

PREPARED FOR:

**CELEBRATION SQUARE
HOMEOWNERS ASSOCIATION
RALEIGH, NC**

**DRAFT –
FOR REVIEW
PURPOSES ONLY**

APRIL 3, 2023

**FULL RESERVE STUDY
with Site Inspection**

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INTRODUCTIONS

The Celebration Square Homeowners Association authorized Giles Flythe Engineers to perform a Full Reserve Study for the Celebration Square community located in Raleigh, NC. The purpose of the reserve study is to assist the association in planning for future capital repair expenses. A reserve study is an important tool for an association to adequately fund capital reserve accounts through regular annual reserve contributions. Adequately funded capital reserve accounts reduce the need to defer capital repairs, collect special assessments or borrow funds for capital repair projects.

A community association typically has certain responsibilities as described in the association governing documents. These responsibilities often include maintaining common areas and other components. An association, as a non-profit organization, will typically have two general asset cash accounts including an operating account and a reserve account. The operating account is funded from regular budgeted assessments and is used to fund routine operating expenses that occur on a predictable cycle, typically monthly or up to annually. The reserve account is funded from regular contributions and is primarily used to fund non-annual capital repair expenses.

The focus of the reserve study is on the reserve account. We have projected capital repair expenses over a term of twenty years. The capital repair expenses are limited to those components for which the association is responsible for maintaining. Capital repair expense estimates include an expected useful life and remaining useful life of the components to develop a projected schedule for capital repairs over the term. After developing a schedule of capital repairs over the term, we completed a cash flow analysis forecasting reserve account balances over the term and provided funding recommendations as needed. Capital repair expense estimates and funding estimates are most reliable in the first portion of the term. Updating a reserve study every three to five years will mitigate the impacts of variation in repair costs, component wear, inflation and reserve funding over time.

Capital reserve funding recommendations are provided to address funding principles including sufficient funds required, a stable reserve contribution rate over the term, an equitable contribution rate over the term, and fiscal responsibility. The reserve study is intended to assist the association in developing budgeted reserve contributions.

The report includes a narrative section which describes the scope of the reserve study, a discussion of observations and capital repair allocations, a general description of capital repairs and a description of our cash flow analysis and funding recommendations. The report appendices include the capital reserve analysis with tables detailing an itemized list of capital repair expenses, an itemized list of expenses by year and our cash flow analysis. A photo log is provided and includes a representative sample of our observations. The report includes multiple sections with information presented in various forms and should, therefore, be read in its entirety.

EXECUTIVE SUMMARY

Celebration Square Townhomes is a community comprised of 31 individually-owned townhomes within 5 buildings. According to Wake County Real Estate records and historical aerial imagery, the buildings were constructed between 2000 and 2001. The units are generally 1.5- to 2-stories in height and are of wood-frame construction. The buildings are located along Bonnie Ridge Court and Rothshire Court in Raleigh, NC.

The association has responsibility for maintaining the exterior façade of the townhome buildings, including roofs and siding, as well as various site improvements. The most significant site improvements include the private streets and associated parking areas, concrete walkways, site fencing, retaining walls, and drainage systems within the community.

The buildings, common areas, and site improvements are generally in fair condition. Based on our evaluation, maintaining the current level of funding is not projected to maintain a positive balance through the term of this study. We have provided additional recommendations for annual reserve contribution schedules that provide sufficient funding to meet capital expenditure requirements in the next twenty years, in summary as follows:

- **Alternative 1:** Beginning in 2024, increase the annual reserve contribution rate to \$17,000 (\$45.70 per unit, per month). Thereafter, increase the annual reserve contribution rate by 9% every year throughout the remainder of the term. In addition to the above increases, a special assessment in the amount of \$62,000 (\$2,000 per unit) will be required in 2024 to assist with upcoming drainage, painting/trim repair, and retaining wall projects. This alternative is projected to maintain a positive balance through the term of this study.
- **Alternative 2:** Beginning in 2024, increase the annual reserve contribution rate to \$30,000 (\$80.65 per unit, per month). Then, increase the annual reserve contribution rate by \$3,500 (~\$9.41 per unit, per month) every other year throughout the remainder of the term. In addition to the above increases, a special assessment in the amount of \$31,000 (\$1,000 per unit) will be required in 2024 to assist with upcoming drainage, painting/trim repair, and retaining wall projects. This alternative is projected to maintain a positive balance through the term of this study.

Note, in both alternatives above, the reserve account balance drops below our recommended threshold balance within the first couple of years. If projects are quoted higher than anticipated, or if repairs are required sooner than anticipated, additional increases and/or assessments may be required.

A more detailed analysis of the reserve fund has been provided in Appendix A.

Some significant expenditures are expected over the term of the study. Some of the more notable examples are listed below:

- Repair, seal, and resurface asphalt pavement in private streets
- Replace building roofs
- Common area drainage repairs
- Replace timber retaining walls

Additional, less significant, capital expenditures are anticipated over the term of this study. Those items that will require repair or replacement are discussed later in this report.

PURPOSE & SCOPE

We have completed this study to estimate capital repair expenses the association is responsible for over the term of the study and provide a cash flow analysis and capital reserve funding plan. This study is intended to assist the association in determining the allocation requirements into the reserve fund which are projected to meet future anticipated capital expenditures for the community.

This report estimates capital repair expenses for the community twenty years into the future. Variations in capital repair expense forecasts due to the quality of maintenance, weather and other events may occur. Over time, age, premature deterioration, or other factors may necessitate the addition of assets into the reserve study. Additionally, fluctuations in material and labor costs beyond assumed inflation rates may also affect the accuracy of the forecasts. Therefore, a reserve study should be routinely updated, typically on a three to five-year cycle to provide the most accurate assessment of needs and financial obligations of the community.

This study has been performed according to the scope as generally defined by the Celebration Square Homeowners Association, Giles Flythe Engineers Inc., and the standards of the Community Associations Institute. The findings and recommendations are based on interviews with the community's management personnel; a review of available documents; and a limited visual inspection of the components maintained by the association.

The Cash Flow Method of calculating reserves has been utilized, whereby contributions to the reserve fund are designed to offset the variable annual expenditures. Funding alternates are recommended which are designed to achieve at minimum a Baseline Funding goal by maintaining a positive balance for the term of the study. We have also included a threshold funding goal which provides a minimum reserve account over the term. The minimum balance is typically calculated by determining the total over term forecasted expenses and dividing by the length of the term in years. This minimum threshold balance will help offset the risk of fluctuations in labor and material costs and component wear.

To determine which components should be included in this analysis, we used the following guidelines:

- The component must be maintained by the association.
- The component must have an estimated remaining useful life within the term of this study.
- The funding for the repair should be from the reserve account, not through an annual operating budget or other maintenance contracts.
- The cost of the capital repair must be significant enough to not be reasonably funded from an annual operating budget.

What is a reserve study?

A reserve study is a long-term capital budget planning tool which compares the current reserve fund of an organization to future capital repairs and replacements.

A reserve study is a tool to help identify and prepare for major repair and replacement projects for a community.

It is recommended that a reserve study be performed every five years to ensure that communities are saving the necessary funds for capital repairs and improvements.

Our process for completing the reserve study includes:

1. Reviewing information provided including governing documents, association financial statements, and information on previous or planned capital repairs.
2. Reviewing available information on the property as needed. This may include plat maps, tax records, historical aerial photographs, available site, and building plans.
3. Conducting a visual inspection of the property. This may include interviewing association representatives during the inspection.
4. Developing an inventory of components to be included in the reserve study.
5. Predicting their remaining service life and, approximating how frequently they will require repair or replacement.
6. Estimating repair or replacement costs (in 2023 dollars) for each capital item.
7. Develop a cash flow analysis adjusting for inflation and return on invested monies to determine the adequacy of current reserve funding plans.
8. Develop funding recommendations with specific reserve contribution recommendations for each year of the term.

The statements in this report are opinions about the present condition of the areas inspected within the community. Our inspection is limited to a visual ground level inspection and we did not remove any surface materials, perform any testing, or move any furnishings. This study is not an exhaustive technical evaluation or building code compliance review. For additional limitations, see Conclusion and Limitations.

Standards of Reference

The following definitions are provided as a standard of reference:

Excellent: Component or system is in “as new” condition, requiring no rehabilitation and should perform in accordance with 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 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.

Poor: 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 state of disrepair. The present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

Adequate: 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.

SOURCES OF INFORMATION

Date of Inspection

Onsite inspection of the property occurred on February 28, 2023.

Interviews

We interviewed the following people in connection with this study:

- Sarah Sonke, ModHomes Realty, HOA Board President

Documents

The following documents were made available to us and reviewed:

- Wake County tax records
- Recorded plat maps
- Association financial statements

Cost Estimates

- Our internal data files on similar projects
- Local contractor estimates for similar projects
- R.S. Means Construction Cost Estimating Data

DESCRIPTION

Celebration Square Townhomes is a community comprised of 31 individually-owned townhomes within 5 buildings. According to Wake County Real Estate records and historical aerial imagery, the buildings were constructed between 2000 and 2001. The units are generally 1.5- to 2-stories in height and are of wood-frame construction. The buildings are located along Bonnie Ridge Court and Rothshire Court in Raleigh, NC.

The association has responsibility for maintaining the exterior façade of the townhome buildings, including roofs and siding, as well as various site improvements. The most significant site improvements include the private streets and associated parking areas, concrete walkways, site fencing, retaining walls, and drainage systems within the community.

The entrance road and parking areas are asphalt-paved. Concrete curb and gutter are provided around landscaped islands, and concrete sidewalks and walkways are provided to the unit entrances. The buildings are of stick-framed, bearing wall construction over concrete slab-on-grade foundations. Roofing surfaces consist of asphaltic fiberglass shingles and gutter and downspout systems. Attic ventilation is provided by roof ridge vents and soffit ventilation. The exteriors incorporate a combination of brick veneer and vinyl siding. The trim work and wood railings are constructed with wood, aluminum, and PVC.

Electrical service is routed underground and metered individually at each residence. Water is also metered individually at each residence. Mailboxes are mounted in two stand-alone metal mail centers. The property does not have a clubhouse or any other common area amenities.

Site drainage is provided via landscaped swales and catch basins in the paved and landscaped areas. These systems direct water flow through underground pipes to a stormwater control pond at the southern end of the community.

OBSERVATIONS

The following key observations were made about the current condition of the more significant and costly common elements of the property.

Site Improvements

We understand that the maintenance of the private asphalt paved streets and parking areas is the responsibility of the association. The pavement appeared to be in generally good to fair condition given the age of the community, with only minor longitudinal and fatigue cracking in isolated areas. Typically, we recommend the application of an oil resistant sealant to asphalt paved surfaces on an approximately 7-year cycle. At this same time, all cracks should be properly filled, patched, and sealed, and all of the markings should be repainted. Per the Board President, Rothshire Court is scheduled to be crack filled and sealed in 2023. Therefore, we have adjusted the allocation in Appendix B in the 'Annual Expense Projection' sheets to only account for crack filling and seal coating Bonnie Ridge Court in 2024. After 2024, we have allocated funds to reseal all of the pavement at the same time on a 7-year cycle in 2031. We assume isolated areas of potholes and fatigue will be repaired using funds from an annual maintenance budget, as needed.

Assuming sealing and crack repairs occur in the interim, asphalt paving should last approximately 20-30 years prior to resurfacing. We have allocated funds to resurface the current asphalt paving in 2038. The pavement could likely be resurfaced sooner, though we have delayed the project due to funding constraints. Resurfacing will include a 1"-1.5" overlay over the paved surfaces, with limited milling in select areas to maintain an adequate drainage profile and a consistent surface. Sectional full depth repairs or reclamation may be required in areas depending on the level of fatigue at the time of resurfacing, which may increase costs.

Concrete curb and gutter line portions of asphalt paved areas throughout the community where sidewalk is not adjacent. It is likely that due to differential settlement, sections of the curbing will require periodic repairs or replacement. Repairs typically include saw-cutting and removing damaged areas, repairing base course and pouring and finishing new concrete curbing. We have allocated funds for periodic repairs of sections of concrete curbing and assumed that 5% of the curbing will require repair every 8 years beginning in 2031.

The association is responsible for maintaining the concrete walkways along the streets and in front of the buildings. Per the provided maintenance responsibility chart, the individual homeowners are responsible for the rear patios. The concrete walkways were in generally good condition. A heaved section of sidewalk was observed at the front-left of Unit 801 Rothshire Court, likely from root growth from a nearby mature tree. We have allocated funds for periodic repairs and/or replacement of the concrete sidewalks as required and have assumed that 2.5% of the surfaces will require maintenance every 8 years beginning in 2031. Repairs may include grinding to reduce unevenness at cracking or saw-cutting, removing, and replacing sections of the concrete. We assume isolated areas of trip hazards, such as the heave mentioned above, will be repaired/replaced, as needed, using funds from an annual operating budget.

Drainage systems include gutter downspouts that discharge primarily to grade near the building foundations. Stormwater on the site drains via surface flow toward curb inlets in the paved areas. Inlets lead to buried stormwater piping that lead to a stormwater basin at the southern end of Bonnie Ridge Court. We assume there is an inlet grate at the low point in the storm retention basin, though it is likely covered with debris/sediment, as it was not visible on site. The basin appears to discharge to the south based on the Wake County GIS maps. Significant erosion was observed around the pond inlet, and the inlet pipe had significant sediment accumulation present. We recommend repairing the areas of erosion and removing sediment from the inlet/outlet pipes to ensure the proper flow of runoff through the system.

Other areas of concern throughout the community include erosion along the embankment at the eastern end of Rothshire Court and along the rears of the buildings west of Bonnie Ridge Court. Erosion was also observed at the rears of Units 804 and 806 Rothshire Court. Significant erosion was observed at the left and rear-left of Unit 801 Rothshire Court, which has led to undermining of the rear-left corner foundation. The front walkway of Unit 7323 Bonnie Ridge Court and the rear patio of 7329 Bonnie Ridge Court were also observed to be undermined. Fill appears to have been added at the rear of Units 7305 and 7307 Bonnie Ridge Court. Minimal grass vegetation was present, as most of the community is shaded from mature tree canopies, which will inhibit grass growth. Where vegetation cannot be maintained, alternative options include a mulch groundcover or stone. Mulch will wash away in areas of concentrated flows. Fill could be added in areas of erosion periodically to bring the slope up to a more level grade and mitigate further erosion that steepens embankments. A suitable flowable fill should be installed in any areas of undermined foundations.

We recommend repairing areas of erosion, and installing soil stabilizing ground cover in areas of bare soil throughout the community. Note that the inlet basins may require periodic cleaning out as well. We also recommend having a portion of the private drainage infrastructure in the streets inspected with a video camera system, flushed, and repaired as necessary. We have allocated funds to repair the drainage systems on a 5-year cycle beginning in 2024. In addition to noted areas above, drainage repairs will likely include retrenching of swales to improve flow, adding rip rap or vegetation to stabilize exposed or steep areas, extending gutter downspouts to underground systems, repairing erosion concerns, installing french drains, or other types of drainage systems. Note, we have included a moderate budget to help cover these costs, and costs can vary significantly depending on the scope of work.

Wood privacy fencing is installed along the northern and northeastern perimeters of the community to separate neighboring properties. The fencing is approximately 6-feet in height and is in generally poor condition, with leaning and missing sections observed. We have allocated funds to replace the fencing on an 18-year cycle beginning in 2029. Note, the fencing should be replaced sooner, though we have delayed replacement due to funding constraints.

Chain link fencing is installed around the stormwater retention basin at the southern end of the community. The fencing was in generally good to fair condition with minor corrosion observed in select areas. We have provided an allocation of funds to replace the chain link fencing on an approximately 30-year cycle beginning in 2035.

Wood timber retaining walls are located behind and adjacent to units to adjust for changes in topographical grade. The timber retaining walls were varying in condition, with sections of bowing, displacement, and rot observed. Many of the wood walls are likely original to construction. Wood timber retaining walls typically have an expected useful life of approximately 15-20 years. Sections of significantly deteriorated and/or leaning walls were observed to the rear of building 7301-7313, left of building 7312-7320, and rear of building 800-810. We have allocated funds to replace these sections of timber retaining wall in 2026. Note however, the walls should likely be replaced sooner, but we have delayed the project due to funding constraints. A section of timber retaining wall at the front-right of building 7321-7333 was in generally good condition, and we have allocated funds for replacement in 2037. The retaining walls should be monitored for additional movement and repaired, as needed, prior to the replacement dates allocated.

A section of segmental block retaining wall was located at the rear-right of unit 7312-7320 that appeared to be in generally good condition. These types of walls should provide a useful life beyond the term of this study, assuming proper drainage and geogrid reinforcement are in place, and the top of the wall is maintained clear of larger, woody vegetation.

An entrance sign is located at the north end of the community that includes painted, engraved community lettering on metal posts. The sign appeared to be in generally good condition. We have provided an allocation of funds to replace the entrance sign on an approximately 15-year cycle beginning in 2034.

There are two exterior mailbox kiosks located within the community that are likely original to construction. Over time, the locking mechanisms and hinges will wear due to daily use and exposure to the exterior elements. These components should have an expected useful life of approximately 25 to 30 years. We have allocated funds for their replacement in 2033.

The association is responsible for common area landscaping, and we have assumed typical landscaping costs will be included in the annual maintenance budget. However, per request, we have provided an allowance for larger tree trimming/removal projects every 5 years beginning in 2029. Note, costs for this type of work can vary significantly depending on the project scope, and the allowance provided may not fully fund repairs.

Common Building Exteriors

The association is responsible for exterior maintenance of the townhome units, including roofing, siding and trim, gutters, and downspouts. Windows and doors are assumed to be the responsibility of the individual homeowners. Therefore, costs associated with these repairs have been omitted from the reserve funding schedule, with the exception of painting the doors, which we assume is the responsibility of the association.

The predominant pitched roof surfaces over the townhome buildings are covered in architectural-grade, asphaltic-fiberglass shingles, which were reportedly replaced within the past two years. Typically, architectural-grade shingle roofing will last 20-25 years. We strongly recommend that any re-roofing project closely follow procedures outlined by the National Roofing Contractors Association's *Roofing and Waterproofing Manual*. A re-roofing sequence should include removal of the existing roofing material, replacement of any inadequate roof sheathing, damaged flashing, and drip edge components. We have

allocated funds for replacement of all the roofs in 2042 on an approximately 20-year cycle. We have also included funding for gutter and downspout replacement at the time of roof replacement.

It is likely that minor roofing repairs will be required in the interim, including replacement of exhaust vent boots, minor flashing repairs, isolated shingle replacements, and minor gutter/downspout repairs. We have assumed these types of repairs will be funded from a general operating budget, as needed.

The buildings in the community are of wood-framed construction and are primarily clad in vinyl siding with wood trim components and aluminum wrapping. Exterior doors are of metal and skin construction, and vinyl shutters flank windows on the front of the buildings. The exterior surfaces were in generally good to fair condition with some deteriorating sections observed. The enamel finish on the aluminum trim wrapping was peeling/flaking on the fronts of the units in the 7312-7320 building. Repairs to similar deficiencies were recently made to Unit 7301 based on a quote provided by the Board President. Other deficiencies included rot damage to several of the front porch posts, such as at Units 809 and 7318.

We typically recommend painting/repairing the wood and aluminum trim components on an approximately 5- to 7-year cycle. Paint cycles should include replacing sections of siding and trim components as needed (including front porch posts), repairing caulking/sealant as needed, adequate surface cleaning/preparations, and the application of two coats of a high-quality exterior grade paint. Doors and shutters will also likely require painting during each paint cycle. We have allocated funds to repair and paint Buildings 7312-7320, 800-810, and 801-811 beginning in 2025 on an approximately 7-year cycle. Similarly, we have provided funding to paint the remaining two buildings in 2028 on a 7-year cycle. Painting and repairs should likely be performed sooner than allocated, though we have delayed the projects due to funding constraints. We have included funds for replacing areas of trim during the painting cycles, as well as select wooden posts where rot is observed. The association should feel free to adjust which units are included in each cycle, based on deterioration at the time of the projects. We would like to note that we do not anticipate any large-scale repairs or re-pointing to be required to the brick veneer surfaces on the buildings over the term of this study.

Vinyl siding should require many years of relatively maintenance-free service, and can have an expected useful life of 40 years or more. However, over time, portions of the siding can become damaged and fade due to exposure to sunlight and other environmental elements. We do not anticipate full replacement of the siding over the term of this study, but we have allocated a contingency of funds to begin to prepare for the eventual significant cost of siding replacement at the end of the term.

Sections of privacy fencing are installed between select units at the rear, and we assume these short sections of fencing are the responsibility of the individual unit owners. We also assume exterior lighting is the responsibility of the individual homeowners based on the provided maintenance responsibility chart.

Mechanical and Plumbing Systems

The association is likely responsible for buried sanitary sewer and drainage piping in common areas and the privately-owned streets. It is possible that sectional repairs of buried piping will be required through the term

of the study due to tree root growth and other concerns. We have provided an allocation of funds for repairs to underground sanitary sewer and drainage piping on a 15-year cycle beginning in 2034.

RESERVE FUND ANALYSIS

We have performed a cash flow analysis projecting balances in the reserve account over the term of this study. We have included estimated capital repair expenses detailed in the first several pages of Appendix A. We have included tables and graphs depicting current funding levels along with recommended funding alternatives.

The financial projections include an assumed inflation rate of 3.5% and an assumed average return on invested funds of 1.5%. The inflation rate adjustment is noted at the bottom of the annual expense page and the return on invested funds is noted in the existing funding level and funding alternative cash flow tables.

The software utilized to analyze the reserve funds was developed by Giles Flythe Engineers, Inc. in cooperation with a technology consultancy. The software and our analysis system have been extensively reviewed by leading community association and non-profit certified public accountants.

The capital repairs listed were derived from the initial request for proposal, discussions with association representatives, our informal review of governing documents and our site inspection. The association should confirm that the items listed are, in fact, the responsibility of the association and appropriate to fund from the reserve account.

Appendix A includes the following:

1. The Project Summary page that lists pertinent details specific to the association, the terms of the analysis and summarizes total over term expenses and recommended threshold balance.
2. The Expense Projection page that itemizes the capital repairs by category, illustrates our cost estimating by unit and provides estimated useful life and remaining useful life of each item.
3. The Annual Expense Projection pages that populate the capital repairs over the term of the study. This page includes a total adjusted for inflation at the bottom of the pages.
4. The Itemized Funding Analysis page provides a summary of the capital expenditures over the term and a graph breaking down the portion of the capital repairs into each category – Site Improvements, Building Exterior, Mechanical/Plumbing Systems.
5. The Current Funding Projection page provides a table and graph illustrating our cash flow analysis assuming the association maintains the current level of reserve contributions over the term of this study. The table includes projected reserve account balances, contributions, return on invested funds and capital repair expenses for each year of the term of this study.
6. The Funding Alternative pages each provide a table and graph illustrating our cash flow analysis assuming the association implements one of our funding recommendations detailed below.

Current Reserve Funding Rate: \$4,200 per year

Current Reserve Balance: \$6,200 (Projected 2024 starting balance)

Note that based on our cash flow analysis, maintaining the current funding level over term is not projected to maintain a positive/healthy balance over the term.

We have included additional recommended funding alternatives to your current reserve-funding program and recommend that the board adopt an alternative that best reflects the objectives of the community. Our funding recommendations are as follows:

- **Alternative 1:** Beginning in 2024, increase the annual reserve contribution rate to \$17,000 (\$45.70 per unit, per month). Thereafter, increase the annual reserve contribution rate by 9% every year throughout the remainder of the term. In addition to the above increases, a special assessment in the amount of \$62,000 (\$2,000 per unit) will be required in 2024 to assist with upcoming drainage, painting/trim repair, and retaining wall projects. This alternative is projected to maintain a positive balance through the term of this study.
- **Alternative 2:** Beginning in 2024, increase the annual reserve contribution rate to \$30,000 (\$80.65 per unit, per month). Then, increase the annual reserve contribution rate by \$3,500 (~\$9.41 per unit, per month) every other year throughout the remainder of the term. In addition to the above increases, a special assessment in the amount of \$31,000 (\$1,000 per unit) will be required in 2024 to assist with upcoming drainage, painting/trim repair, and retaining wall projects. This alternative is projected to maintain a positive balance through the term of this study.

Note, in both alternatives above, the reserve account balance drops below our recommended threshold balance within the first couple of years. If projects are quoted higher than anticipated, or if repairs are required sooner than anticipated, additional increases and/or assessments may be required.

The reserve study is focused on the capital reserve account and budgeted contributions to reserves. The recommendations above are solely attributed to the annual reserve contributions. The association likely has many line items in the annual operating budget that should also be periodically adjusted as part of an annual budgeting process.

The capital repair/replacement cost estimates we have developed are based on 2023 dollars. Our reserve study does include an adjustment for inflation and an assumed rate of return on invested funds.

CONCLUSION & LIMITATIONS

We have provided reserve funding recommendations based on our analysis of the association-maintained components, estimated capital repair costs over the term and the current funding levels. Further detail of the reserve fund analysis is provided in Appendix A.

The physical analysis portion of this reserve study was completed through a limited visual inspection. The visual inspection was completed from ground level unless otherwise specified. The visual inspection is generally limited to readily accessible and visible common areas that would likely require capital repair activities over the term. Note that this inspection does not include removing surface materials, excavation or any testing. The inspection does not include riparian buffers or other protected common areas. Buried utility components and other concealed components were not inspected as part of this analysis and we cannot be responsible for the condition of components not inspected.

The observations described in this study are valid on the date of the investigation and have been made under the conditions noted in the report. We prepared this study for the exclusive use of the Celebration Square Homeowners Association. No other party should rely on the information in this report without consent. If another individual or party relies on this study, they shall indemnify and hold Giles Flythe Engineers Inc. harmless for any damages, losses, or expenses they may incur as a result of its use. 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.

Members of the Giles Flythe Engineers team working on this reserve study are not members of, or otherwise associated with the association. Giles Flythe Engineers has disclosed any other involvement with the association that could result in conflicts of interest.

Information provided by the representatives of the association regarding financial, physical, quantity, or historical issues, will be deemed reliable by Giles Flythe Engineers. The reserve balance presented in the Reserve Study is based upon information provided and was not audited. Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection. Giles Flythe Engineers is not aware of any additional material issues which, if not disclosed, would cause a distortion of the association's situation.

This reserve study is partially a reflection of information provided to us. The reserve study is assembled for the association's use and is not intended to be used for the purpose of performing an audit, quality/forensic analyses or background checks of historical records. Further, this study should not be considered a building code compliance analysis. The purpose of this study is to provide the association with a financial tool and is not to be considered an exhaustive technical or engineering evaluation which would consist of a broader scope of work.

We have provided estimated costs of capital repairs. These costs are based on our general knowledge of the construction industry. We have relied on standard sources as needed, such as Means Building Construction Cost Data and estimates reviewed by Giles Flythe Engineers on similar projects. We have performed no design work or other engineering analysis as part of this study, nor have we obtained competitive quotations or estimates from contractors. Actual repair costs can vary due to a variety of factors. We cannot be responsible for the specific cost estimates provided.

If you have any questions about this reserve study, please feel free to contact us. Thank you for the opportunity to serve you.

Respectfully submitted,

Terry J. Smull, PE, RS
Project Manager
Giles Flythe Engineers, Inc.

APPENDIX A: RESERVE FUND PROJECTIONS

PROJECT SUMMARY

Celebration Square Homeowners Association

City/state location:	Raleigh, NC
Date of inspection:	2/28/2023
Number of units:	31
Term of study (years):	20
Beginning Year of Term	2024
Estimated starting reserve account balance:	\$6,200
Current annual reserve contribution rate:	\$4,200
Assumed inflation rate:	3.50%
Assumed rate of return on invested funds:	1.50%
Total over term capital expenditure (un-inflated):	\$603,950
Total over term capital expenditure with inflation:	\$938,780
Recommended threshold reserve balance (Average annual capital expenditure):	\$46,939

EXPENSE ESTIMATES

Capital Item Description	Quantity	Unit	Unit Cost	Total Cost Per Cycle	Estimated Useful Life (years)	Estimated Remaining Life (years)	Notes
Site Improvements							
Crack fill, seal coat, stripe asphalt paving	3,400	SY	\$4.00	\$13,600	7	0	2024 adjusted for Bonnie Ridge Court only
Resurface asphalt paving with limited milling	3,400	SY	\$20.00	\$68,000	25	14	
Repair/replace sections of concrete curb and gutter	40	LF	\$50.00	\$2,000	8	7	Approx. 5% every 8 years
Repair/replace sections of concrete flatwork	50	SY	\$125.00	\$6,250	8	7	Approx. 2.5% every 8 years
Common area drainage improvements including stormwater basin	1	LS	\$15,000.00	\$15,000	5	0	
Repair/replace wood privacy fencing	500	LF	\$43.00	\$21,500	18	5	
Repair/replace chain link fencing	160	LF	\$35.00	\$5,600	30	11	
Replace sections of timber retaining wall Phase 1	1,350	SF	\$35.00	\$47,250	20	2	
Replace sections of timber retaining wall Phase 2	200	SF	\$35.00	\$7,000	20	13	
Repair/replace entrance signage	1	EA	\$1,500.00	\$1,500	15	10	
Replace mailbox kiosks	2	EA	\$2,800.00	\$5,600	30	9	
Allowance for tree trimming/removal projects	1	LS	\$5,000.00	\$5,000	5	5	
Building Exterior							
Replace building roofs and gutters	380	SQ	\$380.00	\$144,400	20	18	
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 1	17	EA	\$1,000.00	\$17,000	7	1	Buildings 7312-7320, 800-810, & 801-811
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 2	14	EA	\$1,000.00	\$14,000	7	4	Buildings 7301-7313 & 7321-7333
Allowance to prepare for eventual siding replacement	1	LS	\$75,000.00	\$75,000	40	19	Approx. 50% of total
Mechanical, Electrical, Plumbing Systems							
Allocation for buried private street utility repairs	1	LS	\$20,000.00	\$20,000	15	10	

SY: Square Yard SF: Square Feet LF: Linear Feet SQ: Roofing Square
EA: Each LS: Lump Sum SYS: System

ANNUAL EXPENSE PROJECTION



Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Site Improvements										
Crack fill, seal coat, stripe asphalt paving	\$10,000							\$13,600		
Resurface asphalt paving with limited milling										
Repair/replace sections of concrete curb and gutter								\$2,000		
Repair/replace sections of concrete flatwork								\$6,250		
Common area drainage improvements including stormwater basin	\$15,000					\$15,000				
Repair/replace wood privacy fencing						\$21,500				
Repair/replace chain link fencing										
Replace sections of timber retaining wall Phase 1			\$47,250							
Replace sections of timber retaining wall Phase 2										
Repair/replace entrance signage										
Replace mailbox kiosks										\$5,600
Allowance for tree trimming/removal projects						\$5,000				
Building Exterior										
Replace building roofs and gutters										
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 1		\$17,000							\$17,000	
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 2					\$14,000					
Allowance to prepare for eventual siding replacement										
Mechanical, Electrical, Plumbing Systems										
Allocation for buried private street utility repairs										
Totals	\$25,000	\$17,000	\$47,250	\$0	\$14,000	\$41,500	\$0	\$21,850	\$17,000	\$5,600
Totals including inflation:	\$25,000	\$17,595	\$50,615	\$0	\$16,065	\$49,289	\$0	\$27,799	\$22,386	\$7,632

ANNUAL EXPENSE PROJECTION

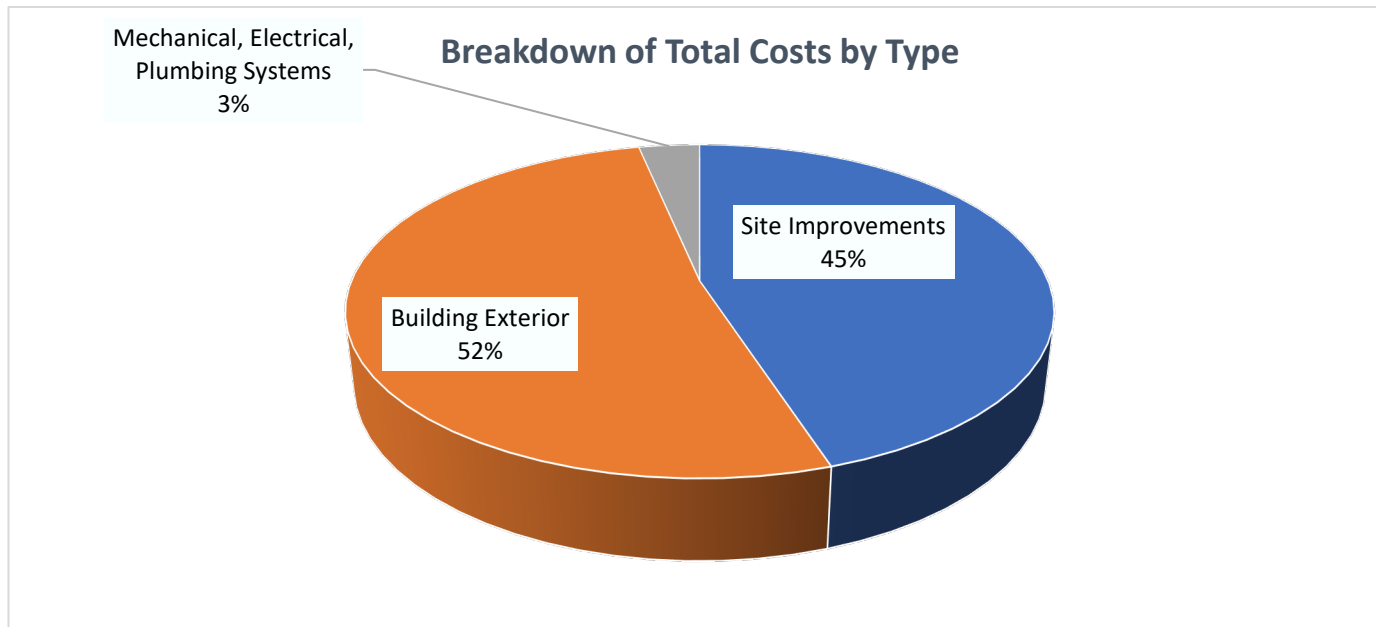


Description	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Site Improvements										
Crack fill, seal coat, stripe asphalt paving										
Resurface asphalt paving with limited milling					\$68,000					
Repair/replace sections of concrete curb and gutter						\$2,000				
Repair/replace sections of concrete flatwork						\$6,250				
Common area drainage improvements including stormwater basin	\$15,000					\$15,000				
Repair/replace wood privacy fencing										
Repair/replace chain link fencing		\$5,600								
Replace sections of timber retaining wall Phase 1										
Replace sections of timber retaining wall Phase 2				\$7,000						
Repair/replace entrance signage	\$1,500									
Replace mailbox kiosks										
Allowance for tree trimming/removal projects	\$5,000					\$5,000				
Building Exterior										
Replace building roofs and gutters									\$144,400	
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 1						\$17,000				
Repair/paint siding and trim components, post repairs, and repair/replace caulking and sealants Phase 2		\$14,000							\$14,000	
Allowance to prepare for eventual siding replacement										\$75,000
Mechanical, Electrical, Plumbing Systems										
Allocation for buried private street utility repairs	\$20,000									
Totals	\$41,500	\$19,600	\$0	\$7,000	\$68,000	\$45,250	\$0	\$0	\$158,400	\$75,000
Totals including inflation:	\$58,540	\$28,615	\$0	\$10,948	\$110,071	\$75,810	\$0	\$0	\$294,226	\$144,188

EXPENSE SUMMARY



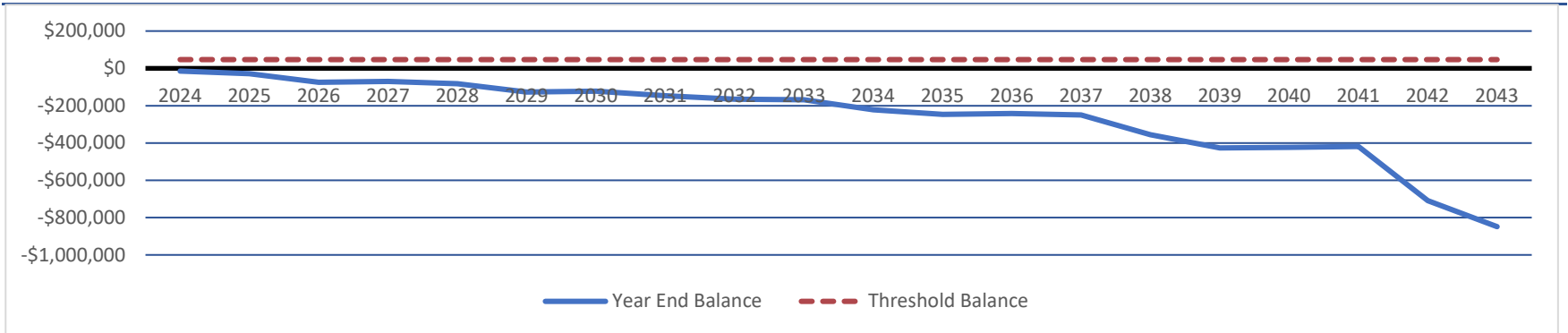
Total over term capital expenditure (un-inflated)	\$603,950
Total over term capital expenditure with inflation:	\$938,780
Average estimated annual capital expenditure with inflation:	\$46,939
Current Reserve Account Balance	\$6,200
Full Funding Balance	\$209,074
Percent Funded	2.97%



Current Funding Analysis



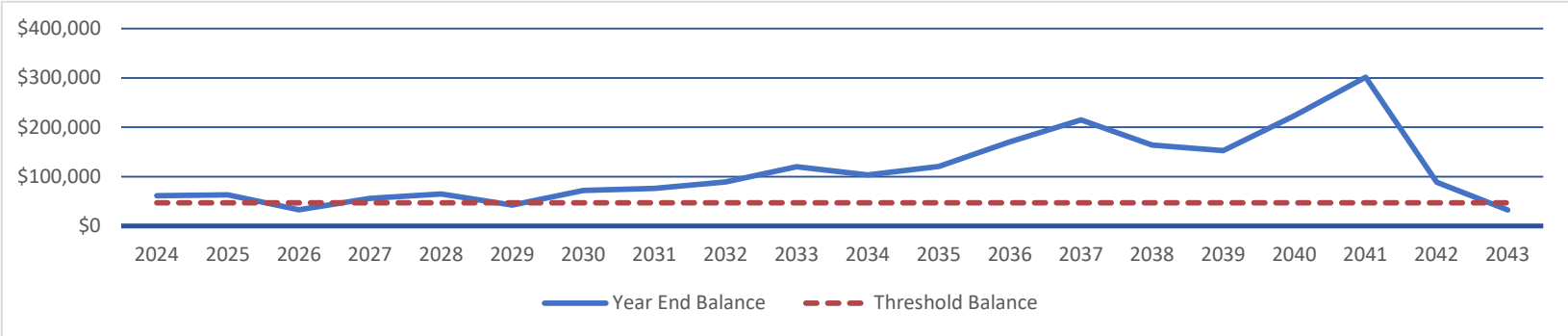
Year	Starting Balance	Reserve Account Contribution	Average Per Unit/Month	Return on Investments	Repair Expenses	Special Assessments	Year End Balance
2024	\$6,200	\$4,200	\$11.29	\$0	\$25,000	\$0	-\$14,600
2025	-\$14,600	\$4,200	\$11.29	\$0	\$17,595	0	-\$27,995
2026	-\$27,995	\$4,200	\$11.29	\$0	\$50,615	0	-\$74,410
2027	-\$74,410	\$4,200	\$11.29	\$0	\$0	0	-\$70,210
2028	-\$70,210	\$4,200	\$11.29	\$0	\$16,065	0	-\$82,076
2029	-\$82,076	\$4,200	\$11.29	\$0	\$49,289	0	-\$127,165
2030	-\$127,165	\$4,200	\$11.29	\$0	\$0	0	-\$122,965
2031	-\$122,965	\$4,200	\$11.29	\$0	\$27,799	0	-\$146,564
2032	-\$146,564	\$4,200	\$11.29	\$0	\$22,386	0	-\$164,750
2033	-\$164,750	\$4,200	\$11.29	\$0	\$7,632	0	-\$168,182
2034	-\$168,182	\$4,200	\$11.29	\$0	\$58,540	0	-\$222,522
2035	-\$222,522	\$4,200	\$11.29	\$0	\$28,615	0	-\$246,937
2036	-\$246,937	\$4,200	\$11.29	\$0	\$0	0	-\$242,737
2037	-\$242,737	\$4,200	\$11.29	\$0	\$10,948	0	-\$249,485
2038	-\$249,485	\$4,200	\$11.29	\$0	\$110,071	0	-\$355,356
2039	-\$355,356	\$4,200	\$11.29	\$0	\$75,810	0	-\$426,966
2040	-\$426,966	\$4,200	\$11.29	\$0	\$0	0	-\$422,766
2041	-\$422,766	\$4,200	\$11.29	\$0	\$0	0	-\$418,566
2042	-\$418,566	\$4,200	\$11.29	\$0	\$294,226	0	-\$708,592
2043	-\$708,592	\$4,200	\$11.29	\$0	\$144,188	0	-\$848,580



Funding Alternative 1 - Increase to \$17,000 in 2024, then by 9% annually, with assessment



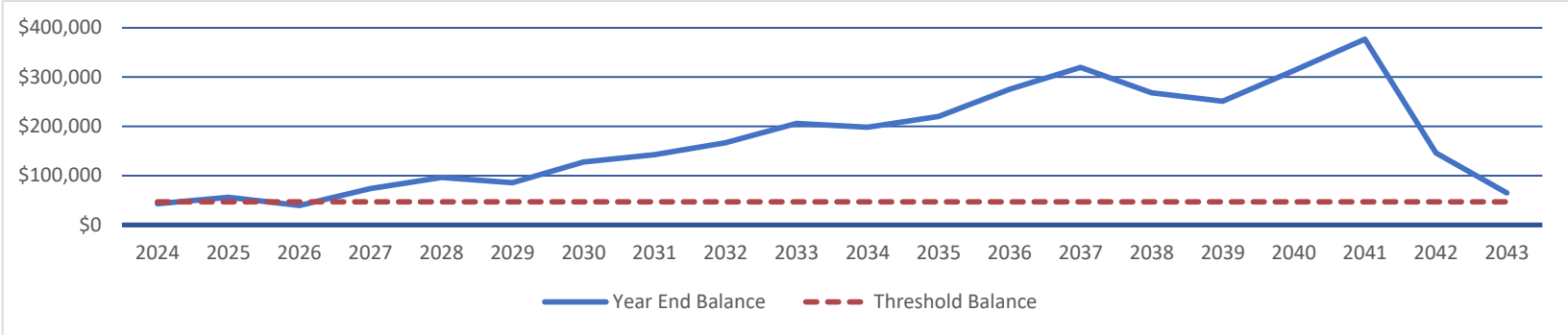
Year	Starting Balance	Reserve Account Contribution	Average Per Unit/Month	Return on Investments	Repair Expenses	Special Assessments	Year End Balance
2024	\$6,200	\$17,000	\$45.70	\$903	\$25,000	\$62,000	\$61,103
2025	\$61,103	\$18,530	\$49.81	\$931	\$17,595	\$0	\$62,969
2026	\$62,969	\$20,198	\$54.29	\$488	\$50,615	\$0	\$33,039
2027	\$33,039	\$22,015	\$59.18	\$826	\$0	\$0	\$55,880
2028	\$55,880	\$23,997	\$64.51	\$957	\$16,065	\$0	\$64,769
2029	\$64,769	\$26,157	\$70.31	\$625	\$49,289	\$0	\$42,261
2030	\$42,261	\$28,511	\$76.64	\$1,062	\$0	\$0	\$71,834
2031	\$71,834	\$31,077	\$83.54	\$1,127	\$27,799	\$0	\$76,238
2032	\$76,238	\$33,874	\$91.06	\$1,316	\$22,386	\$0	\$89,041
2033	\$89,041	\$36,922	\$99.25	\$1,775	\$7,632	\$0	\$120,106
2034	\$120,106	\$40,245	\$108.19	\$1,527	\$58,540	\$0	\$103,339
2035	\$103,339	\$43,867	\$117.92	\$1,779	\$28,615	\$0	\$120,370
2036	\$120,370	\$47,815	\$128.54	\$2,523	\$0	\$0	\$170,708
2037	\$170,708	\$52,119	\$140.10	\$3,178	\$10,948	\$0	\$215,057
2038	\$215,057	\$56,809	\$152.71	\$2,427	\$110,071	\$0	\$164,222
2039	\$164,222	\$61,922	\$166.46	\$2,255	\$75,810	\$0	\$152,590
2040	\$152,590	\$67,495	\$181.44	\$3,301	\$0	\$0	\$223,386
2041	\$223,386	\$73,570	\$197.77	\$4,454	\$0	\$0	\$301,410
2042	\$301,410	\$80,191	\$215.57	\$1,311	\$294,226	\$0	\$88,685
2043	\$88,685	\$87,408	\$234.97	\$479	\$144,188	\$0	\$32,385



Funding Alternative 2 - Increase to \$30,000 in 2024, then by \$3,500 every other year, with assessment



Year	Starting Balance	Reserve Account Contribution	Average Per Unit/Month	Return on Investments	Repair Expenses	Special Assessments	Year End Balance
2024	\$6,200	\$30,000	\$80.65	\$633	\$25,000	\$31,000	\$42,833
2025	\$42,833	\$30,000	\$80.65	\$829	\$17,595	\$0	\$56,067
2026	\$56,067	\$33,500	\$90.05	\$584	\$50,615	\$0	\$39,535
2027	\$39,535	\$33,500	\$90.05	\$1,096	\$0	\$0	\$74,131
2028	\$74,131	\$37,000	\$99.46	\$1,426	\$16,065	\$0	\$96,492
2029	\$96,492	\$37,000	\$99.46	\$1,263	\$49,289	\$0	\$85,466
2030	\$85,466	\$40,500	\$108.87	\$1,889	\$0	\$0	\$127,855
2031	\$127,855	\$40,500	\$108.87	\$2,108	\$27,799	\$0	\$142,664
2032	\$142,664	\$44,000	\$118.28	\$2,464	\$22,386	\$0	\$166,743
2033	\$166,743	\$44,000	\$118.28	\$3,047	\$7,632	\$0	\$206,157
2034	\$206,157	\$47,500	\$127.69	\$2,927	\$58,540	\$0	\$198,044
2035	\$198,044	\$47,500	\$127.69	\$3,254	\$28,615	\$0	\$220,183
2036	\$220,183	\$51,000	\$137.10	\$4,068	\$0	\$0	\$275,250
2037	\$275,250	\$51,000	\$137.10	\$4,730	\$10,948	\$0	\$320,032
2038	\$320,032	\$54,500	\$146.51	\$3,967	\$110,071	\$0	\$268,428
2039	\$268,428	\$54,500	\$146.51	\$3,707	\$75,810	\$0	\$250,825
2040	\$250,825	\$58,000	\$155.91	\$4,632	\$0	\$0	\$313,457
2041	\$313,457	\$58,000	\$155.91	\$5,572	\$0	\$0	\$377,029
2042	\$377,029	\$61,500	\$165.32	\$2,165	\$294,226	\$0	\$146,468
2043	\$146,468	\$61,500	\$165.32	\$957	\$144,188	\$0	\$64,737



APPENDIX B: PROJECT PHOTOGRAPHS

Description

View of entrance
signage



Photo No.
1

Description

Typical asphalt
pavement with areas of
longitudinal cracking



Photo No.
2

Description

Typical concrete cracking



Photo No.
3

Description

Undermined entry sidewalk at Unit 7323



Photo No.
4

Description

Heaved section of sidewalk in front of Unit 801



Photo No.
5

Description

Bare soils and erosion left of Unit 801



Photo No.
6

Description

Undermined foundation
corner at rear-left of Unit
801



Photo No.
7

Description

View of stormwater
retention pond



Photo No.
8

Description

Erosion at stormwater retention pond inlet pipe



Photo No.
9

Description

Outlet in retention pond likely covered in debris/sediment



Photo No.
10

Description

Chain link fence with
minor corrosion around
stormwater pond



Photo No.
11

Description

Fill previously added at
the rear of Building
7301-7313



Photo No.
12

Description

Deteriorated and leaning retaining wall rear of Building 7301-7313



Photo No.
13

Description

Deteriorated and leaning retaining wall rear of Building 800-810



Photo No.
14

Description

Typical rot/insect damage in retaining walls



Photo No.
15

Description

Deteriorated wood fencing an northern and eastern perimeters of the community



Photo No.
16

Description

Deteriorated wood fencing an northern and eastern perimeters of the community



Photo No.
17

Description

Segmental block retaining wall at the rear-right of Building 7312-7320



Photo No.
18

Description

View of mail kiosks



Photo No.
19

Description

Typical building façade



Photo No.
20

Description

Building roofs recently replaced and in good condition



Photo No.
21

Description

Flaking paint off of metal trim at Building 7312-7320



Photo No.
22

Description

Typical rot damage in front entry posts (Unit 7318)

Photo No.
23



Description

Previously replaced post at front of Unit 803

Photo No.
24



Description

Typical front entry door
with flaking paint

Photo No.
25

