

FULL RESERVE STUDY

Meadows at Morris Farm Community Association



Gainesville, Virginia

August 28, 2018



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Meadows at Morris Farm Community Association
Gainesville, Virginia

Dear Board of Directors of Meadows at Morris Farm Community Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Meadows at Morris Farm Community Association in Gainesville, Virginia and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 28, 2018.

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

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 Meadows at Morris Farm Community Association 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 September 26, 2018 by

Reserve Advisors, Inc.

Visual Inspection and Report by: Dixon P. Drumheller, RS¹

Review by: Alan M. Ebert, RS, PRA², Director of Quality Assurance



¹ 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.

² 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>.



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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Meadows at Morris Farm Community Association (Morris Farm)

Location: Gainesville, Virginia

Reference: 120055

Property Basics: Meadows at Morris Farm Community Association is a master association which is responsible for the common elements shared by 660 single family and townhomes. The common elements of the Association were built from 2004 to 2013.

Reserve Components Identified: 42 Reserve Components.

Inspection Date: August 28, 2018. We conducted the original inspection on June 19, 2015.

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 2046 due to replacement of the asphalt pavement streets and alleys.

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
- 1.7% anticipated annual rate of return on invested reserves
- 2.6% 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.

Cash Status of Reserve Fund:

- \$940,114 as of July 31, 2018
- 2018 budgeted Reserve Contributions of \$119,100

Project Prioritization: We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Overlayment of the asphalt pavement alleys
- Partial replacements of concrete flatwork
- Replacement of the pool finishes
- Installation of the shade structures at the pool

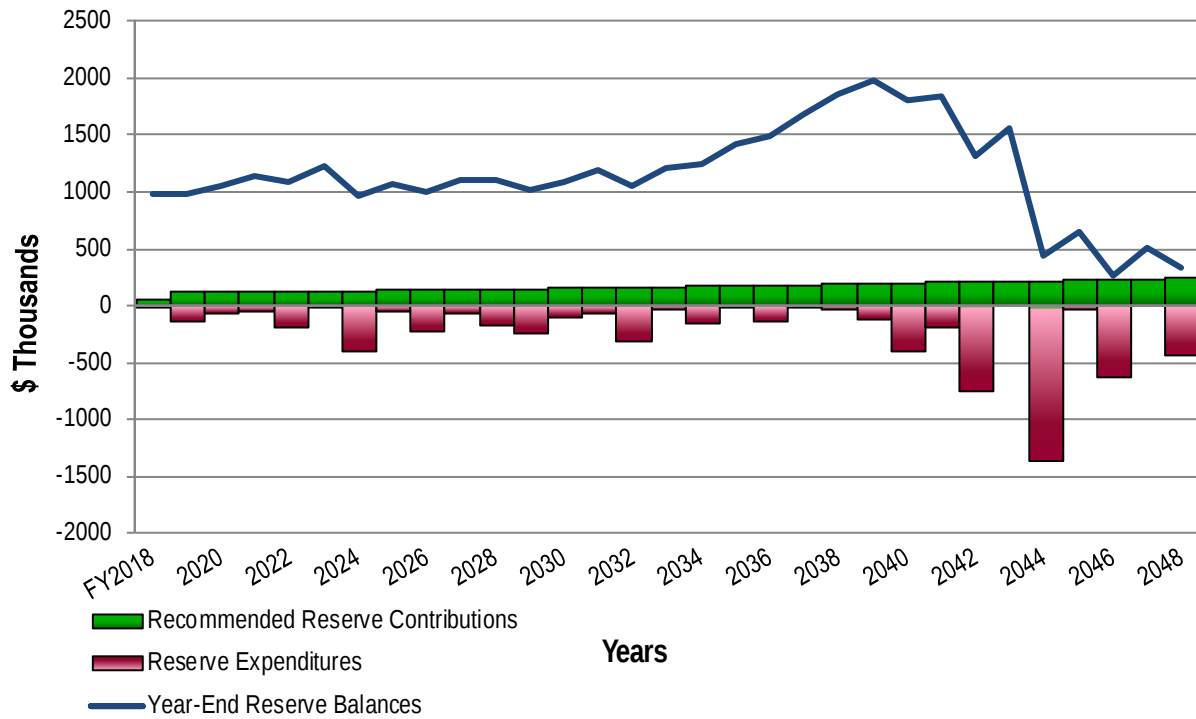
Recommended Reserve Funding: We recommend the following in order to achieve a stable and equitable Funding Plan:

- Stable contributions of \$119,100 from 2019 through 2020
- Inflationary increases through 2048, the limit of this study's Cash Flow Analysis
- 2019 Reserve Contribution of \$119,100 is equivalent to an average monthly contribution of \$15.04 per homeowner. The Association may ascribe the actual contributions and assessments per owner based upon percent ownership, as defined by the Association's governing documents.
- Our revised findings reflect both external market and internal property changes. The result is a similar recommended Reserve Funding Plan to our last Reserve Study on June 19, 2015.

Morris Farm

Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2019	119,100	974,863	2029	150,000	1,015,631	2039	193,800	1,974,760
2020	119,100	1,047,363	2030	153,900	1,080,724	2040	198,800	1,799,067
2021	122,200	1,137,575	2031	157,900	1,192,632	2041	204,000	1,842,262
2022	125,400	1,086,696	2032	162,000	1,055,460	2042	209,300	1,320,477
2023	128,700	1,222,924	2033	166,200	1,216,374	2043	214,700	1,559,450
2024	132,000	965,826	2034	170,500	1,244,541	2044	220,300	438,167
2025	135,400	1,070,968	2035	174,900	1,421,022	2045	226,000	646,310
2026	138,900	1,006,242	2036	179,400	1,486,634	2046	231,900	265,564
2027	142,500	1,104,394	2037	184,100	1,683,283	2047	237,900	510,001
2028	146,200	1,096,630	2038	188,900	1,864,490	2048	244,100	333,923





2. RESERVE STUDY REPORT

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

Meadows at Morris Farm Community Association

Gainesville, Virginia

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 28, 2018. We conducted the original inspection on June 19, 2015.

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
- **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:

- Morris Farm 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 reserve funding at this time.

- Electrical Systems, Common
- Foundation, Clubhouse
- Pipes, Interior Building, Water and Sewer, Clubhouse
- Pool Structures
- Structural Frame, Clubhouse

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 \$6,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Clubhouse, Interior Renovations, Interim
- Entrance Structures, Paint Finish Applications
- Irrigation System, Controls
- Fences, Wood, Entrances, Paint Finish Applications
- Landscape
- Trellises, Wood, Pool Area (To Be Removed Per Management)
- Vending Machines (Leased)
- Walls, Clubhouse, Masonry, Inspections and Repairs
- Walls, Clubhouse, Trim, Paint Finish Applications and Partial Replacements
- Water Heater, Clubhouse
- Water Feature, Deck Fountains
- Other Repairs normally funded through the Operating Budget

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:

- Homes and Lots
- Pipes, Subsurface Utilities, Laterals



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

- Asphalt Pavement Streets (Excluding Alleys, Clubhouse Parking area and Townhome Street at Catbird Drive East of Wood Thrush Way) (Virginia Department of Transportation)
- Catch Basins (Prince William County)
- Concrete Aprons and Sidewalks, (Excluding at Association Maintained Streets) (Virginia Department of Transportation)
- Earth Dam (Prince William County)
- Pipes, Subsurface Utilities, Mains (Prince William 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
- 2018 local cost of replacement
 - Per unit
 - Per phase
 - Replacement of total quantity
- Total future costs of replacement 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

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

Meadows at Morris Farm
Community Association
Gainesville, Virginia

Explanatory Notes:

- 1) 2.6% is the estimated future Inflation Rate for estimating Future Replacement Costs.
2) FY2018 is Fiscal Year beginning January 1, 2018 and ending December 31, 2018.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			RUL = 0 FY2018	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033	
						Useful	Remaining	Unit (2018)	Per Phase (2018)	Total (2018)																	30-Year Total (Inflated)
Property Site Elements																											
4.020	23,800	23,800	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2020	3 to 5	2	1.70	40,460	40,460	501,676		42,591			47,197				52,300					57,955		
4.040	10,800	2,700	Square Yards	Asphalt Pavement, Alleys, Overlay, Phased	2022	15 to 20	4 to 10	12.50	33,750	135,000	161,837			37,399		39,369		41,443		43,626							
4.041	13,000	3,250	Square Yards	Asphalt Pavement, Streets and Parking Areas, Mill and Overlay, Phased	2024	15 to 20	6 to 12	15.00	48,750	195,000	546,413					56,867		59,862		63,016		66,335					
4.045	10,800	2,700	Square Yards	Asphalt Pavement, Alleys, Total Replacement, Phased	2040	15 to 20	22 to 28	34.00	91,800	367,200	698,717																
4.046	13,000	3,250	Square Yards	Asphalt Pavement, Streets and Parking Areas, Total Replacement, Phased	2044	15 to 20	26 to 30+	30.50	99,125	396,500	610,677																
4.080	4,190	1,397	Square Yards	Asphalt Pavement, Total Replacement, Walking Paths, Phased	2022	12 to 18	4 to 8	25.00	34,917	104,750	316,419			38,692		40,730		42,876									
4.108	4,200	245	Square Feet	Concrete Aprons, Townhomes, Partial	2021	to 65	3 to 30+	12.00	2,940	50,400	26,895			3,175				3,610					4,105				
4.110	4,900	205	Linear Feet	Concrete Curbs and Gutters, Common Areas, Partial	2021	to 65	3 to 30+	33.00	6,765	161,700	61,885			7,307				8,307					9,445				
4.120	57,000	3,325	Square Feet	Concrete Driveways, Cluster Homes, Partial (Incl. Pavers)	2021	to 65	3 to 30+	8.50	28,263	484,500	258,538			30,525				34,705					39,457				
4.140	14,900	870	Square Feet	Concrete Sidewalks, Common Areas, Partial	2021	to 65	3 to 30+	10.00	8,700	149,000	79,584			9,396				10,683					12,146				
4.155	300	300	Square Feet	Deck, Composite, Park	2028	20 to 25	10	35.00	10,500	10,500	13,573									13,573							
4.158	2	2	Each	Entrance Structures, Renovation	2034	to 30	16	14,000.00	28,000	28,000	42,220																
4.200	730	730	Linear Feet	Fences, Aluminum, Retaining Walls	2029	to 25	11	40.00	29,200	29,200	38,726										38,726						
4.285	300	300	Linear Feet	Fence, Wood, Open Rail, Entrances	2022	15 to 20	4	25.00	7,500	7,500	21,503			8,311													
4.286	1,960	1,960	Linear Feet	Fences, Wood, Split Rail, Dam	2027	to 25	9	22.00	43,120	43,120	54,326								54,326								
4.420	1	1	Allowance	Irrigation System	2044	to 40	26	66,000.00	66,000	66,000	128,640																
4.500	1	1	Allowance	Landscape, Partial Replacements	2019	to 5	1	33,000.00	33,000	33,000	286,770		33,858				38,494				43,766						
4.560	37	37	Each	Light Poles and Fixtures	2029	to 25	11	2,200.00	81,400	81,400	107,956										107,956						
4.600	4	4	Each	Mailbox Stations, Townhomes	2029	to 25	11	1,900.00	7,600	7,600	10,079										10,079						
4.630	2	2	Each	Pergolas, Wood, Walking Paths	2027	to 25	9	3,100.00	6,200	6,200	7,811								7,811								
4.660	1	1	Allowance	Playground Equipment, Brown Thrasher Court	2024	15 to 20	6	44,000.00	44,000	44,000	137,086						51,326										
4.661	1	1	Allowance	Playground Equipment, Clubhouse	2024	15 to 20	6	37,000.00	37,000	37,000	115,276						43,160										
4.662	1	1	Allowance	Playground Equipment, Parula Way	2024	15 to 20	6	42,500.00	42,500	42,500	132,412						49,576										
4.745	3,110	1,555	Square Feet	Retaining Walls, Masonry, Phased	2042	to 40	24 to 26	80.00	124,400	248,800	472,800																
4.800	1	1	Allowance	Signage, Entrance Monuments, Renovation	2023	15 to 20	5	10,500.00	10,500	10,500	31,379					11,938											
4.810	1	1	Allowance	Signage, Street and Traffic, Replacement	2024	15 to 20	6	35,000.00	35,000	35,000	109,045						40,827										
4.820	2	1	Allowance	Site Furniture, Phased	2025	15 to 25	7 to 14	9,500.00	9,500	19,000	45,496						11,370						13,608				
Clubhouse Elements																											
5.450	1	1	Each	HVAC Equipment	2020	12 to 18	2	6,500.00	6,500	6,500	17,703		6,842														
5.500	1	1	Allowance	Interior, Renovation	2019	to 25	1	56,500.00	56,500	56,500	162,582		57,969														
5.600	35	35	Squares	Roof Assembly, Metal	2034	to 30	16	890.00	31,150	31,150	46,969																
5.727	2,800	2,800	Square Feet	Walls, Vinyl Siding	2039	to 40	21	7.00	19,600	19,600	33,601																
5.800	300	300	Square Feet	Windows and Doors	2039	to 40	21	50.00	15,000	15,000	25,715																
Pool Elements																											
6.200	12,015	12,015	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs (Incl. Pavers)	2022	8 to 12	4	2.00	24,030	24,030	105,541				26,628									34,420			
6.300	5,542	5,542	Square Feet	Covers, Vinyl	2025	6 to 8	7	3.00	16,626	16,626	74,336						19,898								24,434		

RESERVE EXPENDITURES

Meadows at Morris Farm
Community Association
Gainesville, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				16 2034	17 2035	18 2036	19 2037	20 2038	21 2039	22 2040	23 2041	24 2042	25 2043	26 2044	27 2045	28 2046	29 2047	30 2048	
						Useful	Remaining	Unit (2018)	Per Phase (2018)	Total (2018)	30-Year Total (Inflated)																
Property Site Elements																											
4.020	23,800	23,800	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2020	3 to 5	2	1.70	40,460	40,460	501,676			64,221			71,165					78,860				87,387	
4.040	10,800	2,700	Square Yards	Asphalt Pavement, Alleys, Overlay, Phased	2022	15 to 20	4 to 10	12.50	33,750	135,000	161,837																
4.041	13,000	3,250	Square Yards	Asphalt Pavement, Streets and Parking Areas, Mill and Overlay, Phased	2024	15 to 20	6 to 12	15.00	48,750	195,000	546,413											95,018		100,023		105,292	
4.045	10,800	2,700	Square Yards	Asphalt Pavement, Alleys, Total Replacement, Phased	2040	15 to 20	22 to 28	34.00	91,800	367,200	698,717						161,467		169,973		178,926		188,351				
4.046	13,000	3,250	Square Yards	Asphalt Pavement, Streets and Parking Areas, Total Replacement, Phased	2044	15 to 20	26 to 30+	30.50	99,125	396,500	610,677										193,203		203,380		214,094		
4.080	4,190	1,397	Square Yards	Asphalt Pavement, Total Replacement, Walking Paths, Phased	2022	12 to 18	4 to 8	25.00	34,917	104,750	316,419						61,415		64,650		68,056						
4.108	4,200	245	Square Feet	Concrete Aprons, Townhomes, Partial	2021	to 65	3 to 30+	12.00	2,940	50,400	26,895			4,667				5,306					6,032				
4.110	4,900	205	Linear Feet	Concrete Curbs and Gutters, Common Areas, Partial	2021	to 65	3 to 30+	33.00	6,765	161,700	61,885			10,738				12,208					13,880				
4.120	57,000	3,325	Square Feet	Concrete Driveways, Cluster Homes, Partial (Incl. Pavers)	2021	to 65	3 to 30+	8.50	28,263	484,500	258,538			44,860				51,003					57,988				
4.140	14,900	870	Square Feet	Concrete Sidewalks, Common Areas, Partial	2021	to 65	3 to 30+	10.00	8,700	149,000	79,584			13,809				15,700					17,850				
4.155	300	300	Square Feet	Deck, Composite, Park	2028	20 to 25	10	35.00	10,500	10,500	13,573																
4.158	2	2	Each	Entrance Structures, Renovation	2034	to 30	16	14,000.00	28,000	28,000	42,220	42,220															
4.200	730	730	Linear Feet	Fences, Aluminum, Retaining Walls	2029	to 25	11	40.00	29,200	29,200	38,726																
4.285	300	300	Linear Feet	Fence, Wood, Open Rail, Entrances	2022	15 to 20	4	25.00	7,500	7,500	21,503						13,192										
4.286	1,960	1,960	Linear Feet	Fences, Wood, Split Rail, Dam	2027	to 25	9	22.00	43,120	43,120	54,326																
4.420	1	1	Allowance	Irrigation System	2044	to 40	26	66,000.00	66,000	66,000	128,640										128,640						
4.500	1	1	Allowance	Landscape, Partial Replacements	2019	to 5	1	33,000.00	33,000	33,000	286,770	49,759					56,573					64,320					
4.560	37	37	Each	Light Poles and Fixtures	2029	to 25	11	2,200.00	81,400	81,400	107,956																
4.600	4	4	Each	Mailbox Stations, Townhomes	2029	to 25	11	1,900.00	7,600	7,600	10,079																
4.630	2	2	Each	Pergolas, Wood, Walking Paths	2027	to 25	9	3,100.00	6,200	6,200	7,811																
4.660	1	1	Allowance	Playground Equipment, Brown Thrasher Court	2024	15 to 20	6	44,000.00	44,000	44,000	137,086											85,760					
4.661	1	1	Allowance	Playground Equipment, Clubhouse	2024	15 to 20	6	37,000.00	37,000	37,000	115,276											72,116					
4.662	1	1	Allowance	Playground Equipment, Parula Way	2024	15 to 20	6	42,500.00	42,500	42,500	132,412											82,836					
4.745	3,110	1,555	Square Feet	Retaining Walls, Masonry, Phased	2042	to 40	24 to 26	80.00	124,400	248,800	472,800								230,333		242,467						
4.800	1	1	Allowance	Signage, Entrance Monuments, Renovation	2023	15 to 20	5	10,500.00	10,500	10,500	31,379								19,441								
4.810	1	1	Allowance	Signage, Street and Traffic, Replacement	2024	15 to 20	6	35,000.00	35,000	35,000	109,045											68,218					
4.820	2	1	Allowance	Site Furniture, Phased	2025	15 to 25	7 to 14	9,500.00	9,500	19,000	45,496														20,518		
Clubhouse Elements																											
5.450	1	1	Each	HVAC Equipment	2020	12 to 18	2	6,500.00	6,500	6,500	17,703					10,861											
5.500	1	1	Allowance	Interior, Renovation	2019	to 25	1	56,500.00	56,500	56,500	162,582								104,613								
5.600	35	35	Squares	Roof Assembly, Metal	2034	to 30	16	890.00	31,150	31,150	46,969	46,969															
5.727	2,800	2,800	Square Feet	Walls, Vinyl Siding	2039	to 40	21	7.00	19,600	19,600	33,601						33,601										
5.800	300	300	Square Feet	Windows and Doors	2039	to 40	21	50.00	15,000	15,000	25,715						25,715										
Pool Elements																											
6.200	12,015	12,015	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs (Incl. Pavers)	2022	8 to 12	4	2.00	24,030	24,030	105,541									44,493							
6.300	5,542	5,542	Square Feet	Covers, Vinyl	2025	6 to 8	7	3.00	16,626	16,626	74,336								30,004								

RESERVE EXPENDITURES

Meadows at Morris Farm
Community Association
Gainesville, Virginia

Explanatory Notes:

- 1) 2.6% is the estimated future Inflation Rate for estimating Future Replacement Costs.
2) FY2018 is Fiscal Year beginning January 1, 2018 and ending December 31, 2018.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				RUL = 0 FY2018	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033
						Useful	Remaining	Unit (2018)	Per Phase (2018)	Total (2018)	30-Year Total (Inflated)																
6.400	580	580	Linear Feet	Fences, Aluminum	2029	to 25	11	40.00	23,200	23,200	30,769												30,769				
6.500	3	1	Allowance	Furniture, Phased	2022	to 12	4 to 12	16,000.00	16,000	48,000	172,461				17,730			19,647					21,771				
6.560	6	6	Each	Light Poles and Fixtures	2029	to 25	11	2,200.00	13,200	13,200	17,506											17,506					
6.600	3	1	Allowance	Mechanical Equipment, Phased	2020	to 15	2 to 12	13,500.00	13,500	40,500	120,365			14,211				16,157					18,370				
6.800	3,650	3,650	Square Feet	Pool Finishes, Plaster	2022	8 to 12	4	14.00	51,100	51,100	224,434					56,625									73,195		
6.801	1	1	Allowance	Pool Finishes, Tile	2032	15 to 25	14	97,000.00	97,000	97,000	138,942														138,942		
6.870	4	2	Each	Shade Structures, Installation, Phased (2018 is Remaining Cost)	2018	15 to 25	0 to 1	21,410.00	42,820	85,640	217,933	21,410	43,933														
6.950	1	1	Each	Water Feature	2022	to 15	4	8,700.00	8,700	8,700	23,809					9,641											
Anticipated Expenditures, By Year											\$6,430,405	21,410	135,760	63,644	50,403	195,026	11,938	407,546	47,425	221,133	62,137	172,515	248,802	106,476	65,153	318,120	24,434

RESERVE EXPENDITURES

Meadows at Morris Farm
Community Association
Gainesville, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				16 2034	17 2035	18 2036	19 2037	20 2038	21 2039	22 2040	23 2041	24 2042	25 2043	26 2044	27 2045	28 2046	29 2047	30 2048
						Useful	Remaining	Unit (2018)	Per Phase (2018)	Total (2018)	30-Year Total (Inflated)															
6.400	580	580	Linear Feet	Fences, Aluminum	2029	to 25	11	40.00	23,200	23,200	30,769															
6.500	3	1	Allowance	Furniture, Phased	2022	to 12	4 to 12	16,000.00	16,000	48,000	172,461	24,126			26,734				29,625				32,828			
6.560	6	6	Each	Light Poles and Fixtures	2029	to 25	11	2,200.00	13,200	13,200	17,506															
6.600	3	1	Allowance	Mechanical Equipment, Phased	2020	to 15	2 to 12	13,500.00	13,500	40,500	120,365		20,885				23,745					26,997				
6.800	3,650	3,650	Square Feet	Pool Finishes, Plaster	2022	8 to 12	4	14.00	51,100	51,100	224,434								94,614							
6.801	1	1	Allowance	Pool Finishes, Tile	2032	15 to 25	14	97,000.00	97,000	97,000	138,942															
6.870	4	2	Each	Shade Structures, Installation, Phased (2018 is Remaining Cost)	2018	15 to 25	0 to 1	21,410.00	42,820	85,640	217,933						75,316	77,274								
6.950	1	1	Each	Water Feature	2022	to 15	4	8,700.00	8,700	8,700	23,809				14,168											
Anticipated Expenditures, By Year											\$6,430,405	163,074	20,885	138,295	14,168	37,595	115,889	406,300	191,495	757,742	0	1,358,420	26,997	620,332	0	427,291

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS Meadows at Morris Farm Community Association Gainesville, Virginia		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
		FY2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Reserves at Beginning of Year (Note 1)	940,114	975,088	974,863	1,047,363	1,137,575	1,086,696	1,222,924	965,826	1,070,968	1,006,242	1,104,394	1,096,630	1,015,631	1,080,724	1,192,632	1,055,460
	Total Recommended Reserve Contributions (Note 2)	49,625	119,100	119,100	122,200	125,400	128,700	132,000	135,400	138,900	142,500	146,200	150,000	153,900	157,900	162,000	166,200
Plus	Estimated Interest Earned, During Year (Note 3)	6,759	16,435	17,044	18,415	18,747	19,466	18,448	17,167	17,507	17,789	18,551	17,803	17,669	19,161	18,948	19,148
Less	Anticipated Expenditures, By Year	(21,410)	(135,760)	(63,644)	(50,403)	(195,026)	(11,938)	(407,546)	(47,425)	(221,133)	(62,137)	(172,515)	(248,802)	(106,476)	(65,153)	(318,120)	(24,434)
	Anticipated Reserves at Year End	<u>\$975,088</u>	<u>\$974,863</u>	<u>\$1,047,363</u>	<u>\$1,137,575</u>	<u>\$1,086,696</u>	<u>\$1,222,924</u>	<u>\$965,826</u>	<u>\$1,070,968</u>	<u>\$1,006,242</u>	<u>\$1,104,394</u>	<u>\$1,096,630</u>	<u>\$1,015,631</u>	<u>\$1,080,724</u>	<u>\$1,192,632</u>	<u>\$1,055,460</u>	<u>\$1,216,374</u>

(continued)		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued														
		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
	Reserves at Beginning of Year	1,216,374	1,244,541	1,421,022	1,486,634	1,683,283	1,864,490	1,974,760	1,799,067	1,842,262	1,320,477	1,559,450	438,167	646,310	265,564	510,001
	Total Recommended Reserve Contributions	170,500	174,900	179,400	184,100	188,900	193,800	198,800	204,000	209,300	214,700	220,300	226,000	231,900	237,900	244,100
Plus	Estimated Interest Earned, During Year	20,741	22,466	24,507	26,717	29,902	32,359	31,807	30,690	26,657	24,273	16,837	9,140	7,686	6,537	7,113
Less	Anticipated Expenditures, By Year	(163,074)	(20,885)	(138,295)	(14,168)	(37,595)	(115,889)	(406,300)	(191,495)	(757,742)	0	(1,358,420)	(26,997)	(620,332)	0	(427,291)
	Anticipated Reserves at Year End	<u>\$1,244,541</u>	<u>\$1,421,022</u>	<u>\$1,486,634</u>	<u>\$1,683,283</u>	<u>\$1,864,490</u>	<u>\$1,974,760</u>	<u>\$1,799,067</u>	<u>\$1,842,262</u>	<u>\$1,320,477</u>	<u>\$1,559,450</u>	<u>\$438,167</u>	<u>\$646,310</u>	<u>\$265,564</u>	<u>\$510,001</u>	<u>\$333,923</u>
														(NOTE 5)		(NOTE 4)

Explanatory Notes:

- 1) Year 2018 starting reserves are as of July 31, 2018; FY2018 starts January 1, 2018 and ends December 31, 2018.
- 2) Reserve Contributions for 2018 are the remaining budgeted 5 months; 2019 is the first year of recommended contributions.
- 3) 1.7% is the estimated annual rate of return on invested reserves; 2018 is a partial year of interest earned.
- 4) Accumulated year 2048 ending reserves consider the need to fund for replacement of the remaining pavement shortly after 2048, and the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Full 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, Crack Repair, Patch and Seal Coat

Line Item: 4.020

Quantity: Approximately 10,800 square yards of asphalt pavement comprising alleys throughout the community and approximately 13,000 square yards of pavement comprising the streets and parking areas at the townhomes at the west end of Catbird Drive and the clubhouse parking area

History: The alleys and streets were constructed primarily between 2004 and 2010. Management does not report a history of recent repairs.

Condition: Good to fair overall with cracks evident at the alleys, and cracks and previous repairs evident at the streets and parking areas

Useful Life: Three- to five-years

Component Detail Notes: Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless.

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 crack repairs and patching of up to two percent (2%) of the pavement.

Asphalt Pavement, Repaving

Line Items: 4.040 through 4.046

Quantity: Approximately 10,800 square yards of asphalt pavement comprising alleys throughout the community and approximately 13,000 square yards of pavement

comprising the streets and parking areas at the townhomes at the west end of Catbird Drive and the clubhouse parking area

History: The alleys and streets were constructed primarily between 2004 and 2010

Condition: Good to fair overall with cracks evident at the alleys, and cracks and previous repairs evident at the streets and parking areas



Alley overview



Alley overview



Pavement cracks at alley



Pavement cracks at alley



Pavement cracks at alley



Townhome pavement overview



Townhome pavement overview



Previous repairs at townhome pavement



Pavement cracks at townhome pavement



Pavement cracks at townhome pavement



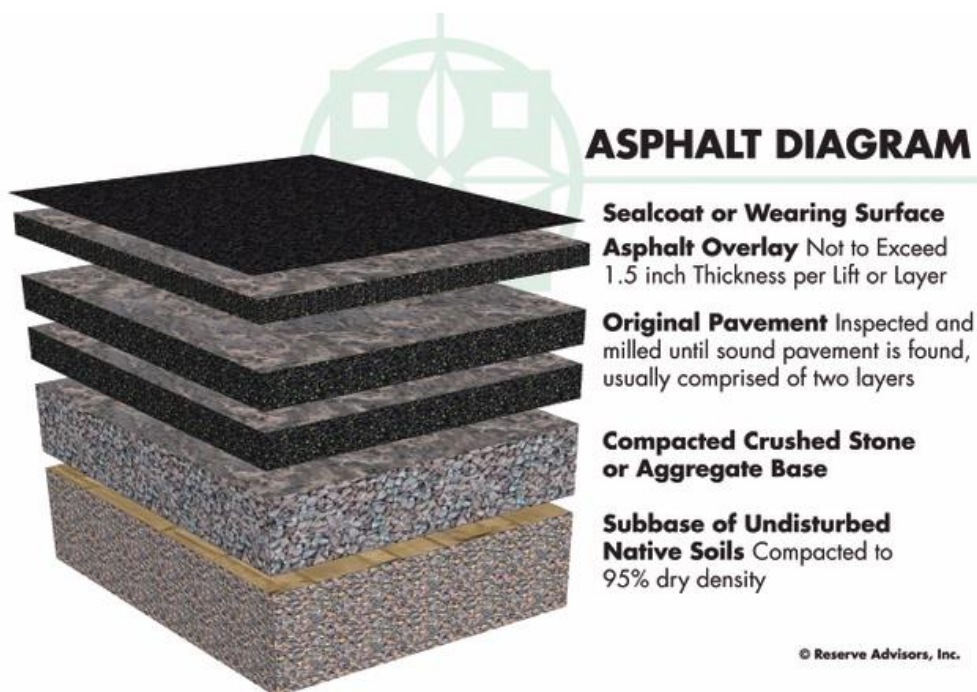
Clubhouse parking area



Cracks and previous repairs

Useful Life: 12- to 18-years for repaving at the alleys and 15- to 20-years for repaving at the townhome pavement

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 Morris Farm:



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 overlay method for initial repaving followed by the total replacement method for subsequent repaving at the alleys. Additionally, we recommend the mill and overlay method for initial repaving followed by the total replacement method for subsequent repaving at the townhomes pavement.

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 costs for both initial repaving events include area patching of up to ten percent (10%).

Asphalt Pavement, Repaving, Walking Paths

Line Item: 4.080

Quantity: 4,190 square yards of pavement comprising walking paths throughout the community

History: Original

Condition: Good to fair overall with cracks and settlement evident



Walking path overview



Walking path cracks



Walking path crack



Walking path cracks



Walking path cracks and settlement

Useful Life: The need to maintain a safe pedestrian surface results in a useful life of 12- to 18-years

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.

Concrete Aprons

Line Item: 4.140

Quantity: 4,200 square feet of concrete aprons at the townhomes at Catbird Drive

Condition: Good overall with isolated cracks evident



Concrete apron



Apron crack

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

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 1,470 square feet of concrete aprons, or thirty-five percent (35%) of the total, will require replacement during the next 30 years.

Concrete Curbs and Gutters

Line Item: 4.110

Quantity: 4,900 linear feet of curbs and gutters at the townhomes at Catbird Drive and at the clubhouse parking lot

Condition: Good to fair overall with cracks evident



Curb and gutter crack



Curb and gutter crack



Curb and gutter crack

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

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 1,230 linear feet of curbs and gutters, or approximately twenty-five percent (25.1%) of the total, will require replacement during the next 30 years.

Concrete Driveways

Line Item: 4.120

Quantity: 38,700 square feet of concrete driveways including 18,300 square feet of mortar set masonry pavers allow access to the cluster homes north of Rollins Ford Road. This quantity excludes the individual driveways at the homes which are maintained by the homeowner.

Condition: Good to fair overall with spall, cracks and mortar deterioration evident



Driveway overview



Driveway overview



Concrete spall



Concrete spall and cracks



Masonry pavers



Mortar deterioration at pavers

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

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 19,950 square feet of concrete driveways, or thirty-five percent (35%) of the total, will require replacement during the next 30 years. Our estimate of cost includes an allowance for replacement of up to ten percent (10%) of the masonry pavers.

Concrete Sidewalks

Line Item: 4.140

Quantity: 14,900 square feet at the common areas throughout the community

Condition: Good to fair overall with spall, deterioration and cracking evident



Concrete sidewalk



Sidewalk spall



Edge deterioration



Sidewalk cracks

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

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 5,220 square feet of concrete sidewalks, or thirty-five percent (35%) of the total, will require replacement during the next 30 years.

Deck, Composite

Line Item: 4.155

Quantity: The Association maintains a composite deck with a wood frame which comprise a total of 300 square feet at Parula Park

History: Original

Condition: Good overall



Deck overview



Deck overview

Useful Life: 20- to 25-years

Component Detail Notes: The wood components in the composite material will absorb moisture. When dispelled, black mold spots can appear that will require chemical cleaning. However, these spots will reappear resulting in the need for cleaning every other month as needed during humid months. The Association should fund these expenses through the operating budget.

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.

Entrance Structures, Renovation

Line Item: 4.158

Quantity: Two each at the community entrances

History: Original. Management informs us the Association recently painted the trim and steel bars at the structures.

Condition: Good overall



Entrance structure



Metal roof



Steel bars

Useful Life: Up to 30 years with periodic maintenance

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget for paint applications and repairs through the operating budget. Our cost for renovation includes:

- Replacement of the metal roof
- Replacement of the steel bars
- Paint finish applications

- Partial replacement of deteriorated wood components and the stone veneer

Fences, Aluminum

Line Item: 4.200

Quantity: 730 linear feet of aluminum fences are found atop the retaining walls at the townhome area on Catbird Drive

History: Original

Condition: Good overall with isolated damage evident



Aluminum fence



Fence damage

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Fence, Wood

Line Items: 4.285 and 4.286

Quantity: 300 linear feet of wood open rail fences are found at the entrances to the community at Song Sparrow Drive and Yellow Hammer Drive. Additionally, the Association maintains approximately 1,960 linear feet of wood split rail fences at the dam behind the townhomes on Catbird Drive.

History: Original

Condition: The open rail fences are in fair overall condition with damage and displacements evident. The split rail fences are in good overall condition.



Open rail fence



Fence damage



Fence displacement



Split rail fence

Useful Life: 15- to 20-years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost for the split rail fences includes an allowance for the replacement of the wire mesh. The Association should anticipate periodic partial replacements due to the non-uniform nature of wood deterioration. Along with these partial replacements, the Association should apply periodic paint applications as needed and fund these activities through the operating budget.

Irrigation System

Line Item: 4.420



Quantity: Management informs us the Association maintains an irrigation system that serves the landscaped areas at the community entrances and the clubhouse

History: Original

Condition: Good overall and Management does not report any deficiencies

Useful Life: Up to 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

Morris Farm 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.

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.

Landscape

Line Item: 4.500

Component Detail Notes: The Association contains a large quantity of trees, shrubbery and other landscape elements. Replacement of these elements is an ongoing need. Many associations budget for these replacements as normal maintenance. Other associations fund ongoing replacements from reserves. Large amounts of landscape may need replacement due to disease, drought or other forces of nature. If the cost of removal and replacement is substantial, funding from reserves is logical. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape.

Useful Life: At the request of Management, we include a landscape allowance for partial replacements every five years.

Priority/Criticality: Per Board discretion

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

Light Poles and Fixtures

Line Item: 4.560

Quantity: 37 metal poles with light fixtures

History: Mostly original. Management informs us the Association recently installed one additional light pole and fixture.

Condition: Good overall



Light pole and fixture

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Mailbox Stations

Line Item: 4.600

Quantity: Four stations are located at the townhome area on Catbird Drive

History: Original

Condition: Good to fair overall with finish deterioration and fastener rust evident



Mailbox station



Mailbox station (Note: Finish deterioration evident)



Fastener rust

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Pergolas, Wood

Line Item: 4.630

Quantity: Two each located along the walking paths

History: Original

Condition: Good overall



Useful Life: Up to 25 years with periodic maintenance

Priority/Criticality: Per Board discretion

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 partial replacements at the stone veneer. We recommend the Association budget for paint applications and repairs through the operating budget.

Playground Equipment

Line Items: 4.660 through 4.662

Quantity: The Association maintains three playgrounds at Brown Thrasher Court, at the clubhouse and at Parula Way

History: Original

Condition: Good to fair overall minor scratches and scuff marks evident



Playground equipment at Brown Thrasher Court



Playground equipment at Brown Thrasher Court



Playground equipment at clubhouse



Playground equipment at clubhouse



Scratches and scuff marks at clubhouse playground slide



Playground equipment at Parula Way

Useful Life: 15- to 20-years

Component Detail Notes: Safety is the major purpose for maintaining playground equipment. We recommend an annual inspection of the playground equipment to identify and repair as normal maintenance loose connections and fasteners or damaged elements. We suggest the Association learn more about the specific requirements of playground equipment at PlaygroundSafety.org. We recommend the use of a specialist for the design or replacement of the playground equipment environment.

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 include an allowance in the unit cost for replacement of the safety surface.

Retaining Walls, Masonry

Line Item: 4.745

Quantity: 3,110 square feet of masonry retaining walls located behind the townhomes at Catbird Drive

History: Original

Condition: Good overall



Masonry retaining wall



Masonry retaining wall



Masonry retaining wall

Useful Life: Up to 40 years

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 Monuments

Line Item: 4.800

Quantity: Two entrance monuments including arbors and masonry walls at Parula Park

History: Original

Condition: Good to fair overall with missing masonry blocks evident



Entrance monument overview



Masonry wall



Arbor and masonry wall at Parula Park



Missing masonry block

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. The signage includes the following elements:

- Arbors, wood
- Masonry, stone
- Concrete signs
- Landscaping

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 and repairs to the masonry and concrete signs, and replacement of the remaining components listed above.

Signage, Street and Traffic

Line Item: 4.810

Quantity: The Association maintains the street identification and traffic signage throughout the community.

History: Original

Condition: Good overall



Typical signage



Typical signage

Useful Life: 15- to 20-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.

Priority/Criticality: Per Board discretion

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

Site Furniture

Line Item: 4.820

History: Mostly original. Management informs us the Association recently installed two additional pet waste stations.

Condition: Good to fair overall with finish deterioration evident



Site furniture



Finish deterioration



Pet waste station

Useful Life: 15- to 25-years

Priority/Criticality: Per Board discretion

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

Clubhouse Elements



Clubhouse overview



Clubhouse overview

HVAC Equipment

Line Item: 5.450

History: Original. Management informs us the Association recently conducted repairs

Condition: Reported satisfactory



Condensing unit

Useful Life: 12- to 18-years

Component Detail Notes:

- One remote condensing units with a cooling capacity of 4-tons
- One internal air handling unit

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.

Interior Renovations

Line Item: 5.500

History: Original. Management informs us the Association plans to renovate the clubhouse interior in the near term.

Condition: Good overall however; Management informs us the Association plans to renovate the clubhouse interior in the near term.



Clubhouse interior



Clubhouse interior



Clubhouse interior



Clubhouse interior

Useful Life: Complete interior renovation every 25 years.

Component Detail Notes: The clubhouse interior comprises approximately 1,500 square feet of finished area which includes:

- Tile floor and wall coverings
- Paint finishes on portions of the walls and the ceilings
- Plumbing fixtures and partitions
- Light fixtures including exit and emergency lights
- Countertops
- Furnishings

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The complete renovation should include replacement of all the interior components listed above. We recommend the Association budget for interim renovations through the operating budget as needed.

Roof Assembly, Metal

Line Item: 5.600

Quantity: 35 squares¹ of standing seam metal roofing including approximately 375 linear feet of aluminum gutters and downspouts

History: Original

Condition: Good overall. Management does not report a history of leaks.



Metal roof



Metal roof

¹ We quantify the roof area in squares where one square is equal to 100 square feet of surface area.



Aluminum gutter and downspout assembly

Useful Life: Up to 30 years

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.

Walls, Vinyl Siding

Line Item: 5.727

Quantity: Approximately 2,800 square feet of the exterior walls. This quantity includes the vinyl soffit and fascia.

History: Original

Condition: Good overall

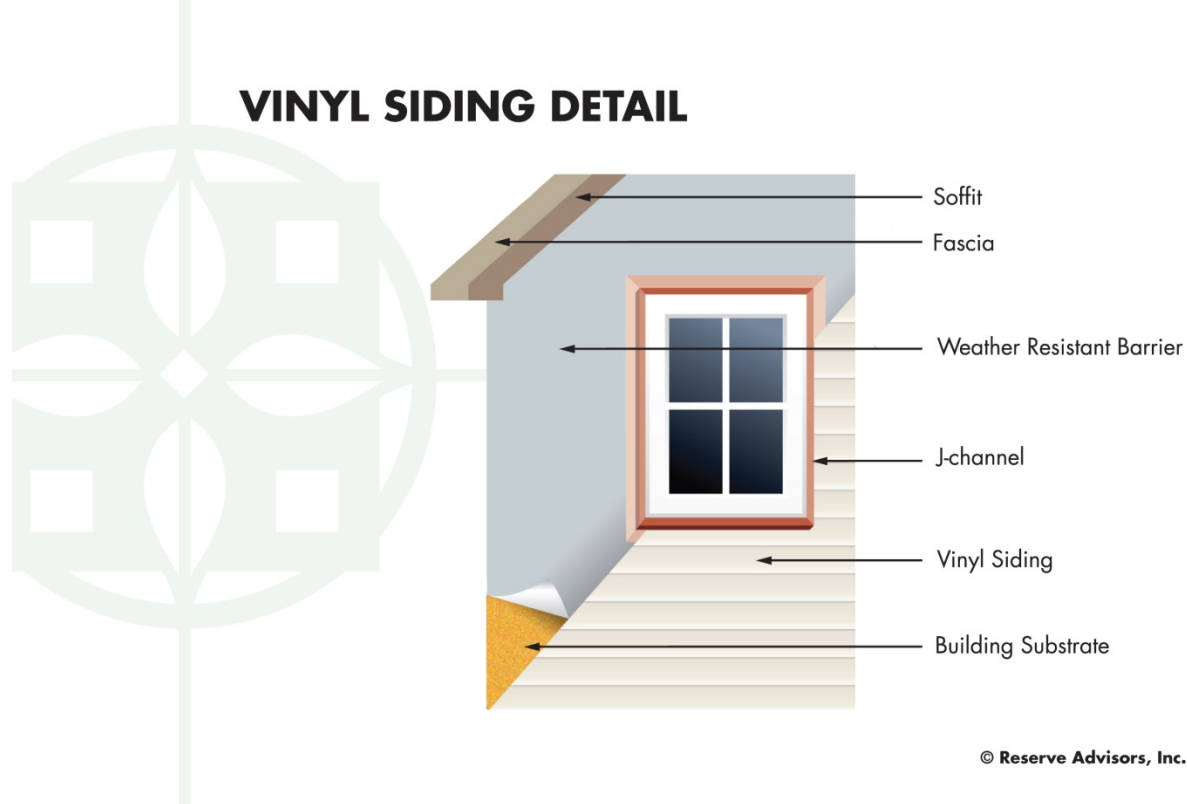


Useful Life: Up to 40 years

Component Detail Notes: The siding at Morris Farm consists of the following:

- Shake and board-and-batten profiles
- J-channel trim at window and door perimeters, and other penetrations
- Water-vapor permeable building paper protects the buildings

The following diagram details the use of building wrap in a vinyl siding system:



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.

Windows and Doors

Line Item: 5.800

Quantity: 300 square feet

History: Original

Condition: Good overall



Clubhouse doors and window

Useful Life: Up to 40 years

Component Detail Notes: Properly designed window and door assemblies anticipate the penetration of some storm water beyond the gaskets. This infiltrated storm water collects in an internal drainage system and drains, or exits, the frames through weep holes. These weep holes can become clogged with dirt or if a sealant is applied, resulting in trapped storm water. We recommend Morris Farm periodically verify that weep holes are unobstructed as normal maintenance. However, as window frames, gaskets and sealants deteriorate, leaks into the interior can result. The windows and doors will eventually need replacement or major capital repairs to prevent water infiltration and damage from wind driven rain.

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.

Pool Elements



Main pool overview



Main pool overview



Wading pool overview

Concrete Deck

Line Item: 6.200

Quantity: 12,015 square feet

History: Original

Condition: Good to fair condition with cracks evident



Deck crack



Pavers and fountain system

Useful Life: The useful life of a concrete pool deck is up to 60 years or more with timely repairs. We recommend the Association conduct inspections, partial replacements and repairs to the deck every 8- to 12-years.

Component Detail Notes: We recommend the Association budget for the following:

- Selective cut out and replacements of up to ten percent (10%) of concrete
- Crack repairs as needed
- Mortar joint repairs
- Caulk replacement
- Resetting of the masonry pavers with replacement of up to ten percent (10%)

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 budget for replacement and repairs to the fountain system through the operating budget as needed.

Covers, Vinyl

Line Item: 6.300

Quantity: 5,542 square feet

History: Replaced last in 2017

Condition: Good condition

Useful Life: Six- to eight-years

Priority/Criticality: Per Board discretion

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

Fences, Aluminum

Line Item: 6.400

Quantity: 580 linear feet

History: Original

Condition: Good overall



Aluminum fence



Aluminum fence

Useful Life: Up to 25 years

Priority/Criticality: Not recommended to defer

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

Furniture

Line Item: 6.500

Quantity:

- Chairs (80)
- Lounges (72)
- Tables (29)
- Umbrellas (8)
- Ladders and life safety equipment

History: Management informs us the Association recently replaced a portion of their pool furniture

Condition: Varying from good to fair overall



Pool furniture



Pool furniture

Useful Life: Up to 12 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend interim re-strapping, refinishing, cushion replacements, reupholstering and other repairs to the furniture as normal maintenance to maximize its useful life.

Light Poles and Fixtures

Line Item: 6.560

Quantity: Six metal poles with light fixtures

History: Original

Condition: Good overall



Light pole and fixture

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Mechanical Equipment

Line Item: 6.600

Quantity:

- Automatic chlorinators
- Controls
- Filters
- Interconnected pipe, fittings and valves
- Pumps
- Electrical panels

History: Management informs us the Association recently replaced a portion of their mechanical equipment

Condition: Reported satisfactory



Main pool filter



Pumps



Wading pool mechanical equipment

Useful Life: Up to 15 years

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. Failure of the pool mechanical equipment as a single event is unlikely. Therefore, we include replacement of up to thirty-three percent (33%) of the equipment per event. We consider interim replacement of motors and minor repairs as normal maintenance.

Pool Finishes, Plaster and Tile

Line Items: 6.800 and 6.801

Quantity: 3,650 square feet of plaster based on the horizontal surface area and approximately 2,310 square feet of tile including the tile at the shallow pool entry and the swim lanes

History: The tile is original and the plaster finished were partially replaced and repaired between 2015 and 2016

Condition: Good overall



Tile at pool entry



Swim lane tile

Useful Life: 8- to 12-years for the plaster and 15- to 25-years for the tile

Component Detail Notes: Removal and replacement provides the opportunity to inspect the pool structures and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structures, we recommend the Association budget for the following:

- Removal and replacement of the plaster finishes
- Partial replacements of the scuppers and coping as needed
- Replacement of tiles as needed
- Replacement of joint sealants as needed
- Concrete structure repairs 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. We recommend the Association budget for full tile replacement every other plaster replacement event.

Shade Structures

Line Item: 6.870

Quantity: Management informs us the Association plans to replace the existing wood trellises at the pool with shade structures. The Association is in the process of installing two shade structures in 2018 and plans to install two more in the near term.

History: Proposed

Useful Life: 15- to 25-years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We base our estimate of cost on the contract provided to us by Management. Our near term estimate of cost is the remaining fifty percent (50%) of the total expense due after the initial deposit.

Water Feature

Line Item: 6.950

History: Original

Conditions: Reported satisfactory



Water feature

Useful Life: Up to 15 years

Priority/Criticality: Per Board discretion

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. 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.

Morris Farm 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 standards¹ set forth by the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Full Reserve Study." 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
- Local² 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 Gainesville, Virginia at an annual inflation rate. Isolated or regional markets of greater

¹ Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

² See Credentials for additional information on our use of published sources of cost data.

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

- The past and current maintenance practices of Morris Farm 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, Inc. 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 principals are founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our principals 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 the 2,600,000-square foot 98-story Trump International Hotel and Tower in Chicago. 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.

QUALIFICATIONS

THEODORE J. SALGADO

Principal Owner

CURRENT CLIENT SERVICES

Theodore J. Salgado is a co-founder of Reserve Advisors, Inc., which is dedicated to serving community associations, city and country clubs, religious organizations, educational facilities, and public and private entities throughout the United States. He is responsible for the production, management, review, and quality assurance of all reserve studies, property inspection services and consulting services for a nationwide portfolio of more than 6,000 clients. Under his direction, the firm conducts reserve study services for community associations, apartment complexes, churches, hotels, resorts, office towers and vintage architecturally ornate buildings.



PRIOR RELEVANT EXPERIENCE

Before founding Reserve Advisors, Inc. with John P. Poehlmann in 1991, Mr. Salgado, a professional engineer registered in the State of Wisconsin, served clients for over 15 years through American Appraisal Associates, the world's largest full service valuation firm. Mr. Salgado conducted facilities analyses of hospitals, steel mills and various other large manufacturing and petrochemical facilities and casinos.

He has served clients throughout the United States and in foreign countries, and frequently acted as project manager on complex valuation, and federal and state tax planning assignments. His valuation studies led to negotiated settlements on property tax disputes between municipalities and property owners.

Mr. Salgado has authored articles on the topic of reserve studies and facilities maintenance. He also co-authored *Reserves*, an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and maintaining appropriate reserves. Mr. Salgado has also written in-house computer applications manuals and taught techniques relating to valuation studies.

EXPERT WITNESS

Mr. Salgado has testified successfully before the Butler County Board of Tax Revisions in Ohio. His depositions in pretrial discovery proceedings relating to reserve studies of Crestview Estates Condominium Association in Wauconda, Illinois, Rivers Point Row Property Owners Association, Inc. in Charleston, South Carolina and the North Shore Club Associations in South Bend, Indiana have successfully assisted the parties in arriving at out of court settlements.

EDUCATION - Milwaukee School of Engineering - B.S. Architectural Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

American Association of Cost Engineers - Past President, Wisconsin Section

Association of Construction Inspectors - Certified Construction Inspector

Association of Professional Reserve Analysts - Past President & Professional Reserve Analyst (PRA)

Community Associations Institute - Member and Volunteer Leader of multiple chapters

Concordia Seminary, St. Louis - Member, National Steering Committee

Milwaukee School of Engineering - Member, Corporation Board

Professional Engineer, Wisconsin (1982) and North Carolina (2014)

Ted continually maintains his professional skills through American Society of Civil Engineers, ASHRAE, Association of Construction Inspectors, and continuing education to maintain his professional engineer licenses.

JOHN P. POEHLMANN, RS
Principal

John P. Poehlmann is a co-founder of Reserve Advisors, Inc. He is responsible for the finance, accounting, marketing, and overall administration of Reserve Advisors, Inc. He also regularly participates in internal Quality Control Team Reviews of Reserve Study reports.



Mr. Poehlmann directs corporate marketing, including business development, advertising, press releases, conference and trade show exhibiting, and electronic marketing campaigns. He frequently speaks throughout the country at seminars and workshops on the benefits of future planning and budgeting for capital repairs and replacements of building components and other assets.

PRIOR RELEVANT EXPERIENCE

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. An international organization, Community Associations Institute (CAI) is a nonprofit 501(c)(3) trade association created in 1973 to provide education and resources to America's 335,000 residential condominium, cooperative and homeowner associations and related professionals and service providers.

He is a founding member of the Institute's Reserve Committee. The Reserve Committee developed national standards and the Reserve Specialist (RS) Designation Program for Reserve Study providers. Mr. Poehlmann has authored numerous articles on the topic of Reserve Studies, including Reserve Studies for the First Time Buyer, Minimizing Board Liability, Sound Association Planning Parallels Business Concepts, and Why Have a Professional Reserve Study. He is also a contributing author in Condo/HOA Primer, a book published for the purpose of sharing a wide background of industry knowledge to help boards in making informed decisions about their communities.

INDUSTRY SERVICE AWARDS

CAI Wisconsin Chapter Award
CAI National Rising Star Award
CAI Michigan Chapter Award

EDUCATION

University of Wisconsin-Milwaukee - Master of Science Management
University of Wisconsin - Bachelor of Business Administration

PROFESSIONAL AFFILIATIONS

Community Associations Institute (CAI) - Founding member of Reserve Committee;
former member of National Board of Trustees; Reserve Specialist (RS) designation;
Member of multiple chapters
Association of Condominium, Townhouse, & Homeowners Associations (ACTHA) –
member



DIXON P. DRUMHELLER, RS
Responsible Advisor

CURRENT CLIENT SERVICES

Dixon P. Drumheller, a Senior Engineer, is an Advisor for Reserve Advisors. Mr. Drumheller is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

The following is a partial list of clients served by Dixon Drumheller demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

GrandView at Annapolis Towne Centre Condominium is a 13 story condominium building in Annapolis, Maryland built in 2009. The building includes 150 units and amenities such as a rooftop pool and Sky Lounge, exercise rooms and social rooms.

Red Hawk Lodge This upscale ski lodge located in Keystone, Colorado was built in 2000. The five-story condominium building includes 100 units and amenities such as a pool, fitness center and parking garage. The building is comprised of asphalt shingle roofs, and wood and fiber cement siding.

Shields Self Storage is a self-storage facility comprising eight different locations in Waynesboro, Virginia that was built between 1957 and 2016. Shields maintains 1,545 storage units as well as offices and a storage facility for tractor trailers and recreational vehicles.

The Henry Condominium A luxury residential property located in downtown Alexandria, Virginia, these five and six-story condominium buildings were built in 2007 and contain 168 units. The buildings include fitness and party rooms as well as rooftop terraces overlooking Washington D.C. The property also includes a controlled access, two level parking garage.

Bulle Rock Community Association This master association in Havre de Grace, Maryland comprises 1,900 single family homes and condominium units. The Association maintains various common elements including a 30,000 square foot clubhouse, indoor and outdoor pools, tennis courts, and extensive nature trails and walking paths.

The Country Club of Rochester One of the oldest golf clubs in America, the Country Club of Rochester was founded in 1895 in Rochester, New York. The current clubhouse was built in 1970 and amenities include 18 holes of golf, paddle tennis courts, a skating rink and tennis courts.

Mary Marshall Assisted Living Facility This property in Arlington, Virginia was built in the 1940's and converted to an assisted living facility in 2011. Mary Marshall comprises 52 units in one building. The facility includes kitchens, dining and community areas, offices and a library.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Drumheller attended James Madison University in Harrisonburg, Virginia where he attained his Bachelor of Science degree in Engineering with minors in Math and Business. His studies focused on environmental engineering and engineering design. Mr. Drumheller also worked as an intern for Property Capital Inc. where he advised on renewable energy projects and obtained real estate financing for clients.

EDUCATION

James Madison University - B.S. Engineering

PROFESSIONAL AFFILIATIONS

Reserve Specialist (RS) - Community Association Institute
Engineer in Training (E.I.T.)- State of Virginia



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, Inc. 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. Several advisors and a Principal of Reserve Advisors, Inc. hold Senior Memberships with ACI.

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. Reserve Advisors, Inc. 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.

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.

Reserve Advisors, Inc., 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 Morris Farm 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) Morris Farm 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, Inc. (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.