

FULL RESERVE STUDY

Forest Edge Cluster Association, Inc.



East Amherst, New York

June 28, 2016



This Report contains intellectual property developed by Reserve Advisors, Inc. and cannot be reproduced or distributed to those who conduct reserve studies without their written consent.

Reserve Study Update

August 15, 2016

The Reserve Study for Forest Edge Cluster Association, Inc.
Was submitted onAugust 15, 2016

To maintain the most accurate and cost-effective replacement schedule and funding plan for your property elements, this study should be updated on or about**Third Quarter, 2018** ...but no later than.....**Third Quarter, 2019**

As a valued client, we are pleased to offer a future reserve study update with site visit for.....**\$3,050**
For a Reserve Study Update with Site visit as noted above.
This future update fee is based on the same property components that were contained in your last Reserve Advisors' reserve study or update. We are pleased to include property additions for an additional fee.

To initiate your Reserve Study Update, please sign this authorization and fax or mail to the number below. Upon receipt of this authorization we will contact you to schedule your site visit and invoice for the Reserve Study Update Service.

Sign this contract below and fax to **414-272-3663**. Or mail to
Reserve Advisors, Inc.
735 N. Water St., Suite 175
Milwaukee, WI 53202

Delivery options for your Reserve Study Update Report, Please check one of the following:

- 1-Full color printed copy PLUS Electronic Report, FREE
- 2-Full color printed copies PLUS Electronic Report, \$100

For: Reserve Advisors, Inc.

Signature: Michelle Baldry

Michelle Baldry
Director of Client Services - Northeast
Region
MBaldry@reserveadvisors.com
Ref. # 020366
(844) 701-9884

For Forest Edge Cluster Association, Inc.

Name: _____

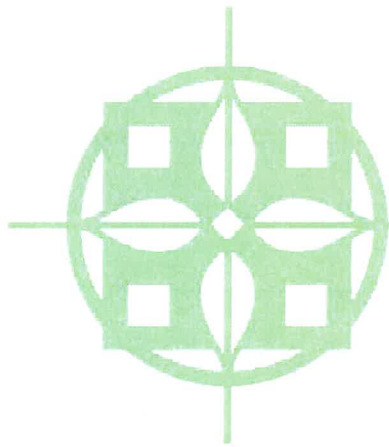
Title: _____

Date: _____

Phone: _____

Agent or Manager: Dillon Joseph

Management Firm: Clover Management Inc.



RESERVE
ADVISORS

Long-term thinking. Everyday commitment.



TABLE OF CONTENTS

1. RESERVE STUDY EXECUTIVE SUMMARY	1.1
2. RESERVE STUDY REPORT	2.1
3. RESERVE EXPENDITURES and FUNDING PLAN	3.1
4. CONDITION ASSESSMENT.....	4.1
Exterior Building Elements.....	4.1
Balconies, Wood.....	4.2
Chimney Caps, Metal.....	4.4
Gutters and Downspouts, Aluminum.....	4.4
Roofs, Asphalt Shingles.....	4.7
Walls, Aluminum Siding	4.16
Walls, Trim, Paint Finishes.....	4.18
Walls, Vinyl Siding.....	4.20
Property Site Elements.....	4.24
Asphalt Pavement, Crack Repair, Patch, Seal Coat and Striping	4.24
Asphalt Pavement, Repaving.....	4.26
Asphalt Pavement, Repaving, Walking Paths.....	4.32
Catch Basins.....	4.34
Concrete, Flatwork.....	4.35
Concrete Sidewalks.....	4.35
Concrete Stoops	4.36
Fences, Vinyl	4.37
Irrigation Systems	4.37
Landscape, Partial Replacements.....	4.38



Light Poles and Fixtures	4.39
Pipes, Subsurface Utilities	4.39
Utilities, Electrical, Junction Boxes.....	4.40
Water Main, Backflow Prevention Valve	4.41
Reserve Study Update.....	4.42
5. METHODOLOGY	5.1
6. DEFINITIONS	6.1
7. PROFESSIONAL SERVICE CONDITIONS.....	7.1
8. CREDENTIALS.....	8.1

1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Forest Edge Cluster Association, Inc. (Forest Edge)

Location: East Amherst, New York

Reference: 020366

Property Basics: Forest Edge Cluster Association, Inc. is a townhome style development of 155 units in 31 buildings. The east side of the development was built in 1974 and consists of 82 units in 14 buildings. The west side of the development was built from 1989 to 1994 and consists of 73 units in 17 buildings. The exteriors of the buildings comprise vinyl and aluminum siding, masonry veneer and asphalt shingle roofs. The development contains asphalt pavement access drives, an asphalt pavement walking path, concrete flatwork, subsurface utility pipes and vinyl fences.

Reserve Components Identified: 27 Reserve Components.

Inspection Date: June 28, 2016.

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 these threshold funding years in 2028 and 2029 due to replacement of the vinyl siding and 2046 due to total replacement of the currently good to fair condition asphalt pavement.

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

- current and future local costs of replacement
- 1.35% annual rate of return on invested reserves
- 1.9% 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: \$602,888 as of May 31, 2016. A potential deficit in reserves might occur by 2023 based upon continuation of the most recent annual reserve contribution of \$115,000 and the identified Reserve Expenditures.

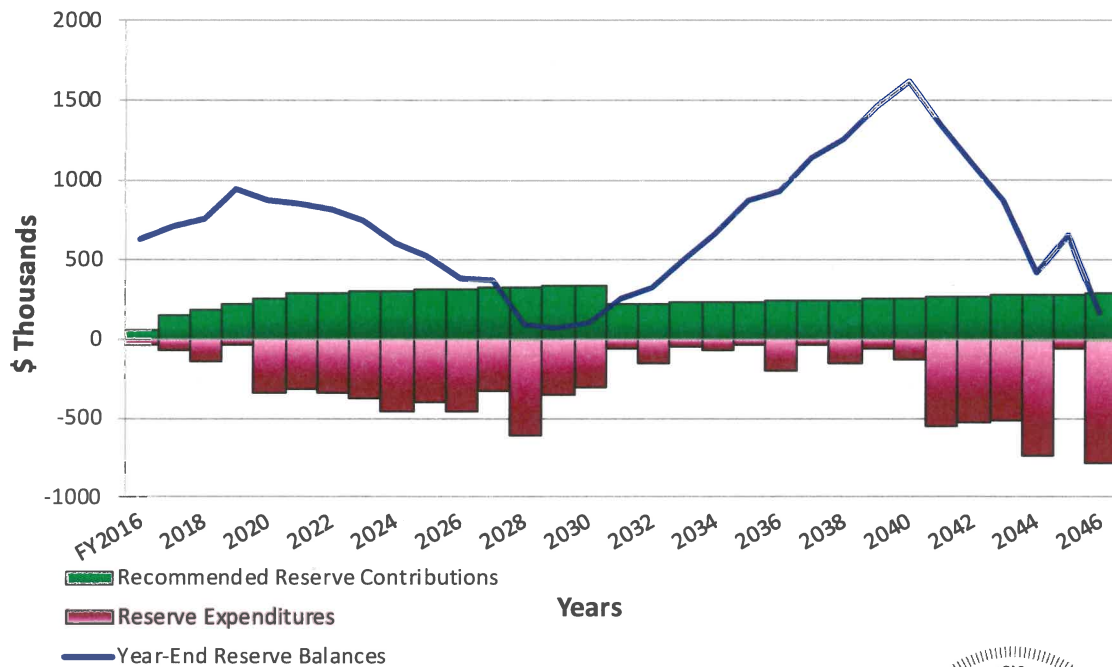
Recommended Reserve Funding: The Association budgeted \$115,000 for Reserve Contributions in 2016¹. We recommend the Association budget annual phased increases in Reserve Contributions of \$34,000 from 2017 through 2021. Afterwards, the Association should budget gradual annual increases in reserve funding that in part consider the effects of inflation. By 2031, the Association will have fully funded for repaving of the asphalt pavement. Therefore, the Association may anticipate a decrease in the annual Reserve Contribution to \$217,000. Afterwards, the Association should again budget gradual annual increases in reserve funding that in part consider the effects of inflation. The initial adjustment in Reserve Contributions of \$34,000 represents about an eight percent (8.0%) adjustment in the 2016 total Operating Budget of \$423,429. This initial adjustment of \$34,000 is equivalent to an increase of \$18.28 in the monthly contributions per homeowner.

¹ The Fiscal Year (FY 2016) for Forest Edge begins December 1, 2015 and ends November 30, 2016. For brevity, we refer to the Fiscal Year by its ending year, i.e. Fiscal Year 2015-16 is FY 2016 or simply 2016.

Certification: This *Full Reserve Study* exceeds the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a “Level I Full Reserve Study.”

Forest Edge
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2017	149,000	708,412	2027	318,900	374,007	2037	242,900	1,144,157
2018	183,000	755,261	2028	325,000	91,439	2038	247,500	1,258,130
2019	217,000	945,573	2029	331,200	65,754	2039	252,200	1,472,117
2020	251,000	872,827	2030	337,500	99,183	2040	257,000	1,618,817
2021	285,000	852,027	2031	217,000	252,621	2041	261,900	1,350,458
2022	290,400	815,248	2032	221,100	319,059	2042	266,900	1,104,748
2023	295,900	741,211	2033	225,300	499,361	2043	272,000	868,574
2024	301,500	598,957	2034	229,600	666,578	2044	277,200	419,327
2025	307,200	518,686	2035	234,000	873,728	2045	282,500	645,691
2026	313,000	383,664	2036	238,400	925,981	2046	287,900	155,841



Respectfully submitted on August 15, 2016 by
RESERVE ADVISORS, INC.



Alan M. Ebert, PRA¹, RS², Director of Quality Assurance

Reviewed by: Nicole L. Lowery, PRA, RS, Associate Director of Quality Assurance

Visual Inspection and Report by: Keary D. Wass



¹PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at <http://www.apra-usa.com>.

² 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. 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

Forest Edge Cluster Association, Inc.

East Amherst, New York

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, June 28, 2016.

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
- **Condition Assessment** - 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, financial information relied upon for the Financial Analysis of 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



Forest Edge Cluster Association, Inc. is a townhome style development of 155 units in 31 buildings. The east side of the development was built in 1974 and consists of 82 units in 14 buildings. The west side of the development was built from 1989 to 1994 and consists of 73 units in 17 buildings. The exteriors of the buildings comprise vinyl and aluminum siding, masonry veneer and asphalt shingle roofs. The development contains asphalt pavement access drives, an asphalt pavement walking path, concrete flatwork, subsurface utility pipes and vinyl fences. We identify 27 major reserve components that are likely to require capital repair or replacement during the next 30 years.

Our investigation includes Reserve Components or property elements as set forth in your Declaration. 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:

- Forest Edge responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements do not have predictable Remaining Useful Lives. 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.

- Foundations
- Structural Frames

The operating budget provides money for the repair and replacement of certain Reserve Components. Operating Budget Funded Repairs and Replacements relate to:

- General Maintenance to the Common Elements
- Expenditures less than \$5,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Concrete Curbs, Partial Replacement
- Creek, Shoreline Maintenance
- Irrigation Systems, Interim Controllers and Partial Replacements
- Landscape, Maintenance
- Light Fixtures, Recessed (Above Garages)
- Paint Finishes, Touch Up
- Railings, Vinyl (2003 through 2007 Replacement)
- Retaining Walls, Masonry
- Shutters, Vinyl (2012 through 2016 Replacement)
- Signage
- Walls, Masonry, Inspections and Capital Repairs
- 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:

- Decks
- Electrical Systems
- Exterior Light Fixtures, Sconces
- Garage Doors
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Patios
- Pipes, Interior Building, Water and Sewer
- Windows and Doors

Certain items have been designated as the responsibility of Others to repair or replace.

Property Maintained by Others relates to:

- Playground Equipment (Master)
- Pool (Glen Oaks Condominium Association)
- Tennis Courts (Glen Oaks Condominium Association)
- Walking Path, Asphalt, East of Association (Master)



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
- Unit cost of replacement
- 2016 local cost of replacement
- Total future costs of replacement anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

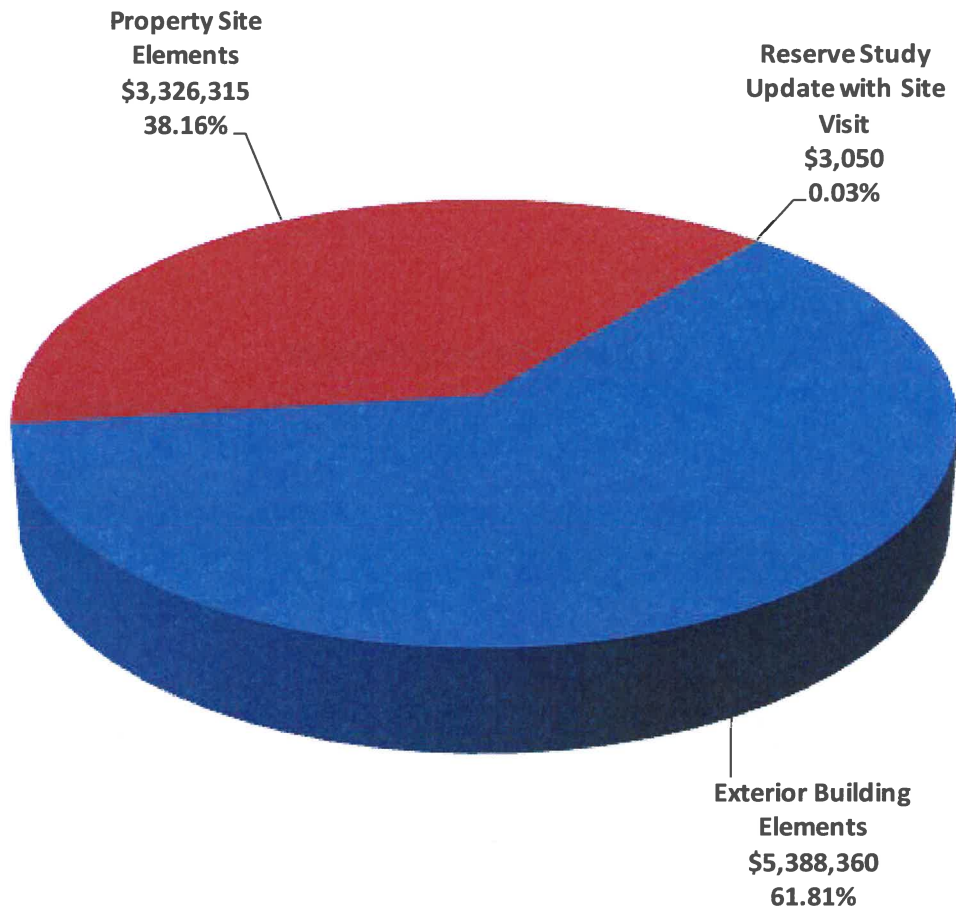
Reserve Funding Plan

- 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
- Predicted reserves based on current funding level

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*.

The following chart illustrates the relative importance of the categories noted in *Reserve Expenditures* and relative funding during the next 30 years.

Forest Edge
Future Expenditures Relative Cost Illustration



4. CONDITION ASSESSMENT

The Condition Assessment of this *Full Reserve Study* includes *Enhanced Solutions and Procedures* for select significant components. These narratives describe the Reserve Components, document specific problems and conditions, 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.*

Exterior Building Elements



Front building overview, 1989 to 1994 models



Side building elevation, 1989 to 1994 models



Rear building elevation, 1989 to 1994 models



Front building overview, 1974 models



Side building overview, 1974 models



Rear building overview, 1974 models

Balconies, Wood - The Association maintains 63 wood balconies which comprise a total of 2,540 square feet. The balconies are in good to fair overall condition at an unknown age. We note partial replacement of balcony decking.



Balcony overview



Balcony structure overview



Partial replacement of balcony decking

Balcony construction includes the following:

- Enclosed aluminum siding rails
- Wood column supported frames (Columns are enclosed in building)
- Cross bracing does not exist to stabilize the frames
- No toe-nailed connections

Wood balcony materials treated with a protective finish have useful lives of 15- to 25-years with proper maintenance. Proper maintenance should include the following activities funded through the operating budget:

- Annual inspections to identify and correct any unsafe conditions
- Securing of loose fasteners and replacement of deteriorated fasteners
- Replacement of deteriorated wood components

- Power washing with an algaecide and application of a sealer/stain

The rates and types of deterioration are not uniform due to the nature of wood. Replacement is normally an ongoing process which eventually leads to a complete replacement for economic or aesthetic reasons. We recommend the Association anticipate a phased replacement of the balcony elements noted above beginning by 2030 and concluding by 2032. We depict this information on Line Item 1.120 of *Reserve Expenditures*.

Chimney Caps, Metal - Forest Edge maintains 65 metal chimney caps. The chimney caps are original and in fair overall condition based on our visual inspection from the ground. We note corrosion.



Chimney cap corrosion noted at Unit 1604

Chimney caps of this type have useful lives of up to 25 years. We recommend the Association anticipate replacement of the chimney caps and related flashing beginning by 2023 and concluding by 2026 in coordination with replacement of the adjacent asphalt shingle roofs. We depict this information on Line Item 1.140 of *Reserve Expenditures*.

Gutters and Downspouts, Aluminum - Approximately 17,150 linear feet of aluminum five-inch gutters and two-inch by three-inch downspouts drain storm water from the roofs of

Forest Edge. These gutters and downspouts are original and in fair overall condition. The gutters and downspouts exhibit damage, leakage and corrosion.



Gutter damage noted at Unit 1601



Typical siding stains from gutter overflow



Gutter damage noted at Unit 1004



Gutter corrosion noted at Unit 301

These gutters and downspouts have a useful life of 15- to 20-years. We include the following solutions and procedures for gutter and downspout maintenance and replacements for present and future board members.

The most common and economical type of gutter profile is the metal roll-formed seamless K-style. The five-inch wide K-style gutter is standard but six-inch wide K-style gutters

should be used on larger roofs. The size of the gutter is determined by the roof's watershed area, a roof pitch factor and the rainfall intensity number of the Association's region. We recommend sloping gutters 1/16 inch per linear foot and providing fasteners a maximum of every three feet.

Downspouts can drain 100 square feet of roof area per one square inch of downspout cross sectional area. Downspouts should be of the same material as the gutters. We recommend the use of downspout extensions and splash blocks at the downspout discharge to direct storm water away from the foundations. Downspouts that discharge directly onto roofs cause premature deterioration of the roofs due to the high concentration of storm water. We recommend either routing these downspouts directly to the ground, connecting the downspouts to the gutters of the lower roof or distributing the storm water discharge over a large area.

Maintenance of the gutters and downspouts should include semiannual inspections, repairs at seams and fastening points, verification that the downspouts discharge away from foundations and cleaning. More frequent maintenance may be required for gutters and downspouts in areas of concentrated landscape growth. The Association should fund these expenses through the operating budget. A lack of maintenance resulting in misdirected storm water will result in deterioration of soffits, fascia, siding, foundations, and the gutters and downspouts themselves.

The useful life of gutters and downspouts coincides with that of the asphalt shingle roofs at 15- to 20-years. Therefore, we recommend the Association budget for the phased replacement of the gutters and downspouts in conjunction with the roof replacement beginning by 2023 and concluding by 2026. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements. A

subsequent phased replacement is likely beginning by 2041 and concluding by 2044. We depict this information on Line Item 1.240 of *Reserve Expenditures*. Based on the watershed area of the roof and the existence of water stains from gutter leakage, we opine the existing gutters and downspouts are undersized and recommend replacement with six-inch gutters and three-inch by four-inch downspouts. We base our cost on replacement with .027-inch thick aluminum.

Roofs, Asphalt Shingles - Approximately 150 *squares*¹ of asphalt shingles comprise the roofs of Units 851 to 856 and 951 to 958. These roofs are in poor overall condition at 13 years of age. The remaining units' 2,050 squares of asphalt shingle roofs are in good to fair overall condition at 8- to 11-years of age. Our visual inspection from the ground notes sheathing deflection, missing shingles, organic growth, granular loss, shingle lift, shingle curl, streaking, flashing corrosion and ridge vent deflection.



Asphalt shingle roof overview



Asphalt shingle roof overview

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



Sheathing deflection noted at Unit 1703



Missing shingles noted at Unit 1603



Organic growth noted at Unit 1501



Sheathing deflection noted at Unit 752



Shingle lift noted at Unit 855



Granular loss noted at Unit 853



Streaking noted at building containing Units 951 through 958



Curled shingles noted at Unit 953



Flashing finish deterioration noted at Unit 1054



Sheathing deflection and shingle lift noted at Unit 153



Waste pipe flashing corrosion noted at Unit 453



Ridge vent deflection noted at Unit 703

The existing roof assembly comprises the following:

- Laminate shingles (excluding Units 851 to 856 and 951 to 958)
- Three tab shingles (Units 851 to 856 and 951 to 958)
- Boston style ridge caps
- Metal base boot flashing at waste pipes
- Soffit and ridge vents
- Metal drip edge
- Enclosed half weaved valleys

The useful life of asphalt shingle roofs in East Amherst is from 15- to 20-years. We include the following solutions and procedures pertaining to the components of an asphalt shingle roof system, times of replacement, recommended method of replacement, and coordination of other related work for the benefit of present and future board members.

Insulation and ventilation are two major components of a sloped roof system. Together, proper insulation and ventilation help to control attic moisture and maintain an energy efficient building. Both insulation and ventilation prevent moisture buildup which can cause wood rot, mold and mildew growth, warp sheathing, deteriorate shingles, and eventually damage building interiors. Sufficient insulation helps to minimize the quantity of moisture that enters the attic spaces and adequate ventilation helps to remove any moisture that enters the attic spaces. These two roof system components also help to reduce the amount of energy that is required to heat and cool a building. Proper attic insulation minimizes heat gain and heat loss between the residential living spaces and attic spaces. This reduces energy consumption year-round. Proper attic ventilation removes excessive heat from attic spaces that can radiate into residential living spaces and cause air conditioners to work harder. Properly installed attic insulation and ventilation work together to maximize the useful life of sloped roof systems.

In addition to moisture control and energy conservation, proper attic insulation and ventilation are essential components to prevent the formation of ice dams. Ice dams occur when

warm air accumulates at the peak of an attic while the roof eaves remain cold. Warm air from the attic melts the snow at the ridge of the roof and the water runs down the slope of the roof. At the cold roof eaves, the water refreezes and forms a buildup of snow and ice. This buildup often traps water that can prematurely deteriorate asphalt shingles and ultimately seep under the shingles and cause water damage to the roof deck and building interiors. Proper insulation minimizes the amount of heat that enters attic spaces in the winter and adequate ventilation helps to remove any heat that enters the attic spaces. Together, these components prevent ice dams with a cold roof deck that melts snow and ice evenly.

The Association should periodically ensure that the vents are clear of debris and are not blocked from above by attic insulation. If the soffit vents are blocked from above, the Association should install polystyrene vent spaces or baffles between the roof joists at these locations to ensure proper ventilation. Forest Edge should fund this ongoing maintenance through the operating budget.

Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of its useful life. Even if the shingles are largely watertight, the infiltration of water in one area can lead to permanent damage to the underlying roof sheathing. This type of deterioration requires replacement of saturated sections of sheathing and greatly increases the cost of roof replacement. Roof leaks may occur from interrelated roof system components, i.e., flashings. Therefore, the warranty period, if any, on the asphalt shingles, may exceed the useful life of the roof system.



Warranties are an indication of product quality and are not a product guarantee. Asphalt shingle product warranties vary from 20- to 50-years and beyond. However, the scope is usually limited to only the material cost of the shingles as caused by manufacturing defects. Warranties may cover defects such as thermal splitting, granule loss, cupping, and curling. Labor cost is rarely included in the remedy so if roof materials fail, the labor to tear off and install new shingles is extra. Other limitations of warranties are exclusions for "incidental and consequential" damages resulting from age, hurricanes, hail storms, ice dams, severe winds, tornadoes, earthquakes, etc. There are some warranties which offer no dollar limit for replacement at an additional cost (effectively an insurance policy) but again these warranties also have limits and may not cover all damages other than a product defect. We recommend a review of the manufacturers' warranties as part of the evaluation of competing proposals to replace a roof system. This evaluation should identify the current costs of remedy if the roof were to fail in the near term future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

Our estimate of remaining useful life considers this possibility and the Association should anticipate the need for capital repairs to the shingles and other roof system components to achieve or maximize the remaining useful life of the roofs. The Association should fund ongoing roof repairs as normal maintenance from the operating budget.

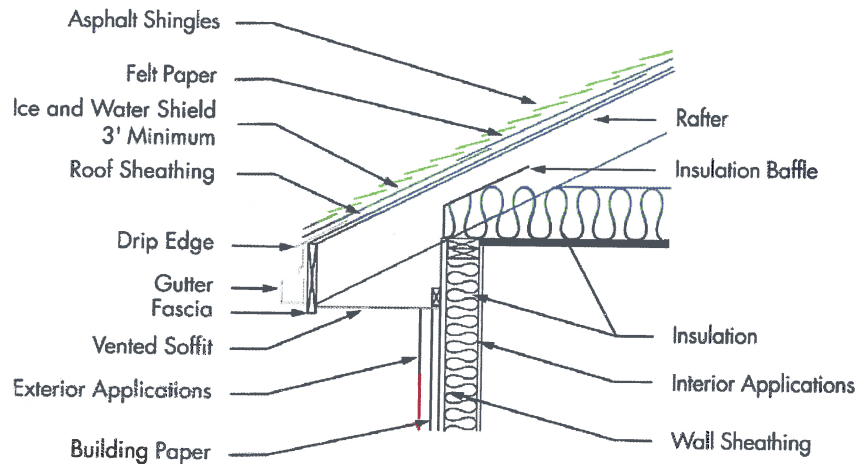
Contractors use one of two methods of replacement for sloped roofs, either an overlayment or a tear-off. Overlayment is the application of new shingles over an existing roof. Although this method is initially more economical, the following disadvantages exist for this type of replacement:

1. Overlaid shingles hide condition defects of the roof system and do not allow for replacement of critical flashings, underlayments and ventilation.
2. Additional layers of shingles absorb and store more heat resulting in premature deterioration of the new shingles and continued deterioration of the underlying shingles and other roof system components.
3. New shingles installed over deteriorated shingles may result in an uneven appearance.

The disadvantages above result in a shorter useful life of 10- to 15-years for overlaid roofs. This shortened useful life and the inevitable eventual replacement of both shingle layers will actually result in increased long-term replacement costs. The costs of an eventual total replacement are deferred onto future homeowners thereby conflicting with the purpose of a reserve study to ensure homeowners pay their “fair share” of the weathering and aging of this commonly owned property. Therefore, we recommend only the tear-off method of replacement. The advantages of the tear-off method include the correction of hidden or latent defects and extend the useful life of the new roof.

The tear-off method of replacement includes removal of the existing shingles, flashings if required and underlayments. The contractor should then inspect the roof sheathing for areas of water damage and partially replace the sheathing as needed. Once the roof sheathing is repaired, the contractor can begin installation of the new underlayments, flashings and shingles. The following cross-sectional schematic illustrates an asphalt shingle roof system:

ROOF SCHEMATIC



© Reserve Advisors, Inc.

The two types of underlayment most often used in an asphalt shingle roof system are ice and water shield membrane, and organic felt paper of varying weights depending on local building codes. Both types of underlayment protect the roof sheathing from moisture damage and wind-driven ice and snow. They have a low vapor resistance that impedes the accumulation of moisture between the underlayment and the roof sheathing. Ice and water shield membrane is thicker than organic paper and is used in areas that are subject to ice dams and standing water. The contractor should install ice and water shield membranes (often a modified bitumen product) at the outer 36 inches of the gutter and rake edge roof eaves, and in the roof valleys. Standard 15-pound organic felt paper should provide sufficient protection over the remaining portions of the roof. Underlayments work in conjunction with flashings to form a watertight roof system.

The function of flashing is to provide a watertight junction between the roofing material and the other parts of the structure and between roof sections. Flashing material is usually galvanized metal, although some roofs use copper or synthetic rubber. The Association should require the contractor to augment existing flashings or replace deteriorated flashings at the time of roof replacement at the following locations:

- Changes in the slope
- Valleys
- Roof intersections with a wall, vertical structure, roof penetration, i.e., vent stacks
- Rakes (sloped edges of the roof) and soffits (lower roof edges)

Another critical type of flashing is drip edge flashing. This important flashing sheds water off the edges of the roofs. The drip edge flashing allows storm water to run off the roof into the gutters without coming into contact with the underlayment and eave board. The special profile of a metal drip edge also prevents or minimizes the possibility of rain water blowing back under the shingles. The contractor should install this flashing at the gutter edge before the installation of underlayment and at the rake edge *after* the installation of underlayment.

Asphalt shingles include both fiberglass shingles and organic mat shingles. Both shingle types are made with asphalt. Fiberglass shingles use a fiberglass reinforcing mat while organic shingles use a wood based cellulose fiber mat. Fiberglass shingles are thinner, lighter and carry a better fire rating than organic shingles. Organic mat shingles are more durable and stay more flexible in cold weather. The contractor should install the shingles atop the underlayment and in conjunction with flashing. Based on a better fire rating, we suggest Forest Edge use a standard strip, fiberglass, Class A, minimum weight class of 210 pounds per square self-sealing shingle at the time of replacement. The self-sealing strip affixes to the lower exposed edges of the shingles. Heat from ambient weather and sunlight activates the shingle adhesive material and

seals the two adjacent courses of shingles together. Contractor proposals should specify the types of proposed materials and types of proposed fasteners. The Association should require the use of nail fasteners, not staples, at the time of replacement. Nail guns are acceptable. Staples are of lesser quality and might not withstand wind forces as well as nails.

The Association should plan to coordinate the replacement of gutters and downspouts with the adjacent roofs. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements.

Based on the age and condition of the roofs, we recommend Forest Edge budget for replacement of the roofs at Units 851 to 856 and Units 951 to 958 by 2018 and again by 2036. We note this information on Line Item 1.280 of *Reserve Expenditures*. Additionally, we recommend the Association budget for replacement of the remaining units' roofs beginning by 2023 and concluding by 2026. Subsequent phased replacement of these roofs is likely beginning by 2041 and concluding by 2044. We note this information on Line Item 1.281 of *Reserve Expenditures*. We base our cost on replacement with standard laminate Class A 240-260-pounds per square shingles. The Association should fund any repairs prior to the complete replacement of the roofs through the operating budget.

Walls, Aluminum Siding - Aluminum siding comprises approximately 103,800 square feet of the exterior walls at the east side of the development built in 1974. This quantity includes the aluminum soffit and fascia. The siding is in fair to poor overall condition at 31- to 33-years of age. The siding exhibits damage and non-uniform color replacement pieces.



Aluminum trim damage noted at Unit 1406



Non-uniform siding color noted at Unit 1108



Siding damage noted at Unit 754



Siding damage noted at Unit 1151

Aluminum siding has a useful life of 35- to 40-years. Consideration of appearance largely governs the decision to replace, in whole or partially, prior to the end of its useful life. Maintenance and partial replacements of the siding may extend the useful life. Normal deterioration mainly relates to fading of the exterior finish from exposure to sunlight, weathering and air pollutants. Aluminum siding gets damaged from forces which cause it to warp and dent, such as rocks thrown from lawn mowers, wind-driven objects, etc. The lack of a water impermeable barrier wrap underneath the siding can result in premature loosening of the siding fasteners from water damage to the substrate sheathing. The lack of replacement pieces



matching the color and profile of the existing siding may result in the need for a premature replacement. These variables may affect the need for partial and complete replacements.

With consideration of the age and existing condition of the siding, we recommend the Association anticipate a phased replacement of the siding beginning by 2020 and concluding by 2022. Vinyl siding is the predominant replacement material for aluminum siding. For purposes of this Reserve Study, we assume replacement with .048-inch thick vinyl siding. We depict this information on Line Item 1.620 of *Reserve Expenditures*.

Aluminum siding is relatively maintenance free. However, the Association should periodically clean the aluminum siding with a water hose. A non-abrasive household cleaner or manufacturer specified aluminum siding cleaner will remove more intense stains. The Association should fund these ongoing expenses through the operating budget.

Walls, Trim, Paint Finishes - The buildings on the east side of the development include paint finish applications on the trim at the doors, garage doors and balconies. Periodic application of a protective finish of paint or stain is an essential maintenance activity to maintain the physical appearance and integrity of these elements. Management informs us the Association will apply a finish to the trim in 2016. We note paint finish deterioration.



Garage trim paint deterioration noted at Unit 806



Garage trim paint deterioration noted at Unit 1304

The Board is likely familiar with many of the requirements for the periodic application of paint² products. We include the following solutions and procedures as a summary of the minimum requirements for a successful paint finish application for present and future board members.

Correct and complete preparation of the surface before application of the paint finish maximizes the useful life of the paint finish and surface. The contractor should remove all loose, peeled or blistered paint before application of the new paint finish. The contractor should then power wash the surface to remove all dirt or chalking of the prior paint finish.

Summarizing the minimum requirements of the proposed scope of work, all bids should include the following:

1. Name of paint finish product
2. The contractor will involve manufacturer representatives to ensure specifications and warranty
3. The contractor will apply the paint to clean and dry surfaces at the manufacturer's recommended spreading rates

²The term *paint* is a generic reference to a specialized mixture of solid pigment in a liquid solution that results in a clear, opaque or solid color protective finish. Product types are too numerous to list but include latex, oil, acrylic and elastomeric based products.

4. The contractor will apply successive coats of the paint finish, with sufficient time elapse between coats, as necessary to ensure uniform appearance
5. The contractor will replace deteriorated or damaged materials prior to the application of the paint finish
6. The contractor will replace deteriorated sealants or caulk prior to the application of the paint finish

The useful life of protective paint finishes in East Amherst is from four- to six-years. We include the 2016 budgeted paint work and recommend the Association budget for the following activities beginning by 2022:

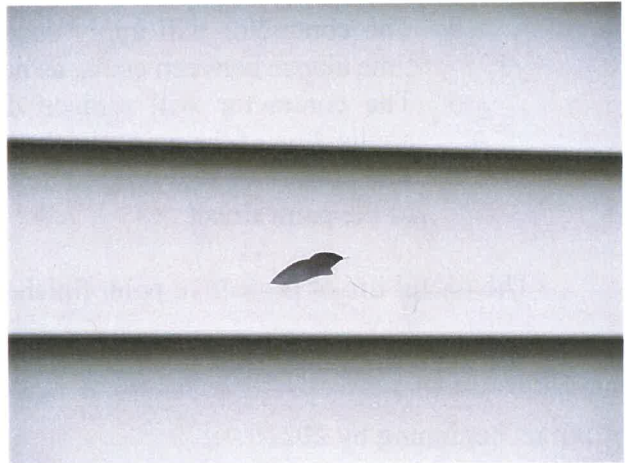
- Paint finish applications
- Replacement of up to five percent (5%), of the trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

Forest Edge should budget subsequent applications and associated replacements every six years thereafter. We depict this information on Line Item 1.910 of *Reserve Expenditures*. We base our estimate of cost on information provided by Management.

Walls, Vinyl Siding - Vinyl siding comprises approximately 96,250 square feet of the exterior walls at the west side of the development built from 1989 to 1994. This quantity includes the aluminum soffit and fascia. The siding is original and in good to fair overall condition. We note siding deflection, damage to the trim and siding, and siding gaps.



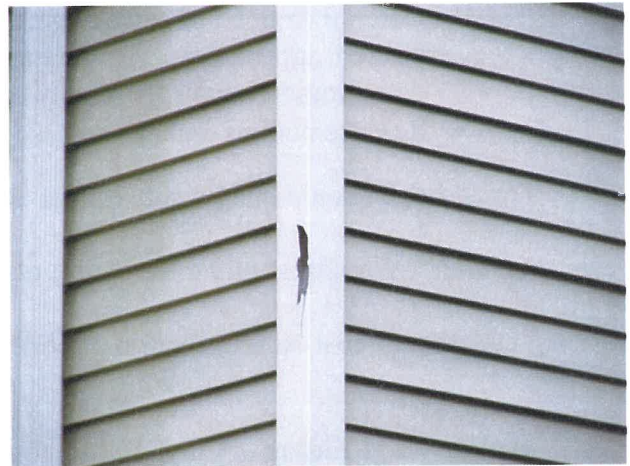
Siding deflection noted at Unit 103



Siding damage noted at Unit 201



Siding gap noted at Unit 206



Trim damage noted at Unit 304



Garage door trim damage noted at Unit 312



Garage siding damage noted at Unit 454

The siding at Forest Edge consists of the following:

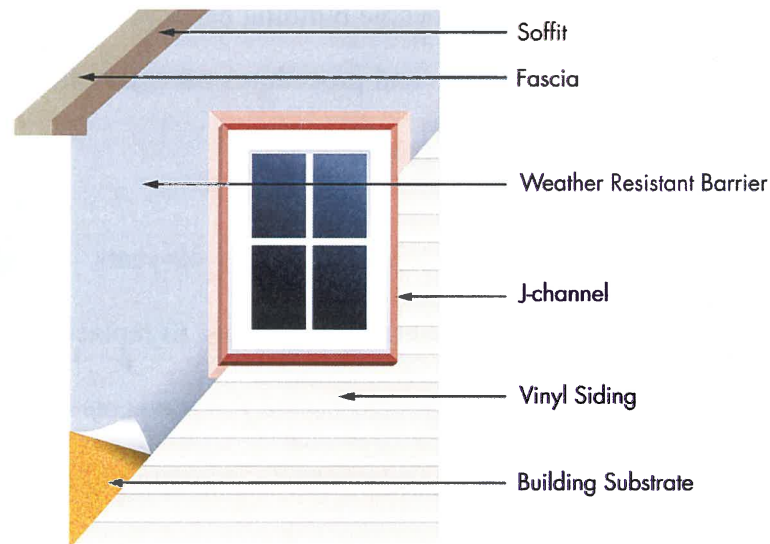
- Clapboard triple three-inch profile
- J-channel trim at window and door perimeters, and other penetrations
- Water-vapor permeable building paper protects the buildings

We elaborate on solutions and procedures necessary for maintenance and replacement of vinyl siding in the following discussion.

Vinyl siding has a useful life of 35- to 40-years. Consideration of appearance and development of issues largely governs the decision to replace, in whole or partially, prior to the end of its useful life. Maintenance and partial replacements of the siding may extend the useful life. Normal deterioration mainly relates to discoloration of the exterior finish from exposure to sunlight, weathering and air pollutants. Loosening of the fasteners also contributes to the possible need for premature replacement. Vinyl siding gets damaged from forces which cause it to warp and crack, such as lawn care equipment, wind-driven objects, etc.

The lack of replacement pieces matching the color and profile of the existing siding may result in the need for a premature replacement. These variables may affect the need for partial and complete replacements. The following diagram details the use of building wrap in a vinyl siding system:

VINYL SIDING DETAIL



© Reserve Advisors, Inc.

The Association should install new vinyl siding as recommended by the *Vinyl Siding Institute, Inc.* We briefly summarize these recommendations in the following narrative:

Weather Resistant Barrier - Vinyl siding should be installed over a continuous weather resistant barrier. Vinyl siding is an exterior cladding that is not watertight. The weather resistant barrier should include water-vapor permeable building paper and properly integrated flashing around all penetrations.

Fasteners - Vinyl siding fasteners include nails, staples and screws. Only aluminum, galvanized steel or other corrosion-resistant fasteners should be used. The fasteners should penetrate a minimum of $\frac{3}{4}$ of an inch into the framing.

Fastening - The fasteners should allow $\frac{1}{32}$ of an inch clearance between the fastener head and the siding, and the fasteners should be installed in the center of the nailing slot in the nailing flange. This will allow for the thermal expansion and contraction of the siding. Overtight fasteners will cause the siding to buckle. Fasteners should be spaced a maximum of 16 inches apart for horizontal siding, 12 inches for vertical siding and 8- to 10-inches for vinyl siding accessories.

Installation - Siding panels should overlap by approximately one inch. Joints should be staggered so that no two courses are aligned vertically, unless separated by at least three courses. The siding should not be caulked where the siding meets trim accessories, such as J-channel, or at overlap joints. J-channel should be installed a minimum of $\frac{1}{2}$ inch off of roof lines.



With consideration of the age and existing condition of the siding, we recommend the Association anticipate a phased replacement of the siding beginning by 2027 and concluding by 2029. For purposes of this Reserve Study, we base our cost on replacement with a minimum of .048-inch thick siding. We note this information on Line Item 1.920 of *Reserve Expenditures*.

Vinyl siding is relatively maintenance free. However, the Association should periodically clean the vinyl siding with a water hose. A non-abrasive household cleaner or manufacturer specified vinyl siding cleaner will remove more intense stains. The Association should fund these ongoing expenses through the operating budget.

Property Site Elements

Asphalt Pavement, Crack Repair, Patch, Seal Coat and Striping - Asphalt pavement comprises 22,250 square yards of access drives throughout the community. The pavement is in good to fair overall condition. We note crack repairs and patches, standing water, pavement settlement, seal coat distress and non-seal coated spots as depicted in the following narrative “**Asphalt Pavement, Repaving**”. Management informs us the Association applied a seal coat and conducted pavement repairs in 2016. The Association should plan future applications and repairs every three- to five-years. These activities reduce water infiltration and the effects of inclement weather. We elaborate on solutions and procedures necessary for the optimal maintenance of asphalt pavement in the following discussion.

We recommend periodic seal coat applications, crack repairs and patching to maintain the pavement. These activities minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement. Asphalt pavement is susceptible to isolated areas of accelerated deterioration in areas that experience freeze-thaw

cycles, at the centerlines of streets and at high traffic areas such as intersections. Depressions often appear at areas where vehicles park such as driveways and parking areas. Isolated areas of depressions, cracks and deterioration indicate the need for crack repairs and patching. The contractor should patch areas that exhibit potholes, alligator or spider web pattern cracks, and areas of pavement that are severely deteriorated from oil and gasoline deposits from parking vehicles. Area patching requires total replacement of isolated areas of pavement. The contractor should mechanically rout and fill all cracks with hot emulsion. Crack repair minimizes the chance of the cracks transmitting through the pavement.

There are four main types of seal coats available: fog coat, acrylic sealer, chip seals and asphaltic emulsion. A fog coat is a simple mixture of water and asphalt. Acrylic sealers include an acrylic additive to the water and asphalt mixture for greater resistance to abrasion. Fog coats and acrylic sealers are typically spray applied and are only for aesthetic purposes. Chip seal is the most substantial type of seal coat which involves placement of oil and aggregate on the driving surface. Either a roller or normal vehicular traffic works the gravel into the oil. Asphaltic emulsions combine a sharp sand mixture or mineral fibers, and an emulsifying agent with the water and asphalt mixture. Asphaltic emulsions are typically hand applied with squeegees to ensure that the sealer fills surface abrasions and minor cracks. This prevents the infiltration of water through cracks into the underlying pavement base. Seal coats therefore minimize the damaging effects of water from expansion and contraction. We regard asphaltic emulsions as the most effective and economical type of seal coat.

Forest Edge should repair any isolated areas of deteriorated pavement prior to seal coat applications. 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. Our future estimates of cost include an allowance for repair activities.

We include the 2016 budgeted expense for pavement repairs, seal coat and striping. We recommend Forest Edge plan for pavement repairs and the next application of seal coat by 2020 and subsequent applications and repairs every four years thereafter except when repaving occurs. Line Item 4.020 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of these activities. Future events will likely require repairs that are more extensive. We opine the historical cost provided by Management to be low.

Asphalt Pavement, Repaving - Asphalt pavement comprises 22,250 square yards of access drives throughout the community. Of this, 2,850 square yards is in fair condition at an estimated eight years of age, 10,650 square yards is in good to fair condition at an estimated six years of age, and 8,750 square yards is in good condition at an estimated four years of age. See the aerial map with graphical overlay depicting pavement conditions included below. We note crack repairs and patches, standing water, pavement settlement, seal coat distress and non-seal coated spots.



Asphalt pavement overview



Asphalt pavement overview



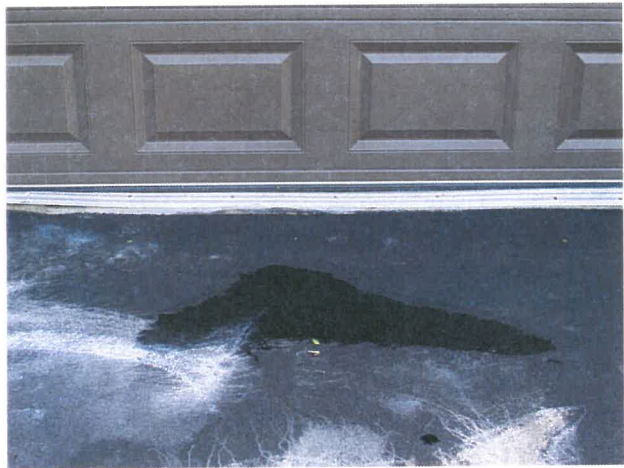
Asphalt pavement overview



Significant crack repairs



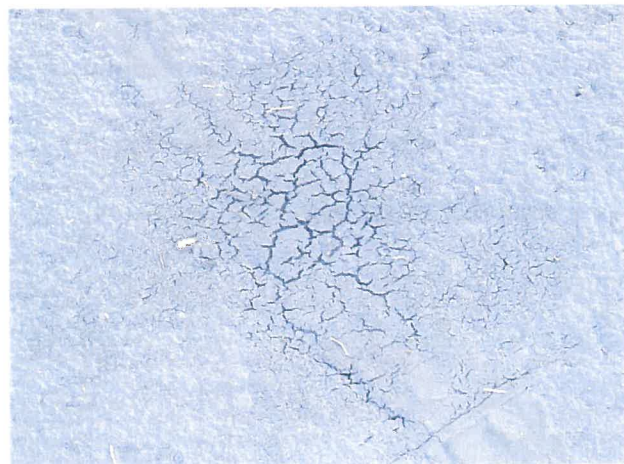
Standing water



Pavement settlement



Non-seal coated parking space



Seal coat distress



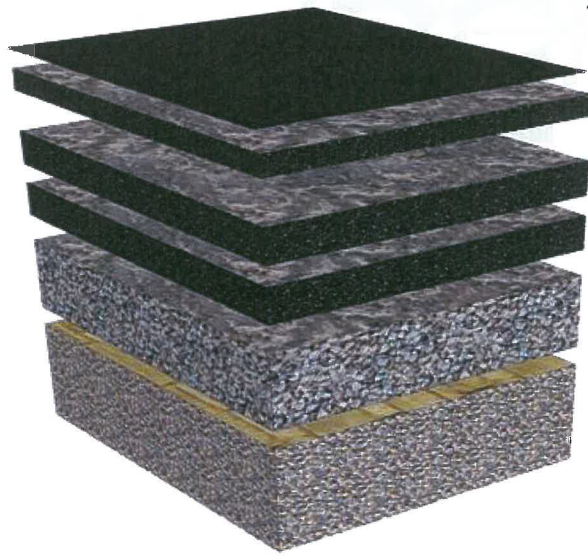
Pavement patch repair



Pavement deterioration

The useful life of pavement in East Amherst is from 15- to 20-years. We include the following repaving solutions and procedures for the benefit of the present and future board members.

Components of asphalt pavement include native soil, aggregate and asphalt. First the contractor creates a base course of aggregate or crushed stone and native soil. The base course is individually compacted to ninety-five percent (95%) dry density prior to the application of the asphalt. Compaction assures a stable base for the asphalt that reduces the possibility of settlement. For street systems and access drives, 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 these components:



ASPHALT DIAGRAM

Sealcoat or Wearing Surface

Asphalt Overlay Not to Exceed
1.5 inch Thickness per Lift or Layer

Original Pavement Inspected and
milled until sound pavement is found,
usually comprised of two layers

**Compacted Crushed Stone
or Aggregate Base**

**Subbase of Undisturbed
Native Soils** Compacted to
95% dry density

© Reserve Advisors, Inc.

The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and



overlay method for initial repaving followed by the total replacement method for subsequent repaving at Forest Edge.

A variety of repairs are necessary to deteriorated pavement prior to the application of an overlay. The contractor should use a combination of area patching, crack repair and milling before the overlayment. Properly milled pavement removes part of the existing pavement and permits the overlay to match the elevation of adjacent areas not subject to repaving. Milling also allows the contractor to make adjustments to the slope of the pavement to ensure proper drainage. The contractor should clean the milled pavement to ensure proper bonding of the new overlayment. We recommend an overlayment thickness that averages 1½ inches (not less than one inch or more than two inches). Variable thicknesses are often necessary to create an adequate slope for proper drainage. The contractor should identify and quantify areas of pavement that require area patching, crack repair and milling to help the Association compare proposed services.

Total replacement requires the removal of all existing asphalt. For area patching, we recommend the contractor use a rectangular saw cut to remove the deteriorated pavement. For larger areas such as entire parking areas or driveways, we recommend the contractor grind, mill or pulverize the existing pavement to remove it. The contractor should then augment and compact the existing aggregate and native soil to create a stable base. Finally the contractor should install the new asphalt in at least two lifts.

The time of replacement is dependent on the useful life, age and condition of the pavement. The useful life is dependent in part on the maintenance applied to the pavement, the amounts and concentration of auto solvents that penetrate the pavement, the exposure to sunlight



and detrimental effects of inclement weather. Forest Edge should repair any isolated areas of deteriorated pavement concurrent with periodic seal coat applications. The following table depicts our repaving recommendations.

Location	Method	Recommended Year(s)
Fair Condition Pavement	Mill and Overlay	2026
Good to Fair Condition Pavement	Mill and Overlay	2028
Good Condition Pavement	Mill and Overlay	2030
Fair Condition Pavement	Total Replacement	2044
Good to Fair Condition Pavement	Total Replacement	2046

We recommend the Association anticipate area patching of up to ten percent (10%) with milling and overlayment events. We depict this information on Line Items 4.040 through 4.046 of *Reserve Expenditures*. The Association should coordinate asphalt repaving of good to fair condition and good condition pavement with related activities such as capital repairs to catch basins.

Asphalt Pavement, Repaving, Walking Paths - The Association maintains 760 square yards of asphalt walking paths running north to south at the center of the community. These paths are in poor overall condition at an unknown age. We note fatigue cracks and pavement heave.



Asphalt pavement walking path overview, note significant cracking



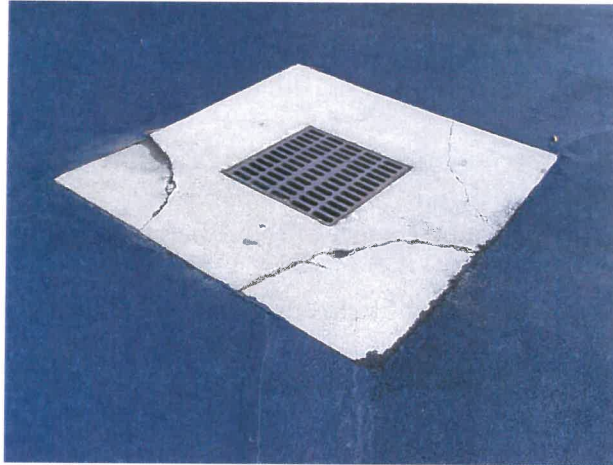
Pavement heave



Fatigue cracks

Walking path asphalt pavement is typically not as thick as parking area or street asphalt pavement. This type of pavement application has the potential for deterioration from tree roots, settlement and development of cracks. The need to maintain a safe pedestrian surface results in a useful life of 10- to 15-years for walking path asphalt pavement. We recommend the Association budget for total replacement in 2017 and again by 2032. We anticipate total replacement is likely to maintain a safe pedestrian walking surface. We include this information on Line Item 4.080 of *Reserve Expenditures*.

Catch Basins - The 22 concrete catch basins collect storm water from the pavement and conduct it into the storm water system. Management informs us the Association has repaired or replaced the majority of the catch basins. The overall condition of the catch basins is good without settlement visually apparent.



Catch basin overview with cracks in concrete collar

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

The Association should anticipate the occasional displacement or failure of a catch basin and the surrounding pavement from erosion. Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement. Forest Edge should plan to repair or replace any displaced or failed catch basins concurrently with the surrounding pavement. The exact times and amount of capital repairs or replacements are dependent upon variable natural forces. Based on the age and condition of the catch basins, we recommend the Association anticipate the inspection, capital repair or partial replacement of up to 11 catch basins in conjunction with repaving by 2028 and 2030. We recommend the

Association anticipate the replacement of up to 11 catch basins in coordination with repaving by 2046. We include this information on Line Items 4.100 and 4.105 of *Reserve Expenditures*.

Concrete, Flatwork - The Association maintains various applications of concrete flatwork. These applications of concrete have useful lives of up to 65 years although isolated deterioration of limited areas of concrete is common. Inclement weather, inadequate subsurface preparation and improper concrete mixtures or finishing techniques can result in premature deterioration such as settlement, chips, cracks and spalls. Variable conditions like these result in the need to plan for periodic partial replacements of the concrete flatwork throughout the next 30 years. We comment on the respective quantities, conditions and times of partial replacements of concrete flatwork in the following sections of this narrative.

Concrete Sidewalks - Concrete sidewalks comprise 9,200 square feet throughout the community. The sidewalks are in good to fair overall condition. We note concrete cracks and settlement repairs.



Diamond grinded section of concrete sidewalk



Concrete sidewalk cracks

We estimate that up to 4,600 square feet of concrete sidewalks, or fifty percent (50%) of the total, will require replacement during the next 30 years. We recommend the Association budget for replacement of 460 square feet of concrete sidewalks every three years beginning by 2018. Line Item 4.140 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of replacements. We base our estimate of replacement on four-inch thick, 3,000 pounds per square inch (PSI) concrete with 6x6 - W1.4xW1.4 steel reinforcing mesh. We recommend an annual inspection of the sidewalks to identify potential trip hazards. We suggest the Association grind down or mark these hazards with orange safety paint prior to replacement and fund this ongoing activity through the operating budget.

Concrete Stoops - Each unit has a concrete stoop at its front entry. The 155 stoops are in good to fair overall condition. We estimate that up to 80 stoops, or approximately fifty-two percent (51.6%) of the total, will require replacement during the next 30 years. Based on their age and condition, we recommend the Association anticipate the replacement of eight stoops by 2018 and every three years thereafter. Line Item 4.170 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of replacements.

The Association should coordinate the concrete flatwork partial replacements on Line Items 4.140 and 4.170 of *Reserve Expenditures* to maximize the given amount of concrete in a single event. This will permit the use of a single contractor and likely achieve the most economical unit price for the work.

Fences, Vinyl - Approximately 1,780 linear feet of vinyl fences are found at the front and rear elevations of the units on the east side of the development. The fences are in good condition at eight years of age.



Vinyl fence overview



Vinyl fence overview

Vinyl fences are resistant to moisture and do not require paint applications. Normal deterioration mainly relates to discoloration of the finish from exposure to sunlight, weathering and air pollutants. These types of fences are susceptible to damage from lawn care equipment, primarily as the vinyl ages and become brittle. Vinyl fences with wood or metal backing are more durable than hollow frame vinyl fences. We recommend the Association anticipate a useful life of 15- to 20-years for these fences and budget for a phased replacement beginning by 2028 and concluding by 2030. We include this information on Line Item 4.261 of *Reserve Expenditures*.

Irrigation Systems – Four irrigation systems water the common lawn and landscaped areas at the community entrance signs. The age of the systems is unknown. They are reported in good condition. Irrigation systems typically include the following components:

- Electronic controls (timer)

- Impact rotors
- Network of supply pipes
- Pop-up heads
- Valves

Water pressure activates the lawn spray pop-up heads. Controllers operate the main water flow valves. The exact amounts and locations of system components were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection.

The system as a whole has a useful life of up to 40 years. The system network supply pipes will dislodge as tree roots grow and soil conditions change. Forest Edge 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. Based on the reported satisfactory working condition, we recommend Forest Edge budget for a complete replacement of the systems by 2024. We note this information on Line Item 4.420 of *Reserve Expenditures*.

Landscape, Partial Replacements - 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. In consideration of these factors and at the request of Management, we include an annual landscape allowance of \$6,000 plus inflation beginning in 2017 to ensure the accumulation of sufficient reserves for partial replacements of the landscape. The times and costs of these replacements

may vary. However, we judge the amounts shown on Line Item 4.500 of *Reserve Expenditures* sufficient to budget appropriate reserves.

Light Poles and Fixtures - The Association uses 27 metal light fixtures atop metal poles to illuminate the property. Management informs us the Association proposes to convert the light fixtures to LED in the near term. These elements vary in age and are in good condition. Light poles and fixtures of this type have useful lives of up to 25 years.



Light pole and fixture overview



Light pole and fixture overview

We include the cost for the proposed LED conversion by 2018. We base our estimate of cost on information provided by Management. We recommend the Association budget for replacement of the light poles and fixtures by 2038. We note this information on Line Items 4.560 and 4.561 of *Reserve Expenditures*.

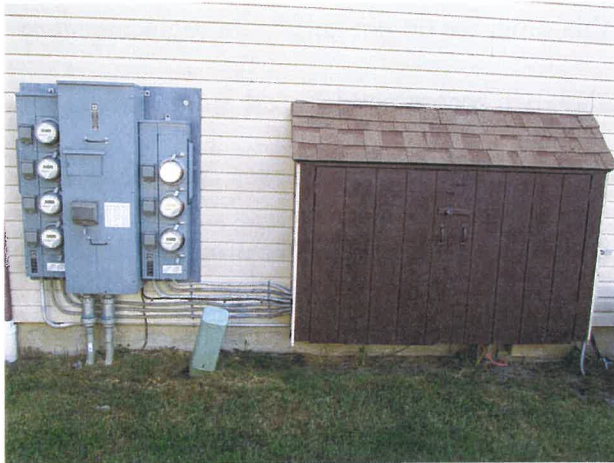
Pipes, Subsurface Utilities - The Association maintains the subsurface utility pipes throughout the property. The exact amounts and locations of the subsurface utility pipes were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection. Management informs us of a history of water main breaks. We anticipate a



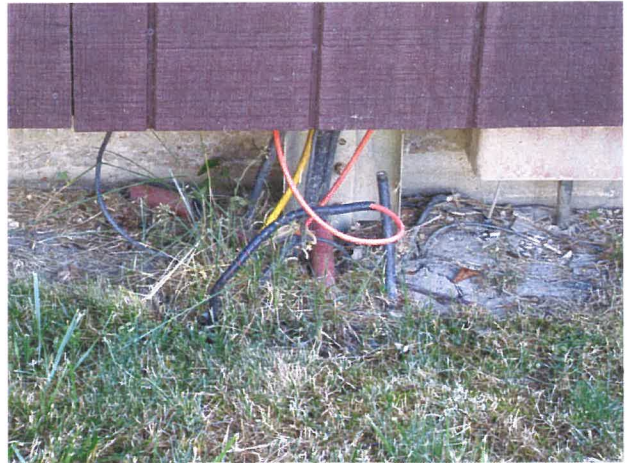
useful life of up to and likely beyond 85 years. At this time, we do not anticipate replacement of continuous lengths of subsurface utility pipes. Rather, we recommend Forest Edge budget for repairs to isolated occurrences of breached utilities. For budgetary purposes, we include an annual allowance for possible repairs beginning in 2017. We note this information on Line Item 4.650 of *Reserve Expenditures*. We base our estimate of cost on historical information provided by Management.

Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Forest Edge could budget sufficient reserves for these utility repairs and have the opportunity to adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual repairs to budget sufficient reserves.

Utilities, Electrical, Junction Boxes - Forest Edge maintains the 14 electrical junction boxes at the east development. Management informs us the Association has replaced two of the junction boxes. The remaining 12 electrical junction boxes are original and in operational condition.



Junction box repair



Ground connections severed from soil movement

These elements have a useful life of up to 65 years. We recommend the Association budget for phased replacement beginning in 2017 and concluding by 2028. We depict this information on Line Item 4.820 of *Reserve Expenditures*.

Water Main, Backflow Prevention Valve - Forest Edge maintains the backflow prevention valve located at the south perimeter of the property near the walking path. The element is reported in good condition at five years of age.



Water main backflow prevention valve structure



These elements have a useful life of up to 30 years. We recommend the Association budget for replacement by 2041. We depict this information on Line Item 4.820 of *Reserve Expenditures*.

Reserve Study Update

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

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

Periodic updates incorporate these variable changes since the last Reserve Study or Update.

The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. 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.

Forest Edge 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:

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

Information Furnished by the Association	
2016 unaudited Cash Status of the Reserve Fund	602,888
2016 Remaining Budgeted Reserve Contribution	57,500
Anticipated Interest on Reserve Fund	4,120
Less Anticipated Reserve Expenditures	(42,482)
Projected 2016 Year-End Reserve Balance	\$622,026

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 East Amherst, New York at an annual inflation rate of 1.9%. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

The past and current maintenance practices of Forest Edge and their effects on remaining useful lives

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.

The anticipated effects of appreciation of the reserves over time in accord with an anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.35% (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).

Interest rates on reserves are steady or increasing in concert with the certificates of deposit and money market rates. Slight increases exist in the savings rates of one, two or three-year CDs. Without significant differences in these savings rates, shorter term investments are the choice of many investors. We recommend consultation with a professional investment adviser before investing reserves to determine an appropriate investment strategy to maximize a safe return on reserve savings. The following

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



table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

Interest Rate and Inflation Data	2015				2016			
	2015:1 (A)	2015:2 (A)	2015:3 (A)	2015:4 (A)	2016:1 (A)	2016:2 (E)	2016:3 (E)	2016:4 (E)
Average or Last Actual = (A)								
1-Year Treasury Bill	0.25%	0.27%	0.30%	0.65%	0.60%	0.55%	0.60%	0.65%
10-Year Treasury Note	1.90%	2.50%	2.70%	2.25%	1.80%	1.80%	1.85%	1.90%
30-Year Treasury Bond	2.55%	3.20%	3.40%	3.00%	2.65%	2.60%	2.60%	2.65%
Consumer Price Index (annualized rate)	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%
Although past indicators are not predictive of future inflation in "building" construction, minimal inflation exists for past 2 years April, 2014 to April 2016 of 1% to 2.5%.								
Savings Rates Results RANGE as found in http://www.bankrate.com	0.02 to 1.11%		Money Market Savings		0.15 to 1.45%		for 2-Year Certificate of Deposit	
	0.1 to 1.25%		1-Year Certificate of Deposit		0.15 to 1.50%		for 3-Year Certificate of Deposit	
Estimated Near Term Yield Rate for Reserve Savings				1.35%				
Est. Near Term Local Inflation Rate for Future Capital Expenditures				1.9%				
								05/05/2016

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

6. 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 Forest Edge 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) Forest Edge 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.



7. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, Inc. will perform its services as an independent contractor in accordance with our professional practice standards. Our compensation is not contingent upon our conclusions.

Our inspection and analysis of the subject property is limited to visual observations and is noninvasive. We will inspect sloped roofs from the ground. We will inspect 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 our observation. Conditions can change between the time of inspection and the issuance of the report. Reserve Advisors does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, structural, latent or hidden defects which may or may not be present on or within the property. Our opinions of estimated costs and remaining useful lives are not a guarantee of the actual costs of replacement, a warranty of the common elements or other property elements, or a guarantee of remaining useful lives.

We assume, without independent verification, the accuracy of all data provided to us. You agree to indemnify and hold us 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 as 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 controlling person of Reserve Advisors, Inc., including any director, officer, employee, affiliate, or agent. Liability of Reserve Advisors, Inc. 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 - Reserve Advisors, Inc. will complete the services in accordance with the Proposal. The Report represents a valid opinion of our findings and recommendations and is deemed complete. However, we will consider any additional information made available to us in the interest of promptly issuing a Revised Report if changes are requested within six months of receiving the Report. We retain the right to withhold a Revised Report if payment for services is not rendered in a timely manner. All files, work papers or documents developed by us during the course of the engagement remains our property.

Your Obligations - You agree to provide us access to the subject property during our on-site visual inspection and tour. You will provide to us to the best of your ability and if reasonably available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete our Study. You agree to pay our actual attorneys' fees and any other costs incurred in the event we have to initiate litigation to collect on any unpaid balance for our services.

Use of Our Report and Your Name - Use of this Report is limited to only the purpose stated herein. Any use or reliance for any other purpose, by you or third parties, is invalid. Our Reserve Study Report in whole or part is not and cannot be used as a design specification, design engineering services or an appraisal. You may show our report in its entirety to those third parties who need to review the information contained herein. The Client and other third parties viewing this report should not reference our name or our report, in whole or in part, in any document prepared and/or distributed to third parties without our written consent. *This report contains intellectual property developed by Reserve Advisors, Inc. specific to this engagement and cannot be reproduced or distributed to those who conduct reserve studies without the written consent of Reserve Advisors, Inc.*



We reserve the right to include our client's name in our client lists, but we will maintain the confidentiality of all conversations, documents provided to us, and the contents of our reports, subject to legal or administrative process or proceedings. These conditions can only be modified by written documents executed by both parties.

Payment Terms, Due Dates and Interest Charges - The retainer payment is due upon authorization and prior to shipment of the report. The final payment of the fee is due immediately upon receipt of the Report. Subsequent changes to the report can be made for up to six months from the initial report date. Any outstanding balance after 30 days of the invoice date is subject to an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court in the State of Wisconsin.

CONDITIONS OF OUR SERVICE ASSUMPTIONS

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, we make no guarantee nor assume liability for the accuracy of any data, opinions, or estimates identified as furnished by others that we used in formulating this analysis.

We did not make any soil analysis or geological study with this report; nor were any water, oil, gas, coal, or other subsurface mineral and use rights or conditions investigated.

Substances such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials could, if present, adversely affect the validity of this study. Unless otherwise stated in this report, the existence of hazardous substance, that may or may not be present on or in the property, was not considered. Our opinions are predicated on the assumption that there are no hazardous materials on or in the property. We assume no responsibility for any such conditions. We are not qualified to detect such substances, quantify the impact, or develop the remedial cost.

We have made a visual inspection of the property and noted visible physical defects, if any, in our report. Our inspection and analysis was made by employees generally familiar with real estate and building construction; however, we did not do any invasive testing. Accordingly, we do not opine on, nor are we responsible for, the structural integrity of the property including its conformity to specific governmental code requirements, such as fire, building and safety, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

Our opinions of the remaining useful lives of the property elements do not represent a guarantee or warranty of performance of the products, materials and workmanship.



8. 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. Each Team Review requires the attendance of several engineers, a Review Coordinator, Director of Quality Assurance and other participatory peers. 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



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

CURRENT CLIENT SERVICES

Alan M. Ebert, a Professional Engineer, is 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 hundreds 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

Reserve Specialist (RS) - Community Associations Institute

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



NICOLE L. LOWERY, PRA, RS
Associate Director of Quality Assurance

CURRENT CLIENT SERVICES

Nicole L. Lowery, a Civil Engineer, is an Associate Director of Quality Assurance for Reserve Advisors. Ms. Lowery is responsible for the management, review and quality assurance of reserve studies. In this role, she assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Ms. Lowery has been involved with hundreds of Reserve Study assignments. The following is a partial list of clients served by Nicole Lowery demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

Amelia Surf & Racquet Club This oceanfront condominium community comprises 156 units in three mid rise buildings. This Fernandina Beach, Florida development contains amenities such as clay tennis courts, two pools and boardwalks.

Ten Museum Park This boutique, luxury 50-story high rise building in downtown Miami, Florida consists of 200 condominium units. The amenities comprise six pools including resistance and plunge pools, a full-service spa and a state-of-the-art fitness center. The property also contains a multi-level parking garage.

3 Chisolm Street Homeowners Association This historic Charleston, South Carolina community was constructed in 1929 and 1960 and comprises brick and stucco construction with asphalt shingle and modified bitumen roofs. The unique buildings were originally the Murray Vocational School. The buildings were transformed in 2002 to 27 high-end condominiums. The property includes a courtyard and covered parking garage.

Lakes of Pine Run Condominium Association This condominium community comprises 112 units in 41 buildings of stucco construction with asphalt shingle roofs. Located in Ormond Beach, Florida, it has a domestic water treatment plant and wastewater treatment plant for the residents of the property.

Rivertowne on the Wando Homeowners Association This exclusive river front community is located on the Wando River in Mount Pleasant, South Carolina. This unique Association includes several private docks along the Wando River, a pool and tennis courts for use by its residents.

Biltmore Estates Homeowners Association This private gated community is located in Miramar, Florida, just northwest of Miami, Florida and consists of 128 single family homes. The lake front property maintains a pool, a pool house and private streets.

Bellavista at Miromar Lakes Condominium Association Located in the residential waterfront resort community of Miromar Lakes Beach & Golf Club in Fort Myers, Florida, this property comprises 60 units in 15 buildings. Amenities include a clubhouse and a pool.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Lowery was a project manager with Kipcon in New Brunswick, New Jersey and the Washington, D.C. Metro area for eight years, where she was responsible for preparing reserve studies and transition studies for community associations. Ms. Lowery successfully completed the bachelors program in Civil Engineering from West Virginia University in Morgantown, West Virginia.

EDUCATION

West Virginia University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute

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



KEARY D. WASS, E.I.T., RS
Responsible Advisor

CURRENT CLIENT SERVICES

Keary D. Wass, a Civil Engineer, is an Advisor for Reserve Advisors. Mr. Wass 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 apartments, high rises, condominiums, townhomes and homeowners associations. Mr. Wass frequently serves as the Quality Assurance Review Coordinator for all types of developments.

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

Frisco Stonewater Crossing Homeowners Association is a 243 unit homeowners association located in Frisco, Texas. This development boasts an impressive in-ground pool, pool house and large playground. It also has two ponds surrounded by decorative concrete retaining walls.

River North Commons Condominium Association Located in downtown Chicago the association includes 198 units in two seven-story mid-rise buildings. This secured community is comprised of high end finishes, ramp and underground parking, fitness area and a party room.

Cherry Hills Country Club Situated just outside of Denver in Englewood, Colorado, this private Country Club provides a scenic view of the Rockies.. The Country Club amenities include a recently expanded clubhouse with three kitchens, 18-hole golf course, driving range, and a pool and tennis building.

Camp For All Located in Texas between Houston and Austin, this campground specializes in programs designed for children and adults with special needs. The campground includes group and private lodging, a clubhouse, a pool, basketball area and baseball field, climbing walls and zip lines, a church, a large and small animal ranch, and an art center.

Southdown Village Community Association is a large planned unit development located in Houston, Texas. The Association consists of 954 single family homes and includes a pool and pool house, fencing, and two parks with large playgrounds.

Watermark Place Condominiums is a 12-story high-rise located in Columbia, Maryland. This high-rise includes a secured entrance, pool area and fitness center, and a multi-story parking structure.

Kenbrook Hills Unit Owners' Association is a 30-unit, five-building community located in Columbus, Ohio. It is a comfortable development constructed amongst mature trees with creeks surrounding three sides of the property. This property features unique walkout style units.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Wass worked as a civil engineer for a construction engineering firm specializing in the repair and construction of underground structures. He was responsible for soil condition analysis, inspection of existing structures, repair and new construction design, and construction oversight of a variety of municipal and private engineering projects. Mr. Wass attended the University of Minnesota in Minneapolis, Minnesota where he attained his Bachelor of Science degree in Civil Engineering. At the University of Minnesota, Mr. Wass performed undergraduate research in the field of non-destructive testing of rigid pavements.

EDUCATION

University of Minnesota - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS

Engineer in Training (E.I.T.) MN - Minnesota Board of Architecture, Engineering, Land Surveying
Landscape Architecture, Geoscience and Interior Design (AELSLAGID)
Reserve Specialist (RS) - Community Associations Institute



ANDREW J. FOSTER, PE, RS
Review Coordinator

CURRENT CLIENT SERVICES

Andrew J. Foster, a Civil Engineer, is an Advisor for Reserve Advisors. Mr. Foster 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 Andrew Foster demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

Ouray Ranch Homeowners Association is a homeowners association found near the headwaters of the Colorado River and within close proximity to Lake Granby, Colorado. This sprawling Association is responsible for the maintenance of the community historic lodge, site amenities, and water treatment and water distribution facilities. The Association also maintains the river banks of the Colorado River that pass through the community and several ponds.

Port Herman Beach Condominium is located within the northern portion of the Chesapeake Bay, Maryland. The community is comprised of 38 waterfront units overlooking the bay. The Association maintains the building exteriors comprising asphalt shingle roofs, fiber cement siding, and wood balconies, decks and staircases. In addition, the Association is responsible for the sewage treatment and septic field systems, water treatment and distribution system, asphalt pavement streets and an extensive wood pier.

Silver Strike Lodge Owners Association is a ski-in/ski-out lodge located in the ski resort area of Park City, Utah. This seven story building features rustic interior designs and stylish floor plans. Amenities at the resort include heated underground parking garages, outdoor spa area and an exercise facility.

Shadow Creek Ranch Master Association is a sprawling planned unit development located in Pearland, Texas. The Master Association comprises four Homeowner Associations which include pool and waterpark areas, extensive networks of masonry perimeter walls, gated entrances, concrete bridges and irrigation systems.

Lone Peak Center Condominium Association is a resort located at the base of the Big Sky Resort in Big Sky, Montana. This mid-rise development comprises 60 residential units and six commercial units in one four-story building. The building exterior comprises cedar shake siding, wood timbers, stone masonry and concrete balconies. The Association also includes a pool and spa area with heated decks, and heated patios.

Four Seasons Residence Club Scottsdale at Troon North This Four Seasons resort is located within Arizona's Sonoran Desert and north of Scottsdale, Arizona. The resort boasts elegant villas with spectacular views of the surrounding desert and foothills. The Association is also responsible for a luxurious clubhouse, uniquely designed pools and recreational facilities.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Foster was a Staff Geotechnical Engineer for Terracon Consultants, Inc. Mr. Foster supervised soil profile explorations in a range of northwestern states, performed preliminary foundation designs for a variety of commercial buildings and provided pipeline drilling design recommendations for ConocoPhillips.

EDUCATION

Montana State University - M.S. Civil Engineering
Montana State University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS

Reserve Specialist (RS) - Community Associations Institute
Professional Engineering License - Wisconsin 2015



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.

Reserve Study Update

August 15, 2016

The Reserve Study for Forest Edge Cluster Association, Inc.
Was submitted onAugust 15, 2016

To maintain the most accurate and cost-effective replacement schedule and funding plan for your property elements, this study should be updated on or about**Third Quarter, 2018**
...but no later than.....**Third Quarter, 2019**

As a valued client, we are pleased to offer a future reserve study update with site visit for.....**\$3,050**
For a Reserve Study Update with Site visit as noted above.
This future update fee is based on the same property components that were contained in your last Reserve Advisors' reserve study or update. We are pleased to include property additions for an additional fee.

To initiate your Reserve Study Update, please sign this authorization and fax or mail to the number below. Upon receipt of this authorization we will contact you to schedule your site visit and invoice for the Reserve Study Update Service.

Sign this contract below and fax to **414-272-3663**. Or mail to
Reserve Advisors, Inc.
735 N. Water St., Suite 175
Milwaukee, WI 53202

Delivery options for your Reserve Study Update Report, Please check one of the following:

- 1-Full color printed copy PLUS Electronic Report, FREE
- 2-Full color printed copies PLUS Electronic Report, \$100

For: Reserve Advisors, Inc.

Signature: Michelle Baldry

Michelle Baldry
Director of Client Services - Northeast
Region
MBaldry@reserveadvisors.com
Ref. # 020366
(844) 701-9884

For Forest Edge Cluster Association, Inc.

Name: _____

Title: _____

Date: _____

Phone: _____

Agent or Manager: Dillon Joseph

Management Firm: Clover Management Inc.