

Structural Integrity Reserve Study

Project # 23RL-1178
April 2, 2025

Starlight Towers Association, Inc.

***Starlight Towers Condominium
SIRS Report***

***6000 North Ocean Boulevard,
Lauderdale-By-The-Sea,
FL 33308***



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April 2, 2025

Starlight Towers Association, Inc.
Attn: Cindy Whittle
6000 North Ocean Boulevard
Lauderdale-By-The-Sea, FL 33308

RE: Starlight Towers Condominium
KEG File # 23RL-1178
Structural Integrity Reserve Study

Dear Cindy and Board of Directors:

Karins Engineering (KE) agreed to render professional engineering services in connection with a Structural Integrity Reserve Study per F.S. 718.112(2)(f)[2] at **Starlight Towers Condominium** (hereinafter called the "Project"), located at **6000 North Ocean Boulevard Lauderdale-By-The-Sea, FL 33308, for Starlight Towers Association, Inc.** (hereinafter called the "Client"), on October 1st, 2024. Per the Letter of Agreement signed and dated November July 12th, 2024, KE will complete a limited condition observation and evaluation of the current conditions and construction.

Our observations were limited to visible surfaces of accessible exterior building components and included visual observations of accessible building components referenced specifically herein. Our observations were of a general nature intended to identify significant deficiencies, problems or on-going maintenance concerns that are related to the building structures and are visible at the time of our observations. Neither our observations nor this report is intended to cover hidden defects, mechanical, electrical, architectural features, code compliance or other areas of the building not specifically mentioned. The intent of our review was to provide our professional opinion of the existing condition of the identified components.

KEG review of design documents was not to be exhaustive or intended to detect all design deficiencies, omissions or conflicts. We did not attempt to verify the adequacy of the original design or to supplant the responsibilities of the original Architect / Engineer of Record. Due to the limited scope of this investigation, we cannot attest to the structure's compliance with building codes or accepted construction techniques, except as noted herein.

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Table of Contents

Executive Summary:.....	3
Statute Summary:.....	3
References:.....	5
Documents:.....	5
Contacts:.....	5
Vendors:.....	5
General Information:.....	5
Scope of Observations:.....	6
Inclusions:.....	6
Exclusions:.....	6
Terminology:.....	7
Physical Analysis:.....	7
Financial Analysis:.....	7
Physical Analysis – Part 1:.....	8
Roof System.....	8
Structure: Concrete.....	9
Fire System:.....	10
Plumbing Systems:.....	11
Electrical System:.....	12
Waterproofing and Painting.....	13
Windows and Common Doors.....	14
Other Items Over 10K:.....	15
Financial Analysis – Part 2:.....	16
Methodology.....	16
Funding Goal:.....	16
Funding Plan:.....	16
Schedule:.....	17
Parameters:.....	18
Assumptions:.....	19
Recommendations:.....	20
Conclusion:.....	21
ATTACHMENTS.....	22



Executive Summary:

The purpose of this report is to summarize our observations and provide our opinion of recommendations, as it relates to F.S. 718.112(g) – Structural Integrity Reserve Study (SIRS), of the association-owned common elements, components, or items. Specifically, as they relate to the “*structural integrity and safety of the building.*”¹

Currently, this statute is under revision by bill SB 154 (2023 Legislature CS for CS for SB 154), which was approved by the Governor on June 9th, 2023. The bill amends, revises, and clarifies various statutes. Namely, F.S. 718.112. To paraphrase, the bill defines the minimum items which are to be included in a SIRS to be: **roof, structure, fireproofing & fire protection systems, plumbing, electrical systems, waterproofing and exterior painting, windows and exterior doors, and any other item that has a deferred maintenance or replacement cost that exceeds \$10,000.** The purpose of a reserve study is best defined as “*a budget planning tool which identifies the components that a community association is responsible to maintain or replace, the current status of the reserve fund, and a stable and equitable funding plan to offset the anticipated future major common area expenditures.*”²

Generally, reserve studies applied to an association's capital expenditures and deferred maintenance expenses for components which required timely and inevitable replacement / maintenance required to support proper function of an association's common elements. Typically, these included the minimum items as defined by F.S. 718 and any other items defined in the association By-Laws. Other items were included at the discretion of the professional or association. However, funding could be waived by a majority vote of the association and reserve accounts were not required to be maintained.

Due to the harrowing events at the Champlain Towers of Surfside Florida on June 24th, 2021, the Florida Legislature has elected to mandate the funding of reserve accounts for most applicable associations. The required funding is defined by the Florida Statue which includes a general outline of the relevant components. Ultimately, it has become the responsibility of the professional to reasonably define the relevant components and recommend a comprehensive funding plan which the association must adopt.

For a fully funded reserve, KE recommends annual contributions totaling **\$298,000.00** to fund the SIRS related elements of the structure for 2025-2030, **\$115,000.00** from 2031 - 2036, **\$ \$115,000.00** from 2037 – 2042, **\$115,000.00** from 2043 – 2048 and **\$68,000.00** from 2049 - 2055. A flat inflation rate of **2.0%** was used for future expenditures and a **2.0%** yearly contribution increase, based on 2020 Construction Cost Index from Engineering News Record.

Statute Summary:

The purpose of this section is to summarize our interpretation of the relevant provisions of Florida Statute 718 – Condominiums, Part I – General Provisions, F.S. 718.112 – Bylaws. Specifically, paragraph (f) – Annual budget and paragraph (g) – Structural integrity reserve study, as they relate to this report.

¹ F.S. 718.112 - Bylaws

² 2023 Reserve Study Standards; Community Association Institute (CAI)



An association's "**annual budget**"¹ is indicated to be a "*proposed annual budget of estimated revenues and expenses,*"¹ and "*must show amounts budgeted by **accounts** and expense classifications.*" The minimum requirements for the budget are outlined in F.S. 718.504 – Prospectus or offering circular, paragraph 21. Multi-condominium associations must adopt "*a separate budget of common expenses for each condominium*"¹ and "*a separate budget of common expenses for the association.*"¹

Further, "*the budget must include reserve accounts for **capital expenditures** and **deferred maintenance.***"¹ Generally, this applies to **common elements** and **limited common elements**. These accounts, items, or components are to include, at a minimum: "*roof replacement, building painting, and pavement resurfacing,*"¹ and "*any other item that has a deferred maintenance expense or **replacement cost** that exceeds \$10,000.*"¹ The amount to be reserved "*must be computed using a formula based upon estimated **remaining useful life** and estimated replacement cost or deferred maintenance expense.*"¹

Historically, "*unit-owner-controlled*"¹ associations could vote to "*provide no reserve or less reserves than required*"¹ by majority. However, a "*budget adopted on or after December 31, 2024, the members of a unit-owner-controlled association that must obtain a structural integrity reserve study may not determine to provide no reserves or less reserves than required.*"¹ Unless, an "*alternative funding method has been approved by the division*"¹ for a multi-condominium association.

A residential condominium association must obtain a **Structural Integrity Reserve Study** or **SIRS** for "*each building on the condominium property that is three stories or higher in height.*"¹ At a minimum, the Study is to include building elements "*as related to the structural integrity and safety of the building.*"¹ These items are defined as follows:

"**a.** Roof. **b.** Structure, including load-bearing walls and other primary structural members and primary structural systems... **c.** Fireproofing and fire protection systems. **d.** Plumbing. **e.** Electrical systems. **f.** Waterproofing and exterior painting. **g.** Windows and exterior doors. **h.** Any other item that has a deferred maintenance expense or replacement cost that exceeds \$10,000 and the failure to replace or maintain such item negatively affects the items listed..."¹

A SIRS must "*identify each item of the condominium property being visually inspected, state the estimated remaining useful life and the estimated replacement cost or deferred maintenance expense of each item,*"¹ and "*provide a reserve funding **schedule** with a recommended annual reserve amount that achieves the estimated replacement cost or deferred maintenance expense of each item ... by the end of the estimated remaining useful life of the item.*"¹

A SIRS may recommend that "*reserves do not need to be maintained for any item for which an estimate of useful life and an estimate of replacement cost cannot be determined.*"¹ Or, "*reserves for replacement costs do not need to be maintained for any item with an estimated remaining useful life of great than 25 years.*"¹ However, the SIRS may recommend a "*deferred maintenance expense amount for such item*"¹ or component.

Lastly, if a Milestone Inspection per F.S. 553.899 was "*performed within the past 5 years and meets the requirements...*"¹, the inspection "*may be used in place of the visual inspection portion*"¹ of the SIRS.



References:

Documents:

In preparation of this report, KEG reviewed the following documentation:

- Blueprint of the building

Unless noted otherwise, KEG did not review every subsection of these documents, make attempts to acquire public records, and assess the full history of the building. Furthermore, historical or association documents may have been provided by the Client. However, KEG reviewed all past internal documentation in relevance to this report and shall be noted as necessary.

Contacts:

In preparation of this report, KEG procured correspondence with the following parties:

- Cindy Whittle, Property Manager

Vendors:

In preparation of this report, KEG was informed the following vendors were under contract or agreement:

- N/A

General Information:

The property, constructed in 1968, is situated in Lauderdale-By-The-Sea, Broward County, Florida, approximately 200 feet from the Atlantic Ocean. It is comprised of one, 16 story building with 116 units, with carports in the ground level, and ground level oceanfront pool. The structure includes conventionally reinforced concrete slabs, conventionally reinforced concrete beams, and columns. The structure is also comprised of CMU blocks throughout the structure. Each unit has balconies, mostly with tile covering the slab. The balconies vary in size and exposure to the elements. The existing roofing is modified bitumen system.



Figure 1: Aerial View of Parcel



Figure 2: Aerial View of Building



Scope of Observations:

Observations were made on the following date(s): November 15th, 2024.

Observations were visual in nature, only. No destructive observations were made, nor were any elements moved or altered. Elements not observed were either, out of the scope of this report, or not accessible. Observations may have included qualitative soundings at select elements to investigate for delamination and spalling that may not be observed visually or to assess extent thereof. Unless noted otherwise, sounds were not formally documented.

For the purposes of determining which components to include and exclude, we use CAI's three-part test:

1. The association has the obligation to maintain or replace the existing element.
2. The need and schedule for this project can be reasonably anticipated.
3. The total cost for the project is material to the association, can be reasonably estimated, and includes all direct and related costs.

This three-part test limits components to major and predictable expenses. KEG does not include unpredictable expenses such as damage from fire, flood, or earthquake.

Inclusions:

The following elements, components, and items are generally observed, if applicable:

- Building Envelope
 - Roof Systems
 - Painting and Weatherproofing
 - Common Windows
 - Common Doors
- Walkways & Balconies
 - Railings
 - Knee Walls
- Fire Suppression
 - Fire System
 - Fire Panel
- Plumbing
 - Potable Water System
- Electrical
 - Transfer Switch
 - Generator

Exclusions:

The following elements, components, and items are generally not observed:

- Grounds
 - Pavement
 - Irrigation Well Pump & Tank
 - Perimeter Fence
- Mechanical Equipment
 - Elevators
 - HVAC
- Pools & Decks
 - Pumps
 - Filters
 - Heaters
 - Deck
 - Furnishing



Terminology:

Physical Analysis:

In order to accurately and consistently categorize component conditions, KEG utilizes an adapted scale developed by the American Society of Civil Engineers (ASCE) for the purposes of this report:

- **Very Good – Fit for Purpose:** The infrastructure in the system or network is generally in excellent condition, typically new or recently rehabilitated, and meets capacity needs for the future. Few, if any, elements show signs of general deterioration that require attention.
- **Good – Adequate for Now:** The infrastructure in the system or network is in good to excellent condition; some elements show signs of general deterioration that require attention. A few elements exhibit significant deficiencies. Safe and reliable, with minimal capacity issues and minimal risk.
- **Fair – Mediocre, Requires Attention:** The infrastructure in the system or network is in fair to good condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies in conditions and functionality, with increasing vulnerability to risk.
- **Poor – At Risk:** The infrastructure is in poor to fair condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration. Condition and capacity are of serious concern with a strong risk of failure.
- **Very Poor – Failing/Critical, Unfit for Purpose:** The infrastructure in the system is in unacceptable condition with widespread advanced signs of deterioration. Many of the components of the system exhibit signs of imminent failure.

Financial Analysis:

For the purposes of this report, the following terminology is defined as such:

- **Accounts:** Bank *accounts*.
- **Budget:** Total *annual budget* which includes the reserve account(s).
- **Capital Expenditures:** Cost of acquiring or maintaining Components.
- **Category:** A group of Components.
- **Common Elements:** Components entitled to use by each unit-owner.
- **Components:** An asset or individual line item within a Category.
- **Contributions:** The amount required to offset Expenditures.
- **Deferred maintenance:** Any maintenance or repair that will be performed less frequently than annually and will result in maintaining the Useful Life of a Component.
- **Expenditure:** The amount or cost to achieve replacement, deferred maintenance, or repair of a Component.
- **Limited Common Elements:** Components entitled to use only by specified unit-owners.
- **Long-Life Components:** Components for which Replacement Life exceeds the projections of a reserve study.
- **Remaining Life (Estimated):** The estimated time in years for which a Component can be expected to continue to serve its intended function.
- **Replacement Cost (Estimated):** The estimated cost of replacing, repairing, or restoring a Component to its original functional condition.
- **Useful Life:** The estimated time in years for which a Component can be expected to serve its intended function.



Physical Analysis – Part 1:

The purpose of this section is to summarize our observations by Category and Component. Commentary or recommendations may be included if notable deficiencies or deterioration is observed. Otherwise, typical Components are simply identified and documented herein.

Per industry standard, Physical Analysis is where Component Assessment and Valuation is defined. Although Component Assessment is defined here, Component Valuation is addressed in the Financial Analysis.

Roof System

- Component Condition: Fair.
- Commentary: The structure has a flat re-roof with a bitumen membrane surrounded by CMU parapet walls. The upper roof includes two primary structures: the mechanical tower and the elevator machine room. There are exposed pipes running along the roof surface, which appear securely fastened.
- Recommendations: KEG recommends installing a new roofing.



Figure 1: Roof Level Actual Condition



Figure 2: Roof Level Actual Condition.

<i>Description of Reserve Item</i>	<i>Estimated Useful Life</i>	<i>Estimated Remaining Life</i>	<i>Estimated Replacement / Deferred Maintenance Cost</i>
<i>Built Up Flat Roof Area. Includes: Tear off, Waterproofing, Sloping Material, Overburden</i>	20	3	\$964,697.25
<i>Waterproof Cooling Tower Area</i>	20	3	\$82,080.00
<i>Support for Cooling Tower Equipment</i>	25	3	\$108,000.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Structure: Concrete

- Component Condition: Fair.
- Commentary: Starlight Towers Association hired Suncoast Painting and Professional Services, Inc. to perform a waterproofing, painting, and building restoration project. All visible deficiencies are currently being addressed in balconies/walkways and building façade. KEG as the Engineer of Record (EOR) has been performing the inspections during the course of the project to ensure the correct completion of the repairs mentioned.
- Recommendations: After the completion of the restoration project, the association is to implement proper maintenance protocol of the areas addressed by the restoration project to prolong the longevity of the structure.



Figure 3: Repairs in Progress



Figure 4: Repairs in Progress



Figure 5: Repairs in Progress



Figure 6: Repairs in Progress

Description of Reserve Item	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement / Deferred Maintenance Cost
Typical Concrete Maintenance / Replacement (One Occurrence)	10	0	\$140,250.00
Typical Concrete Repairs. Future Restoration Concrete Maintenance	10	10	\$70,125.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Fire System:

- Component Condition: Good
- Commentary: The observed elements of the fire protection system, including the fire alarm control panel (FACP), fire pump, and sprinkler system, were found to be in adequate condition. While the system is operational, routine maintenance and testing are required to ensure continued reliability. The estimated remaining life varies for different components; however, all elements should be maintained as necessary to maximize their useful life.
- Recommendations: Regular maintenance in accordance with the jurisdiction authorities.



Figure 7: Fire Alarm Panel



Figure 8: Fire Sprinkler System

Description of Reserve Item	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement / Deferred Maintenance Cost
Fire Alarm Panel	20	7	\$8,617.80
Fire Alarm Call Boxes	25	7	\$1,856.00
Sprinkler Heads	20	10	\$2,907.20
Fire Pump	20	5	\$10,080.00
Fire Doors	10	5	\$79,414.94

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Plumbing Systems:

- Component Condition: Good.
- Commentary: The observed elements of the plumbing system were in adequate condition. The water distribution lines, fixtures, and drainage components are generally well-maintained. Although the useful appearance observed on some piping joints and fittings, the overall system performance remains within acceptable standards. The estimated remaining life varies among components; however, routine maintenance and timely repairs will help extend the useful life of the entire system.
- Recommendations: Continued maintenance and repairs necessary will help sustain the plumbing system’s performance and extend its service life.



Figure 9: Existing Water Valves Installed



Figure 10: Main Valve of Starligh Towers

Description of Reserve Item	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement / Deferred Maintenance Cost
Domestic Water Pump System	15	10	\$60,760.00
Domestic Water Pump Valves	25	15	\$17,680.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Electrical System:

- Component Condition: Fair
- Commentary: The observed elements of the electrical system, including the main electrical panels, generator transfer switch, and associated distribution components, were found to be in fair condition. The system appears to be functional with clear labeling on circuit breakers and equipment. However, surface rust and signs of aging are present on some panels and enclosures, which should be monitored and treated to prolong the remaining useful life.
- Recommendations: Continued maintenance as necessary.



Figure 11: Main Breaker Panel



Figure 12: Main Breaker Panels



Figure 13: Condition of the Generator



Figure 14: Main Breaker Panel

<i>Description of Reserve Item</i>	<i>Estimated Useful Life</i>	<i>Estimated Remaining Life</i>	<i>Estimated Replacement / Deferred Maintenance Cost</i>
<i>Generator and Transfer Switch</i>	30	12	\$57,598.30
<i>Main Breaker Panel (all included)</i>	25	8	\$6,500.00
<i>Switchboard Panel (all included)</i>	30	8	\$10,000.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Waterproofing and Painting

- Component Condition: Good
- Commentary: Starlight Towers is currently under a painting and waterproofing restoration project, scheduled to be completed in June 2025. All exterior paint and waterproofing on balconies will be completed per KEG’s Project Manual and specifications. Guardrail coating was observed in good condition generally. However, it is recommended that regular maintenance protocols are implemented to protect the guardrail system from the environment agents.
- Recommendations: Continuing regular maintenance to all areas addressed.

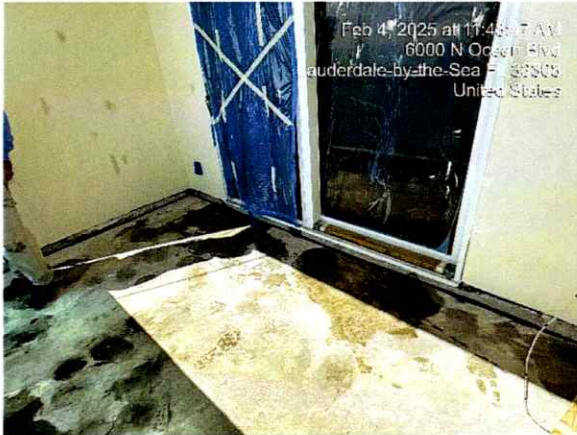


Figure 15: Balcony After Removal of the Tiling.



Figure 16: Waterproofing Application in Progress at Balconies.



Figure 17: Actual Condition of the Balcony Guardrails



Figure 18: New Waterproofing Installed and Condition of Balcony Railing

Description of Reserve Item	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement / Deferred Maintenance Cost
Installation of Waterproofing at Balconies	10	10	\$110,025.00
Exterior Weatherproofing Paint Application	7	7	\$115,000.00
Window Sealant Replacement	7	0	\$110,887.00
Guardrail painting (Maintenance)	7	5	\$112,200.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Windows and Common Doors

- Component Condition: Good.
- Commentary: Common windows were observed to be in adequate condition and proper operation generally. All fire-rated and non-fire-rated metal doors were observed operating properly. Minor signs of corrosion were observed in some of the metal frames that can be addressed to prolong the useful life of existing doors.
- Recommendations: KEG recommends replacing some of the door hardware and apply proper metal painting protocols and continuing with regular maintenance.



Figure 19: Metal Door for the Staircase.



Figure 20: Signs of Corrosion at Metal Door Frame.



Figure 21: Sealant Was Observed in Good Condition.



Figure 22: Sealant Was Observed in Good Condition.

<i>Description of Reserve Item</i>	<i>Estimated Useful Life</i>	<i>Estimated Remaining Life</i>	<i>Estimated Replacement / Deferred Maintenance Cost</i>
<i>Front Doors (Building Entrance)</i>	20	17	\$5,000.00
<i>Trash Room and Staircase Doors</i>	20	15	\$175,980.00
<i>Common Windows Pool Area</i>	20	17	\$25,000.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Other Items Over 10K:

- Component Condition: Good.
- Commentary: Part of the concrete restoration project includes addressing exterior cementitious finish of the building envelope after the concrete repair completion.
- Recommendations: Regular maintenance after exceeding useful life to prolong the longevity of the structure.



Figure 23: Condition of the Façade After Repairs

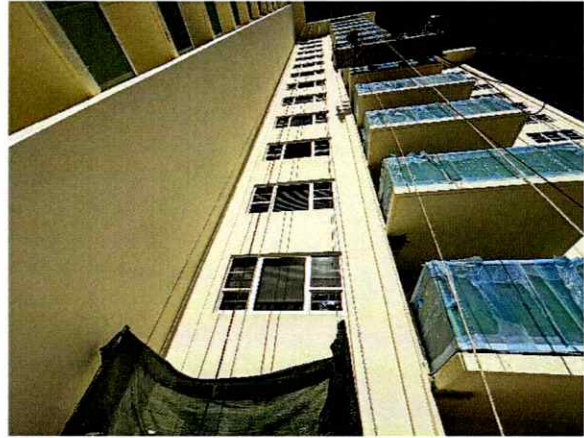


Figure 24: Condition of the Façade After Repairs



Figure 25: Condition of the Façade After Repairs



Figure 26: Condition of the Façade After Repairs

Description of Reserve Item	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement / Deferred Maintenance Cost
Stucco Maintenance (One Occurrence)	10	0	\$58,374.00
Stucco Maintenance. Future Restoration	10	10	\$29,187.00

Note: This does not include soft costs such as engineering design or consulting during construction, permitting or other updates for current and/or future code requirements.



Financial Analysis – Part 2:

The purpose of this section is to define our approach and summarize our analysis.

Methodology

This reserve study is based on: Cash-Flow or Pooled methodology.

Cash-Flow Method (Pooled): “A method of calculating reserve contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.”³ Alternatively, a formula used to calculate the annual contribution for a specific component, whereby the estimated replacement cost equals the annual expenditure at 0 estimated remaining life. Generally, this method is preferred since accounting is simplified and requires only one bank account.

Versus: Component or Straight-Line methodology.

Component Method (Straight-Line): “A method of calculating reserve contributions where the total reserve contribution is based on the sum of contributions for individual components.”³ Alternatively, a formula used to calculate the annual contribution for a specific component, whereby estimated replacement cost divided by the estimated useful life equals the annual expenditure. Generally, this method is not preferred since accounting can be more complex and requires a bank account for each Category.

Funding Goal:

This reserve study is based on a: Baseline funding goal.

Baseline: “Establishing a reserve funding goal of keeping the reserve cash balance above zero.”³

Versus: Threshold or Fully Funded.

Threshold: “Establishing a reserve funding goal of keeping the reserve balance above a specified dollar amount.”³

Fully Funded: “Setting a reserve funding goal of attaining and maintaining reserves at or near 100% funded.”³
Note, Percent Funded and Fully Funded is out of the scope of this study.

Funding Plan:

This reserve study is based on a Unit-Owner Contribution plan.

Unit-Owner Contribution: Where the funding of the reserve account(s) is primarily dependent on contributions from owners.

³ Standards of Practice; Association of Professional Reserve Analysts



An ideal plan is best defined as, “*an associations plan to provide income to a reserve fund to offset anticipated expenditures from that fund.*”³ There are many other ways to fund a reserve account or to create a funding plan. For example, cellular service contracts, assessments, and special assessments. The latter is to be avoided and the primary purpose of this study.

Schedule:

The Schedule is the primary focus of this study and serves as a representation of the Clients capital expenditures and deferred maintenance. It is an Excel spreadsheet which summarizes our calculations based on the required formula of “*remaining useful life and estimated replacement cost or deferred maintenance expense.*”¹

The Schedule is attached to this report as Appendix A. For ease of reference, it is presented on 36”x48” sheet size paper. Smaller sheet sizes on multiple pages and the Excel spreadsheet can be provided.

The analysis and computation procedure is illustrated as follows (cash-flow or pooled):

1. Each Category is assigned a Component or Components.
2. Each Component is assigned a Quantity, Estimated Useful Life, Estimated Remaining Life, and an Estimated Unit Cost.
3. For each component, the Estimated Replacement Cost is automatically calculated by multiplying the Quantity by the Estimated Unit Cost. Then, each Component is summed within a Category and is reflected as Sub-Total Replacement Cost. Additionally, each Sub-Total Replacement Cost is summed for each Category and is reflected as Total Replacement Cost: All. Note, the Sub-Total Replacement Cost and Total Replacement Cost is for reference purposes only.
4. Each Initial Replacement Year is automatically calculated based on the Estimated Remaining Life and when it will reach a value of 0. Successive Second and Third Replacement Years are automatically calculated based on the sum of Initial Placement Year and Estimated Useful Life. Note, Initial, Second, and Third Replacement Years are for reference purposes only.
5. The Projections reflect Estimated Replacement Cost of each Component from the Start Year through the End Year, this includes a flat Inflation Rate multiplier. By which, if a Component reaches an Estimated Remaining Life of 0 at a respective year, the Estimated Replacement Cost is automatically applied for that respective year including inflation. Otherwise, the Estimated Replacement Cost is considered 0 and reflected as a dash. These Estimated Replacement Costs are summed for each Component within a Category and reflected as Sub-Total Annual Expenditure.
6. The Sub-Total Annual Expenditures are summed for each Category by year, then reflected as Total Annual Expenditure. That is, this reflects the Estimated Replacement Cost of each Component within each year if the Estimated Remaining Life were to reach a value of 0.
7. Total Annual Contributions are automatically calculated for each year based on the Annual Contributions as defined for each period. This includes a Contribution Rate Increase multiplier generally applied to offset inflation.
8. For the Start Year, the Total Annual Reserve Balance is automatically calculated by taking the difference between Total Annual Contributions and Total Annual Expenditure, with the addition of the Starting Balance. For all successive years, Total Annual Reserve Balance is automatically calculated by taking the difference of the previous year’s Total Annual Reserve Balance and the current year’s Total Annual Expenditure, with the addition of the current year’s Total Annual Contribution.



9. The primary goal of the analysis is to reach a minimum value of Annual Contributions while maintaining a positive Total Annual Reserve Balance. Assuming the parameters have been accurately reflected, we iterate or solve for this lowest value of Annual Contributions.

Notes:

- All calculations are based on an end-of-year assumption for replacement, deferred maintenance, and / or repair.
- All *Estimated* Life and Cost values are based on the current calendar year.
- Components scheduled for replacement on the Initial Year or Start Year have a Remaining Useful Life of 0.

Parameters:

The following resources were utilized for the purposes of determining Quantities:

1. Existing Building Plans
2. Google Maps / Earth.
3. Previous reserve studies.
4. Previous estimates, quotes, bids, etc.

The following resources were utilized for the purpose of determining Useful Life and Remaining Useful Life:

1. Visual observations.
2. Past project records of similar projects.
3. Client history regarding installation dates and maintenance.
4. Contractor / Supplier / Vendor / Manufacturer evaluation and recommendations.

The following resources were utilized for the purpose of determining Replacement Costs:

1. Clients cost history and / or current proposals.
2. Local comparison to previous reports.
3. National industry cost estimating guidebooks.
4. Contractor / Supplier / Vendor / Manufacturer evaluation and recommendations.

Generally, Replacement Cost assumes complete replacement of the component, including material and labor for removal and installation, unless noted otherwise. Research was conducted using current construction cost data, quotes provided by local contractors, and comparisons to similar projects. KEG makes no warranty, expressed or implied, as to the accuracy of reported costs as compared to any bids received or the actual costs of the work as described. Cost information herein is not a construction estimate or contract value, but our professional opinion based on historical data on similar, though not identical, buildings and projects. Actual bid costs may vary materially based on project specific considerations, market conditions or other unforeseen items.



Further, the development of Capital Improvements is not considered as an expenditure on the reserve fund. However, the replacement or maintenance of capital improvements is accounted for. Long-life Components may be identified and accounted for.

Assumptions:

Based upon our observations, the following assumptions were made to form the basis of this report:

- **Roof Systems:**
 - Estimated useful life was determined based on observations. No additional information was provided. Public records were not found at the Lauderdale-By-The-Sea building department portal.
- **Painting & Weatherproofing:**
 - Starlight Towers Condominium contracted certified GC Suncoast Painting and Professional Services, Inc. to perform a major concrete restoration, which includes painting of the building and waterproofing replacement.
- **Common Windows and Common Doors:**
 - Pool area windows and doors are responsible for the Association.
- **Walkways & Balconies:**
 - Walkways and Balconies: Typical concrete repairs and complete waterproofing replacement is currently in a major restoration project.
 - Railings: Estimated useful life was determined based on observations.
- **Conveying Equipment:**
 - Fire Suppression: KEG based assumptions on observations.
 - Plumbing and Electrical: No additional information was provided to KEG. Assumptions were limited to observations.
- **Other Items Over 10K:**
 - Stucco Maintenance:
 - Starlight Towers Condominium contracted certified GC Suncoast Painting and Professional Services, Inc. to perform a major concrete restoration, which includes stucco repairs globally.



Recommendations:

In summary, this reserve study was completed based on the **Cash-Flow or Pooled** Methodology with a minimum **Baseline** Funding Goal and forecasts over a **25-year** period, from **2025** to **2055**. For a fully funded reserve, KEG recommends annual contributions totaling **\$298,000.00** to fund the SIRS related elements of the structure from 2025 – 2031, **\$115,000.00** from 2032 – 2037, **\$115,000.00** from 2038 – 2043, **\$115,000.00** from 2044 – 2049, and **\$68,000.00** from 2050 – 2055. These figures may vary based upon how the Association calculates contributions by unit. A flat inflation rate of **2.00%** was used for future expenditures and a **2.00%** yearly contribution increase, based on 2020 Construction Cost Index from Engineering News Record.

A fixed rate of **2.00%** for Inflation was utilized to adjust for inflation of Expenditures and a fixed rate (OR VARIABLE) of **2.00%** for Contribution Increase was utilized to counter the inflation. If applicable, an Interest Accumulation Rate was utilized based on the account information provided by the Client.

KEG recommends the Client implement funding of the reserve account for capital expenditures and deferred maintenance as was yield by the analysis. Otherwise, the Client risks the potential need for a special assessment of the unit owners to finance future expenditures.

Note, the identification, accounting, and recommendations of actual monies and accounts are beyond the scope of this report and should be advised by the Clients professional accountant or legal counsel.

Furthermore, this reserve study should be re-visited and updated at a minimum of every 3 years to more accurately reflect the current market status and existing state of the Clients components and reserve account(s). At this same time, Long-Life Components should be addressed to determine whether to be included as future expenditures.



Conclusion:

Reserve studies generally account for any item for which the deferred maintenance expense or replacement cost exceeds \$10,000. Florida statute requires reserves for roofs, painting and pavement regardless of the value.

Items of less value than those reserved may be budgeted by expense classifications such as maintenance and covered under the “day to day” operating expense budget.

Karins recommends that this report is reviewed and adjusted annually with on-site condition observations performed approximately every three years. If elements or quantities need to be verified a full study may be necessary.

We reserve the right to amend our opinion should new information be brought to our attention.

This report is prepared for the sole benefit of the Client. Any unauthorized use without our permission shall result in no liability or legal exposure to Karins Engineering, Inc.

We trust this information is helpful. Should questions arise, please do not hesitate to contact us!

Sincerely,

Karins Engineering

**Hector
Velazque
z-Abreu**

Digitally signed

by Hector

Velazque

Abreu

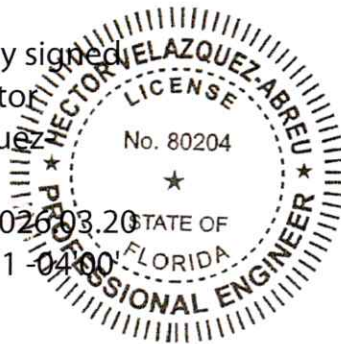
Date: 2025.03.20

10:43:51 -0400

Hector Velazquez-Abreu

FL PE. # 80204

(954) 551-5936



This item has been electronically signed and sealed by Hector Velazquez-Abreu, PE on the date indicated above using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



ATTACHMENTS

Appendix A: LWG Condominium Association, Inc. Structural Reserve Study (SIRS). Financial Spreadsheet

Appendix A



Reserve Type
 Reserve Start Year
 Reserve End Year

Number of Residential Buildings
 Number of Living Units

All Reserves Start Balance
 First Annual Reserve Amount
 Second Annual Reserve Amount
 Third Annual Reserve Amount
 Fourth Annual Reserve Amount
 Fifth Annual Reserve Amount

Total Expenditures
 Total Contributions
 Ending Balance

Inflation Rate Added for Expenditures %
 Adjustment Rate Added for Contributions % Years 2025-2035
 Adjustment Rate Added for Contributions % Years 2036-2040
 Adjustment Rate Added for Contributions % Years 2041-2050
 Adjustment Rate Added for Contributions % Years 2051-2055

Reserve Type	Reserve Start Year	Reserve End Year	Number of Residential Buildings	Number of Living Units	All Reserves Start Balance	First Annual Reserve Amount	Second Annual Reserve Amount	Third Annual Reserve Amount	Fourth Annual Reserve Amount	Fifth Annual Reserve Amount	Total Expenditures	Total Contributions	Ending Balance	Inflation Rate Added for Expenditures %	Adjustment Rate Added for Contributions % Years 2025-2035	Adjustment Rate Added for Contributions % Years 2036-2040	Adjustment Rate Added for Contributions % Years 2041-2050	Adjustment Rate Added for Contributions % Years 2051-2055
Roofed	2025	2050	1	116	\$	298,000.00	\$	115,000.00	\$	115,000.00	\$	4,826,553.59	\$5,014,201.58	2.00%	2.00%	2.00%	2.00%	
													\$187,647.99					

Component	Useful Life	2025		Estimated Remaining		Estimated Unit Cost	Estimated Replacement Cost	Replacement Year								
		Quantity	Units	Life	%			Year	Year	Year	Year	Year	Year			
														Starting Bal.	Quantity	Units
Roof	20	12,863	SF	3	75.00	\$	984,697.25	2025	2026	2027	2028	2029	2030	2031	2032	
		864	SF	20	95.00	\$	87,050.00	2028	2048	2068	-	-	-	-	-	
		80	LF	3	1,200.00	\$	108,000.00	2028	2048	2078	-	-	-	-	-	
							Total Replacement Value: Roof	\$	1,154,747.25							
							Total Expenditure: Roof	\$	-							
								\$	1,226,458.86							

Component	Useful Life	2025		Estimated Remaining		Estimated Unit Cost	Estimated Replacement Cost	Replacement Year								
		Quantity	Units	Life	%			Year	Year	Year	Year	Year				
													Starting Bal.	Quantity	Units	Life
Structure	10	425	SF	0	330.00	\$	140,250.00	2025	2026	2027	2028	2029	2030	2031	2032	
		219	SF	10	330.00	\$	72,600.00	2025	2026	2027	2028	2029	2030	2031	2032	
							Total Replacement Value: Structure	\$	212,850.00							
							Total Expenditure: Structure	\$	140,250.00							

Component	Useful Life	2024		Estimated Remaining		Estimated Unit Cost	Estimated Replacement Cost	Replacement Year							
		Quantity	Units	Life	%			Year	Year	Year	Year	Year			
													Starting Bal.	Quantity	Units
Fire System	20	2	EA	7	4,308.50	\$	6,617.50	2032	2052	2072	-	-	-	-	
		16	EA	25	116.00	\$	1,856.00	2032	2057	2082	-	-	-	-	
		32	EA	20	89.85	\$	2,907.20	2035	2055	2075	-	-	-	-	
		2	EA	5	5,040.00	\$	10,080.00	2030	2050	2070	-	-	-	-	
		45	EA	10	1,784.78	\$	80,814.45	2030	2046	2062	-	-	-	-	
							Total Replacement Value: Fire System	\$	102,815.54						
							Total Expenditure: Fire System	\$	-						
								\$	86,929.34						

Component	Useful Life	2024		Estimated Remaining		Estimated Unit Cost	Estimated Replacement Cost	Replacement Year						
		Quantity	Units	Life	%			Year	Year	Year	Year	Year		
													Starting Bal.	Quantity
Plumbing	15	2	EA	10	\$30,380.00	\$	60,760.00	2035	2065	2095	-	-	-	-
		2	EA	25	8,640.00	\$	17,680.00	2040	2065	2090	-	-	-	-
							Total Replacement Value: Plumbing	\$	78,440.00					
							Total Expenditure: Plumbing	\$	-					

Component	Useful Life	2024		Estimated Remaining		Estimated Unit Cost	Estimated Replacement Cost	Replacement Year					
		Quantity	Units	Life	%			Year	Year	Year	Year	Year	
													Starting Bal.
Electrical Systems	30	1	EA	12	\$7,598.30	\$	57,586.30	2037	2067	2097	-	-	-
		25	EA	8	6,500.00	\$	16,500.00	2033	2058	2083	-	-	-
		2	EA	8	\$	5,000.00	\$	10,000.00	2033	2063	2093	-	-
							Total Replacement Value: Electrical Systems	\$	74,086.30				
							Total Expenditure: Electrical Systems	\$	-				
								\$	87,690.31				
								\$	12,031.10				

Starlight Towers Condominium SIRS (DRAFT)

