RESERVE STUDY

(UPDATE, WITH-SITE-VISIT/ON-SITE REVIEW)

Villas at Northville Hills Condominium Association
Northville, Michigan

January 1, 2015 to December 31, 2015

Photo: View of entry area signage

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August 11, 2014

Linda Martin, CMCA, AMS, PCAM
Community Association Manager
Villas at Northville Hills Condominium Association
40000 Grand River Avenue, Suite 100
Novi, MI 48375

Re: "Update, With Site-Visit/On-Site Review" Reserve Study
Villas at Northville Hills Condominium Association
Northville, Michigan

Dear Linda Martin:

In fulfillment of our agreement as outlined in the letter of engagement dated May 1, 2014, we are pleased to transmit this "Update, With Site-Visit/On-Site Review" Reserve Study for the Villas at Northville Hills Condominium Association. This report details the development of our study and sets forth our conclusions, along with supporting data and reasoning which forms the basis of our conclusions.

The conclusions in this Reserve Study are qualified by certain definitions, assumptions, limiting conditions, and certifications which are set forth in the attached report.

The intended user of this report is the Villas at Northville Hills Condominium Association. This study is to be used by the intended user for the purpose of budgeting and long-term major repair and replacement planning. The scope of work included in this study is unique to the intended use and intended user, and this report may not be utilized for any other use or user.

This study complies with the standards promulgated by the Community Associations Institute (CAI) for a "Update, With Site-Visit/On-Site Review" Reserve Study. In addition, this study adheres to the applicable sections of the *Uniform Standards of Professional Appraisal Practice* of the Appraisal Foundation, as well as the *Code of Professional Ethics* of the Appraisal Institute.

This letter must remain attached to the report in order for the opinion set forth to be considered valid.

Respectfully submitted,

Paul K.T. Conahan, MBA, RS
State Certified General Real Estate Appraiser
License No. 1201002454

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SUMMARY AND RECOMMENDED FUNDING PLAN

INTRODUCTION

A Reserve Study is a tool which anticipates major common area repair and replacement expenses and develops a prudent Reserve Funding Plan to pay for these expenses. By its nature, a Reserve Study must make assumptions about the future, which can sometimes be unpredictable. However, by using meticulous research and analysis together with proven methodologies, a well-executed Reserve Study provides condominium associations with valuable budget planning information and guidance on upcoming long-term maintenance and repairs.

In addition, a Reserve Study is a key marketing component for well-run condominium associations, since potential buyers can be assured that common elements will be cared for, and that association fees will not increase dramatically due to a lack of foresight and planning.

Villas at Northville Hills Condominium Association (Villas at Northville Hills) directed Michigan Reserve Associates to do a "Update, With Site-Visit/On-Site Review" Reserve Study. On April 25, 2014 we performed an on-site noninvasive inspection.

A Reserve Study consists of two major components.

Physical Analysis	Financial Analysis
• Component Survey and Inventory	• Current Reserve Fund Status
• Assessment of Component Condition	• Recommended Funding Plan
• Estimate of Useful Life, Effective Age, Remaining Useful Life, and Replacement Cost	

Villas at Northville Hills consists of 184 units. The project was built in several phases spanning 2002 to 2013.

The Reserve Components were established based on our review of the governing documents (e.g., master deed and bylaws for condominiums, declaration of covenants and restrictions and/or bylaws for homeowners associations, or occupancy agreement in a cooperative association), and interviews with representatives of Kramer-Triad Management Group. The following table provides an inventory of the reserve components:

Inventory of Reserve Components

Reserve Component Inventory	Quantities Total	First Year of Replacement	Life Analysis (Yrs.) Normal	Remaining
Exterior Building Components				
30-Year Roof Shingles+Partial Gutter Replacement; Phased	453,581 SF	2027	25	12
Concrete Sidewalk For Units; Partial Replacement	25,573 SF	2019	50	37
Concrete Parking Aprons; Partial Replacement	96,317 SF	2019	50	37
16' x 7' Garage Doors; Phased Replacement	184 UNITS	2022	20	7
Site Elements				
Concrete Sidewalk; Partial Replacement	24,829 SF	2017	50	37
Concrete Curbing; Phased Partial Replacement	13,854 LF	2017	50	37
Street Asphalt; Mill and Overlay; Phase 1; Phased	90,406 SF	2022	18	7
Street Asphalt; Mill and Overlay; Phase 2; Phased	35,158 SF	2029	18	14
Pedestrian Path Asphalt; Mill+Overlay on Five Mile and Sheldon; Ph.	11,446 SF	2022	20	7
Pole Lights; Replacement	5 UNITS	2029	25	14
Tennis Court Surface; 30% Replacement	4,248 SF	2022	20	7
Tennis Court Fence 10' Height; 30% Replacement	143 LF	2032	30	17
Wood Fence Along Sheldon & 5 Mile; Phased Replacement	1,145 LF	2027	25	12
Stormwater Detention Basin, Dredging	1 LOT	2032	30	17
Clubhouse Elements				
30-Year Roof Shingles Replacement+Partial Gutter Replacement	2,416 SF	2027	25	12
Windows and Doors; Replacement	454 SF	2032	30	17
Furnace and Condenser; Replacement	1 LOT	2022	20	7
Interior Renovations; 1,939 SF @ $7 PSF + Appliances; Replace	1 LOT	2020	15	5
Cybex Quality Exercise Equipment; Replace	4 UNITS	2018	10	3
Pool Elements				
Metal Fencing 5' Height; Replacement	239 LF	2032	30	17
2 Post Decorative Arbor; Replacement	2 UNITS	2027	25	12
Concrete Pool Apron; Replacement	862 SF	2027	25	12
Marcite; Replacement	1 LOT	2023	10	8
Tile and Coping; Replacement	1 LOT	2025	12	10
Heater; Replacement	1 UNIT	2022	10	7

RECOMMENDED FUNDING PLAN

According to information provided by Kramer-Triad Management Group, the Villas at Northville Hills reserve fund balance as of January 1, 2015 will be $522,361. This balance was calculated by taking the reserve balance of $503,020 as of March 31, 2014, adding $92,668 in anticipated reserve income until the end of the fiscal year, then adding $1,123 in earned interest until the end of the fiscal year, and deducting $74,450 in anticipated reserve expenditures until the end of the fiscal year. Using the current Reserve Contribution amount plus a typical 0% annual increase, the projected Reserve Balance will remain positive until the year 2033, at which time there will be a negative balance of $186,702. Negative reserve balances will then continue for the remainder of the projection period. This indicates that the current Reserve Balance and annual Reserve Contributions will be inadequate to fund the anticipated Reserve Expenditures (see 3rd Tab titled "Reserve Funding Plan Graphs" for a graph showing the reserve balance using the current and recommended funding plans).

This Reserve Study calculates Reserve Expenditures based on local costs, estimated interest which will accrue to the Reserve Funds collected, and accounting for projected future inflation for materials and workmanship.

The following is our recommend Reserve Funding Plan Contributions for the duration of the projection period, along with a snapshot of the current and Recommended Reserve Contribution.

Recommended Annual Reserve Contributions

Year	Recommended Reserve Contrib.	Recommended Assessment	Year	Recommended Reserve Contrib.	Recommended Assessment
2015	$ 120,000	$ -	2028	$ 176,000	$ -
2016	123,500	-	2029	181,500	-
2017	127,000	-	2030	187,000	-
2018	131,000	-	2031	192,500	-
2019	135,000	-	2032	198,500	-
2020	139,000	-	2033	204,500	-
2021	143,000	-	2034	210,500	-
2022	147,500	-	2035	217,000	-
2023	152,000	-	2036	223,500	-
2024	156,500	-	2037	230,000	-
2025	161,000	-	2038	237,000	-
2026	166,000	-	2039	244,000	-
2027	171,000	-			

Snapshot of Current and Recommended Reserve Contribution

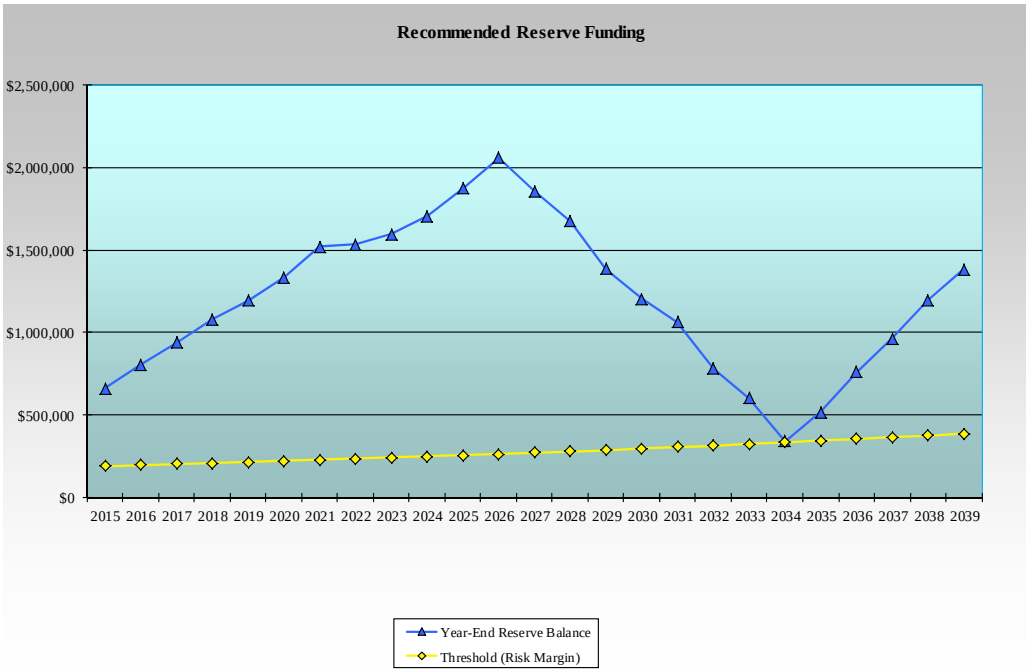
	Annual Amount	Per Unit Per Month (Average)
Current Reserve Contribution	$ 123,557	$ 55.96
Recommended Reserve Contribution	$ 120,000	$ 54.35
Amount of Increase/(Decrease) Current vs. Recommended	$ (3,557)	$ (1.61)
Recommended Additional Assessment (Year 1)	$ 0	$ 0.00

The recommended year 2015 Reserve Contribution of $120,000 ($54.35 per unit per month) reflects a decrease of $3,557, relative to the prior year's Reserve Contribution, or a decrease of $1.61 per unit per month. Starting with the 2015 Recommended Reserve Contribution of $120,000 per annum, and then increasing the Recommended Reserve Contribution by 3.0% per year, the Association's Reserves will typically remain above zero as well as above the Threshold for all years shown ("Threshold" is discussed in the next paragraph).

By following the recommended Reserve Contributions, the Association will gradually accrue a Reserve Fund which will provide the financial means to address the major Reserve Component Expenditures which will arise in the future. The recommended Reserve Contribution amount will provide adequate, but not excessive, levels of Reserves, while still maintaining a reasonable Threshold Margin which suits the particular needs of the

Association and will provide a "safety buffer" for unanticipated Reserve Expenditures which are unpredictable but inevitable.

The following graph illustrates the year-end Reserve Fund balance using the Recommended Reserve Funding Plan for the next 25 years.



In order to insure that significant overfunding or underfunding does not occur, we recommend that the Villas at Northville Hills Condominium Association update this Reserve Study every three to five years, or when any major changes in the Physical or Financial analysis occur. Such changes include accelerated Reserve Component Expenditures undertaken at the client's discretion, addition (construction) or demolition of Reserve Components, interest rate changes on reserve investments, and changes in local building costs.

Respectfully submitted,

Paul Conahan

Paul Conahan, MBA, RS
Michigan Reserve Associates LLC

INTRODUCTION AND METHODOLOGY

INTRODUCTION

A Reserve Study is a tool which anticipates major common area repair and replacement expenses and develops a prudent Reserve Funding Plan to pay for these expenses. By its nature, a Reserve Study must make assumptions about the future, which can sometimes be unpredictable. However, by using meticulous research and analysis together with proven methodologies, a well-executed Reserve Study provides condominium associations with valuable budget planning information, and guidance on upcoming long-term maintenance and repairs.

In addition, a Reserve Study is a key marketing component for well-run condominium associations, since potential buyers can be assured that common elements will be cared for, and that association fees will not increase dramatically due to a lack of foresight and planning.

There are three levels of service for Reserve Studies as espoused by the Community Associations Institute.[1]

I) **Full:** A Full Reserve Study consists of the following:

- Component Inventory
- Condition Assessment (based upon on-site visual observation)
- Life and Valuation Estimates
- Reserve Fund Status
- Recommended Reserve Funding Plan

II) **Update, With-Site-Visit/On-Site Review**, consists of:

- Component Inventory (verification only, not quantification)
- Condition Assessment (based upon on-site visual observation)

[1] "RS National Reserve Study Standards," Community Associations Institute, April 2009, p. 2.

- Life and Valuation Estimates
- Reserve Fund Status
- Recommended Reserve Funding Plan

III) **Update, No-Site-Visit/Off-Site Review**, consists of:

- Life and Valuation Estimates
- Reserve Fund Status
- Recommended Reserve Funding Plan

This is a "Update, With Site-Visit/On-Site Review" Reserve Study. For simplicity, the terms "Update, With Site-Visit/On-Site Review" Reserve Study and "Reserve Study" will be used interchangeably following this section.

Typically, the Level I (Full Reserve Study) option is only required for an association's first Reserve Study. This is our most comprehensive offering and should be used by associations which are ordering their first reserve study, or whose previous reserve study is so dated and/or inaccurate as to require a "blank slate" approach to re-survey the various common element components and their conditions. As part of our scope of work, we will thoroughly review your governing documents, maintenance schedule, and interview Board members and/or property management representatives to determine what items should be included in the list of reserve components. We will then estimate Useful Life, Remaining Useful Life, and Replacement Cost, all documented and supported with color photographs. From this Physical Analysis we will then perform a Financial Analysis which will account for your current reserve funding situation and recommend an ongoing Reserve Funding Plan.

Level II (Update, With-Site-Visit/On-Site Review) reserve studies are recommended if the association is confident that the Reserve Components have been accurately surveyed, and no major changes have occurred since the last Full Reserve Study. The scope of work includes an on-site inspection to update Useful Life, Remaining Useful Life, Cost Figures, and Financial Assumptions, but component quantities will not be re-surveyed.

When doing an "Update With Site Visit" assignment, the Reserve Component inventory is not quantified, although minor additions/deletions of the component inventory, along with their quantities and install dates, as reported by the client, will be accounted for. Excluding any changes reported by the client, the quantification of reserve components as determined by the previous reserve study will be assumed to be accurate.

Level III (Update, No-Site-Visit/Off-Site Review) reserve studies are useful when the association is confident that the Reserve Components have been accurately identified and surveyed, but due to the minimal number of Reserve Components, and short-time period elapsed since the last Reserve Study, the association does not feel an on-site inspection would be required. In order to provide a credible reserve study, we only provide this type of reserve study for existing clients, and our previous reserve study (with site visit) is less than five years old. Narrative content of this type of Reserve Study is extremely limited, with most communication occurring via an Executive Summary, charts and graphs (Reserve Expenditures and Reserve Funding Plan).

When doing an "Update Without Site Visit" assignment, the Reserve Component conditions are not visually confirmed and updated, and the Remaining Useful Lives of the Reserve Components will be calculated based on the assumption that the actual time elapsed since the previous reserve study is added to the effective age as determined in the previous reserve study. However, minor additions/deletions of the Reserve Components, along with their quantities and dates of installation, as reported by the client, will be accounted for. Excluding any changes reported by the client, the quantification of Reserve Components as determined by the previous reserve study will be assumed to be accurate.

Villas at Northville Hills Condominium Association (Villas at Northville Hills) directed Michigan Reserve Associates to do a "Update, With Site-Visit/On-Site Review" Reserve Study. On April 25, 2014 we performed an on-site noninvasive inspection.

METHODOLOGY

The Physical Analysis precedes the Financial Analysis since we must first determine the projected expenses before evaluating the Association's financial status to develop a Recommended Reserve Funding Plan.

The Physical Analysis therefore starts with an inventory of Reserve Components. To establish what items to include in our inventory, we reviewed the Association's governing documents, recent Reserve expenditures, and conducted interviews with the Association's representatives to determine if there are historical precedents which warrant inclusion in the Reserve Component Inventory. Please see Reserve Expenditures (2nd Tab) for a listing of individual line items, estimates for Useful Life, Remaining Useful Life, and current Replacement Cost for each component.

What Physical Assets Should be Included in an inventory of Reserve Components?

Reserves are large items that require advance planning to repair or replace. Operating expenses are ongoing, predictable expenses that repeat throughout the year or from year-to-year, with modest unanticipated items typically covered by a maintenance contingency in the budget, whereas larger items may be covered by additional assessments or insurance.

There is a national standard five-part test to establish whether an item should be funded through reserves. First, the item must be a common element maintenance responsibility. Second, the component must have a limited life. Third, the limited life must be predictable. Fourth, the item must be above a threshold cost. Fifth, the item is required by local codes. A sixth criteria is not part of the national standard but is inherent in the methodology used in this Reserve Study. Only Reserve Components which fall within the 25-year time horizon are included in our analysis. Therefore, Reserve Components presented in this Reserve Study are association responsibilities, major items, with limited and predictable lives which fall within the 25-year projection period. Items such as foundations and major infrastructure components are not included in reserves since they do not have limited useful life expectancies which can be predicted. Small items, such as metal street signs are not

considered Reserve Components due to their nominal costs (i.e., they do not pass Test # 4 above).[2]

As it relates to the Association, we suggested that items costing more than $3,000 and that have a minimum predictable Useful Life of at least three years be considered Reserve Components. The reason for this is that there should be a firewall between the reserve and operating accounts so that reserve funds do not get treated as an extension of operating funds. Our reading of the 1978 Michigan Condominium Act (the "Act") is that reserves can only be used for major repairs and replacements. (the Act does not provide further definitions of "major repairs" or "replacements," nor are these terms satisfactorily clarified by any administrative rulings). We are not lawyers, but we do recommend that the Association adopt a clear definition of what constitutes a Reserve Component which will be funded via Reserve Funds. We recommend that the Association consult with an experienced community association attorney to develop such a definition of Reserve Components.

How are Useful Life and Remaining Useful Life Established?

Useful Life is estimated based on our experience with the Reserve Component, after accounting for quality, expected maintenance, and weather exposure. Remaining Useful Life is primarily a function of the current noninvasive observed condition. The complement of Remaining Useful Life is Effective Age. Typically, Effective Age does not equal Actual Age due to differences in quality, rate of wear, and degree of maintenance attention a particular item receives. For Reserve Components where age characteristics are not readily visible (e.g., complex heating/cooling systems, elevators, security systems, etc.), we rely on interviews with the Association's service vendor. If the vendor is no longer available, we use national benchmarks, primarily from the *Marshall & Swift* cost estimating service.

How are Cost Estimates Established?

Whenever possible, we use recent historical information for Reserve Components which have been replaced or repaired, since this gives an actual localized data point from which to estimate future costs. Additional sources of information are comparisons with other

[2] *Ibid.*, p. 2.

condominium and homeowners associations for which we have performed work, as well as interviews with local vendors. Costs are also compared with those published by *Marshall & Swift* to provide a feedback mechanism to verify local vendor costs against national and regional cost data.

How Much Reserves Should We Contribute?

We utilize four principles when developing a Recommended Reserve Funding Plan. First, there must be sufficient cash on hand to handle the Reserve projects which arise. Second, we seek to provide a stable rate of contribution since this makes it easier for the Association and Association residents to plan their budgets year-to-year. Third, the Reserve Funding Recommendation attempts to evenly distribute the contributions over the years so that owners pay their fair share in proportion to the time that they have owned their unit. Finally, the Recommended Reserve Funding Plan must be fiscally responsible using reasonable and prudent financial assumptions with a risk profile tailored to the client.[3]

What is Our Funding Goal?

There are four different funding goals which are independent of the methodology utilized. These goals are:

1) Baseline Funding: Anticipated costs and their expected timing over the projection period are calculated. The reserve contribution is then set to keep the reserve cash balance above zero.

2) Full Funding: Setting a reserve funding goal of attaining and maintaining reserves at or near 100% funded. For example, an association would set aside $10,000 per year for a component (e.g., roof) which will cost $100,000 to replace in 10 years. Full funding is considered the most expensive (and therefore conservative) funding formula since money for all reserve components is set aside and accounted for.

[3] *Ibid.*, p. 4.

3) Statutory Funding: Establishing a reserve funding goal of setting aside the specific minimum or regulatory amount of reserves requires by local statutes. In Michigan, the minimum amount to be set aside for Reserves is 10% of the annual association budget on a non-accumulating basis.

4) Threshold Funding: Establishing a reserve funding goal of keeping the reserve balance above a specified dollar or percent funded amount. Depending on the threshold, this funding goal may be more or less conservative than Full Funding.

With Baseline Funding, there is no margin for error, and if expenses are higher than budgeted, or projects occur earlier than planned, additional assessments can occur, although this risk can be somewhat alleviated by regular updates to the Reserve Study.

Statutory Funding is not recommended because there is no direct correlation between the statutory minimum and the association's actual financial needs. For example, a 10% minimum for the reserve contribution might be acceptable for a newer development with relatively few common elements, and a properly developed maintenance and overall budget plan. However, the 10% minimum might be wildly off the mark for an older development with extensive common element obligations and a maintenance and overall budget that are themselves underfunded.

In our opinion, Full Funding provides an excessive level of funding since the association is typically setting aside money that it will not be using for decades. On the other hand, this funding goal has the distinction of typically being the most conservative funding formula which may be seen as a virtue by some associations.

We recommend using Threshold Funding with a safety margin set above 100% of Baseline Funding. Although the safety margin is arbitrary, it should be customized to the client's risk profile. As a rule of thumb, we suggest a safety margin of $1,000 per unit as prudent for associations similar to the subject. When an association is considering what their threshold safety margin should be, a good question to ask is "What is a reasonable level of money to

have on hand due to unpredictable events?" Small amounts can usually be covered by maintenance contingency funds or short-term loans, while very large unplanned events are typically covered by insurance.[4]

An added benefit of using Threshold Funding as recommended above is that it provides a layer of global risk management against the many future unknowns which must be assumed for the purposes of a reserve study. For example, reserve studies must make assumptions about future rates of inflation, rates of return on reserve investments, and the Useful Lives of Reserve Components. One way of accounting for the many different risk factors inherent in reserve study assumptions would be to attempt to individually forecast the future replacement cost for each Reserve Component. For example, certain Reserve Components which depend on petroleum-based commodity materials (such as paving and roof shingles) have recently been increasing at a rate significantly greater than inflation. However, not only would it be impractical to forecast future Replacement Costs for potentially dozens of Reserve Components (some of which may actually experience deflation over time), it is more straightforward to concede that future risk can realistically only be managed at a macro, rather than micro, level.

[4] *Ibid.*, p. 3.

PHYSICAL ANALYSIS

IDENTIFICATION OF RESERVE COMPONENTS

Villas at Northville Hills consists of 184 units. Project was completed in several phases spanning 2002 to 2013. The following graphic provides an aerial view of the project.

AERIAL AND LOCATION MAP

The Physical Analysis starts with an inventory of Reserve Components. To establish what items to include in our inventory, we reviewed the Association's governing documents, recent Reserve expenditures, and conducted interviews with the Association's representatives. Please see Reserve Expenditures (2nd Tab) for a listing of individual line items, estimates for Useful Life, Remaining Useful Life, and current Replacement Cost for each component.

When doing an "Update With Site Visit" assignment, the Reserve Component inventory was not quantified, although minor additions/deletions of the component inventory, along with their quantities and install dates, were accounted for. The quantification of Reserve Components as determined by the previous reserve study was assumed to be accurate.

Changes made to the Reserve Component inventory, since the prior Reserve Study, are as follows:

- DELETED: Painting of Hardiplank and Trim; at the direction of the Association, this item is assumed to be funded from operations moving forward
- ADDED: Wood fencing along Sheldon Road and 5 Mile Road; replacement

Based on the national five-part test described on page 10, there are certain items which have not been included in this reserve study.

Items which may pass the five-part inclusion test as a Reserve Component discussed on page 10 but were specifically excluded in this Reserve Study at the direction of the client are:

- Asphalt seal coating – The slurry seal impedes the penetration of moisture below the asphalt, which in turn lessens the impact of frost heave due to the freeze-thaw cycles endemic in Michigan. However, the primary function of the seal coat is an aesthetic one. Although co-owners typically find the uniform appearance of the roadways appealing, the sealcoat does not penetrate the asphalt and provides little rejuvenative effect. An annual crack filling maintenance program should still be implemented regardless of whether there is a seal coating program in place or not.

  In addition, there is growing concern that coal tar sealants, which are commonly used in seal coating applications, pose a cancer risk to humans, and may also appear in runoff which can adversely impact the environment. Asphalt-based products typically cost about the same as coal tar products and contain significantly lower levels of cancer-linked chemicals, although there is some debate on whether asphalt-based sealants perform as well as coal tar sealants.
- Underground sprinkler equipment (sprinkler head repair and replacement; sprinkler valve repair and replacement; sprinkler control box repair and replacement) – This item is assumed to be funded "as needed" from operating funds.
- Entry signage lights; replacement - The Association directed us to assume that this would be paid on an "as needed" basis out of the operating budget

- Mailbox clusters; replacement – The Association directed us to assume that this would be paid on an "as needed" basis out of the operating budget

Items which may fail the five-part inclusion test as a Reserve Component discussed on page 10 but were specifically included in this Reserve Study at the direction of the Client are:

- None noted

Noteworthy items which did not meet the criteria (see page 10) for inclusion as Reserve Components are broken down by category below:

Item failed test #1 (Not an association common element maintenance responsibility)

- Unit heating and air-conditioning units
- Unit interior spaces
- Unit windows and doors
- Unit decks

Item failed test #2 (No limited life)

- None noted

Item failed test #3 (No Predictable Limited Life)

- Site; electrical power distribution systems; replacement
- Site; sewer and water mains; replacement
- Site; tree and shrub replacement
- Units; foundations; replacement
- Units; structural framing; replacement

Item failed test #4 (Cost is Below the Assumed Threshold Amount of $3,000)

- Items in this category which are assumed to be funded (either on an "as needed" or scheduled basis) by the Association's operating budget are:
  - Domestic hot water heater in the clubhouse
  - Wooden street signs

- Site; routine asphalt crack filling and repair
- Site; routine pond maintenance
- Pool; routine maintenance
- Site; irrigation pumps; refurbishment

Item failed test #5 (Not Required by Local Code)

- None noted

Noteworthy items which passed Tests 1-5 on page 10, and are thus considered Reserve Components, but were not explicitly accounted for in this Reserve Study because the Remaining Useful Life is beyond the 25-year time horizon:

- Site; stone entry signs; replacement
- Site; flat poles; replacement
- Site; pergola with metal roof; replacement
- Units; concrete entry slabs; replacement
- Units; cement fiber siding; replacement
- Units; brick siding; replacement
- Units; brick tuck pointing – Tuck pointing costs depend largely on the condition of the existing installation and overall accessibility. For this reason, it is typical for tuck pointing to be bid on a time and materials basis. The Useful Life for tuck pointing ranges from 25 to 50 years, and not all of the brick veneer will require tuck pointing depending on location and orientation to the elements.
- Pool; pool shotcrete ("Gunite") shell; replacement

CONDITION ASSESSMENT

The following narrative details the condition assessment of the significant Reserve Components, along with relevant commentary and cost source, if applicable.

BUILDING COMPONENTS

Asphalt Roof Shingles (Including Partial Gutter and Downspout Replacement): Asphalt shingles were observed to be in average condition. We note that the claimed shingle life of 25-30 years is typically based on moderate weather conditions compared to Michigan, and the claimed life is not typically realized. We therefore used a more realistic 25-year Useful Life. At time of replacement, existing roofing is assumed to be completely removed and then replaced using 30-year shingles. Replacement cost was estimated using the *Marshall and Swift Valuation Service* as well as actual costs obtained from roofing projects performed at several condominium associations. We recommend that the Association implement a regular annual inspection program to insure that trees are not rubbing against roof shingles, since constant friction can dramatically shorten the Useful Life of the asphalt shingles.

Garage Doors: Garage doors were generally observed to be in average condition. This type of garage door has a Useful Life of 25 years. Cost source was provided by Lowe's Home Improvement Centers, which also provided labor quotes for removal of the existing garage doors, and installation of the new doors. Lowe's data points were cross-checked with the *Marshall and Swift Valuation Service.*

SITE COMPONENTS

Concrete Sidewalks: This item has a Useful Life which can range from 30 to 50 years. Observed condition is average. Replacement will be 4" of concrete. Since sections of concrete can be selectively replaced, and since concrete can vary significantly in wear and tear, only partial replacement of the concrete sidewalks was assumed, with the remainder being easily repaired or simply used for an extended period. It was assumed that approximately 5-10% of concrete sidewalks would require replacement after 15 years, and then an additional 5-10% of concrete curbing would be replaced every five years thereafter.

We recommend that any weeds that are growing between or through the concrete slabs be immediately treated with an herbicide such as Roundup. If the Association wishes to limit

the use of herbicides, application of a vinegar solution (20% acetic acid) and water has been shown to be effective for approximately two months (these results are comparable to the use of Roundup). Failure to implement a regular weed abatement program can dramatically shorten the Useful Life of the concrete sidewalks.

Concrete Aprons: This item has a Useful Life which can range from 30 to 50 years. Observed condition is average. Replacement will be 6" of concrete. Since sections of concrete can be selectively replaced, and since concrete can vary significantly in wear and tear, only partial replacement of the concrete aprons was assumed, with the remainder being easily repaired or simply used for an extended period. It was assumed that approximately 5-10% of concrete aprons would require replacement after 15 years, and then an additional 5-10% of concrete aprons would be replaced every five years thereafter.

As with the concrete sidewalks, we recommend that any weeds that are growing between or through the concrete slabs be immediately treated with an herbicide such as Roundup or acetic acid solution (see prior discussion).

Concrete Curbing: This item has a Useful Life which can range from 30 to 50 years. Observed condition is average. Since sections of concrete can be selectively replaced, and since concrete can vary significantly in wear and tear, only partial replacement of the concrete curbs was assumed, with the remainder being easily repaired or simply used for an extended period. It was assumed that approximately 5-10% of concrete curbing would require replacement after 15 years, and then an additional 5-10% of concrete curbing would be replaced every five years thereafter.

Asphalt (Mill and Overlay): This item has a Useful Life of 18-24 years. Replacement will consist of milling out the existing asphalt, with a minimum 1½" overlay. Current observed condition is average. Cost source for this item was obtained via review of information from Michigan-based vendors, and was cross-checked for reasonableness using the *Marshall and Swift Valuation Service.* We recommend that any weeds that are growing between or through the asphalt be immediately treated with an herbicide such as Roundup. If the

Association wishes to limit the use of herbicides, application of a vinegar solution (20% acetic acid) and water has been shown to be effective for approximately two months (these results are comparable to the use of Roundup). Failure to implement a regular weed abatement program can dramatically shorten the Useful Life of the asphalt surfacing.

Detention Pond Dredging: According to the Association, the storm water detention areas are comprised of two on-site ponds plus approximately 11 off-site basins. The Association's share for the 13 basins is 8.65%, and dredging for all basins was recently estimated at $300,000, which results as $26,000 for the Association's share. The Association pays approximately $5,500 per year for basin maintenance, and 10% of this payment is earmarked for dredging and other major repairs. As an added layer of risk planning, we modeled the Association's current share of $26,000 into the reserve study, and assumed a Remaining Useful Life of 17 years before these funds would be required.

The subject's reported area will vary depending on weather and percolation conditions. Estimating dredging costs involves knowing the following:

- Type of dredging to be used
- Final depth desired
- Total cubic yards to dredge
- Availability of a locale to put the material for dewatering
- Proximity of the settling site from the area to be dredged
- Time restraints
- Permit requirements

Many of the above items cannot be known until 20-30 years in the future. However, for reserve budgeting purposes, we assumed a depth of approximately one yard. Dredging is required to remove the primarily organic material from vegetation/deciduous trees, as well as the nominal amount of soil erosion from the surrounding area. Considering the nominal depth of the pond, direct sunlight is likely to accelerate growth of aquatic plants, which in turn will exacerbate the need for dredging. However, there are chemical treatments which can slow down the growth of such plants, and help to control odors as well.

While dredging may have an aesthetic component (which can have a direct impact on property values), detention basin dredging is a practical necessity to assure the continued functioning of the detention basin.

Hydraulic dredging has been assumed since heavy machinery is not required (but is required for mechanical "scoop" dredging) which decreases the need for remediation of damaged landscaping. The time and cost of this maintenance activity may vary, but we judge the amount shown in this reserve study to be sufficient to budget appropriate reserves.

Tennis Elements: At the direction of the client, only 30% of the tennis elements were included in the analysis since the remaining 70% is the responsibility of the Northville Hills Golf Course.

CLUBHOUSE ELEMENTS

The rationale for estimating costs and useful lives of roof shingles, exterior painting, and gutters and downspouts were previously discussed in the Exterior Building Components section.

Windows and Doors: There are 454 square feet of windows,. Useful life can vary widely depending on usage patterns and orientation to the elements. A 30-year Useful Life was considered reasonable since most manufacturers offer at least a 25 year warranty period for comparable window systems.

Interior Renovations: We projected a renovation cost of $7.00 per square foot which covers replacement of flooring surfaces, re-painting of walls and ceilings, and partial replacement of appliances and furniture.

Cybex Quality Exercise Equipment: The exercise equipment was observed to be commercial quality Cybex "spa quality" equipment. An allowance of $4,500 per piece of machinery provides an allowance for eventual replacement of each machine, with an

estimated original Useful Life of 10 years. Routine maintenance is assumed to occur through the operating budget.

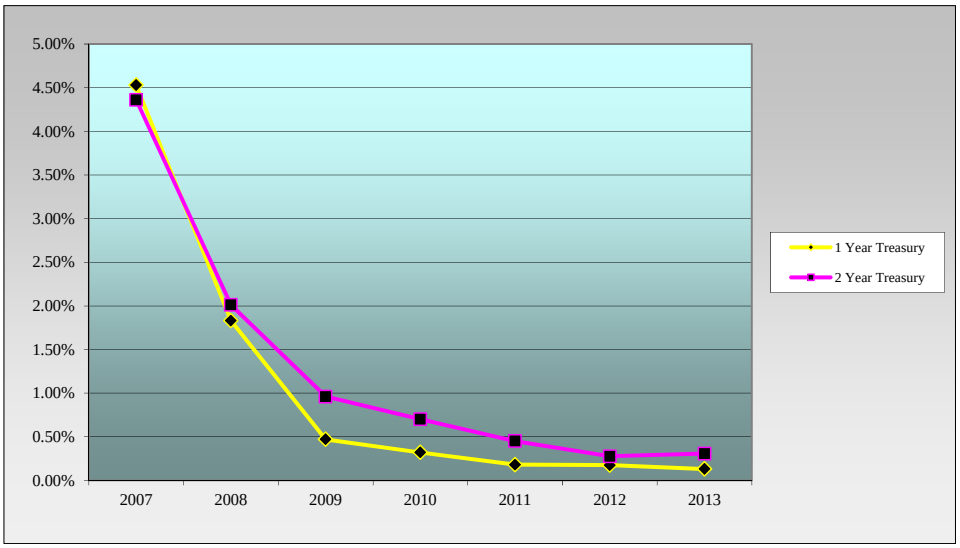
POOL COMPONENTS

Estimated costs and Useful Lives were provided by Mr. Daniel Martin of B&B Pools, as well as Mr. Dennis Scherdt of Ann Arbor Pool Builders. Remaining costs were estimated using the *Marshall & Swift Cost Guide.*

FINANCIAL ASSUMPTIONS

The following chart details the historical trend for typical savings investment vehicles (one- and two-year Treasuries) as published by the U.S. Treasury Department.

Trend for Sample Investment Types



Treasuries provide a good investment benchmark since they reflect a very safe investment whose risk profile matches that of most condominium associations. By using "laddering" in which maturities are staggered over time, an Association can gain some of the higher yield of a longer-term investment, while still having access to liquid funds as the various investments mature in series.

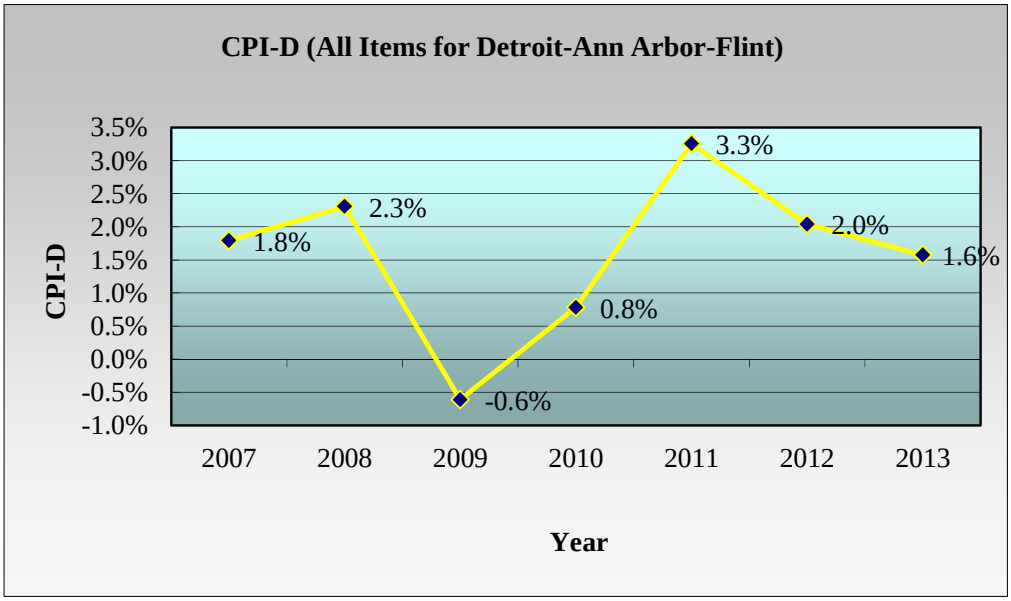
A broad-based analysis of rates is required since the investment yield-rate selected will be utilized for the entire 25-year projection period, and the rate selected should therefore reflect what can be expected during a 25-year time period, with nominal attention paid to current investment rates.

For the purposes of this Reserve Study, we will use a Reserve savings yield rate of 3.0%. We did not make any adjustments to account for the impact of Federal Income Tax on

investment income since the Association's tax situation can change over time. We advise the client to consult with its accountant and/or professional investment advisor to develop or refine an investment strategy consistent with the Association's risk profile and Reserve investment profile.

ESTIMATION OF INFLATION RATE

The following graph illustrates the five-year historical trend for the Consumer Price Index (CPI-D; all Items for Detroit-Ann Arbor-Flint) as published by the U.S. Bureau of Labor Statistics.



As discussed for Reserve savings, a broad-based analysis of rates is required since the inflation rate selected will be utilized for the entire 25-year projection period. In addition, the CPI-D measures inflation for a wide-range of goods, and therefore does not correlate directly with changes in the cost of materials and labor for repair/replacement of Reserve Components.

For the purposes of this Reserve Study, we will use a 3.0% annual inflation rate. Although inflation may be above or below 3% during any particular year of the 25-year projection period, we anticipate 3% to represent the average inflation rate over time.

SUMMARY AND CONCLUSION OF SELECTED RATES

Having the Reserve savings yield rate equal the expected long-term inflation rate is a relatively conservative assumption since most investments are made for the sole purpose of exceeding inflation, rather than simply keeping pace. However, associations typically follow a reserve investment policy which strongly emphasizes safety and preservation of capital. Since risk and reward are directly related, the lower risk profile utilized by associations typically results in a lower rate of return, and therefore having the reserve savings investment yield simply achieve parity with the expected inflation rate was considered reasonable.

RECOMMENDED FUNDING PLAN

According to information provided by Kramer-Triad Management Group, the Villas at Northville Hills reserve fund balance as of January 1, 2015 will be $522,361. This balance was calculated by taking the reserve balance of $503,020 as of March 31, 2014, adding $92,668 in anticipated reserve income until the end of the fiscal year, then adding $1,123 in earned interest until the end of the fiscal year, and deducting $74,450 in anticipated reserve expenditures until the end of the fiscal year. Using the current Reserve Contribution amount plus a typical 0% annual increase, the projected Reserve Balance will remain positive until the year 2033, at which time there will be a negative balance of $186,702. Negative reserve balances will then continue for the remainder of the projection period. This indicates that the current Reserve Balance and annual Reserve Contributions will be inadequate to fund the anticipated Reserve Expenditures (see 3rd Tab titled “Reserve Funding Plan Graphs” for a graph showing the reserve balance using the current and recommended funding plans).

This Reserve Study calculates Reserve Expenditures based on local costs, estimated interest which will accrue to the Reserve Funds collected, and accounting for projected future inflation for materials and workmanship.

The following is our recommend Reserve Funding Plan Contributions for the duration of the projection period, along with a snapshot of the current and Recommended Reserve Contribution.

Recommended Annual Reserve Contributions

Year	Recommended Reserve Contrib.	Recommended Assessment	Year	Recommended Reserve Contrib.	Recommended Assessment
2015	$ 120,000	$ -	2028	$ 176,000	$ -
2016	123,500	-	2029	181,500	-
2017	127,000	-	2030	187,000	-
2018	131,000	-	2031	192,500	-
2019	135,000	-	2032	198,500	-
2020	139,000	-	2033	204,500	-
2021	143,000	-	2034	210,500	-
2022	147,500	-	2035	217,000	-
2023	152,000	-	2036	223,500	-
2024	156,500	-	2037	230,000	-
2025	161,000	-	2038	237,000	-
2026	166,000	-	2039	244,000	-
2027	171,000	-			

Snapshot of Current and Recommended Reserve Contribution

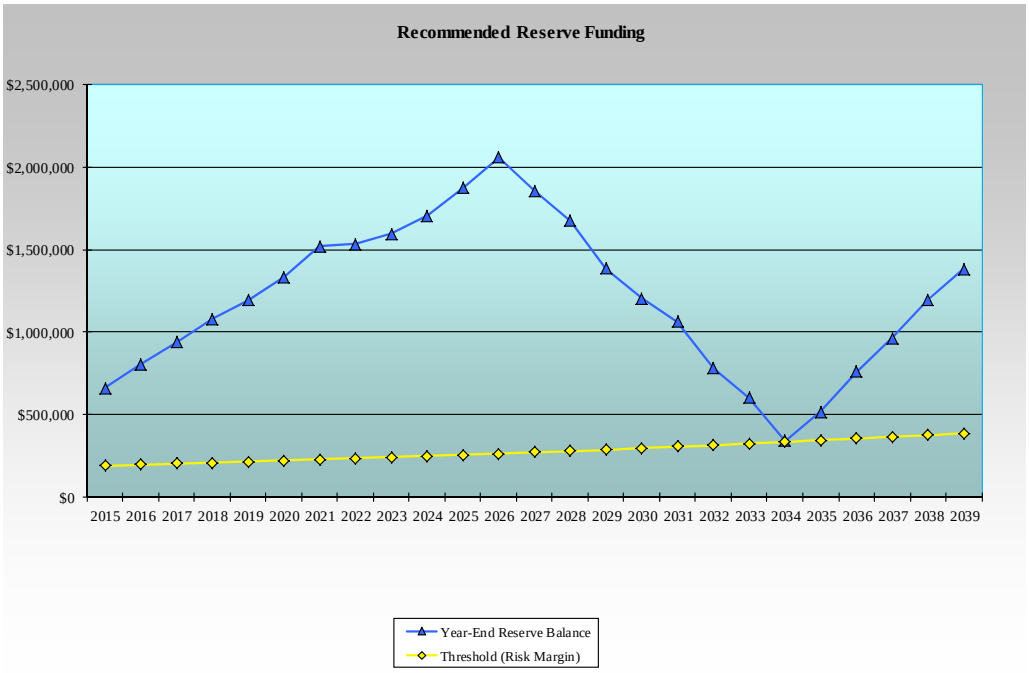
	Annual Amount	Per Unit Per Month (Average)
Current Reserve Contribution	$ 123,557	$ 55.96
Recommended Reserve Contribution	$ 120,000	$ 54.35
Amount of Increase/(Decrease) Current vs. Recommended	$ (3,557)	$ (1.61)
Recommended Additional Assessment (Year 1)	$ 0	$ 0.00

The recommended year 2015 Reserve Contribution of $120,000 ($54.35 per unit per month) reflects a decrease of $3,557, relative to the prior year's Reserve Contribution, or a decrease of $1.61 per unit per month. Starting with the 2015 Recommended Reserve Contribution of $120,000 per annum, and then increasing the Recommended Reserve Contribution by 3.0% per year, the Association's Reserves will typically remain above zero as well as above the Threshold for all years shown ("Threshold" is discussed in the next paragraph).

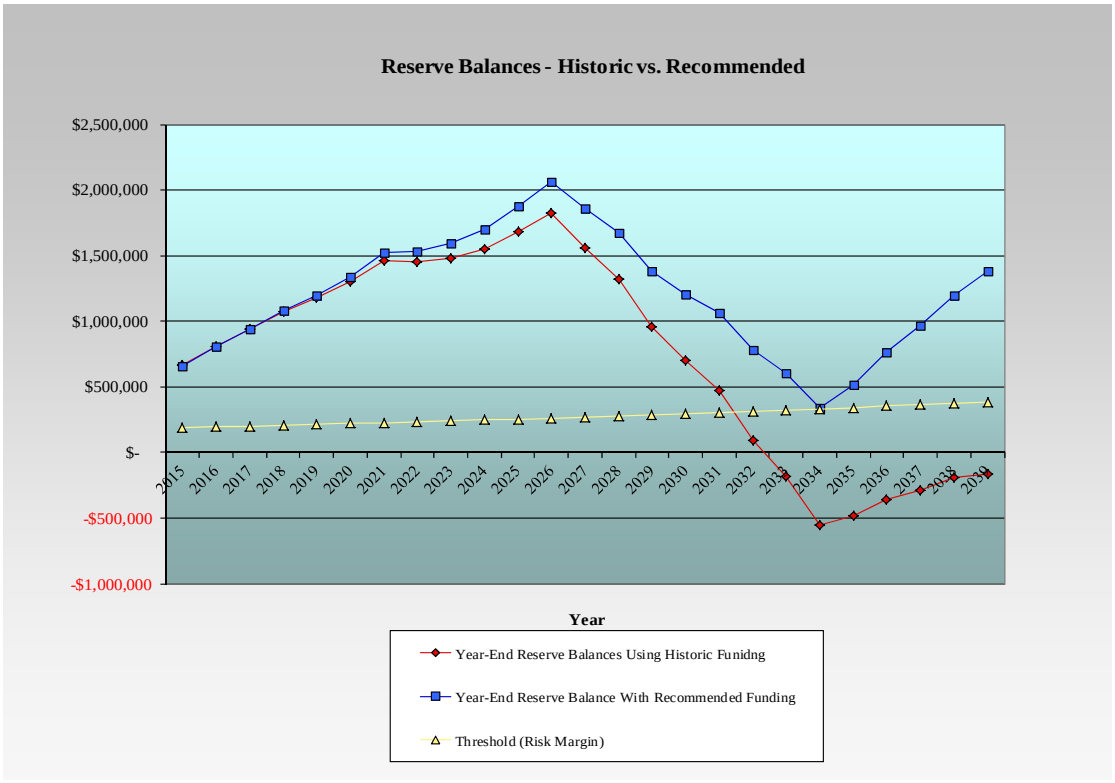
By following the recommended Reserve Contributions, the Association will gradually accrue a Reserve Fund which will provide the financial means to address the major Reserve

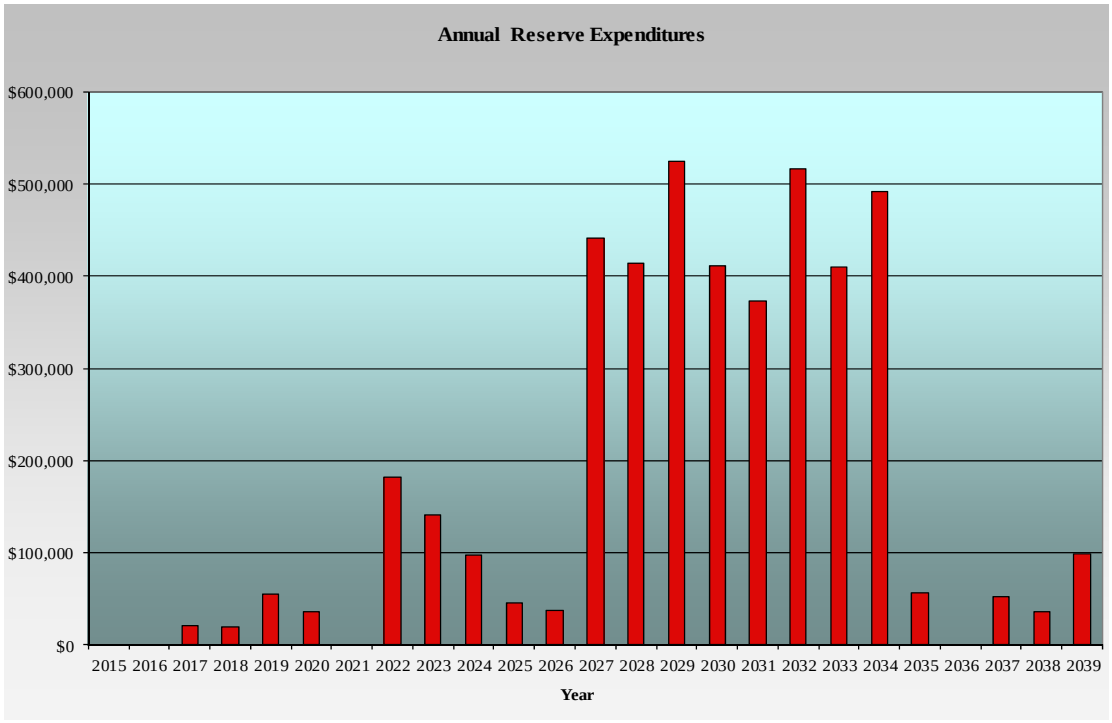
Component Expenditures which will arise in the future. The recommended Reserve Contribution amount will provide adequate, but not excessive, levels of Reserves, while still maintaining a reasonable Threshold Margin which suits the particular needs of the Association and will provide a "safety buffer" for unanticipated Reserve Expenditures which are unpredictable but inevitable.

The following graph illustrates the year-end Reserve Fund balance using the Recommended Reserve Funding Plan for the next 25 years.



In order to insure that significant overfunding or underfunding does not occur, we recommend that the Villas at Northville Hills Condominium Association update this Reserve Study every three to five years, or when any major changes in the Physical or Financial analysis occur. Such changes include accelerated Reserve Component Expenditures undertaken at the client's discretion, addition (construction) or demolition of Reserve Components, interest rate changes on reserve investments, and changes in local building costs.


Reserve Balances - Historic vs. Recommended
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$-
-$500,000
-$1,000,000
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039
Year
Year-End Reserve Balances Using Historic Funidng
Year-End Reserve Balance With Recommended Funding
Threshold (Risk Margin)


Annual Reserve Expenditures
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039
Year

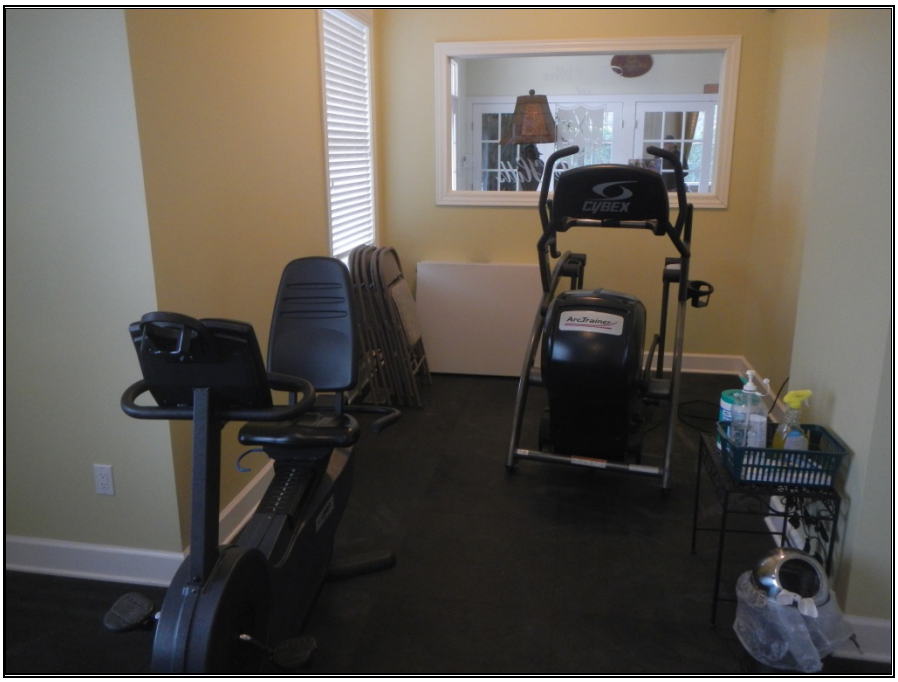
ADDENDA

PHOTOGRAPHS

Photograph 1: View of entry area

Photograph 2: Typical view of clubhouse interior (lounge area)

PHOTOGRAPHS



Photograph 3: Typical view of clubhouse interior (exercise room)

Photograph 4: Typical view of clubhouse interior (exercise room)

Photograph 5: Typical view of clubhouse interior (kitchen)

Photograph 6: Typical view of pool area

Photograph 7: Typical view of clubhouse interior (changing room and showers)

Photograph 8: Typical view of wood fence

Photograph 9: Typical view of concrete sidewalk

Photograph 10: Typical view of asphalt path along 5 Mile Road

Photograph 11: Typical view of pole light fixture

Photograph 12: Typical view of asphalt roof shingles

Photograph 13: Typical view concrete apron

Photograph 14: Typical view of concrete sidewalk

Photograph 15: Typical view of garage door

Photograph 16: Typical view of concrete curb

Photograph 17: Typical view of asphalt paved street

Photograph 18: Typical view of concrete apron

Photograph 19: Typical view of aluminum gutters

Photograph 20: Typical view of concrete sidewalk to unit

PHOTOGRAPHS

Photograph 21: Typical view of concrete sidewalk

Photograph 22: Typical view of exterior building elevation

Photograph 23: Typical view of exterior building elevation

Photograph 24: Typical view of tennis court

Photograph 25: Typical view of aluminum gutter

Photograph 26: Typical view of exterior building elevation

Photograph 27: Typical view of exterior building elevation

Photograph 28: Typical view of exterior building elevation

RESERVE EXPENDITURES AND RESERVE FUNDING PLAN

Assumptions

3.0% annual inflation rate

2015 year of analysis

Reserve Component Inventory	Quantities Total	First Year of Replacement	Life Analysis (Yrs.) Normal	Remaining	Unit Cost ($)	Remaining Useful Lives and Estimated Future Replacements Costs RUL= 0 2015	1 2016	2 2017	3 2018	4 2019	5 2020	6 2021	7 2022	8 2023	9 2024	10 2025	11 2026	12 2027	13 2028	14 2029	15 2030	16 2031	17 2032	18 2033	19 2034	20 2035	21 2036	22 2037	23 2038	24 2039
Exterior Building Components																														
30-Year Roof Shingles+Partial Gutter Replacement; Phased	453,581 SF	2027	25	12	4.10 PSF	-	-	-	-	-	-	-	-	-	-	-	-	331,433	341,376	351,617	362,166	373,030	384,221	395,748	407,620	-	-	-	-	-
Concrete Sidewalk For Units; Partial Replacement	25,573 SF	2019	50	37	7.22 PSF	-	-	-	-	10,391	-	-	-	-	12,045	-	-	-	-	13,964	-	-	-	-	16,188	-	-	-	-	18,766
Concrete Parking Aprons; Partial Replacement	96,317 SF	2019	50	37	8.10 PSF	-	-	-	-	43,904	-	-	-	-	50,897	-	-	-	-	59,004	-	-	-	-	68,401	-	-	-	-	79,296
16' x 7' Garage Doors; Phased Replacement	184 UNITS	2022	20	7	1150 /UNIT	-	-	-	-	-	-	-	32,530	33,506	34,511	35,547	36,613	37,711	38,843	40,008	-	-	-	-	-	-	-	-	-	-
Site Elements																														
Concrete Sidewalk; Partial Replacement	24,829 SF	2017	50	37	7.22 PSF	-	-	9,509	-	-	-	-	11,024	-	-	-	-	12,779	-	-	-	-	14,815	-	-	-	-	17,175	-	-
Concrete Curbing; Phased Partial Replacement	13,854 LF	2017	50	37	15.23 PLF	-	-	11,192	-	-	-	-	12,975	-	-	-	-	15,042	-	-	-	-	17,437	-	-	-	-	20,215	-	-
Street Asphalt; Mill and Overlay; Phase 1; Phased	90,406 SF	2022	18	7	1.50 PSF	-	-	-	-	-	-	-	83,391	85,893	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Street Asphalt; Mill and Overlay; Phase 2; Phased	35,158 SF	2029	18	14	1.50 PSF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39,885	41,081	-	-	-	-	-	-	-	-	-
Pedestrian Path Asphalt; Mill+Overlay on Five Mile and Sheldon; Ph.	11,446 SF	2022	20	7	1.50 PSF	-	-	-	-	-	-	-	10,558	10,875	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pole Lights; Replacement	5 UNITS	2029	25	14	1,600 /UNIT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,101	-	-	-	-	-	-	-	-	-	-
Tennis Court Surface; 30% Replacement	4,248 SF	2022	20	7	3.50 PSF	-	-	-	-	-	-	-	18,286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennis Court Fence 10' Height; 30% Replacement	143 LF	2032	30	17	28.00 PLF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,618	-	-	-	-	-	-	-
Wood Fence Along Sheldon & 5 Mile; Phased Replacement	1,145 LF	2027	25	12	19.50 PLF	-	-	-	-	-	-	-	-	-	-	-	-	7,958	8,197	8,443	8,696	-	-	-	-	-	-	-	-	-
Stormwater Detention Basin, Dredging	1 LOT	2032	30	17	26,000 /LOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42,974	-	-	-	-	-	-	-
Clubhouse Elements																														
30-Year Roof Shingles Replacement+Partial Gutter Replacement	2,416 SF	2027	25	12	4.10 PSF	-	-	-	-	-	-	-	-	-	-	-	-	14,123	-	-	-	-	-	-	-	-	-	-	-	-
Windows and Doors; Replacement	454 SF	2032	30	17	40.00 /SF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,016	-	-	-	-	-	-	-
Furnace and Condenser; Replacement	1 LOT	2022	20	7	6,200 /LOT	-	-	-	-	-	-	-	7,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interior Renovations; 1,939 SF @ $7 PSF + Appliances; Replace	1 LOT	2020	15	5	31,073 /LOT	-	-	-	-	-	36,022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,121	-	-	-	-
Cybex Quality Exercise Equipment; Replace	4 UNITS	2018	10	3	4,500 /UNIT	-	-	-	19,669	-	-	-	-	-	-	-	-	-	26,434	-	-	-	-	-	-	-	-	-	35,525	-
Pool Elements																														
Metal Fencing 5' Height; Replacement	239 LF	2032	30	17	35.00 PLF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,826	-	-	-	-	-	-	-
2 Post Decorative Arbor; Replacement	2 UNITS	2027	25	12	4,500 /UNIT	-	-	-	-	-	-	-	-	-	-	-	-	12,832	-	-	-	-	-	-	-	-	-	-	-	-
Concrete Pool Apron; Replacement	862 SF	2027	25	12	8.10 /SF	-	-	-	-	-	-	-	-	-	-	-	-	9,955	-	-	-	-	-	-	-	-	-	-	-	-
Marcite; Replacement	1 LOT	2023	10	8	8,500 /LOT	-	-	-	-	-	-	-	-	10,768	-	-	-	-	-	-	-	-	-	14,471	-	-	-	-	-	-
Tile and Coping; Replacement	1 LOT	2025	12	10	7,500 /LOT	-	-	-	-	-	-	-	-	-	-	10,079	-	-	-	-	-	-	-	-	-	-	-	14,371	-	-
Heater; Replacement	1 UNIT	2022	10	7	4,000 /UNIT	-	-	-	-	-	-	-	4,919	-	-	-	-	-	-	-	-	-	6,611	-	-	-	-	-	-	-
						-	-	20,701	19,669	54,295	36,022	-	181,308	141,041	97,454	45,626	36,613	441,833	414,849	525,021	411,943	373,030	516,519	410,219	492,210	56,121	-	51,760	35,525	98,062

HISTORIC AND RECOMMENDED RESERVE FUNDING PLAN

Assumptions

3.0%	Average Interest Rate Earned on Invested Reserves
0.0%	Annual Increase in Collected Reserve Funds for Historic Projection
3.0%	Annual Increase in Collected Reserve Funds for Recommended Funding Plan
$ 1,000	Per Unit; Threshold For 1st Year
184	Number of Untis
No	Autocalculate Reserve Contributions

Historic Reserve Funding Projection

			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	Reserve Balance at Beginning of Year		$ 522,361	$ 663,616	$ 809,107	$ 938,263	$ 1,072,325	$ 1,175,783	$ 1,300,618	$ 1,465,219	$ 1,453,451	$ 1,481,597	$ 1,554,175	$ 1,680,757	$ 1,820,150	$ 1,558,505	$ 1,315,994	$ 956,036	$ 698,357	$ 471,861	$ 95,081	$ (186,702)	$ (553,329)	$ (483,867)	$ (358,283)	$ (284,460)	$ (194,401)
Plus	Reserve Monies Collecting During Year		123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557	123,557
Plus	Additional Assessments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equals	Interim Reserve Balance		645,918	787,173	932,664	1,061,820	1,195,882	1,299,340	1,424,175	1,588,776	1,577,008	1,605,154	1,677,732	1,804,314	1,943,707	1,682,062	1,439,551	1,079,593	821,914	595,418	218,638	(63,145)	(429,772)	(360,310)	(234,726)	(160,903)	(70,844)
Plus	Estimated Interest Earned, During Year[1]		17,697	21,935	26,300	30,174	34,196	37,300	41,045	45,983	45,630	46,474	48,652	52,449	56,631	48,781	41,506	30,707	22,977	16,182	4,879	2,026	2,026	2,026	2,026	2,026	2,026
Equals	New Reserve Balance		663,616	809,107	958,964	1,091,994	1,230,078	1,336,640	1,465,219	1,634,759	1,622,638	1,651,628	1,726,383	1,856,763	2,000,338	1,730,843	1,481,057	1,110,300	844,891	611,600	223,517	(61,119)	(427,745)	(358,283)	(232,700)	(158,877)	(68,818)
Less	Anticipated Expenditures, By Year		-	-	(20,701)	(19,669)	(54,295)	(36,022)	-	(181,308)	(141,041)	(97,454)	(45,626)	(36,613)	(441,833)	(414,849)	(525,021)	(411,943)	(373,030)	(516,519)	(410,219)	(492,210)	(56,121)	-	(51,760)	(35,525)	(98,062)
Equals	Anticipated Balance of Reserve Fund at Year End		$ 663,616	$ 809,107	$ 938,263	$ 1,072,325	$ 1,175,783	$ 1,300,618	$ 1,465,219	$ 1,453,451	$ 1,481,597	$ 1,554,175	$ 1,680,757	$ 1,820,150	$ 1,558,505	$ 1,315,994	$ 956,036	$ 698,357	$ 471,861	$ 95,081	-$186,702	-$553,329	-$483,867	-$358,283	-$284,460	-$194,401	-$166,880
Threshold Target		$184,000	$ 189,520	$ 195,206	$ 201,062	$ 207,094	$ 213,306	$ 219,706	$ 226,297	$ 233,086	$ 240,078	$ 247,281	$ 254,699	$ 262,340	$ 270,210	$ 278,317	$ 286,666	$ 295,266	$ 304,124	$ 313,248	$ 322,645	$ 332,324	$ 342,294	$ 352,563	$ 363,140	$ 374,034	$ 385,255

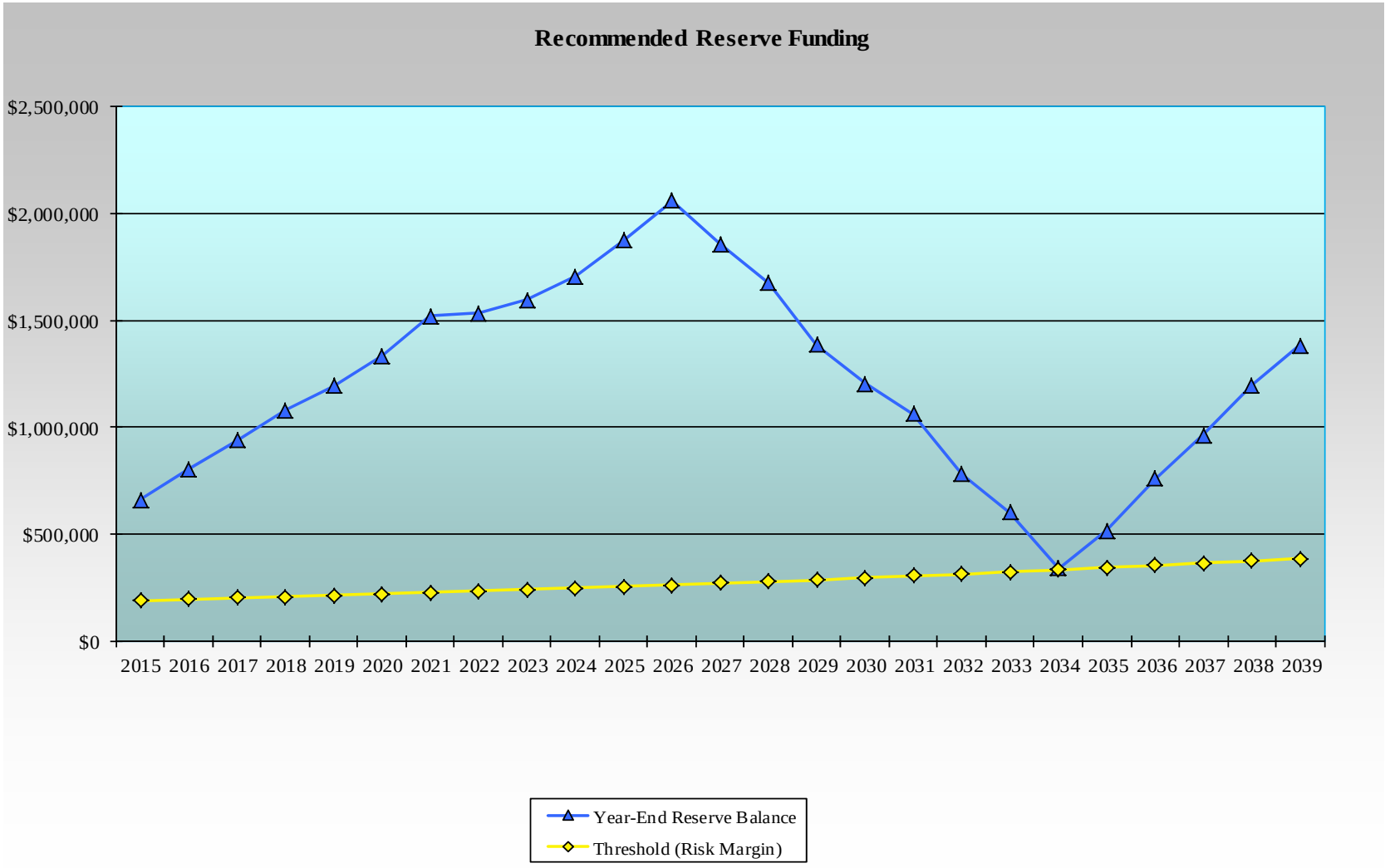
Recommended Funding Plan

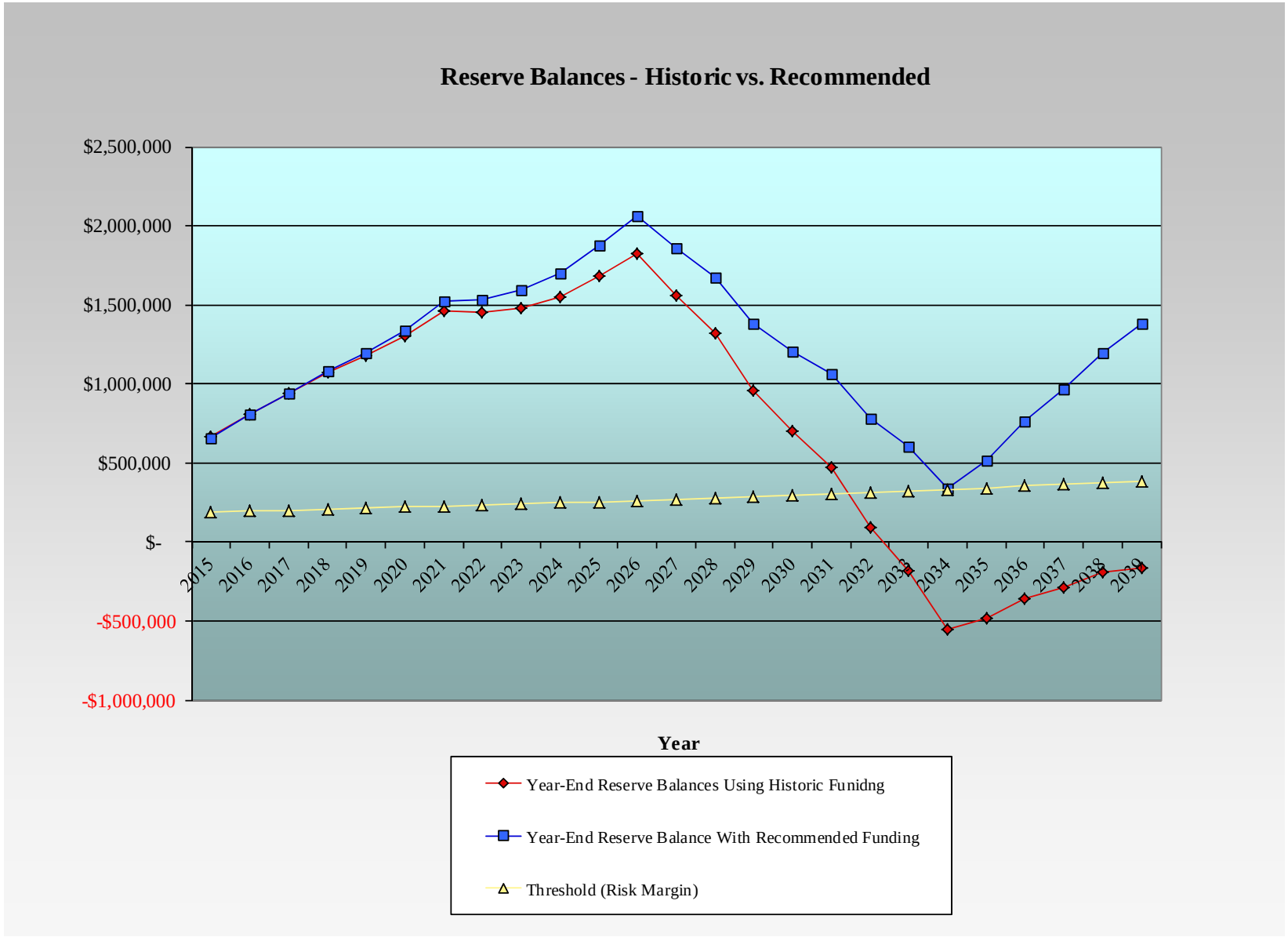
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	Reserve Balance at Beginning of Year		$ 522,361	$ 660,000	$ 805,326	$ 937,867	$ 1,079,482	$ 1,194,786	$ 1,335,887	$ 1,521,309	$ 1,535,559	$ 1,595,077	$ 1,704,542	$ 1,873,693	$ 2,062,013	$ 1,855,845	$ 1,675,557	$ 1,385,279	$ 1,204,961	$ 1,063,737	$ 780,885	$ 601,947	$ 341,747	$ 516,437	$ 759,096	$ 963,881	$ 1,198,160
Plus	Total Recommended Recurring Reserve Contributions		120,000	123,500	127,000	131,000	135,000	139,000	143,000	147,500	152,000	156,500	161,000	166,000	171,000	176,000	181,500	187,000	192,500	198,500	204,500	210,500	217,000	223,500	230,000	237,000	244,000
Plus	Additional Assessments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equals	Interim Reserve Balance		642,361	783,500	932,326	1,068,867	1,214,482	1,333,786	1,478,887	1,668,809	1,687,559	1,751,577	1,865,542	2,039,693	2,233,013	2,031,845	1,857,057	1,572,279	1,397,461	1,262,237	985,385	812,447	558,747	739,937	989,096	1,200,881	1,442,160
Plus	Estimated Interest Earned, During Year[1]		17,639	21,825	26,243	30,284	34,598	38,123	42,422	48,058	48,560	50,419	53,777	58,933	64,665	58,562	53,243	44,625	39,306	35,167	26,780	21,511	13,811	19,158	26,545	32,803	39,946
Equals	New Reserve Balance		660,000	805,326	958,568	1,099,151	1,249,081	1,371,909	1,521,309	1,716,867	1,736,118	1,801,996	1,919,319	2,098,626	2,297,678	2,090,406	1,910,300	1,616,904	1,436,767	1,297,404	1,012,166	833,958	572,559	759,096	1,015,641	1,233,684	1,482,106
Less	Anticipated Expenditures, By Year		-	-	(20,701)	(19,669)	(54,295)	(36,022)	-	(181,308)	(141,041)	(97,454)	(45,626)	(36,613)	(441,833)	(414,849)	(525,021)	(411,943)	(373,030)	(516,519)	(410,219)	(492,210)	(56,121)	-	(51,760)	(35,525)	(98,062)
Equals	Anticipated Balance of Reserve Fund at Year End		$ 660,000	$ 805,326	$ 937,867	$ 1,079,482	$ 1,194,786	$ 1,335,887	$ 1,521,309	$ 1,535,559	$ 1,595,077	$ 1,704,542	$ 1,873,693	$ 2,062,013	$ 1,855,845	$ 1,675,557	$ 1,385,279	$ 1,204,961	$ 1,063,737	$ 780,885	$ 601,947	$ 341,747	$ 516,437	$ 759,096	$ 963,881	$ 1,198,160	$ 1,384,043

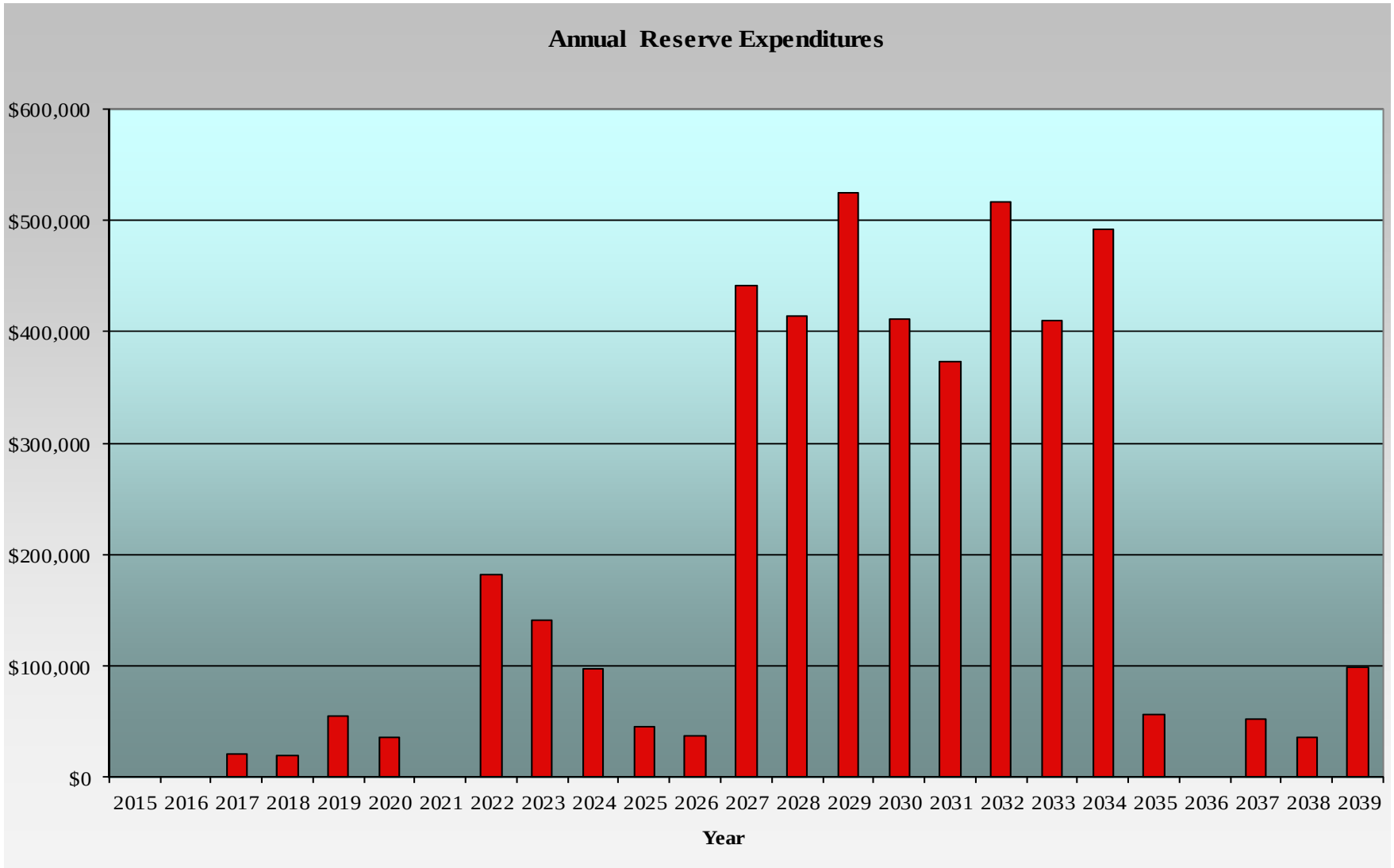
[1] Assuming reserves are invested monthly during the course of the year

Amount Over/Under Threshold		$ 470,480	$ 610,120	$ 736,805	$ 872,388	$ 981,479	$ 1,116,181	$ 1,295,012	$ 1,302,473	$ 1,354,999	$ 1,457,262	$ 1,618,994	$ 1,799,673	$ 1,585,634	$ 1,397,241	$ 1,098,613	$ 909,695	$ 759,613	$ 467,638	$ 279,302	$ 9,423	$ 174,143	$ 406,533	$ 600,741	$ 824,125	$ 998,788

RESERVE FUNDING PLAN GRAPHS




Reserve Balances - Historic vs. Recommended
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$-
-$500,000
-$1,000,000
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
Year
Year-End Reserve Balances Using Historic Funidng
Year-End Reserve Balance With Recommended Funding
Threshold (Risk Margin)


Annual Reserve Expenditures
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039
Year

Certifications

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, and no personal interest with respect to the parties involved.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined outcome that favors the cause of the client, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions are developed, and this report has been prepared, in conformity with the relevant sections of the Uniform Standards of Professional Appraisal Practice of the Appraisal Foundation and the Code of Professional Ethics of the Appraisal Institute.
- I have made a non-invasive inspection of the property that is the subject of this report.
- No one provided significant professional assistance to the person signing this report.
- I certify that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- In Michigan, appraisers are required to be licensed/certified and are regulated by the Michigan Department of Consumer and Industry Services, Licensing Division, P.O. Box 30018, Lansing, Michigan 48909.

Paul K.T. Conahan, MBA, RS
State Certified General Real Estate Appraiser
License No. 1201002454

Assumptions and Limiting Conditions

Assumptions

- When doing an "Update With Site Visit" assignment, the Reserve Component inventory was not quantified, although minor additions/deletions of the component inventory, along with their quantities and install dates, were accounted for. The quantification of Reserve Components as determined by the previous reserve study were assumed to be accurate.

- When doing an "Update Without Site Visit" assignment, the Reserve Component conditions were not visually confirmed and updated, and the Remaining Useful Lives of the Reserve Components were calculated based on the assumption that the actual time elapsed since the previous reserve study was added to the effective age as determined in the previous reserve study. However, minor additions/deletions of the Reserve Components, along with their quantities and dates of installation, as reported by the client, were accounted for. Excluding any changes reported by the client, the quantification of Reserve Components as determined by the previous reserve study were assumed to be accurate.

- Responsible and competent property management are assumed. This includes not only responsible and competent oversight with regard to the repair and replacement of the Reserve Components, but also responsible and competent financial management, with particular regard to prudent investment of the Association's reserve funds.

- Information furnished by representatives of the association regarding financial, physical, quantity, or historical issues were assumed reliable. However, no warranty is given for the accuracy of this information. The actual or projected total reserve balance presented in the Reserve Study is based upon information provided but was not audited. Client's receipt of the final reserve study will serve as verification that the client has reviewed the reserve study and confirmed that all information provided by the association has been accurately represented in the final reserve study.

- It is assumed that there are no hidden or unapparent conditions on the property, subsoil or structure. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them.

- Unless otherwise stated in this report, the existence of hazardous materials, which may or may not be present on the property, was not observed by the author of this report. The author has no knowledge of the existence of such materials on or in the property. The author, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea formaldehyde foam insulation, lead-based paint, or other potentially hazardous materials may adversely affect the property and require remediation. We assumed that there are no such materials on the property. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.

- It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws, and all other applicable laws and regulations.

- It is assumed that all required licenses, certificates of occupancy, consents or other legislative or administrative authority from any local, state or national government or private entity or organization have been obtained.

- The client is assumed to have deemed previously developed component quantities as accurate and reliable (for update reports only).

- The current work is reliant on the validity of prior Reserve Studies (for update reports only).

Limiting Conditions

- By its nature, a reserve study must make assumptions about the future. Michigan Reserve Associates LLC cannot be held responsible for unforeseeable events that dramatically alter future costs from those projected in the reserve study.

- Reserve Studies do not typically include the repair or replacement of plumbing, electrical wiring, or telephone lines.

- Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection.

- For mechanical systems, we have observed those parts of the mechanical equipment and systems that constitute an integral part of the property and that are generally visible. From such observation, we have reported any apparent conditions that we believe might bear on the conclusions of this report. We have not, however, extensively tested such mechanical systems and equipment, and we assume no responsibility for their operating performance.

- No invasive testing was performed on the Reserve Components. We render no opinion on the structural integrity of the property, nor do we offer an opinion as to conformity with governmental code requirements.

- Our opinion of Remaining Useful Life is not a guarantee or warranty of the Reserve Components.

- This study is to be used by the intended user for the purpose of budgeting and long-term major repair and replacement planning. The scope of work included in this study is unique to the intended use and intended user, and this report may not be utilized for any other use or user. Such other uses include, but are not limited to, performing an audit, quality/forensic analysis, or background checks of historical records. The client and its representatives may not transmit this reserve study in any fashion to persons or entities that perform reserve studies.

- Client agreed to furnish Michigan Reserve Associates LLC with a complete and up-to-date set of governing documents. Michigan Reserve Associates LLC cannot be held responsible for incomplete or incorrect documents. We are not attorneys and we cannot guarantee that all reserve components have been properly included or excluded in the reserve study. Client agrees to review the reserve study for accuracy during the review process, and seek legal counsel when necessary. Client agrees that all responsibility for the list of reserve components presented in the final reserve study shall be borne by the client.

- The Americans with Disabilities Act (ADA) became effective on January 26, 1992. We have not made a specific compliance survey and analysis of the subject property to determine whether or not it is in conformity with the various requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more requirements of the ADA. If so, this fact could have a negative impact on the property and trigger compliance costs. We did not consider noncompliance with the ADA requirements for this assignment.

- Our inspection did not address or render an opinion on repairs or replacements arising from original construction defects or unpredictable acts of nature.

- We are not financial advisors, and we recommend that the client consult with its accountant and/or professional investment advisor(s) to develop and refine an investment strategy consistent with the Association's risk profile and Reserve investment profile.

- We are not attorneys, and we recommend that the client consult with its attorney regarding reserve requirements and any other interpretations of relevant law, such as, but not limited to, the Michigan Condominium Act, complementary legislation such as the Nonprofit Corporation Act, and Administrative Rulings.

- Roof areas were measured from the ground using generally accepted techniques which take into account the building footprint, roof overhang, roof pitch, and unique roofing characteristics.

- Possession of this report, or a copy thereof, does not carry with it the right of publication. It may not be used for any purpose by any person other than the party to whom it is addressed without the written consent of Michigan Reserve Associates LLC, and in any event only with properly written qualifications and only in its entirety.

- Any illustrative material in this report is included only to assist the reader in visualizing the property and/or provide graphical support to the narrative text.

- We are not by reason of this report, required to give further in-person consultation, testimony or be in attendance in court with reference to the property in question unless prior arrangements have been made.

- Liability due to negligence is limited to the actual cost paid by the client for this engagement.

- Any dispute arising under this agreement will be arbitrated under the rules of the American Arbitration Association. Any arbitration award may be entered by any court of competent jurisdiction.

- Michigan Reserve Associates LLC reserves the right to include your Association's name in our client list. However, all information provided to us, as well as details of interviews, conversations, and the Reserve Study shall be strictly confidential and will not be disbursed to any third party.

CONTACT INFORMATION

Mail: 424 Little Lake Drive, Suite 23, Ann Arbor, Michigan 48103

Phone: (734) 661-1259

Fax: (734) 661-1259

E-mail: paul@MichiganReserveAssociates.com

Web: www.MichiganReserveAssocaites.com

EMPLOYMENT RECORD

President and Principal, Michigan Reserve Associates LLC, Ann Arbor, Michigan, 2005-Present

Vice President and Principal, Commercial and Residential Real Estate Appraiser, Davis M. Somers Company, Ann Arbor, Michigan, 1991-Present

REALTOR® Associate, Fee Simple Realty, Honolulu, Hawaii, 1985-1987

ADDITIONAL EXPERIENCE

Qualified as Expert Witness, Washtenaw County Circuit Court

Michigan Department of Transportation Approved Level II Appraiser

Approved Fee Appraiser for the United States Veterans Administration

EDUCATION AND DESIGNATIONS

Bachelor of Arts (BA), Biopsychology, Vassar College, Poughkeepsie, New York, Graduated in 1991

Master of Business Administration (MBA) With an Emphasis in Real Estate and Finance, Stephen M. Ross School of Business, University of Michigan, Graduated in 1999

Reserve Specialist (RS), Community Associations Institute, Alexandria, Virginia, Awarded in 2010

APPRAISAL EDUCATION (MOST RECENT SHOWN FIRST)

Fundamentals of Separating Real Property, Personal Property, and Intangible Business Assets (Course 833), Appraisal Institute, Instructor James Vernor, Ph.D., MAI, April 2012

Essential Elements of Disclosures and Disclaimers, McKissock, December 2011

2012-2013 7-Hour National USPAP Update Course, McKissock, December 2011

Michigan Law, McKissock, December 2011

Appraising Convenience Stores, Appraisal Institute, January 2011

7-Hour National USPAP Equivalent Course, 2011-2011, Appraisal Institute, January 2011

Michigan Law, McKissock, January 2011

GIS, The Executive Overview, Appraisal Institute, January 2011

Commercial/Residential Construction Inspection, Appraisal Institute, April 2009

Appraising from Blueprints and Specifications, Appraisal Institute, April 2009

Uniform Standards of Professional Appraisal Practice, Appraisal Institute, Flint, June 2008

Valuation of Detrimental Conditions, Appraisal Institute, Novi, December 2007

What Clients Would Like Their Appraisers to Know, Southfield, December 2006

Effective Appraisal Writing, Appraisal Institute, Ypsilanti, Michigan, October 2006

Appraising Local Retail Properties, Appraisal Institute, Southfield, Michigan, June 2004

Appraising the Tough Ones, Appraisal Institute, Ypsilanti, Michigan, December 2003

Highest & Best Use and Market Analysis (Course 520), Appraisal Institute, Troy, Michigan, April/May 2001

Advanced Sales Comparison and Cost Approaches (Course 530), Appraisal Institute, Flint, Michigan, November 2002

Highest & Best Use and Market Analysis (Course 520), Appraisal Institute, Troy, Michigan, April/May 2001

Appraisal of Nonconforming Uses, Appraisal Institute, Novi, Michigan, May 2000

The Appraisal of Partial Acquisitions (Course 401: 40 Hours), International Right of Way Association, Ann Arbor, Michigan, Instructor: Dave Burgoyne, May 1996

Other Relevant Courses Taken:

Advanced Applications (Course 550), Appraisal Institute
Report Writing and Valuation Analysis (Course 540), Appraisal Institute
Advanced Income Capitalization (Course 510), Appraisal Institute
Challenged and passed Appraisal Procedures (Course 120), Appraisal Institute
Capitalization Theory and Techniques Part A, Appraisal Institute
The Appraiser as an Expert Witness, Appraisal Institute

LICENSES

Certified General Real Estate Appraiser Number 1201002454, State of Michigan, Obtained in 1993

Active Real Estate Associate Broker License Number 6502139365, State of Michigan, Obtained in 2002 (Michigan Real Estate Salesperson License obtained in 1992)

Inactive Real Estate Sales License Number RS-36782, State of Hawaii, Obtained in 1985

ASSOCIATIONS

Member, Community Associations Institute, Since 2005

Member, United Condominium Owners of Michigan, Since 2005

General Associate Member, Candidate for the MAI designation, Appraisal Institute, Chicago, Illinois

Member, International Right of Way Association, Gardena, California, Since 1996

REGULATORY NOTES

In Michigan, appraisers are required to be licensed/certified and are regulated by the Michigan Department of Labor and Economic Growth, Licensing Division, P.O. Box 30018, Lansing, Michigan 48909.

PARTIAL LIST OF CLIENTS

Condominium/Homeowners Associations

1001 Covington Association (Detroit)

297 Condominium Owners Association (Muskegon)

Aberdeen at Hartford Association (Macomb)

Bellefontaine Meadows Homeowners Association (Dayton, Ohio)

Black Bear Farms Co-Owners' Association (Traverse City)

Breaker Cove (Bay City)

Brentwood Park Condominium Association (East Lansing)

Bridgewater Place Condominium Association (Bridgewater)

Byron Forest Condominium Association (Byron Center)

Chateau Vert Association (Ypsilanti)

Chapel Hill Condominium Association (Ann Arbor)

Chelsea Square Condominium Association (Canton)

Colony Farms Condominium Association (Plymouth)

Cornerstone Village Homeowners Association (Macomb)

Cottage Glens Owners Association (Williamsburg)

Creekwood Estates Association (Bay City)

Crossings at Irving Avenue Condominium Association (Royal Oak)

Crystal Village Manor (Marysville)

Douglas Harbor Village Condominium Association (Douglas)

Eaglecrest Condominium Association (Grand Rapids)

Fairlane Woods Association (Dearborn)

Fieldstone Village Condominium Association (Chelsea)

Fox Pointe Association (Ann Arbor)

Gallery Park Homeowners Association (Ann Arbor)

Great Oak Cohousing Association (Ann Arbor)

Grosse Pointe Gardens Association (Harper Woods)

Hampton Ridge North HOA (Canton)

Harbour Towne Condominium Association (Muskegon)

Haven Condominium Association (South Haven)

Heatherwood Condominium Association (Ann Arbor)

Hidden Glen Condominium Association (Canton)

Hidden Lake Community Association (South Lyon)

Hometown Village at Waterstone Association (Oxford)

Indian Village Condominium Association (Grand Rapids)

Island Lake of Novi Community Association (Novi)

Island Lake South Harbor Association (Novi)

Kirkway Homeowners Association (Canton)

Lake Village II (Walled Lake)

Lost Creek Condominium Association (East Lansing)

Marquette Village Condominium Association (Westland)

Meadowview Common Condominium Association (Elk Rapids)

Newberry Place Cohousing Condominium Association (Grand Rapids)

Northridge Estates Homeowners Association (Northville)

Northridge Villas Association (Northville)

Northville Hills Golf Club Homeowners Association (Northville)

Northville Hollow Condominium Association (Northville)

Parkway Condominium Association (Livonia)

Pinehurst Condominium Association (Trenton)

Pittsfield Village Condominium Association (Ann Arbor)

Plymouth Corners Condominium Association (Plymouth)

Plymouth Landing Association (Canton)

Pointe Park Homeowners Association (Grosse Point Park)

Reserve at Tull Lake Condominium Association (White Lake)

Rochester Park II Association (Rochester)

Sand Piper Condominium Association (Glen Arbor)

St. Lawrence Estates Condominium Association (Northville)

Scio Village Condominium Association (Ann Arbor)

Steeple Chase of Northville Owners Association (Northville)

Steeple Ridge Condominium Association (Clarkston)

Stone Lake Condominium Association (East Lansing)

Stonewater Homeowners Association (Northville)

Stratford Townhouses Consumer Housing Cooperative (Grand Rapids)

The Links of Northville Hills Golf Club Condominium Association (Northville)

The Maples of Novi, Maple Pointe Association (Novi)

The Ponds Cooperative Homes (Okemos)

The Preserve at Maple Lake Association (Milford)

The Residences at TPC Association (Dearborn)

The Willits Condominium Association (Birmingham)

Thornberry Condominium Association (Midland)

Tollgate Woods Homeowners Association (Novi)

Touchstone Cohousing Association (Ann Arbor)

University Commons Condominium Association (Ann Arbor)

Valley Wood Condominium Association (Livonia)

Venn Manor (Detroit)

Verndale Lakes Condominium Association (Lansing)

Village Oaks Common Areas Association (Novi)

Villa Capri Condominium Association (Warren)

Villas at Northville Hills Condominium Association (Northville)

Vistas of Central Park Condominium Association (Canton)

Walton Pond Condominium Association (Pontiac)

Wedgewood Village Association (Plymouth)

Whetherstone Condominium Association (White Lake)

Whitney Court of West Bloomfield (West Bloomfield)

Windward Court Condominium Association (Detroit)

Woodfield Square Association (Brighton)

Woodland Creek Condominium Association (Kentwood)

Woodland Ridge of Commerce Association (Commerce Township)

Woodland Trails Condominium Association (Okemos)

Woodlore Condominium Owners Association (Livonia)

Woods of Northville (Plymouth)

Woodside Meadows Condominium Association (Ann Arbor)

Woodward Place Association (Birmingham)

Woodwind Glen Condominium Association (South Lyon)

<u>Educational/Institutional Organizations</u>

Michigan Friends Center (Chelsea)

Rudolph Steiner School of Ann Arbor (Ann Arbor)

Chelsea District Library (Chelsea)