CAPITAL RESERVE ANALYSIS

FOR

CITY HEIGHTS

ATLANTA, GEORGIA

PREPARED FOR:

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C/O
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TABLE OF CONTENTS

I. CAPITAL RESERVE DETERMINATION 1
- A. Methodology and Assumptions 1
- B. Summary of Replacement Reserve Needs 3
  - 1. Technical Definitions 3
- C. Executive Summary 5
- D. Replacement Reserve Requirements 7
- E. Notes 8

II. RESERVE CASH FLOW ANALYSIS 24
- A. Introduction 24
  - 1. Formulas 25
  - 2. Definitions 25
- B. Projected Cash Flow Graph and Chart 25
- C. Recommendations and Conclusions 26

III. RECOMMENDED MAINTENANCE SCHEDULE 29
- A. Asphalt Pavement 29
- B. Concrete Pavement 30
- C. Sidewalks 30
- D. Storm Drainage Systems 31
  - 1. Catch Basins 31
  - 2. Drainage Swales 31
- E. Landscaping 31
- F. Lawn Sprinkler System 32
- G. Roofs • Flat 32
- H. Roof Drains and Scuppers 33
- I. Roof Parapet Walls 33
- J. Gutters and Downspouts 33
- K. Steel Stairs, Railings, and Posts 34
- L. Balconies/Wood Decks 35
- M. Wood Siding 35
- N. Synthetic Stucco Veneer 35
- O. Brick Veneer 36
- P. Mechanical 36
  - 1. Furnaces 36
  - 2. Water Heaters 37

DISCLOSURES 39

BIOGRAPHY 40

LIMITATION OF RESPONSIBILITY 41

GLOSSARY OF TERMS 43

BIBLIOGRAPHY 44

PHOTOGRAPHS 45

I. CAPITAL RESERVE DETERMINATION

A. METHODOLOGY AND ASSUMPTIONS

A Capital Reserve Analysis is a report giving an estimate of the amount of money which must be put aside to replace or restore the common elements and building components that will require replacement before the community's use expires. Typically, the items included are limited to those with a useful life of 30 years or less.

The commonly accepted guidelines as established by governing statutes, the Community Associations Institute, and our engineering judgment and experience have been used as a basis for the reserve schedule in this report. The schedule, when implemented in conjunction with a well-planned preventive maintenance program, will provide adequate funds for the replacement of the community's common elements as they reach the end of their useful lives. In order to assure that this schedule remains current, a reassessment of the existing condition and replacement costs for each item is necessary at a regular interval as recommended within the report. Updating of the schedule, reduction of the useful lives, and inflation of the replacement costs may be executed with the benefit of re-inspection. The schedule must also be adjusted as common elements are added or modified.

It is important to note that a reserve item is a common element component which will require replacement on a recurring basis using a similar cost item. If an upgrade is necessitated due to a cost change or other extraordinary reason, the cost over and above the replacement cost is considered to be a capital improvement rather than a capital replacement. Capital improvements should not be funded from the reserves. After it has been upgraded, the item will then become part of the reserve schedule.

Method of Accounting

The Method used in the Capital Reserve Analysis is the "Cash Flow" Method and the funding plan utilized is the Baseline Funding. The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance does not drop below zero during the projected period.

Level of Service

This reserve analysis was completed utilizing a Level I, Full-Service Study as defined under the National Reserve Standards that have been adopted by the Community Association Institute. The common component inventory was established based on information provided by the association's representative, field measurements and/or drawing take-offs. The Full-Service Study includes a review of the common property components and preparation of this report.

B. SUMMARY OF REPLACEMENT RESERVE NEEDS

1. TECHNICAL DEFINITIONS

This page is a summary of each of the different categories within the detailed schedule. It shows the total dollar amounts for each category and is based on the full funding of each item.

Following are descriptions of the different variables, which are shown on the reserve schedule in the order in which they appear.

Description

This column on the schedule lists all of the components for which we recommend that reserves be accumulated. The basis for the selection of these items includes:

- Review of the governing documents regarding the common and limited common elements.
- Review of all available maintenance contracts.
- The type of component and its anticipated full useful life and condition.
- A review of applicable statutes dealing with reserve requirements.

Quantity

The quantities which are used as a basis for this report are calculated from field measurements and drawings which have been supplied to Ray Engineering, Inc. Ray Engineering, Inc. has not made extensive as-built measurements, and the quantities used are based primarily on the reference materials provided.

Unit Cost

The construction and replacement costs used in this report are based primarily on the various publications written by the R.S. Means Company and construction related experience of Ray Engineering. The publications are listed in the Bibliography.

Reserve Requirements Present Dollars

This is calculated by multiplying the "quantity" by the "unit costs."

Existing Reserve Fund

This is an allocation of the total existing reserve funds to the individual line items using a weighing factor which is based on the total "reserve requirement present dollars," the "estimated remaining life," and other factors. An existing balance was submitted to Ray Engineering, Inc. This balance was used in developing our Reserve Analysis.

Estimated Useful Life

The useful life values that are part of this report come from a variety of sources, some of which are listed in the Bibliography. In order to ensure that all items attain their anticipated useful lives, it is imperative that a well-planned maintenance schedule be adhered to. If an existing item is replaced with an upgraded product, the estimated remaining life has been listed for the new product.

Estimated Remaining Life

The estimated remaining life is based on both the age of the component and the results of the field inspections conducted in March and June 2022.

Annual Reserve Funding

The reserve requirement present value was converted to the future value for the time in which each replacement will occur. A 3% compounded inflation rate has been assumed. The future value was then converted to an annual reserve fund value. The arithmetic calculations and formulas are indicated later in this report.

C. EXECUTIVE SUMMARY

City Heights Condominium is a residential community containing two separate building styles. On one side of the property are townhomes referred to as the Arbors and the townhomes are installed over a concrete parking deck. At the other side of the property is an 18-story high rise with individual condominium units. There are a total of 257 Units at the property. It is our understanding that the community is approximately 42 years old. The community is located off Ralph McGill Boulevard in Atlanta, Georgia. The property consists of the townhome buildings, the condominium high-rise, a parking garage, an asphalt parking lot, an entrance sign, landscaped common areas, entry gates, concrete sidewalks, perimeter fencing, a pool house and a swimming pool. The common elements of the buildings consist of the roofs, gutters/downspouts, building exterior finishes, front porches, balconies, interior corridors, the lobby, offices, elevators, common electrical and common plumbing items.

The townhomes (The Arbors) at City Heights Condominium are a series of three-story buildings with pitched composition asphalt roofs and exterior walls, completely faced with brick. The buildings are constructed over crawl spaces with foundations consisting of concrete masonry unit (CMU) foundation walls bearing on the concrete slab parking garage. The structure of the crawl space consists of 2″x10″ floor joists and plywood subfloor. There are also raised landscaped areas supported by the reinforced concrete parking garage structure. There are wood-framed walkways and stairs with metal railing that provide access to the individual units. Each unit has a wood-framed elevated balcony. It is our understanding that the buildings were constructed more than 40 years ago. When originally constructed, the buildings were owned by the Atlanta Housing Authority and were known as Bedford Place. Sometime later, the name of the complex was changed to Plaza West, and when the complex was converted to condominiums, the name was changed to City Heights.

The high-rise building is constructed on reinforced concrete footings and foundation walls. The elevated floor slabs appear to consist of pre-manufactured floor trusses. The roof consists of a low-sloped TPO roof and a moderately steep-sloped roof with metal seam roofs at the building extensions on the roof. The roof drainage is controlled by aluminum gutters and scuppers with downspouts. The exterior finishes consist of a combination of brick veneer and an exterior insulated EIFS. Interior finishes generally consist of carpet, painted gypsum board walls and ceiling. There are entry corridors providing access to each

of the units and the access to the individual floors are provided by an elevator. At the terrace level of the building is a lobby area with a concierge desk and at the second floor is the management office spaces. At the exterior of each of the units are reinforced concrete balconies with concrete parapet walls for the railing.

Ray Engineering, Inc., has performed several inspections over the years at the arbors which consisted of evaluations at the parking garage, the exterior surfaces and roofs, the crawl spaces and the entry stairs and balconies. Over the years the Association has implemented restoration scopes for the removal of some of the weight on top of the parking garage and the improvement of the drainage at the top of the parking garage. It is our understanding that the Association is currently implementing large remediation plans over the next couple of years. The Association has acquired a loan in 2022 to pay for all the remediation plans. As such, the beginning budget for 2022 is significantly larger to represent the amount of the loan. Every year, thereafter, will represent what the annual contribution and budget will need to be for the HOA.

This reserve analysis was completed utilizing the "full" level of service, which included the property review and preparation of this report. This Reserve Analysis is prepared for the fiscal year starting January 1, 2023. It is our understanding that the reserve account for the community has a balance of approximately $342,130 with an annual contribution of $950,000 for 2022. Following the completion of the major remediation work being completed in 2022 and 2023, we recommend that the annual contribution be $450,000 in 2023 and then increased by $50,000 in six years. For a review of the funding requirements for the next 20 years, please refer to the "Cost and Funding Recap" included as a part of this report.

D. Replacement Reserve Requirements

Replacement Reserve Schedule

Cost and Funding Recap

Itemized Project Costs by Year

CITY HEIGHTS
REPLACEMENT RESERVE SCHEDULE

COMPONENT DESCRIPTION	UNIT	UNIT QUANTITY	UNIT COST	TOTAL COST	ESTIMATED USEFUL LIFE	ESTIMATED REMAINING LIFE	NOTES	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
SITEWORK ITEMS (MASTER)																												
VISITOR ASPHALT PARKING LOT - REPAIR/SEALCOAT	S.Y.	1200	$3.00	$3,600	6	10	2											$4,838						$5,777				**$10,615**
VISITOR ASPHALT PARKING LOT - MILL/OVERLAY	S.Y.	1200	$28.00	$33,600	20	4	2					$37,817																**$37,817**
SIDEWALKS - REPAIR/REPLACE CRACKED, SETTLED SECTIONS	ALLOW	1	$10,000.00	$10,000	6	3	3				$10,927						$13,048						$15,580					**$39,555**
ENTRY MONUMENTS AND SIGNAGE - REPAIR/PAINT/TUCK POINT	ALLOW	1	$3,500.00	$3,500	8	5	4						$4,057								$5,140							**$9,197**
COMMON AREA FENCING - REPAIR/PARTIAL REPLACE	ALLOW	1	$8,000.00	$8,000	7	5	4						$9,274							$11,406							$14,028	**$34,708**
DRAINAGE/SLOPE EROSION/STORM SYSTEM - REPAIR/MAINTAIN	ALLOW	1	$9,000.00	$9,000	7	3	5				$9,835							$12,095						$14,876				**$36,805**
LANDSCAPING - UPGRADE/REMOVE TREES, SHRUBS/TRIM	ALLOW	1	$20,000.00	$20,000	10	7	6								$24,597									$33,057				**$57,654**
SWIMMING POOL SURFACE - RESURFACE/REPLACE TILES	L.S.	1	$30,000.00	$30,000	10	2	7			$31,827										$42,773								**$74,600**
SWIMMING POOL DECK - REPAIR/SEAL CRACKS	ALLOW	1	$3,000.00	$3,000	6	0	7	$3,000						$3,582						$4,277						$5,107		**$15,967**
SWIMMING POOL DECK - PARTIAL REPLACE DAMAGED SECTIONS	ALLOW	1	$10,000.00	$10,000	20	10	7											$13,439										**$13,439**
SWIMMING POOL FURNITURE/EQUIPMENT - PARTIAL REPLACE	ALLOW	1	$10,000.00	$10,000	5	3	7				$10,927					$12,668					$14,685						$17,024		**$55,305**
SWIMMING POOL FENCE/GATE - REPAIR/PAINT	ALLOW	1	$2,000.00	$2,000	8	1	7		$2,060								$2,610								$3,306			**$7,975**
SWIMMING POOL DECK ARBOR - REPAIR/PAINT	ALLOW	1	$1,750.00	$1,750	8	6	7							$2,090								$2,647						**$4,737**
SWIMMING POOL COVER - REPLACE	ALLOW	1	$5,000.00	$5,000	10	8	7									$6,334										$8,512		**$14,846**
POOL HOUSE ROOF - REPAIR/SEAL/PAINT	SQFT	1600	$7.00	$11,200	15	5	8						$12,984															**$12,984**
POOL HOUSE GUTTERS & DOWNSPOUTS - REPLACE	ALLOW	1	$1,500.00	$1,500	25	5	8						$1,739															**$1,739**
POOL HOUSE EXTERIOR FINISHES - REPAIR/PAINT/SEAL	ALLOW	1	$2,500.00	$2,500	10	6	8							$2,985										$4,012				**$6,997**
POOL HOUSE BRICK VENEER - REPAIR/TUCK POINT	ALLOW	1	$5,000.00	$5,000	12	6	8							$5,970												$8,512		**$14,482**
POOL HOUSE BATHROOMS - REPAIR/PAINT	EA.	2	$1,000.00	$2,000	12	7	8								$2,460												$3,507	**$5,967**
POOL HOUSE BATHROOMS - UPGRADE	EA.	2	$8,000.00	$16,000	20	12	8													$22,812								**$22,812**
PARKING DECK (PLAZA) - SEAL CRACKS	ALLOW	1	$3,000.00	$3,000	3	0	9	$3,000			$3,278			$3,582			$3,914			$4,277			$4,674		$5,107			**$27,833**
PARKING DECK (PLAZA) - RE-COAT	SQFT	5500	$40.00	$220,000	5	1	9		$226,600					$262,692					$304,531					$353,035				**$1,146,858**
PARKING DECK - GENERAL REPAIRS	ALLOW	1	$10,000.00	$10,000	5	2	9			$10,609					$12,299					$14,258					$16,528			**$53,694**
PARKING LOT (PARKING DECK) - RESURFACE/PAINT LINES/PRESSURE WASH	ALLOW	1	$27,500.00	$27,500	7	0	9	$27,500							$33,822							$41,596						**$102,918**
TOTAL SITEWORK (MASTER) COMPONENTS								**$33,500**	**$228,660**	**$42,436**	**$34,967**	**$37,817**	**$28,054**	**$280,901**	**$73,177**	**$19,002**	**$19,572**	**$30,373**	**$304,531**	**$99,803**	**$19,825**	**$44,243**	**$20,254**	**$362,824**	**$67,767**	**$44,263**	**$17,535**	**$1,809,505**
MECHANICAL/ELECTRICAL/PLUMBING COMPONENTS (MASTER)																												
SWIMMING POOL EQUIPMENT - REPLACE PUMPS/MOTORS	ALLOW	1	$5,000.00	$5,000.00	8	5	7						$5,796								$7,343							**$13,139**
SWIMMING POOL FILTRATION SYSTEM - REPLACE FILTERS	ALLOW	1	$3,000.00	$3,000.00	8	5	7						$3,478								$4,406							**$7,883**
POOL HOUSE ELECTRICAL FIXTURES - PARTIAL REPLACE	ALLOW	1	$2,250.00	$2,250.00	10	6	8							$2,687										$3,611				**$6,297**
POOL HOUSE PLUMBING & FIXTURES - PARTIAL REPLACE	ALLOW	1	$2,250.00	$2,250.00	10	6	8							$2,687										$3,611				**$6,297**
SECURITY GATE - REPLACE MOTORS AND CONTROLLERS	ALLOW	1	$17,500.00	$17,500.00	12	7	10								$21,523												$30,686	**$52,209**
SECURITY GATE - UPGRADE ACCESS CONTROLS	ALLOW	1	$15,000.00	$15,000.00	15	9	10										$19,572											**$19,572**
TOTAL MECHANICAL/ELECTRICAL/PLUMBING COMPONENTS (MASTER)								**$0**	**$0**	**$0**	**$0**	**$0**	**$9,274**	**$5,373**	**$21,523**	**$0**	**$19,572**	**$0**	**$0**	**$0**	**$11,748**	**$0**	**$0**	**$7,221**	**$0**	**$0**	**$30,686**	**$105,398**
EXTERIOR/INTERIOR BUILDING MAINTENANCE ITEMS (ARBORS)																												
TOWNHOME ROOFS - REPLACE SHINGLES - 8 BUILDINGS	SQ.	530	$475.00	$251,750.00	25	2	11			$267,082																		**$267,082**
METAL ROOFS - REPAIR/SEAL/PAINT	EA.	60	$750.00	$45,000.00	15	4	11					$50,648															$78,908	**$129,556**
TOWNHOME GUTTERS & DOWNSPOUTS - REPLACE	ALLOW	1	$55,000.00	$55,000.00	25	1	11		$56,650																			**$56,650**
BUILDING EXTERIOR FINISHES - REPAIR/PAINT/SEAL	ALLOW	1	$30,000.00	$30,000.00	10	1	11		$30,900										$41,527									**$72,427**
BRICK VENEER @ BUILDINGS/WALKWAYS - FULL REMEDIATION	ALLOW	1	$150,000.00	$150,000.00	30	1	11		$154,500																			**$154,500**
BRICK VENEER @ BUILDINGS/WALKWAYS - REPAIR/TUCK POINT	ALLOW	1	$50,000.00	$50,000.00	12	12	11													$71,288								**$71,288**
PLANTERS - RE-INSTALL PLANTER WALL/SOILS/TIE IN DOWNSPOUTS	ALLOW	1	$265,200.00	$265,200.00	30	0	11	$265,200																				**$265,200**
PLANTERS - REPAIR/MAINTAIN/TUCK POINT	ALLOW	1	$10,000.00	$10,000.00	12	12	11													$14,258								**$14,258**
ELEVATED WALKWAY/PATIOS/BALCONIES - IMMEDIATE REPAIRS	ALLOW	1	$120,000.00	$120,000.00	30	1	11		$123,600																			**$123,600**
ELEVATED WALKWAY/PATIOS/BALCONIES - PAINT/REPAIR/PARTIAL REPLACE	ALLOW	1	$75,000.00	$75,000.00	8	8	11									$95,008								$120,353				**$215,361**
ELEVATED WALKWAY/PATIOS/BALCONIES METAL RAILING - REPAIR/PAINT	ALLOW	1	$40,000.00	$40,000.00	15	13	11														$58,741							**$58,741**
CRAWL SPACES - IMMEDIATE REPAIR	ALLOW	1	$20,000.00	$20,000.00	30	0	11	$20,000																				**$20,000**
CRAWL SPACES - REPAIR/MAINTAIN	ALLOW	1	$10,000.00	$10,000.00	10	10	11											$13,439										**$13,439**
ENTRY DOOR RESTORATION	EA.	112	$500.00	$56,000.00	30	1	11		$57,680																			**$57,680**
ARBORS ON PARKING DECK - REPAIR/PAINT	ALLOW	1	$10,000.00	$10,000.00	12	8	11									$12,668												**$12,668**
TOTAL MONUMENTS & SIGNAGE								**$285,200**	**$423,330**	**$267,082**	**$0**	**$50,648**	**$0**	**$0**	**$0**	**$107,675**	**$0**	**$13,439**	**$41,527**	**$85,546**	**$58,741**	**$0**	**$0**	**$120,353**	**$0**	**$0**	**$78,908**	**$1,532,449**
TOWER BUILDING EXTERIOR COMPONENTS																												
(TOWER) BALCONIES & RAILINGS - RESTORATION (PAINT/REPAIR/SEAL)	L.S.	1	$300,000	$300,000.00	12	6	12							$358,216												$510,730		**$868,946**
(TOWER) EXTERIOR EIFS - CLEAN/REPAIR/SEAL/PAINT	L.S.	1	$400,000	$400,000.00	10	5	12						$463,710										$623,187					**$1,086,897**
(TOWER) BRICK VENEER - REPAIR/TUCK POINT	L.S.	1	$325,000	$325,000.00	12	7	12								$399,709												$569,889	**$969,598**
(TOWER) SUPPORTS/STRAPS FOR HVAC - PAINT/REPAIR/PARTIAL REPLACE	ALLOW	1	$10,000	$10,000.00	6	4	12					$11,255						$13,439						$16,047				**$40,741**
(TOWER) TPO ROOF - REPLACE	SQ.	72	$1,250	$90,000.00	20	13	12														$132,168							**$132,168**
(TOWER) TPO ROOF REPAIRS	L.S.	1	$10,000	$10,000.00	5	2	12			$10,609					$12,299					$14,258					$16,528			**$53,694**
(TOWER) METAL SEAM ROOF - REPAIR/SEAL/PAINT	SQFT	2500	$7	$17,500.00	15	10	12											$23,519										**$23,519**
TOTAL TOWER BUILDING EXTERIOR COMPONENTS								**$0**	**$0**	**$10,609**	**$0**	**$11,255**	**$463,710**	**$358,216**	**$412,008**	**$0**	**$0**	**$36,958**	**$0**	**$14,258**	**$132,168**	**$0**	**$623,187**	**$16,047**	**$16,528**	**$510,730**	**$569,889**	**$3,175,562**
TOWER BUILDING INTERIOR COMPONENTS																												
LOBBY & RECEPTION DESK - REMODEL	ALLOW	1	$50,000.00	$50,000.00	15	9	13										$65,239											**$65,239**
OFFICES INTERIOR SURFACE - REPAIR/PAINT	ALLOW	1	$6,500.00	$6,500.00	12	6	13							$7,761												$11,066		**$18,827**
OFFICE FLOOR - REPLACE CARPET	ALLOW	1	$4,000.00	$4,000.00	10	4	13					$4,502										$6,050						**$10,552**
OFFICE EQUIPMENT - REPLACE	L.S.	1	$5,000	$5,000.00	5	3	13				$5,464					$6,334					$7,343					$8,512		**$27,652**
FITNESS ROOM EQUIPMENT - PARTIAL REPLACE	ALLOW	1	$15,000.00	$15,000.00	5	4	13					$16,883					$19,572					$22,689					$26,303	**$85,446**
MAILBOXES - REPLACE	L.S.	1	$11,000	$11,000.00	30	15	13																$17,138					**$17,138**
CORRIDOR INTERIOR WALLS - REPAIR/PAINT (16 FLOORS)	EA.	16	$3,000.00	$48,000.00	10	5	13						$55,645										$74,782					**$130,428**
CORRIDOR CARPETS - REPLACE	L.S.	1	$45,000.00	$45,000.00	10	1	13		$46,350										$62,291									**$108,641**
TOTAL TOWER BUILDING INTERIOR COMPONENTS								**$0**	**$46,350**	**$0**	**$5,464**	**$21,385**	**$55,645**	**$7,761**	**$0**	**$6,334**	**$84,810**	**$0**	**$62,291**	**$0**	**$7,343**	**$28,739**	**$91,920**	**$0**	**$0**	**$19,578**	**$26,303**	**$463,922**
TOWER PLUMBING/MECHANICAL/ELECTRICAL SYSTEMS																												
ENTRY ACCESS SYSTEM - UPGRADE	ALLOW	1	$10,000	$10,000.00	10	6	14							$11,941										$16,047				**$27,988**
ELECTRICAL PANELS - REPAIR AS NEEDED	ALLOW	1	$10,000	$10,000.00	2	2	14			$10,609		$11,255		$11,941		$12,668		$13,439		$14,258		$15,126		$16,047		$17,024		**$122,366**
ELECTRICAL PANELBOARDS AND SWITHCES - REPLACE	ALLOW	1	$250,000	$250,000.00	25	15	14																$389,492					**$389,492**
COMMON EXTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	ALLOW	1	$15,000	$15,000.00	10	8	14									$19,002										$25,536		**$44,538**
COMMON INTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	ALLOW	1	$30,000	$30,000.00	10	7	14								$36,896										$49,585			**$86,482**
SECURITY SYSTEM/CAMERAS - UPGRADE/REPLACE	ALLOW	1	$10,000	$10,000.00	10	8	14									$12,668										$17,024		**$29,692**
FIRE ALARM SYSTEM/PANELS - UPGRADE/REPLACE	L.S.	1	$70,000	$70,000.00	15	12	14													$99,803								**$99,803**
FIRE SPRINKLER REPAIRS	ALLOW	1	$6,000	$6,000.00	10	8	14									$7,601										$10,215		**$17,815**
JOCKEY PUMP - REPLACE	ALLOW	1	$10,000	$10,000.00	8	8	14									$12,668								$16,047				**$28,715**
FIRE PUMP - REPAIR	ALLOW	1	$46,000	$46,000.00	22	21	14																					**$0**
PLUMBING FIXTURES - REPAIR/PARTIAL REPLACE	ALLOW	1	$20,000	$20,000.00	15	10	14											$26,878										**$26,878**
ROOFTOP HVAC SYSTEM - REPLACE	ALLOW	1	$125,000	$125,000.00	15	10	14											$167,990										**$167,990**
GROUND HVAC SYSTEM - REPLACE	ALLOW	1	$175,000	$175,000.00	15	8	14									$221,685												**$221,685**
WATER HEATER (30 GALLON) - REPLACE	ALLOW	1	$6,000	$6,000.00	12	6	14							$7,164												$10,215		**$17,379**
WATER PIPING - REPAIR/PARTIAL REPLACE	ALLOW	1	$10,000	$10,000.00	10	6	14							$11,941										$16,047				**$27,988**
UNDERGROUND SEWER LINES - REPAIR/PARTIAL REPLACE	ALLOW	1	$12,000	$12,000.00	15	11	14												$16,611									**$16,611**
ELEVATOR CABS - REMODEL	Ea.	2	$25,000	$50,000.00	12	12	14													$71,288								**$71,288**

CITY HEIGHTS
REPLACEMENT RESERVE SCHEDULE

COMPONENT DESCRIPTION	UNIT	UNIT QUANTITY	UNIT COST	TOTAL COST	ESTIMATED USEFUL LIFE	ESTIMATED REMAINING LIFE	NOTES	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
ELEVATORS - UPGRADE/REPLACE	Ea.	2	$300,000	$600,000.00	25	5	14						$695,564															**$695,564**
CHILLER - REPLACE	ALLOW	1	$250,000.00	$250,000.00	25	6	14							$298,513														**$298,513**
CHILLER CIRCULATING PUMPS - REPLACE	ALLOW	1	$30,000.00	$30,000.00	25	6	14							$35,822														**$35,822**
GENERAC GENERATOR - REPAIR/MAINTAIN	ALLOW	1	$3,065.00	$3,065.00	3	3	14				$3,349			$3,660			$3,999			$4,370			$4,775			$5,218		**$25,371**
TOTAL TOWER PLUMBING/MECHANICAL/ELECTRICAL SYSTEMS								**$0**	**$0**	**$10,609**	**$3,349**	**$11,255**	**$695,564**	**$380,981**	**$36,896**	**$286,290**	**$3,999**	**$208,307**	**$16,611**	**$189,719**	**$0**	**$15,126**	**$394,267**	**$64,188**	**$49,585**	**$85,232**	**$0**	**$2,451,979**
COMPLETE RESERVE TOTAL								**$318,700**	**$698,340**	**$330,736**	**$43,780**	**$132,360**	**$1,252,248**	**$1,033,232**	**$543,604**	**$419,301**	**$127,953**	**$289,076**	**$424,960**	**$389,325**	**$229,826**	**$88,108**	**$1,129,628**	**$570,634**	**$133,881**	**$659,803**	**$723,321**	**$9,538,815**

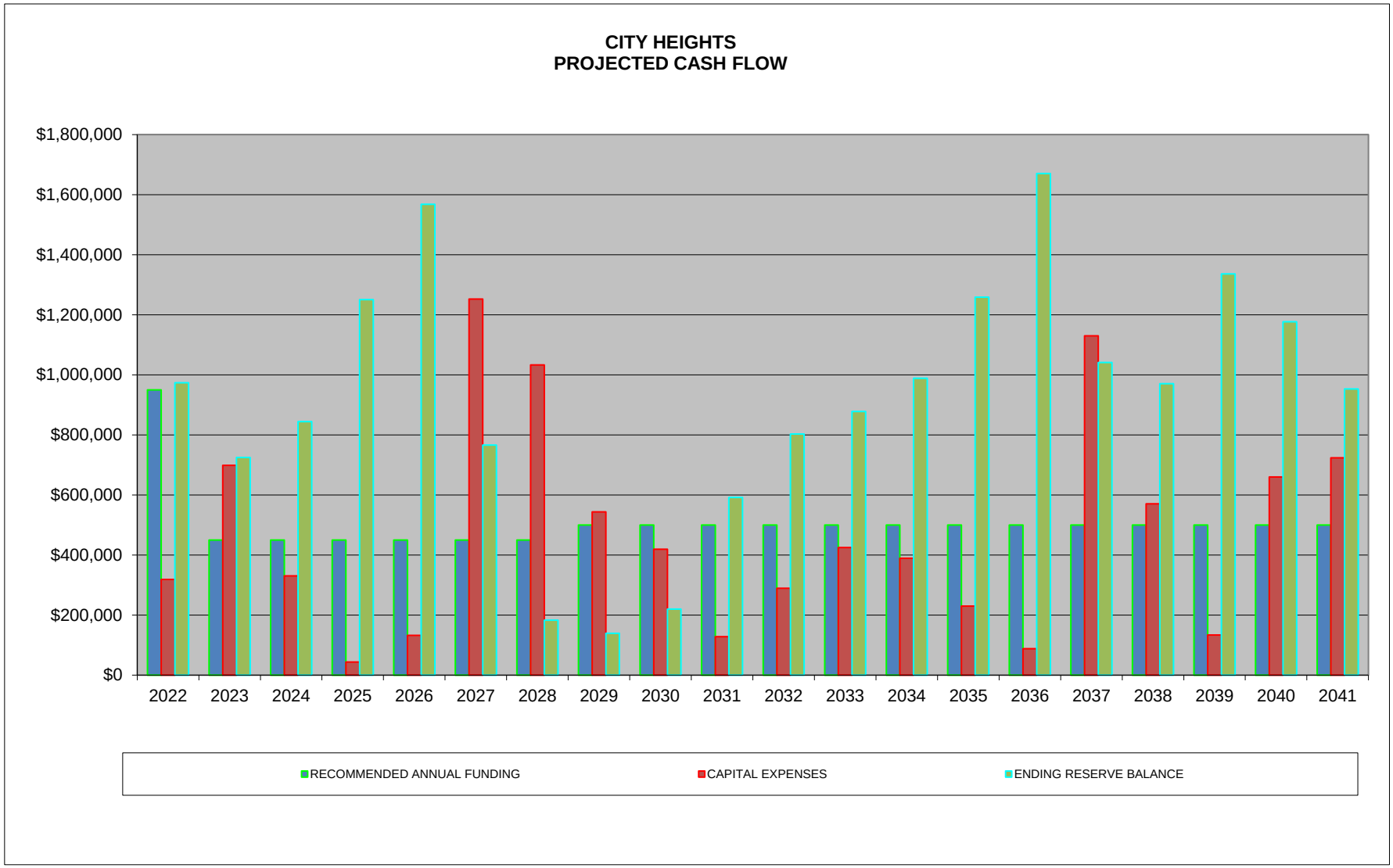
CITY HEIGHTS

COST AND FUNDING RECAP

	2022 1	2023 2	2024 3	2025 4	2026 5	2027 6	2028 7	2029 8	2030 9	2031 10	2032 11	2033 12	2034 13	2035 14	2036 15	2037 16	2038 17	2039 18	2040 19	2041 20
Beginning Reserve Fund Balance	$342,130	$973,430	$725,090	$844,354	$1,250,574	$1,568,214	$765,967	$182,735	$139,131	$219,830	$591,877	$802,801	$877,841	$988,515	$1,258,690	$1,670,582	$1,040,954	$970,320	$1,336,440	$1,176,636
Recommended Annual Funding	$950,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
Capital Expenditures	$318,700	$698,340	$330,736	$43,780	$132,360	$1,252,248	$1,033,232	$543,604	$419,301	$127,953	$289,076	$424,960	$389,325	$229,826	$88,108	$1,129,628	$570,634	$133,881	$659,803	$723,321
Ending Reserve Balance	$973,430	$725,090	$844,354	$1,250,574	$1,568,214	$765,967	$182,735	$139,131	$219,830	$591,877	$802,801	$877,841	$988,515	$1,258,690	$1,670,582	$1,040,954	$970,320	$1,336,440	$1,176,636	$953,315

Inflation Rate 3.0%

Interest Rate 1.00%


CITY HEIGHTS
PROJECTED CASH FLOW
$1,800,000
$1,600,000
$1,400,000
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
RECOMMENDED ANNUAL FUNDING
CAPITAL EXPENSES
ENDING RESERVE BALANCE

CITY HEIGHTS
(Excluding Capital Improvements)
ITEMIZED PROJECTED COST BY YEAR

SWIMMING POOL DECK - REPAIR/SEAL CRACKS	$3,000
PARKING DECK (PLAZA) - SEAL CRACKS	$3,000
PARKING LOT (PARKING DECK) - RESURFACE/PAINT LINES/PRESSURE WASH	$27,500
PLANTERS - RE-INSTALL PLANTER WALL/SOILS/TIE IN DOWNSPOUTS	$265,200
CRAWL SPACES - IMMEDIATE REPAIR	$20,000
Total 2022 Expenditures	**$318,700**
SWIMMING POOL FENCE/GATE - REPAIR/PAINT	$2,060
PARKING DECK (PLAZA) - RE-COAT	$226,600
TOWNHOME GUTTERS & DOWNSPOUTS - REPLACE	$56,650
BUILDING EXTERIOR FINISHES - REPAIR/PAINT/SEAL	$30,900
BRICK VENEER @ BUILDINGS/WALKWAYS - FULL REMEDIATION	$154,500
ELEVATED WALKWAY/PATIOS/BALCONIES - IMMEDIATE REPAIRS	$123,600
ENTRY DOOR RESTORATION	$57,680
CORRIDOR CARPETS - REPLACE	$46,350
Total 2023 Expenditures	**$698,340**
SWIMMING POOL SURFACE - RESURFACE/REPLACE TILES	$31,827
PARKING DECK - GENERAL REPAIRS	$10,609
TOWNHOME ROOFS - REPLACE SHINGLES - 8 BUILDINGS	$267,082
(TOWER) TPO ROOF REPAIRS	$10,609
ELECTRICAL PANELS - REPAIR AS NEEDED	$10,609
Total 2024 Expenditures	**$330,736**
SIDEWALKS - REPAIR/REPLACE CRACKED, SETTLED SECTIONS	$10,927
DRAINAGE/SLOPE EROSION/STORM SYSTEM - REPAIR/MAINTAIN	$9,835
SWIMMING POOL FURNITURE/EQUIPMENT - PARTIAL REPLACE	$10,927
PARKING DECK (PLAZA) - SEAL CRACKS	$3,278
OFFICE EQUIPMENT - REPLACE	$5,464
GENERAC GENERATOR - REPAIR/MAINTAIN	$3,349
Total 2025 Expenditures	**$43,780**
VISITOR ASPHALT PARKING LOT - MILL/OVERLAY	$37,817
METAL ROOFS - REPAIR/SEAL/PAINT	$50,648
(TOWER) SUPPORTS/STRAPS FOR HVAC - PAINT/REPAIR/PARTIAL REPLACE	$11,255
OFFICE FLOOR - REPLACE CARPET	$4,502
FITNESS ROOM EQUIPMENT - PARTIAL REPLACE	$16,883
ELECTRICAL PANELS - REPAIR AS NEEDED	$11,255
Total 2026 Expenditures	**$132,360**
ENTRY MONUMENTS AND SIGNAGE - REPAIR/PAINT/TUCK POINT	$4,057
COMMON AREA FENCING - REPAIR/PARTIAL REPLACE	$9,274
POOL HOUSE ROOF - REPAIR/SEAL/PAINT	$12,984
POOL HOUSE GUTTERS & DOWNSPOUTS - REPLACE	$1,739
SWIMMING POOL EQUIPMENT - REPLACE PUMPS/MOTORS	$5,796
SWIMMING POOL FILTRATION SYSTEM - REPLACE FILTERS	$3,478
(TOWER) EXTERIOR EIFS - CLEAN/REPAIR/SEAL/PAINT	$463,710
CORRIDOR INTERIOR WALLS - REPAIR/PAINT (16 FLOORS)	$55,645
ELEVATORS - UPGRADE/REPLACE	$695,564
Total 2027 Expenditures	**$1,252,248**
SWIMMING POOL DECK - REPAIR/SEAL CRACKS	$3,582
SWIMMING POOL DECK ARBOR - REPAIR/PAINT	$2,090
POOL HOUSE EXTERIOR FINISHES - REPAIR/PAINT/SEAL	$2,985
POOL HOUSE BRICK VENEER - REPAIR/TUCK POINT	$5,970
PARKING DECK (PLAZA) - SEAL CRACKS	$3,582
PARKING DECK (PLAZA) - RE-COAT	$262,692
POOL HOUSE ELECTRICAL FIXTURES - PARTIAL REPLACE	$2,687
POOL HOUSE PLUMBING & FIXTURES - PARTIAL REPLACE	$2,687
(TOWER) BALCONIES & RAILINGS - RESTORATION (PAINT/REPAIR/SEAL)	$358,216
OFFICES INTERIOR SURFACE - REPAIR/PAINT	$7,761
ENTRY ACCESS SYSTEM - UPGRADE	$11,941

ELECTRICAL PANELS - REPAIR AS NEEDED	$11,941
WATER HEATER (30 GALLON) - REPLACE	$7,164
WATER PIPING - REPAIR/PARTIAL REPLACE	$11,941
CHILLER - REPLACE	$298,513
CHILLER CIRCULATING PUMPS - REPLACE	$35,822
GENERAC GENERATOR - REPAIR/MAINTAIN	$3,660
Total 2028 Expenditures	**$1,033,232**
LANDSCAPING - UPGRADE/REMOVE TREES, SHRUBS/TRIM	$24,597
POOL HOUSE BATHROOMS - REPAIR/PAINT	$2,460
PARKING DECK - GENERAL REPAIRS	$12,299
PARKING LOT (PARKING DECK) - RESURFACE/PAINT LINES/PRESSURE WASH	$33,822
SECURITY GATE - REPLACE MOTORS AND CONTROLLERS	$21,523
(TOWER) BRICK VENEER - REPAIR/TUCK POINT	$399,709
(TOWER) TPO ROOF REPAIRS	$12,299
COMMON INTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	$36,896
Total 2029 Expenditures	**$543,604**
SWIMMING POOL FURNITURE/EQUIPMENT - PARTIAL REPLACE	$12,668
SWIMMING POOL COVER - REPLACE	$6,334
ELEVATED WALKWAY/PATIOS/BALCONIES - PAINT/REPAIR/PARTIAL REPLACE	$95,008
ARBORS ON PARKING DECK - REPAIR/PAINT	$12,668
OFFICE EQUIPMENT - REPLACE	$6,334
ELECTRICAL PANELS - REPAIR AS NEEDED	$12,668
COMMON EXTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	$19,002
SECURITY SYSTEM/CAMERAS - UPGRADE/REPLACE	$12,668
FIRE SPRINKLER REPAIRS	$7,601
JOCKEY PUMP - REPLACE	$12,668
GROUND HVAC SYSTEM - REPLACE	$221,685
Total 2030 Expenditures	**$419,301**
SIDEWALKS - REPAIR/REPLACE CRACKED, SETTLED SECTIONS	$13,048
SWIMMING POOL FENCE/GATE - REPAIR/PAINT	$2,610
PARKING DECK (PLAZA) - SEAL CRACKS	$3,914
SECURITY GATE - UPGRADE ACCESS CONTROLS	$19,572
LOBBY & RECEPTION DESK - REMODEL	$65,239
FITNESS ROOM EQUIPMENT - PARTIAL REPLACE	$19,572
GENERAC GENERATOR - REPAIR/MAINTAIN	$3,999
Total 2031 Expenditures	**$127,953**
VISITOR ASPHALT PARKING LOT - REPAIR/SEALCOAT	$4,838
DRAINAGE/SLOPE EROSION/STORM SYSTEM - REPAIR/MAINTAIN	$12,095
SWIMMING POOL DECK - PARTIAL REPLACE DAMAGED SECTIONS	$13,439
CRAWL SPACES - REPAIR/MAINTAIN	$13,439
(TOWER) SUPPORTS/STRAPS FOR HVAC - PAINT/REPAIR/PARTIAL REPLACE	$13,439
(TOWER) METAL SEAM ROOF - REPAIR/SEAL/PAINT	$23,519
ELECTRICAL PANELS - REPAIR AS NEEDED	$13,439
PLUMBING FIXTURES - REPAIR/PARTIAL REPLACE	$26,878
ROOFTOP HVAC SYSTEM - REPLACE	$167,990
Total 2032 Expenditures	**$289,076**
PARKING DECK (PLAZA) - RE-COAT	$304,531
BUILDING EXTERIOR FINISHES - REPAIR/PAINT/SEAL	$41,527
CORRIDOR CARPETS - REPLACE	$62,291
UNDERGROUND SEWER LINES - REPAIR/PARTIAL REPLACE	$16,611
Total 2033 Expenditures	**$424,960**
COMMON AREA FENCING - REPAIR/PARTIAL REPLACE	$11,406
SWIMMING POOL SURFACE - RESURFACE/REPLACE TILES	$42,773
SWIMMING POOL DECK - REPAIR/SEAL CRACKS	$4,277
POOL HOUSE BATHROOMS - UPGRADE	$22,812
PARKING DECK (PLAZA) - SEAL CRACKS	$4,277
PARKING DECK - GENERAL REPAIRS	$14,258
BRICK VENEER @ BUILDINGS/WALKWAYS - REPAIR/TUCK POINT	$71,288
PLANTERS - REPAIR/MAINTAIN/TUCK POINT	$14,258

(TOWER) TPO ROOF REPAIRS	$14,258
ELECTRICAL PANELS - REPAIR AS NEEDED	$14,258
FIRE ALARM SYSTEM/PANELS - UPGRADE/REPLACE	$99,803
ELEVATOR CABS - REMODEL	$71,288
GENERAC GENERATOR - REPAIR/MAINTAIN	$4,370
Total 2034 Expenditures	**$389,325**
ENTRY MONUMENTS AND SIGNAGE - REPAIR/PAINT/TUCK POINT	$5,140
SWIMMING POOL FURNITURE/EQUIPMENT - PARTIAL REPLACE	$14,685
SWIMMING POOL EQUIPMENT - REPLACE PUMPS/MOTORS	$7,343
SWIMMING POOL FILTRATION SYSTEM - REPLACE FILTERS	$4,406
ELEVATED WALKWAY/PATIOS/BALCONIES METAL RAILING - REPAIR/PAINT	$58,741
(TOWER) TPO ROOF - REPLACE	$132,168
OFFICE EQUIPMENT - REPLACE	$7,343
Total 2035 Expenditures	**$229,826**
SWIMMING POOL DECK ARBOR - REPAIR/PAINT	$2,647
PARKING LOT (PARKING DECK) - RESURFACE/PAINT LINES/PRESSURE WASH	$41,596
OFFICE FLOOR - REPLACE CARPET	$6,050
FITNESS ROOM EQUIPMENT - PARTIAL REPLACE	$22,689
ELECTRICAL PANELS - REPAIR AS NEEDED	$15,126
Total 2036 Expenditures	**$88,108**
SIDEWALKS - REPAIR/REPLACE CRACKED, SETTLED SECTIONS	$15,580
PARKING DECK (PLAZA) - SEAL CRACKS	$4,674
(TOWER) EXTERIOR EIFS - CLEAN/REPAIR/SEAL/PAINT	$623,187
MAILBOXES - REPLACE	$17,138
CORRIDOR INTERIOR WALLS - REPAIR/PAINT (16 FLOORS)	$74,782
ELECTRICAL PANELBOARDS AND SWITHCES - REPLACE	$389,492
GENERAC GENERATOR - REPAIR/MAINTAIN	$4,775
Total 2037 Expenditures	**$1,129,628**
VISITOR ASPHALT PARKING LOT - REPAIR/SEALCOAT	$5,777
POOL HOUSE EXTERIOR FINISHES - REPAIR/PAINT/SEAL	$4,012
PARKING DECK (PLAZA) - RE-COAT	$353,035
POOL HOUSE ELECTRICAL FIXTURES - PARTIAL REPLACE	$3,611
POOL HOUSE PLUMBING & FIXTURES - PARTIAL REPLACE	$3,611
ELEVATED WALKWAY/PATIOS/BALCONIES - PAINT/REPAIR/PARTIAL REPLACE	$120,353
(TOWER) SUPPORTS/STRAPS FOR HVAC - PAINT/REPAIR/PARTIAL REPLACE	$16,047
ENTRY ACCESS SYSTEM - UPGRADE	$16,047
ELECTRICAL PANELS - REPAIR AS NEEDED	$16,047
JOCKEY PUMP - REPLACE	$16,047
WATER PIPING - REPAIR/PARTIAL REPLACE	$16,047
Total 2038 Expenditures	**$570,634**
DRAINAGE/SLOPE EROSION/STORM SYSTEM - REPAIR/MAINTAIN	$14,876
LANDSCAPING - UPGRADE/REMOVE TREES, SHRUBS/TRIM	$33,057
SWIMMING POOL FENCE/GATE - REPAIR/PAINT	$3,306
PARKING DECK - GENERAL REPAIRS	$16,528
(TOWER) TPO ROOF REPAIRS	$16,528
COMMON INTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	$49,585
Total 2039 Expenditures	**$133,881**
SWIMMING POOL DECK - REPAIR/SEAL CRACKS	$5,107
SWIMMING POOL FURNITURE/EQUIPMENT - PARTIAL REPLACE	$17,024
SWIMMING POOL COVER - REPLACE	$8,512
POOL HOUSE BRICK VENEER - REPAIR/TUCK POINT	$8,512
PARKING DECK (PLAZA) - SEAL CRACKS	$5,107
(TOWER) BALCONIES & RAILINGS - RESTORATION (PAINT/REPAIR/SEAL)	$510,730
OFFICES INTERIOR SURFACE - REPAIR/PAINT	$11,066
OFFICE EQUIPMENT - REPLACE	$8,512
ELECTRICAL PANELS - REPAIR AS NEEDED	$17,024
COMMON EXTERIOR LIGHTING - REPAIR/PARTIAL REPLACE	$25,536
SECURITY SYSTEM/CAMERAS - UPGRADE/REPLACE	$17,024
FIRE SPRINKLER REPAIRS	$10,215

WATER HEATER (30 GALLON) - REPLACE		$10,215
GENERAC GENERATOR - REPAIR/MAINTAIN		$5,218
	Total 2040 Expenditures	**$659,803**
COMMON AREA FENCING - REPAIR/PARTIAL REPLACE		$14,028
POOL HOUSE BATHROOMS - REPAIR/PAINT		$3,507
SECURITY GATE - REPLACE MOTORS AND CONTROLLERS		$30,686
METAL ROOFS - REPAIR/SEAL/PAINT		$78,908
(TOWER) BRICK VENEER - REPAIR/TUCK POINT		$569,889
FITNESS ROOM EQUIPMENT - PARTIAL REPLACE		$26,303
	Total 2041 Expenditures	**$723,321**
	Total Expenditures	**$9,538,815**

E. NOTES

The accompanying notes are an integral part of the reserve schedule contained in this report. When reviewing the schedule, please be sure to read all notes pertaining to a particular line item. This will provide the most complete explanation of each line item and will provide any clarification where necessary.

1. These items were found to be in good condition and well maintained. The useful life reflects the age and overall condition of the respective item.

2. **Visitors Parking Area and Entry Drive -** The asphalt roads and parking areas typically consists of graded aggregate base, asphalt base course, and asphalt surface course. We were not provided any information on the last time the asphalt was resurfaced nor do we know the current age of the asphalt. From our review, the asphalt appeared to be in poor condition with large amounts of "alligatored" cracks and settled sections of the asphalt observed (reference photographs 1-3).

   Most cracks that appear at asphalt are typically the result of typical expansion and contraction of the asphalt material over the course of its useful life. In most cases, moisture can enter the cracks over time, and potentially weaken the underlying base material, resulting in the formation of more cracks; therefore, we recommend all of the cracks be cleaned and sealed in accordance with industry standards. The useful life of the asphalt pavement is approximately 20-25 years.

   Industry standards recommend sealcoating asphalt pavements that receive minimal use. Under normal use, the rolling action of vehicles wheels will "kneed" the pavement, bringing the emulsions within the asphalt up to the surface which is needed to ensure its long-term performance.

   Over the years, the compounding for sealcoating has improved and is more durable. However, sealcoating of the asphalt may only extend the useful life of the asphalt for up to five years. The Association can also replace the poor sections of the asphalt as the issues arise.

   For this review, it should be noted that the resurfacing budget is based on edge

milling along the curb line. This provides a means of tapering the new asphalt overlay to provide a recessed taper that allows the new asphalt overlay to be installed flush with the top edge of the gutter portion of the curb. Doing so eliminates many drainage problems that are created when the asphalt is placed directly on top of the existing asphalt. This is a process that creates a raised edge that is often irregular, unsightly and also traps surface runoff in the flow line of the curb.

Due to the on-going restoration of some of the items at the property, we have pushed back the resurfacing of the asphalt for a few more years.

In order to prolong the useful life of the asphalt pavement, we recommend that the cracks be filled, and the pavement be sealcoated and striped every six to eight years. All crack patching and filler should consist of hot-applied products. The useful life of asphalt pavement is approximately 20 years, after which, a new layer of asphalt should be installed. Prior to overlay, any settled areas should be removed, the base then re-compacted, and a new layer of asphalt course installed. It is recommended that a budget be allocated for the resurfacing of the asphalt with a 1-1/2" overlay every 20 years. We recommend that the asphalt surface be inspected approximately every ten years to determine if the condition of asphalt is adequate and if the useful life can be prolonged.

3. **Concrete Curb/Sidewalks –** The concrete curbs are located at the perimeter of the visitor parking area and entry drive. From our review, the concrete curbs were observed to be in poor condition with cracks and minor settlement observed at a few sections. Due to the current timeline for the asphalt parking areas to be redone, we recommend that the sidewalk be remediated at the same time.

   The sidewalks are located around the rear of the property that surrounds the landscaped areas. From our review, most sections of the sidewalk appear to be in generally good condition and are showing signs of normal wear and tear; however, at the sidewalk area adjacent to the pool area, there are multiple areas of the sidewalk that are cracked, settled, and some areas that are uprooted by the large trees in the area which are resulting in potential trip hazards. When it rains, a large section of the sidewalk that has settled becomes completely submerged (reference photographs 4-6).

Normally, if a section of sidewalk represents a trip hazard, then it can be grinded down; however, in this case, the uprooting of the sidewalk is significant and will require full replacement. This also for the settled sections of the sidewalk. The Association should consider replacing a large portion of the sidewalk and possibly re-designing where the new sections of the sidewalk go so that the large trees will not have to be removed. Due to some of the more urgent items being remediated at the property, we have pushed the restorations of the sidewalks out a few years as the sidewalks should not impact anything structural at the buildings if they remain in the current condition.

While most of the cracks appear to be minor and a result of typical expansion and contraction of the concrete, any sections of the concrete that begin to settle should be monitored, and if they continue to settle, these sections should be replaced. We have included a budget for the maintenance of the concrete materials. The budget is provided for the replacement of damaged, deteriorated, or settled sections of curbs and sidewalks at the common property. The budget is provided for every six years, and the funding can be used when necessary, during the estimated useful life. The budget is not for complete replacement of the concrete curbs or sidewalks, only replacement of the sections that become trip hazards or safety concerns. Any vertical displacement at cracks that could potentially represent a trip hazard and liability should be replaced. If the settlement is not active, some areas of the concrete can be grinded down to reduce the trip hazard.

4. **Entry Monument and Signage/Fencing** – The main entrance to the community is accented by a monument with brick veneer piers on each side, stucco accents at the top and bottom and square glass panes at the center. Attached to the monument is a panted sign with letters engraved into the material. From our review, the entry monument and signage appeared to be in generally good condition and well maintained for its age (reference photograph 7). We do not recommend any major remediation at this time.

   Typically, due to the construction of the monuments, the maintenance of the monuments should be minimal and should only consist of tuck pointing at the brick, pressure washing, and painting or replacement of the signage.

Around the perimeter of the property is a painted metal picket fence. From our review, the picket fence appeared to be in generally good condition.

Any mildew growth on the monuments and grout joints may be power washed as part of regular maintenance for a better appearance. It is recommended that $3,500 be allocated for the repair, painting, and tuck pointing of the monument walls every eight years. We have a budget for the repair and partial replacement of the fencing based on the type and construction. The budget for the fencing is an allotment of $8,000 and is to be completed, as needed, every six to seven years.

5. **Common Area Drainage** - The community storm drain system generally directs surface and roof runoff by finished grade to inlets located along the curb line of the road, where it is then directed by buried, underground pipes. As mentioned previously, along the rear-right of the property there is a natural area that is considered common area for the community. This area is low lying and a heavy volume of storm water passes through this area during rain events. The storm water enters from an adjoining property and passes through the common area.

   Our observation of the site drainage and collection system found it to be functioning fairly, with the exception of drainage at the common landscaped area as previously shown in the sidewalk notes issued in this report. This can be remediated when either the sidewalk is replaced or shortly after. The remediation of the drainage can include the installation of a proper ground cover, drain inlets and swales.

   This does not include the drainage issues currently on-going at the parking garage.

   For maintaining the site drainage system, it is our recommendation that $9,000 be allocated every seven years. Depending on how well the drainage systems are maintained, the budget for these items can fluctuate or decrease with proper maintenance.

6. **Common Area Landscaping** - The landscaping at the common areas consists of small and large trees, shrubs, and common landscaped areas. From our review, the common area landscaping appeared to be in generally good condition. Our overall evaluation does not include the potential removal of the large trees uprooting the sidewalks as these trees have not been noted as to whether or not they are to be

removed. The appearance of the community is very subjective, as is the allocation of funds for the upgrade of the landscape materials. From our experience with similar communities, upgrading of the community landscaping is typically done every five to ten years.

A budget of $20,000 has been allocated for the replacement of any uprooting, damaged or diseased shrubs and trees, trimming of trees, and upgrade of the landscaping every ten years. This is not designed for yearly or routine landscaping or annual flower installation. All trees with a large root system that are located within 10' of a structure should be removed or monitored to prevent any damage.

7. **Swimming Pool** – The swimming pool consists of an in-ground concrete pool with a plaster finish. The pool deck consists of a concrete slab-on-grade with brick style coping and is surrounded by a painted steel picket fence with intermediate steel hollow tube posts. The pool surface generally has an expected life of approximately ten years, after which, it needs to be resurfaced. The coating on the pool deck appears to be a Kool Deck type of surface coating the top of the concrete and will require resurfacing. From our review, the swimming pool and corresponding components appeared to be in fair condition; however, we did observe the following conditions:

   - There are multiple cracks observed at the pool deck; however, most of them appear to be typically and the result of normal expansion and contraction of the concrete material and minor differential settlement (reference photographs 8 & 9).

   - The metal fence has multiple pickets that have evidence of corrosion and will require repainting in the near future to extend the useful life of the metal material (reference photograph 10).

   - The pool was unclean at the time of our review so our review of the pool surface was limited and we based the remaining life of the pool on information provided.

   Following is the estimated useful life of the components for the swimming pool.

Swimming Pool - Resurface ..... Every 8-10 years
Swimming Pool Deck – Repair/Seal Cracks ..... Every 5-6 years
Swimming Pool Deck – Partial Replace Damaged Sections ..... Every 18-20 years
Swimming Pool Furniture – Partial Replace ..... Every 4-5 years
Swimming Pool Fence/Gate – Repair/Paint ..... Every 7-8 years
Swimming Pool Arbor – Repair/Paint ..... Every 7-8 years
Swimming Pool Cover - Replace ..... Every 9-10 years
Swimming Pool Equipment – Replace Pumps/Motors ..... Every 8-10 years
Swimming Pool Filtration System – Replace Filters ..... Every 8-10 years

We have provided budgets for each of the above-referenced items and have included them in the reserves.

8. **Pool House** - The pool house is a one-story, brick structure constructed over a concrete slab-on-grade. The pool house contains two bathrooms and an equipment room. The exterior finishes consist of brick veneer with painted wood trim, soffit and fascia. The roof consists of a moderately steep-sloped roof with a painted metal seam roof. Roof runoff is collected in pre-finished square metal gutters, installed around the perimeter of the roof eave, and is directed by finished grade. The pool house also contains sanitary sewer, water plumbing lines, and common electrical equipment.

   The pool house will require numerous line-item budgets to properly maintain. We have budgets for roofing, gutters and downspouts replacement, exterior painting, interior painting, furnishings replacement, electronics and appliance replacement. Each budget is based upon the value of items observed at the pool house and the age of the individual item. Several of the budgets are allowances, since the items will not require a complete replacement at the same time (i.e., appliances).

   Overall, the condition of the pool house and components appeared to be in generally good condition for its, and we did not observe any major deficiencies at the time of our review; however, we did observe a section of the gutter that was damaged (reference photographs 11 & 12). Other deficiencies observed was mostly a result of a need for upgrading of equipment such as the water fountain.

We have provided budgets for each of the referenced items above and have included them in the reserve. For all electrical and mechanical items, we have provided the replacement and repair budgets for the individual items, as well based on their age and current condition.

9. **Parking Garage** - The parking garage consists of a single-story reinforced concrete structure with a flat slab. On the top deck of the parking garage is a plaza level which contains twenty-three, two-story wood-framed townhomes and a landscaped courtyard area. The parking garage is supported by 16" diameter reinforced concrete columns spaced at approximately 40' on center. At the top of each column are 9' x 9' x 8" thick concrete capitals and 2' x 2' column caps. We were not provided any information on the design or loading requirements for the parking garage. It is our understanding that in 2010, Engineered Restorations, Inc., in conjunction with Hatch Matt MacDonald, performed a review of the parking garage and identified 41 columns that were in need of repair or strengthening. They also identified several cracks in the parking deck slab which were in need of repair and sealing. It is also our understanding that only five of the 41 columns were actually repaired along with some of the cracks. The repair to the columns consisted of a fiber reinforced wrap at the top of the columns.

   Due to continued problems with water penetration and cracks at the concrete columns, Ray Engineering, Inc., has performed multiple reviews with recommendations for restoration since 2010 with the most recent review being completed in 2021. It is our understanding that several repairs have been made over the years to remediate the drainage, sealing of the cracks, reinforcement of the columns and the removal of planters to reduce the weight on top of the parking garage. It is our understanding that several planters are currently being removed or reworked to reduce more weight on the top of the garage and to improve some of the drainage issues. Earlier in 2022, new drains were installed through the topping slab of the parking garage to improve the drainage.

   At the time of our review, most of the same items were observed in regards to cracks at the slab and areas where there is ponding water. Included in a crawl space review completed by Ray Engineering, Inc., in 2020 and 2021, we also noted poor drainage beneath the crawl spaces which has also contributed to some of the water infiltration issues at the parking garage. We have shown some of the items as part of this

report; however, please refer to Ray Engineering, Inc's reports from the last few years to get an overall scope of the issues to be remediated and the recommendations for restoration (reference photographs 13-20).

We have allotted individual budgets for the sealing, recoating and general repairs at the parking garage that are needed to maintain the structure. These budgets do not include any on-going major remediations currently on-going at the property. Recoating of the parking garage slab will be required in the near future to help prevent water infiltration through the cracks which can ultimately lead to damage to the concrete and metal reinforcement/post tension cables within the slab.

10. **Entry Gate** - The entrance to the property contains one security gate that consists of a sliding gate that provides access to the parking garage. From our review, the entry gate and directory/access system appeared to be in generally good condition and operating properly.

Due to changes in code compliance, technology and normal wear and tear, remote access systems and directories become obsolete and/or become lacking in new features. Most systems can be upgraded or modified as needed to keep-up with the changing requirements and features.

It is recommended that a budget be allotted for the replacement of the entry motors and the access controllers approximately every 12 to 15 years. It is also recommended that a budget be allotted for the upgrading of the directory and remote access system approximately every 15 years.

11. **Townhome Buildings (Arbors)** - The townhomes (The Arbors) at City Heights Condominium are a series of three-story buildings with pitched composition asphalt roofs and exterior walls, completely faced with brick. The buildings are constructed over crawl spaces with foundations consisting of concrete masonry unit (CMU) foundation walls bearing on the concrete slab parking garage. The structure of the crawl space consists of 2″x10″ floor joists and plywood subfloor. There are also raised landscaped areas supported by the reinforced concrete parking garage structure. There are wood-framed walkways and stairs with metal railing that provide access to the individual units. Each unit has a wood-framed elevated balcony. It is our understanding that the buildings were constructed more than 40

years ago. When originally constructed, the buildings were owned by the Atlanta Housing Authority and were known as Bedford Place. Sometime later, the name of the complex was changed to Plaza West, and when the complex was converted to condominiums, the name was changed to City Heights.

Asphalt shingle cost is somewhat tied to the petroleum industry since the shingles are an asphalt-based product. Sometimes the inflation rate provided (3% per year) is not adequate to keep pace with the cost increases to roofing materials and labor. We are factoring in a 3% inflation rate every year for all the budgets within this analysis so the funding levels for each should be accurate.

Painting should include power washing the buildings, caulking around all doors, windows, and siding, and painting all previously painted surfaces. Any loose siding should be properly fastened, and any deteriorated wood trim should be replaced prior to painting.

Over the years, Ray Engineering, Inc., has completed multiple inspections at the exterior surfaces, the roofs, the balconies and crawl spaces at the townhome units with the most recent reports being completed in 2020 and 2021. In those reports we have noted multiple deficiencies which include but are not limited to the following:

- Cracks and water infiltration issues at the brick veneer.
- Deteriorated and failing balconies, stairs and walkways (all wood construction).
- Water infiltration concerns at the front entry doors to the units.
- Railing connection issues at the walkways and balconies.
- Structural issues at the framing within the crawl spaces.
- Drainage issues at the planters.
- Roof leaks at the roofing shingles.

It is our understanding that over the last several years, the Association has completed remediation projects at the townhome units. As mentioned previously in this study, the Association is currently completing multiple large remediation projects, starting with the redesigning or removing the planters. In 2021, we provided a Full Estimated Restoration Scope of Work which included the

replacement and repair of the individual items found in need of remediation at the townhome units. The items listed are as follows:

CONDITION
Entry Door Restoration (ALL UNITS)
Re-Install Planter Wall/Soil (SqFt)
Downspouts Replace/Re-Pipe @ Planter(s) (L.F.)
Repair at Brick at Covered Walkway (S.F.)
Railing to be Re-Installed and Fastened (L.F.)
Install Post and Base Cap Connectors at Balcony Columns (EA.)
Replace Wood Stair Treads (EA.)
Stain and Seal Wood Decking (SqFt)
Replace Steel Pipe Columns w/ 6x6 P.T. Column (EA.)
Install 12"x12"x8" Concrete Footing at Columns (EA.)
Stain/Repair Metal Roofs (EA.)
Waterproofing Membrane Application @ CMU (L.F.)
Seal Along Exterior Envelope at Base of Brick Walls (L.F.)
Repair/Tuck Point Brick @ Exterior (SqFt)
Seal cracks on surface of parking deck (L.F.)
Coat Surface of Parking Deck w/ Masterseal (SQFT)
Excavate and Seal Along Seam of Foundation Wall of Parking Deck (L.F.)
Crawl Space/Floor Wood Repairs (SqFt)
Shingled roof replacement (SQ)

In order to better represent the conditions observed at the arbors, we have attached the most recent report that reflects our findings and photographs of the individual issues. A general timeline has been planned by the Association to make the necessary repairs and each item is to be completed in order by matter of urgency.

We have provided budgets for each of the represented items in the reserve with estimated dates for completion based on discussions between Ray Engineering, Inc., and the Association and the results of our findings. The reserve may not show the exact clarification as shown above in the chart; however, all capital items needed to be budgeted for has been included, as needed. Following the completion

of the major remediation projects to be completed at the Arbors, we have provided budgets and estimated remaining lives for all future expenses to be covered by the reserve.

12. **Tower Exterior Components** – The roof consists of a low-sloped TPO roof and a moderately steep-sloped roof with metal seam roofs at the building extensions on the roof. The roof drainage is controlled by aluminum gutters and scuppers with downspouts. Overflow scuppers are provided in the parapet wall surrounding the perimeter of the roof. It is our understanding that the TPO roof was replaced in 2015. There are also four (4) metal seam roofs at each end of the square roof system that overhang the top of the balconies.

    The exterior finishes consist of a combination of brick veneer and an exterior insulated EIFS. At the exterior of each of the units are reinforced concrete balconies with concrete parapet walls for the railing. Due to hidden conditions, the vapor barrier, exterior sheathing, and flashing behind the exterior finishes could not be observed. Also due to the height of the building we could not observe the full condition of the exterior surfaces so most of our budgeting for the exterior is based upon the results from our visual inspection, information provided by the Association, and our past experience. It is our understanding that the Association has been maintaining the exterior surfaces on an as needed basis and there were no obvious decencies noted; however, it is also our understanding that there are some concerns in regards to the condition of the balconies and the Association has requested for us to complete a full inspection of each balcony. We have not completed the review of the balconies; however, upon completion of a full review by either Ray Engineering, Inc., or others, the budget for the maintenance of the exterior surfaces and balconies can be revised, as needed.

    Overall, we did not observe any major deficiencies and all budgeting items required for each exterior component for the tower has been provided on the reserve.

    Following is the estimated useful life of the components for the exterior surfaces of the Tower.

    Balconies & Railings – Restoration (Paint/Repair/Seal) ..... Every 10-12 years
    Exterior EIFS – Clean/Repair/Seal/Paint..... Every 8-10 years

Brick Veneer – Repair/Tuck Point ..... Every 10-12 years
Supports/Straps for HVAC – Paint/Repair/Partial Replace ..... Every 5-6 years
TPO Roof - Replace ..... Every 18-20 years
TPO Roof Repairs ..... Every 4-5 years
Metal Seam Roof – Repair/Seal/Paint ..... Every 13-15 years

We have provided budgets for each of the above-referenced items and have included them in the reserves.

13. **Tower Building Interior Components** – The common corridors at each level consist of mostly carpeted floors with minor tile sections, painted gypsum drywall walls and ceilings. A mechanical and maintenance closet is located on each floor. From our review, the common corridors and corresponding components appeared to be in generally good condition; however, it is our understanding that the flooring within the common corridors are to be replaced in 2023.

The main entrance to the building is located on the ground floor, and is accessed from a pedestrian entry. The lobby consists of tile floors with gypsum drywall walls and ceiling. Within the lobby is a concierge desk, mail room and employee break room. There are painted metal mailbox clusters within the mail room.

At the amenity area within the building is a fitness center and laundromat room. The fitness center has matted floors with painted gypsum board walls. It is our understanding that the fitness equipment was recently replaced.

At the second floor of the town, there are the management office space that includes the main property manager office, meeting room, and assistant desk. The room is enclosed with large glass panes and the interiors consist of carpeted floors and painted gypsum board walls.

Overall, the condition of the interiors appeared to be in generally fair condition and showing signs of normal wear and tear.

Following is the estimated useful life of the components for the interior components of the Tower.

Lobby & Reception Desk - Remodel ..... Every 12-15 years
Offices Interior Surface – Repair/Paint ..... Every 10-12 years
Office Floor – Replace Carpet ..... Every 8-10 years
Office Equipment - Replace ..... Every 4-5 years
Fitness Room Equipment – Partial Replace ..... Every 4-5 years
Mailboxes - Replace ..... Every 25-30 years
Corridor Interior Walls – Repair/Paint (16 Floors) ..... Every 8-10 years
Corridor Carpets - Replace ..... Every 8-10 years

We have provided budgets for each of the above-referenced items and have included them in the reserves.

14. **Tower Plumbing/Mechanical/Electrical Systems –** The domestic water supply at the property consists of a main supply line which enters the property. The water line then enters into the mechanical room at the lower level where it feeds the domestic water house pumps and provides domestic water to the building. It is our understanding that there are no apparent problems with the domestic water lines, water flow, or water pressure. Due to hidden conditions, we are unable to determine the full condition of the domestic water components.

There is one 30-gallon water heater for the common areas. At the time of our review, the water heater appeared to be in generally good condition and operating properly and it is our understanding that it should not have to be replaced for at least six (6) years.

The common corridors, lobby, and amenity area are heated and cooled by two, large HVAC units. We were not informed of any issues regarding the HVAC systems that service the common areas and our analysis is based upon the current age of the units and information provided by the Association.

Each of the individual units and common areas are protected by a wet-type sprinkler and standpipe system. The controls and pumps for the fire protection system are located in an equipment room on the basement level. The fire protection system is serviced by a 6" ductile iron fire service, which enters to the rear of the building. Flow and tamper switches are provided at each of the valves at the equipment room.

We were not informed of any issues regarding the fire safety system. Typically, a fire protection system is inspected on an annual basis by a certified fire inspection company to determine if any upgrades or repairs are needed. conditions of the systems are typically shown by a red, yellow or green tag. If a tag is red, some degree of maintenance or remediation is required to bring the system up to compliance.

The building is serviced with access-controlled security panels, located at the entry doors of the building. There are also small security cameras in the common areas of the building and at the parking lot. The security access panels and cameras were observed to be in generally good condition and operating properly.

The common electrical fixtures consist of multiple types of lighting fixtures, located in the common areas of the building. This includes both interior and exterior fixtures that are typically replaced on an as needed basis. Since we reviewed the property during the day, we were not able to observe what light fixtures were not properly working at the exterior of the building.

There is a large chiller that services the building. By definition from Panasonic:

"A chiller (cooling water circulation device) is a general term for a device that controls the temperature by circulating a liquid such as water or heat medium as a cooling liquid whose temperature was adjusted by the refrigerant cycle. In addition to maintaining the temperature of various industrial devices and laboratory instruments, equipment and apparatuses at a constant level, it is also used for air conditioning in buildings and factories. It is referred to as a "chiller" because it is often used for cooling.

A chiller can supply chilled water continuously while circulating water in a cooling device. It is used a lot as a suitable device to cool heat generating parts and air conditioning equipment such as laser processing devices and high frequency heating devices at a constant temperature, solves various cooling problems and can reduce running costs while improving energy efficiency."

It is our understanding that the chiller will require replacement within the next six years.

There is also a large Generac Generator that services the building in case of a power outage. Typically, a Generac Generator has a useful life of 30+ years depending on how well it is serviced and maintained. It is our understanding that the Association performs regular maintenance and repairs of the generator every three (3) years. We did not provide a budget for a full replacement of the generator as requested as the maintenance performed on the generator should extend its life beyond 20 years.

There are two elevators located at the property. There is one that services as a lift from the ground level to the top of the parking garage and the other is an elevator which services the building and provides access to each of the individual floors of the tower. The mechanical equipment for the tower elevator is located at the roof within an enclosed structure. It is our understanding that the elevator equipment receives on-going maintenance. From our review, the elevators' cabs and equipment appeared to be in generally good condition and were both functioning at the time of our review. Based on the overall age of the elevators, the upgrading of the elevator equipment is projected to be competed within the next five (5) years.

Following is the estimated useful life of the components for the electrical, plumbing and mechanical components of the Tower.

Entry Access System..... Every 8-10 years
Electrical Panels – Repair as Needed ..... Every 1-2 years
Electrical Panel Boards and Switches - Replace..... Every 20-25 years
Common Exterior Lighting – Repair/Partial Replace..... Every 8-10 years
Common Interior Lighting – Repair/Partial Replace..... Every 8-10 years
Security System/Cameras – Upgrade/Replace..... Every 8-10 years
Fire Alarm System Panels – Upgrade/Replace ..... Every 12-15 years
Fire Sprinkler Repairs ..... Every 8-10 years
Jockey Pump - Replace ..... Every 7-8 years
Fire Pump - Repair ..... Every 20-22 years
Plumbing Fixtures – Repair/Partial Replace ..... Every 12-15 years
Rooftop HVAC System - Replace ..... Every 14-15 years
Ground HVAC System - Replace ..... Every 14-15 years

Water Heater (30 Gallon) - Replace..... Every 10-12 years
Water Piping – Repair/Partial Replace..... Every 8-10 years
Underground Sewer Lines – Repair/Partial Replace..... Every 12-15 years
Elevator Cabs - Remodel..... Every 10-12 years
Elevators – Upgrade/Replace..... Every 20-25 years
Chiller - Replace..... Every 20-25 years
Chiller Circulating Pumps - Replace..... Every 20-25 years
Generac Generator – Repair/Maintain..... Every 2-3 years

We have provided budgets for each of the above-referenced items and have included them in the reserves.

II. RESERVE CASH FLOW ANALYSIS

A. INTRODUCTION

The enclosed chart and graph contain a 20-year cash flow projection of the reserve requirements for the Association. The budget should be adjusted at the end of the 20-year period to readjust for changes in remaining life, inflation, and current costs of replacements. This cash flow analysis is based on the assumption that all of the items that make up the schedule are fully funded. By this we mean that each item will accumulate its full replacement cost during its life span. At the end of this life, each item would be replaced, and the funding would start aging for items with a long life. For items with a short useful life, the funding for the first replacement is budgeted in addition to future replacements due to the short life span. The future replacement funding is started in the first year; however, payments are less than the first replacement due to the extended time period allowed to accumulate funds. Taking all of the components that make up the reserve schedule, using this full funding analysis, there is typically an ongoing surplus in the reserve fund. This ensures that the Association will have a surplus at the end of the 10-year period. This is called the "pooling effect" and is represented by the upper line on the cash flow chart, which is designated as the "Net Cumulative Fund." The "Net Cumulative Fund" is calculated by taking the existing amount in the reserve fund at the time the reserve schedule is prepared, adding to it the yearly contribution, and subtracting from it the annual expenditures.

The annual reserve funding required has been calculated by estimating the useful remaining life based on the current condition, age, and all other known factors of each item description. The present value replacement cost was estimated by either past quotations or other listed methods of estimation. The present value replacement cost was then converted to future value using a 3% annual compounded inflation rate. The future cost was calculated for the projected time when replacement will be required.

The future cost was then broken down into annual installments while still considering the 3% compounded annual inflation rate. The monthly reserve funding was calculated by a further breakdown of the annual reserve funding required.

1. Formulas

The following economic formulas were used in our calculations:

DISCOUNTING FACTOR	FUNCTIONAL NOTATION	FORMULA
Single Payment Compound Amount	(F/P, i %, n)	$(1+i)^n$
Uniform Series Sinking Fund	(A/F, i %, n)	$i/[(1+i)^{n-1}]$

2. Definitions

Definitions of the above-mentioned terms are as follows:

TERM	DEFINITION
Single Payment Compound Amount	Conversion of present worth to future value
Uniform Series Sinking Fund	Conversion of future value to annual value
F	Future worth of item in *n* years from present
P	Present Worth
A	Annual worth
I	Interest Rate (1.00% used)
N	# of years until each calculated replacement

B. PROJECTED CASH FLOW GRAPH AND CHART

The projected cash flow for the Capital Reserve Analysis is illustrated by the bar graph and line chart on the following pages.

C. Recommendations and Conclusions

Based on our review, we would make the following recommendations. The Association should set aside the following amount for the specified year into the reserve fund:

Cost and Funding Recap

See Attached

The Association should update the reserve schedule a minimum of once every two years. It is especially important to update the schedule when using average contribution due to the fact that even a minor change in the estimated useful life can have a significant impact on adequate funding.

The Association should review each of the individual line items that make up the reserve schedule to make sure that there is no overlap between what is indicated in the schedule and any other portion of the budget. For example, we may show on the reserve schedule the replacement of fencing, but at the same time, the Association may be replacing the fencing out of their operating budget. If duplication like this exists, the item should either be removed from the reserve schedule or the operation budget. It should not be funded in two different locations.

The Association should review the items on the schedule to assure that their replacement is not covered under a maintenance contract. An example would be reserving for the replacement of mechanical equipment components while the Association has a maintenance contract for the item at the same time. The reserve schedule should be carefully reviewed to be sure that it does not fund the replacement of any portion of any item whose replacement is covered under a maintenance contract.

The Association should review the items on the schedule to be sure that they are all the Association's responsibility. As an example, if we have included site lighting on the reserve schedule, but at the same time the local municipality is responsible for the maintenance and repair of these connections, they should be removed from the schedule.

The Association should review the individual line items on the reserve schedule carefully to determine if a number of the smaller individual components can be consolidated into one line item which can be continuously funded.

For example, if there are five or six components with a total replacement cost of $1,000 each, rather than reserving the full $5,000 or $6,000 for all of these items, the Association may want to consider funding all six components under one line item for a total of $1,000. Should one of these six items have to be replaced, that line item would have to be brought current within a year or so after its expenditure. By doing this rather than

funding the full $6,000, only a portion of the total would be funded. This would reduce the overall yearly contribution to reserves.

Depending on the size of the overall operating budget, the Association may decide that any line item of less than the given amount will be funded directly through the operating budget rather than through the reserve schedule. If this is the case, any item with the given value or less should be removed from the schedule. The schedule would then be footnoted accordingly.

III. RECOMMENDED MAINTENANCE SCHEDULE

The following guidelines are intended to ensure that a program of preventive maintenance is implemented in order to assure that, as a minimum, the predicted useful lives of the major common elements is attained. A preventive maintenance program is made up of "a system of periodic inspections of existing facilities to uncover conditions leading to breakdown or harmful depreciation and the correction of these conditions while they are still minor." It should be noted that experience has shown that a proper maintenance program can add 50% to the expected useful life of some items.

In any case, the proper determination of the useful lives of the items which make up your common elements is critical to the proper updating of the reserve schedule. The items included will only attain their anticipated useful lives if a proper maintenance program is implemented. For this reason, it is recommended that the reserve schedule be updated every two years to assure that all items are being properly maintained.

A. ASPHALT PAVEMENT

The early detection and repair of minor defects is the most important consideration in the preventive maintenance of pavements. Cracks and other surface breaks, which in their first stages are almost unnoticeable, may develop into serious defects if not repaired in a timely manner. For this reason, walking inspections of the pavement should be conducted in the fall and spring of each year, as a minimum.

The inspections should note small cracks or other surface breaks in the pavement. In addition, there are other signs, such as mud or water on the pavement surface or soil erosion along the edges of the pavement, which may indicate possible future problem areas.

Most small cracks or surface breaks can be repaired by sealing them with a good commercial-grade caulk. Areas which have settled and pose a possible trip hazard should be cut out and replaced to prevent a potential liability problem, as well as to prevent further deterioration of the surface. If large areas are observed

to be cracking or breaking up, this may be an indication of a problem with the base material and/or subsoils and would require further investigation to determine the

cause and proper method of repair.

B. CONCRETE PAVEMENT

The early detection and repair of minor defects is the most important consideration in the preventive maintenance of pavements. Cracks and other surface breaks, which in their first stages are almost unnoticeable, may develop into serious defects if not repaired in a timely manner. For this reason, walking inspections of the pavement should be conducted in the fall and spring of each year, as a minimum.

The inspections should note small cracks or other surface breaks in the pavement. In addition, there are other signs, such as mud or water on the pavement surface or soil erosion along the edges of the pavement, which may indicate possible future problem areas.

Most small cracks or surface breaks can be repaired by sealing them with a good commercial-grade caulk. Areas which have settled and pose a possible trip hazard should be cut out and replaced to prevent a potential liability problem, as well as to prevent further deterioration of the concrete surface. If large areas are observed to be cracking or breaking up, this may be an indication of a problem with the base material and/or subsoils and would require further investigation to determine the cause and proper method of repair.

C. SIDEWALKS

Sidewalks should be inspected at least twice a year (spring and fall). The inspection should note any cracked sections, uneven settlement between sections (which may result in tripping hazards), and surface damage. Undermining of sidewalks (caused by soil erosion) should also be noted. Proper replacement of any sections with the above noted problems is necessary to eliminate safety hazards and potential liability problems. These repairs will also allow the curbing to achieve its full useful life.

D. STORM DRAINAGE SYSTEMS

All storm drainage systems should be routinely inspected to ensure proper operation. Inspections should be scheduled for all facilities after major storms for routine maintenance. In addition, bi-annual structural inspections should be performed. The following are the recommended maintenance schedules for each individual section of a storm system:

1. Catch Basins

All catch basins should be routinely inspected after a major storm to ensure that they are working properly. During these inspections, any sediment buildup or debris should be removed from catch basins to ensure that they continue to function properly.

2. Drainage Swales

The five most prevalent maintenance problems with swales are:

- Weed growth
- Grass maintenance
- Sediment control
- Soil deterioration
- Mosquito control

Drainage swales should be inspected on a routine basis to ensure that they are functioning properly. The grass located within the swales should be mowed on a weekly basis to prevent the accumulation of debris, which may impede the flow of the drainage. The trash racks attached to the outlet structures should be periodically checked and cleaned of debris to prevent blockage. The outlet structures should also be checked for deterioration and/or cracking of concrete.

E. LANDSCAPING

A discussion regarding the preventive maintenance of the landscaped areas of the

development would require an entire report. For this reason, it is recommended that a professional service specializing in this area be consulted. It should be noted that landscaping is not included as a reserve schedule item since, with proper maintenance, large-scale replacement should not become necessary.

F. Lawn Sprinkler System

The preventive maintenance of the lawn sprinkler system would require an extensive report concerning the operation and servicing of the control valve, pumps, sprinkler heads, and water lines. For this reason, it is recommended that a professional sprinkler system contractor be consulted to provide the necessary services to properly maintain the sprinkler system.

G. Roofs • Flat

Membrane roof systems can be expected to perform for 10 - 15 years, provided that the systems have been installed in accordance with industry standards. In order to achieve this useful life, proper maintenance requires periodic inspections to detect the need for repair or changes in the roof surface. In order to reduce maintenance and replacement costs, it is vital to detect problems when they are minor and prevent them from escalating into major problems.

Roof inspections should be conducted at least twice a year. These inspections should preferably occur in the early fall to prepare for winter and in the spring to assess any winter damage and prepare for the hot summer sun. In addition to these seasonal inspections, the roofs should be carefully checked after violent rain or windstorms, nearby fires, or after workmen have been on the roof.

The roof inspections should include:

- Examination of exterior walls for settlement.
- Checking interior walls and the underside of roofs for leakage. This is necessary since the majority of roof problems may not be detected by inspecting the outside roof surface.

- Inspection of the roof surface for missing, loose, lifted, cracked, or deteriorated shingles.
- A review of the roof drainage, including any change in the roof and the condition and operation of roof drains, gutters, and scuppers.
- Examination of flashed areas. Most water infiltration problems are caused by flashing defects. Lifted, loose, torn, or missing flashing require immediate repair.
- A review of ventilation since improper ventilation can cause ice damming conditions and accelerates the deterioration of the roof shingle.

H. Roof Drains and Scuppers

The key to maintaining roof drains is to make sure they are kept clear of debris. A buildup of debris blocks roof drains and prevents proper drainage. If this occurs, trapped water will overload the roof, which could result in flooding or structural damage.

I. Roof Parapet Walls

Parapet wall surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of loose or deteriorated flashing, damaged cant strips, and roof membrane deterioration. The lightning protection system should also be included in the inspection. The system should be checked for loose or damaged terminal, frayed and/or deteriorated cable, deteriorated seals, and missing conductors. Deficiencies noted should be repaired by a qualified electrician.

J. Gutters and Downspouts

The key to maintaining gutters and downspouts is to make sure they are kept clear of debris. A buildup of leaves and other plant material will block downspouts and prevent proper drainage. If this occurs, trapped water could weigh down the gutters

and cause them to loosen or fall. Blocked gutters will also overflow along their length, resulting in the washing away of the mulch and/or soils adjacent to the sides of a building, which could result in premature deterioration of a building's exterior finish over time. Ice damming will also be evident in the winter if gutters are not able to drain.

At least twice a year, the gutters should be cleaned and inspected for damage. This should be done in late spring and late fall. Any loose or misaligned gutters should be corrected at this time to prevent further damage. Splash blocks and downspout extension pipes should also be adjusted to prevent erosion and to direct water away from the building.

As the gutters age, the paint coating will oxidize and dull. When this occurs, an aluminum paint product should be used to restore the finish, or the gutters should be power washed to prevent deterioration.

K. STEEL STAIRS, RAILINGS, AND POSTS

All steel components should be inspected on a yearly basis for corrosion or damage. Any excessive corrosion should be addressed as soon as possible by wire brushing to remove all rust and scale, spot priming, and painting as needed. Of special concern are the steel and metal pan stairs. Moisture has a tendency to become trapped between the concrete in-fill of the treads and the metal support pans, resulting in rusting that occur from the inside out. Since this condition is not visible, considerable damage can be done before a problem is realized. We recommend cleaning visible rust off of the stair components and priming and painting the affected areas. Additionally, we recommend cleaning and sealing the concrete of the treads and caulking all of the joints between the steel and concrete interfaces to prevent moisture intrusion.

Note: Salts used to eliminate ice on stairs during winter months can cause concrete and steel to deteriorate prematurely. Only products rated safe for use on concrete and steel should be applied for de-icing purposes.

L. BALCONIES/ DECKS

Deck surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking. Railings and handrails should be inspected for signs of damage. They should also be checked to ensure that they are still sturdy and safe.

M. WOOD SIDING

The proper maintenance of siding is critical to keeping a building waterproof and weather-tight. Prior to painting, all siding should be checked for delamination or deterioration and should be properly replaced or restored as required. All loose siding should be renailed and caulked prior to painting. All joints and penetrations in the siding should be caulked or sealed. Any loose, damaged, or missing trim should also be restored or replaced during siding restoration. During the siding review, any evidence of termite or pest infestation should be checked and treated, as necessary. Lack of maintenance of siding and trim can result in water infiltration problems, as well as a poor appearance.

N. SYNTHETIC STUCCO VENEER

Stucco veneer is subject to cracking and loosening from a variety of environmental and construction causes. Veneers on all buildings should be thoroughly inspected in early spring and late fall. The inspections should include checking for chipped, cracked, deteriorated, and void areas at the stucco surfaces. All caulked joints should be checked for brittleness and delamination from the adjacent substrates. All damaged and deteriorated stucco should be repaired, and all cracks caulked in accordance with the manufacturer's recommendations. Similarly, all dried out and delaminated caulking should be removed and replaced with new caulk. We recommend pressure washing of the exterior surface every two years to remove mold, mildew, and dirt.

O. BRICK VENEER

Brick veneer is subject to cracking and loosening from a variety of environmental and construction causes. Veneers on all buildings should be thoroughly inspected in early spring and late fall. The inspections should include checking for chipped, loose, cracked, deteriorated, and missing bricks. Cracked and missing bricks should be replaced. Cracked mortar should be repointed and caulked at intersections. Other surfaces should be repaired where necessary. Any evidence of moisture on an interior wall surface may indicate water absorption through the brick veneer. This condition may be corrected by applying a sealant to the exterior brick face.

Excessive settlement of the foundation may be evidenced by open cracks, especially around window and doorframes. Significant amounts of loose brick or bulging wall areas may indicate structural deficiencies or that large amounts of differential settlement have taken place at the foundation. These conditions should be investigated by a professional and the appropriate action taken to correct uncovered problems.

P. MECHANICAL EQUIPMENT

A well-established plan of preventive maintenance is essential to obtaining the maximum performance and life from your mechanical equipment. All work should be performed by qualified technicians specializing in the particular equipment.

The following guidelines are considered to be minimal procedures for maintaining the equipment:

1. FURNACES

Surrounding Areas:

The flow of combustion and ventilating air must not be obstructed from reaching the furnace. Air openings provided in the casing of the furnace must be kept free of obstructions, which would restrict airflow, thereby affecting efficiency and safe operation of the furnace. Furnaces must have

air for proper performance. In addition, warm air furnaces should not be operated in a corrosive atmosphere. Paint solvents, cleaning chemicals, spray propellants, and bleaches should not be used in the vicinity of the furnace during normal operation.

Thermostat:

The thermostat is the heart of a warm air furnace center. Its operation depends on the surrounding air temperatures; therefore, it should be mounted on a draft-free inside wall for best operation. Because the thermostat is sensitive to heat, devices such as radios, televisions, or lamps should not be placed near it. The thermostat also accumulates lint, which affects its accuracy. For best operation, the thermostat should be cleaned annually.

Filters:

The filters remove dust and debris from the air before it is heated and circulated to the living spaces. Filters must be changed when dirty. Inspections of the filters should be made on a monthly basis.

Blowers:

The blower size and speed determine the air volume delivered by the furnace. The blower bearings are permanently lubricated and usually do not require servicing. Annual cleaning of the blower wheel and housing is recommended for maximum air output. It is recommended to consult a qualified service technician for this procedure.

Burners:

Gas burners do not normally require scheduled servicing; however, accumulation of lint may cause a yellowing flame or delay ignition. Either condition indicates that a service call is required. For best operation, burners must be cleaned annually using a brush and vacuum cleaner. It is recommended to consult a qualified service technician for this procedure.

Flue Pipe:

For best operation, these items should be inspected for signs of corrosion and/or deterioration and cleaned, if necessary, at the beginning of each

heating season by a qualified service technician.

2. WATER HEATERS

The area near the water heater should be kept free of flammable liquids, such as gasoline, paint thinners, adhesives, and other combustible materials. Make certain that the flow of air to the water heater for adequate combustion (proper burner operation) and ventilation is not obstructed.

A water heater's tank can act as a settling basin for solids suspended in the water. It is, therefore, not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few quarts of water be drained from the water heater's tank every month to prevent this condition from occurring.

At least once a year, lift and release the level handle on the temperature pressure relief valve (located near the top of the water heater) to make certain that the valve operates freely, and allow several gallons to flush through discharge lines. Make certain that the discharge is directed to an open drain.

Visually inspect the burner annually, while firing, and pilot burner flame with the main burner off. If any unusual burner operation is noted, the water heater should be shut off until professional service assistance can be obtained.

The water heater's internal flue should be inspected annually to be certain that it is clean by removing the draft hood and flue baffle. When reinstalling the flue baffle, make certain that it is hung securely by its hanger at the top of the flue. Remove any scale that may have fallen on the burner or flood shield. Reinstall the draft hood. It is recommended that a professional service be consulted for this procedure.

DISCLOSURES

Ray Engineering, Inc. does not have any other involvement with the association, which could result in actual or perceived conflicts of interest.

During our review of the property, visual review, and field measurements, as needed, of each common element was performed. No destructive testing or drawing take-offs were performed.

Material issues which, if not disclosed, would cause a distortion of the association's situation.

Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues will be deemed reliable by the consultant.

The Reserve Analysis will be a reflection of information provided to the consultant and assembled for the association's use, not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.

Ray Engineering, Inc. did not perform an audit of the current or past budgets of the association.

Client is considered to have deemed previously developed component quantities as accurate and reliable.

Ray Engineering, Inc. assumes that the prior Reserve Analysis component quantities were accurate and reliable.

Information provided to Ray Engineering, Inc. by the association representative about reserve projects will be considered reliable. Any on-site inspection(s) by Ray Engineering, Inc. should not be considered a project audit or quality inspection.

BIOGRAPHY

ROBERT "NICKO" ROMEO, R.S.
SENIOR ENGINEER

Mr. Romeo has a Bachelor of Science in Mechanical Engineering Technology, Southern Polytechnic State University, Marietta, Georgia, 2016. Mr. Romeo started his internship with Ray Engineering in 2015 through 2017. In 2017, upon obtaining his Bachelor of Science Degree in Mechanical Engineering, he obtained employment as a Project Engineer at Ray Engineering. Mr. Romeo provides consulting services for civil/structural and construction related problems for various condominium, apartment, single-family, residential, and commercial properties, as well as design and specifications for restoration of deficiencies. Mr. Romeo has seven years of experience in the preparation of Capital Reserve Analyses.

LIMITATION OF RESPONSIBILITY

The report represents a statement of the physical condition of the common elements of the property based upon our visual observation, professional analysis, and judgment. The report applies only to those portions of the property and/or items and equipment which were capable of being visually observed. Unless specifically stated otherwise, no intrusive testing was performed nor were any materials removed or excavations made for further inspection. Drawings and specifications were available only to the extent described in the report.

The following activities are not included in the scope and are excluded from the scope of the reserve analysis described in the National Reserve Study Standards:

- *Utilities* – Operating condition of any underground system or infrastructure; accessing manholes or utility pits; the reserve analysis does not include any infrastructure with an estimated useful life of more than 30 years, unless specified otherwise in the report;
- *Structural Frame and Building Envelope* – Unless specifically defined in the proposal, entering of crawl, attic, or confined space areas (however, the field observer will observe conditions to the extent easily visible from the point of access to the crawl or confined space if the access is at the exterior of the building or common space); determination of previous substructure flooding or water penetration unless easily visible or unless such information is provided;
- *Roofs* – Walking on pitched roofs or any roof areas that appear to be unsafe or roofs with no built-in access; determining roofing design criteria;
- *Plumbing* – Verifying the condition of any pipes underground, behind walls or ceilings; determining adequate pressure and flow rate, verifying pipe size, or verifying the point of discharge for underground systems;
- *HVAC* – Observation of fire connections, interiors of chimneys, flues or boiler stacks, or tenant owned or tenant-maintained equipment;
- *Electrical* – Removal of any electrical panels or device covers, except if removed by building staff; providing common equipment or tenant owned equipment.
- *Vertical Transportation* – Examining of cable, shears, controllers, motors, inspection

tags or entering elevator/escalator pits;

- *Life Safety/Fire Protection* – Determining NFPA hazard classifications; classifying or testing fire rating of assemblies;

- Preparing engineering calculations to determine any system's components or equipment's adequacy or compliance with any specific or commonly accepted design requirements or building codes; preparing designs or specifications to remedy any physical deficiencies;

- Reporting on the presence or absence of pests or insects unless evidence of such presence is readily apparent during the field observer's walk-through survey, or such information is provided to the Consultant;

- Entering or accessing any area of the property deemed by the engineer to pose a threat to the safety of any individual or to the integrity of the building system or material;

- Providing an opinion on the operation of any system or component that is shut down or not properly operating;

- Evaluating any acoustical or insulating characteristics of the property;

- Providing an opinion on matters regarding security and protection of its occupants or users;

- Providing an environmental assessment or opinion of the presence of any environmental issues such as asbestos, hazardous wastes, toxic materials, radon, or the location of designated wetlands, unless specifically defined within the scope of work;

- Any representations regarding the status of ADA Title III Compliance.

The report is not a compliance inspection or certification for past or present governmental codes or regulations of any kind. Any reference made to codes in this report is to assist in identification of a specific problem.

GLOSSARY OF TERMS

Abbreviation	Definition	Abbreviation	Definition
Allow.	Allowance	L.F.	Linear Foot
Avg.	Average	Lg.	Long Length
B.F.	Board Feet	L.S.	Lump Sum
Bit/Bitum.	Bituminous	Maint.	Maintenance
Bldg.	Building	Mat., Mat'l	Material
Brk.	Brick	Max	Maximum
Cal	Calculated	MBF	Thousand Board Feet
C.C.F.	Hundred Cubic Feet	M.C.F.	Thousand Cubic Feet
C.F.	Cubic Feet	Min.	Minimum
C.L.F.	Hundred Linear Feet	Misc.	Miscellaneous
Col.	Column	M.L.F.	Thousand Linear Feet
Conc.	Concrete	M.S.F.	Thousand Square Feet
Cont.	Continuous, continued	M.S.Y.	Thousand Square Yards
C.S.F.	Hundred Square Feet	NA	Not applicable/available
Cu. Ft.	Cubic Feet	No.	Number
C.Y.	Cubic Yard, 27 cubic feet	O.C.	On Center
DHW	Domestic Hot Water	P.E.	Professional Engineer
Diam.	Diameter	Ply.	Plywood
Ea.	Each	Pr.	Pair
Est.	Estimated	PVC	Polyvinyl Chloride
Ext.	Exterior	Pvmt.	Pavement
Fig.	Figure	Quan. Qty.	Quantity
Fin.	Finished	R.C.P.	Reinforced Concrete Pipe
Fixt	Fixture	Reinf.	Reinforced
Flr.	Floor	Req'd	Required
FRP	Fiberglass Reinforced Plastic	Sch., Sched.	Schedule
Ft.	Foot, Feet	S.F.	Square Foot
Galv.	Galvanized	Sq.	Square, 100 Square Feet
Ht.	Height	Std.	Standard
Htrs.	Heaters	Sys.	System
HVAC	Heating, Ventilation, A/C	S.Y.	Square Yard
HW	Hot Water	T&G	Tongue & Groove
In.	Inch	Th, Thk.	Thick
Int.	Interior	Tot.	Total
Inst.	Installation	Unfin.	Unfinished
Insul.	Insulation	V.C.T.	Vinyl Composition Tile
lb.	Pound	Vent.	Ventilator
		Yd.	Yard

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Mechanical Cost Data
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Electrical Cost Data
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Open Shop Cost Data
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PHOTOGRAPHS

1. View of “alligatored” cracks at the visitors parking area.

2. View of “alligatored cracks at the drop off/entry lane.

3. View of cracked and settled section of the asphalt and concrete curb.

4. View of settled section of the sidewalk.

5. View of settled section of the sidewalk that is primarily covered by accumulated silt.

6. View of heavily uprooted section of the sidewalk that is representing a trip hazard.

7. View of entry sign and monument.

8. View of typical crack at the pool deck.

9. View of typical crack at the pool deck.

10. View of typical corrosion found at the pool fence.

11. View of pool house.

12. View of damaged gutter at the pool house.

13. View of clogged drain at the top of the parking garage.

14. View of cracks at the topping slab of the parking garage.

15. View of cracks at the topping slab of the parking garage.

16. View of ponding water and poor drainage in front of one of the planters.

17. View of deteriorated concrete and exposed reinforcement at one of the supporting columns beneath the parking garage.

18. View of cracks and efflorescence at the parking garage slab.

19. View of chipped concrete and exposed reinforcement at the topping slab of the parking garage.

20. View of effloresence at the top of a column.