

For Board Review

FULL RESERVE FUND STUDY

*LAKE PARK CONDOMINIUMS
RALEIGH, NC*

Prepared for:
**LAKE PARK CONDOMINIUMS HOMEOWNERS ASSOCIATION
RALEIGH, NC
&
WILSON PROPERTY MANAGEMENT**

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1.0 INTRODUCTION

The Lake Park Condominiums Homeowners Association authorized Criterium-Giles Engineers to conduct a Building Evaluation and Full Reserve Fund Study for the Lake Park Condominiums community located in Raleigh, North Carolina. Studies of this nature are important to ensure a community has sufficient funds for long-term, periodic capital expenditure requirements. Anticipating large expenditures over an extended period of time 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 home owners.

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 twenty (20) years. The first ten years are the most reliable. Such a study should be updated every five years.

This report is structured 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. Funding program recommendations are made with the objective of limiting substantial cash excesses while minimizing financial burdens that can result from significant cash inadequacies.

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 of immediate concern, may be discussed. Therefore, the report should be read in its entirety in order to fully understand all of the information that has been obtained.

2.0 EXECUTIVE SUMMARY

A total of 240 condominium units in eighteen (18) residential buildings were constructed in the Lake Park Condominiums community in phases from 1997 through 1999. The Association is responsible for the exterior facades of the buildings, building breezeways and exterior stairs, storage rooms and mail center structures, site improvements and amenities. The most significant site improvements include the private streets and sidewalks, drainage systems, retaining walls and fences. Amenities include a pool building with swimming pool and associated equipment, recreation area with grills and picnic tables, volleyball courts and basketball court. The fire sprinkler system/life safety equipment for all the buildings and mechanical/plumbing equipment in the pool building has been included in this study.

The buildings, common areas and grounds are generally in fair-to-good condition. **Based on our evaluation, the current level of funding is inadequate and does not maintain a positive balance through the term of this study.** We have provided two alternatives for annual reserve contribution schedules that provide sufficient funding to meet capital expenditure requirements in the next twenty years. 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 and reseal asphalt paved streets
- Replace all building roofs and gutters
- Resurfacing pool and replacement of pool equipment
- Replacement of fencing/railings

There are, of course, other capital expenditures to be expected over the next twenty years. Those items that will require attention are discussed later in this report.

3.0 PURPOSE & SCOPE

3.1 Purpose

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

This report forecasts obligations for the community twenty years into the future. It should be noted that events might occur that could have an effect on 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 three to five-year cycle, in order to reflect the most accurate needs and obligations of the community.

3.2 Scope

This study has been performed according to the scope as generally defined by Lake Park Condominiums HOA, Criterium-Giles Engineers Inc., representatives with Wilson Property Management 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 an investigation of the buildings and site.

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 a "Baseline Funding" goal by maintaining a positive balance for the term of the study.

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 component must have an estimated remaining useful life of twenty years or less. As the site ages, additional components may need to be added.
3. The funding for replacement should be from one source only, not funded from another area of the budget or through a maintenance contract.
4. The cost of replacement should be high enough to make it financially unsound to fund it from the operating budget.

Our reserve study analysis included evaluating the following association property:

- **Site and Grounds:** Drainage systems including catch basins in the grassed areas, curb inlets in the parking areas, landscaped and rockered swales. Vinyl/PVC fences and retaining walls are also the responsibility of the Association and included in this study.

Dumpster screening, swimming pool and decking, a basketball court, two volleyball courts and tables/grills in the recreational area are the responsibility of the Association.

- **Private Streets, Parking Lots and Sidewalks:** All streets and asphalt paved parking areas within the community are privately owned by the association and are included in this study. Concrete sidewalks and concrete curb/gutter are also maintained by the association and included.
- **Buildings:** Maintaining the exterior facades of all of the residential buildings in the community is the responsibility of the association and therefore included in this study. Note that replacement of individual condominium unit doors and windows is **not** the responsibility of the Association. The swimming pool building, storage buildings and mail kiosk buildings are also the responsibility of the association and included in this study.

The above list was obtained from the site inspection and discussions with the management firm during the inspection.

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

1. Examining association managed equipment, buildings 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 2014 dollars) for each capital item.
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. For additional limitations, see Section 11.0.

3.3 Sources of Information

The onsite inspections of the property occurred on the following date:

- December 9, 2014
- December 18, 2014

The following people were interviewed during our study:

- Rebecca Darby, Assistant Property Manager
- Jeb Black, Wilson Property Manager

3.4 Standards of Reference

The following documents were made available to us and reviewed:

- Wake County tax records
- Site Plan
- Lake Park Financial Data (Wilson Property Management)
- Roofing costs from 2013 (Roofwerks)

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

- R.S. Means
- Our data files on similar projects
- Local contractor estimates

For your reference, the following definitions may be helpful:

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 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. 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.

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.

Repair/Replacement Reserves - 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 the course

of this forecast, or, in the opinion of the investigator, will require attention during that time.

4.0 DESCRIPTION

A total of 240 condominium units in eighteen (18) residential buildings were constructed in the Lake Park Condominiums community in phases from 1997 through 1999. The Association is responsible for the exterior facades of the buildings, building breezeways and exterior stairs, storage rooms and mail center structures, site improvements and amenities. The most significant site improvements include the private streets and sidewalks, drainage systems, retaining walls and fences. Amenities include a pool building with swimming pool and associated equipment, recreation area with grills and picnic tables, volleyball courts and basketball court. The fire sprinkler system/life safety equipment for all the buildings and mechanical/plumbing equipment in the pool building has been included in this study.

Exterior surfaces are primarily comprised of vinyl siding and trim. Exterior doors are of metal skin construction and condominium unit windows are double pane vinyl units.

The building roofs are shingled with three tab asphaltic fiberglass shingles. Aluminum gutters and downspouts discharge stormwater to grade or underground drainage systems.

Site drainage is provided via landscaped and rocked swales and a combination of catch basins and curb inlet basins that are connected to underground piping. These systems direct water flow to the City of Raleigh stormwater system.

Poured concrete, segmental concrete and wood retaining walls are located in several areas on the property and the higher walls typically incorporate vinyl fencing.

5.0 SITE IMPROVEMENTS

5.1 Topography Description

The site generally slopes downward toward the creek that extends along the south end of the site. A combination of poured concrete retaining walls, segmental concrete walls and wood retaining walls are located around buildings on University Court and Crab Orchard Road and at buildings located at 1410 and 1420 Collegiate Circle.

Evaluation & Recommendations

The segmental concrete retaining walls generally appeared to be in fair-to-good condition. We noted significant cracking of the poured concrete walls between Building Nos. 1241-1251, between Building Nos. 1221-1231 and between Building Nos. 1341-1351. These vertical cracks (up to ½-inch wide) have been resealed in the past and the cracks have widened with limited horizontal displacement noted in the walls. These walls should be monitored for further movement and we have allocated funds to stabilize these wall sections (using helical tie-backs or wall anchors with

rods) in 2022. At the time of repair, the drainage system behind these sections of wall should be improved to minimize further hydrostatic pressure on the wall.

Segmental retaining walls typically have an expected useful life well beyond the term of this study and we have not allocated funds to repair these walls.

The vertically short sections of wood retaining walls and planters have an expected life of approximately 20-24 years. We observed limited deterioration to some of the wood members. We have allocated funds to replace all the wooden retaining wall/planter sections in 2020.

Storm water on the site drains via catch basins in grassed areas, curb inlet basins in the parking lot and via rock/rip rap swales that transport stormwater from piped discharge. The originally installed large catch and inlet basins are connected to underground piping that is connected to the City of Raleigh stormwater system.

The piped drainage systems in the community generally appeared to be in fair-to-good condition. However, we noted significant erosion of the swale between Lake Dam Road and Building No. 1251. The erosion is in relatively close proximity to the foundation of this building. We have allocated funds to repair this swale (install additional rock or rip-rap) in 2015. We also noted limited erosion at other areas of the property including at the fencing above the retaining wall between Building Nos. 1331 and 1341.

We have allocated funds on an 8-year cycle for additional drainage repairs/improvements. Future repairs will likely include retrenching of swales to improve flow, installing additional rip-rap, repairing catch basins and underground piping and/or installing French drain or other types of drainage systems.

**5.2 Storm Drainage
Description**

**Evaluation &
Recommendations**

5.3 Paving & Curbing

COMMUNITY PAVING & CURBING	
Type of Paving	Asphalt paving of all streets and parking areas
Type of Curbing	Concrete curb and gutter

Table 5.1: Parking Area

Description

The asphalt paved streets and parking areas in the community are all owned and maintained by the Association. The streets are lined on both sides by concrete curb and gutter.

**Evaluation &
Recommendations**

The asphalt paving appears to generally be in fair-to-good condition.

Except for isolated areas (notably behind Building 1220), no significant upheaval, depressions or potholes were observed in the existing pavement. However, we did observe relatively wide cracks in limited areas of the parking lots and streets and the asphalt paving did not appear to have been recently resealed. The striping was worn in many areas.

Typically, we recommend the application of an oil resistant sealant to all asphalt paved surfaces on a seven-year cycle. At this same time, all cracks should be properly filled, patched, and sealed. We have allocated funds to seal and repair cracks on a seven-year cycle beginning in 2015. We have also allocated funds for full-depth repairs of existing potholes and alligatored areas of paving in 2015 and anticipate that similar full-depth repairs will be required on a 10-year cycle.

If sealant and major crack repairs are accomplished in the interim, we anticipate the asphalt paving in the community to have an additional estimated useful life of approximately twenty-five years.

The concrete curb and gutter generally appeared to be in good condition; however, we did observe limited damage in some curbing. It is likely that due to differential settlement and vehicular damage, sections of the concrete curb and gutter will require repair on an approximately 8-year cycle. We have allocated funds to repair approximately 5% of the total amount of concrete curbing every 8 years, beginning in 2018.

Concrete flatwork in the community is comprised of concrete sidewalks in front of the residential buildings and leading to building entrances. Additionally, concrete sidewalks are installed for access to the amenities. Pavers have also been installed from individual unit patios to the parking lot.

The concrete flatwork in the community appeared to generally be in good condition. We observed limited cracking in sections of sidewalk, but no major upheaval or missing sections of sidewalk were noted. We have allocated funds to replace 5% of the concrete flatwork on an eight-year cycle beginning in 2018.

Landscaping on the site is moderately well established. Most consists primarily of ornamental trees and shrubs throughout the property. We noted grassed areas and natural areas including brick chips near buildings.

Vinyl/PVC fencing is located along the retaining walls and extends out from some of the building footprints. Chain link fencing surrounds the pool area and the basketball court.

Wood entrance signage is located at the two entrances to the community off of Lake Dam Road and Crab Orchard Road. The Association is also responsible for maintaining the street signs at the intersections within the

**5.4 Flatwork
Description**

**Evaluation &
Recommendations**

**5.5 Landscaping & Appurtenances
Description**

**Evaluation &
Recommendations**

community.

Vinyl/PVC fencing screens most (but not all) of the trash dumpsters within the community.

The PVC/vinyl fencing appeared to be generally in fair-to-good condition. We observed limited deterioration in sections of fencing and over time all the fencing will begin to deteriorate and/or fade in color. We have allocated funds to replace the fencing on a 25-year cycle beginning in 2023.

We observed minor damage to the fencing surrounding the basketball court (fence top rail not connected). The fencing around the pool appeared to be in good condition and we do not anticipate complete replacement of either the basketball court or pool area fencing will be required during the 20-term of this study. Minor repairs to the fencing (and replacement of the 3 gates if required) should be funded from the Maintenance budget.

The entrance signage on Lake Dam and Crab Orchard appeared to be in adequate condition but the paint exhibits some signs of fading. The painted signage will likely to continue to fade and exhibit discoloration in time. Any required painting of the signs should be funded from the Maintenance budget. We have allocated funds to replace and upgrade the two entrance signs with new sign systems in 2020.

The street signs throughout the community appeared to be in fair-to-good condition. These signs may be damaged from vandalism or vehicular impact during the 20-year period; however, repairs or replacement of this signage should be funded from the Maintenance budget.

The vinyl/PVC fencing used to screen the waste dumpsters is showing signs of deterioration. The life of this fencing is approximately 20 years and we have allocated funds to replace all these screening systems in 2020.

**6.0 EXTERIOR BUILDING
SYSTEMS**

Description

The buildings in the community are of wood framed construction. The buildings were constructed in phases between 2007 and 2009. The buildings are primarily clad in vinyl siding and vinyl trim.

The pitched roofs of the buildings are covered in asphaltic fiberglass 3-tab shingles. Windows are of vinyl double pane construction and front entry doors are of metal skin construction. Each condominium unit incorporates a rear concrete patio or wood deck. We also observed metal doors on storage rooms located between many buildings and at the pool building.

The exterior stairs and breezeways leading to the upper level floors of the condominium buildings are wood framed. The steel stair stringers with concrete step treads, pressure treated wood breezeways, metal and PVC/vinyl railings are under roofing footprint. Each upper level

**Evaluation &
Recommendations**

condominium also includes balconies with PVC railings.

We also observed canopies in metal frames that extend between the dual building entrances over the walkways to each set of stairways.

The vinyl siding surfaces generally appeared to be in fair-to-good condition; however, we did observe small areas of damaged siding and trim. While vinyl siding is sometimes projected to last fifty years, it has been our experience that a much shorter life span should be expected of this material. As the siding ages, the colors begin to lose their color density and show signs of oxidation, the components become unsightly from neglect and impact damage, mold and mildew growth occurs, and replacement sections made necessary by periodic repairs become evident as colors and styles no longer match. Based on the age of the buildings, complete siding replacement is not anticipated over the next 20 years. However, we have provided an allowance at the end of the term of this analysis (2034) to replace large sections of vinyl siding on buildings as needed. Replacement or repair of small sections of siding that are damaged should be funded from the Maintenance budget.

The front entrance doors leading to each unit, the storage rooms, fire sprinkler system rooms and pool building should be painted on an approximately 7-year cycle. We have allocated funds to paint all of the metal doors on a seven year cycle beginning in 2017. Note that the storage room and pool doors that lead to non-conditioned spaces are more subject to rust and deterioration (we observed rust on some of these doors). We have allocated funds to replace these ten metal doors on a 15-year cycle beginning in 2020. Repairs and replacement of condominium entry doors are the responsibility of the individual condominium owner and no funds allocated for repairs to these doors.

Repairs and replacement of condominium windows are the responsibility of the individual condominium owner and no funds allocated for repairs/replacement of these windows.

Typically we anticipate 3-Tab roof shingles to have an expected useful life of approximately 20 years. Seven buildings were re-roofed in 2014 (after approximately 17 years of service). The remaining roofs generally appeared to be in poor-to-fair condition with areas of patched shingles observed. We have reviewed the Roofwerks roof condition report from December 2013 and generally agree with their expected lives for each building roof. We have allocated funds to replace six more roofs in 2015 and the remaining five building roofs in 2017. Replacement of roofs over the seven buildings with recently installed roof shingles should not be required until approximately 2034.

A re-roofing sequence should include removal of the existing shingle surfacing, replacement of any inadequate roof sheathing, replacement of any damaged flashing, and replacement of drip edge components. We strongly recommend that any re-roofing project closely follow procedures

outlined by the National Roofing Contractors Association's *Roofing and Waterproofing Manual*, Fifth Edition.

Gutters and downspouts are in generally fair-to-good condition and have not significantly deteriorated since original construction. We have provided an allowance for gutter/downspout sectional replacement for each building in 2029. Note that high winds and fallen trees will have the most impact on gutter replacement schedules during the term of this analysis.

The building wood decking and breezeway framing generally appeared to be in good condition. Because these components are not under direct sunlight or exposure to the elements, the expected life of the wood exceeds the life of typical wood decks. We do not anticipate full structural replacement of the stairs or breezeways will be required in the next 20 years. However, we have provided an allowance per building for decking and stair tread replacement in 2025. At that time the wood bridge decking leading to Building 1410 should be replaced as needed.

Concrete treads in the open riser stairways appeared to be in satisfactory condition. Typically these treads will be replaced from the Maintenance budget if individually damaged and we have not included funds from the reserve account for replacement of treads. The metal railings at each stairway should not require replacement during the term of this analysis. However, we noted peeling and missing paint on many sections of railings and have allocated funds to paint all the stairway railings in 2016 and on a 10-year cycle.

The PVC/vinyl railings at the breezeways and unit balconies appeared to be in adequate condition. We anticipate that many of the railings will require replacement

The canopies at the building entrances have been replaced since original construction and appeared to be in relatively good condition. These type canopies typically show signs of wear and discoloration in approximately 10-years and we have allocated funds to replace all canopies in 2020 and on a 10-year cycle.

The Association is responsible for maintaining the interior of the pool building and the storage/fire sprinkler system rooms. However, no significant floor, wall and ceiling finishes are included in the small pool building or rooms.

The interior of the pool building will require periodic routine maintenance, which should be covered by an annual operating budget.

7.0 BUILDING INTERIOR

Description

Evaluation & Recommendations

8.0 MECHANICAL
Description

Sewer and potable water is provided by the municipality and underground piping supplies water from main lines under the streets. Electric service is provided by Duke Energy and the units are individually metered. Duke Energy owns and maintains the street lights in the community.

Water heating for the pool building is provided by a 6-gallon capacity electric water heater. This heater was manufactured in 1998.

The pool includes a single Triton II sand filter and single small horsepower Hayward pump. This equipment is housed in the small pool building. Additionally, the pool building incorporates two small restrooms.

Pole/post mounted light fixtures are located around the basketball court and pool. Additionally, the condominium units incorporate entrance wall-mounted light fixtures.

All the buildings are protected by a fire sprinkler system (piping, valves, gauges and heads) that operates off of municipal water pressure. We also observed MS-502 fire panels and electric heaters in the fire sprinkler rooms located in each building. The condominium buildings incorporate life safety features in the exterior breezeways and stairs including fire alarm pull stations, strobes, fire extinguishers/cabinets, emergency lighting, etc.

Evaluation &
Recommendations

The swimming pool was uncovered at the time of inspection and we viewed the filtration system equipment. No significant problems were reported. We have allocated funds for component repair or replacement of the individual components within each system on a 3-year cycle beginning in 2017. As noted above newer pump/motor equipment was observed in the pool room.

The small water heater has operated beyond its expected life and will likely require replacement in the near term. We have allocated funds to replace on a 15-year cycle beginning in 2015.

The exterior fire safety components are located on each floor/stairwell of the condominium buildings and have a typical life of approximately 20-25 years. Therefore; we have allocated an allowance to replace these components and sprinkler system gauges as required in 2023. Additionally, we anticipate replacement of all the fire panels will be required during the term of this analysis and have funds in 2020 for this replacement. The electric space heaters in the fire sprinkler rooms have an extended expected life and periodic repairs/replacement of these small heaters should be funded from the Maintenance budget.

The condominium unit front entrance and breezeway corridor light fixtures are relatively inexpensive and replacement of these fixtures should be funded from the Maintenance budget. The basketball and pool area high intensity lighting fixtures have an expected life of approximately 20-25

9.0 AMENITIES & OTHER
Description

years and we have allocated funds to replace in 2023.

One in-ground swimming pool is centrally located in the community. The pool includes access ladders but does not include a diving board or other features. Concrete decking surrounds the pool and an elevated wood deck has been installed adjacent to the pool concrete deck. Three charcoal grills and two composite picnic tables are located in the recreational area near the pool.

A hard surface exterior basketball court with two goals and fencing was observed. Additionally, two sand volleyball courts with posts and nets were noted.

Covered mailboxes are installed under roofs at the building entrances.

Evaluation &
Recommendations

The swimming pool surface generally appeared to be in good condition. The property manager advised that the pool was repainted in 2010. The pool surface will likely require re-coating on an approximately year cycle depending on maintenance and use. We have allocated funds to repair any cracks and recoat the pool surfaces with a similar plaster finish on 10-year cycle beginning in 2021. Replacement of pool rails, ladders and minimal pool furniture should be funded from the Maintenance budget as required.

We noted cracking in the concrete decking on all sides surrounding the pool. No major concrete upheaval was observed. Note that cracking will likely continue to occur and we have allocated funds to replace 10% of the decking on a 5-year cycle beginning in 2018.

The mailboxes appeared to be in fair condition and located under roofs. We observed limited damage and deterioration in the boxes. We have allocated funds to replace all the mailboxes in 2027.

We have allocated funds to replace the grills in the recreational area on a 10-year cycle beginning in 2018. The two picnic tables appeared to be in good condition and we have allocated funds to replace in 2027.

We observed minor cracking in the basketball court; however, the court was in relatively good condition and functional at the time of inspection. We have allocated funds to resurface this court on a 15-year cycle beginning in 2027. We do not anticipate complete reconstruction (full depth asphalt replacement) of the court will be required during the term of this assessment. Replacement of the basketball goals, volleyball court sand and volleyball court net should be funded from the Maintenance budget.

10.0 CONCLUSION

In Summary, we consider the site and amenities to be in generally fair condition when compared to others of similar age and construction type. While some components are in need of a repair and replacement program, the program can be prioritized and planned in conjunction with reserve strategies.

We feel that the reserve financials included with this report outline several possible strategies for the community to adopt given the current condition of the project as a whole. As time passes, it may become necessary to re-establish financial priorities and capital expenditure schedules given any unforeseen circumstances. We recommend and encourage this activity.

11.0 LIMITATIONS

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 Lake Park Condominiums Homeowners Association. Criterium-Giles Engineers Inc. 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-Giles Engineers Inc. 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:

- Buried utilities or infrastructure
- Concealed structural members or systems
- Condominium unit interiors

We do not render an opinion on uninvestigated portions of the community.

We did not perform any computations or other engineering analysis 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.

A member of the Criterium-Giles Engineers team working on this reserve study owns one (1) condominium unit within the Association. Criterium-Giles Engineers has disclosed this involvement with the Association to avoid any conflict of interest.

Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues, will be deemed reliable by Criterium-Giles 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. Criterium-Giles Engineers is not aware of any additional material issues which, if not disclosed, would cause a distortion of the association's situation.

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,

Robert C. Giles, PE, RS
President
Criterium-Giles Engineers Inc.

Appendix A: RESERVE FUND PROJECTIONS

INTRODUCTION

The following is a projected reserve fund analysis for non-annual items as discussed in the report. This projection takes into consideration a reasonable return on invested moneys and inflation. Please review this thoroughly and let us know of any changes that may be desired.

The intent of this reserve fund projection is to help the Association develop a reserve fund to provide for anticipated repair or replacements of various system components during the next twenty years.

The capital items listed are those that are typically the responsibility of the condominium association and are derived from a list provided by the property manager. However, Association by-laws vary and, therefore, which components are the responsibility of the owner and which are the responsibility of the Association can vary. The Association should confirm that the items listed should be financed by the Association reserve fund.

This projection provides the following:

- An input sheet that defines all the criteria used for the financial alternatives, including the assumed inflation rate (3%) and rate of return on deposited reserve funds (2%).
- A table that lists anticipated replacement and/or repair items complete with estimated remaining life expectancies, projected costs of 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 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 twenty-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.
- 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.

Current Reserve Balance: \$150,000

Current Annual Reserve Contribution: No contribution to reserves in 2014. Special Assessment collected for roof replacement.

We have included two alternatives to your current funding program and recommend that the board adopt an alternative that best reflects the objectives of the community:

- **Alternative 1:** Establish a monthly reserve contribution rate in 2015 of \$69,600/year (\$5,800 per month). Then increase the contribution as a step function every other year through 2025. The magnitude of step increase should be \$6,000 per year (\$500 per month). This alternative is projected maintain a positive balance through the term of this study
- **Alternative 2:** Establish a month reserve contribution rate in 2015 of \$64,800/year (\$5,400 per month). Then, increase the reserve contribution amount by 5% annually through 2025. This alternative is also projected maintain a positive balance through the term of this study.
- **Alternative 3:** Not used. This alternative is typically reserved for special assessments. Assuming significant increases to funding described above are implemented, we do not anticipate that special assessments will be required.

Please note that the reserve fund study does not include typical annual maintenance items. Our assumption is that you already have an annual operating budget that provides for these typical, repetitive items. This includes miscellaneous repairs, lawn and grounds maintenance, routine minor painting, etc. We have focused on those significant, non-annual items where careful financial planning is important.

Finally, please note that the estimates we have developed are based on 2014 dollars. Our reserve fund study does adjust for an estimated annual inflation and a given return on investment assuming that the indicated fund balances are maintained.

Reserve Study Worksheet

General Information:

1 Organization: **Lake Park Condominiums**
 2 Address: **Collegiate Circle**
Raleigh, NC

3	Number of Units	240
4	Age of Building (in years)	17
5a	Study Period (in years)	20
5b	Normal Fiscal Year starts:	January 1, 2015
5c	Partial Fiscal Year starts:	January 1, 2015
5d	Partial Year Length:	12 months
6	Site Inspection Date	December 9, 2014
7	Reserve Funds at start	\$150,000
8	Rate of Return on invested Reserve Funds (%)	2.0%
9	Inflation Rate (%)	3.0%

10 Current Funding Levels

Existing Funding Levels				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Reserve Fund Contribution (First Year).....	\$0	\$0	\$0.00	\$0.00
Reserve Fund Contribution (Remaining Years).....	\$0	\$0	\$0.00	\$0.00
	Years Out	Total Annual	Per Unit	
Planned Special Assessment.....	0	\$0	\$0	
Balance Computed.....	(\$1,877,026)			

11 Alternative Reserve Fund Contribution

Alternative 1 Level Funding with Steps				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$5,800	\$69,600	\$24.17	\$290.00
Monthly Amount, (Last Year).....	\$8,300	\$99,600	\$34.58	\$415.00
Balance Required Final Year.....	\$101,351			
	Years Out	Total/Year	Per Unit	
Special Assessments:				
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	\$11,788			

Alternative 2 Escalating Funding at 5% per Year				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$5,400	\$64,800	\$22.50	\$270.00
Monthly Amount, (Last Year).....	\$8,796	\$105,552	\$36.65	\$439.80
Balance Required Final Year.....	\$101,351			
Base Escalation %.....	5.00%			
	Years Out	Total/Year	Per Unit	
Special Assessments:				
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	\$74,647			

Alternative 3 Escalating Funding with Special Assessments (Not Used)				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$0	\$0	\$0.00	\$0.00
Monthly Amount, (Last Year).....	\$0	\$0	\$0.00	\$0.00
Balance Required Final Year.....	\$101,351			
Base Escalation %.....	0.00%			
	Years Out	Total/Year	Per Unit	
Special Assessments:				
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	(\$1,877,026)			

Itemized Worksheet

Capital Item To Be Replaced	Quantity	Unit cost	Reserve Requirement (*)	Beginning Balance	Frequency (yrs)**	Remaining Life (yrs)	Reserve Monthly	Funding Annual	Required Annual	Full Funding Balance	Information Source
Site											
Asphalt paving - fill cracks, reseal, stripe	33,000	SY	\$1.25	\$41,250.00		7	0	\$0.00	\$0.00	\$41,250.00	
Asphalt paving - full depth repairs	1,650	SY	\$40.00	\$66,000.00		10	5	\$979.85	\$11,758.19	\$33,000.00	5% full depth repairs every 10 years
Sectional repair of concrete curb/gutter	575	LF	\$35.00	\$20,125.00		8	3	\$482.70	\$5,792.41	\$12,578.13	5% replacement every 8 years
Sectional repair of concrete sidewalks	120	SY	\$90.00	\$10,800.00		8	3	\$259.04	\$3,108.47	\$6,750.00	5% replacement every 8 years
Replacement of wood retaining walls	1,800	SF	\$25.00	\$45,000.00		22	5	\$623.39	\$7,480.73	\$34,772.73	
Repair/stabilization of poured concrete walls	3	sys	\$5,000.00	\$15,000.00		25	7	\$150.48	\$1,805.81	\$10,800.00	
Drainage repairs and riprap installation	1	sys	\$5,000.00	\$5,000.00		8	0	\$0.00	\$0.00	\$5,000.00	
Replacement of PVC fencing	925	LF	\$20.00	\$18,500.00		25	8	\$164.08	\$1,968.98	\$12,580.00	
Replacement of dumpster screen fencing	180	LF	\$25.00	\$4,500.00		22	5	\$62.34	\$748.07	\$3,477.27	
Replace entry signage	2	ea	\$1,500.00	\$3,000.00		12	5	\$43.63	\$523.54	\$1,750.00	
Building Exterior											
Replace Roofing (Ph 1)	470	SQ	\$250.00	\$117,500.00		20	0	\$0.00	\$0.00	\$117,500.00	
Replace Roofing (Ph 2)	393	SQ	\$250.00	\$98,250.00		20	2	\$3,288.87	\$39,466.48	\$88,425.00	
Replace Roofing (Ph 3)	550	SQ	\$250.00	\$137,500.00		20	19	\$596.48	\$7,157.80	\$6,875.00	
Vinyl siding replacement (Allowance)	55,000	SF	\$3.00	\$165,000.00		40	19	\$640.69	\$7,688.22	\$86,625.00	Assume 20% replacement by Year 20
Replacement of building entrance canopies	18	ea	\$3,000.00	\$54,000.00		10	5	\$801.69	\$9,620.33	\$27,000.00	
Replace pool bldg and storage room doors	10	ea	\$400.00	\$4,000.00		15	5	\$56.96	\$683.49	\$2,666.67	
Gutter/downspout repair allowance	18	bldg	\$2,000.00	\$36,000.00		30	14	\$189.32	\$2,271.83	\$19,200.00	Allowance -replace damaged components
Sectional replacement of corridor decking	18	bldg	\$3,000.00	\$54,000.00		25	10	\$391.02	\$4,692.20	\$32,400.00	Allowance - replace deteriorated decking
Sectional replace-PVC corridor/balcony rails	1,000	LF	\$20.00	\$20,000.00		25	10	\$144.82	\$1,737.85	\$12,000.00	25% replacement in 10 years
Repaint metal stair railings	18	bldg	\$2,000.00	\$36,000.00		10	1	\$2,410.17	\$28,922.00	\$32,400.00	
Paint exterior doors	286	ea	\$40.00	\$11,440.00		7	2	\$402.29	\$4,827.45	\$8,171.43	
Building Interior											
Mechanical											
Replace pool filtration equipment	1	sys	\$2,500.00	\$2,500.00		3	2	\$96.58	\$1,158.98	\$833.33	Replace components every 3 years
Replace water heater at pool	1	ea	\$500.00	\$500.00		15	0	\$0.00	\$0.00	\$500.00	
Replace strobes, pull stations, emerg lites, exit	18	bldg	\$3,000.00	\$54,000.00		25	8	\$478.94	\$5,747.28	\$36,720.00	
Replace pool, bball post light fixtures	8	ea	\$600.00	\$4,800.00		25	8	\$42.57	\$510.87	\$3,264.00	
Replace fire panels	18	ea	\$1,000.00	\$18,000.00		20	5	\$250.85	\$3,010.17	\$13,500.00	
Amenities											
Recoat swimming pool	1,200	SF	\$6.00	\$7,200.00		10	6	\$91.26	\$1,095.14	\$2,880.00	
Resurface basketball court	1	ea	\$5,000.00	\$5,000.00		20	12	\$31.69	\$380.26	\$2,000.00	
Replace picnic tables	2	ea	\$600.00	\$1,200.00		15	12	\$7.97	\$95.63	\$240.00	
Replace charcoal grills	3	ea	\$400.00	\$1,200.00		10	3	\$28.24	\$338.83	\$840.00	
Replace mailboxes	288	ea	\$90.00	\$25,920.00		35	18	\$107.27	\$1,287.21	\$12,589.71	
Replace wood decking at pool area	475	SF	\$10.00	\$4,750.00		22	4	\$81.27	\$975.25	\$3,886.36	
Replace concrete decking at pool area	30	SY	\$100.00	\$3,000.00		5	3	\$76.05	\$912.62	\$1,200.00	Replace 10% every 5 years
Other											
Replace mail centers	288	ea	\$75.00	\$21,600.00		30	12	\$130.34	\$1,564.07	\$12,960.00	
			Totals	\$1,112,535.00	\$150,000.00			\$13,110.84	\$157,330.14	\$686,634.63	

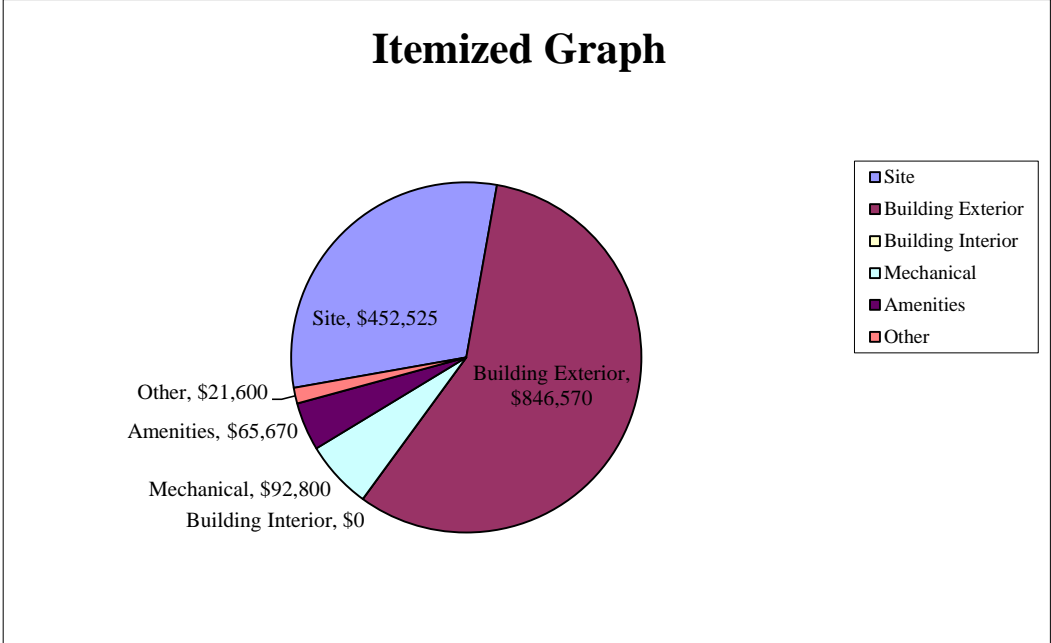
Total Over Term \$1,479,165.00

* Costs are typically 10%±

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

Itemized Graph

Categories	Totals
Site	\$452,525
Building Exterior	\$846,570
Building Interior	\$0
Mechanical	\$92,800
Amenities	\$65,670
Other	\$21,600
Total	\$1,479,165



Itemized Funding



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Categories	Reserve Requirement	Beginning Balance	Balance Requiring Funding	Monthly Reserve Funding Required	Annual Reserve Funding Required	Full Funding Balance	Percent Funded
Site	\$452,525	\$35,381	\$417,144	\$2,766	\$33,186	\$161,958	
Building Exterior	\$846,570	\$94,649	\$751,921	\$8,922	\$107,068	\$433,263	
Building Interior	\$0	\$0	\$0	\$0	\$0	\$0	
Mechanical	\$92,800	\$11,975	\$80,825	\$869	\$10,427	\$54,817	
Amenities	\$65,670	\$5,163	\$60,507	\$424	\$5,085	\$23,636	
Other	\$21,600	\$2,831	\$18,769	\$130	\$1,564	\$12,960	
Totals	\$1,479,165	\$150,000	\$1,329,165	\$13,111	\$157,330	\$686,635	21.8%

Annual Expense By Year

Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Site																
Asphalt paving - fill cracks, reseal, stripe	41,250	0	0	0	0	0	0	41,250	0	0	0	0	0	0	41,250	0
Asphalt paving - full depth repairs	0	0	0	0	0	66,000	0	0	0	0	0	0	0	0	0	66,000
Sectional repair of concrete curb/gutter	0	0	0	20,125	0	0	0	0	0	0	0	20,125	0	0	0	0
Sectional repair of concrete sidewalks	0	0	0	10,800	0	0	0	0	0	0	0	10,800	0	0	0	0
Replacement of wood retaining walls	0	0	0	0	0	45,000	0	0	0	0	0	0	0	0	0	0
Repair/stabilization of poured concrete walls	0	0	0	0	0	0	0	15,000	0	0	0	0	0	0	0	0
Drainage repairs and riprap installation	5,000	0	0	0	0	0	0	0	5,000	0	0	0	0	0	0	0
Replacement of PVC fencing	0	0	0	0	0	0	0	0	18,500	0	0	0	0	0	0	0
Replacement of dumpster screen fencing	0	0	0	0	0	4,500	0	0	0	0	0	0	0	0	0	0
Replace entry signage	0	0	0	0	0	3,000	0	0	0	0	0	0	0	0	0	0
Building Exterior																
Replace Roofing (Ph 1)	117,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace Roofing (Ph 2)	0	0	98,250	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace Roofing (Ph 3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl siding replacement (Allowance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement of building entrance canopies	0	0	0	0	0	54,000	0	0	0	0	0	0	0	0	0	54,000
Replace pool bldg and storage room doors	0	0	0	0	0	4,000	0	0	0	0	0	0	0	0	0	0
Gutter/downspout repair allowance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,000	0
Sectional replacement of corridor decking	0	0	0	0	0	0	0	0	0	0	54,000	0	0	0	0	0
Sectional replace-PVC corridor/balcony rails	0	0	0	0	0	0	0	0	0	0	20,000	0	0	0	0	0
Repaint metal stair railings	0	36,000	0	0	0	0	0	0	0	0	0	36,000	0	0	0	0
Paint exterior doors	0	0	11,440	0	0	0	0	0	0	11,440	0	0	0	0	0	0
Building Interior																
Mechanical																
Replace pool filtration equipment	0	0	2,500	0	0	2,500	0	0	2,500	0	0	2,500	0	0	2,500	0
Replace water heater at pool	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500
Replace strobes, pull stations, emerg lites, exit	0	0	0	0	0	0	0	0	54,000	0	0	0	0	0	0	0
Replace pool, bball post light fixtures	0	0	0	0	0	0	0	0	4,800	0	0	0	0	0	0	0
Replace fire panels	0	0	0	0	0	18,000	0	0	0	0	0	0	0	0	0	0
Amenities																
Recoat swimming pool	0	0	0	0	0	0	7,200	0	0	0	0	0	0	0	0	0
Resurface basketball court	0	0	0	0	0	0	0	0	0	0	0	0	5,000	0	0	0
Replace picnic tables	0	0	0	0	0	0	0	0	0	0	0	0	1,200	0	0	0
Replace charcoal grills	0	0	0	1,200	0	0	0	0	0	0	0	0	0	1,200	0	0
Replace mailboxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace wood decking at pool area	0	0	0	0	4,750	0	0	0	0	0	0	0	0	0	0	0
Replace concrete decking at pool area	0	0	0	3,000	0	0	0	0	3,000	0	0	0	0	3,000	0	0
Other																
Replace mail centers	0	0	0	0	0	0	0	0	0	0	0	0	21,600	0	0	0
Total Costs	164,250	36,000	112,190	35,125	4,750	197,000	7,200	56,250	87,800	11,440	74,000	69,425	27,800	4,200	79,750	120,500
Total Costs Adjusted For 3% Inflation	164,250	37,080	119,022	38,382	5,346	228,377	8,597	69,180	111,222	14,927	99,450	96,100	39,636	6,168	120,629	187,735

Annual Expense By Year

	Year: Year Number:	2031 17	2032 18	2033 19	2034 20
Site					
Asphalt paving - fill cracks, reseal, stripe		0	0	0	0
Asphalt paving - full depth repairs		0	0	0	0
Sectional repair of concrete curb/gutter		0	0	0	20,125
Sectional repair of concrete sidewalks		0	0	0	10,800
Replacement of wood retaining walls		0	0	0	0
Repair/stabilization of poured concrete walls		0	0	0	0
Drainage repairs and riprap installation		5,000	0	0	0
Replacement of PVC fencing		0	0	0	0
Replacement of dumpster screen fencing		0	0	0	0
Replace entry signage		0	3,000	0	0
Building Exterior					
Replace Roofing (Ph 1)		0	0	0	0
Replace Roofing (Ph 2)		0	0	0	0
Replace Roofing (Ph 3)		0	0	0	137,500
Vinyl siding replacement (Allowance)		0	0	0	165,000
Replacement of building entrance canopies		0	0	0	0
Replace pool bldg and storage room doors		0	0	0	0
Gutter/downspout repair allowance		0	0	0	0
Sectional replacement of corridor decking		0	0	0	0
Sectional replace-PVC corridor/balcony rails		0	0	0	0
Repaint metal stair railings		0	0	0	0
Paint exterior doors		11,440	0	0	0
Building Interior					
Mechanical					
Replace pool filtration equipment		0	2,500	0	0
Replace water heater at pool		0	0	0	0
Replace strobes, pull stations, emerg lites, exit		0	0	0	0
Replace pool, bball post light fixtures		0	0	0	0
Replace fire panels		0	0	0	0
Amenities					
Recoat swimming pool		7,200	0	0	0
Resurface basketball court		0	0	0	0
Replace picnic tables		0	0	0	0
Replace charcoal grills		0	0	0	0
Replace mailboxes		0	0	25,920	0
Replace wood decking at pool area		0	0	0	0
Replace concrete decking at pool area		0	0	3,000	0
Other					
Replace mail centers		0	0	0	0
Total Costs		23,640	5,500	28,920	333,425
Total Costs Adjusted For 3% Inflation		37,935	9,091	49,234	584,663

Existing Funding Levels

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments	Investment Earnings	Capital Expenditures	Ending Balance
2015	1	\$150,000	\$0	\$0	\$0	\$164,250	(\$14,250)
2016	2	(\$14,250)	\$0	\$0	\$0	\$37,080	(\$51,330)
2017	3	(\$51,330)	\$0	\$0	\$0	\$119,022	(\$170,352)
2018	4	(\$170,352)	\$0	\$0	\$0	\$38,382	(\$208,734)
2019	5	(\$208,734)	\$0	\$0	\$0	\$5,346	(\$214,081)
2020	6	(\$214,081)	\$0	\$0	\$0	\$228,377	(\$442,458)
2021	7	(\$442,458)	\$0	\$0	\$0	\$8,597	(\$451,055)
2022	8	(\$451,055)	\$0	\$0	\$0	\$69,180	(\$520,235)
2023	9	(\$520,235)	\$0	\$0	\$0	\$111,222	(\$631,458)
2024	10	(\$631,458)	\$0	\$0	\$0	\$14,927	(\$646,384)
2025	11	(\$646,384)	\$0	\$0	\$0	\$99,450	(\$745,834)
2026	12	(\$745,834)	\$0	\$0	\$0	\$96,100	(\$841,934)
2027	13	(\$841,934)	\$0	\$0	\$0	\$39,636	(\$881,571)
2028	14	(\$881,571)	\$0	\$0	\$0	\$6,168	(\$887,738)
2029	15	(\$887,738)	\$0	\$0	\$0	\$120,629	(\$1,008,367)
2030	16	(\$1,008,367)	\$0	\$0	\$0	\$187,735	(\$1,196,103)
2031	17	(\$1,196,103)	\$0	\$0	\$0	\$37,935	(\$1,234,038)
2032	18	(\$1,234,038)	\$0	\$0	\$0	\$9,091	(\$1,243,128)
2033	19	(\$1,243,128)	\$0	\$0	\$0	\$49,234	(\$1,292,363)
2034	20	(\$1,292,363)	\$0	\$0	\$0	\$584,663	(\$1,877,026)

Existing Funding Levels

Beginning Balance as of start of year beginning Jan 2015: \$150,000

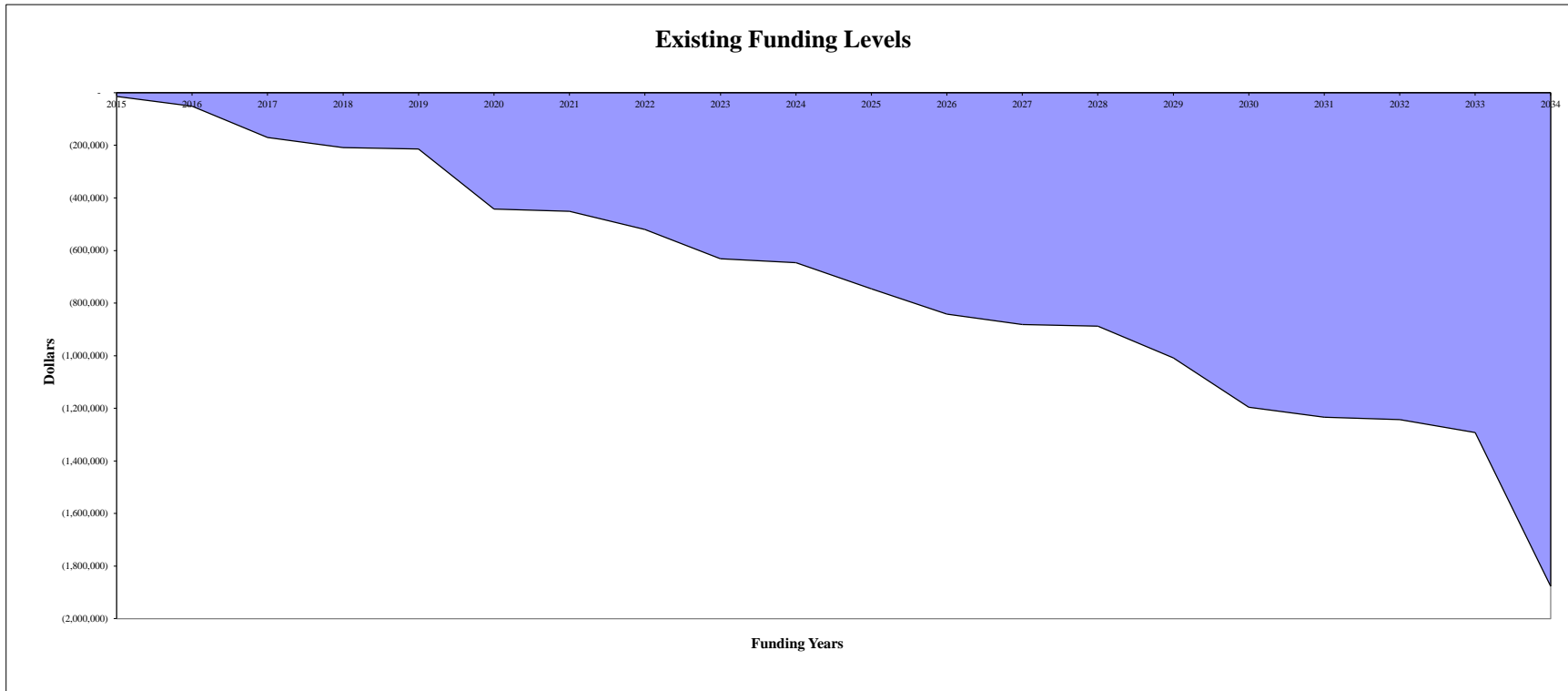
CONTRIBUTIONS		
FIRST YR	REM YRS	
\$0.00	\$0.00	per year
\$0.00	\$0.00	per unit per year
\$0.00	\$0.00	per month
\$0.00	\$0.00	per unit per month

SPECIAL ASSESSMENTS			
Totals			
Per Year	\$0	Per Unit	\$0

Projected Annual Funding and Expenditures:

Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	(14,250)	(51,330)	(170,352)	(208,734)	(214,081)	(442,458)	(451,055)	(520,235)	(631,458)	(646,384)	(745,834)	(841,934)	(881,571)	(887,738)	(1,008,367)
Capital Expenditures:	164,250	37,080	119,022	38,382	5,346	228,377	8,597	69,180	111,222	14,927	99,450	96,100	39,636	6,168	120,629
Total Revenue (all sources)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Year:	2030	2031	2032	2033	2034
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	(1,196,103)	(1,234,038)	(1,243,128)	(1,292,363)	(1,877,026)
Capital Expenditures:	187,735	37,935	9,091	49,234	584,663
Total Revenue (all sources)	-	-	-	-	-



Alternative 1: Level Funding with Steps

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2015	1	\$150,000	\$69,600	\$0	\$0	\$1,107	\$164,250	\$56,457
2016	2	\$56,457	\$69,600	\$0	\$0	\$1,780	\$37,080	\$90,757
2017	3	\$90,757	\$75,600	\$0	\$0	\$947	\$119,022	\$48,281
2018	4	\$48,281	\$75,600	\$0	\$0	\$1,710	\$38,382	\$87,209
2019	5	\$87,209	\$81,600	\$0	\$0	\$3,269	\$5,346	\$166,732
2020	6	\$166,732	\$81,600	\$0	\$0	\$399	\$228,377	\$20,354
2021	7	\$20,354	\$87,600	\$0	\$0	\$1,987	\$8,597	\$101,344
2022	8	\$101,344	\$87,600	\$0	\$0	\$2,395	\$69,180	\$122,159
2023	9	\$122,159	\$93,600	\$0	\$0	\$2,091	\$111,222	\$106,627
2024	10	\$106,627	\$93,600	\$0	\$0	\$3,706	\$14,927	\$189,007
2025	11	\$189,007	\$99,600	\$0	\$0	\$3,783	\$99,450	\$192,940
2026	12	\$192,940	\$99,600	\$0	\$0	\$3,929	\$96,100	\$200,368
2027	13	\$200,368	\$99,600	\$0	\$0	\$5,207	\$39,636	\$265,539
2028	14	\$265,539	\$99,600	\$0	\$0	\$7,179	\$6,168	\$366,150
2029	15	\$366,150	\$99,600	\$0	\$0	\$6,902	\$120,629	\$352,024
2030	16	\$352,024	\$99,600	\$0	\$0	\$5,278	\$187,735	\$269,166
2031	17	\$269,166	\$99,600	\$0	\$0	\$6,617	\$37,935	\$337,448
2032	18	\$337,448	\$99,600	\$0	\$0	\$8,559	\$9,091	\$436,516
2033	19	\$436,516	\$99,600	\$0	\$0	\$9,738	\$49,234	\$496,619
2034	20	\$496,619	\$99,600	\$0	\$0	\$231	\$584,663	\$11,788

Alternative 1: Level Funding with Steps

Beginning Balance as of start of year beginning Jan 2015: \$150,000

CONTRIBUTIONS		
FIRST YR	LAST YR	
\$69,600.00	\$99,600.00	per year
\$290.00	\$415.00	per unit per year
\$5,800.00	\$8,300.00	per month
\$24.17	\$34.58	per unit per month

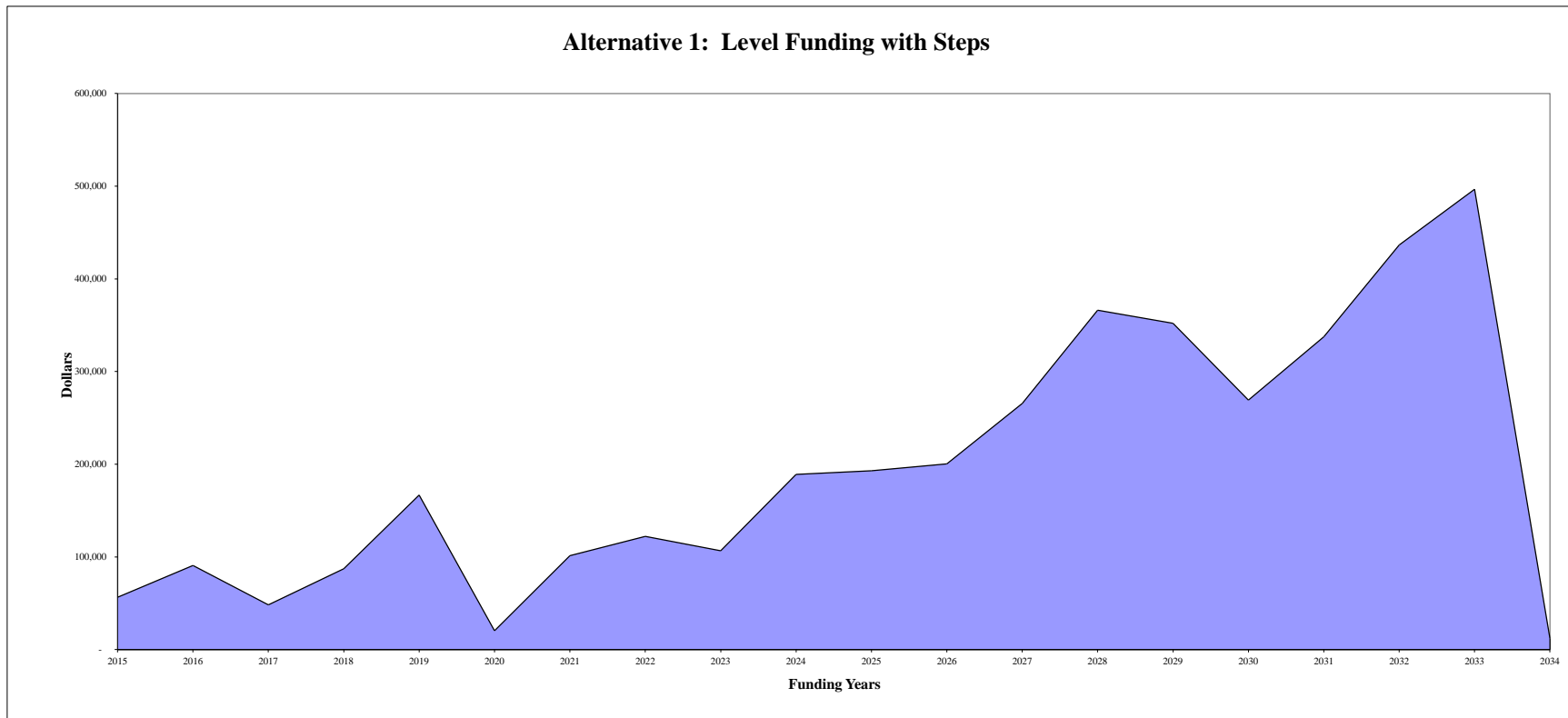
SPECIAL ASSESSMENTS				
First Second	Per Year Per Year	Totals		\$0 \$0
		\$0 \$0	Per Unit Per Unit	

SETTINGS (analyzed by year)		
Starting amount (\$):	5800	
Increment by (\$):	500	
Every	2	year
Frequency:	5	time

Projected Annual Funding and Expenditures:

Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	56,457	90,757	48,281	87,209	166,732	20,354	101,344	122,159	106,627	189,007	192,940	200,368	265,539	366,150	352,024
Capital Expenditures:	164,250	37,080	119,022	38,382	5,346	228,377	8,597	69,180	111,222	14,927	99,450	96,100	39,636	6,168	120,629
Total Revenue (all sources)	70,707	71,380	76,547	77,310	84,869	81,999	89,587	89,995	95,691	97,306	103,383	103,529	104,807	106,779	106,502

Year:	2030	2031	2032	2033	2034
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	269,166	337,448	436,516	496,619	11,788
Capital Expenditures:	187,735	37,935	9,091	49,234	584,663
Total Revenue (all sources)	104,878	106,217	108,159	109,338	99,831



Alternative 2: Escalating Funding at 5% per Year

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2015	1	\$150,000	\$64,800	\$0	\$0	\$1,011	\$164,250	\$51,561
2016	2	\$51,561	\$68,040	\$0	\$0	\$1,650	\$37,080	\$84,171
2017	3	\$84,171	\$71,442	\$0	\$0	\$732	\$119,022	\$37,323
2018	4	\$37,323	\$75,014	\$0	\$0	\$1,479	\$38,382	\$75,434
2019	5	\$75,434	\$78,765	\$0	\$0	\$2,977	\$5,346	\$151,830
2020	6	\$151,830	\$82,703	\$0	\$0	\$123	\$228,377	\$6,279
2021	7	\$6,279	\$86,838	\$0	\$0	\$1,690	\$8,597	\$86,210
2022	8	\$86,210	\$91,180	\$0	\$0	\$2,164	\$69,180	\$110,374
2023	9	\$110,374	\$95,739	\$0	\$0	\$1,898	\$111,222	\$96,789
2024	10	\$96,789	\$100,526	\$0	\$0	\$3,648	\$14,927	\$186,036
2025	11	\$186,036	\$105,552	\$0	\$0	\$3,843	\$99,450	\$195,981
2026	12	\$195,981	\$105,552	\$0	\$0	\$4,109	\$96,100	\$209,542
2027	13	\$209,542	\$105,552	\$0	\$0	\$5,509	\$39,636	\$280,967
2028	14	\$280,967	\$105,552	\$0	\$0	\$7,607	\$6,168	\$387,959
2029	15	\$387,959	\$105,552	\$0	\$0	\$7,458	\$120,629	\$380,340
2030	16	\$380,340	\$105,552	\$0	\$0	\$5,963	\$187,735	\$304,120
2031	17	\$304,120	\$105,552	\$0	\$0	\$7,435	\$37,935	\$379,172
2032	18	\$379,172	\$105,552	\$0	\$0	\$9,513	\$9,091	\$485,147
2033	19	\$485,147	\$105,552	\$0	\$0	\$10,829	\$49,234	\$552,294
2034	20	\$552,294	\$105,552	\$0	\$0	\$1,464	\$584,663	\$74,647

Alternative 2: Escalating Funding at 5% per Year

Beginning Balance as of start of year beginning Jan 2015: \$150,000

CONTRIBUTIONS		
FIRST YR	LAST YR	
\$64,800.00	\$105,552.37	per year
\$270.00	\$439.80	per unit per year
\$5,400.00	\$8,796.03	per month
\$22.50	\$36.65	per unit per month

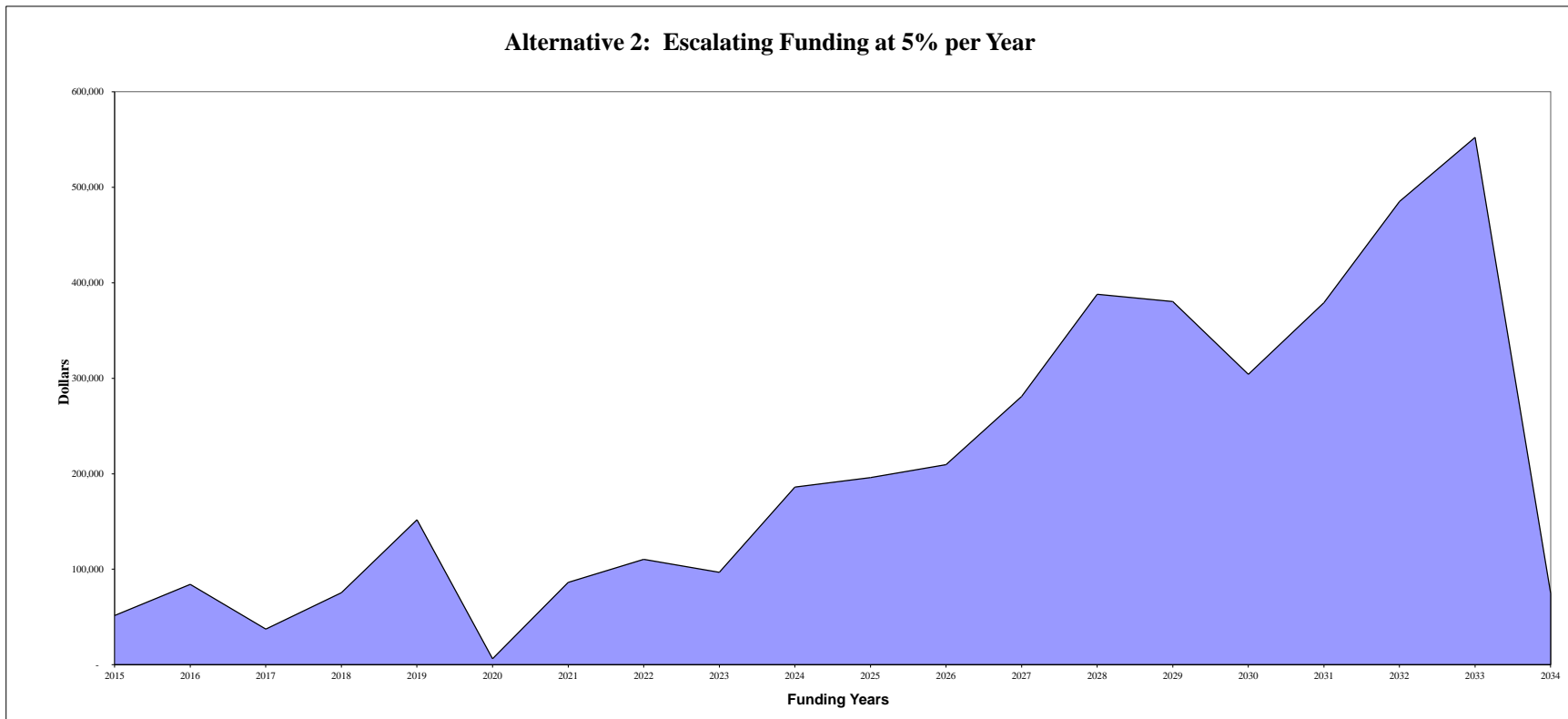
SPECIAL ASSESSMENTS				
First Second	Per Year Per Year	Totals		
		\$0	Per Unit	\$0
		\$0	Per Unit	\$0

SETTINGS (analyzed by year)	
Starting amount (\$):	5400
Increment by (%):	5
Step (%):	
Every	1 year
Frequency:	10 time

Projected Annual Funding and Expenditures:

Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	51,561	84,171	37,323	75,434	151,830	6,279	86,210	110,374	96,789	186,036	195,981	209,542	280,967	387,959	380,340
Capital Expenditures:	164,250	37,080	119,022	38,382	5,346	228,377	8,597	69,180	111,222	14,927	99,450	96,100	39,636	6,168	120,629
Total Revenue (all sources)	65,811	69,690	72,174	76,493	81,742	82,826	88,529	93,344	97,637	104,174	109,395	109,661	111,062	113,159	113,010

Year:	2030	2031	2032	2033	2034
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	304,120	379,172	485,147	552,294	74,647
Capital Expenditures:	187,735	37,935	9,091	49,234	584,663
Total Revenue (all sources)	111,516	112,987	115,065	116,382	107,016



Appendix B: PROJECT PHOTOGRAPHS

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Typical view of
front of building

Photo Number
1



Description:
View of rear of 2
buildings

Photo Number
2

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:

Close-up view of patched roof shingles on Building 1430 – typical of several buildings

Photo Number

3



Description:

View of another building roof with patched shingles

Photo Number

4

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Note building roof
shingles are
relatively new

Photo Number
5



Description:
View of another
roof with newer
shingles

Photo Number
6

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Note typical grade level entrance canopy

Photo Number
7



Description:
View of typical staircase with open risers, concrete steps and metal railing (railing needs painting)

Photo Number
8

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of underside
of typical wood
landing in
breezeway

Photo Number
9



Description:
PVC railing
system at
breezeway landing

Photo Number
10

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Note concrete steps are supported by angle iron welded to steel stringers

Photo Number
11



Description:
View of rusted metal storage room door

Photo Number
12

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of unit front
door, number and
lighting

Photo Number
13



Description:
Typical fire pull
alarm

Photo Number
14

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Typical fire strobe

Photo Number
15



Description:
View of mailboxes
at entrance to
building

Photo Number
16

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:

View of relatively wide crack in poured concrete retaining wall – typical of several buildings

Photo Number

17



Description:

View of nearly 1/2-inch wide cracked poured concrete wall section

Photo Number

18

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of typical short section of wood retaining wall – note deterioration in top of wall

Photo Number
19



Description:
View of both poured concrete retaining wall and short wood wall used as planter box

Photo Number
20

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of one of
two entrance signs
mounted on
pressure treated
posts

Photo Number
21



Description:
Note rip rap in
drainage ditch
adjacent to
Building 1220

Photo Number
22

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of erosion in
drainage ditch
adjacent to
Building 1351

Photo Number
23



Description:
Typical condition
of asphalt parking
lot and driveway

Photo Number
24

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of pothole
and alligator
cracking in
driveway behind
Building 1220

Photo Number
25



Description:
View of typical
cracking in
driveway

Photo Number
26

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of erosion at
Building 1331 end
wall – PVC post
footing is
undermined

Photo Number
27



Description:
View of bridge
leading to Building
1410 next to office

Photo Number
28

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Typical PVC
fencing above
retaining wall

Photo Number
29



Description:
View of
deterioration at
bottom rail of PVC
fencing

Photo Number
30

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of typical
waste dumpster
with vinyl fence
screening

Photo Number
31



Description:
View of pool
building exterior

Photo Number
32

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of swimming
pool

Photo Number
33



Description:
Typical cracking
in concrete deck
around pool

Photo Number
34

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of elevated
wood decking at
pool area

Photo Number
35



Description:
View of pool filter,
pump and piping

Photo Number
36

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:

Small water heater
in pool equipment
room

Photo Number

37



Description:

View of basketball
court and
volleyball courts in
background

Photo Number

38

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
View of two picnic
tables at recreation
area

Photo Number
39



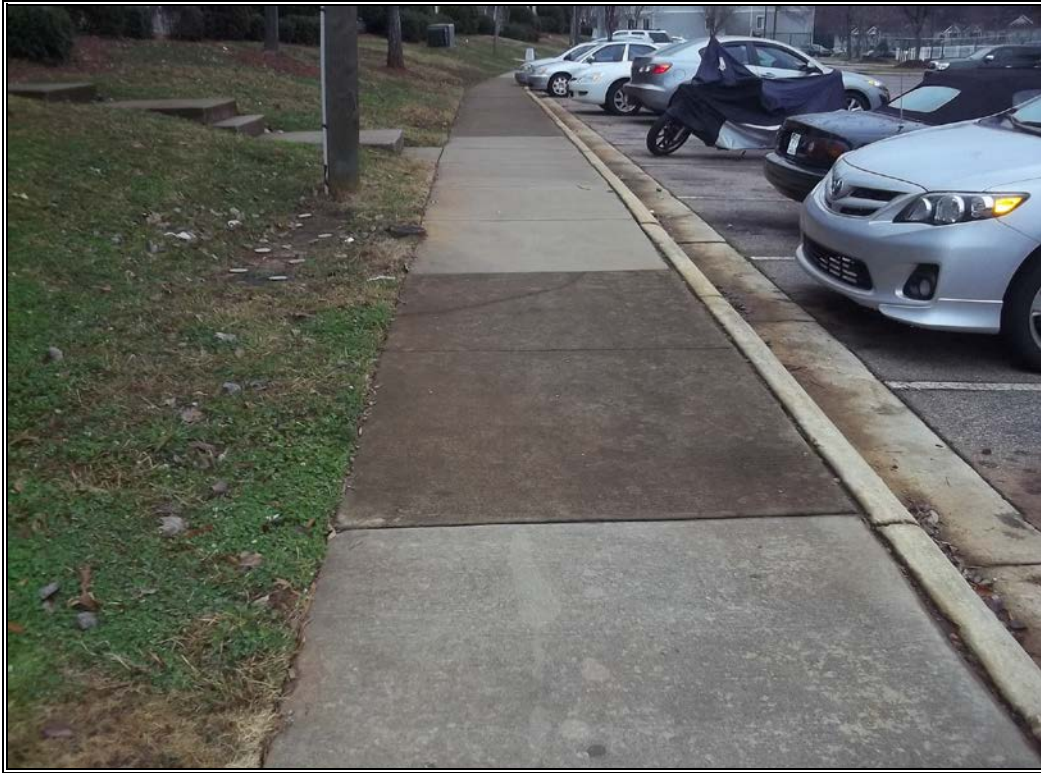
Description:
View of charcoal
grills at recreation
area

Photo Number
40

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Note concrete sidewalk, curb and gutter

Photo Number
41



Description:
View of concrete pavers leading to grade level unit patio

Photo Number
42

Location:
Lake Park
Raleigh, NC

Photo Taken by:
Robert C. Giles, PE

Date:
12/09/2014
12/18/2014



Description:
Note typical fire panel in fire sprinkler system room

Photo Number
43



Description:
View of fire sprinkler system piping, gauges and inspection tags

Photo Number
44