MUNICIPAL SERVICES BUILDING FEASIBILITY STUDY

100 S. Myrtle Avenue
Clearwater, FL 33756

FOR THE

CITY OF CLEARWATER
CLEARWATER, FLORIDA

DRAFT

MAY 31, 2023

PREPARED BY:

LONG & ASSOCIATES
architects | engineers, inc.

WCCI
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INTRODUCTION

Long & Associates Architects & Engineers, Inc was retained to provide the City of Clearwater with an independent third-party assessment of the existing Municipal Services Building (MSB) and the feasibility of modernizing the facility for continued long term use. The scope of services as defined by the following descriptions of project objectives and project deliverables was established in coordination with City staff. Our team of Architectural and Engineering professionals undertook a series of site observation visits and conducted a series of Document reviews and interviews with City staff to assess the existing conditions and identify deficiencies which must be considered to modernize the facility for continued projected use over the next 25-30 years.

PROJECT OBJECTIVES

The feasibility study goal was to generally review and evaluate the existing MSB Building and render a third-party professional opinion of the conditions and feasibility to modernize the facility for extended long term use, including an independent opinion of probable construction costs.

PROJECT DELIVERABLE

This Final Report includes an Executive Summary, evaluations, observations, and recommendations for the potential use of the facility. This includes the written existing conditions evaluation, a Code Review evaluation, and an Independent Opinion of Probable Construction Cost presuming a 25-year Life Cycle for use as well as an Appendix with the applicable drawings and research.

PROJECT TEAM

Alexander M. Long, AIA, LEED AP, Architect, President

Edward Smith, AIA, Architect, Project Manager

Paul Wieczorek, PE, Structural Engineer, Vice President of Engineering

Elmer Chase, PE, Structural Engineer

Robert Race, PE, LEED AP, Senior Electrical Engineer

Daniel Herrera, PE, Senior Mechanical Engineer

Brad Tubbs, President, Willis Construction Consulting, Inc. – Senior Estimator

FORMAT AND PROCESS

This Final Report is organized into an evaluation section with separate chapters for each discipline involved by floor including a written narrative of what would be expected to modernize the facility by discipline. Following the evaluation, we have included separate chapters to address and highlight specific issues requested by the Owner. Conceptual options have been provided to address a staged remodeling of the facility for various tenant use and to evaluate the various portions of the facility that would have to be remodeled to make each portion function and Code compliant. Lastly, we have provided an Independent Opinion of Probable Construction Cost based on the written narratives and Square Feet to be remodeled and average construction costs anticipated for the 2023/2024 Fiscal Year, presuming 3% inflation for each year thereafter.

The evaluation of the facility was based solely on visual observations by experienced design professionals, a review of available construction documents, and from information obtained through interviews with City personnel. Testing and analysis of materials and methods of construction, testing operational condition of equipment and systems, and indoor environmental quality was not performed within the scope of this study. Information such as dates of original construction, subsequent additions and renovations, and existing building square footage was taken from best available data from other sources as provided by the Owner. Recommendations for enhancements to existing facilities are described in broad terms only to establish the general scope of work required to address needs and deficiencies identified through the evaluation process outlined in this report. Detailed work plans and specific design solutions are beyond the scope of this study. The recommendations are provided to assist the City in a cost-benefit analysis of the potential renovation and modernization of the facility for long term continued use.

OPINION OF PROBABLE CONSTRUCTION COST

Our Independent Third-Party Opinion of Probable Construction Cost is provided to assist the City in financial planning and budgeting necessary to understand the magnitude of effort required to modernize the existing facility to make it suitable for continued use through long term service. We have presumed no change of use and that the building would continue to serve as the City's Municipal Services Building as it does now. The opinion of probable construction cost stated for each work scope is based on our professional experience in the Tampa Bay construction market and we have provided a range of costs. Construction Cost figures were derived from a comparison of standardized unit cost data for similar work scopes and types of projects. Further, we have included a standard contingency as well as a soft cost amount to budget for the necessary fees, testing, and design costs typically encountered to modernize such a facility. These figures are expressed in 2023/2024 dollars, and extrapolation will be

required for any cost projections in future years based on inflation, market fluctuation and other factors. We have suggested a 3% increase be used for future inflation for each year thereafter.

LIMITATIONS OF USE

This report has been prepared solely for use by the City of Clearwater as a planning and budgeting tool and may not contain sufficient or appropriate information for other uses or for the purposes of other parties. In the event any conclusions or recommendations based upon this report are made by others, such conclusions or recommendations cannot be construed to reflect the professional opinions of Long & Associates Architects/Engineers, Inc unless we have been given the opportunity to review and concur with them in writing. We appreciate the opportunity to provide this Professional Architectural and Engineering service for the City of Clearwater. If you have any questions concerning this report, or if we may be of further assistance, please do not hesitate to contact us at your convenience.

LONG & ASSOCIATES

ARCHITECTS/ENGINEERS, INC.

ALEXANDER “LEX” LONG, AIA, LEED AP

PRESIDENT

EXECUTIVE SUMMARY:

Based on our visual observations of this facility, this building appears to be suitable for continued long term use provided the minimum systems are addressed for operable service in accordance with a Level 2 Alteration to meet the Florida Building Code, latest edition. However, we find that this effort will require replacement or upgrades of various systems and a significant monetary investment. While the building is currently occupied, we find that the existing equipment needs various significant repair or replacement to make the space compliant and functional long term. In addition, many of the building's mechanical, plumbing and electrical systems have outlived their useful life span and are in need of replacement or significant upgrades. The emergency power generation system needs to be replaced and upgraded in order to make the atrium and emergency power system modernized for life safety such that the whole building may function as intended. From an exterior point of view, the roof is in need of replacement and the exterior skin should be sealed and the building joints replaced to avoid moisture intrusion at a minimum. Regarding wind sustainability, the building in its current state would most likely comply with the latest FBC meeting a Category 2 hurricane storm for a facility in this location. Although a Level 2 Alteration for an existing building would not require the facility to be structurally upgraded to this extent, a change of use or a complete building remodeling would then require the entire building to be upgraded to meet the current FBC requirements, including the structural systems and exterior components and cladding systems.

For the purpose of this report, we have presumed the building tenants remain the same and that the building will function in its current capacity. Therefore, we presume that all existing systems would generally remain the same in type and service and would be replaced in like kind should that be necessary. Any equipment changes would be modernized in like kind or upgrade should a better and more efficient system be available. We have not evaluated multiple system selections or design alterations as a part of this study. In general, we found the building to be in

good condition considering its current life span and use, and that general building maintenance has been applied for the upkeep and longevity of the facility. The roof, while being 26 years old, was in relatively good condition as a gravel ballasted roof system with evidence of minor areas of repair over time. The exterior skin was in good condition, comprised of mostly aluminum storefront and window systems along with precast concrete panels on a steel frame structural system. In 2007, the exterior window system had an aluminum hurricane screen panel system applied over the aluminum glazing system to protect the building from flying debris and the system appears to be in good condition. The sealants generally appear to be in reasonable condition and varied in apparent age based on type and location. The interior of the facility appeared both contemporary and in good condition considering the age of the facility. The finishes appear to have held up well over time with continued use. The interior functions of the facility appear to remain generally the same as initially planned for in 1996, with a few exceptions and alterations. More recent space changes have been accommodated with interior demountable partitions to the lay in ceiling tile system rather than partitions to deck. With continued maintenance and upkeep the building should continue to perform as it has in the recent past. However, we recommend the city budget accordingly to address the systems that have reached their serviceable lifespan. We would not consider this facility as a “hardened structure” for such purposes. While the building is relatively protected from a severe weather event, we do not recommend its use during such event, but rather directly after such event has passed to reopen city services.

City of Clearwater
Municipal Services Building
Feasibility Study

Municipal Services Building Feasibility Study		Gross SF 69,750
01 - General Requirements		$ -
02 - Existing Conditions		$ 96,683.00
03 - Concrete		$ -
04 - Masonry		$ -
05 - Metals		$ 13,311.00
06 - Woods and Plastics		$ 68,294.00
07 - Thermal and Moisture Protection		$ 725,701.00
08 - Doors and Windows		$ 283,408.00
09 - Finishes		$ 1,406,046.00
10 - Specialties		$ 70,476.00
11 - Equipment		$ 14,500.00
12 - Furnishings		$ 101,809.00
13 - Special Construction		$ -
14 - Conveying Systems		$ 60,000.00
21 - Fire Suppression		$ 217,092.00
22 - Plumbing		$ 336,608.00
23 - HVAC		$ 2,650,650.00
26 - Electrical		$ 2,298,557.00
27 - Communications		$ 635,674.00
28 - Electronic Safety and Security		$ 654,555.00
32 - Exterior Improvements		$ 44,125.00
	Cost of Work Subtotal	$ 9,677,489.00
Design Contingency @	10.00%	$ 967,748.90
Escalation @	3.00%	$ 290,324.67
	Subtotal	$ 10,935,562.57
Permit @	1.00%	$ 109,355.63
Liability Insurance @	1.00%	$ 109,355.63
Payment & Performance Bond @	1.00%	$ 109,355.63
	Subtotal	$ 11,263,629.45
General Conditions @	10.00%	$ 1,126,362.94
Fee @	7.00%	$ 867,299.47
	PROJECT TOTAL	**$ 13,257,291.86**

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City of Clearwater
Municipal Services Building
Feasibility Study

Municipal Services Building Feasibility Study Alternate #1		Gross SF 69,750
01 - General Requirements		$ -
02 - Existing Conditions		$ 7,872.00
03 - Concrete		$ -
04 - Masonry		$ -
05 - Metals		$ -
06 - Woods and Plastics		$ -
07 - Thermal and Moisture Protection		$ -
08 - Doors and Windows		$ 143,451.00
09 - Finishes		$ -
10 - Specialties		$ -
11 - Equipment		$ -
12 - Furnishings		$ -
13 - Special Construction		$ -
14 - Conveying Systems		$ -
21 - Fire Suppression		$ -
22 - Plumbing		$ -
23 - HVAC		$ -
26 - Electrical		$ -
27 - Communications		$ -
28 - Electronic Safety and Security		$ -
32 - Exterior Improvements		$ -
	Cost of Work Subtotal	$ 151,323.00
Design Contingency @	10.00%	$ 15,132.30
Escalation @	3.00%	$ 4,539.69
	Subtotal	$ 170,994.99
Permit @	1.00%	$ 1,709.95
Liability Insurance @	1.00%	$ 1,709.95
Payment & Performance Bond @	1.00%	$ 1,709.95
	Subtotal	$ 176,124.84
General Conditions @	10.00%	$ 17,612.48
Fee @	7.00%	$ 13,561.61
	PROJECT TOTAL	**$ 207,298.94**

WCCI
CONSTRUCTION COST CLARITY

5/26/2023

EVALUATION OF EXISTING FACILITY

The Municipal Service Building (MSB) is a city-owned facility located at 100 S. Myrtle Avenue Clearwater, FL 33756 in the heart of Downtown Clearwater, Florida. The site is a 26-year-old, approximately 69,000 gross square feet 3 story office building that houses City services and is part of a cluster of City related buildings and services. The building's Finish Floor is at elevation 27'-0" and above the apparent flood plain (per the architectural floor plans). The MSB was a part of a phased project that included a parking garage and a new city police headquarters building on adjacent parcels. The complex was designed and constructed in what appears to be 7 phases from 1994 through 1997. Originally called the Clearwater City Services Building, the facility contained 3 occupiable floors with a 4th floor mechanical penthouse and a 4-story atrium.

First Floor	=	20,700 GSF
Second Floor	=	22,500 GSF
Third Floor	=	24,300 GSF
Fourth Floor	=	2,250 GSF
Total Gross	=	69,750 GSF

The MSB currently provides a host of City services to the public including Parks & Recreation, Utilities, Permitting, Code Enforcement, City Engineering, and related services.

Upon approval and notice to proceed, Long & Associates received documents from the City which were scanned copies of the original construction documents of the subject project. The documents received are listed as follows:

11/07/94 -02/15/96	GMP Clearwater City Service Center, Rowe Architects (Incomplete)
09/25/95	Office Building F.P. Plan (As Built), AAA Fire Protection Inc
01/12/96	Municipal Service Center – Office Building (Technology), Bay Resources Inc
05/31/05	Generator Addition For: City of Clearwater – Municipal Service Building, APG Electric
11/14/05	Clearwater City Service Center Chiller Replacement, Advanced Systems Engineering Inc
09/28/07	Phoenix Architectural Products – Hurricane Screens Permit & Shop Drawings

The original scanned documents provided appeared to be partially incomplete and were generally legible as the copies were of varying quality. From what could be obtained, these documents have been reproduced in Appendix C accordingly.

Through professional courtesy, Construction Documents were requested from Rowe Architects who were the original architects in 1994. However, these documents were not available and the City's current set is incomplete and missing several structural documents. We have formed the basis of our review and understanding of the building, along with our on-site field investigations on the limited as-built information provided to date. The "Rowe" Documents appear clear and relatively accurate to the current existing conditions for what portions of the original construction set we have that are available, despite several apparent renovations or remodeling that has taken place since 1996. We would like to thank Rowe Architects for their cooperation in this effort and document search.

EXISTING CONDITIONS SURVEY

On Wednesday, May 3rd, 2023, Long & Associates Architects/Engineers, Inc began the on-site field investigation process to observe and document the existing conditions of the facility. Our team of professionals included Architecture, Mechanical, Structural, Electrical, Fire Protection, Plumbing, Data/Telecom & Low Voltage, and Estimating, and met with Ms. Tara Kivett, P.E., on site for access to the facility. Beginning at the roof top, the team divided by discipline and went throughout the building floor by floor. The Roof, exterior, and each floor were observed by each discipline to document the conditions and findings of use. Subsequent individual meetings with various City staff further addressed existing building conditions and characteristics.

To evaluate the facility, we have broken up the review by floor, and by discipline. Therefore, the order of events is recorded in the following order:

Exterior or General Items
Roof Top & Penthouse - (Approximately 2,250 gsf)
Third Floor - (Approximately 24,300 gsf)
Second Floor - (Approximately 22,500 gsf)
First Floor - (Approximately 20,700 gsf)

In addition, each of the levels is broken down into the various disciplines listed below:

Architectural
Structural
Mechanical
Plumbing
Electrical
Fire Protection

At the conclusion of this report, we offer a general Summary Overview of the entire facility findings.

Our evaluation of the existing Facility also included a review for the following items as requested by the City, and is included below in the appropriate section:

Code Compliance Review
ADA Accessibility Review

While this office inquired with the owner about an existing asbestos abatement survey, an asbestos abatement survey was not performed for this feasibility study and is not included. We further presume that since this facility was designed and constructed after 1995 that the potential for asbestos will be limited and minimal. It should be noted that an asbestos abatement survey will be required prior to any future construction work and is not a part of this study.

EXTERIOR OR GENERAL ITEMS:

ARCHITECTURAL:

The building is essentially a steel frame and concrete building with an exterior precast concrete panel wall system or light gauge metal framing (or cmu) and stucco exterior, and an aluminum window glazing system around the full perimeter of each floor. Interior core parts are poured in place concrete and masonry cmu for the elevator shaft and related spaces. Exterior aluminum storefront glazing systems appear to be original to the 1996 era. From the outside, the exterior skin system appears to be in good condition. However, we noted some minor vertical thermal cracking in the exterior stucco panel system infill locations on the west side of the building. Overall, the building exterior appeared to be in good condition for the age of the facility. In 2007, the city procured and installed aluminum exterior hurricane screens by Phoenix Architectural Products for the exterior aluminum window system around the perimeter of the building in an attempt to more securely protect the building envelope from a severe weather event. This system was rated for large and small missile impact to meet the Florida Building Code 2001 edition and ASCE 7-98 and carried a Miami Dade (NOA) approval Acceptance No. 02-1104.01, Expiration date: 02/04/2008. As late as 2018 a letter was provided by Glass Service Co. Inc, regarding the installation of the original aluminum storefront glazing system that indicates the original glazing is a ½" thick laminated glass (2 layers ¼" glass w/ PVB interlayer) system that is similar to "hurricane impact laminated glass". However, no certification, and or no testing of the system in place was conducted or is available to review upon the writing of this report. The glazing system as installed occurred before the modern Florida Building Code more fully addressed hurricane wind forces and without testing and certification, the system cannot be considered as hurricane wind force (impact) compliant at this time. By contrast, the hurricane screen installation that occurred in 2007 does carry a NOA that complies with the Florida Building Code 2001 Edition and therefore appears adequate and correct for the installation and

wind forces calculated to meet the Florida Building Code at that time. The weak point in this system remains the entry and exit points of the building as these areas also require some form of impact protection, and by doing so, restrict the buildings access points. This affects building ingress and egress and affects the building occupancy during a severe weather event. The ideal installation would include a hurricane rated impact resistant ingress and egress system at all building entry points required for proper occupancy so the building may maintain the intended function and use without blocking an access point.

We note that the exterior HVAC intakes at aluminum wall louvers are not and do not appear to be hurricane or wind driven rain rated, and therefore these would need removal and replacement for FBC 2020 compliance.

STRUCTURAL:

The Municipal Services Building (MSB) is hereby defined as the “subject structure” comprised of three stories and a mechanical penthouse constructed in the mid 1990’s. The MSB is constructed utilizing steel beams, joists, joist girders, and steel columns. The steel columns are generally round HSS (hollow structural steel) sections varying in diameter, except for wide flange columns supporting the roof top chiller platform. The building’s lateral force restraint appears to be provided by a system of shear walls comprised of concrete core sections housing stairs, elevators, and restrooms along with steel cross bracing. An additional concrete walled stair tower providing lateral restraint is located towards the building’s north face. The elevated floor slabs are 4” thick, normal weight concrete on 1-1/2” deep, 22 gage, composite metal deck. The 2nd and 3rd floor slabs are fastened to each concrete core wall through a steel ledger angle. The roof deck attachment to supporting concrete core walls is through steel beam and joist embed connections. The penthouse floor slab consists of reinforced 6” thick concrete reinforced with 2 layers of #4 bars at 12” on center each way.

Basic Design Wind Speed:

Presently Long & Associates (L&A) has been unable to obtain a set of record documents of the structural drawings. Therefore, the wind codes used in the design of the subject structure are unavailable. Based on the date of the very limited, incomplete, and not current GMP Plans that we were provided with, we have deduced that the predominant wind code in effect when the subject structure was designed was the "Standard Building Code (SBCCI)". Per this code, wind loads were based upon the recurrence of "fastest mile" basic wind speeds ranging between 100 and 110 mph for Pinellas County. Fastest mile wind speed is defined as the highest wind speed measured over a period of time it takes one mile of wind to pass by the anemometer while peak gust is the highest 2-5 second wind speed. The actual design basic wind speed selected for the subject structure would have been based upon how the local building official or the Engineer of Record chose to interpret wind map isotachs delineating 100 mph and 110 mph wind zones shown in these building codes, or any possible local ordinances prevailing at the time. It is our belief that the design wind speed was most likely 105 mph (nominal wind speed) based upon design wind loads shown on Sheet S2 dated 2 years later by the same design group for the City Hall renovations nearby.

The current building code in effect for the subject structure is now called the "Florida Building Code (FBC)". This code is based upon "3-second peak gust" winds. Pinellas County building officials currently mandate that new structures must be capable of resisting a minimum of 145 mph ultimate wind (113 mph nominal wind speed), for a 3-second peak gust basic wind. Surface pressures determined using the original design of 105 mph (assumed) fastest mile wind speed compared to surface pressures determined using todays 113 mph 3-second peak gust for the subject structure would not be anticipated to have drastically changed. However, changes in building codes and standards have significantly affected the way allowable loads on structural components and cladding are determined. Early building codes and material standards

traditionally allowed structural engineers to take a one-third stress increase on the calculated design capacities of building components when designing for forces generated from wind events. Current design codes such as the FBC as well as ASCE 7-16 do not allow stress increases resulting from wind loads when designing with certain load combinations and materials. As a result, if any of these structural elements were designed to allow the stress increase, their capacity to support today's current stricter code requirements may be in question.

Wind-Borne Debris:

The Florida Building Code has established “wind-borne debris” regions. In wind-borne debris regions, the FBC requires that all exterior glazing that receives positive pressure in the lower 60 feet in a building shall be assumed to be open unless such glazing is impact resistant or protected with an impact-resistant covering meeting the requirements of an approved impact-resisting standard or ASTM E 1996 and of ASTM E 1886. In addition, glazed openings located within 30 feet of grade shall meet the requirements of the Large Missile Test of ASTM E 1996. The subject structure is located in a wind-borne debris region. The City of Clearwater has installed window barrier systems around the perimeter windows, store fronts, and door openings to meet this requirement. However, there are no barriers observed at exterior wall louvers in these locations that are subject to wind borne debris.

Structural Observations – General/Exterior:

- Louvers did not have any additional impact barrier system in place throughout the building’s exterior.
- The exterior veneer concrete panels of the building’s perimeter were observed from grade. Minor hairline cracks were visible in some panels, however, the majority of the panels showed no signs of cracks and appeared in satisfactory condition.

- The overflow scuppers did show signs of mildew on the exterior face of the concrete panels directly below the scuppers indicating that water accumulates on the roof during rain events and the excess (ponding) water drains via the scuppers. We did not observe any signs of structural distress or overload in the roof elements receiving ponding loads.
- All exterior windows were protected by a Florida Product approved barrier system in place.
- Glazed door entries and the lower section of the glazed storefront at the front entrance have anchor locations above the glazed openings and the slab on grade. This barrier system appears to be part of a rated assembly containing Florida Product approval. However, it is important to note the entire system must be installed prior to a hazardous storm event in order to provide the required impact resistance and may not allow for access to the building once in place.
- Observed exterior cracks in the slab on grade at the employee break area.
- Observed cracked concrete encasements at several exposed perimeter steel columns.
- Observed the generator room building located near the public drive-in teller window. The building is constructed with masonry walls, concrete tie-beams, steel joist, and metal roof deck. The building's structure appears in average condition.

MECHANICAL:

The heating ventilation and air conditioning system as originally designed for this facility utilized an air-cooled chilled water system distributing 44°F chilled water to individual air handlers located in the Penthouse. From the penthouse, the central air handler servicing all three floors of the building distributes cooling air through supply ductwork that extended down a protected shaft branching off at each floor level to provide air to fan powered variable air terminals for distribution to zoned spaces. Return air was achieved through a plenum return that also then traveled upward and back to the penthouse located AHU unit. This system functions as

intended, however, for the future modernization of the system, we would recommend eliminating the plenum return and providing a ducted return system which would improve the air quality and humidity within the building.

PLUMBING

Storm Piping:

One 10-inch storm piping (11,690 SF / 514 gpm) of drainage with an invert 23.69 at the north side of the building. One 12-inch storm piping (15,710 SF / 691 gpm) of drainage with an invert 24.40 at the east side of the building.

A revision was done to re-route one (1) 8" storm drain piping from the penthouse roof drains discharging below the floor of Storage Room CE108 to tie into the east 12-inch storm pipe, one (1) 8" vertical storm drain collecting storm flow from two (2) roof drains at the west side of the third floor roof (south) stair well to tie-in to the same 12-inch storm pipe at the east side of the building. One (1) 6" storm drain collecting storm flow from two (2) roof drains at the west side of the third-floor roof (north) to tie in to the 10-inch north side storm pipe. One (1) vertical 8" storm drain collecting condensate flow from hub drains in the penthouse and routed in the plumbing chase below to tie into the same 10-inch north storm pipe.

Sanitary Piping:

One 5" sanitary piping (240 DFU) of drainage with an invert 22.58 at the north side of the building.

Domestic Water Piping:

3" cold potable water pipe with isolation valve (300 WFU / 108 GPM) connected at the west side of the building to the city water supply pipe. The water line supplies the restroom plumbing fixtures, drinking fountains, sinks, lavatories, utility sinks, hose bibbs, trap primers, etc.

2" non-potable water pipe is also connected at the west side of the building to the city water supply pipe for processing water for the computer room units on the third floor.

Natural Gas Piping:

The natural gas regulator assembly and utility meter is located at the west side of the building and is supplied with a low pressure 3-inch natural gas pipe for a design capacity of 1,223 Mbh for 175 ft of pipe length. For the same length (at 3-inch pipe) the capacity is 1,820 Mbh per the 2014 Fuel Gas Code Tables.

ELECTRICAL:

Lighting - General:

Lighting (Exterior)

The parking lots are illuminated by pole mounted LED light fixtures. The parking lot LED lights appear to be full cutoff type as required by the FBC, but there were no record documents provided to A/E to confirm this Code requirement. The building entry areas were illuminated with soffit lights. The soffit luminaire lamp sources could not be confirmed. If they are the original fixtures, the lamp sources are likely High Intensity Discharge (HID) type. The entry and soffit lights generally appeared to be in serviceable condition, but operation was not observed; therefore, lamp, ballast operation, and photometric performance was not verified at this time. Based on the building 1995 as-built dwgs, the exterior lights were controlled by timeclocks and contactors, photocells and included over-ride switches. Based on field observations, the

timeclock appears to have been removed and it is not clear how the exterior lights are controlled. Florida Energy Efficiency Code requires that exterior lighting controls include astronomic features allowing the system to adjust for changes in seasonal daylight patterns. Based on review of the as-built lighting plans, exterior egress “public way” areas do not have emergency egress lighting provided as required by the NFPA 101.

Power - General:

The building complex is served by Duke Energy. A single utility padmount transformer is located on the west side of the building. The Duke Energy KWD power demand meter number is 9901780.

Secondary power is delivered underground into the main electrical room 2,500-amp GE three section switchboard located on the First Floor, west side of the building. The service entrance switchboard did appear to have a TVSS (transient voltage surge suppressor) or SPD (surge protective device) unit. Low voltage power is provided from the stepdown transformers, 480-208/120 volts, 3 phase, 4 wire located in the main electrical room and in the electrical rooms on each floor. Each floor has separate GE 208V panels to serve general purpose receptacles and receptacles serving computer loads. The switchboard serves a Motor Control Center in the penthouse which distributes power to the mechanical equipment in the penthouse. The main switchboard also serves three Automatic Transfer Switches (ATS). The ATS switches serve emergency panels and UPS equipment. Panelboards in general lack TVSS/SPD devices, directory cards and breaker labels. Service disconnect is not labeled per NEC. Many of the step-down distribution transformers are loud; verification that core mounting bolts were loosened after installation is recommended. Electronic circuit breakers should be field tested, and calibration verified. Thermography of circuit breakers and terminations and breakers is recommended. Testing of breaker operations is recommended.

The electrical distribution equipment appears to be the original equipment installed in 1994. It appears to be in serviceable condition but is nearing the end of the equipment's serviceable life. Many of the equipment components are likely no longer manufactured or discontinued and replacement parts will be more difficult to find.

Coverplates for wiring devices (receptacles, light switches, etc.) were missing source panel and circuit designation labels. Tracing of wiring device branch circuits and labeling device coverplates accordingly is recommended.

Standby Emergency Power Systems:

Based on the 1994 drawings available a standby diesel fueled 200 kW 480/277 volt, 3 phase, 4 wire, Ring Power engine generator, associated life safety and standby automatic transfer switches (ATS) and distribution equipment were installed. The generator and diesel fire pump are housed in a separate building located on NW area of the site. This generator emergency power distribution system was designed to supply emergency backup power to the standby power distribution system and the Life Safety power distribution system. Emergency life safety power is required for egress lighting and other legally required emergency loads. Based on marking on the genset alternator, the generator alternator was changed in May of 2021. The genset has a base fuel tank. The tank fuel capacity could not be verified. The generator annunciator panel was located in the main building lobby. The generator system and generator annunciator serve life safety system loads requiring the equipment to be Level 1 Listed per NFPA 110, but the equipment Level 1 Listing could not be verified. The generator has performed beyond the projected serviceable life of the equipment.

Based on the 2005 generation addition project drawings, a second standby diesel 125 KW, 480/277 volt, 3 phase, 4 wire, Cummins engine generator, standby system ATS switch, distribution equipment and UPS were installed. This emergency distribution system was designed to supply emergency backup power to the existing UPS equipment and an additional UPS. The genset is located on the NW side of the site and is equipped with a NEMA-3R enclosure and a 365 gallon double walled base fuel tank. The generator annunciator panel was located in the main electrical room and should be relocated next to the existing generator annunciator in the building main lobby. The generator is approaching the equipment serviceable life. The generator remote emergency power off (EPO) station should be relocated from the west wall in the main electrical room to the side of the main switchboard, next to the building normal power main disconnect switch in accordance with the National Electric Code (NEC) and NFPA 110.

Uninterruptable Power Systems (UPS):

Based on the review of the 1994 drawings, a 30 KVA, 208Y/120V UPS was installed in the UPS room located on the 1st floor, west side, of the building. The UPS was served from an emergency panel EDPC located in mail electrical room. The UPS served panel 1UL, located in the UPS room and panel 1UL served subpanels 3UL and 3ULT on the third floor.

Based on the review of the 2005 generator and UPS addition project drawings, a 60 KVA, 208Y/120V UPS was installed in the UPS room. The 60 KVA UPS is served from the 125 KW generator via panel 1EHB, and ATS-A located in the main electrical room. The 60KVA UPS serves panel 1ULA in the UPS room and panel 1ULA serves subpanels 3UL and 3ULA located on third floor. The 30 KVA UPS power distribution system from panel 1UL was modified to serve subpanels 3ULT and 3ULTA located on the third floor. The UPS system serves UPS panels located in the Traffic Management Dept and computer room on the third floor.

The nameplates for the 30 KVA and 60 KVA Liebert UPS units indicate the units were manufactured in 2019, which implies the units were changed-out with new units. There were no as-built drawings provided by to the A/E for the UPS equipment replacement project.

The labeling of the ATS switches is confusing as there are two ATS switches that are labeled "ATS-A." The equipment label for the ATS that serves the 60 KVA UPS should be changed to "ATS-C". UPS emergency power shut-off pushbuttons were missing in the UPS room. UPS battery off-gassing detection system and fire suppression system could not be verified. There was an existing Notifier RP-1001 Preaction Deluge Control panel located in the 1st floor main electrical room, but the system condition could not be verified. Drawings for the upgraded UPS system were not available for review. Not enough data was able to be gathered in this study to determine if a fire suppression system was installed and UPS room had appropriate wall fire ratings. Review of the existing UPS battery system and additional Code research is needed to determine Code requirements for the UPS room.

Building Common Area Public Address System:

A PA/sound distribution system was installed throughout the building. The PA system Bogen headend equipment is in the first-floor electrical room and is accessed through the building telephone system. The system consists of recessed ceiling speakers in the building's common corridors and other common areas. The PA system would need to be cross-connect with the fire alarm voice evacuation system for muting of active programs and broadcast of the fire alarm annunciation. The system operations were not verified.

Based on field conversations with Telecommunications Systems Manager, Kelly Hemming, the PA system is rarely used. The telephone handsets are used for intercom communication between building occupants.

If the existing building PA system is to be maintained, the system should be tested, and all inoperable speakers and system components shall be replaced as required for a complete and operational system.

Building PA system As-built drawings were not available to A/E for review.

Conference Rooms A/V Systems:

There were several Conference room local A/V systems throughout the building. The existing systems appear to be operational and most systems included cameras, sound system enhancement speakers, TV monitors, projectors/projection screens, recording equipment, A/V remote controls and A/V cabinets, etc. The operation of the A/V systems was not verified.
Building A/V system As-built drawings were not available to A/E for review.
The A/E needs the help of the City of Clearwater to estimate funding allowances needed to meet the current needs of the conference room A/V systems and determine the projected budget funding allowance required over the next 25 years to fund growth and expansion, system upgrades, system maintenance, etc.

FIRE PROTECTION:

This facility has a wet pipe fire protection sprinkler system for light hazard occupancy. The standpipe fire risers are located in the stairwells and appear to be properly labeled, tested and fire stopped where required. The sprinkler heads in the building are of the fusible link, pendent concealed type throughout the building. The system appears to have had operational tests and labels and is functioning as intended.

FIRE PUMP

The building sprinkler system has a diesel engine driven (Clarke Detroit Diesel) coupled to a Fairbanks Morse fire pump rated for 1,000 GPM with 112.0 psi with maximum 98 brake horsepower. Located in a detached building housing the fire pump and emergency generator.

The fire pump room has a 6" underground supply fire pipe from the city tied into the fire pump header.

There is a 4" supply to the fire department connection outside and another 6" fire supply to the office building.

From this location the fire sprinkler piping is distributed in three zones with standpipes and risers located in two stairwells providing fire protection to the first, second, and third floors with floor control valves and a riser to the penthouse where a double interlock pre-action system is located providing fire protection to a computer room area and traffic control.

The heads are of quick response (165°F) chrome plated finish ½" orifice with 5.6 k factor.
In the areas without ceilings, there are upright quick response (165°F) sprinkler heads chrome plated finish ½" orifice with 5.6 k factor.

ROOF TOP - EXISTING CONDITIONS (Elevation - 70'-0" & 58'-4")

ARCHITECTURAL:

ROOF:

The Roof is generally comprised of a gravel ballasted built up Roof on what appears to be 3" rigid insulation on standard 22 gauge 1-1/2" metal deck on steel bar joists spaced approximately 5'-0" on center. This is consistent with the appearance and limited design drawings and any "re-roofing" that may have occurred over the years appears to have matched this system. The Roof Deck appears to slope at 1/4"/ft minimum to the building perimeter edge and has internal roof drains. The 1/4"/ft minimum meets current minimum roof slopes. The Roof has a parapet around the entire perimeter approximately 2'-0" tall as a part of the precast concrete panel system. The gravel ballasted roof system was in good condition and sloped to the drains. We noticed the roof top lightning protection system was partially intact and in cases disconnected or had been removed from the parapet. Reinstallation and reconnection, certification, of the lightning protection system is needed. Most of the roof top drains had their Roof Drain Strainer tops, however we noted that the roof drain pans contained gravel ballast which has most likely fallen down into the roof drains below. The roof drains were mostly 3" in size on the main roof level. On the upper rooftop penthouse level, the roof drains were only 2" in size. This small roof drain size can lead to drainage problems, and there was evidence that the overflow scuppers were discharging water most likely in a high weather event as the 3" drain size is likely too small to adequately drain the flash flood rain conditions experienced in this local region. We noticed that the edge of the roof in one area on the South side of the building appeared to have had remedial work performed recently that included the removal of the gravel ballast and the patching of the roof membrane with a modified bitumen granular cap sheet and roofing sealants. This indicates there must have been a roof leak at some point in the recent past. The flashing around the perimeter base of the roof system was in good general condition and fabricated from

stainless steel. The roof top sealants were also generally in good condition. There was evidence that the roof top sealants have been improved over time with replacement, and or additional layers.

The construction drawings available provide a basic a roof plan and our observations support the roof condition which generally matches the roof plan layout. Our observation of equipment locations, roof top curbs, fans, vents, drains, and the like were generally similar to where the existing drawings indicated equipment should be based on the mechanical plan and minimal structural drawings. Most of the equipment was mechanical in nature. The roof had a few pitch pockets for utility penetrations and related standpipes. VTR's were lead boot flashed and sealed. The rooftop mechanical platform steel columns through the roof showed evidence of steel corrosion and deterioration at the penetration. Steel remediation would be necessary. The steel pipe guardrails on the elevated mechanical platform have been modified and are in disrepair. The roof system has a lightning protection system installed, however portions of the system were removed or disconnected.

Mechanical equipment on the Roof included individual compressor units, DX units, Air cooled chillers, related units and fans were located on a primary elevated steel rail platform. Liebert DX units were also located on the roof top on pate curbs. Please see the Mechanical Section accordingly for additional information and see the Roof aerial plan for locations of equipment. The mechanical platform on the roof also had a galvanized metal panel skin on the inside face that has deteriorated and rusted most likely due to the salt water/air exposure and this would need replacement at some point.

We have requested any copies the city may have of the current Roof warranties; however, none were available. In our opinion, the roof system has outlived its useful life and is in need of replacement to include adequate and proper roof slope drainage to direct the flow of water to the storm drainage system. The current building code would require new work to meet a 1/4"/ft roof slope as a minimum and the insulating value of the roof would typically need to be increased to an R-30 value. In addition, any new roof work would be required to meet the current FBC wind loads and NOA system assemblies for an application in the wind-borne debris area. There may also be moisture intrusion that has been encapsulated which would necessitate replacement if encountered.

We note that the exterior HVAC intake louvers are aluminum and do not appear to be hurricane or wind driven rain rated. We would recommend replacement as a part of a total building renovation to address severe weather event conditions.

STRUCTURAL:

Roof Existing Conditions:

As previously stated, L&A has been unable to obtain a set of record structural design documents. The subject structure drawings available are limited and currently include S1 through S4 and S10, dated 11-07-94, and are noted for distribution as GMP and Phase 1. We have been provided some drawings from the surrounding buildings as part of the overall phased project. Based on a review of those drawings and our site visit, we offer the following comments:

- (2) Roof top chiller units are supported by an elevated platform with steel wide flange beams framing to wide flange posts and main building HSS columns. Perimeter grating walkways provide access to the equipment. The platform has a partial stucco/metal panel screen wall and steel guardrail on the north, south and west sides with the

penthouse wall on the east side. The steel framing is generally in average condition with some concentrated areas of moderate corrosion. The guardrail is in poor to average condition with several of the post to top flange welded connections showing moderate corrosion.

- Aluminum canopies covered (2) sets of double doors and are anchored to the penthouse wall. The penthouse wall construction appears to be light gage metal studs with plywood sheathing. The canopy anchorage visible appears to be fasten to 2x wood blocking fastened to the metal wall studs.
- The penthouse walls, roof, and the main building roof all appear in average condition. Roof drains with overflow scuppers appeared clear of debris.
- The roof top front atrium glass was covered with a Florida Product approved window barrier system.
- DX Mechanical units setting on pate curbs were insufficiently anchored to resistant lateral and uplift wind forces.

MECHANICAL:

PENTHOUSE - EXISTING CONDITIONS:

Mechanical Penthouse (Roof Top Level - Elevation 58'-4"):

The Penthouse contains the originally installed main air handling HVAC chilled water equipment units, a chilled water outdoor air unit (AHU-1) the central air conditioning air distribution unit for supply and return (AHU-2) interconnecting ductwork, the chilled water distribution pumps, and variable frequency controllers; DDC panel, hydronic equipment (air separator and vents, expansion tank, shot feeder) located along the west wall. Located in the same area, the general exhaust fan EF-1 discharges the exhaust air to the exterior of the building through a louver located midway in the raised platform between the chillers. Located adjacent to this mechanical space is the heating hot-water gas-fired generator with atmospheric draft hood and flue stack

through the roof. In a separate room, the atrium smoke evacuation fan EF-2 and associated ductwork is located discharging through a louver to the north side of the penthouse.

The Mechanical Penthouse

AHU-2 delivers 48,300 cfm cooling air to the Third, Second and First Floors to zoned variable air volume fan-powered boxes to all the floors, respectively. The return air is done by means of a return air plenum above the lay-in ceiling, at each floor, being drawn under the action of the AHU fan back to inlet openings connected to a vertical duct located in a vertical shaft up to the penthouse and routed back to the return side of AHU-2. The outdoor air ventilation is provided by AHU-1 which tempers 10,700 cfm of outdoor air to 44°F and is introduced at a mixing section of AHU-2 to mix with the cooled return air from the building spaces. EF-01 removes 9,700 cfm of air from the restrooms, custodial closets, and general exhaust from public areas on the floors below.

HOT WATER GENERATOR (BOILER)

The existing gas-fired hot water generator is at the end of its economic life and needs to be replaced with a new gas-fired hot water generator with higher efficiency.

The new hot water generator would be selected with a similar type and capacity for natural gas. The boiler shall be copper finned tubing type with atmospheric draft hood to connect to the existing flue stack through the roof. An upgrade would be to select a unit mounted powered vent. Gross Input 1,223 Mbh for an output of 1,002 Mbh. The actual capacity will be evaluated for the current use and demand. The circulating pumps are of the in-line vertical type and will be replaced on the same location on the piping. Pipe insulation will be replaced as required.

ROOF-MOUNTED AIR-COOLED CHILLERS

From the west wall of the penthouse, there is a double door to access the roof. On the roof there are several mechanical air conditioning equipment consisting of two (2) air cooled chillers mounted on a structural platform extending about 24 feet from the penthouse wall westward. There are aluminum stairs and walking grates to access the rooftop units on all sides. These chillers have a nominal capacity of 125 tons each for a combined load of 250 tons. The chillers provide the chilled water to the air handling units described in the penthouse equipment above. These units were installed in the year 2006 and are reaching their economic and operational life. The air-cooled condensing units' aluminum fins are showing deterioration due to exposure to seacoast environment.

From the location of the chillers moving around to the south side of the penthouse there are three (3) condensing units for the computer room air conditioning units located on the third-floor level computer room.

Moving toward the north, along the west penthouse wall, there is the outdoor air intake louver with an extended rain hood for AHU-1 described above. Beyond this intake louver, there are two additional louvers on this wall, one mounted high and the other mounted low for combustion air for the gas fired hot water generator inside the penthouse. On the north wall, there is a large architectural louver for the discharge of the smoke evacuation from the top of the atrium.

AIR DISTRIBUTION

The air distribution to the spaces at each floor is done by main distribution ducts from the central station air handling unit down a vertical duct shaft down to the third, second and first-floor ceiling space using fan powered variable air volume terminals. The air is delivered to the spaces using plenum boxes connected to linear diffusers with discharge openings below the ceiling, supplied with round flexible ducts connections above the ceiling.

Each variable air terminal has an electric heating coil used for re-heating to temper the air for humidity control.

The fan powered box serving the atrium from the first floor has a hot water coil fur 100 Mbh connected to the hot water generator system at the penthouse.

There are six types of variable air terminals based on airflow capacity needed at each space. They have different inlet sizes and fan sizes as follows:

Size 06 has a range up to 450 CFM with a 1/6 HP fan
Size 08 has a range 451 up to 700 CFM with a 1/4 HP fan
Size 10 has a range 701 up to 1,300 CFM with a 1/4 HP fan
Size 12 has a range 1,301 up to 1,800 CFM with a 1/3 HP fan
Size 14 has a range 1,801 up to 2,400 CFM with a 1/2 HP fan
Size 16 has a range 2,401 up to 3,300 CFM with a 3/4 HP fan

The electric heat capacity varies for each application, temperature and humidity control.

PLUMBING:

PENTHOUSE – PLUMBING EXISTING CONDITIONS:

Penthouse (Roof Top Level - Elevation 58'-4"):

The Penthouse roof has three (3) roof drains and one (1) roof drain leader from the atrium roof routed overhead connected to an 8-inch vertical storm pipe.

There are four (4) hub drains collecting condensate from the air conditioning cooling sections of AHU-1 and AHU-2 and routed below to an 8-inch pipe in the plumbing chase to connect to storm below as described above.

ELECTRICAL:

ROOF:

Lightning Protection System:

The roof Lightning Protection System (LPS) appeared to be in relatively good condition. There were several areas noted in the field investigation where the cables base anchors were missing and LPS cables were not secured to roof. Cable clamps shall be provided as required to secure all loose cables. If the roof is recommended to be replaced to allow the building to function for an additional 25 years, the existing LPS system will need to be removed and a new LPS system with a master UL label shall be installed on the new roof.

Power Distribution Equipment:

Several existing disconnect switches serving roof mounted condensing units were rusted and will require replacement with new NEMA-3R fused disconnect switches. In addition, the CU equipment service GFI did not trip when tested. Replace receptacle with new 20-amp WR listed, GFI receptacle with new metallic “while-in-use” cover.

FIRE PROTECTION:

This facility has a wet pipe fire protection sprinkler system for light hazard occupancy. The standpipe fire risers are located in the stairwells and appear to be properly labeled, tested and fire stopped where required. The sprinkler heads in the building are of the fusible link, pendent concealed type throughout the building. The system appears to have had operational tests and labels and is functioning as intended.

THIRD FLOOR (Elevation - 56'-0”)

ARCHITECTURAL:

This floor houses Finance, Information Technology, Internal Audit, Public Communications, Computer Training and Budget Office among other functions. The stairwells appeared clean and free of obstructions. The stair guardrails and handrails appeared to meet current FBC requirements and functions. The general office space witnessed was in good condition. We note the HVAC system utilizes plenum return. The lighting and HVAC System are dated and need modernization. The general ceiling lighting was egg crate type fixtures, and the HVAC supply system utilizes a ceiling grid drop diffuser under higher pressure which creates a dirty discharge location on the ceiling tiles. The finishes were in generally good condition; however, the carpet was worn in typical traffic pattern locations common for business use occupancy. The toilet rooms were in generally good condition; however, they do not fully meet ADA requirements in all

conditions. The individual shower rooms were in good condition, but also did not fully meet ADA requirements as one room has a curb to the shower, and the other room has the ADA seat in the wrong location. In general, tested hardware on the floor varied from 5lbs push pull to 9 lbs push pull on the electronic latch type hardware. Countertop heights were generally at 36", however none were indicated below this height, and none were indicated for frontal approach. To meet ADA a side approach to cabinetry would require a height no greater than 34" to the top of the sink rim or finish countertop. We noted sagging ceiling tiles in the atrium space, which is indicative of higher humidity level exposure. Minor deterioration of the ceiling tile grid was also evident in the T Grid at the lobby level on the third floor. The building appears to be fully sprinkled throughout and has concealed heads throughout. See the Fire Protection System section for more details. The interior building signage was dated and did not contain braille in most conditions. We noted a few locations of stained ceiling tiles indicating most likely condensation of the HVAC system above the ceiling, or in lesser cases a roof leak. We noted that the main atrium stairwell, guardrail/handrail system had one area that is not fully FBC compliant at the landing returns. At the return locations, a sphere greater than 4" can pass through the end guardrail location, and this condition would need to be remedied to be FBC compliant.

ATRIUM:

The Atrium appeared to have the proper smoke evacuation purge system required for an atrium that extends 4 floors, and this system appears to have been installed at or directly after the original construction as the floor plan provided does not match the conditions encountered. We could not locate the smoke purge test controls for the system. In addition, we could not verify the rating of the glazing system that surrounds the atrium on each floor which should be at least 1 hour rated, and typically the atrium glazing system in a condition as witnessed (for the 2020 FBC) would require fire sprinkler deluge along the glass which appears to have been installed as a revision to the construction documents. Fire protection concealed sprinkler heads spaced 6'-0" apart are along the interior ceilings of the office space and 12" off the face of the storefront glazing, as well as all around the top of the atrium space at the ceiling level. For more information see the Fire Protection Section.

STRUCTURAL:

- Steel framing at the 3rd floor appears in satisfactory condition along the west and north sides of the center core.
- Elevated tile flooring surfaces showed little to no visible cracks.

MECHANICAL:

The sprinkler system has been modified to provide sprinkler heads for glass protection of the open atrium over the entry lobby at the ground level. The glass protection sprinkler heads are recessed type located at the penthouse ceiling level along the north, east and south perimeters placed at 6'-0" from each head centered on the 2 by 2 ft ceiling tiles. At the top of the atrium at the west wall there are sprinkler heads covering the west exposure of the atrium return air louvers and smoke evacuation louvers. At the third-floor level, glass protection is provided by sprinkler heads placed along the west corridor at the ceiling level placed at 6'-0" from each head centered on the 2 by 2 ft ceiling tiles. There are no additional sprinkler heads

along the south since there is an open stairwell from the ground level to the third level. At the second floor and first floor levels, glass protection is provided by sprinkler heads placed along the west corridor in the same layout as on the third floor. The air distribution in the atrium consists of air supply introduced at the ground level with high volume linear diffusers and returned at the top with louvers attached to a plenum that is ducted into the return side of AHU-2 in the penthouse. The atrium also has intake louvers connected to a smoke evacuation fan at the penthouse which discharges 40,000 cubic feet per minute (Cfm) through an architectural exhaust louver at the north wall of the penthouse above the roof.

PLUMBING:

Third Floor:

There is non-potable water system routed from the ground level with ¾-inch piping for the computer room unit located in CIS Data Control (CE306) and Traffic (AC317) connected with back flow preventers to the units.

The existing plumbing systems utilize type K copper for the domestic water and what appears to be PVC sewer piping run throughout the building. Toilet room upgrades would require fixture replacement with proper ADA compliant fixtures where required including faucets and drinking fountains as they are not at the right height for a side approach at 34" AFF. Cabinetry would need to be replaced that had water service to meet ADA requirements. We presume most of the existing sewer system would be acceptable to re-use and maintain. All new plumbing fixtures to accommodate ADA requirements will be reconnected to existing domestic water and sanitary and vent piping.

ELECTRICAL:

Lighting (Interior)

Most of the building interior spaces observed are illuminated with fluorescent lighting. The light fixture types include 2'x4' lay-in fixtures with prismatic lens, 2'x4' lay-in fixtures with parabolic lens, recessed downlights with compact fluorescent lamps and strip light fixtures in electrical and mechanical rooms.

Light fixtures are observed to be generally in serviceable condition. Some lenses are yellowed due to aging and UV exposure from the fluorescent lamps. In general, the light fixtures are showing their age. The building lighting controls appear to be the original building controls and their functions could not be verified as this time. There was no daylight harvesting lighting control system observed in the building. Many rooms did not have light occupancy or vacancy lighting controls, room level reduction or dimming controls and the building does not currently meet the Florida Energy Efficiency Code requirements for lighting controls.

The building emergency life safety power distribution system provides power to the building egress lighting system. Upon review of the building as-built lighting plans, the emergency egress light switch emergency bypass relays did not appear to be UL 924 listed, which is required per the current NEC and NFPA 101.

Information Technology is located on the third floor in room #360. An IT Training room is located on the third floor, room #373.

Based on field conversations with Telecommunications Systems Manager, Kelly Hemming, the existing multimode fiber cables were upgraded to single mode fiber cables. In addition, Kelly indicated that a project is currently in the works to transition data storage to the "Cloud" which will reduce the data storage static hard drives, file servers and related equipment in the 3rd floor CIS room.

Communication Network system As-built drawings were not available to A/E for review for communication system upgrades installed after 1997.

It is our understanding that the IT Central Hub is being upgraded under a separate project. The current plan for the IT Central Hub, with regard to this study, is to capture the cost of modernizing the existing infrastructure as it is, with no size change. Any upgrades to the IT Central Hub will be part of a separate City of Clearwater project.

Cable TV/C-View TV Studio:

The building appears to have a C-View Television broadcasting system and CATV distribution system within the building. The C-view television broadcasting and recording studio is located on the third floor, room #381.

The system broadcasts RF signals through roof top antennas. There are also CATV terminal cabinets with signal amplifiers located in the 1st, 2nd, and 3rd floor communications closets. Horizonal CATV Coaxial cable is distributed from the terminal cabinets to CATV outlets throughout the building.

Cable TV system As-built drawings were not available for review.

It is our understanding that the C-View TV Studio room is being upgraded under a separate project. The current plan for the C-View TV, in for the regards to this study, is to capture the cost to modernize the existing infrastructure as it is, with no size change. Any upgrades to the TV Studio will be part of a separate City of Clearwater project.

Traffic Signal Computer/Control Room:

The Traffic Signal Computer/Control room is located on the third floor of the building in Room #392. The Computer Room has several equipment racks with electronic equipment, servers, recording equipment and a raised floor to accommodate cabling between equipment devices and cabinets. The room is also equipped with video wall monitors and a central control/monitoring station.

It is our understanding that the Traffic control room is being upgraded under a separate project this year.

The current plan for the Traffic Control Room, in for the regards to this study, is to capture the cost of modernizing the existing infrastructure as it is, with no size change. Any upgrades to the Traffic Control room will be part of a separate City of Clearwater project.

FIRE PROTECTION:

This facility has a wet pipe fire protection sprinkler system for light hazard occupancy. The standpipe fire risers are located in the stairwells and appear to be properly labeled, tested and fire stopped where required. The sprinkler heads in the building are of the fusible link, pendent concealed type throughout the building. The system appears to have had operational tests and labels and is functioning as intended.

SECOND FLOOR (Elevation - 42'-5")

ARCHITECTURAL:

The Second Floor Level currently houses Planning and Development, Code Compliance, Engineering, and related city services. The stairwells appeared clean and free of obstructions. The stair guardrails and handrails appeared to meet current FBC requirements and functions. The general office space witnessed was in good condition. We note the HVAC system utilizes plenum returns. The lighting and HVAC System are dated and need modernization. The general ceiling lighting was egg crate type fixtures, and the HVAC supply system utilizes a ceiling grid drop diffuser under higher pressure which creates a dirty discharge location on the ceiling tiles. The finishes were in generally good condition; however, the carpet was worn in typical traffic pattern locations common for business use occupancy. The toilet rooms were in generally good condition; however, they do not fully meet ADA requirements in all conditions. In general, tested hardware on the floor varied from 5lbs push pull to 9 lbs. push pull on the electronic latch type hardware. Countertop heights were generally at 36", with stand up countertops at 42" to 48"; however none were indicated below this height, and none were indicated for frontal approach. Typically, a stand up counter would require two heights, one to meet ADA at 30" and one at stand up height of 42" to 48". To meet ADA, a side approach to cabinetry would require a height no greater than 34" to the top of the sink rim or finish countertop. We noted sagging ceiling tiles in the lobby space, which is indicative of higher humidity level exposure. Minor deterioration of the ceiling tile grid was also evident in the T Grid at the lobby level on the second floor. The interior building signage was dated and did not contain braille in most conditions. We noted a few locations of stained ceiling tiles indicating most likely condensation of the HVAC system above the ceiling. We noted that the main atrium stairwell, guardrail/handrail system had one area that is not fully FBC compliant at the landing returns. At the return locations, a sphere greater than 4" can pass through the end guardrail location, and this condition would need to be remedied to be FBC compliant.

STRUCTURAL:

- Steel framing at the 2nd floor appears in satisfactory condition along the west and north sides of the center core.
- Elevated tile flooring surfaces showed little to no visible cracks.

MECHANICAL:

The mechanical system on this floor is served by an AHU unit in the penthouse though ductwork distributed downward through a duct shaft in the building. From the penthouse, the central air handler servicing all three floors of the building distributes cooling air through supply ductwork that extended down a protected shaft branching off at each floor level to provide air to fan powered variable air terminals for distribution to zoned spaces. Return air was achieved through a plenum return that also then traveled upward and back to the penthouse located AHU unit. This system functions as intended.

PLUMBING:

The existing plumbing systems utilize type K copper for the domestic water and PVC sewer piping run throughout the building. Toilet room upgrades would require fixture replacement with proper ADA compliant fixtures where required including faucets and drinking fountains as they are not at the right height for a side approach at 34" AFF. Cabinetry would need to be replaced that had water service to meet ADA requirements. We presume most of the existing sewer system would be acceptable to re-use and maintain. All new plumbing fixtures to accommodate ADA requirements will be reconnected to existing domestic water and sanitary and vent piping.

ELECTRICAL:

Lighting (Interior)

Most of the building interior spaces observed are illuminated with fluorescent lighting. The light fixture types include 2'x4' lay-in fixtures with prismatic lens, 2'x4' lay-in fixtures with parabolic lens, recessed downlights with compact fluorescent lamps and strip light fixtures in electrical and mechanical rooms.

Light fixtures are observed to be generally in serviceable condition. Some lenses are yellowed due to aging and UV exposure from the fluorescent lamps. In general, the light fixtures are showing their age. The building lighting controls appear to be the original building controls and their functions could not be verified as this time. There was no daylight harvesting lighting control system observed in the building. Many rooms did not have light occupancy or vacancy lighting controls, room level reduction or dimming controls and the building does not currently meet the Florida Energy Efficiency Code requirements for lighting controls.

FIRE PROTECTION:

This facility has a wet pipe fire protection sprinkler system for light hazard occupancy. The standpipe fire risers are located in the stairwells and appear to be properly labeled, tested and fire stopped where required. The sprinkler heads in the building are of the fusible link, pendent concealed type throughout the building. The system appears to have had operational tests and labels and is functioning as intended.

FIRST FLOOR (Elevation 27'-0")

ARCHITECTURAL:

The First Floor Level houses the Public main entry lobby and waiting rooms with the Human Resources, Parks & Recreation, Utility Customer Service, and Conference Room. The stairwells appeared clean and free of obstructions with one exception under the enclosed stairwell landing. This area had storage of materials and a trash can that should be removed. Storage of materials is not permitted under a stairwell or stairwell landing per the FBC and NFPA. The stair guardrails and handrails appeared to meet current FBC requirements and functions. The general office space witnessed was in good condition. We note the HVAC system utilizes plenum returns. The lighting and HVAC System are dated and need modernization. The general ceiling lighting was egg crate type fixtures, and the HVAC supply system utilizes a ceiling grid drop diffuser under higher pressure which creates a dirty discharge location on the ceiling tiles. The finishes were in generally good condition; however, the carpet was worn in typical traffic pattern locations common for business use occupancy. The toilet rooms were in generally good condition; however, they do not fully meet ADA requirements in all conditions. In general, tested hardware on the floor varied from 5lbs push pull to 9 lbs. push pull on the electronic latch type hardware. Countertop heights were generally at 36", withstand up countertops at 42" to 48"; however, none were indicated below this height, and none were indicated for frontal approach. Typically, a stand-up counter would require two heights, one to meet ADA at 30" and one at stand-up height of 42" to 48". To meet ADA, a side approach to cabinetry would require a height no greater than 34" to the top of the sink rim or finish countertop. We noted sagging ceiling tiles in the lobby space, which is indicative of higher humidity level exposure. Minor deterioration of the ceiling tile grid was also evident in the T Grid at the lobby level on the second floor. The interior building signage was dated and did not contain braille in most conditions. We noted a few locations of stained ceiling tiles indicating most likely condensation of the HVAC system above the ceiling. We noted that the main atrium stairwell, guardrail/handrail system had one

area that is not fully FBC compliant at the landing returns. At the return locations, a sphere greater than 4” can pass through the end guardrail location, and this condition would need to be remedied to be FBC compliant.

STRUCTURAL:

- Observed cracks in the exterior slab on grade at the employee break area.
- Observed cracked concrete encasements at several exterior exposed, perimeter steel columns.
- Observed the generator room building located near the public drive-in teller window. The building is constructed with masonry walls, concrete tie-beams, steel joist, and metal roof deck. The building’s structure appears in average condition.

MECHANICAL:

The mechanical system on this floor is served by an AHU unit in the penthouse though ductwork distributed downward through a duct shaft in the building. From the penthouse, the central air handler servicing all three floors of the building distributes cooling air through supply ductwork that extended down a protected shaft branching off at each floor level to provide air to fan powered variable air terminals for distribution to zoned spaces. Return air was achieved through a plenum return that also then traveled upward and back to the penthouse located AHU unit. This system functions as intended.

PLUMBING:

The existing plumbing systems utilize type K copper for the domestic water and PVC sewer piping run throughout the building. Toilet room upgrades would require fixture replacement with proper ADA compliant fixtures where required including faucets and drinking fountains as they are not at the right height for a side approach at 34" AFF. Cabinetry would need to be replaced that had water service to meet ADA requirements. We presume most of the existing sewer system would be acceptable to re-use and maintain. All new plumbing fixtures to accommodate ADA requirements will be reconnected to existing domestic water and sanitary and vent piping.

ELECTRICAL

Lighting (Interior)

Most of the building interior spaces observed are illuminated with fluorescent lighting. The light fixture types include 2'x4' lay-in fixtures with prismatic lens, 2'x4' lay-in fixtures with parabolic lens, recessed downlights with compact fluorescent lamps and strip light fixtures in electrical and mechanical rooms.

Light fixtures are observed to be generally in serviceable condition. Some lenses are yellowed due to aging and UV exposure from the fluorescent lamps. In general, the light fixtures are showing their age. The building lighting controls appear to be the original building controls and their functions could not be verified as this time. There was no daylight harvesting lighting control system observed in the building. Many rooms did not have light occupancy or vacancy lighting controls, room level reduction or dimming controls and the building does not currently meet the Florida Energy Efficiency Code requirements for lighting controls.

Communication systems:

Telephone System:

Based on a review of the building 1997 Voice Riser as-built diagram prepared by Bay Resources, Inc, the telephone PBX is located in the building PBX room on the 1st floor, west side of the building. The PBX is served from a 12-strand fiber from the police station and a 400 pair telephone riser cable is distributed from the PBX to telephone wall mounted 110 punch-down blocks located in the each of the 1st, 2nd, and 3rd floor communications closets. A horizontal telephone cable is distributed from the communications closet to telephone outlets to serve active analog emergency phones, digital phones, and analog devices. Telephone system As-built drawings were not available to A/E for review for telephone systems installed after 1997.

Based on field conversations with Telecommunications Systems Manager, Kelly Hemming, the building currently has a mix of analog, digital and VoIP telephone systems. Kelly indicated the plan is to move towards a VoIP phone system and phase-out the digital system. When the new telephone system is in place, inactive copper telephone horizontal cabling/PB blocks should be removed. Some analog telephone cabling will need to be retained to serve emergency analog telephones and devices (Fire Alarm and security panel dialers, security panel dialers, etc.). The building telephone system is serviced by Ancom System Technology Solutions, Inc. and the Ancom contact is Lisa Andrews (813) 884-5273.

It is our understanding that the building Telephone system is being upgraded under a separate project.

The current plan for the Telephone system, regarding this study, is to capture the cost to modernize the existing infrastructure as it is, with no size change. Any upgrades to the Telephone system will be part of a separate City of Clearwater project.

Communications Network Systems:

Based on review of the building 1997 as-built Fiber Riser diagram prepared by Bay Resources, Inc, a 12 strand multimode fiber is routed from the 1st floor communications room (CR) rack mounted fiber Light Interface Unit (LIU) to the second floor CR LIU; a 12 strand multimode fiber is routed from the second floor LIU to the third floor CR LIU; a 12 strand fiber cable is routed from the 1st floor LIU to the third floor CR LIU; a 24 strand fiber cable is routed from the third floor CR to the 3rd floor CIS Computer room LIU mounted in the data rack. In addition, 4- 12 strand fiber optic cables are routed from the 2nd floor LIU in the CR room to the police station; 1-12 strand fiber cable is routed from the 3rd floor LIU in the CR room to the City Hall Building and 1-12 strand fiber cable is routed from the 3rd floor LIU in the CR room to the Fire Station. The inter-building fiber cables are routed in existing 4" conduits between the Municipal Services Building, Fire Station, City Hall Building and Police Station Buildings. There are several communication manholes between the buildings to facilitate cable installations between buildings.

The general intra-building data/telephone cabling system includes horizontal data/telephone UTP cabling routed from communications outlets (CO), Wireless Access devices, etc. to data/telephone patch panels located in data racks in each of the 1st, 2nd, and 3rd floor Communications Rooms. Equipment cords connect workstation and equipment to the COs and patch cords connect the patch panel ports to the respective data network switches. Based on field observations and discussions with Kelly Hemming, there is a mix of Cat 5, Cat 5E and Cat 6 cabling throughout the building. All cables routed in the plenum ceiling spaces are required to

be plenum rated cables. Upgrading the Building data/telephone system cabling system to Cat 6 or Cat 6A should be considered to allow building Communications systems to function for an additional 25 years.

CAT 5 and CAT 3 UTP (unshielded twisted pair) cables are functional but not adequate for current network bandwidth requirements. At a minimum, CAT 6, and Cat 6A are the current standard cabling backbones. Generally, the CAT 6 or Cat 6A cabling plant is now used universally for data or voice. Although the existing cables could be re- terminated and re-tested, they are old technology not suitable for 1000 BASE-T network requirements. A common grounding electrode system connected to the main electrical service ground and a grounding conductor riser to upper telecommunications rooms was not observed.

ELECTRONIC SAFETY AND SECURITY SYSTEMS

Fire Alarm:

There is a building-wide addressable fire alarm system. The main fire alarm control panel (FACP) is located in the 1st floor main electrical room. A Silent Knight panel with a dialer is located next to the FACP. The FACP manufacturer is Pyrotronics. Pyrotronics was bought out by Siemens. Fire alarm system devices include manual pull stations located next to the 1st floor egress exit doors, air handling ducts with duct smoke detectors, heat/smoke detectors in some storage locations, horn and strobe devices, smoke/fire door holders, fire protection system water flow switches and valve tamper switches monitored and supervised by the fire alarm system, area smoke detectors in the elevator lobby ceiling, elevator smoke detectors and elevator recall devices. The system appears to be missing a Fire Alarm smoke purge control panel for the Atrium area that is required by the current NFPA 72 Code. The panel was not located during the site field investigation and as-built drawings were not available for the fire alarm systems. The fire alarm system monitors the fire pump control panel. The FACP is also

required to monitor the UPS room fire suppression system, but this could not be verified during the site visit. The fire alarm system operations were not activated and verified at this time. Operation of the Atrium area smoke purge system could not be verified at this time.

The existing Fire Alarm System is serviced by Siemens Industry, Inc. (1-800-771-7374). Based on discussions with Siemens Smart Infrastructure Representative, Ken Lewis, (727) 423-1609, All Siemens F/A Equipment has a plan to migrate to the next platform and phase-out obsolete fire alarm control systems due to component availability issues and major changes of the Underwriters Laboratory and detector test standard (UL268). Reference “MXL Phaseout Letter” and “Updated MXL Detector Phase out Announcement POA-03016” documents in Appendix “A” for additional information regarding the Siemens Fire Alarm System phase-out details.

Several of the placement of fire alarm system notification visual and audible devices are not compliant with NFPA 72. A new building-wide voice evacuation system is recommended utilizing mass notification features of the current Code edition.

Security Intrusion Detection System:

The building has an active security system. The security keypad is located on the first floor and motion detectors are located throughout the building. Reportedly the system is in operation and functional.

Video Surveillance System (VSS):

The building has a Video Surveillance System consisting of multiple IP cameras located throughout the building interiors and exteriors. The cameras have horizontal cabling extended to rack mounted POE switches located in the data rooms of each floor. Recorded data is stored in rack mounted NVRs and the Cloud. Most of the cameras observed appeared to be Axis cameras. The system appears to be in good condition. The system is serviced and maintained by GSA, Inc. and the contact is Matt Wurthner (813) 560-1000.

If the existing building VSS system is to be maintained, the system should be evaluated, and all inoperable system equipment and cameras should be replaced as required for a complete and operational system.

Building VSS system As-built drawings were not available to A/E for review.

Access Control System (ACS):

The building has an ACS system. The ACS system consisted of card readers and secured doors throughout the building. The ACS terminal cabinets and headend cabinets are located in the 1st floor data room. The system is reportedly in good condition. The system is serviced and maintained by GSA, Inc.

If the existing building ACS is to be maintained, the system should be tested and all inoperable system equipment, card readers, relays, door hardware, etc. should be repaired and replaced as required for a complete and operational system.

Building ACS system As-built drawings were not available to A/E for review.

FIRE PROTECTION:

This facility has a wet pipe fire protection sprinkler system for light hazard occupancy. The standpipe fire risers are located in the stairwells and appear to be properly labeled, tested and fire stopped where required. The sprinkler heads in the building are of the fusible link, pendent concealed type throughout the building. The system appears to have had operational tests and labels and is functioning as intended.

CODE COMPLIANCE:

A full and complete set of as built documents are not available, and therefore our research is limited to what was provided by the owner and our visual observations of the facility. No calculations have been performed and our comments below are only observations witnessed and our professional opinion of the findings. From our walk through and document research, it appears the facility was designed and constructed to meet or exceed the Florida Building Code at the time of construction with the one exception of the main stairwell returns not meeting the 4” sphere rule on the guardrail returns. Currently, there are door push pull requirements that appear to exceed the 5lb pressure requirement in the FBC ADA section for egress. We noted that door hardware generally tended to be lever type but varied with different types of levers and hardware styles indicating hardware had been changed out and or replaced over time. The atrium appears to have been modified at or upon completion of construction to include a full atrium smoke evacuation purge system as this existing condition varies from the construction documents provided. The witnessed smoke and fire rated walls appear to be properly sealed and labeled accordingly. We noted a few fire rated doors that were “propped” open with wooden foot blocks, when they should technically close upon use with the closer. Doors propped open with proper fire rated hold opens are acceptable. The occupancy and use tended to be in accordance with the building’s original design and use intended therefore no change in use or condition has been contemplated.

ADA ACCESSABILITY:

In general, the building appears to be ADA accessible, but not fully compliant. The slopes measured on walkway surfaces approaching the building's main pedestrian entrances was equal to or less than a 1:20 slope, however greater slopes were measured in other locations up to 1:12 which would require handrails. No Civil Engineering or civil review was performed or included in this report. Handicap parking stalls are indicated, and an accessible route appears obvious, but signage as such is not posted. The interior of the facility has generally ADA compliant finishes and materials and has an elevator with access to all 3 floors. The door hardware needs adjustment to meet the 5lb push pull requirement throughout the facility. We noted no thresholds greater than 1/2" except at the shower stall curb on the third floor. All countertops were above the 34" max for a side approach to meet ADA requirements and would need to be addressed for either side approach or frontal approach. The toilets and showers were generally compliant with minor exceptions as noted. The limitations noted herein are not intended to be all inclusive and definitive, but rather a compendium of observations related to ADA requirements and professional opinions. Exterior handicapped parking spaces appeared compliant, and an accessible route existed from the parking lot to the front main entry, however, signage for an accessible route were not witnessed. Slopes measured along the accessible routes were within ADA tolerance and compliance. The existing elevator service appears to be in good condition and functions as intended with operability for ADA service.

MODERNIZATION:

For the purpose of this report, we have presumed the building tenants will remain the same and that the building will function in its current capacity long term for another 25 years. Therefore, we presume that all existing systems would generally remain the same in type and service and would be replaced in like kind should that be necessary. Any equipment changes would be modernized in like kind or better should a better and more efficient system be available.

MODERNIZATION APPROACH:

We have not evaluated multiple system selections or design alterations as a part of this study. In general, we found the building to be in good condition considering its current life span and use, and that general building maintenance had been applied for the upkeep and longevity of the facility. In order to address the details required to generate an opinion of probable construction cost to modernize this facility as outlined above, we have provided the following discipline narratives of the anticipated scope required. The opinion of probable construction cost is prepared based on the scope listed herein.

ARCHITECTURAL:

1. Full building pressure wash and exterior cleaning. Prepare exterior surfaces for new paint and new Precast Concrete Panel clear silicone resin sealant equal to Professional Products of Kansas, Inc. PWS-5 with a 10-year warranty or equal. Clean, prime and paint all exposed steel.
2. Full building reroofing. Remove gravel ballasted roof system to insulation and apply a recovery board and additional insulation (3") to achieve an R-30 insulation value (6" total insulation) sloped to drain and apply a new 3 ply modified bitumen roof system with granular cap sheet equal to Johns Manville FPA FL#2948-R13 System S-59 or equal. Provide all new stainless-steel flashings throughout to match existing conditions.

3. Provide new roof drain piping to vertical internal leaders, 4” minimum roof drains with new drains and domes. Insulate all roof drain piping with 2” jacket insulation.
4. Remove all pitch pockets and provide NRCA and SMACNA approved penetration flashing standards.
5. Rake clean all exterior sealants and control joints and provide new backer rod and silicone sealants, or polyurethane sealants as required. Sealants to carry at 10-year warranty minimum.
6. Replace existing lightning protection system for a complete and certified system. See Electrical Scope of work.
7. Clean, repair, prime and paint the rooftop mechanical platform and guardrails and related system.
8. Remove the aluminum mechanical intake louvers on the exterior walls and at the penthouse exterior wall and provide NOA hurricane and wind driven rain rated aluminum intake louvers to meet FBC 2020 and impact requirements. See Mechanical

ARCHITECTURAL ALTERNATE OPTION:

1. Keep and maintain existing hurricane screen system on exterior perimeter windows (As-is).
2. Add Alternate No.1.
    a. Remove lower aluminum storefront system, doors and glazing at all of the building first floor exits, and lobby from the intermediate structural I beam down to finish floor, and replace just those systems with a NOA/FPA approved storefront system and exit doors to meet current FBC wind speeds and impact ratings equal to YKK storefront system YHS 50 FI, FPA #14218.3 or equal system. This affects the two lobby entry sliding doors and two exterior hallway exit doors and hardware.

ARCHITECTURAL INTERIOR:

1. Replace all interior finishes including flooring (carpet, tile, vct) and paints, baseboard, tile baseboards, T-Grid Ceilings (aluminum T-Grid and equal to fine fissured 90% RH 2x2 lay in tile), and wallpaper (interior hallways and lobby portions only) throughout the facility.
2. Remove and refinish all interior wood doors and provide new SS hardware with appropriate matching ADA levers.
3. Remove and replace all exterior window blinds with commercial grade roller window shades.
4. Remove and replace all existing casework with matching casework at ADA height levels of 34" max AFF to finish countertop height. Also replace all existing appliances with new matching appliances.
5. Remove and replace all tiles in all bathrooms and update the bathrooms to have fully compliant ADA accommodations and accessories. No new fixture counts provided at this time. Provide all new phenolic toilet partitions system to meet current plumbing count.
6. Remove and replace all tiles in the 2 showers on the third floor and provide fully compliant ADA accommodations and accessories.
7. Remove all demountable partitions at office locations and replace with stud partition walls to 4" above the ceiling presuming 3-5/8" galv metal studs at 16" O.C and 4" batt insulation and 5/8" gyp bd both sides to 4" above ceiling braced as required with level 4 finish, painted.
8. Provide a fully refurbished elevator and elevator cab and elevator equipment system with warranty.
9. Clean, repair, prime and paint the metal stair system within the building.
10. Clean, repair, prime and paint the lobby atrium stair system and provide matching metal picket infill at stair guardrail returns to meet 4" sphere rule at each landing.
11. 3 story Atrium requires a 1-hour separation from occupied spaces, therefore replace the interior aluminum office storefront with a 1-hour hollow metal frame system with 45 min fire rated glazing system at each level and provide a fire protection deluge system over the glazing at the atrium.

STRUCTURAL:

1. Remove and repair surface corrosion on all areas of the chiller platform framing members and attached guardrail/ stairs. Areas observed should be cleaned using the SSP-SP3 method of surface prep, then primed and painted with an exterior paint to match existing. Members with more than 10% loss in material thickness shall be replaced in like-kind.
2. Louvers not meeting current FBC impact requirements should be replaced with a Florida Product approved louver meeting FBC wind load and impact ratings.
3. Cracks observed in the exterior concrete veneer panels shall be sealed with flexible sealant prior to receiving new paint.
4. Cracks observed in the slab on grade should be considered cosmetic. The damage may be removed and replaced with a new concrete slab reinforced with welded wire fabric over compacted soil as desired. Provide construction joints in a 10'x10' (maximum) grid.
5. Remove cracked concrete encasement at exterior steel columns and replace with new concrete sloped away from the steel column as provided in the original design documents. Additionally, a ½" pre-molded joint filler(PJF) shall be provided against the steel column along with a flexible, exterior traffic sealant, at the exposed surface of joint.

MECHANICAL:

1. The return air shall be ducted throughout the first, second and third floors and routed into the return air duct shaft back to the air handling unit.

Chillers

1. Replace the two (2) air-cooled chillers currently on the structural platform with two (2) new 150-ton energy efficient air-cooled scroll chillers equipped with state-of-the-art controls. The building HVAC loads will be evaluated to select the optimal size for the use of the building.
2. The circulating pumps shall be replaced in the same primary-secondary configuration to fit in the existing space at this time. Presume pump sizing remains the same at this time.

Air handling units

1. The air distribution will be converted from the current return air plenum scheme and modified to provide ducted return air to improve indoor air quality and humidity control. The current air handling units are built-up units installed in 1995, so we would anticipate the need for new built-up type AHU units.
2. All ductwork shall be metal ductwork externally insulated supply side. No internally lined ductwork.
3. The air handling units shall be replaced with a similar central station with plenum fans, centrifugal housed fans or a fan array system to fit in the similar configuration to align with the existing supply air duct shaft to the lower floors.

Supply air terminals

1. The air supply to the zone spaces shall be done by variable air volume terminal boxes of the shut-off type with electric re-heat coils with four-way throw diffusers for better air distribution.
2. The atrium supply fan powered terminal will be replaced with a hot water coil to match the existing unit capacity.

Temperature Controls

1. The temperature control will be upgraded to have Energy Management with Direct Digital Control (DDC) complying with BACNET or Modbus protocol. The VAV box terminals shall be controlled by room temperature sensors connected to the VAV box zone controller via the energy management control system (EMCS).

HOT WATER GENERATOR (BOILER)

1. The existing gas-fired hot water generator is at the end of its economic life and needs to be replaced with a new gas-fired hot water generator with higher efficiency.
2. The new hot water generator would be selected with a similar type and capacity for natural gas. The boiler shall be copper finned tubing type with atmospheric draft hood to connect to the existing flue stack through the roof. An upgrade would be to select a unit mounted powered vent. Gross Input 1,223 Mbh for an output of 1,002 Mbh. The actual capacity will be evaluated for the current use and demand. The circulating pumps are of the in-line vertical type and will be replaced on the same location on the piping. Pipe insulation will be replaced as required.

PLUMBING:

1. The existing plumbing systems utilize type K copper for the domestic water and what appears to be PVC sewer piping run throughout the building. Toilet room upgrades would require fixture replacement with proper ADA compliant fixtures where required including faucets and drinking fountains. Cabinetry to be replaced that had water service would require new sinks and faucets accordingly. We presume most of the existing sewer system would be acceptable to re-use and maintain.
2. All new plumbing fixtures to accommodate ADA requirements will be reconnected to existing domestic water and sanitary and vent piping.

3. All new plumbing fixtures, faucets at new cabinetry and drinking fountains will be reconnected to existing domestic water and sanitary and vent piping.
6. The existing electric 80-gallon water heater shall be replaced with a 90-galllon new water heater. The existing hot water re-circulation pumps shall be replaced as well.

ELECTRICAL:

Lighting - General:

Lighting (Exterior)

1. Replace all non-LED light fixtures with LED light fixtures.
2. Tie-in all exterior lighting controls to building Energy Management System (EMS). Program EMS to control site lights and adjust lighting controls for seasonal sunrise/sunset schedules.
3. Add new photocell and interface into EMS system for lighting controls. Add manual site lighting bypass switches to manually bypass EMS control of site lights.
4. Add exterior “public way” emergency egress lighting in compliance with FBC and NFPA 101.

Lighting (Interior)

1. Replace all interior lighting with LED lighting.
2. Replace all interior lighting controls with new controls in accordance with the 2020 Florida Energy Conservation Code and 2016ASHRAE 90.1. Include daylight harvesting systems, occupancy sensors, vacancy sensors and lighting dimming systems as required.
3. Remove all UL-924 non-compliant emergency egress lighting bypass relays and provide new UL-924 compliant emergency egress lighting bypass transfer switches.

Power - General:

1. Replace all building power distribution gear. The gear replacement includes switchboard, panelboards, transformers, motor control center, motor starters and surge suppressors.
2. Trace all receptacle and light switch branch circuits and label device coverplates with source panel and circuit designations. Provided engraved plastic labels on all equipment disconnect switches and motor starters indicating source panel and branch circuit.

Standby Emergency Power Systems:

1. Remove and replace the two aging standby emergency generators and multiple power distribution systems with one generator with life safety and standby (equipment) power distribution systems. The standby emergency power system equipment to be removed will include the existing generators. Fuel tanks, Automatic Transfer Switches (ATS) switches, remote annunciator panels, remote Emergency Power Off stations (EPOs), etc. The new emergency power distribution system equipment shall include a standby diesel 500 kW, 480/277 volt, 3 phase, 4 wire, NFPA 110 Level 1 Listed generator with a double wall 1,200-gallon base fuel tank, three integral circuit breakers, remote generator load bank test station, two ATS switches, remote annunciator, remote EPO's, emergency power panels, panel surge suppressors and transformers. The generator power distribution system shall include feeder circuits serving load bank station, standby (equipment) branch automatic transfer switch (ATS), life safety branch ATS and life safety and standby system branch panelboards and transformers. Existing building emergency standby and life safety branch circuits shall be extended to new system panelboards. A site location and equipment concrete pad will need to be considered for the new generator.

Uninterruptable Power Systems (UPS):

1. The nameplates for the 30 KVA and 60 KVA Liebert UPS units indicate the units were manufactured in 2019, which implies the units were changed-out with new units. There were no as-built drawings provided by to the A/E for the UPS equipment replacement project. The units appear to be in good condition. With the transitioning of storing data in the "cloud", the need for electronic storage equipment in the building should be reduced which will likely reduce the load demand on the UPS equipment.
2. Verify operation of the UPS room fire protection deluge system. If system is more than 8 years old, replace system with new system in compliance with current system Codes.
3. Add UPS power shut-down station next to door exiting the UPS room.

Roof:

1. As part of the roof replacement project, remove the existing Lightning Protection System (LPS) system and replace with a new LPS system with a master UL label.
2. Replace exiting condensing unit (CU) disconnect switches with new NEMA-3R switches.
3. Replace existing CU service receptacle with new 20 amp, GFI, WR rated receptacle and new metallic "while-in-use" cover.

COMMUNICATION SYSTEMS:

Telephone System:

1. Remove building telephone horizontal cabling that is abandoned, inactive or no longer needed. The building is transitioning to a VoIP telephone system and a majority of the existing building telephone cabling will no longer be needed. A few telephone analog lines will be maintained for emergency analog telephones and call-out lines for electronic security and safety equipment (Fire alarm dialer and security panels).
2. It is our understanding that the building Telephone system is being upgraded under a separate project. The current plan for the Telephone system, regarding this study, is to capture the cost to modernize the existing infrastructure as it is, with no size change. Any upgrades to the Telephone system will be part of a separate City of Clearwater project.

Communications Network Systems:

1. Replace all building Cat 5, Cat 5E and Cat 6 interior horizontal data/telephone cabling and passive distribution system components with Cat 6A cabling plant. The Cat 6A cabling plant includes 4 pair plenum Cat 6A horizontal cabling, equipment cords, patch cords, patch panels and communications (data/telephone) outlet jacks/faceplates. The Owner shall furnish, install, and program communications network system electronic equipment. Cat 6A cables have a larger diameter than lower rated cabling and, in some locations, will require additional surface raceway conduits and outlet boxes to accommodate the cabling. For pricing purposes, an estimated 20% of communications outlet raceway systems will need to be upgraded to support the Cat 6A cabling.
2. Provide Alternate pricing for same system cabling and components indicated in items #1, except Cat 6 rated system.

Cable TV/C-View TV Studio:

1. It is our understanding that the C-View TV Studio room is being upgraded under a separate project. The current plan for the C-View TV, in regards to this study, is to capture the cost to modernize the existing infrastructure as it is, with no size change. Any upgrades to the TV Studio will be part of a separate City of Clearwater project.

Building Common Area Public Address System:

1. If the existing building PA system is to be maintained, the system should be tested, and all inoperable speakers and system components shall be replaced as required for a complete and operational system.

Conference Rooms A/V Systems:

1. The City of Clearwater to provide estimate funding allowances needed to meet the current needs of the conference room A/V systems and determine the projected budget funding allowance required over the next 25 years to fund upgrades, system maintenance, and expansion.

Traffic Signal Computer/Control Room:

1. It is our understanding that the Traffic control room is being upgraded under a separate project this year. The current plan for the Traffic Control Room, in regards to this study, is to capture the cost of modernizing the existing infrastructure as it is, with no size change. Any upgrades to the Traffic Control room will be part of a separate City of Clearwater project.

ELECTRONIC SAFETY AND SECURITY SYSTEMS

Fire Alarm:

1. Replace the existing fire alarm system with an addressable voice evacuation system.
2. Provide Atrium smoke purge fire alarm system panel to interface with atrium smoke purge system for system monitoring/control.
3. Provide a new FA remote annunciator and microphone in the reception area.
4. Interface new FA system with fire pump control panel, UPS room deluge system and battery off-gassing/power runaway detection system, HVAC system (for AHU shutdown), fire damper detector monitoring/control, smoke/fire door holders, fire protection waterflow switches, fire protection zone valves and tamper switches, etc.

Contact Siemens Smart Infrastructure Representative, Ken Lewis, (727) 423-1609 for new fire alarm system details and pricing.

Security Intrusion Detection System:

1. The building had an active security system. The security keypad is located on the first floor and motion detectors are located throughout the building. Reportedly the system is in operation and functional.

Video Surveillance System (VSS):

1. If the existing building VSS system is to be maintained, the system should be evaluated, and all inoperable system equipment and cameras should be replaced as required for a complete and operational system.

Access Control System (ACS):

1. If the existing building ACS is to be maintained, the system should be tested and all inoperable system equipment, card readers, relays, door hardware, etc. should be repaired and replaced as required for a complete and operational system.

FIRE PROTECTION:

This facility has a full and complete wet pipe protection fire sprinkler system for light hazard occupancy. The system appears to be in good condition and utilities concealed the type of sprinkler heads in the lay in ceiling system. The standpipes are located in the stairwells accordingly. The atrium is addressed with an appropriate sprinkler deluge system with smoke evacuation.

1. The existing Diesel fire pump located in a detached building housing the fire pump shall be replaced with a new engine driven pump with new improved technology and controls.
2. A new flow test shall be performed from the nearest hydrant to update the system hydraulics for flow requirements and new fire pump sizing.
3. The existing jockey pump shall be replaced with a new pump as well based on the updated hydraulic calculations.

CONDITIONS OF USE:

In general, we find that the MSB building appears to be functioning as intended for its original use, housing City services and related business functions. Over the years of service, the building has undergone a few renovations and select systems have been upgraded and or replaced. Some of these include the Chiller replacements in 2005, various offices added as demountable partitions, and exterior hurricane screens added for additional window protection, among others. While several systems, such as the current Chillers have reached their anticipated service life and continue to function, continued use will require building upkeep and replacement of those outdated systems. Specialty systems such as the TV Studio, and IT Services appear to be under further revisions and have upcoming potential renovations to improve those systems. The existing building design lends itself to its current business-type use and function, and in general the building is in good condition. We see no reason why the building cannot continue to function in its current condition and use, provided that the outdated systems that have reached their serviceable lifespan would be upgraded and or replaced in the near future as needed. Should these systems be addressed in an upcoming renovation or remodeling of the building, improvements and options should be reviewed to consider the latest enhancements in technology and energy efficiency performance to improve the building's energy consumption and delivery of services.

Considering that the building houses some of the City's more critical functions, it is reasonable to address the building's potential survivability in a severe weather event. Clearly the City has addressed this question in the past, as the result tended to include the addition of hurricane screens to protect the storefront glazing systems on the building's exterior. The building is clearly elevated on the bluff and has a finish floor elevation of 27'-0" which is above the flood plain in that area and the building is well located on major street arteries for good access. It does not appear that building Flooding is a major concern in this location. While this report did

not include addressing any structural calculations or testing analysis of the existing structure, and the original structural design drawings were not available which might have more clearly identified the design loads, the building is similar in design, time and nature as the City's Police headquarters facility designed by the same Architect and located across the street. Those drawings indicate a performance that would indicate the building has an inherent hardening to a Cat2-Cat3 Hurricane wind speed rating. The apparent weakness of the system at this time would be the hurricane screens that block the buildings major entry/egress points during a severe weather event. Those systems must be installed before the event occurs to be effective, and by nature, then block the very entry/egress points required for building access. Therefore, in Cost Alternate Option 1, we are recommending the City consider replacing just those portions required to maintain entry/egress, with hurricane impact rated storefront systems so that the building egress points are maintained in a safe function.

We understand the City does not anticipate housing occupants in this building during a severe weather event. However, the question often raised is "what about after the storm?". Therefore, it appears reasonable to address the lower storefront egress systems with hurricane hardened entries in order to more safely secure the building for use directly after a severe weather event should this building stay in use. We see no reason why the building would not successfully survive a severe weather event Cat2-Cat3 Hurricane in its current condition excluding tornado activity. However, for the building to function as an Enhanced Hurricane Protection Area the building would need further upgrades and hardening as well as accommodations for the inhabitants during such an event and these efforts and costs would most likely be prohibitive. Such facilities require for the accommodations of inhabitants over a period of time that requires domestic water support, sewer support, cooking and related living support as well as protection hardening of the facility. Therefore, we do not recommend the building be generally inhabited during a severe weather event as those accommodations do not currently exist. It is more likely

however that the building could function for the respective City services after a severe weather event has passed.

The opinions expressed herein are solely the professional opinions of Long & Associates Architects / Engineers, Inc and rely on our general experience and viewpoints of other similar related buildings and services in similar condition. No testing of existing systems was performed, and limited existing conditions documentation exists or was provided to make a numerical engineering determination. Should the City determine that the building should remain in service and perform under severe weather events, further structural analysis and determinations would need to be made in more detail. Long & Associates Architects/Engineers, Inc, reserves the right to review, update and revise our opinions and viewpoints based upon new information that may be discovered or otherwise made available in the future.