method offsets future variable Reserve Expenditures with existing and future stable levels of reserve funding. Our application of this method also considers:

- Current and future local costs of replacement
- 0.9% anticipated annual rate of return on invested reserves
- 2.0% future Inflation Rate for estimating Future Replacement Costs

**Sources for Local Costs of Replacement:** Our proprietary database, historical costs and published sources, i.e., R.S. Means, Incorporated.

**Unaudited Cash Status of Reserve Fund:**

- \$152,254 as of February 28, 2021
- 2021 budgeted Reserve Contributions of \$15,600

**Project Prioritization:** We note anticipated Reserve Expenditures for the next 30 years in the *Reserve Expenditures* tables and include a *Five-Year Outlook* table following the *Reserve Funding Plan* in Section 3. We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Concrete Curbs and Gutters
- Concrete Sidewalks
- Fences, Aluminum
- Fences, Vinyl
- Ponds, Debris Removal and Shoreline Maintenance

**Recommended Reserve Funding:** We recommend the following in order to achieve a stable and equitable Funding Plan:

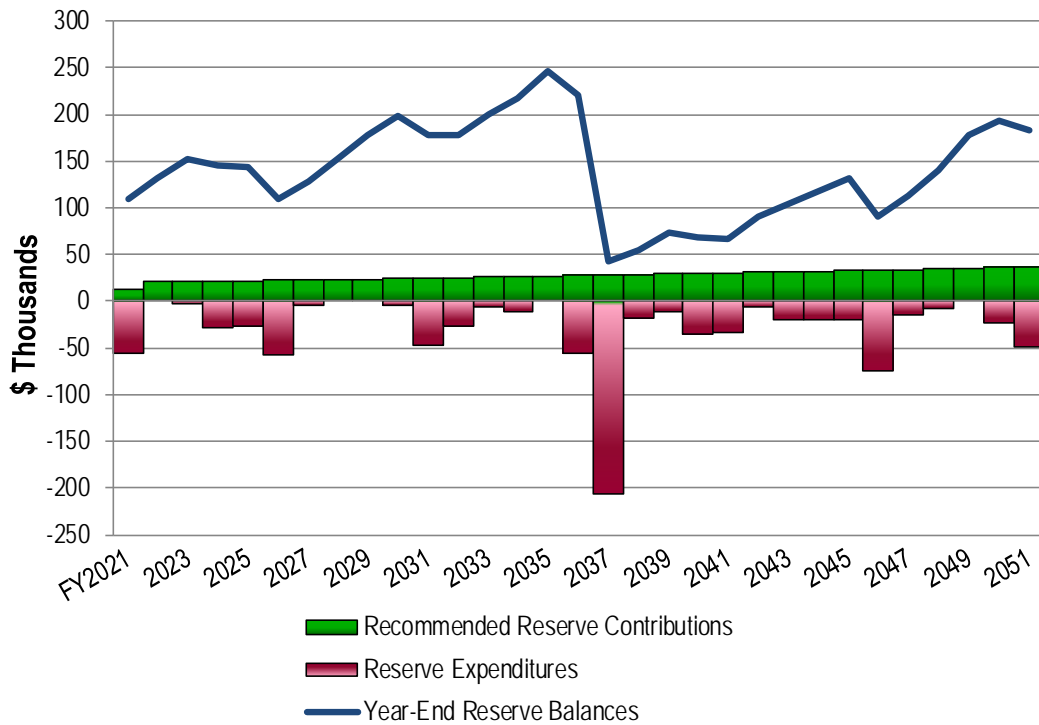
- Increase to \$20,700 in 2022
- Inflationary increases through 2051, the limit of this study's Cash Flow Analysis
- 2022 Reserve Contribution of \$20,700 is equivalent to an average monthly contribution of \$25.37 per homeowner.



Our revised findings reflect both external market and internal property changes. The result is an overall increase in the recommended Reserve Funding Plan since our last Reserve Study on August 20, 2018. The overall increase relates primarily to the higher unit cost for repaving of asphalt pavement, the addition of security cameras, and the lower than recommended reserve fund balance.

**Moss Creek of Hillsborough**  
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2022	20,700	131,776	2032	25,250	178,555	2042	30,800	90,890
2023	21,100	151,997	2033	25,750	200,550	2043	31,400	104,148
2024	21,500	145,754	2034	26,250	217,938	2044	32,050	117,321
2025	21,950	143,020	2035	26,800	246,820	2045	32,700	130,867
2026	22,400	108,916	2036	27,350	220,815	2046	33,350	91,056
2027	22,850	127,985	2037	27,900	43,433	2047	34,000	112,077
2028	23,300	152,542	2038	28,450	54,680	2048	34,700	140,569
2029	23,750	177,772	2039	29,000	72,825	2049	35,400	177,393
2030	24,250	198,569	2040	29,600	68,093	2050	36,100	192,775
2031	24,750	177,696	2041	30,200	65,905	2051	36,800	182,167





## 2. RESERVE STUDY REPORT

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of

**Moss Creek of Hillsborough Homeowners Association, Inc.**

**Riverview, Florida**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 6, 2021. We conducted previous inspections in 2008 and 2018.

We present our findings and recommendations in the following report sections and spreadsheets:

- **Identification of Property** - Segregates all property into several areas of responsibility for repair or replacement
- **Reserve Expenditures** - Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- **Reserve Funding Plan** - Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- **Five-Year Outlook** - Identifies reserve components and anticipated reserve expenditures during the first five years
- **Reserve Component Detail** - Describes the reserve components, includes photographic documentation of the condition of various property elements, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Methodology** - Lists the national standards, methods and procedures used to develop the Reserve Study
- **Definitions** - Contains definitions of terms used in the Reserve Study, consistent with national standards
- **Professional Service Conditions** - Describes Assumptions and Professional Service Conditions
- **Credentials and Resources**

## IDENTIFICATION OF PROPERTY



Our investigation includes Reserve Components or property elements as set forth in your Declaration. The Expenditure tables in Section 3 list the elements contained in this study. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement.

Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or Homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Homeowners
- Property Maintained by Others

We advise the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget. The Reserve Study identifies Reserve Components as set forth in your Declaration or which were identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:



- Moss Creek of Hillsborough responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the 30-year scope of the study. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan. We identify the following Long-Lived Property Elements as excluded from the 30-year Reserve Expenditures at this time.

- Box Culvert, Replacement on Moss Island Drive
- Pipes, Subsurface Utilities, Storm Drainage



**Box Culvert on Moss Island Drive**

The operating budget provides money for the repair and replacement of certain Reserve Components. The Association may develop independent criteria for use of operating and reserve funds. For purposes of calculating appropriate Reserve Contributions, we identify the following list of Operating Budget Funded Repairs and Replacements:

- General Maintenance to the Common Elements
- Expenditures less than \$2,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Benches, Common
- Detention Ponds
- Entrance Monument and Pillars, Interim Repairs and Paint Finishes
- Irrigation System, Controller
- Landscape
- Landscape Lighting
- Ponds, Water Quality Maintenance
- Railings at Box Culvert

- Retaining Walls, Masonry, Interim Inspections and Capital Repairs



**Bench at the gate entry**



**Railing above the box culvert on Moss Island Drive**



**Detention pond**

Certain items have been designated as the responsibility of the homeowners to repair or replace at their cost. Property Maintained by Homeowners, including items billed back to Homeowners, relates to unit:

- Driveways
- Fences, Excluding Perimeter Fence
- Homes and Lots
- Irrigation, Lots
- Mailboxes (2018) (Per Management)
- Pipes, Subsurface Utilities, Laterals, Domestic Water and Sanitary Sewer
- Retaining Walls, Lots



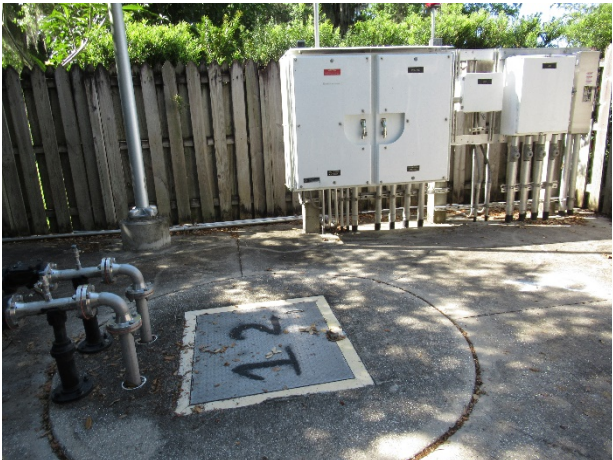
**Mailbox**



**Retaining wall on South side of 11144  
Bridgecreek Drive**

Certain items have been designated as the responsibility of others to repair or replace. Property Maintained by Others relates to:

- Fences, Vinyl (South Side) (Neighboring Community)
- Fire Hydrants (Hillsborough County)
- Lift Station (Includes Fencing and Access Drive) (Hillsborough County)
- Light Poles and Fixtures (Tampa Electric Company)
- Pipes, Subsurface Utilities, Mains, Domestic Water and Sanitary Sewer (Hillsborough County)
- Pipes, Subsurface Utilities, Mains, Fire Hydrant Supply (Hillsborough County)



**Lift station maintained by Hillsborough County**



**Fire hydrant maintained by Hillsborough  
County**

### **3. RESERVE EXPENDITURES and FUNDING PLAN**

The tables following this introduction present:

#### **Reserve Expenditures**

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
  - useful life
  - remaining useful life
- 2021 local cost of replacement
  - Per unit
  - Per phase
  - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

#### **Reserve Funding Plan**

- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end
- Predicted reserves based on current funding level

#### **Five-Year Outlook**

- Line item numbers
- Reserve component inventory of only the expenditures anticipated to occur within the first five years
- Schedule of estimated future costs for each reserve component anticipated to occur within the first five years

The purpose of a Reserve Study is to provide an opinion of reasonable annual Reserve Contributions. Prediction of exact timing and costs of minor Reserve Expenditures typically will not significantly affect the 30-year cash flow analysis. Adjustments to the times and/or costs of expenditures may not always result in an adjustment in the recommended Reserve Contributions.

Financial statements prepared by your association, by you or others might rely in part on information contained in this section. For your convenience, we have provided an electronic data file containing the tables of ***Reserve Expenditures*** and ***Reserve Funding Plan***.

## RESERVE EXPENDITURES

**Moss Creek of Hillsborough  
Homeowners Association, Inc.**  
Riverview, Florida

**Explanatory Notes:**

- 1) **2.0%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2021** is Fiscal Year beginning January 1, 2021 and ending December 31, 2021.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2021	1 2022	2 2023	3 2024	4 2025	5 2026	6 2027	7 2028	8 2029	9 2030	10 2031	11 2032	12 2033	13 2034	14 2035	15 2036
						Useful	Remaining	Unit (2021)	Per Phase (2021)	Total (2021)																	
<b>Property Site Elements</b>																											
4.020	8,600	8,600	Square Yards	Asphalt Pavement, Patch	2024	3 to 5	3	0.50	4,300	4,300	5.6%				4,563		4,842			5,139			5,453				
4.040	8,600	8,600	Square Yards	Asphalt Pavement, Mill and Overlay	2037	15 to 20	16	13.50	116,100	116,100	18.5%																
4.100	16	16	Each	Catch Basins, Inspections and Capital Repairs	2037	15 to 20	16	700.00	11,200	11,200	1.8%																
4.110	7,700	770	Linear Feet	Concrete Curbs and Gutters, Partial	2024	to 65	3 to 30+	30.00	23,100	231,000	6.5%			24,514													
4.140	30,800	1,200	Square Feet	Concrete Sidewalks, Partial	2026	to 65	5 to 30+	10.50	12,600	323,400	10.4%					13,911							15,667				
4.200	110	110	Linear Feet	Fences, Aluminum	2031	to 25	10	45.00	4,950	4,950	0.7%										6,034						
4.260	900	900	Linear Feet	Fences, Vinyl	2026	15 to 20	5	44.00	39,600	39,600	12.6%					43,722											
4.310	1	1	Panel	Gate Entry System	2031	10 to 15	10	5,600.00	5,600	5,600	1.9%											6,826					
4.311	3	1	Allowance	Gate Entry System, Surveillance Cameras, Phased	2032	10 to 15	11 to 15	8,300.00	8,300	24,900	8.4%												10,320		10,737		11,171
4.320	2	2	Each	Gate Operators	2031	to 10	10	3,900.00	7,800	7,800	4.1%											9,508					
4.330	2	2	Each	Gates	2031	to 20	10	7,500.00	15,000	15,000	5.3%											18,285					
4.420	6	6	Zones	Irrigation System, Commons	2041	to 40+	20	2,400.00	14,400	14,400	2.5%																
4.620	780	780	Square Feet	Pavers, Masonry	2031	25 to 30	10	7.00	5,460	5,460	0.8%										6,656						
4.710	1	1	Allowance	Ponds, Debris Removal and Shoreline Maintenance, Partial	2025	to 15	4	24,000.00	24,000	24,000	7.1%				25,978												
4.745	940	940	Square Feet	Retaining Walls, Masonry, Commons	2036	to 35	15	35.00	32,900	32,900	5.1%																44,279
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2039	15 to 20	18	8,000.00	8,000	8,000	1.3%																
4.810	1	1	Allowance	Signage, Street and Traffic, Replacement	2043	to 25	22	4,000.00	4,000	4,000	0.7%																
		1	Allowance	2021 Reserve Expenditures	2021	N/A	0	56,241	56,241	56,241	6.5%	56,241															
		1	Allowance	Reserve Study Update with Site Visit	2023	2	2	2,150.00	2,150	2,150	0.2%			2,150													
<b>Anticipated Expenditures, By Year (\$861,998 over 30 years)</b>												56,241	0	2,150	29,077	25,978	57,633	4,842	0	0	5,139	47,309	25,987	5,453	10,737	0	55,450

## RESERVE EXPENDITURES

**Moss Creek of Hillsborough  
Homeowners Association, Inc.**  
Riverview, Florida

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2037	17 2038	18 2039	19 2040	20 2041	21 2042	22 2043	23 2044	24 2045	25 2046	26 2047	27 2048	28 2049	29 2050	30 2051	
						Useful	Remaining	Unit (2021)	Per Phase (2021)	Total (2021)																	
<b>Property Site Elements</b>																											
4.020	8,600	8,600	Square Yards	Asphalt Pavement, Patch	2024	3 to 5	3	0.50	4,300	4,300	5.6%						6,517		6,916			7,340				7,789	
4.040	8,600	8,600	Square Yards	Asphalt Pavement, Mill and Overlay	2037	15 to 20	16	13.50	116,100	116,100	18.5%	159,380															
4.100	16	16	Each	Catch Basins, Inspections and Capital Repairs	2037	15 to 20	16	700.00	11,200	11,200	1.8%	15,375															
4.110	7,700	770	Linear Feet	Concrete Curbs and Gutters, Partial	2024	to 65	3 to 30+	30.00	23,100	231,000	6.5%	31,711															
4.140	30,800	1,200	Square Feet	Concrete Sidewalks, Partial	2026	to 65	5 to 30+	10.50	12,600	323,400	10.4%		17,643					19,869							22,376		
4.200	110	110	Linear Feet	Fences, Aluminum	2031	to 25	10	45.00	4,950	4,950	0.7%																
4.260	900	900	Linear Feet	Fences, Vinyl	2026	15 to 20	5	44.00	39,600	39,600	12.6%										64,968						
4.310	1	1	Panel	Gate Entry System	2031	10 to 15	10	5,600.00	5,600	5,600	1.9%										9,187						
4.311	3	1	Allowance	Gate Entry System, Surveillance Cameras, Phased	2032	10 to 15	11 to 15	8,300.00	8,300	24,900	8.4%							12,832		13,350		13,889					
4.320	2	2	Each	Gate Operators	2031	to 10	10	3,900.00	7,800	7,800	4.1%					11,590										14,129	
4.330	2	2	Each	Gates	2031	to 20	10	7,500.00	15,000	15,000	5.3%															27,170	
4.420	6	6	Zones	Irrigation System, Commons	2041	to 40+	20	2,400.00	14,400	14,400	2.5%					21,398											
4.620	780	780	Square Feet	Pavers, Masonry	2031	25 to 30	10	7.00	5,460	5,460	0.8%																
4.710	1	1	Allowance	Ponds, Debris Removal and Shoreline Maintenance, Partial	2025	to 15	4	24,000.00	24,000	24,000	7.1%				34,963												
4.745	940	940	Square Feet	Retaining Walls, Masonry, Commons	2036	to 35	15	35.00	32,900	32,900	5.1%																
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2039	15 to 20	18	8,000.00	8,000	8,000	1.3%			11,426													
4.810	1	1	Allowance	Signage, Street and Traffic, Replacement	2043	to 25	22	4,000.00	4,000	4,000	0.7%							6,184									
		1	Allowance	2021 Reserve Expenditures	2021	N/A	0	56,241	56,241	56,241	6.5%																
		1	Allowance	Reserve Study Update with Site Visit	2023	2	2	2,150.00	2,150	2,150	0.2%																
<b>Anticipated Expenditures, By Year (\$861,998 over 30 years)</b>												206,466	17,643	11,426	34,963	32,988	6,517	19,016	19,869	20,266	74,155	13,889	7,340	0	22,376	49,088	

## RESERVE FUNDING PLAN

**CASH FLOW ANALYSIS**  
**Moss Creek of Hillsborough**  
**Homeowners Association, Inc.**

		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
Riverview, Florida		FY2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Reserves at Beginning of Year	(Note 1)	152,254	109,993	131,776	151,997	145,754	143,020	108,916	127,985	152,542	177,772	198,569	177,696	178,555	200,550	217,938	246,820
Total Recommended Reserve Contributions	(Note 2)	13,000	20,700	21,100	21,500	21,950	22,400	22,850	23,300	23,750	24,250	24,750	25,250	25,750	26,250	26,800	27,350
Estimated Interest Earned, During Year	(Note 3)	980	1,083	1,271	1,334	1,294	1,129	1,061	1,257	1,480	1,686	1,686	1,596	1,698	1,875	2,082	2,095
Anticipated Expenditures, By Year		(56,241)	0	(2,150)	(29,077)	(25,978)	(57,633)	(4,842)	0	0	(5,139)	(47,309)	(25,987)	(5,453)	(10,737)	0	(55,450)
Anticipated Reserves at Year End		<u>\$109,993</u>	<u>\$131,776</u>	<u>\$151,997</u>	<u>\$145,754</u>	<u>\$143,020</u>	<u>\$108,916</u>	<u>\$127,985</u>	<u>\$152,542</u>	<u>\$177,772</u>	<u>\$198,569</u>	<u>\$177,696</u>	<u>\$178,555</u>	<u>\$200,550</u>	<u>\$217,938</u>	<u>\$246,820</u>	<u>\$220,815</u>

(continued)

		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued														
		2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Reserves at Beginning of Year		220,815	43,433	54,680	72,825	68,093	65,905	90,890	104,148	117,321	130,867	91,056	112,077	140,569	177,393	192,775
Total Recommended Reserve Contributions		27,900	28,450	29,000	29,600	30,200	30,800	31,400	32,050	32,700	33,350	34,000	34,700	35,400	36,100	36,800
Estimated Interest Earned, During Year		1,184	440	571	631	600	702	874	992	1,112	994	910	1,132	1,424	1,658	1,680
Anticipated Expenditures, By Year		(206,466)	(17,643)	(11,426)	(34,963)	(32,988)	(6,517)	(19,016)	(19,869)	(20,266)	(74,155)	(13,889)	(7,340)	0	(22,376)	(49,088)
Anticipated Reserves at Year End		<u>\$43,433</u>	<u>\$54,680</u>	<u>\$72,825</u>	<u>\$68,093</u>	<u>\$65,905</u>	<u>\$90,890</u>	<u>\$104,148</u>	<u>\$117,321</u>	<u>\$130,867</u>	<u>\$91,056</u>	<u>\$112,077</u>	<u>\$140,569</u>	<u>\$177,393</u>	<u>\$192,775</u>	<u>\$182,167</u>
		(NOTE 5)														(NOTE 4)

**Explanatory Notes:**

- 1) Year 2021 starting reserves are as of February 28, 2021; FY2021 starts January 1, 2021 and ends December 31, 2021.
- 2) Reserve Contributions for 2021 are the remaining budgeted 10 months; 2022 is the first year of recommended contributions.
- 3) 0.9% is the estimated annual rate of return on invested reserves; 2021 is a partial year of interest earned.
- 4) Accumulated year 2051 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

## FIVE-YEAR OUTLOOK

**Moss Creek of Hillsborough  
Homeowners Association, Inc.**  
Riverview, Florida

Line Item	Reserve Component Inventory	RUL = 0 FY2021	1 2022	2 2023	3 2024	4 2025	5 2026
<b><u>Property Site Elements</u></b>							
4.020	Asphalt Pavement, Patch				4,563		
4.110	Concrete Curbs and Gutters, Partial				24,514		
4.140	Concrete Sidewalks, Partial						13,911
4.260	Fences, Vinyl						43,722
4.710	Ponds, Debris Removal and Shoreline Maintenance, Partial					25,978	
	2021 Reserve Expenditures	56,241					
	<b>Reserve Study Update with Site Visit</b>			2,150			
	<b>Anticipated Expenditures, By Year (\$861,998 over 30 years)</b>	56,241	0	2,150	29,077	25,978	57,633



## 4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Reserve Study* includes enhanced solutions and procedures for select significant components. This section describes the Reserve Components, documents specific problems and condition assessments, and may include detailed solutions and procedures for necessary capital repairs and replacements for the benefit of current and future board members. We advise the Board use this information to help define the scope and procedures for repair or replacement when soliciting bids or proposals from contractors. *However, the Report in whole or part is not and should not be used as a design specification or design engineering service.*

### Property Site Elements

#### Asphalt Pavement, Patch

---

**Line Item:** 4.020

**Quantity:** Approximately 8,600 square yards

**History:** Asphalt pavement was repaved in 2017.

**Condition:** Good to fair overall with isolated transverse cracks, block cracks and longitudinal cracks evident.

**Useful Life:** Three- to five-years

**Priority/Criticality:** Per Board discretion.

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for patching of up to two percent (2%) of the pavement.

#### Asphalt Pavement, Mill and Overlay

---

**Line Item:** 4.040

**Quantity:** Approximately 8,600 square yards

**History:** Asphalt pavement was repaved in 2017

**Condition:** Good to fair overall with isolated transverse cracks, block cracks and longitudinal cracks evident



**Asphalt pavement overview**



**Asphalt pavement overview**



**Asphalt pavement with block cracks on Moss Island Drive**



**Asphalt pavement with block cracks**



**Asphalt pavement with block cracks**



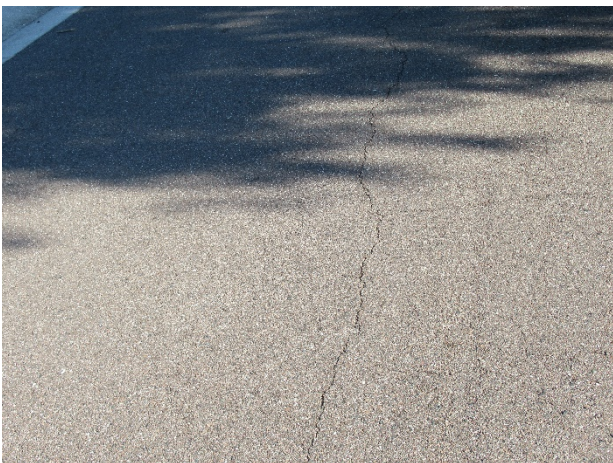
**Asphalt pavement with block cracks**



**Asphalt pavement with longitudinal cracks**



**Asphalt pavement with longitudinal and Transverse cracks**



**Asphalt pavement with longitudinal cracks**



**Asphalt pavement with longitudinal cracks**



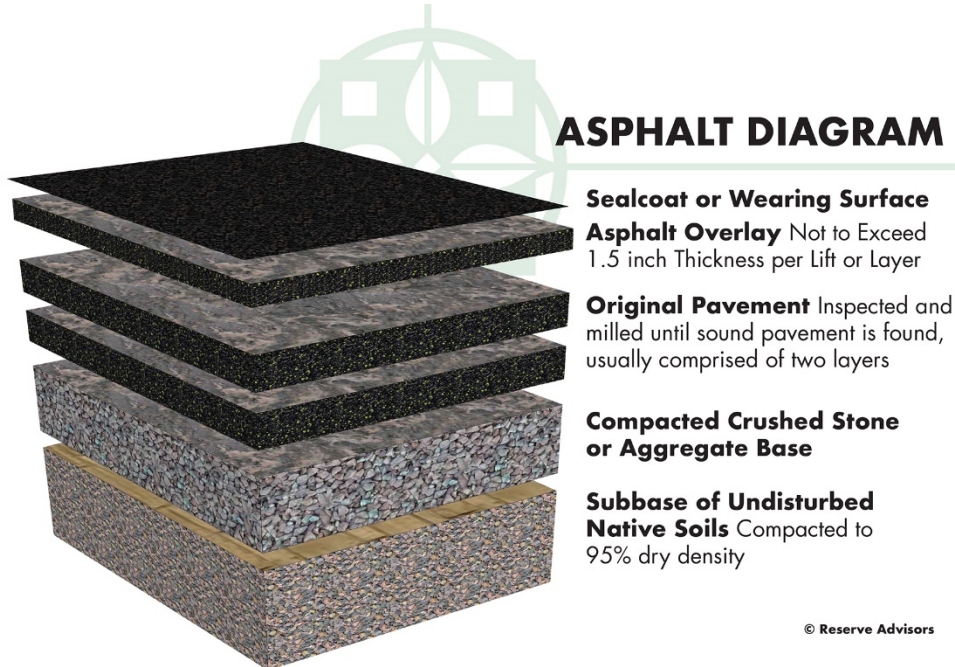
**Asphalt pavement with mild raveling**



**Asphalt pavement with raveling**

**Useful Life:** 15- to 20-years with the benefit of timely crack repairs and patching

**Component Detail Notes:** The initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts the typical components although it may not reflect the actual configuration at Moss Creek of Hillsborough:



The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all

existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving at Moss Creek of Hillsborough.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect for settlement, large cracks and trip hazards, and ensure proper drainage
  - Repair areas which could cause vehicular damage such as potholes
- As needed:
  - Perform crack repairs and patching

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for milling and overlayment includes area patching of up to ten percent (10%).

## **Catch Basins, Inspections and Capital Repairs**

---

**Line Item:** 4.100

**Quantity:** 16 catch basins<sup>1</sup>

**History:** Original. We are informed that the catch basins and storm drains were inspected in Original.

**Condition:** Good to fair overall without settlement visually apparent

<sup>1</sup> We utilize the terminology catch basin to refer to all storm water collection structures including curb inlets.



**Typical catch basin**



**Catch basin with signs of repairs**



**Typical catch basin**

**Useful Life:** The useful life of catch basins is up to 65 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

**Component Detail Notes:** Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair any settlement and collar cracks
  - Ensure proper drainage and inlets are free of debris
  - If property drainage is not adequate in heavy rainfall events, typically bi-annual cleaning of the catch basins is recommended

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association plan for inspections and capital repairs to the catch basins in conjunction with repaving and partial curb replacements.

## Concrete Curbs and Gutters

---

**Line Item:** 4.110

**Quantity:** Approximately 7,700 linear feet

**Condition:** Good to fair overall with isolated cracks evident. The association reports an issue with pooling at the concrete curbs and gutters.



Lifted concrete curb



Concrete curb with common cracks



Concrete curb with cracks evident



Concrete curb with evidence of water pooling on Moss Island Drive



**Concrete curb with evidence of water pooling  
on Moss Island Drive**

**Useful Life:** Up to 65 years although interim deterioration of areas is common

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair major cracks, spalls and trip hazards
  - Mark with orange safety paint prior to replacement or repair
  - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 1,540 linear feet of curbs and gutters, or twenty percent (20%) of the total, will require replacement during the next 30 years.

## **Concrete Sidewalks**

---

**Line Item:** 4.140

**Quantity:** Approximately 30,800 square feet

**History:** Currently undergoing repairs in 2021

**Condition:** Good to fair overall with isolated cracks and trip hazards evident





**Sidewalk indicating trip hazard location**



**Gap between the sidewalk and box culvert on Moss Island Drive**



**Sidewalk repairs**



**Sidewalk repairs**



**Sidewalk repairs**



**Sidewalk with trip hazard**

**Useful Life:** Up to 65 years although interim deterioration of areas is common

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair major cracks, spalls and trip hazards
  - Mark with orange safety paint prior to replacement or repair
  - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 6,000 square feet of concrete sidewalks, or twenty percent (19.5%) of the total, will require replacement during the next 30 years.

## Fences, Aluminum

---

**Line Item:** 4.200

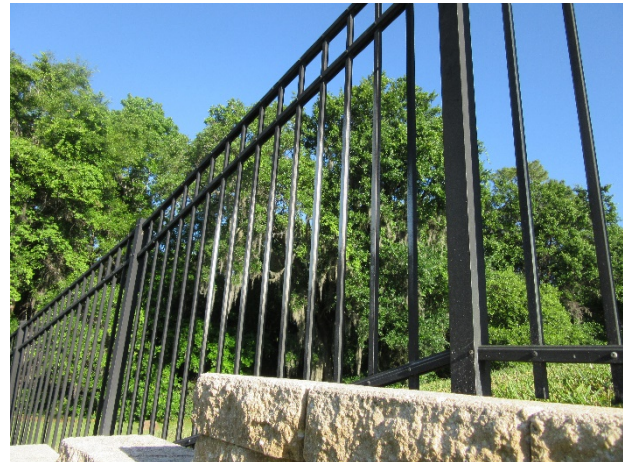
**Quantity:** 110 linear feet at the front entrance and above the retaining wall on Moss Island Drive.

**History:** Original

**Condition:** Good overall with slight discoloration evident



**Aluminum fence on Moss Island Drive  
overview**



**Aluminum fence with discoloration evident**



**Aluminum fencing at entrance**



**Aluminum fencing at the gate entry**

**Useful Life:** Up to 25 years (The useful life of the finish is indeterminate. Future updates of this Reserve Study will again consider the need to refinish the railings based on condition.)

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair loose fasteners or sections, and damage
  - Repair leaning sections and clear vegetation from fence areas which could cause damage

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## Fences, Vinyl

---

**Line Item:** 4.260

**Quantity:** 900 linear feet at the perimeter of the community, adjacent to Balm Riverview Road

**History:** Original

**Condition:** Good overall with isolated damage evident



**Vinyl fence overview**



**Vinyl fence at the perimeter of the property**



**Vinyl fence with damage**

**Useful Life:** 15- to 20-years

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair loose panels, and damage
  - Repair leaning sections and clear vegetation from fence areas which could cause damage
  - Periodically clean vinyl fence as needed

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## **Gate Entry System**

---

**Line Item:** 4.310

**Quantity:** One panel

**History:** Original with a refurbishment of the panel in 2021

**Condition:** Reported satisfactory



**Keypad gate entry system overview**

**Useful Life:** 10- to 15-years

**Preventative Maintenance Notes:** We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Monthly:
  - Inspect panel for damage and ensure the panel is mounted securely, tighten or replace any loose or damaged fasteners.
  - Inspect panel for proper operation of buttons, displays, microphone and speaker.
- Annually:
  - Check power connections, and if applicable, functionality of battery power supply systems

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## **Gate Entry System, Surveillance Cameras**

---

**Line Item:** 4.311

**Quantity:** Four cameras

**History:** Original to installation in 2021

**Condition:** Reported satisfactory



**Single surveillance camera**



**Single housing with three surveillance cameras**

**Useful Life:** 10- to 15-years

**Preventative Maintenance Notes:** We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Monthly:
  - Inspect panel for damage and ensure the panel is mounted securely, tighten or replace any loose or damaged fasteners.
  - Inspect panel for proper operation of buttons, displays, microphone and speaker.
- Annually:
  - Check power connections, and if applicable, functionality of battery power supply systems

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We anticipate a phased replacement of up to thirty-three percent (33%) of the total quantity with each event.

## **Gates and Operators**

---

**Line Items:** 4.320 and 4.330

**Quantity:** Two gates and two operators

**History:** Replacement of the gate operators and vehicle detectors occurred in 2021. The gates are original.

**Condition:** Good overall



**Gate overview**



**Gate operator**

**Useful Life:** Up to 10 years for the operators and up to 20 years for the gates

**Preventative Maintenance Notes:** We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
  - Ensure gates operate freely
  - Inspect for any wear, rust and loose fasteners
  - Inspect and correct tension in belts and chains, and lubricate hinges and chains as necessary
  - Check alignment of pulleys
  - Check for no oil leakage at the gear box
  - Check the control board for water damage. Clean and remove insects and other pests as needed.
  - Check all wiring for insulation damage and loose connections. If applicable, check functionality of battery power supply systems

**Priority/Criticality:** Not recommended to defer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost includes an allowance for the replacement of a pedestrian gate and vehicle detectors.

## **Irrigation System, Commons**

---

**Line Item:** 4.420

**Quantity:** One controller with approximately six irrigation zones

**History:** Original

**Condition:** Good to fair overall and Management does not report any deficiencies

**Useful Life:** 40+ years

**Component Detail Notes:** Irrigation systems typically include the following components:

- Electronic controls (timer)
- Impact rotors
- Network of supply pipes
- Pop-up heads
- Valves

Moss Creek of Hillsborough should anticipate interim and partial replacements of the system network supply pipes and other components as normal maintenance to maximize the useful life of the irrigation system. The Association should fund these ongoing seasonal repairs through the operating budget.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
  - Conduct seasonal repairs which includes valve repairs, controller repairs, partial head replacements and pipe repairs

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## **Pavers, Masonry**

---

**Line Item:** 4.620

**Quantity:** 780 square feet at the entrance to the property.

**History:** Original

**Condition:** Good to fair overall with no significant deterioration evident





**Masonry pavers at the entrance**



**Masonry pavers overview**

**Useful Life:** 25- to 30-years

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair settlement, trip hazards and paver spalls at heavy traffic areas
  - Re-set and/or reseal damaged pavers as necessary
  - Periodically clean and remove overgrown vegetation as needed

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes complete resetting of the pavers with full replacement. We suggest the Association conduct interim resetting and replacement of minor areas of pavers as normal maintenance, funded from the operating budget.

## **Ponds, Debris Removal and Shoreline Maintenance**

---

**Line Item:** 4.710

**Quantity:** Two ponds comprising approximately 2,000 linear feet of shorelines and 3,000 square yards of pond area.

**Condition:** Fair overall with sediment accumulation evident at the outflow structures



**Moss Island Drive pond overview**



**Moss Island Drive pond overview**



**Bridgecreek Drive pond overview**



**Bridgecreek Drive pond with soil accumulation evident**



**Pond outflow pipe with sediment accumulation**



**Box culvert with overgrown vegetation**

**Useful Life:** Shorelines are subject to fluctuations in water levels, increased plant growth and migrating storm and ground water resulting in the need for erosion control measures up to every 15 years.

**Component Detail Notes:** The steep shoreline embankments are likely to exacerbate soil movement and erosion. The use and maintenance of landscape, natural vegetation and/or stone rip rap along the pond shorelines will help maintain an attractive appearance and prevent soil erosion.

Shoreline plantings are referred to as buffer zones. Buffer zones provide the following advantages:

- Control insects naturally
- Create an aesthetically pleasing shoreline
- Enhance water infiltration and storage
- Filter nutrients and pollutants
- Increase fish and wildlife habitat
- Reduce lawn maintenance
- Stabilize shoreline and reduce erosion
- Trap sediments

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate includes sediment removal of up to four percent (4%) of the pond areas and installation of plantings at up to ten percent (10%) of the pond shorelines.

## **Retaining Walls, Masonry, Commons**

---

**Line Item:** 4.745

**Quantity:** The Association is responsible for maintaining six retaining walls comprised of a total of approximately 940 square feet, at the following locations:

- One retaining wall at the front entrance
- Two retaining walls at 10738 Moss Island Drive
- One retaining wall at 10807 Moss Island drive (at the perimeter of the Moss Island Drive pond)
- One retaining wall at 11107 Bridgecreek Drive
- One retaining wall at 11111 Bridgecreek Drive

**History:** Original

**Condition:** Good to fair overall with no significant deterioration evident



**Retaining wall at Moss Island Drive overview**



**Retaining wall at 11111 Bridgecreek Drive**



**Retaining wall at 11107 Bridgecreek Drive**



**Retaining wall at the front entrance**



**Retaining wall at 10738 Moss Island Drive**



**Retaining wall at 10738 Moss Island Drive**

***Useful Life:*** Up to 35 years

**Component Detail Notes:** Properly constructed interlocking masonry retaining walls utilize geosynthetic reinforcement and a drainage system to stabilize the wall and prevent the buildup of hydrostatic pressure behind the wall. Water stains may indicate inadequate drainage or blocked drainage from behind the walls.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair leaning sections or damaged areas
  - Water stains which may indicate possible blocked drainage should be investigated further
  - Inspect and repair erosion at the wall base and backside

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## **Signage, Entrance Monument, Renovation**

---

**Line Item:** 4.800

**Quantity:** Two entrance monuments. The signage includes the following elements:

- Architectural foam capital repairs
- Light fixtures
- Masonry columns (Including columns at the gate entry)
- Signage
- Stucco paint finishes
- Thin stone veneers

**History:** Signage monuments were painted in 2019

**Condition:** Good overall



**Entrance monument overview**



**Entrance monument signage and thin brick veneer**



**Masonry columns at the gate entry**



**Architectural foam damage on front entrance pillars**

**Useful Life:** 15- to 20-years

**Component Detail Notes:** Community signage contributes to the overall aesthetic appearance of the property to owners and potential buyers. Renovation or replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for replacement or renovation are discretionary.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair damage, vandalism and loose components
  - Verify lighting is working properly
  - Touch-up paint finish applications if applicable

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for renovation includes repointing of thin stone veneer, repairs of architectural foam, replacement of the light fixtures and signage, and applications of paint finishes.

## **Signage, Street and Traffic, Replacement**

---

**Line Item:** 4.810

**Quantity:** Five street identification and traffic signs

**History:** Standard signage was replaced with decorative signage in 2018.

**Condition:** Good overall



Stop sign with street addresses overview



Decorative speed limit sign and post overview

**Useful Life:** 25 years

**Component Detail Notes:** The community signs contribute to the overall aesthetic appearance of the property to owners and potential buyers. Replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific time for replacement of the signs is discretionary.

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair damage, vandalism and loose components
  - Verify lighting is working properly if applicable
  - Touch-up paint finish applications if applicable

**Priority/Criticality:** Per Board discretion



**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## 2021 Reserve Expenditures

---

**Line Item:** Second to last

**Component Detail Notes:** Moss Creek of Hillsborough will expend \$56,241 in reserve expenditures in 2021. These expenditures relate to the following:

- \$20,141: Concrete Sidewalks, Partial
- \$3,000: Gate Entry System
- \$25,000: Gate Entry System, Surveillance Cameras
- \$8,100: Gate Operators

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

## Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. Many variables change after the study is conducted that may result in significant overfunding or underfunding the reserve account. Variables that may affect the Reserve Funding Plan include, but are not limited to:

- Deferred or accelerated capital projects based on Board discretion
- Changes in the interest rates on reserve investments
- Changes in the *local* construction inflation rate
- Additions and deletions to the Reserve Component Inventory
- The presence or absence of maintenance programs
- Unusually mild or extreme weather conditions
- Technological advancements

Periodic updates incorporate these variable changes since the last Reserve Study or Update. The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.



## 5.METHODOLOGY

Reserves for replacement are the amounts of money required for future expenditures to repair or replace Reserve Components that wear out before the entire facility or project wears out. Reserving funds for future repair or replacement of the Reserve Components is also one of the most reliable ways of protecting the value of the property's infrastructure and marketability.

Moss Creek of Hillsborough can fund capital repairs and replacements in any combination of the following:

1. Increases in the operating budget during years when the shortages occur
2. Loans using borrowed capital for major replacement projects
3. Level monthly reserve assessments annually adjusted upward for inflation to increase reserves to fund the expected major future expenditures
4. Special assessments

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that Homeowners pay their "fair share" of the weathering and aging of the commonly owned property each year. Level reserve assessments preserve the property and enhance the resale value of the homes.

This Reserve Study is in compliance with and exceeds the National standards<sup>1</sup> set forth by the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level II Reserve Study Update." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

- The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan
- Local<sup>2</sup> costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long-term future inflation for construction costs in Riverview, Florida at an annual inflation rate<sup>3</sup>. Isolated or regional markets of greater

<sup>1</sup> Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

<sup>2</sup> See Credentials for additional information on our use of published sources of cost data.

<sup>3</sup> Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.

construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Moss Creek of Hillsborough and their effects on remaining useful lives
- Financial information provided by the Association pertaining to the cash status of the reserve fund and budgeted reserve contribution
- The anticipated effects of appreciation of the reserves over time in accord with a return or yield on investment of your cash equivalent assets. (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).
- The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components.

Updates to this Reserve Study will continue to monitor historical facts and trends concerning the external market conditions.



## 6. CREDENTIALS

### HISTORY AND DEPTH OF SERVICE

**Founded in 1991**, Reserve Advisors is the leading provider of reserve studies, insurance appraisals, developer turnover transition studies, expert witness services, and other engineering consulting services. Clients include community associations, resort properties, hotels, clubs, non-profit organizations, apartment building owners, religious and educational institutions, and office/commercial building owners in 48 states, Canada and throughout the world.

The **architectural engineering consulting firm** was formed to take a leadership role in helping fiduciaries, boards, and property managers manage their property like a business with a long-range master plan known as a Reserve Study.

Reserve Advisors employs the **largest staff of Reserve Specialists** with bachelor's degrees in engineering dedicated to Reserve Study services. Our founders are also founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our founders is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and historical analyses are keys to determining accurate remaining useful life estimates of building components.

**No Conflict of Interest** - As consulting specialists, our **independent opinion** eliminates any real or perceived conflict of interest because we do not conduct or manage capital projects.

### TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, and by utilizing the experience of other staff members, each of whom has served hundreds of clients. We conduct Team Reviews, an internal quality assurance review of each assignment, including: the inspection; building component costing; lifing; and technical report phases of the assignment. Due to our extensive experience with building components, we do not have a need to utilize subcontractors.

### OUR GOAL

To help our clients fulfill their fiduciary responsibilities to maintain property in good condition.

### VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

Reserve Advisors has conducted reserve studies for a multitude of different communities and building types. We've analyzed thousands of buildings, from as small as a 3,500-square foot day care center to a 2,600,000-square foot 98-story highrise. We also routinely inspect buildings with various types of mechanical systems such as simple electric heat, to complex systems with air handlers, chillers, boilers, elevators, and life safety and security systems.

We're familiar with all types of building exteriors as well. Our well-versed staff regularly identifies optimal repair and replacement solutions for such building exterior surfaces such as adobe, brick, stone, concrete, stucco, EIFS, wood products, stained glass and aluminum siding, and window wall systems.

### OLD TO NEW

Reserve Advisors' experience includes ornate and vintage buildings as well as modern structures. Our specialists are no strangers to older buildings. We're accustomed to addressing the unique challenges posed by buildings that date to the 1800's. We recognize and consider the methods of construction employed into our analysis. We recommend appropriate replacement programs that apply cost effective technologies while maintaining a building's character and appeal.

**NANCY S. DANIEL, P.E., RS**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Nancy S. Daniel, a Mechanical Engineer, is an Advisor for *Reserve Advisors*. Ms. Daniel is responsible for the inspection and analysis of the condition of clients' properties, and for recommending engineering solutions to prolong the lives of the components. She forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is also responsible for conducting Life Cycle Cost Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for apartments, condominiums, townhomes and homeowner associations.



The following is a partial list of clients served by Nancy Daniel demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

**Queen's Harbour Yacht and Country Club Owners Association, Inc.** – An exclusive Master planned community for the common elements shared by 1,000 single family homes. Located in Jacksonville, Florida, the Queen's Harbour Yacht and Country Club Owners Association contains a marina, a lock and dam, sea walls, as well as community center, fitness center and maintenance facility.

**Riviera Dunes Marina** – A premier marina with 219 wet slips with slip sizes up to 100 feet located near Bradenton, Florida. The community contains floating docks, utility and pump out services, marina fuel station, floating pools, a dock master office, and restaurant.

**PGA Village Property Owners' Association** – A 3,000-acre Master planned community located in Port St. Lucie, Florida. The exclusive community consists of 2,500 single-family homes, townhomes and condominiums. The PGA Village contains a clubhouse and pool area, approximately 33 miles of paved streets, irrigation distribution systems, and 46 lakes.

**YC Coconut Grove Hotel and Condominium** - A 24-story high-rise condominium community with 211 units, located in Miami, Florida. This all-inclusive condominium includes a commercial hotel, restaurants, fitness center, pool, parking garage, and building services equipment.

**Jade Signature Condominium** – A 57-story high-rise condominium community with 193 units, located in Sunny Isles Beach, Florida. This exclusive condominium contains a spa and wellness center, restaurants, pools and spas, parking garage, and building services equipment.

**Vero Beach Museum of Art** – A nonprofit art museum for the appreciation and teaching of the arts and humanities, located in Vero Beach, Florida. The museum contains art galleries, sculpture gardens, performance halls, art studios, children's art zone, and building services equipment.

**PRIOR RELEVANT EXPERIENCE**

Before joining *Reserve Advisors*, Ms. Daniel was a licensed Community Association Manager for Condominium Associates in Tampa, Florida. Ms. Daniel also was employed as a Process Engineer for Anheuser Busch and Lockwood Greene Engineering. She was responsible for process engineering design, construction and process start-up for beverage manufacturing facilities across the United States. She currently serves as a Board Member and Treasurer for her condominium association.

**EDUCATION**

University of Illinois – B.S. Mechanical Engineering  
North Carolina State University – M.A. Humanities and Social Sciences

**PROFESSIONAL AFFILIATIONS**

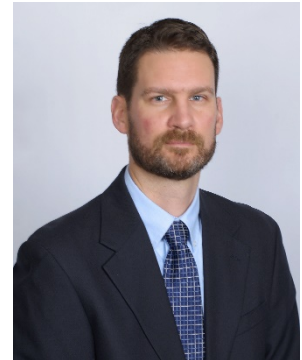
*Professional Engineer (P.E.)* – State of Texas  
*Reserve Specialist (RS)* - Community Associations Institute  
*Licensed Community Association Manager (LCAM)* – State of Florida

**ALAN M. EBERT, P.E., PRA, RS**  
**Director of Quality Assurance**

**CURRENT CLIENT SERVICES**

Alan M. Ebert, a Professional Engineer, is the Director of Quality Assurance for Reserve Advisors. Mr. Ebert is responsible for the management, review and quality assurance of reserve studies. In this role, he assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Mr. Ebert has been involved with thousands of Reserve Study assignments. The following is a partial list of clients served by Alan Ebert demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.



**Brownsville Winter Haven** Located in Brownsville, Texas, this unique homeowners association contains 525 units. The Association maintains three pools and pool houses, a community and management office, landscape and maintenance equipment, and nine irrigation canals with associated infrastructure.

**Rosemont Condominiums** This unique condominium is located in Alexandria, Virginia and dates to the 1940's. The two mid-rise buildings utilize decorative stone and brick masonry. The development features common interior spaces, multi-level wood balconies and common asphalt parking areas.

**Stillwater Homeowners Association** Located in Naperville, Illinois, Stillwater Homeowners Association maintains four tennis courts, an Olympic sized pool and an upscale ballroom with commercial-grade kitchen. The community also maintains three storm water retention ponds and a detention basin.

**Birchfield Community Services Association** This extensive Association comprises seven separate parcels which include 505 townhome and single family homes. This Community Services Association is located in Mt. Laurel, New Jersey. Three lakes, a pool, a clubhouse and management office, wood carports, aluminum siding, and asphalt shingle roofs are a few of the elements maintained by the Association.

**Oakridge Manor Condominium Association** Located in Londonderry, New Hampshire, this Association includes 104 units at 13 buildings. In addition to extensive roads and parking areas, the Association maintains a large septic system and significant concrete retaining walls.

**Memorial Lofts Homeowners Association** This upscale high rise is located in Houston, Texas. The 20 luxury units include large balconies and decorative interior hallways. The 10-story building utilizes a painted stucco facade and TPO roof, while an on-grade garage serves residents and guests.

**PRIOR RELEVANT EXPERIENCE**

Mr. Ebert earned his Bachelor of Science degree in Geological Engineering from the University of Wisconsin-Madison. His relevant course work includes foundations, retaining walls, and slope stability. Before joining Reserve Advisors, Mr. Ebert was an oilfield engineer and tested and evaluated hundreds of oil and gas wells throughout North America.

**EDUCATION**

University of Wisconsin-Madison - B.S. Geological Engineering

**PROFESSIONAL AFFILIATIONS/DESIGNATIONS**

*Professional Engineering License* – Wisconsin, North Carolina, Illinois, Colorado

*Reserve Specialist (RS)* - Community Associations Institute

*Professional Reserve Analyst (PRA)* - Association of Professional Reserve Analysts



## RESOURCES

Reserve Advisors utilizes numerous resources of national and local data to conduct its Professional Services. A concise list of several of these resources follows:

**Association of Construction Inspectors**, (ACI) the largest professional organization for those involved in construction inspection and construction project management. ACI is also the leading association providing standards, guidelines, regulations, education, training, and professional recognition in a field that has quickly become important procedure for both residential and commercial construction, found on the web at [www.iami.org](http://www.iami.org).

**American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.**, (ASHRAE) the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., devoted to the arts and sciences of heating, ventilation, air conditioning and refrigeration; recognized as the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines, found on the web at [www.ashrae.org](http://www.ashrae.org). Reserve Advisors actively participates in its local chapter and holds individual memberships.

**Community Associations Institute**, (CAI) America's leading advocate for responsible communities noted as the only national organization dedicated to fostering vibrant, responsive, competent community associations. Their mission is to assist community associations in promoting harmony, community, and responsible leadership.

**Marshall & Swift / Boeckh**, (MS/B) the worldwide provider of building cost data, co-sourcing solutions, and estimating technology for the property and casualty insurance industry found on the web at [www.marshallswift.com](http://www.marshallswift.com).

**R.S. Means CostWorks**, North America's leading supplier of construction cost information. As a member of the Construction Market Data Group, Means provides accurate and up-to-date cost information that helps owners, developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects found on the web at [www.rsmeans.com](http://www.rsmeans.com).

Reserve Advisors' library of numerous periodicals relating to reserve studies, condition analyses, chapter community associations, and historical costs from thousands of capital repair and replacement projects, and product literature from manufacturers of building products and building systems.

## 7. DEFINITIONS

Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 305,000 condominium and homeowners associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners.

**Cash Flow Method** - A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

**Component Method** - A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components.

**Current Cost of Replacement** - That amount required today derived from the quantity of a *Reserve Component* and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current *local* market prices for *materials, labor* and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.

**Fully Funded Balance** - The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation.

**Funding Goal (Threshold)** - The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.

**Future Cost of Replacement** - *Reserve Expenditure* derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.

**Long-Lived Property Component** - Property component of Moss Creek of Hillsborough responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.

**Percent Funded** - The ratio, at a particular point of time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.

**Remaining Useful Life** - The estimated remaining functional or useful time in years of a *Reserve Component* based on its age, condition and maintenance.

**Reserve Component** - Property elements with: 1) Moss Creek of Hillsborough responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

**Reserve Component Inventory** - Line Items in *Reserve Expenditures* that identify a *Reserve Component*.

**Reserve Contribution** - An amount of money set aside or *Reserve Assessment* contributed to a *Reserve Fund* for future *Reserve Expenditures* to repair or replace *Reserve Components*.

**Reserve Expenditure** - Future Cost of Replacement of a Reserve Component.

**Reserve Fund Status** - The accumulated amount of reserves in dollars at a given point in time, i.e., at year end.

**Reserve Funding Plan** - The portion of the Reserve Study identifying the *Cash Flow Analysis* and containing the recommended Reserve Contributions and projected annual expenditures, interest earned and reserve balances.

**Reserve Study** - A budget planning tool that identifies the current status of the reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures.

**Useful Life** - The anticipated total time in years that a *Reserve Component* is expected to serve its intended function in its present application or installation.



## 8. PROFESSIONAL SERVICE CONDITIONS

**Our Services** - Reserve Advisors, LLC (RA) performs its services as an independent contractor in accordance with our professional practice standards and its compensation is not contingent upon our conclusions. The purpose of our reserve study is to provide a budget planning tool that identifies the current status of the reserve fund, and an opinion recommending an annual funding plan to create reserves for anticipated future replacement expenditures of the property.

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. The report is based upon a "snapshot in time" at the moment of inspection. RA may note visible physical defects in our report. The inspection is made by employees generally familiar with real estate and building construction but in the absence of invasive testing RA cannot opine on, nor is RA responsible for, the structural integrity of the property including its conformity to specific governmental code requirements for fire, building, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the report. RA does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials or structural defects that are latent or hidden defects which may or may not be present on or within the property. RA does not make any soil analysis or geological study as part of its services; nor does RA investigate water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions. RA assumes no responsibility for any such conditions. The Report contains opinions of estimated costs and remaining useful lives which are neither a guarantee of the actual costs of replacement nor a guarantee of remaining useful lives of any property element.

RA assumes, without independent verification, the accuracy of all data provided to it. You agree to indemnify and hold RA harmless against and from any and all losses, claims, actions, damages, expenses or liabilities, including reasonable attorneys' fees, to which we may become subject in connection with this engagement, because of any false, misleading or incomplete information which we have relied upon supplied by you or others under your direction, or which may result from any improper use or reliance on the Report by you or third parties under your control or direction. Your obligation for indemnification and reimbursement shall extend to any director, officer, employee, affiliate, or agent of RA. Liability of RA and its employees, affiliates, and agents for errors and omissions, if any, in this work is limited to the amount of its compensation for the work performed in this engagement.

**Report** - RA completes the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations and is deemed complete. RA, however, considers any additional information made available to us within 6 months of issuing the Report if a timely request for a revised Report is made. RA retains the right to withhold a revised Report if payment for services was not tendered in a timely manner. All information received by RA and all files, work papers or documents developed by RA during the course of the engagement shall remain the property of RA and may be used for whatever purpose it sees fit.

**Your Obligations** - You agree to provide us access to the subject property for an on-site visual inspection. You agree to provide RA all available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete the Report. You agree to pay actual attorneys' fees and any other costs incurred to collect on any unpaid balance for RA's services.

**Use of Our Report and Your Name** - Use of this Report is limited to only the purpose stated herein. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and you shall hold RA harmless from any consequences of such use. Use by any unauthorized third party is unlawful. The Report in whole or in part **is not and cannot be used as a design specification for design engineering purposes or as an appraisal.** You may show our Report in its entirety to the following third parties: members of your organization, your accountant, attorney, financial institution and property manager who need to review the information contained herein. Without the written consent of RA, you shall not disclose the Report to any other third party. The Report contains intellectual property developed by RA and **shall not be reproduced or distributed to any party that conducts reserve studies without the written consent of RA.**

RA will include your name in our client lists. RA reserves the right to use property information to obtain estimates of replacement costs, useful life of property elements or otherwise as RA, in its sole discretion, deems appropriate.

**Payment Terms, Due Dates and Interest Charges** - Retainer payment is due upon authorization and prior to inspection. The balance is due net 30 days from the report shipment date. Any balance remaining 30 days after delivery of the Report shall accrue an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court for the State of Wisconsin.