# **Reserve Fund Study**

# **DOWDEN PARK ASSOCIATION**

# SPRINGFIELD, OHIO

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#### **1.0 INTRODUCTION**

The Dowden Park Association authorized Criterium–Liszkay Engineers to conduct a Building Evaluation and Reserve Fund Study for the Dowden Park Association located in Springfield, Ohio.

Studies of this nature are important to ensure that a community has sufficient funds for long-term, periodic capital expenditure requirements. Anticipating large expenditures over an extended period through a structured analysis and scheduling process assists the Association in meeting financial requirements without increasing the service fees above permitted maximums, borrowing the funds, or levying special financial assessments to the owners.

This report is designed to analyze components of the community for which the Association is responsible and to assess a useful expected life and useful remaining life to those components. The anticipated scheduled repair or replacement of the component and the anticipated expense for the activity are then analyzed in conjunction with the current capital reserves funding program for the community.

This study should be considered as a "Full inspection" since the entire site was inspected by an on-site inspection.

The present amount of funds in the reserve account was not audited by Criterium Liszkay Engineers but is based on information provided by Donald Cook.

Typically, a community association has two broad cash requirements: the general operating reserves and the capital repair and replacement reserves. In this report, we will focus on those items falling under the capital repair and replacement reserve criteria. We have projected a capital repair and replacement reserve for 20 years. The first 10 years are the most reliable. Such a study should be updated every five years.

This report is intended to be used as a tool to determine reserve fund allocation requirements for the community, to manage future Association obligations, and to inform the community of future financial needs in general. The report that follows has been prepared from the perspective of what an owner of this property would benefit from knowing. Some items, beyond those immediate concern, maybe discussed because without including these issues could distort the association's situation. Therefore, the report should be read in its entirety to fully understand all of the information that has been obtained.

#### 2.0 EXECUTIVE SUMMARY

The community consists of 99 free-standing residences, none of which are included in the study, a pond with a fountain, and some sidewalks. There are freestanding monuments at the main entrance and the entrance to the association. There is a walking path, vinyl fences along the walking path, a fountain at a second pond, and a nature reserve, of which this association is responsible for 54% of the maintenance costs.

This community is part of the Simon Kenton Farm development. The Dowden Park development was started in 2000 which occupies an estimated 30-acre parcel of generally flat ground.

The roads are covered with asphalt and are maintained by the local township. There are concrete sidewalks on one side of the pond that are the responsibility of the association.

Based on our evaluation, the current level of funding of the reserves is not adequate. A more detailed analysis of the reserve fund has been provided in Appendix A.

Based on our observations, the following immediate concern was noted:

- Some of the sidewalks around the pond, are not consistently level and now present a trip hazard. Also, the are no truncated domes at the ramps at the street crossing.
- Where the asphalt covered walkway intersects a sidewalk, large gaps between the asphalt and concrete may be considered a trip hazard for a handicapped person.

There are several capital expenditures to be expected over the next 10 to 20 years. For your convenience, we have prepared the following summary of the condition of the major systems of the property.

SUMMARY OF ACTIVITY									
SYSTEM	CONDITION	ANTICIPATED YEAR OF ACTIVITY							
SITE									
Fences	G	Repair	2025-2040						
Asphalt walkays	G-F	Seal, repair, overlay	2022-2038						
Sidewalks	G-F	Repair	2022-2037						
Dredge pond	G	Dredge	2037						
BUILDING EXTERIOR									
BUILDING INTERIOR									
MECHANICAL									
Pond fountain	G	Replace	2030						
Landscape lights	G	Replace	2028						
Well pump	G	Replace	2031						
AMENITIES									
Light poles	G	Replace	2024-2034						
Major stone monuments	G	Replace	2029						
OTHER									

Table 2.1: Summary

## 3.0 PURPOSE & SCOPE

3.1 Purpose

3.2 Scope

The purpose of this study is to perform a reserve fund analysis and to develop a capital needs plan. It is intended to be used as a tool for Dowden Park Association in determining the allocation requirements into the reserve fund to meet future anticipated capital expenditures for the community.

This report forecasts obligations for the community 20 years into the future. It should be noted that events might occur that could affect the underlying component or system useful life assumptions used in this study. Likewise, inevitable market fluctuations can have an impact on component or system replacement and repair costs. Therefore, a study such as this should be updated from time to time, usually on a five-year cycle, to reflect the most accurate needs and obligations of the community.

This study has been performed according to the scope as generally defined by Dowden Park Association, Criterium–Liszkay Engineers and the standards of the Community Associations Institute. The findings and recommendations are based on an investigation of the site.

The guidelines used to determine which physical components within the community are to be included in the component inventory are based on the following general criteria:

- 1. The component must be a common element, or otherwise noted to be the responsibility of the Association to replace.
- 2. The funding for replacement should be from one source only, not funded from another area of the budget or through a maintenance contract.
- 3. The cost of a replacement should be high enough to make it financially unsound to fund it from the operating budget.
- 4. Components, such as day-to-day painting, which are considered deferred maintenance, are most appropriately funded from the Operating Budget instead of Reserves.

Our reserve study analysis included evaluating the following association property:

- Site and Grounds: The community consists of 99 free-standing buildings, none of which are included in the study. The community is part of a larger master association. Drainage is collected by drains in the streets and the ground.
- **Private Streets, Sidewalks and Curbs:** All of the roads are maintained by the local township are covered with asphalt. The association is responsible for the concrete sidewalks around the pond and a portion of the cost (54%) of the fences, walking paths, monuments, landscape lighting, street lights and a nature reserve area.
- **Building Common Elements:** There are no buildings that are part of the association.
- Amenities: There is a large retention pond with a fountain. The

association is also responsible for a portion of a second fountain at another pond. There is electrical equipment that supports the pond fountain and a well to provide water to the pond.

This study estimates the funding levels required for maintaining the longterm viability of the facility. Our approach involves:

- 1. Examining association managed equipment and site facilities.
- 2. Predicting their remaining service life and, approximating how frequently they will require repair or replacement.
- 3. Estimating repair or replacement costs (in 2021 dollars) for each capital item and applying a 3.5% inflation rate.
- 4. Using data developed in Steps 1, 2 and 3 to project Capital Reserve balances for Years 1 through 20.

The statements in this report are opinions about the present condition of the subject community. They are based on visual evidence available during a diligent investigation of all reasonably accessible areas falling under the responsibility of the Association. We did not remove any surface materials, perform any destructive testing, or move any furnishings. This study is not an exhaustive technical evaluation. Such an evaluation would entail a significantly larger scope than this effort.

On-site inspection of the property occurred on the following date:

May 19, 2021

The following person was interviewed:

Donald Cook

Neither the Articles of Incorporation nor the construction drawings were reviewed.

We based our cost estimates on some or all of the following:

- Some costs and schedule information from our historical files
- R.S. Means
- Local contractors

For your reference, the following definitions may be helpful:

*Excellent:* Component or system is in "as new" condition, requiring no rehabilitation and should perform under expected performance.

*Good:* Component or system is sound and performing its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.

Fair: Component or system falls into one or more of the following

**3.3 Sources of Information** 

3.4 Standards of Reference

		categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching the end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.
		<i>Poor:</i> Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or a state of disrepair. The present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.
		<i>Adequate:</i> A component or system is of a capacity that is defined as enough for what is required, sufficient, suitable, and/or conforms to standard construction practices.
		All ratings are determined by comparison to other buildings of similar age and construction type. Further, some details of workmanship and materials will be examined more closely in higher quality buildings where such details typically become more relevant.
		All directions (left, right, rear, etc.), when used, are taken from the viewpoint of an observer standing in front of a building and facing it.
		<i>Repair/Replacement Reserves</i> - Non-annual maintenance items that will require significant expenditure over the life of the buildings. Included are items that will reach the end of their estimated useful life during this forecast, or, in the opinion of the investigator, will require attention during that time.
4.0 D	ESCRIPTION	The community consists of 99 residential buildings, none of which are included in the study. The community is part of a larger master association.
		The main roads that are maintained by the local township are covered with asphalt. The association is responsible for the concrete sidewalks around the pond and 54% of the cost to maintain the fences, walking paths, monuments, landscape lighting street lights and a nature reserve area.
		There is a large retention pond with a fountain. The association is also responsible for a portion of a second fountain at another pond. There is electrical equipment that supports the pond fountain and a well to provide water to the pond.
5.0 O	BSERVATIONS	The following key observations were made about the current condition of the common elements of the property.
		Site and Grounds
		The grounds are generally flat but some of the ground is sloped toward the pond. There are cattails and other vegetation in the pond, that will need to be periodically

removed, however, this is considered maintenance. Long term, the pond will need to be dredged.

There is a concrete sidewalk around the pond and near the entrance to the community.

Some portions of the sidewalks around the pond, are not consistently level and now present a trip hazard. Also, there are no truncated domes at the ramps at the street crossing, both in the sidewalks around the pond and at the entrance to the community.

Where the asphalt covered walkway intersects a sidewalk, large gaps between the asphalt and concrete may be considered a trip hazard for a handicapped person.

The asphalt covered walkway needs maintenance. The block, longitudinal, transverse, and edge cracks, plus a few potholes that were seen, generally are an indication of pavement fatigue and damage from water penetration. Filling of the cracks larger than  $\frac{1}{2}$  inch and seal coating all of the asphalt surfaces is recommended and funds, 54% of the cost for this work are included in the study.

There is a retention pond with a fountain that is the association's responsibility. Across the street there are several ponds, however, the association is only responsible for 54% of the cost to maintain one of the fountains in these ponds.

There are stacked stone covered monuments with a community sign at the main entrance to the community for which the association is fully responsible. However, at the main entrance to the entire site, the association is only responsible for 54% of the maintenance costs.

There is a vinyl fencing along portions of the walkway. The association is responsible for 54% of the cost of maintenance of these fences.

### **Building Exterior**

None of the buildings are the responsibility of the association.

### Mechanical

The only mechanical equipment that is the responsibility of the association is the pond fountains and their electrical support equipment and the well that is nearby the pond.

#### Amenities

The pond appeared in good condition and only maintenance of the vegetation in the pond and the eventual dredging of the pond will be an ongoing requirement.

There were no items in the nature reserve that were observed that require funding.

None of the sports fields or equipment located on the north side of the nature reserve was inspected.

Using software developed by Criterium Engineers and KPMG Peat Marwick, we have analyzed capital reserves draw-down for the projected capital expenditures to

#### 6.0 RESERVE FUND ANALYSIS

determine the amount needed. The following is a projected reserve fund analysis for non-annual items as discussed in the report. This projection takes into consideration a small return on invested money and inflation.

This reserve fund projection intends to help the Association develop a reserve fund to provide for anticipated repair or replacements of various system components during the next 20 years.

The capital items listed are those that are typically the responsibility of the association. However, association by-laws vary, and therefore, which components are the responsibilities of the owner and which is the responsibility of the Association can vary.

This projection provides the following:

- An input sheet that defines all the criteria used for the financial alternatives, including the assumed inflation rate and rate of return on deposited reserve funds.
- A table that lists anticipated replacement and/or repair items complete with estimated remaining life expectancies, projected costs of the replacement and/or repair, a frequency in years of when these items require replacement and/or repair, and a projection based on this frequency.
- A table and graph that represent the end-of-year balances versus capital expenditures based on your current funding program and reserve balances, and alternatives to your current program. The provided graphs illustrate what effects the funding methods will have over the presented 20 year period versus the anticipated capital expenditures. Care should be taken in analyzing the graphs due to varying graphic scales that occur within each graph and between graphs.
- Note that based on our developed list of capital items and taking inflation into account the current funding is not adequate over the next 20 years.
- The Association should bear in mind that unanticipated expenditures can always arise and maintenance of a significant reserve fund balance can be viewed as a way to avoid special assessments.

We have included three alternatives to your current funding program and recommend that the board adopt an alternative that best reflects the objectives of the community. In summary, they are as follows:

## Current Reserve Funding Rate:

Based on information received from Donald Cook, the reserve fund balance is \$16,973. The 2021 annual contribution into the reserve fund is projected to be \$5,000 or \$4.21 per unit per month. This is not adequate to fully fund the reserves. To make the association "fully funded" one of the following alternative funding plans should be adopted.

Alternative 1: In 2023 increase the per-unit monthly contribution to the Reserve Fund from \$4.21 to \$5.21. Starting in 2025 increase the contribution by \$1 per unit per month. Every three years, increase the fees by \$1 per unit per month Continue this increase until 2031 when the monthly per-unit

	contribution would be \$7.21. Maintain this rate through the 20 years. This alternative maintains a positive balance during the 20 years.
	<b>Alternative 2</b> : In 2023 increase the per-unit monthly contribution to the Reserve Fund from \$4.21 by 3%. Continue this increase every year until 2032 when the monthly per-unit contribution would be \$5.66. Maintain this rate through the 20 years. This alternative maintains a positive balance during the 20 years.
	Alternative 3: Increase the per unit monthly contribution to the Reserve Fund in 2022 to \$5.50. Maintain this rate through the 20 years. This alternative maintains a positive balance during the 20 years.
7.0 CONCLUSION	The site inspection finds that the items that the community is responsible for are well maintained except for the condition of the sidewalks which need to be maintained for ADA requirements with the addition of truncated domes at each street crossing.
	This analysis finds that your current reserve fund contribution for capital items is not adequately funded. We trust this answers any questions that may arise. If not, or if we can be of further assistance, please do not hesitate to call.
8.0 LIMITATIONS	The observations described in this study are valid on the dates of the investigation and have been made under the conditions noted in the report. We prepared this study for the exclusive use of the Dowden Park Association. Criterium–Liszkay Engineers does not intend any other individual or party to rely upon this study without our express written consent. If another individual or party relies on this study, they shall indemnify and hold Criterium–Liszkay Engineers harmless for any damages, losses, or expenses they may incur as a result of its use.
	This study is limited to the visual observations made during our inspection. We did not remove surface materials, conduct any destructive or invasive testing, move furnishings or equipment, or undertake any digging or excavation. Accordingly, we cannot comment on the condition of systems that we could not see, such as buried structures and utilities, nor are we responsible for conditions that could not be seen or were not within the scope of our services at the time of the investigation. We did not undertake to completely assess the stability of the buildings or the underlying foundation soil since this effort would require excavation and destructive testing. Likewise, this is not a seismic assessment.
	We did not investigate the following areas:
	<ul><li>Buried utilities or infrastructure.</li><li>Any concealed systems.</li><li>Any buildings</li></ul>
	We do not render an opinion on uninvestigated portions of the community.
	We did not perform any computations or other engineering analyses as part of this evaluation, nor did we conduct a comprehensive code compliance investigation. This study is not to be considered a warranty of condition, and no warranty is implied. The appendices are an integral part of this report and must be included in

any review.

In our Reserve Fund Analysis, we have provided estimated costs. These costs are based on our general knowledge of building systems and the contracting and construction industry. When appropriate, we have relied on standard sources, such as Means Building Construction Cost Data, to develop estimates. However, for items that we have developed costs (e.g.: structural repairs), no standard guide for developing such costs exists. Actual costs can vary significantly, based on the availability of qualified contractors to do the work, as well as many other variables. We cannot be responsible for the specific cost estimates provided.

We have performed no design work as part of this study, nor have we obtained competitive quotations or estimates from contractors as this also is beyond the scope of the project. The actual cost to remedy deficiencies and deferred maintenance items that we have identified may vary significantly from estimates and competitive quotations from contractors.

If you have any questions about this study or the reserve fund analysis, please feel free to contact us. Thank you for the opportunity to be of assistance to you.

Respectfully submitted,

Art Wickerham

**Professional Engineer** 

Criterium-Liszkay Engineers

Appendix A: RESERVE FUND PROJECTIONS



General Information:

- 1 Organization: **Downden Parrk**
- 2 Address: Sppringfield , Ohio

3	Number of Units	99
4	Age of Building (in years)	21
5a	Study Period (in years)	20
5b	Normal Fiscal Year starts:	<b>January 1, 2022</b>
5c	Partial Fiscal Year starts:	<b>January 1, 2022</b>
5d	Partial Year Length:	12 months
6	Site Inspection Date	June 19, 2021
7	Reserve Funds at start	\$16,973
8	Rate of Return on invested Reserve Funds (%)	0.1%
9	Inflation Rate (%)	3.5%

## 10 Current Funding Levels

Existing Funding Levels					
Reserve Fund Contribution	Total/Month \$417	Total Annual <b>\$5,000</b>	Per Unit/Month <b>\$4.21</b>	Per Unit/Year <b>\$50.55</b>	
	Years Out		Total Annual	Per Unit	
Planned Special Assessment	0		\$0	\$0	
Balance Computed	\$2,535				

## 11 Alternative Reserve Fund Contribution

Alternative 1 Funding with Level Steps					
Monthly Amount, (First Year)		Total/Month \$417	Total Annual <b>\$5,001</b>	Per Unit/Month <b>\$4.21</b>	Per Unit/Year <b>\$50.52</b>
Monthly Amount, (Last Year)		\$714	\$8,565	\$7.21	\$86.52
Special Assessments:	Years Out		Total/Year	Per Unit	
First Assessment	0		\$0	\$0	
Second Assessment	0		\$0	\$0	
Balance Computed	. \$52,816				

Alternative 2 Escalating Funding at 3% per Y	ear				
		Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year)		\$417	\$5,001	\$4.21	\$50.52
Monthly Amount, (Last Year)		\$560	\$6,722	\$5.66	\$67.89
Base Escalation %	3.00%				
Special Assessments:	Years Out		Total/Year	Per Unit	
First Assessment	0		\$0	\$0	
Second Assessment	0		\$0	\$0	
Balance Computed	\$27,251				

Alternative 3 Level Funding without Special A	Assessments				
Monthly Amount, (First Year) Monthly Amount, (Last Year)	Total/Month \$545 \$545	Total Annual \$6,534 \$6,534	Per Unit/Month \$5.50 \$5.50	Per Unit/Year \$66.00 \$66.00	
Base Escalation %	0.00%				
Special Assessments:	Years Out		Total/Year	Per Unit	
First Assessment	0		\$0	\$0	
Second Assessment	0		\$0	\$0	
Balance Computed	\$33,508				



# **Itemized Worksheet**

Capital Item			Reserve	Beginning	Frequency	Remaining
To Be Replaced	Quantity	Unit cost	Requirement (*)	Balance	(yrs**)	Life (yrs)
Site						
Seal asphalt walkways (54%)	12,960 sf	\$0.14	\$1,814.40	\$790.70	5	0
Overlay walkway (54%)	12,960 sf	\$1.25	\$16,200.00	\$4,706.52	30	10
Dredge pond	1 ls	\$25,000.00	\$25,000.00	\$5,447.36	30	15
Dowden Park sidewalk repairs	1 ls	\$1,000.00	\$1,000.00	\$435.79	5	0
Install truncated domes at street crossings	10 ea	a \$250.00	\$2,500.00	\$1,089.47	30	0
Setions of fence replacement at 54%	1 ls	\$1,000.00	\$1,000.00	\$0.00	3	3
Building Exterior						
Building Interior						
Mechanical						
Replace pond fountail	1 ea	a \$3,500.00	\$3,500.00	\$711.79	15	8
Replace north pond fountain (54%)	1 ea	a \$1,890.00	\$1,890.00	\$384.37	15	8
Landscape lighing at main entrance at 54%	1 ls	\$1,890.00	\$1,890.00	\$494.18	15	6
Replace well pump	1 ls	\$6,000.00	\$6,000.00	\$1,830.31	30	9
Amenities						
Replace some light poles at 54%	1 ea	a \$1,350.00	\$1,350.00	\$470.65	10	2
Major stone monumet upgrades at 54%	1 ls	\$2,160.00	\$2,160.00	\$611.85	20	7
Other						
		Totals	\$64,304.40	\$16,973.00		
		Total Over Term	\$79,097.60			
	<b>Total Over</b>	Term with Inflation	\$114,849.50			

\* Costs are typically  $10\% \pm$ 

\*\* Reserve study is based on a 20 year projection of non-annual maintenance

# **Itemized Graph**





## Annual Expense By Year



	Year:	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Site																
Seal asphalt walkways (54%)		1,814	0	0	0	0	1,814	0	0	0	0	0	1,814	0	0	0
Overlay walkway (54%)		0	0	0	0	0	0	0	0	0	0	16,200	0	0	0	0
Dredge pond		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dowden Park sidewalk repairs		1,000	0	0	0	0	1,000	0	0	0	0	1,000	0	0	0	0
Install truncated domes at street crossings		2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Setions of fence replacement at 54%		0	0	0	1,000	0	0	1,000	0	0	1,000	0	0	1,000	0	0
Building Exterior																
Building Interior																
Mechanical																
Replace pond fountail		0	0	0	0	0	0	0	0	3,500	0	0	0	0	0	0
Replace north pond fountain (54%)		0	0	0	0	0	0	0	0	1,890	0	0	0	0	0	0
Landscape lighing at main entrance at 54%		0	0	0	0	0	0	1,890	0	0	0	0	0	0	0	0
Replace well pump		0	0	0	0	0	0	0	0	0	6,000	0	0	0	0	0
Amenities																
Replace some light poles at 54%		0	0	1,350	0	0	0	0	0	0	0	0	0	1,350	0	0
Major stone monumet upgrades at 54%		0	0	0	0	0	0	0	2,160	0	0	0	0	0	0	0
Other																
Total Costs	_	5,314	0	1,350	1,000	0	2,814	2,890	2,160	5,390	7,000	17,200	1,814	2,350	0	0
Total Costs Adjusted For 3.5% Inflation	=	5,314	0	1,446	1,109	0	3,343	3,553	2,748	7,098	9,540	24,262	2,648	3,551	0	0



## Annual Expense By Year

	Year:	2037	2038	2039	2040	2041
	Year Number:	16	17	18	19	20
Site						
Seal asphalt walkways (54%)		0	1,814	0	0	0
Overlay walkway (54%)		0	0	0	0	0
Dredge pond		25,000	0	0	0	0
Dowden Park sidewalk repairs		1,000	0	0	0	0
Install truncated domes at street crossings		0	0	0	0	0
Setions of fence replacement at 54%		1,000	0	0	1,000	0
Building Exterior						
Building Interior						
Mechanical						
Replace pond fountail		0	0	0	0	0
Replace north pond fountain (54%)		0	0	0	0	0
Landscape lighing at main entrance at 54%		0	0	0	0	0
Replace well pump		0	0	0	0	0
Amenities						
Replace some light poles at 54%		0	0	0	0	0
Major stone monumet upgrades at 54%		0	0	0	0	0
Other						
Total Costs		27,000	1,814	0	1,000	0
Total Costs Adjusted For 3.5% Inflation		45,234	3,145	0	1,857	0



		Beginning					
	Year	<b>Reserve Fund</b>	Fee	Special	Investment	Capital	Ending
Year	Number	Balance	Revenue	Assessments	Earnings	Expenditures	Balance
2022	1	\$16,973	\$5,000	\$0	\$17	\$5,314	\$16,675
2023	2	\$16,675	\$5,000	\$0	\$22	\$0	\$21,697
2024	3	\$21,697	\$5,000	\$0	\$25	\$1,446	\$25,276
2025	4	\$25,276	\$5,000	\$0	\$29	\$1,109	\$29,196
2026	5	\$29,196	\$5,000	\$0	\$34	\$0	\$34,231
2027	6	\$34,231	\$5,000	\$0	\$36	\$3,343	\$35,924
2028	7	\$35,924	\$5,000	\$0	\$37	\$3,553	\$37,409
2029	8	\$37,409	\$5,000	\$0	\$40	\$2,748	\$39,700
2030	9	\$39,700	\$5,000	\$0	\$38	\$7,098	\$37,640
2031	10	\$37,640	\$5,000	\$0	\$33	\$9,540	\$33,133
2032	11	\$33,133	\$5,000	\$0	\$14	\$24,262	\$13,885
2033	12	\$13,885	\$5,000	\$0	\$16	\$2,648	\$16,253
2034	13	\$16,253	\$5,000	\$0	\$18	\$3,551	\$17,719
2035	14	\$17,719	\$5,000	\$0	\$23	\$0	\$22,742
2036	15	\$22,742	\$5,000	\$0	\$28	\$0	\$27,770
2037	16	\$27,770	\$5,000	\$0	\$0	\$45,234	(\$12,465)
2038	17	(\$12,465)	\$5,000	\$0	\$0	\$3,145	(\$10,610)
2039	18	(\$10,610)	\$5,000	\$0	\$0	\$0	(\$5,610)
2040	19	(\$5,610)	\$5,000	\$0	\$0	\$1,857	(\$2,468)
2041	20	(\$2,468)	\$5,000	\$0	\$3	\$0	\$2,535



#### **Existing Funding Levels**

CONTRIBUTIONS	CONTRIBUTIONS			SPE	CIAL ASS	SESSMENTS									
AMOUNT					Tot	als									
\$5,000.00 per year				Per Year	\$0	Per Unit	\$0								
\$50.55 per unit per yea	r														
\$417.00 per month															
\$4.21 per unit per mo	nth														
Projected Annual Funding and Expe	enditures:														
Year:	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	16,675	21,697	25,276	29,196	34,231	35,924	37,409	39,700	37,640	33,133	13,885	16,253	17,719	22,742	27,770
Capital Expenditures:	5,314	-	1,446	1,109	-	3,343	3,553	2,748	7,098	9,540	24,262	2,648	3,551	-	-
Total Revenue (all sources)	5,017	5,022	5,025	5,029	5,034	5,036	5,037	5,040	5,038	5,033	5,014	5,016	5,018	5,023	5,028
Year:	2037	2038	2039	2040	2041										
Year Number:	16	17	18	19	20										
End of Year Reserve Fund Balance	(12,465)	(10,610)	(5,610)	(2,468)	2,535										
Capital Expenditures:	45,234	3,145	-	1,857	-										
Total Revenue (all sources)	32,770	(7,465)	(5,610)	(610)	2,535										





		Beginning						
	Year	<b>Reserve Fund</b>	Fee	Special	Special	Investment	Capital	Ending
Year	Number	Balance	Revenue	Assessments 1	Assessments 2	Earnings	Expenditures	Balance
2022	1	\$16,973	\$5,001	\$0	\$0	\$17	\$5,314	\$16,677
2023	2	\$16,677	\$5,001	\$0	\$0	\$22	\$0	\$21,700
2024	3	\$21,700	\$5,001	\$0	\$0	\$25	\$1,446	\$25,280
2025	4	\$25,280	\$6,189	\$0	\$0	\$30	\$1,109	\$30,392
2026	5	\$30,392	\$6,189	\$0	\$0	\$37	\$0	\$36,618
2027	6	\$36,618	\$6,189	\$0	\$0	\$39	\$3,343	\$39,504
2028	7	\$39,504	\$7,377	\$0	\$0	\$43	\$3,553	\$43,372
2029	8	\$43,372	\$7,377	\$0	\$0	\$48	\$2,748	\$48,050
2030	9	\$48,050	\$7,377	\$0	\$0	\$48	\$7,098	\$48,378
2031	10	\$48,378	\$8,565	\$0	\$0	\$47	\$9,540	\$47,450
2032	11	\$47,450	\$8,565	\$0	\$0	\$32	\$24,262	\$31,785
2033	12	\$31,785	\$8,565	\$0	\$0	\$38	\$2,648	\$37,740
2034	13	\$37,740	\$8,565	\$0	\$0	\$43	\$3,551	\$42,797
2035	14	\$42,797	\$8,565	\$0	\$0	\$51	\$0	\$51,414
2036	15	\$51,414	\$8,565	\$0	\$0	\$60	\$0	\$60,040
2037	16	\$60,040	\$8,565	\$0	\$0	\$23	\$45,234	\$23,394
2038	17	\$23,394	\$8,565	\$0	\$0	\$29	\$3,145	\$28,843
2039	18	\$28,843	\$8,565	\$0	\$0	\$37	\$0	\$37,446
2040	19	\$37,446	\$8,565	\$0	\$0	\$44	\$1,857	\$44,198
2041	20	\$44,198	\$8,565	\$0	\$0	\$53	\$0	\$52,816



#### Alternative 1: Funding with Level Steps

	CONTRIBUTIONS		Γ		SI	PECIAL ASSI	ESSMENTS	5			SETTINGS (analyzed by unit/month)					
FIRST YR	LAST YR							Tot	als			Starting a	nount (\$):	4.21		
\$5,001.48	\$8,565.48	per year			First		Per Year	\$0	Per Unit	\$0		Increm	ent by (\$):	1		
\$50.52	\$86.52	per unit per y	year		Second		Per Year	\$0	Per Unit	\$0			Every	3	year	
\$416.79	\$713.79	per month										F	requency:	3	time	
\$4.21	\$7.21	per unit per 1	month													
Projected Annual F	Funding and Ex	penditures:														
Year:		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Year Number:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve	e Fund Balance	16,677	21,700	25,280	30,392	36,618	39,504	43,372	48,050	48,378	47,450	31,785	37,740	42,797	51,414	60,040
Capital Expenditure	es:	5,314	-	1,446	1,109	-	3,343	3,553	2,748	7,098	9,540	24,262	2,648	3,551	-	-
Total Revenue (all s	sources)	5,018	5,023	5,027	6,220	6,226	6,229	7,421	7,425	7,426	8,613	8,597	8,603	8,608	8,617	8,625
Year:		2037	2038	2039	2040	2041										
Year Number:		16	17	18	19	20										
End of Year Reserve	e Fund Balance	23,394	28,843	37,446	44,198	52,816										
Capital Expenditure	es:	45,234	3,145	-	1,857	-										
Total Revenue (all s	sources)	8,589	8,594	8,603	8,610	8,618										





		Beginning						
	Year	<b>Reserve Fund</b>	Fee	Special	Special	Investment	Capital	Ending
Year	Number	Balance	Revenue	Assessments 1	Assessments 2	Earnings	Expenditures	Balance
2022	1	\$16,973	\$5,001	\$0	\$0	\$17	\$5,314	\$16,677
2023	2	\$16,677	\$5,152	\$0	\$0	\$22	\$0	\$21,850
2024	3	\$21,850	\$5,306	\$0	\$0	\$26	\$1,446	\$25,736
2025	4	\$25,736	\$5,465	\$0	\$0	\$30	\$1,109	\$30,122
2026	5	\$30,122	\$5,629	\$0	\$0	\$36	\$0	\$35,787
2027	6	\$35,787	\$5,798	\$0	\$0	\$38	\$3,343	\$38,281
2028	7	\$38,281	\$5,972	\$0	\$0	\$41	\$3,553	\$40,741
2029	8	\$40,741	\$6,151	\$0	\$0	\$44	\$2,748	\$44,188
2030	9	\$44,188	\$6,336	\$0	\$0	\$43	\$7,098	\$43,470
2031	10	\$43,470	\$6,526	\$0	\$0	\$40	\$9,540	\$40,496
2032	11	\$40,496	\$6,722	\$0	\$0	\$23	\$24,262	\$22,978
2033	12	\$22,978	\$6,722	\$0	\$0	\$27	\$2,648	\$27,078
2034	13	\$27,078	\$6,722	\$0	\$0	\$30	\$3,551	\$30,279
2035	14	\$30,279	\$6,722	\$0	\$0	\$37	\$0	\$37,038
2036	15	\$37,038	\$6,722	\$0	\$0	\$44	\$0	\$43,803
2037	16	\$43,803	\$6,722	\$0	\$0	\$5	\$45,234	\$5,296
2038	17	\$5,296	\$6,722	\$0	\$0	\$9	\$3,145	\$8,881
2039	18	\$8,881	\$6,722	\$0	\$0	\$16	\$0	\$15,618
2040	19	\$15,618	\$6,722	\$0	\$0	\$20	\$1,857	\$20,502
2041	20	\$20,502	\$6,722	\$0	\$0	\$27	\$0	\$27,251



#### Alternative 2: Escalating Funding at 3% per Year

	CONTRIBUTIONS				SPECIAL ASSESSMENTS						Ī	SETTINGS (analyzed by unit/month)				
FIRST YR	LAST YR							Tot	als			Starting a	nount (\$):	4.21		
\$5,001.48	\$6,721.57	per year			First		Per Year	\$0	Per Unit	\$0		Increme	nt by (%):	3		
\$50.52	\$67.89	per unit per y	ear		Second		Per Year	\$0	Per Unit	\$0			Step (%):			
\$416.79	\$560.13	per month											Every	1	year	
\$4.21	\$5.66 per unit per month		nonth									F	requency:	10	time	
Projected Annual F	Funding and Exp	penditures:														
Year:		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Year Number:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve	e Fund Balance	16,677	21,850	25,736	30,122	35,787	38,281	40,741	44,188	43,470	40,496	22,978	27,078	30,279	37,038	43,803
Capital Expenditure	es:	5,314	-	1,446	1,109	-	3,343	3,553	2,748	7,098	9,540	24,262	2,648	3,551	-	-
Total Revenue (all s	sources)	5,018	5,173	5,332	5,495	5,665	5,836	6,013	6,195	6,379	6,566	6,745	6,749	6,752	6,759	6,765
Year:		2037	2038	2039	2040	2041										
Year Number:		16	17	18	19	20										
End of Year Reserve	e Fund Balance	5,296	8,881	15,618	20,502	27,251										
Capital Expenditure	s:	45,234	3,145	-	1,857	-										
Total Revenue (all s	sources)	6,727	6,730	6,737	6,742	6,749										





		Beginning						
	Year	<b>Reserve Fund</b>	Fee	Special	Special	Investment	Capital	Ending
Year	Number	Balance	Revenue	Assessments 1	Assessments 2	Earnings	Expenditures	Balance
2022	1	\$16,973	\$6,534	\$0	\$0	\$18	\$5,314	\$18,211
2023	2	\$18,211	\$6,534	\$0	\$0	\$25	\$0	\$24,770
2024	3	\$24,770	\$6,534	\$0	\$0	\$30	\$1,446	\$29,887
2025	4	\$29,887	\$6,534	\$0	\$0	\$35	\$1,109	\$35,348
2026	5	\$35,348	\$6,534	\$0	\$0	\$42	\$0	\$41,924
2027	6	\$41,924	\$6,534	\$0	\$0	\$45	\$3,343	\$45,160
2028	7	\$45,160	\$6,534	\$0	\$0	\$48	\$3,553	\$48,190
2029	8	\$48,190	\$6,534	\$0	\$0	\$52	\$2,748	\$52,028
2030	9	\$52,028	\$6,534	\$0	\$0	\$51	\$7,098	\$51,516
2031	10	\$51,516	\$6,534	\$0	\$0	\$49	\$9,540	\$48,558
2032	11	\$48,558	\$6,534	\$0	\$0	\$31	\$24,262	\$30,860
2033	12	\$30,860	\$6,534	\$0	\$0	\$35	\$2,648	\$34,781
2034	13	\$34,781	\$6,534	\$0	\$0	\$38	\$3,551	\$37,801
2035	14	\$37,801	\$6,534	\$0	\$0	\$44	\$0	\$44,380
2036	15	\$44,380	\$6,534	\$0	\$0	\$51	\$0	\$50,965
2037	16	\$50,965	\$6,534	\$0	\$0	\$12	\$45,234	\$12,276
2038	17	\$12,276	\$6,534	\$0	\$0	\$16	\$3,145	\$15,681
2039	18	\$15,681	\$6,534	\$0	\$0	\$22	\$0	\$22,237
2040	19	\$22,237	\$6,534	\$0	\$0	\$27	\$1,857	\$26,940
2041	20	\$26,940	\$6,534	\$0	\$0	\$33	\$0	\$33,508



#### Alternative 3: Level Funding without Special Assessments

CON	CONTRIBUTIONS				SPECIAL ASSESSMENTS						Γ	SETTINGS (analyzed by unit/month)			month)	
FIRST YR LAS	ST YR							Tot	als			Starting a	nount (\$):	5.5		
\$6,534.00 \$6,	6,534.00	per year			First		Per Year	\$0	Per Unit	\$0		Incremen	nt by (%):	0		
\$66.00	\$66.00	per unit per y	ear		Second		Per Year	\$0	Per Unit	\$0			Step (%):	0		
\$544.50 \$	\$544.50	per month											Every	3	year	
\$5.50	.50 \$5.50 per unit per month		nonth									F	requency:	3	time	
Projected Annual Funding	ig and Exp	penditures:														
Year:		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Year Number:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund	l Balance	18,211	24,770	29,887	35,348	41,924	45,160	48,190	52,028	51,516	48,558	30,860	34,781	37,801	44,380	50,965
Capital Expenditures:		5,314	-	1,446	1,109	-	3,343	3,553	2,748	7,098	9,540	24,262	2,648	3,551	-	-
Total Revenue (all sources)	s)	6,552	6,559	6,564	6,569	6,576	6,579	6,582	6,586	6,585	6,583	6,565	6,569	6,572	6,578	6,585
Year:		2037	2038	2039	2040	2041										
Year Number:		16	17	18	19	20										
End of Year Reserve Fund	l Balance	12,276	15,681	22,237	26,940	33,508										
Capital Expenditures:		45,234	3,145	-	1,857	-										
Total Revenue (all sources)	s)	6,546	6,550	6,556	6,561	6,567										



# **Summary of Reserve Balances**



	Year	Yearly			
<u>Year</u>	<u>Number</u>	<b>Expenditures</b>	<u>Alt. 1</u>	<u>Alt. 2</u>	<u>Alt. 3</u>
2022	1	\$5,314	\$16,677	\$16,677	\$18,211
2023	2	\$0	\$21,700	\$21,850	\$24,770
2024	3	\$1,446	\$25,280	\$25,736	\$29,887
2025	4	\$1,109	\$30,392	\$30,122	\$35,348
2026	5	\$0	\$36,618	\$35,787	\$41,924
2027	6	\$3,343	\$39,504	\$38,281	\$45,160
2028	7	\$3,553	\$43,372	\$40,741	\$48,190
2029	8	\$2,748	\$48,050	\$44,188	\$52,028
2030	9	\$7,098	\$48,378	\$43,470	\$51,516
2031	10	\$9,540	\$47,450	\$40,496	\$48,558
2032	11	\$24,262	\$31,785	\$22,978	\$30,860
2033	12	\$2,648	\$37,740	\$27,078	\$34,781
2034	13	\$3,551	\$42,797	\$30,279	\$37,801
2035	14	\$0	\$51,414	\$37,038	\$44,380
2036	15	\$0	\$60,040	\$43,803	\$50,965
2037	16	\$45,234	\$23,394	\$5,296	\$12,276
2038	17	\$3,145	\$28,843	\$8,881	\$15,681
2039	18	\$0	\$37,446	\$15,618	\$22,237
2040	19	\$1,857	\$44,198	\$20,502	\$26,940
2041	20	\$0	\$52,816	\$27,251	\$33,508



## **Appendix B: PROJECT PHOTOGRAPHS**

**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021







**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021







**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

Area of pond that is not receiving movement resulting in hazy scum.







**Photo Taken by:** Wickerham, P.E. **Date:** May 19, 2021





# **Description:**

One of the cross walk ramps that is lacking the required truncated domes.



**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

Area of walkway needing seal coating.







**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

Edge cracks were seen in many locations.



**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021







**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

View of the stacked stone at the entrance to Dowden Park.



**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

Gap between sidewalk and asphalt that are a trip hazard.

Photo Number **21** 

# <image>

# **Description:**

Area where nearby tree has raised the walking path surface.

Now a trip hazard.



**Photo Taken by:** Wickerham, P.E.

**Date:** May 19, 2021





# **Description:**

Sign at the entrance to the nature reserve.



**Photo Taken by:** Wickerham, P.E. **Date:** May 19, 2021





# **Description:**

One of the landscape lights near the main entrance.

Appendix C: PROFESSIONAL QUALIFICATIONS

## **CRITERIUM-LISZKAY ENGINEERS**

110 N. High St., Suite 207 Gahanna, Ohio 43230 614-418-7200, fax 614 418-7270 www.clengineers.com, art@clengineers.com

## PROFESSIONAL QUALIFICATIONS AND EXPERIENCE - ARTHUR E WICKERHAM, P.E., RS

## AREAS OF EXPERTISE

Current Position: Building Inspection Engineer and Marketing Manager, Criterium-Liszkay Engrs, since 2001. Selected as Criterium's Engineer of the Year in 2002 and 2013.

Type of Work: I have performed close to nine hundred residential/commercial building inspections with Criterium. These included structural and electrical investigations, design, Reserve and Transition Studies and Property Condition Assessments. I received my Reserve Specialist (RS) designation from the Community Associations Institute (CAI) in 2006. In 2008 Art was certified as a Building Inspector Engineer by the NABIE.

Types of buildings: I have inspected single family residences, 2, 3 and 4 family residences, one, two and three story commercial buildings and warehouses.

Types of clients: Clients included: individual owners, banks, mortgage companies, attorneys, condominium management companies and investors

## QUALIFICATIONS

Retired as a Senior Electrical Engineer and manager of construction engineering for over 37 years. I was responsible for the design, contraction for and construction of power generation and distribution, computer facilities, security and fire systems at various companies in Ohio. I was responsible for all facility designs and modification to new and existing structures. I was also the disaster recovery and emergency preparedness manager, including responsibility for hazardous and environmental matters. Oversaw all design aspects and construction of several million dollars worth of construction annually.

I retired from the military in 1997 with the rank of Navy Captain with 30 plus years of combined active and reserve service. During my career I was responsible for contingency engineering management and construction for locations in the Caribbean, Pacific, Vietnam, Europe and United States. I was responsible for training and construction efforts of over 3500 Navy construction personnel worldwide and their logistic support. During Desert Storm I, I was the Commanding Officer of a 745 man Seabee Construction Battalion.

## EDUCATION AND AFFILIATIONS

I have been registered as a P.E. in Ohio since 1971 and Michigan since 2006. I received my Bachelor degree in Electrical Engineering from the University of Louisville and Bachelor of Business Administration from Franklin University. Past Instructor at Franklin University and Columbus State Community College. Author of Home Inspections for the Non-Professional. Ham Radio KD8VFR

November 2013