

BRICKELL ON THE RIVER NORTH

Brickell on the River North
Condominium Association, Inc.
31 SE 5th Street
Miami, Florida 33131

Structural Integrity Reserve Study



7171 SW 62nd Avenue
Miami, Florida 33143
305.669.2700

December 24th, 2024

Project No: 07-210-C

December 24th, 2024

Brickell on the River North Condominium Association, Inc.
31 SE 5th Street
Miami, Florida 33131

Re: *Brickell on the River North Tower*
31 SE 5th Street
Miami, Florida 33131

This Structural Integrity Reserve Study is prepared for the purpose of complying with the Florida Statutes Section 718.112 (2)(g) requiring the Association, *Brickell on the River North Condominium Association, Inc.*, to prepare at a minimum, a study of the following items as related to the structural integrity and safety of the building:

- a. Roof.
- b. Structure, including load-bearing walls or other primary structural members and primary structural systems as those terms are defined in s. 627.706.
- 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 in subparagraphs 1-5.

The undersigned representatives of Pistorino & Alam Consulting Engineers Inc. (P&A) conducted the inspections of the Brickell on the River North Condominium property at various times between September and October 2023. Visual inspections were performed of the building common areas and grounds in general. The inspections included areas such as the components of the exterior of the building, the roofing system, mechanical and electrical rooms, means of egress, elevator equipment rooms, storage rooms, the service areas, and common area amenities.

The observations reported hereunder are based on visual inspection of the exposed building elements only. The scope of inspections excludes any in-depth engineering analysis of the capacity of the building structure or detailed evaluation of the performance of the mechanical and electrical systems.

The estimates for the useful life of the various components are based on the assumption of reasonable care and promptness in attending to individual deficiencies, as well as the implementation of a program of inspection and maintenance.

Estimates of Replacement Costs for the items listed hereunder are based on industry standard pricing set forth in the current Means Estimating Guide, Marshall & Swift Valuation Guide, local database pricing, and other documents provided by client. All cost estimates are based on the replacement cost as of the date of this study and have not been adjusted for annual inflation rates. P&A recommends that the Association's legal counsel and accountant (CPA) review this study prior to implementation to ensure that it complies with all federal, state, and local regulations and is in conformance with the Association's governing documents.

Table of Contents

PART 1 2

 GENERAL 2

PART 2 3

 A. ROOF 3

 B. STRUCTURE, INCLUDING LOAD-BEARING WALLS AND OTHER
 PRIMARY STRUCTURAL MEMBERS.....3

 C. FIREPROOFING AND FIRE PROTECTION SYSTEMS.....5

 D. PLUMBING 7

 E. ELECTRICAL SYSTEMS 10

 F. WATERPROOFING AND EXTERIOR PAINTING 10

 G. WINDOWS AND EXTERIOR DOORS 12

 H. ANY OTHER ITEMS OVER \$10,000.....12

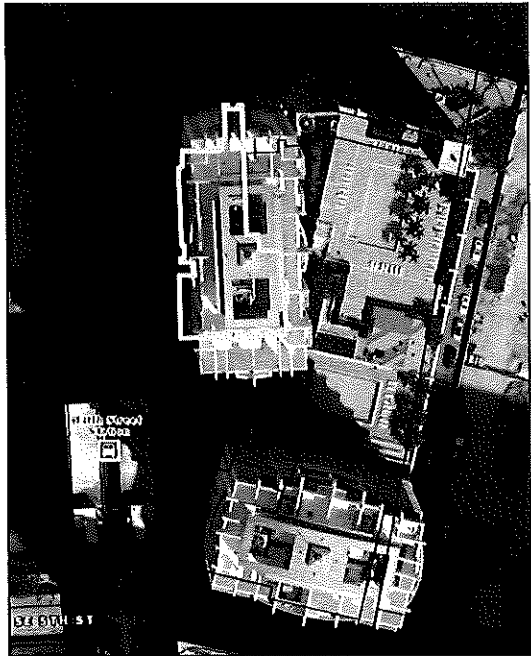
 L. SUFFICIENCY 17

EXHIBIT “A” – 25-Year Projected Cash Flow

PART 1

GENERAL

Brickell on the River North Condominium is a development site located at 31 SE 5th Street, Miami, Florida. The site is bound by the Miami River to the north, the Metromover tracks to the west and adjacent developed land to the east and south. The main pedestrian and vehicular access to the property is via the main driveway coming off SE 5th Street and running parallel to the Metromover tracks.



Building Description

The **Brickell on the River North Condominium** consists of a forty-two (42) story residential tower with 384 residential units and commercial and office space on the ground level. Each structural item as addressed below refers to the structural property of the condominium association. The purpose of this reserve study is to ensure that sufficient reserve funds are available to adequately maintain and preserve the structural components of the building so that they may be safely occupied for the useful life of the building which is projected to be a minimum of seventy-five (75) years. According to the Miami-Dade County Property Appraiser, the property was built in 2006, is currently 18 years old, and therefore has a projected useful life of 57 years.

The specific items have been designated by the Florida Statute to ensure that they may not be creating a condition or function in such a way as to adversely affect the performance and adequacy of the structure.

The following represents a current evaluation of the common elements pursuant to the Florida Statute 718.112 (2)(g).

PART 2

A. Roof

The main roofed areas found at the top roof level above the 42nd level are composed of low-sloped (flat) roofing system consisting of a single-ply membrane roofing over rigid tapered insulation sloped to roof drains with emergency overflow scuppers on a structural concrete deck.

The roofing covering systems protect the structural substrates and prevent water from infiltrating into the interior of the residential units or into the concrete deck and thus attacking and corroding the embedded steel. If the steel is compromised the structural capacity of the roof deck will be adversely affected. Therefore, the roofing must be maintained in a condition so that it will not leak or allow water to get below it. Also ponding water that can accumulate on the roofing surface for more than 24 hours must be eliminated.

Annual observations are required by a licensed roofing contractor. It is also necessary to evaluate the presence of moisture or water below the roofing system. Therefore, a roof moisture survey should be performed every 5 years by a licensed engineering laboratory to determine that the roofing system remains in a dry condition.

1)	Life expectancy of existing low-sloped roofing systems	20 years
2)	Age of existing roofing system:	18 years
3)	Estimated remaining useful life: (Based on current maintenance plan and conditions)	5 years
4)	Estimated replacement cost (combined): \$535,000 + 18% Engineering:	\$631,300.00
5)	Recommended annual reserve amount based on newly installed system starting in 2029: \$631,300/20 years	\$31,565.00

B. Structure, including load bearing walls or other primary structural members and primary structural systems as those terms are defined in s. 627.706.

B.1 Load Bearing Walls or Other Primary Structural Members

The load-bearing walls and other primary structural members consist of reinforced concrete columns, beams, infill reinforced masonry covered with cementitious stucco and paint. In addition, the walls consist of reinforced concrete shear walls that resist lateral wind loads as well as vertical gravity loads. The walls provide for the envelope of the building to be fully enclosed. The exterior walls also provide support for the wall openings consisting of doors and windows. Therefore, the walls

must be protected at all times from deterioration involving water intrusion, cracking from building movement, and corrosion of the embedded steel.

Maintenance of the walls consists of addressing and repairing defects that occur at any time over the life of the building which is estimated to be 75 years. The maintenance will consist of repairs to cracks, stucco bonding, waterproofing in the form of protective painting, and caulking around wall openings.

1)	Life expectancy of Structural System:	75 years
2)	Age of Structural System:	18 years
3)	Expected remaining useful life of Structural System:	57 years
4)	Estimated cost of current repairs based upon recent inspection:	\$967,200.43
5)	Estimated replacement cost of Structural System (current):	\$55,032,341.95
6)	Recommended annual reserve amount that achieves the estimated replacement cost by the end of the remaining useful life:	\$130,700.00 / year

B.2 Floors

The floors consist of post-tension reinforced concrete that are covered with flooring materials above and interior finishes. The embedded reinforcement in the floors is protected with concrete cover except at a few locations. At this time the interior floors are protected from the weather with the exception of floors that make up exterior balconies and which terminate at exterior walls. Periodic inspections of the balconies should be performed every five (5) years by a licensed structural engineer. Any observation of corrosion on the balcony edges should be addressed and repaired in a timely manner. Any condition of failure of the balconies to shed rainwater or damage to the flooring and waterproofing should also be addressed in a timely manner. The flooring and balconies will then last the full life expectancy (75 years) of the building and may be safely occupied.

1)	Life expectancy of Structural System:	75 years
2)	Age of Structural System:	18 years
3)	Expected remaining useful life of Structural System:	57 years
4)	Estimated cost of current repairs based upon recent inspection:	\$123,674.62
5)	Estimated replacement cost of Structural System (current):	\$9,654,796.83

6)	Recommended annual reserve amount that achieves the estimated replacement cost by the end of the remaining useful life:	<i>Estimate for this item is included in Item B.1 above - "Load-bearing walls or other primary structural members"</i>
----	---	--

B.3 Foundation

The foundation system of the main tower consists of isolated piles & pile caps, grade beams system and building frame concrete columns. Therefore, the embedded steel in each component is protected with a concrete cover to protect the steel from being exposed to salt laden water from the garage, groundwater, and storm surge. The foundation did not exhibit any imminent deterioration at the time of inspection and may be relied upon to safely support the building tower and structure. However, the foundation components must be inspected on a regular basis for any indication of corrosion, cracking, or spalling concrete. Also, to ensure that protection from water and moisture is effective, the exposed members should be painted often with a waterproofing coating.

The drainage system must be kept operational, and the ground floor area kept in a dry condition at all times. Mechanical pumps and discharge equipment must be kept operational and maintained.

1)	Life expectancy of Structural System:	75 years
2)	Age of Structural System:	18 years
3)	Expected remaining useful life of Structural System:	57 years
4)	Estimated cost of current repairs based upon recent inspection:	<i>Estimates for sections 4 thru 6 are included in Item B.1 above - "Load-bearing walls or other primary structural members"</i>
5)	Estimated replacement cost of Structural System (current):	
6)	Recommended annual reserve amount that achieves the estimated replacement cost by the end of the remaining useful life.	

C. Fireproofing and fire protection systems

The building is protected throughout with a **Fire Suppression System** which consists of an automatic wet pipe fire sprinkler system combined with a Class I wet automatic standpipe system. A diesel motor-driven fire pump services the fire suppression system. The fire alarm system is also continuously monitoring the operation of the system. The

fire suppression system will contain and protect the concrete structure in the event a fire occurs. Therefore, it is necessary to maintain the sprinkler system at all times. The systems will require weekly, monthly, and annual inspection, testing, and certification along with periodic maintenance and repairs. The piping in these systems is generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis. Equipment in the systems are replaced as the reach or exceed their useful life. An annual maintenance contract should be in place with a licensed fire sprinkler company to properly maintain, test, and certify the fire suppression system in accordance with *NFPA 25: Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems* and equipment manufacturer’s instructions and recommendations.

Fire Suppression System		
1)	Life expectancy of the Fire Suppression System:	40 years
2)	Age of the existing system:	18 years
3)	Remaining useful life of the existing system	22 years
4)	Estimated replacement cost of Fire Suppression System (fire sprinkler piping and standpipes):	\$2,733,420.00 ^{1,3}
5)	Estimated replacement cost of fire Pump equipment (35 years useful life; current age 18 years)	\$180,720.00 ^{2,3}
6)	Recommended annual reserve amount over the first 17 years for deferred maintenance and Fire Pump Replacement (2025 to 2041):	\$63,995.00/year
7)	Recommended annual reserve amount over the following 8 years for deferred maintenance and Fire Pump Replacement (2042 to 2049):	\$53,444.00/year
Notes: 1. The replacement cost of the Fire Suppression System is provided for informational purposes only. The recommended annual reserve amounts in Lines 6 and 7 do not reflect a complete replacement of the system at this time and considers instead an allocated budget amount for deferred maintenance (20% of replacement costs of the system) for repairs/replacement of sections of the system over a 10-year period. 2. Equipment replacement costs for the Fire Pump equipment are included in the recommended annual reserve amounts in Line 6. After the equipment is replaced its useful life will be 35 years and funding for replacement again will not need to begin until the equipment has a 25 year useful life. 3. The estimated replacement costs in Lines 4 and 5 include the following markups: a. 15% for General Contractor general conditions, overhead, and profit. b. 16 – 18% Engineering Fees for Design and Construction Phase Services.		

The building is equipped with a **Fire Alarm System** which provides visible and audible notification and annunciation throughout the building in the event of a fire incident. There is a Main Fire Alarm Control Panel (FACP) located in the Fire Command room located in the lobby at ground level.

Inspections and testing are required by the NFPA at least once each year with the Inspection Labels updated. For system problems that may occur, the service company should be contacted. For 24-hour service, the telephone number of the service company is located on the inspection labels on the front covers of the Fire Alarm Control Panel. The requirements for maintenance are specified in the operations and maintenance manuals of the manufacturers of this equipment, Miami Dade County ordinances and the National Fire Protection Association (NFPA) codes.

Fire Alarm System		
1)	Life expectancy of fire alarm system:	25 years
2)	Approximate Age of fire alarm system (portion upgraded 2023):	18 Years
3)	Expected remaining useful life of fire alarm system:	7 Years
4)	Estimated replacement cost of fire alarm system (current- includes 2023 upgrades):	\$410,000.00
5)	Annual service & Maintenance cost:	\$42,394.00
6)	Recommended annual reserve amount:	\$42,394.00
	• Service Maintenance Costs: \$42,394.00	

D. Plumbing

The building’s Plumbing system consists of a stormwater drainage piping, sanitary drainage piping, and domestic water distribution piping. Each system can affect the structural integrity of the building.

- 1) The Stormwater Drainage System removes rainwater from the roofs, terraces, recreational deck, and the site in general. The existing drainage piping of the system is constructed of cast iron and plastic PVC. This system can affect the structural integrity of the building, especially if rainwater is allowed to accumulate over the flat roof and terrace/deck areas to the extent that the structure may become overloaded. Therefore, it is essential that the stormwater drainage system be operational and maintained when interior roof and deck drains are relied upon. A licensed plumbing contractor must inspect the stormwater drainage utilizing cameras. All overflow drains and scuppers must be clear and kept in serviceable condition. Stormwater drainage stacks should be either water jetted or mechanically cleaned every five to ten years, or sooner depending on camera inspection results, to remove scale and soil build up. The piping in these systems are generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis

Stormwater Drainage System		
A)	Life expectancy of the Stormwater Drainage System:	50 years
B)	Age of the existing system:	18 years
C)	Remaining useful life of the existing system	32 years
D)	Estimated replacement cost of Stormwater Drainage System (drainage stack piping only):	\$1,348,500.00 ^{1,2}
E)	Recommended annual reserve amount over the next 25 years for deferred maintenance (2025 to 2049):	\$26,565.00/year
Notes:		
1. The replacement cost of the Stormwater Drainage System (drainage stack piping only) is provided for informational purposes only. The recommended annual reserve amount in Line E does not reflect a complete replacement of sections of the system at this time and considers instead an allocated budget amount (20% of replacement cost) for repairs/replacement of the system over a 10-year period.		
2. The estimated replacement costs in Line D includes the following markups:		
a. 15% for General Contractor general conditions, overhead, and profit.		
b. 17% Engineering Fees from Design and Construction Phase Services.		

2) The Sanitary Drainage System removes sanitary waste from the building and is connected to the city’s main utility. The existing drainage piping of the system is constructed of cast iron and plastic PVC. Water leakage or spillage from the system, if not addressed in a timely fashion, can penetrate into the building structure, eventually corroding the steel reinforcement and damaging the concrete. Therefore, it is essential that the sanitary drainage system be operational and maintained. A licensed plumbing contractor must inspect the sanitary drainage piping utilizing cameras. Drainage soil waste stacks should be either water jetted or mechanically cleaned every five to ten years, or sooner depending on camera inspection results, to remove scale and soil build up. The piping in these systems are generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis.

Sanitary Drainage System		
A)	Life expectancy of Sanitary Drainage System:	50 years
B)	Age of the existing system:	18 years
C)	Remaining useful life of the existing system	32 years
D)	Estimated replacement cost of sanitary drainage system:	\$6,470,160.00 ^{1,2}
E)	Recommended annual reserve amount over the next 25 years for deferred maintenance (2025 to 2049):	\$126,506.00/year
Notes:		
1. The replacement cost of the Sanitary Drainage System (vertical soil waste stack piping only) is provided for informational purposes only. The recommended annual reserve amount in Line E does not reflect a complete replacement of the system at this time and considers instead an allocated		

- budget amount (20% of replacement cost) for repairs/replacement of sections of the system over a 10-year period.

2. The estimated replacement costs in Line D includes the following markups:

a. 15% for General Contractor general conditions, overhead, and profit.

b. 16% Engineering Fees for Design and Construction Phase Services
- 3) The Domestic Water Distribution system is connected to the city’s water main, through a backflow preventer, and provides the building and all residential units with potable water. The existing system is constructed of copper piping. Water leakage or spillage from the system, if not addressed in a timely fashion, can penetrate into the building structure, eventually corroding the steel reinforcement and damaging the concrete. Furthermore, leaks in the system can cause catastrophic damage to property and other building systems which protect the structure, such as the fire sprinkler and fire alarm systems. It is necessary to inspect the domestic water distribution system and all associated equipment on an annual basis and perform periodic maintenance and repairs as necessary. Therefore, it is essential that the domestic water distribution system be operational and maintained. The piping in these systems are generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis. Equipment in the systems are replaced as the reach or exceed their useful life.

Domestic Water Distribution System		
A)	Life expectancy of the Domestic Water Distribution System:	50 years
B)	Age of the existing system:	18 years
C)	Remaining useful life of the existing system	32 years
D)	Estimated replacement cost of the Domestic Water Distribution piping system (risers piping only):	\$3,791,100.00 ^{1,3}
E)	Estimated replacement cost of booster pumps (25 years useful life; current age 18 years)	\$250,000.00 ^{2,3}
F)	Recommended annual reserve amount over the next 7 years for deferred maintenance and Booster Pump Replacement (2025 to2031):	\$118,102.00/year
G)	Recommended annual reserve amount over the following 13 years for deferred maintenance and Booster Pump Replacement (2032 to2049):	\$86,438.00/year
Notes:		
1. The replacement cost of the Domestic Water Distribution System is provided for informational purposes only. The recommended annual reserve amount in Lines F and G do not reflect a complete replacement of the system at this time and consider instead an allocated budget amount (20% of replacement cost) for repairs/replacement of sections of the system over a 10-year period.		
2. The recommended annual reserve amounts in Lines F and G do account for a complete replacement of the equipment as the remaining useful life of the pump systems is less than or equal to 25 years.		

3. The estimated replacement costs in Lines D and E include the following markups:

a. 15% for General Contractor general conditions, overhead, and profit.

b. 16-18% Engineering Fees from Design and Construction Phase Services.

E. Electrical Systems

The building’s common area electrical power distribution system (electrical system) can affect the structure if conduits penetrate structural components, are not properly maintained (possible fire event) and/or furnishes power to fire pumps that are essential to provide the availability of water in a fire emergency to the fire protection system. Maintenance of the electrical system is therefore essential from a structural consideration. The system includes, but is not limited to switchgear, distribution panels, transformers, emergency generator, wiring equipment, disconnects and other associated electrical equipment. The electrical system should be maintained as per manufacturer’s recommendations, Miami Dade County ordinances and NFPA 70B recommendations. The electrical system should be inspected on a yearly basis utilizing thermography and visual inspections by qualified personnel under the supervision of an electrical engineer.

Electrical System		
1)	Life expectancy of Electrical System:	40 years
2)	Approximate Age of Electrical System:	18 Years
3)	Expected remaining useful life of Electrical System:	22 Years
4)	Estimated cost of current repairs based upon recent inspection:	\$36,500
5)	Estimated replacement cost of Electrical System (current):	\$4,500,000.00
6)	Estimated replacement cost of Lighting System (current):	\$950,000.00
5)	Recommended annual reserve amount: - Estimated Repair Cost - Bidding Services - Electrical Inspections - Generator Maintenance	\$102,273,000

F. Waterproofing and exterior painting

Waterproofing and exterior painting protect the structural elements of the building exposed to the weather.

Waterproofing – All exterior decks, terraces and balconies are waterproofed under the tile/paver finishes. However, these components are maintained by parties other than the

Association and therefore are not included in this study. The waterproofing in the mechanical pump rooms for the condenser water system and at the roof level around the cooling towers and elevators machine room must be maintained. The water in these systems is chemically treated to prevent microbial growth and pipe corrosion. The chemicals used in those treatments are highly corrosive. Failure of the waterproofing in these areas can allow for spillage of the chemically treated water to penetrate the structure, eventually corroding the steel reinforcement and damaging the concrete.

Note – According to most Condominium Documents, the exterior balconies of each condominium unit are maintained by parties other than the Association, namely the individual condominium unit owner, and therefore are not included in this study. Only waterproofing located in common areas will be included.

Exterior Painting – Buildings near or on the ocean (like Brickell on the River North Condominium) and in urban environments may be painted on approximately a ten-year cycle, or as determined by qualified inspection. Periodic pressure washing of exterior surfaces weathered by urban pollution and windborne chlorides should be performed as needed. Except for factory finished components, metals such as exterior doors and frames, piping, and miscellaneous metals exposed to the weather should be painted in three-year cycles or as determined by inspection. Temperature cracking of the stucco should be routinely sealed with paint grade elastomeric sealant to control potential water filtration. Localized stucco delamination, if any were to occur, should be evaluated for probable cause and repaired in accordance with a specification prepared by an engineer.

1)	Estimated useful life of Painting and Waterproofing Systems - Waterproofing (mechanical rooms only): Exterior painting:	10 years 10 years
2)	Age of existing components – Waterproofing (mechanical rooms only): Exterior Painting:	18 years 6 years
3)	Estimated remaining useful life – Waterproofing (mechanical rooms only): Painting:	0 years 4 years
4)	Estimated replacement cost - Waterproofing (mechanical rooms only): \$15,000.00 + 18% Engineering: Exterior painting: \$650,000 + 18% Engineering:	\$17,700.00 \$767,000.00
6)	Recommended annual reserve amount: Waterproofing (mechanical rooms only) based on newly installed system starting in 2025 - \$17,700/10 years: Exterior painting based on newly installed system starting in 2028 - \$767,000/10 years:	\$1,770.00 \$76,700.00

G. Windows and exterior doors

The windows and exterior doors, such as sliding glass doors (SGD), prevent moisture and water from entering the building which can damage the structure. Therefore, the windows and SGDs must be kept caulked around their perimeters and any location where caulking has failed. The windows and SGDs should be inspected every 5 years and repairs made on an as-needed basis. In addition, the windows and doors transmit wind loads to the structure during a hurricane. Since the building has been structurally designed to remain enclosed during such a storm, it is essential that the windows and doors do not fail or allow the interior of the building to receive internal wind pressures. Therefore, the glazing lites and frames of the windows and door must be maintained. At a minimum, washing of the glazing utilizing clear water to remove damaging salts should be performed regularly. The operating mechanism including latches and locks must be maintained. A certified window and door service company should be retained to inspect and repair the wall openings every 5 years.

Note – According to Florida Statute 718.112 (2)(g)(3) – the structural integrity reserve study may recommend that reserves for replacement costs do not need to be maintained for any item with an estimated remaining useful life of greater than 25 years, but the study may recommend a deferred maintenance expense amount for such item. As such, only a maintenance cost is included for this item.

1)	Estimated useful life:	50 years
2)	Age of existing components:	18 years
3)	Estimated remaining useful life:	32 years
4)	Estimated replacement cost (common areas only- 1 st floor): \$200,000 + 18% Engineering: <i>(current pricing for informational purposes only, not included in reserve amounts)</i>	\$236,000.00
5)	Estimated cost for inspections/repairs (32 years useful life) @ \$5,000/5 years, starting in 2025:	\$32,000.00
6)	Recommended annual reserve amount: \$32,000/32 years	\$1,000.00

H. Other items greater than \$10,000

- 1) The **CCTV system** is comprised of video cameras located throughout common areas of the building. The camera videos are displayed on LED monitors located at the front desk. The system is essential within the building especially if an occurrence takes place where occupants must be warned of a structural emergency.

1)	Life expectancy of security system:	15 years
2)	Age of existing security system:	5 years
3)	Expected remaining useful life of existing security system	10 years

4)	Estimated replacement cost of Security System (current):	\$100,000
5)	Recommended annual reserve amount that achieves the estimated replacement cost by the end of the remaining useful life:	\$10,000

2) Building system equipment supports and stands must also be regularly maintained, especially for equipment which is located on the roof or exposed to wind loads. It is essential that these components be maintained to support not only the loading of equipment but also loads imposed by wind. Failure of equipment supports/stands can allow for significantly sized equipment to come loose and damage roofing, waterproofing, painting and ultimately the building structure. Supports/stands should be checked for signs of corrosion, protective coatings maintained, conditions of fasteners or welds, and attachment to the structure were observable, including tie-downs.

Roof Equipment Supports and Stands		
A)	Life expectancy of Roof Equipment Supports and Stands	25 years
B)	Age of existing system:	18 years
C)	Remaining useful life of existing system	7 years
D)	Estimated replacement cost of Roof Equipment Support Stands:	\$10,000.00
E)	Estimated replacement of Cooling Tower supports. (Based on existing conditions of the equipment, the remaining useful life is estimated to 2 years. Scheduled for replacement 2025 and 2026 along with Cooling Towers)	\$25,000.00
F)	Recommended annual reserve amount over the next 2 years for Roof Equipment Support Stands and Cooling Tower Supports Replacement (2025 to 2026):	\$13,929.00/year
G)	Recommended annual reserve amount over the following 5 years for Roof Equipment Support Stands and Cooling Tower Supports Replacement (2027 to 2031):	\$2,429.00/year
H)	Recommended annual reserve amount over the following 18 years for Roof Equipment Support Stands and Cooling Tower Supports Replacement (2032 to 2049):	\$1,400.00/year
Notes:		
1. The replacement costs for the Roof Equipment Supports and Cooling Tower Supports are included in the recommended annual reserve amounts in Lines F through H. The new supports will have a useful life of 25 years and will need to begin reserving for future replacement.		
2. The estimated replacement costs in Lines D and E include the following markups:		
a. 15% for General Contractor general conditions, overhead, and profit.		

b. 18% Engineering Fees from Design and Construction Phase Services.

3) The building is provided with a double-loop (open/closed circuits) **Condenser Water System** which delivers condenser water to the water-source, air conditioning heat pump equipment in the residential/hotel units and the common areas. The system consists of a cooling tower, circulating condenser water pumps, heat exchangers and distribution piping of black steel. These systems are provided with chemically treated water to prevent microbial growth and pipe scaling. The chemicals used in these systems can be highly corrosive. Water leakage or spillage from the system, if not addressed in a timely fashion, can damage surrounding waterproofing and penetrate into the building structure, eventually corroding the steel reinforcement and damaging the concrete. Furthermore, leaks in the system can cause catastrophic damage to property and other building systems which protect the structure, such as the fire sprinkler and fire alarm systems. It is necessary to inspect the condenser water system and all associated equipment on an annual basis and perform periodic maintenance and repairs as necessary. An annual maintenance contract should be in place with a licensed mechanical company to properly inspect, maintain, and service the equipment and piping of the condenser water system. The piping in these systems are generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis. Equipment in the systems are replaced as the reach or exceed their useful life.

Condenser Water System		
A)	Life expectancy of the Condenser Water System:	45 years
B)	Age of the existing system:	18 years
C)	Remaining useful life of the existing system:	27 years
D)	Estimated replacement cost of the Condenser Water System (riser piping only):	\$5,990,000.00 ^{1,3}
E)	Estimated replacement cost of Cooling Tower equipment (25-year useful life; current age 18 years. Based on existing conditions of the equipment, the remaining useful life is estimated to 2 years. Scheduled for replacement 2025 and 2026)	\$1,202,250.00 ^{2,3}
F)	Estimated replacement cost of Condenser Water and Cooling Tower Pump equipment (25-year useful life; current age 18 years. Based on existing conditions of the equipment, the remaining useful life is estimated to 5 years.)	\$105,000.00 ^{2,3}
G)	Estimated replacement cost of the Heat Exchanger equipment (25-year useful life; current age 18 years [installed in 2006] and 10 years [installed in 2013].)	\$656,250.00 ^{2,3}
H)	Recommended annual reserve amount over the next 2 years for deferred maintenance and Cooling Tower Replacement, Circulating Pump Replacement and Heat Exchanger Replacement (2025 to 2026):	\$789,714.00/year

I)	Recommended annual reserve amount over the following 3 years for deferred maintenance and Cooling Tower Replacement, Circulating Pump Replacement and Heat Exchanger Replacement (2027 to 2029):	\$236,679.00/year
J)	Recommended annual reserve amount over the following 2 years for deferred maintenance and Cooling Tower Replacement, Circulating Pump Replacement and Heat Exchanger Replacement (2030 to 2031):	\$219,879.00/year
K)	Recommended annual reserve amount over the following 8 years for deferred maintenance and Cooling Tower Replacement, Circulating Pump Replacement and Heat Exchanger Replacement (2032 to 2039):	\$171,279.00/year
L)	Recommended annual reserve amount over the following 10 years for deferred maintenance and Cooling Tower Replacement, Circulating Pump Replacement and Heat Exchanger Replacement (2040 to 2049):	\$166,379.00/year
Notes: 1. The replacement cost of the Condenser Water and Chilled Water Systems (riser piping only) is provided for informational purposes only. The recommended annual reserve amounts in Lines H through L do not reflect a complete replacement of the system at this time and considers instead an allocated budget amount (15% of replacement cost) for repairs/replacement of sections of the system over a 10-year period. 2. Equipment replacement costs for the Cooling Towers, Chillers, Condenser Water and Chilled Water Pumps, and Heat Exchanger equipment are included in the recommended annual reserve amounts in Lines H through L. The new equipment will have a useful life of 25 years and will need to begin reserving for future replacement. 3. The estimated replacement costs in Lines D through G include the following markups: a. 15% for General Contractor general conditions, overhead, and profit b. 16% - 18% Engineering Fees from Design and Construction Phase Services.		

- 4) The building is provided with a Natural Gas system which services the hot water heaters, heating hot water boilers, and pool heaters. The gas distribution piping is constructed of steel and is connected to the main utility through a meter/regulator. This system contains a combustible fuel source. In the event of a gas leak or equipment failure, natural gas can accumulate and when ignited can cause an explosion. This can cause catastrophic damage to the building structure. Therefore, it is necessary to always maintain the natural gas system. The system will require annual inspection, testing, and certification along with periodic maintenance and

repairs. The system should be inspected and tested following the requirements of NFPA 54 – National Fuel Gas Code and the Florida Building Code, Fuel Gas. The piping in these systems are generally not replaced in their entirety at one time and instead are repaired/replaced in sections on an as needed basis. Boiler and water heater equipment are replaced at the end of their useful life.

Natural Gas System		
A)	Life expectancy of the Natural Gas System:	35 years
B)	Age of the existing system:	18 years
C)	Remaining useful life of the existing system	17 years
D)	Estimated replacement cost of the Natural Gas System (piping only):	\$110,403.00 ^{1,3}
E)	Estimate replacement cost of Gas-Fired Heating Water Boiler equipment (20-year useful life; current age 18 years. Based on existing conditions of the equipment, the remaining useful life is estimated to 5 years.)	\$121,194.00 ^{2,3}
F)	Recommended annual reserve amount over the next 5 years for Natural Gas Piping Replacement and Heating Water Boiler Replacement (2025 to 2029):	\$30,733.00/year
G)	Recommended annual reserve amount over the following 12 years for Natural Gas Piping Replacement and Heating Water Boiler Replacement (2030 to 2041):	\$12,554.00/year
H)	Recommended annual reserve amount over the following 8 years for Natural Gas Piping Replacement and Heating Water Boiler Replacement (2042 to 2049):	\$6,060.00/year
Notes: 3. The replacement cost of the Natural Gas System (piping only) is included in the recommended annual reserve amounts in Line F through H. After the system is replaced its useful life will be 35 years and funding for replacement again will not need to begin until the system has a remaining 25 year useful life. 4. Equipment replacement costs for the water heaters and boiler equipment are included in the recommended annual reserve amounts in Lines F through H. The new equipment will have a useful life of 25 years and will need to begin reserving for future replacement. 5. The estimated replacement costs in Lines D and E include the following markups: c. 15% for General Contractor general conditions, overhead, and profit. d. 18% Engineering Fees from Design and Construction Phase Services.		

5) Florida statutes require the preparation of Structural Integrity Reserve Study Report every ten years and Milestone Inspection Reports as the building reaches twenty-five years old then each ten years thereafter.

Statute Required Reports

a)	Age of existing building:	18 years
b)	Remaining time until building reaches 25 years	7 years
c)	Estimated cost for preparation of Milestone Inspection Report by 2031 (\$1,430/year over the next 7 years):	\$10,000.00
d)	Estimated cost for preparation of SIRS Report in 2034 (\$3,000/year over the next 10 years):	\$30,000.00
h)	Recommended annual reserve amount that achieves the estimated cost for preparation of required reports by the prescribed time.	\$4,430.00

I. SUFFICIENCY

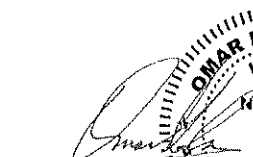
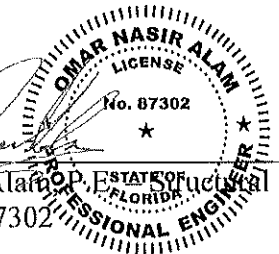
As a routine matter, in order to avoid any possible misunderstanding, nothing in this report should be considered directly or indirectly as a guarantee for any portion of the structures. The estimated useful life remaining of all items in this report is based upon anticipated proper maintenance.

In accordance with Florida Statutes 718.112 (2)(g), this report was prepared by architects and engineers authorized to practice in the State of Florida on the date of this report, based on inspections undertaken at various times between September and October 2023.

Submitted by,
Pistorino & Alam Consulting Engineers, Inc.

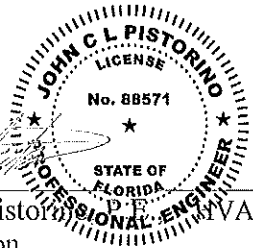

Henry O. Castro, R.A., NCARB
FL Reg. AR 93412

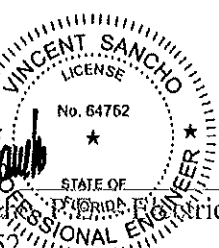
Prepared by:
Pistorino & Alam Consulting Engineers, Inc.



Omar N. Alam, P.E., Structural
FL Reg. 87302



Henry O. Castro, R.A., Architecture
FL Reg. AR 93412


John C.L. Pistorino
Fire Protection
FL. Reg. 88571


Vincent Sancho
Electrical
FL. Reg. 64752

Pistorino & Alam Consulting Engineers, Inc.

EXHIBIT “A”

Brickell on the River North Condominium Association - 25-Year Projected Cash Flow

25 YEAR PROJECTED CASH FLOW

Brickell on the River North
Miami, Florida

Reserve Analysis - Structural Integrity Reserve Study Elements

Item Description	Current Cost (2024)	Useful Life	Age	Remaining Life	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	Subtotal
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A. Roof																														
Roof Replacement (Based on current Maintenance plan, existing roof has 5 years of remaining life)	631,300	20	18	5	-	-	-	-	631,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	631,300	
A.Roof Total					0	0	0	0	631,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	631,300	1,262,600
B.1 Load Bearing Walls or Other Primary Structural Members B.2 Floors B.3 Foundation																														
Annual Reserve Structural System	1,307,000	10	0	10	-	-	-	-	-	-	-	-	-	1,307,000	-	-	-	-	-	-	-	-	-	1,307,000	-	-	-	-	-	
B.Structural System Total	1,307,000				0	0	0	0	0	0	0	0	0	1,307,000	0	0	0	0	0	0	0	0	0	1,307,000	0	0	0	0	0	2,614,000
C. Fire Proofing and Fire Protection																														
Fire Suppression System (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	2,672,217	40	18	22	-	-	-	-	267,222	-	-	-	-	267,222	-	-	-	-	267,222	-	-	-	-	267,222	-	-	-	-	267,222	
Fire Pump Replacement	179,364	35	18	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179,364	-	-	-	-	-	-	-	-	
Fire Alarm System (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	410,000	25	18	7	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	42,394	
C. Fire Proofing/Protection Total	3,261,580				42,394	42,394	42,394	42,394	309,616	42,394	42,394	42,394	42,394	309,616	42,394	42,394	42,394	42,394	309,616	42,394	281,769	42,394	42,394	309,616	42,394	42,394	42,394	42,394	309,616	2,978,331
D. Plumbing																														
Stormwater Drainage (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	1,328,236	50	18	32	-	-	-	-	132,824	-	-	-	-	132,824	-	-	-	-	132,824	-	-	-	-	132,824	-	-	-	-	132,824	
Sanitary Drainage System (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	6,325,301	50	18	32	-	-	-	-	474,309	-	-	-	-	474,309	-	-	-	-	474,309	-	-	-	-	474,309	-	-	-	-	474,309	
Water Distribution System Risers (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	3,706,230	50	18	32	-	-	-	-	277,957	-	-	-	-	277,957	-	-	-	-	277,957	-	-	-	-	277,957	-	-	-	-	277,957	
Estimated Cost for replacement of boiler pumps (25 years useful life)	307,838	25	18	7	-	-	-	-	-	-	307,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
D. Plumbing	11,687,605				0	0	0	0	885,189	0	307,838	0	0	885,189	0	0	0	0	885,189	0	0	0	0	885,189	0	0	0	0	885,189	4,739,780
E. Electrical System																														
Electrical System (includes \$330,750 for Emergency Generator. Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	4,500,000	40	18	22	-	-	-	-	511,364	-	-	-	-	511,364	-	-	-	-	511,364	-	-	-	-	511,364	-	-	-	-	511,364	
Lighting Replacement (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	950,000	40	18	22	-	-	-	-	107,995	-	-	-	-	107,995	-	-	-	-	107,995	-	-	-	-	107,995	-	-	-	-	107,995	
E.Electrical System Total	5,450,000				0	0	0	0	619,319	0	0	0	0	619,319	0	0	0	0	619,319	0	0	0	0	619,319	0	0	0	0	619,319	3,298,591
F. Waterproofing and Exterior Painting																														
Waterproofing Replacement	17,700	10	0	10	17,700	-	-	-	-	-	-	-	-	-	17,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Exterior Painting	767,000	10	5	4	-	-	-	767,000	-	-	-	-	-	-	-	-	-	767,000	-	-	-	-	-	-	-	-	-	-	767,000	-
F. Waterproofing/Painting Total	784,700				17,700	0	0	767,000	0	0	0	0	0	17,700	0	0	0	767,000	0	0	0	0	0	0	17,700	0	0	767,000	0	2,354,100
G. Windows (and Exterior Doors)																														
Windows and Exterior Doors Replacement (Useful Life is beyond 25 years so deferred maintenance is included every 5 years)	238,000	50	18	32	-	-	-	-	5,000	-	-	-	-	5,000	-	-	-	-	5,000	-	-	-	-	5,000	-	-	-	-	5,000	

Brickell on the River North
Miami, Florida

25 YEAR PROJECTED CASH FLOW

Reserve Analysis - Structural Integrity Reserve Study Elements

Item Description	Current Cost (2024)	Useful Life	Age	Remaining Life	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	Subtotal	
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
G. Windows Total	216,600				0	0	0	0	5,000	0	0	0	0	5,000	0	0	0	0	5,000	0	0	0	0	5,000	0	0	0	0	5,000	25,000	
H. Other																															
Security System Replacement	100,000	15	5	10	-	-	-	-	-	-	-	-	-	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100,000	
Estimated replacement cost of Roof Equipment Support Stands	10,000	25	18	7	-	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Estimated replacement cost of Cooling Tower supports	25,000	25	18	2	12,500	12,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Condenser Water System - Riser Piping Only (Total Replacement cost shown for informational purposes. Deferred Maintenance cost is considered for the reserve amount)	5,855,908	45	18	27	-	-	-	-	439,193	-	-	-	-	439,193	-	-	-	-	439,193	-	-	-	-	439,193	-	-	-	-	-	439,193	
Estimated Cost for Cooling Tower Replacement (Scheduled for replacement between 2025 and 2026. Estimated remaining useful life is 2 years based on existing conditions)	1,202,250	25	18	2	601,125	601,125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Estimated Cost for Condenser Water Circulating Pump Replacement (Remaining useful life estimated 5 Years based on existing condition)	105,000	25	18	5	-	-	-	-	105,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Estimated Cost for Heat Exchanger Replacement (installed 2006)	472,500	25	18	7	-	-	-	-	-	-	472,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Estimated Cost for Heat Exchanger Replacement (installed 2013)	183,750	25	10	15	-	-	-	-	-	-	-	-	-	-	-	-	-	183,750	-	-	-	-	-	-	-	-	-	-	-	-	
Natural Gas System Replacement (piping only)	110,400	35	18	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110,400	-	-	-	-	-	-	-	-	-	-	
Estimated Cost for Gas-Fired Heating Boiler Replacement (Remaining useful life estimated 5 Years based on existing conditions and maintenance)	121,194	20	18	5	-	-	-	-	121,194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121,194	
SIRS & Milestone Reports	40,000	10	0	10	-	-	-	-	-	-	10,000	-	-	30,000	-	-	-	-	-	-	10,000	-	-	30,000	-	-	-	-	-	-	
H. Other Total	8,226,005				613,625	613,625	0	0	655,387	0	492,950	0	0	868,193	0	0	0	0	622,943	0	120,400	0	0	459,193	0	0	0	0	660,387	4,827,250	
Total Projected Annual Cash Outflow					613,719	656,819	42,394	809,394	3,115,809	42,394	842,733	42,394	42,394	3,695,316	60,604	42,394	42,394	809,394	2,442,065	42,394	342,161	42,394	42,394	3,695,316	60,604	42,394	42,394	809,394	3,110,809		
Beginning Cash Balance					1,663,514	1,838,184	2,030,575	2,836,561	2,875,566	608,177	1,414,183	1,419,650	2,225,856	3,031,861	184,846	973,251	1,779,257	2,585,263	2,624,266	1,030,603	1,836,608	2,342,647	3,143,652	3,954,658	1,207,842	1,966,248	2,802,254	3,608,259	3,647,265		
Average Monthly Unit Contribution					175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	
Annual Reserves Requirement - 404 Units					848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	848,400	
Ending Cash Balance					1,838,184	2,030,575	2,836,561	2,875,566	608,177	1,414,183	1,419,650	2,225,856	3,031,861	184,846	973,251	1,779,257	2,585,263	2,624,266	1,030,603	1,836,608	2,342,647	3,143,652	3,954,658	1,207,842	1,966,248	2,802,254	3,608,259	3,647,265	1,334,850		