Office of Johnson County Sheriff and Jail

511 South Capitol Street Iowa City, IA, 52240

Facility Condition Assessment Report

Prepared for:

Johnson County



Member of the SNC-Lavalin Group

Table of Contents

Executive Summary

Introduction

Limiting Conditions

Project Details

Building Details

Building Description

Property Executive Summary

Architectural Executive Summary

Mechanical Executive Summary

Electrical Executive Summary

Site Systems Executive Summary

Summary of Findings

Building Expenditure Summary

Key Findings

Distribution of Immediate (Year 0 - Year 1) Needs by Building System

Distribution of Future (Year 2 – Year 10) Needs by Building System

Facility Condition Needs Index

Needs Sorted by Prioritization of Work

Needs Sorted by Plan Type

Asset Details

- A SubStructure
- B Shell
- C Interiors
- D Services
- E Equipment & Furnishing
- G Building Sitework

Appendix

Appendix A - Capital Expenditure Table

Appendix B - Photographic Records

Appendix C - Document Review and Warranty Information

Appendix D - Equipment Tables

Appendix E - Glossary of Terms

QUALITY CONTROL TRACKING STAMP (3-STEP)					
Version 1		Date: 1/6/2017			
QC DOCUMENT:					
QC REVIEW ACTIVITY					
1. READY FOR REVIEW	ORIG:	Scott Edson			
	Date	09/09/2022			
2. QC REVIEW	REV:	Scott Edson			
(Red = correction)	Date:	09/20/2022			
3. CHANGES MADE AND VERIFIED √ ■ (Blue check next to comment = accept)	ORIG:	Jennifer Ryder			
√ (Yellow highlight over red comment = change made to address comment)	Date:	10/07/2022			
ORIG = Originator, REV = Independent Reviewer					
Atkins North America, Inc.	Atkins North America, Inc.				

FCA Report | Sheriff & Jail



Executive Summary

Introduction

In accordance with the contract held between Johnson County and Atkins North America Inc. dba Faithful+Gould, this completed report provides a comprehensive Facility Condition Assessment of Sheriff & Jail located at 511 South Capitol Street in Iowa City, IA (The Property).

This report provides a summary of the facility information known to us at the time of the study, the scope of work performed, an equipment inventory and an evaluation of the visually apparent condition of The Property, together with a forecast of capital expenditures anticipated over the next 10 years. The expenditure forecast does not account for typical preventative maintenance items such as changing filters to air handler units.

This report provides a summary of the anticipated primary expenditures over the 10 - year study period. Further details of these expenditures are included within each respective report section and within the 10 - year expenditure forecast in Appendix A.

Our cost rates to produce life cycle and replacement cost estimates are based on our knowledge of the local regional market rates. The data in this report represents an opinion of the probable cost of construction and is made on the basis of the experience, qualification, and best judgement of professional consultants familiar with the construction industry. Our line item costs assume that the work will be undertaken by either in-house or direct sub-contract.

Readers should note that the Current Replacement Values (CRVs) as outlined in this report are direct like-for-like replacements using construction methods and materials readily available at the time of a building's construction. As time progresses, upward pressures of inflation as well as evolution of building standards and codes are expected to increase the overall construction costs of a given building. Our current replacement values only factor in the current size, style, and construction type of the building. Any expansion, upgrade, or enhancement of the building type, architecture, or construction is not considered as part of the Current Replacement Value, nor is it accounted for in this report.

This report also calculates the Current Facility Condition Index (FCI), which is used by Facilities Management professionals to benchmark the relative condition of a group of facilities. The FCI is a snapshot of the condition of the building in a given year. The FCI scores are primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

We have applied a 45% soft costs uplift to the net construction costs to account for GC overhead and profit, etc. The projected costs in this report are net present value with 2022 construction pricing. Annually, these costs projections should be uplifted with the current construction inflation index so that each year they represent the current year's net present value construction cost.

Scott Edson Lead Facility Assessor Strategic Facilities Consulting

not Ecson

Faithful + Gould

Dean Leonard VP Senior Director Strategic Facilities Consulting Faithful + Gould

Limiting Conditions

This report has been prepared for the exclusive and sole use of Johnson County. The report may not be relied upon by any other person or entity without the express written consent of Faithful+Gould.

Any reliance on this report by a third party, any decisions that a third party makes based on this report, or any use at all of this report by a third party is the responsibility of such third parties. Faithful+Gould accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made, or actions taken, based on this report.

The assessment of the building and site components was performed using methods and procedures that are consistent with standard commercial and customary practice as outlined in ASTM Standard E 2018-015 for PCA assessments. As per this ASTM Standard, the assessment of the building and site components is based on a visual walk-through site visit, which captured the overall condition of the site at that specific point in time only.

No legal surveys, soil tests, environmental assessments, geotechnical assessments, detailed barrier-free compliance assessments, seismic assessments, detailed engineering calculations, or quantity surveying compilations have been made. Therefore, no responsibility is assumed concerning these matters. Faithful+Gould did not design or construct the building(s) or related structures and therefore will not be held responsible for the impact of any design or construction defects, whether or not described in this report. No guarantee or warranty, expressed or implied, with respect to the property, building components, building systems, property systems, or any other physical aspect of The Property is made.

The recommendations and our opinion of probable costs associated with these recommendations, as presented in this report, are based on walk-through non-invasive observations of the parts of the building which were readily accessible during our visual review. Conditions may exist that are not as per the general condition of the system being observed and reported in this document. Opinions of probable costs presented in this report are also based on information received during interviews with operations and maintenance staff. In certain instances, Faithful+Gould has been required to assume that the information provided is accurate and cannot be held responsible for incorrect information received during the interview process. Should additional information become available with respect to the condition of the building and site elements, Faithful+Gould requests that this information be brought to our attention so that we may reassess the conclusions presented herein.

Faithful+Gould cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent Cost Estimates. The scope of work and the actual costs of the work recommended can only be determined after a detailed examination of the site element in question, understanding of the site restrictions, understanding of the effects on the ongoing operations of the site or building, definition of the construction schedule, and preparation of tender documents.

Project Details

On August 22, 2022, Scott Edson of Faithful+Gould visited The Property to observe and document the condition of the building and site components. During our site visit, Faithful+Gould was assisted by Dave Curtis (Supervisor), who is associated with Johnson County.

Building Details

Item	Description
Project Name	Sheriff & Jail
Property Type	Correctional Facility
Full Address	511 South Capitol Street Iowa City, IA, 52240
Onsite Date	08/22/2022
Year Built	1981
Occupancy Status	Occupied
Number of Stories	2
Gross Building Area (GSF)	26,520
Current Replacement Value (CRV)	\$4,508,400
CRV/GSF (\$/Sq Ft)	\$170.00

Building Description

Property Executive Summary

The Johnson County Sheriff's Facility is located at 511 South Capitol Street in Iowa City, IA. The Sheriff's Facility is a two-story facility that was built in 1981 and is approximately 26,520 square feet in size. We observed cracking and dislodgement of veneer units in various locations. We recommend structural engineer action early in the study period.

Architectural Executive Summary

The Johnson County Sheriff's Facility is supported by a system of reinforced cast-in-place concrete footings at the perimeter. The ground floor construction is reinforced cast-in-place concrete slab on grade placed on compacted engineered fill. The building's exterior walls are constructed of masonry brick with a steel frame supporting the upper floor construction. The roof level consists of a low-sloped metal corrugated deck, which is supported by steel beams that contain a single ply roof membrane covering with a gravel finish. The roof drains to field drains with interior leaders that discharge at grade level. Exterior openings present include glazed aluminum framed single, hollow metal doors and overhead rollup doors.

Mechanical Executive Summary

The Johnson County Sheriff's Facility plumbing systems include vitreous china floor-mounted water closets with automatic flush valves, wall-mounted urinals, along with wall-hung and countertop lavatories. Heating and cooling for the second floor of the facility is provided by multiple Trane package rooftop package units (RTU). The RTU's have a cooling capacity ranging from 3-5 tons of cooling. The building contains a number of heat pumps located in the first-floor ceiling. The heat pumps were manufactured by Carrier and have capacities ranging from 2-3 tons. There are two passenger elevators in the building.

Electrical Executive Summary

The Main Distribution Panels (MDP) are Square D Company units that are rated at 120/208 volts at 2,000 amps. This is a single-phase panel that supplies power to the lower capacity panels ranging from 100 to 1200 amps. The building is backed-up by a diesel generator which is located in the mechanical room of the building. The transfer switch is wall-mounted within the same room. The generator is manufactured by Caterpillar with a capacity of 400kW.

Lighting for the facility is provided by fluorescent strip lighting for the interior, recessed can light fixtures for the eves and exterior wall packs. A fire alarm and full security system are present in the building.

Summary of Findings

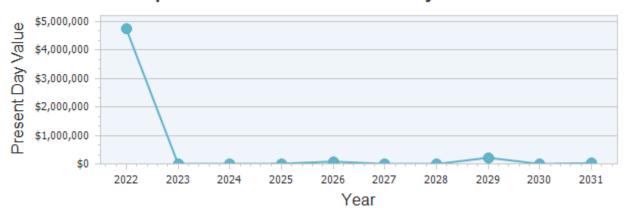
This report represents summary-level findings for the Facility Condition Assessment. The deficiencies identified in this assessment can be combined to develop an overall Long-Term Capital Needs Plan that can be the basis for a facility wide capital improvement funding strategy. Key findings from the Assessment include:

Key Findings	Metric
Current Year Facility Condition Index	104.8%
Immediate Capital Needs (Year 0 and Year 1)	\$4,723,967
Future Capital Needs (Year 2 to Year 10)	\$349,829

Building Expenditure Summary

The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Sheriff & Jail building. In addition, we have noted key findings highlighting items greater than \$5,000 and their anticipated year of replacement. Further details of these expenditures are included within each respective report section and within the expenditure forecast, in Appendix A of this report. The results illustrate a total anticipated expenditure over the study period of approximately \$5,073,796 (Immediate Needs + Future Needs).

Expenditure Forecast Over Study Period



2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
\$4,723,967	\$0	\$0	\$11,435	\$85,836	\$0	\$0	\$220,066	\$0	\$32,491

Key Findings

Below is a list of Key Findings of capital expenditures over a \$5,000 threshold :

Level 1	Action Type	Level 5	Year	Expenditures
A SubStructure	Schedule Action	A100001 Engineering Study of Foundation	2022	\$7,250
B Shell	Replacement	B202100 Aluminum Window Units _ Fixed or Single Hung	2022	\$103,886
B Shell	Replacement	B203100 Double Aluminum Glazed Doors	2022	\$25,746
B Shell	Replacement	B203304 Rolling Overhead Doors, Electric	2022	\$26,987
B Shell	Replacement	B203902 Single HM Doors	2022	\$10,489
B Shell	Replacement	B301109 Single ply Roof Membrane _ Ballasted _ Complete Covering System	2022	\$339,933
B Shell	Replacement	B301607 Roof Drains and Interior Leaders_EACH	2022	\$7,929
C Interiors	Replacement	C101405 Toilet Partition	2022	\$9,790
C Interiors	Replacement	C301214 Painted Finish _ Standard	2029	\$69,196
C Interiors	Replacement	C302101 Refinish Concrete Floor	2022	\$155,575
C Interiors	Replacement	C302303 Epoxy Floor Coating	2022	\$9,455
C Interiors	Replacement	C302401 Ceramic Tile	2022	\$36,689
C Interiors	Replacement	C302407 Quarry Tile	2031	\$14,505
C Interiors	Replacement	C302413 Vinyl Composite Tile, VCT	2022	\$11,978
C Interiors	Replacement	C302505 Carpet Tiles _ Standard	2029	\$140,350
D Services	Replacement	D101102 Elevator Cab Renovation	2022	\$116,550
D Services	Replacement	D101103 Elevator Controls _ Motor Controller	2022	\$97,902

Level 1	Action Type	Level 5	Year	Expenditures
D Services	Replacement	D101105 Hydraulic Elevator _ Standard	2022	\$314,684
D Services	Replacement	D201406 Service Sink Floor Mounted	2022	\$10,505
D Services	Replacement	D201703 Shower _ Three Wall Ceramic Tile	2022	\$10,292
D Services	Replacement	D201703 Shower _ Three Wall Ceramic Tile	2022	\$34,306
D Services	Replacement	D202214 Domestic Hot Water Heater _ Gas	2031	\$8,219
D Services	Replacement	D202218 DHW Circulation Pump and Motors 0.5 HP to 1 HP	2025	\$7,929
D Services	Replacement	D303113 Cooling Tower _ Galvanized _ Outdoor Unit	2022	\$37,874
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303202 Water Source Heat Pump 1 to 2 TONS	2026	\$5,859
D Services	Replacement	D303203 Water Source Heat Pump 3 to 5 TONS	2026	\$9,742
D Services	Replacement	D303203 Water Source Heat Pump 3 to 5 TONS	2026	\$9,742
D Services	Replacement	D303203 Water Source Heat Pump 3 to 5 TONS	2026	\$9,742

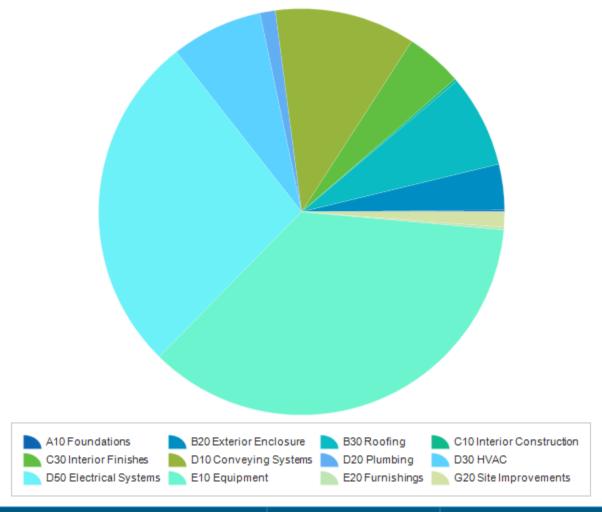
Level 1	Action Type	Level 5	Year	Expenditures
D Services	Replacement	D303203 Water Source Heat Pump 3 to 5 TONS	2026	\$9,742
D Services	Replacement	D303217 Split System Full System _ Cooling Only	2022	\$8,841
D Services	Replacement	D304205 Exhaust Fan	2022	\$6,699
D Services	Replacement	D305113 Unit Heater _ Gas Fired Suspended, 100 MBH	2029	\$7,014
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$14,637
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$14,637
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$9,758
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$24,396
D Services	Replacement	D305202 Packaged Outdoor Unit _ Cooling and Heating	2022	\$14,637
D Services	Replacement	D501203 Emergency Generator Transfer Switch	2022	\$11,673

Level 1	Action Type	Level 5	Year	Expenditures
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$21,392
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$14,605
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$35,006
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$88,790
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$14,605
D Services	Replacement	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	2022	\$9,352
D Services	Schedule Action	D502250 ECM 001 Update Exterior Lighting to Energy Efficient Lighting	2022	\$7,796
D Services	Schedule Action	D502251 ECM 002 Update Interior Lighting to Energy Efficient Lighting	2022	\$430,012
D Services	Replacement	D503705 Fire Alarm Control Panel, FACP, Up to 10 Zone	2031	\$6,709

Level 1	Action Type	Level 5	Year	Expenditures
D Services	Replacement	D503808 Security System _ Full Spec	2022	\$560,493
E Equipment & Furnishing	Replacement	E102602 Doors and Frames, Single Plate, 3ft x 7ft	2022	\$617,713
E Equipment & Furnishing	Replacement	E102604 Cell Front Rolling Door, 5ft x 7ft High	2022	\$362,883
E Equipment & Furnishing	Replacement	E102605 Toilet Apparatus, incl. Wash Basin	2022	\$677,097
E Equipment & Furnishing	Replacement	E102606 Visito Cubicle, Vision panel, No Intercom	2022	\$39,795
E Equipment & Furnishing	Replacement	E201203 Floor Mounted Base Cabinets _ Standard	2022	\$6,469
G Building Sitework	Schedule Action	G202001 Crack Repair, Seal Coating, and Restriping to Parking Lots	2022	\$41,641
G Building Sitework	Replacement	G202403 Vehicle Barrier _ Drive Way Entrance or Exit	2022	\$15,247

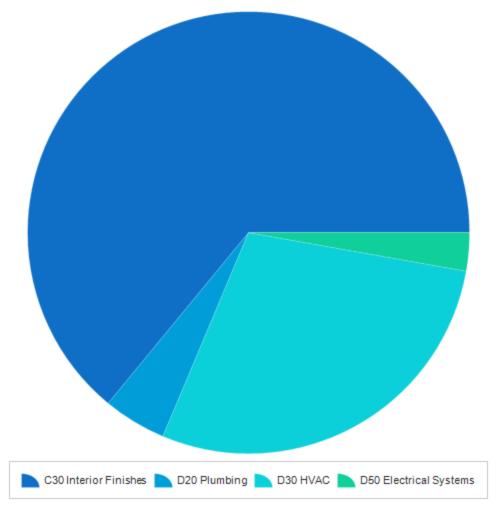
- 1. All costs are presented in present day value.
- 2. Costs represent total anticipated values over the 10 year study period.
- 3. All costs have been calculated to include an additional 45% for soft costs, i.e., professional fees, general contractor, overhead and profit management cost.

Distribution of Immediate (Year 0 - Year 1) Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
A10 Foundations	\$7,250	0.2%
B20 Exterior Enclosure	\$171,569	3.6%
B30 Roofing	\$347,862	7.4%
C10 Interior Construction	\$9,790	0.2%
C30 Interior Finishes	\$213,697	4.5%
D10 Conveying Systems	\$529,135	11.2%
D20 Plumbing	\$57,702	1.2%
D30 HVAC	\$344,127	7.3%
D50 Electrical Systems	\$1,277,894	27.1%
E10 Equipment	\$1,697,489	35.9%
E20 Furnishings	\$10,564	0.2%
G20 Site Improvements	\$56,888	1.2%
Total	\$4,723,968	100%

Distribution of Future (Year 2 - Year 10) Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
C30 Interior Finishes	\$224,051	64.1%
D20 Plumbing	\$16,147	4.6%
D30 HVAC	\$99,863	28.6%
D50 Electrical Systems	\$9,767	2.8%
Total	\$349,829	100%

FCA Report | Sheriff & Jail

Facility Condition Index

In this report we have calculated the Current Year Facility Condition Index (FCI) for the facility as well as the FCI for subsequent years throughout the study period. The FCI illustrates the condition of the systems, equipment, and buildings in a given year and will go up if the required funding is not expended over the study period. The FCI is also used in Facilities Management to provide a benchmark to compare the relative condition and needs of a group of facilities. The FCI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

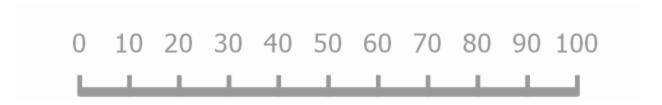
The FCI is the ratio of accumulated Deferred Maintenance (DM) (total sum of immediate required and recommended works) to the Current Replacement Value (CRV) for a constructed asset. Calculated by dividing DM and Needs by CRV. The FCI ranges is from zero for a newly-constructed building, to 100% for a constructed asset with a Deferred Maintenance value equal to its CRV. Acceptable ranges vary by Building Type, but as a general guideline, the FCI scoring system is as follows:



If the FCI rating is 60% or greater then replacement of the asset/building should be considered instead of renewal.

Condition	Definition	Percentage Value
	In a new or well-maintained condition with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
	Subject to wear and soiling but is still in a serviceable and functioning condition.	5% to 10%
	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 10%
	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal now necessary.	Greater than 60%

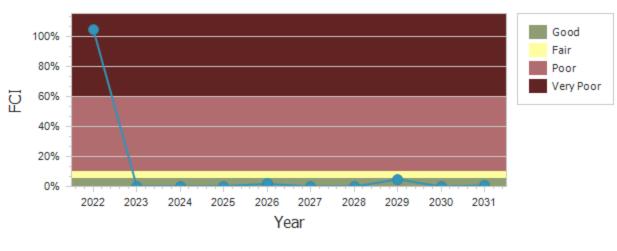
The chart below indicates the current FCI ratio of Sheriff & Jail.



Sheriff & Jail, FCI: 104.8%

The chart below indicates the effects of the FCI ratio per year, assuming the required funds and expenditures are made to address the identified actions each year.

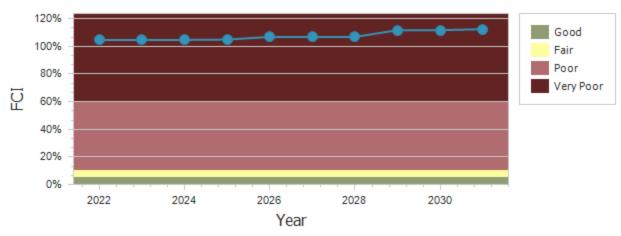
Year by Year Effects of FCI



2	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
10)4.8%	0.0%	0.0%	0.3%	1.9%	0.0%	0.0%	4.9%	0.0%	0.7%

The chart below indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are NOT provided to address the identified works and deferred maintenance each year.

Cumulative Effects of FCI



2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
104.8%	104.8%	104.8%	105.0%	106.9%	106.9%	106.9%	111.8%	111.8%	112.5%

FCA Report | Sheriff & Jail

Needs Sorted by Prioritization of Work

Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessment. The following Priorities are shown below:

·Fire/ Life/ Safety/ Code

 Systems that require upgrade or replacement to comply with current Fire, Life, or Safety Codes and accessibility. These systems should be replaced immediately upon reaching the end of their useful life so as not to compromise the safety of the building.

Priority 1

Currently Critical

 Systems requireing immediate action that have failed or are nearing the end of their useful life, if not addressed will cause additional deterioration and added repair costs.

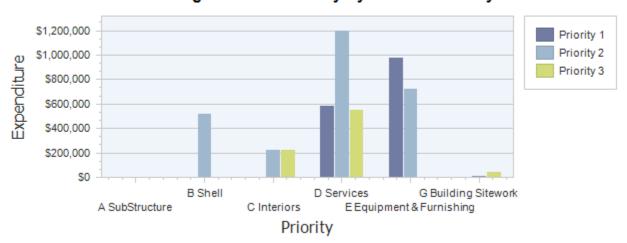
Priority 2

Necessary/ Not Critical

 Lifecycle replacements necessary but not critical or mid-term, future replacements to maintain the integrity of the facility or component.

Priority 3

Planning Horizon Needs by System and Priority

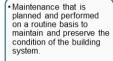


Building System	Priority 1	Priority 2	Priority 3	Grand Total	
A SubStructure	\$7,250	\$0	\$0	\$7,250	
B Shell	\$0	\$519,431	\$0	\$519,431	
C Interiors	\$0	\$223,487	\$224,051	\$447,538	
D Services	\$581,933	\$1,198,885	\$553,818	\$2,334,636	
E Equipment & Furnishing	\$980,596	\$727,456	\$0	\$1,708,052	
G Building Sitework	\$0	\$15,247	\$41,641	\$56,888	
Grand Total	\$1,569,779	\$2,684,506	\$819,510	\$5,073,796	

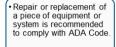
Needs Sorted by Plan Type

Faithful+Gould has prioritized the identified work according to the Plan Type or deficiency categories in order to assist with analyzing the deficiencies found during the assessment. The following Plan Types are shown below:





 Planned future replacement of building systems that have or will reach the end of their useful life during the study period.



 Repair or Replacement of a piece of equipment or system is recommended to improve energy and sustainability performance.





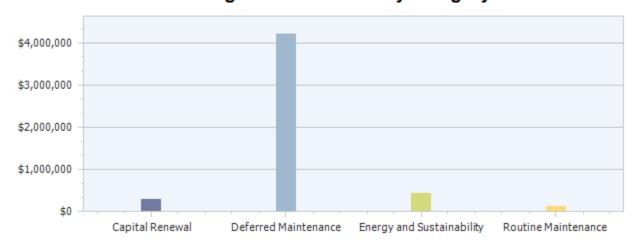








Planning Horizon Needs By category



Plan Type	Expenditure Total		
Capital Renewal	\$292,305		
Deferred Maintenance	\$4,223,391		
Energy and Sustainability	\$437,808		
Routine Maintenance	\$120,292		
Grand Total	\$5,073,796		

Asset Details

A SubStructure

A10 Foundations

A1011 Wall Foundations

Description

The exterior wall construction is supported by reinforced concrete spread footings around the perimeter of the building. The compressive strength of the concrete is unknown.

Condition

The footings are not visible due to their location below the exterior wall construction. However there is no deterioration to the wall constructions that they are supporting, therefore we assume them to be in fair condition and free from defects. We do not anticipate any replacement actions during the study period.

A SubStructure

A10 Foundations

A1031 Standard Slab on Grade

Description

The basement level of the building consisted of cast-in-place concrete slab-on-grade. We assume that the floor slab was placed over a compacted gravel fill, with the thickness of the slab being approximately 6" laid over a sand bed. The compressive strength of the concrete is unknown.

Condition

The slab-on-grade floor was observed to be in fair condition and there were no signs of undue settling or major cracks noted. We do not anticipate a requirement for replacement during the study period.

B Shell

B10 SuperStructure

B1012 Upper Floors Construction

Description

The 2nd floor contains a reinforced cast-in-place concrete slab. The thickness of the floor construction and compressive strength of the concrete is unknown.

Condition

The upper floor was observed to be in generally fair condition, with no significant cracking or failure observed. No actions will be generated during the study period.

B Shell

B20 Exterior Enclosure

B2011 Exterior Wall Construction

Description

The facility contains exterior veneer brick that was installed with the original construction of the building.

Condition

The wall construction was observed to be in fair condition generally; however we observed cracking and dislodgement of veneer units in various locations. We recommend a structural engineer action early in the study period.

B Shell

B20 Exterior Enclosure

B2021 Windows

Description

The building contains aluminum framed insulated fixed window units throughout the elevations. Sealant is provided between the framing and exterior wall at the perimeter of the windows.

Condition

The exterior windows were observed to be in poor to fair condition and are assumed to be original to the facility. Based on the age and condition, we recommend upgrading the windows early in the study period.

B Shell

B20 Exterior Enclosure

B2031 Glazed Doors and Entrances

Description

Exterior doors for the facility is provided via two glazed aluminum double entrance doors, three single hollow metal doors and one double hollow metal door.

Condition

The exterior doors were observed to be in poor to fair condition and appear to be original tot he structure. Based on the age and condition, we recommend replacement early in the study period.

B Shell

B20 Exterior Enclosure

B2034 Overhead Doors

Description

There are three rolling overhead doors located at the East exterior elevation. The doors are electrically operated and are guided via a metal track located either side of the door panels.

Condition

The overhead doors appeared to be in poor to fair condition. Based on the age of the overhead doors, we recommend replacement early in the study period.

B Shell

B30 Roofing

B3011 Roof Finishes

Description

The roof levels consists of low-sloped metal corrugated deck which is supported by steel beams which contains a single ply roof membrane covering with a gravel finish.

Condition

The roof covering was observed to be in poor to fair condition and was installed in 2001. Based on the age and condition we recommend replacement early in the study period.

B Shell

B30 Roofing

B3016 Gutters and Downspouts

Description

The building contains ten roof drains located throughout the low sloped roof at the designed low-points. We understand the drains are connected to interior leaders that discharge into the sanitary waste system.

Condition

The roof drains and interior leaders were observed to be in poor to fair condition. This type of asset has a typical EUL of twenty years. We recommended replacement at the beginning of the study period with the recommended roof replacement.

C10 Interior Construction

C1011 Fixed Partitions

Description

The building interior partitions are provided with gypsum wall board stud partition walls with a painted finish.

Condition

The gypsum wall board stud wall partitions appear to be in fair condition. As gypsum wall board stud partition walls have a typical EUL of fifty years, no replacement is anticipated during the study period. We recommend repainting the walls late in the study period.

C Interiors

C10 Interior Construction

C1014 Site Built Toilet Partitions

Description

Floor and wall mounted toilet partitions are present within the facilities locker rooms.

Condition

The metal partitions were observed to be in poor to fair condition and appeared to have surpassed their EUL of twenty years. We recommend replacement early in the study period.

C Interiors

C10 Interior Construction

C1021 Interior Doors

Description

The stairwells contain four single hollow metal doors. The hollow metal doors contain hydraulic self closers and and knob style handles.

Condition

The hollow metal doors were observed to be in fair condition. Base on the age and condition of the doors, no replacement is anticipated during the study period.

C10 Interior Construction

C1021 Interior Doors

Description

The office areas of the facility contains single solid wood core doors. The wood doors contain knob style handles and a natural finish.

Condition

The wood doors were observed to be in fair to good condition. Based on the age and condition of the doors no replacement is anticipated during the study period.

C Interiors

C20 Stairs

C2011 Regular Stairs

Description

The building's interior is provided with concrete filled steel pan constructed stairways with exposed concrete finishes and metal handrails which serves two floors to the building.

Condition

The interior stairs appeared to be in fair to good condition, with no signs of deterioration. Based on the observed condition, no replacements are anticipated during the study period.

C Interiors

C30 Interior Finishes

C3021 Floor Toppings

Description

The second floor contains refinished concrete flooring throughout the jail and cell portion of the facility.

Condition

The refinished concrete was observed to be in poor to fair condition. Based on the age and condition of the flooring we recommend refinishing the slab early in the study period.

C30 Interior Finishes

C3024 Flooring

Description

The restrooms and locker rooms contain ceramic floor tile. The floor tile appeared to be original to the facility.

Condition

The floor tile in the restrooms and locker rooms appeared to be in poor to fair condition. Based on the age and condition we recommend replacement early in the study period.

C Interiors

C30 Interior Finishes

C3024 Flooring

Description

The kitchen on the second floor contains a quarry tile flooring. The quarry tile is 4X4 tile with quarter inch grout line.

Condition

The quarry tile was observed to bein fair condition considering the age. Based on the RUL of nine years we recommend replacement late in the study period.

C Interiors

C30 Interior Finishes

C3024 Flooring

Description

Flooring for the second floor hallway is provided by VCT floor tile. We assume the VCT to be original to the facility.

Condition

The VCT was observed to be ion poor to fair condition for it s age. Based on the EUL of eighteen years, we recommend replacement early in the study period.

C30 Interior Finishes

C3025 Carpeting

Description

Flooring for the office areas and first floor hallways contains carpet tile. The carpet tile was replaced in 2010.

Condition

The carpet tile was observed to be in fair to good condition. Based on the condition of the carpet tile we have extended the RUL. We recommend replacement late in the study period.

C Interiors

C30 Interior Finishes

C3032 Suspended Ceilings

Description

The majority of facilities ceiling finishes are provided with a suspended acoustic ceiling tile system. The remainder of the building consists of gypsum wallboard and exposed ceiling.

Condition

The ceiling finishes were observed to be in fair to good condition. Based on the condition of the finishes, no replacement is anticipated during the study period.

D10 Conveying Systems

D1011 Passenger Elevators

Description

Elevator cab finishes for the facility contains VCT flooring, laminated wall panels and stainless steel hand rails.

Condition

The elevator cab finishes were observed to be in poor to fair condition and dated in appearance. Based on the condition we recommend replacement early in the study period.

D Services

D10 Conveying Systems

D1011 Passenger Elevators

Description

The building contains two hydraulic elevators each with a capacity of approximately 3,500 lbs. serving two landings. The machine rooms contain the hydraulic pumps and control equipment serving the elevator cars together with their individual control equipment.

Condition

The Montgomery hydraulic elevator appeared to be original to the facility. Based on the age of the elevator equipment we recommend replacement early in the study period. The Hydraulik elevator was replaced in 2015. No replacement is anticipated during the study period.

D Services

D20 Plumbing

D2011 Water Closets

Description

The building contains multiple tank-less and tank type floor mounted vitreous china water closets with plastic seats, automatic and manual flush valves located within the restrooms.

Condition

The water closets appeared to be in fair condition. As a whole the water closets flushed properly and did not have any cracks in the china and no actions have been generated as it is anticipated that they are suitable to last beyond the study period.

D20 Plumbing

D2012 Urinals

Description

The facility contains two wall mounted vitreous china urinal located within the men's restrooms.

Condition

The urinals were observed to be in fair condition. The urinals flushed properly and did not have any cracks in the china. No actions are anticipated during the study period.

D Services

D20 Plumbing

D2013 Lavatories

Description

The building is provided with four vitreous china vanity top lavatories and six wall hung lavatories within the restrooms. The lavatories were equipped with single handle and dual handle faucets.

Condition

The lavatories appeared to be in fair to good condition and are original to the building. The typical EUL for this type of fixture is thirty-five years, therefore no replacements are anticipated during the study period.

D Services

D20 Plumbing

D2014 Sinks

Description

The facility contains two floor mounted service sinks located in the janitorial closets.

Condition

The service sinks were observed to be in poor to fair condition and appeared to be original to the structure. Based on the age and condition we recommend replacement early in the study period.

D20 Plumbing

D2014 Sinks

Description

The breakroom contains one single bowl stainless steel sink. The sink is equipped with a dual handle faucet.

Condition

The single bowl sink was observed to be in fair condition. Based on the age of the sink we recommend replacement early in the study period.

D Services

D20 Plumbing

D2017 Showers

Description

The detention cells contain ten stainless steel three wall showers with the associated components and valves.

Condition

Teh detention showers were observed to be in poor condition. Based on the age and condition of the shower walls and components, we recommend replacement early in the study period.

D Services

D20 Plumbing

D2017 Showers

Description

The building is provided with three ceramic tile shower located in the first floor locker rooms.

Condition

The ceramic wall showers were observed to be in poor to fair condition and we assume to be original to the structure. Based on the EUL of forty years we recommend replacement early in the study period.

D20 Plumbing

D2018 Drinking Fountains and Coolers

Description

The facility contains one wall mounted drinking fountain with a water bottle filler.

Condition

The wall mounted drinking fountain was observed to be in fair to good condition. Based on the condition of the drinking fountain, we have extended the RUL. No action will be required during the study period.

D Services

D20 Plumbing

D2021 Cold Water Service

Description

The domestic cold water system is supplied directly from the local public utility company and we assume enters the building at the North elevation.

Condition

The domestic water system at the building appeared to be in fair condition. No known corrosion was observed that could be attributed to age and deferred maintenance. No actions required.

D Services

D20 Plumbing

D2021 Cold Water Service

Description

There is water softener system present at the building located in the mechanical room. The water softener is present to eliminate scaling and the removal of calcium and magnesium to reduce the negative effects of hard water clogging pipes and machinery.

Condition

The domestic water system at the building appeared to be in fair to good condition as far as we are aware. No known corrosion was observed that could be attributed to age and deferred maintenance. No actions required.

D20 Plumbing

D2022 Hot Water Service

Description

How water distribution is provided by two circulating distribution pumps. The pumps were not accessible due to being plumbed toward the ceiling of the mechanical room.

Condition

The distribution pumps were observed to be in fair condition. No issues were noted at the time of the assessment. We recommend replacement late in the study period to maintain reliable and efficient operation.

D Services

D20 Plumbing

D2022 Hot Water Service

Description

The buildings domestic hot water is provided via a two natural gas water heaters with capacities of 75 gallons. The water heaters are manufactured by A.O Smith and Rheem and are located in the mechanical room.

Condition

The water heaters were observed to be in fair to good condition. The A.O Smith water heater has an EUL of nine years. We recommend replacement late in the study period. The Rheem will last beyond the study period.

D Services

D20 Plumbing

D2031 Waste Piping

Description

The sanitary waste is gravity base system is comprised of cast iron pipe. The main line discharges into the municipal sanitary waste system.

Condition

No visually apparent problems with the sanitary waste piping were observed or reported recently by the maintenance personnel. The waste system can be serviceable well beyond the study period with regular maintenance.

D₃₀ HVAC

D3021 Boilers

Description

The facility contains one Lochinvar gas hot water boiler at 285 MBH located in the mechanical room of the facility.

Condition

The hot water boiler was observed to be in fair to good condition. Based on the RUL of thirteen years, no action will be taken during the study period.

D Services

D₃₀ HVAC

D3031 Chilled Water Systems

Description

The building's chilled water system includes a 60 ton cooling tower manufactured by Evapco. The unit is located on the roof of the facility.

Condition

The cooling tower was observed to be in poor to fair condition and has surpassed its EUL of fifteen years. Based on the age and condition, we recommend replacement early in the study period.

D Services

D30 HVAC

D3032 Direct Expansion Systems

Description

Cooling for the data rooming is provided by two full split systems. The split systems are manufactured by Mitsubishi and Daikin. The cooling capacity for the split systems are one ton of cooling.

Condition

The full split systems were observed to in fair and fair to good condition. The Daikin unit has been replaced in the past few years and will last beyond the study period. The Mitsubishi unit has surpassed its EUL of twenty years. We recommend replacement early in the study period.

D30 HVAC

D3032 Direct Expansion Systems

Description

The building contained a number of heat pumps located in the first floor ceiling. The heat pumps were manufactured by Carrier and had capacities ranging from 2-3 tons.

Condition

The water source heat pumps were all observed to be in fair condition and functioned properly. This type of equipment has an EUL of twenty years therefore we anticipate the units will need to be replaced midway through the study period.

D Services

D30 HVAC

D3042 Exhaust Ventilation Systems

Description

Building exhaust is provided by multiple rooftop exhaust fans that are manufactured by Greenheck. The exhaust fans have a CFM rating of approximately 600-2000 CFM.

Condition

The exhaust fans were observed to be in poor to fair and fair to good condition. A majority of the exhaust fan have surpassed their EUL of fifteen years. We recommend replacing those exhaust fans early in the study period.

D Services

D30 HVAC

D3045 Chilled Water Distribution

Description

The building contained one chilled water pump that is attached to the cooling tower. The pump motor was manufactured by Weg and has a capacity of one HP.

Condition

The HVAC chilled water circulation pumps appeared to be in fair condition. With an EUL of fifteen-years for this type of equipment we do not anticipate replacement during the study period.

D₃₀ HVAC

D3051 Terminal Self Contained Units

Description

The facility contains two suspended natural gas heaters. The suspended heaters have an MBH rating of 20 and 100 MBH.

Condition

The suspended heaters were observed to be in fair and fair to good condition. Based on the age, we recommend replacement late in the study period.

D Services

D₃₀ HVAC

D3052 Package Units

Description

Heating and cooling for the second floor of the facility is provided by multiple Trane package rooftop package units (RTU). The RTU's have a cooling capacity ranging from 3-5 tons of cooling.

Condition

The RTU's were observed to be in poor to fair condition and have surpassed their EUL of twenty years. Based on the age and condition of the HVAC units we recommend replacement early in the study period.

D Services

D50 Electrical Systems

D5012 Low Tension Service and Dist

Description

The Main Distribution Panels (MDP) are Square D Company units that are rated at 120/208 volts at 2,000 amps. This is a single phase panel that supply power to the lower capacity panels ranging from 1200 to 100 amps.

Condition

The MDP appeared to be in fair condition. We assume that the switchboard is more than twenty-years of age and therefore based on typical EUL of thirty-years we have included for its replacement early in the study period to maintain reliable supply at the building.

D Services

D50 Electrical Systems

D5021 Branch Wiring Devices

Description

The branch wiring devices including switches, receptacles, GFCI and other devices were observed to be commercial grade in standard non-décor format.

Condition

The branch wiring was observed to be in fair condition with no broken outlets or switches therefore no actions will be generated during the study period.

D Services

D50 Electrical Systems

D5022 Lighting Equipment

Description

Lighting for the facility is provided by fluorescent strip lighting for the interior, recessed can light fixtures for the eves and exterior wall packs.

Condition

Lighting for facility was observed to be in fair and fair to good condition. The exterior wall packs have been upgraded to LED and will last beyond the study period. The recessed can lighting and fluorescent light will require upgrading early in the study period.

D Services

D50 Electrical Systems

D5033 Telephone Systems

Description

The telephone service board and data equipment are located within the telephone room mounted on plywood board and a metal rack cart. The telephone system provides voice lines to the telephone switch panel and is patched to the structured voice cabling to the various telephone voice plates throughout the building. The data system contains a metal rack cart with voice and data patch panels, routers, switches, modems and structured data cabling to the various data plates located throughout the building.

Condition

The existing telephone and data equipment/infrastructure was observed to be in fair to good condition; therefore, based on the RUL, no action will be taken during the study period.

D Services

D50 Electrical Systems

D5037 Fire Alarm Systems

Description

There is Fire Control Instruments fire detection system with an addressable Fire Alarm Control Panel (FACP) located in the building. The FACP is wall mounted within the interior of the facility. The FACP monitors manual pull stations and smoke detectors throughout the building interior.

Condition

The fire alarm system appeared to be in fair condition with no operational issues observed or noted to us. The typical EUL for a FACP is fifteen-years, we recommend replacement late in the study period.

D Services

D50 Electrical Systems

D5038 Security and Detection Systems

Description

The building contains a security system with a closed-circuit television system which enables door access and monitors detainees. The remote locks at secured doors and CCTV system is monitored at the central control center.

Condition

The equipment appeared to be in poor to fair condition due to age and that replacement parts are no longer available. The system has exceeded the ten-year EUL and that connection and replacement part issues were reported to us we recommend the system be upgraded at the start of the study period.

E Equipment & Furnishing

E10 Equipment

E1026 Detention Equipment

Description

The detention center doors are made up of single plate metal doors and cell front rolling doors.

Condition

The detention door were observed to be in poor condition and original to the facility. Based on the age and the doors being obsolete, we recommend replacement early in the study period.

E Equipment & Furnishing

E10 Equipment

E1026 Detention Equipment

Description

The building contains multiple stainless steel prison style sink and water closet combination units.

Condition

The holding cell toilet apparatus units were observed in poor to fair condition. These units are original to the building and the EUL for this type of fixture is twenty years. We recommend replacement early in the study period.

E Equipment & Furnishing

E20 Furnishings

E2012 Fixed Casework

Description

The building contained wood constructed fixed casework within the break room/kitchen areas. The wood cabinets generally consisted of hardwood frames and plywood plastic laminated finished panels and worktops.

Condition

The fixed casework appeared to be in poor to fair condition, although suitable for their use, they appear in most instances to be more than twenty-years of age. Cabinets have a typical EUL of twenty-years and therefore replacement is recommended near-term in the study period.

G Building Sitework

G20 Site Improvements

G2021 Bases and Sub Bases

Description

The property contains an asphalt base parking lot with painted striping. The parking lot contains 55 parking spaces.

Condition

The asphalt area appeared to be in poor to fair condition. The asphalt is starting to crack and spall due to age. We recommend the asphalt parking area be milled and over laid early in the study period.

G Building Sitework

G20 Site Improvements

G2024 Parking Booths and Equipment

Description

The parking lot contained one vehicle barrier at the drive way entrance / exit systems for controlled access for the users.

Condition

The vehicle barrier - drive way entrance / exit system was observed to be in fair condition. The typical EUL for this type of equipment is fifteen-years, we recommend replacement early in the study period.

G Building Sitework

G40 Site Electrical Utilities

G4092 Site Emergency Power Generation

Description

The building is backed-up by a diesel generator which is located in the mechanical room of the building. The transfer switch is wall mounted within the same room. The generator is manufactured by Caterpillar with a capacity of 400kW.

Condition

The generator appeared to be fair to good condition and in good working order. Other than routine maintenance and scheduled testing, no major actions are foreseen during the study period.

Appendix

Appendix A - Capital Expenditure Table

Sheriff & Jail

CRV: \$4,508,400

Year Built: 1981

GSF: 26,520

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2022	JOHN-CTY-SHERF- SHERF106	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF107	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF108	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF114	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF115	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF116	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$14605.10	\$14,605
2022	JOHN-CTY-SHERF- SHERF117	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$21391.97	\$21,392
2022	JOHN-CTY-SHERF- SHERF118	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$14605.10	\$14,605
2022	JOHN-CTY-SHERF- SHERF83	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF84	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF85	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF86	Panelboard	1	EACH	\$35005.80	\$35,006

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2022	JOHN-CTY-SHERF- SHERF96	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$88789.56	\$88,790
2022	JOHN-CTY-SHERF- SHERF97	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF98	Panelboard, 208Y over 120V, 225 to 1200 AMP	1	EACH	\$9352.28	\$9,352
2022	JOHN-CTY-SHERF- SHERF-B201123-3-A1	Engineering Study of Foundation	1	EACH	\$7250.00	\$7,250
2022	JOHN-CTY-SHERF- SHERF-B202100-8	Aluminum Window Units _ Fixed or Single Hung	905	SF	\$114.79	\$103,886
2022	JOHN-CTY-SHERF- SHERF-B203100-10	Double Aluminum Glazed Doors	2	EACH	\$12873.00	\$25,746
2022	JOHN-CTY-SHERF- SHERF-B203304-9	Rolling Overhead Doors, Electric	295	SF	\$91.48	\$26,987
2022	JOHN-CTY-SHERF- SHERF-B203900-11	Double HM Doors	1	EACH	\$4461.23	\$4,461
2022	JOHN-CTY-SHERF- SHERF-B203902-12	Single HM Doors	3	EACH	\$3496.49	\$10,489
2022	JOHN-CTY-SHERF- SHERF-B301109-6	Single ply Roof Membrane _ Ballasted _ Complete Covering System	13,260	SF	\$25.64	\$339,933
2022	JOHN-CTY-SHERF- SHERF-B301607-7	Roof Drains and Interior Leaders_EACH	10	EACH	\$792.86	\$7,929
2022	JOHN-CTY-SHERF- SHERF-C101405-14	Toilet Partition	3	EACH	\$3263.38	\$9,790
2022	JOHN-CTY-SHERF- SHERF-C202101-26	Refinish Concrete Floor	12,505	SF	\$12.44	\$155,575
2022	JOHN-CTY-SHERF- SHERF-C302303-19	Epoxy Floor Coating	405	SF	\$23.35	\$9,455
2022	JOHN-CTY-SHERF- SHERF-C302401-23	Ceramic Tile	904	SF	\$40.59	\$36,689
2022	JOHN-CTY-SHERF- SHERF-C302413-20	Vinyl Composite Tile, VCT	895	SF	\$13.38	\$11,978

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2022	JOHN-CTY-SHERF- SHERF-D101102-29	Elevator Cab Renovation	2	EACH	\$58274.80	\$116,550
2022	JOHN-CTY-SHERF- SHERF-D101103-31	Elevator Controls _ Motor Controller	1	EACH	\$97901.68	\$97,902
2022	JOHN-CTY-SHERF- SHERF-D101105-30	Hydraulic Elevator _ Standard	1	EACH	\$314683.97	\$314,684
2022	JOHN-CTY-SHERF- SHERF-D201406-39	Service Sink Floor Mounted	2	EACH	\$5252.63	\$10,505
2022	JOHN-CTY-SHERF- SHERF-D201408-38	Single Compartment Stainless Sink	1	EACH	\$2598.66	\$2,599
2022	JOHN-CTY-SHERF- SHERF-D201703-126	Detention Cell Showers	10	EACH	\$3430.61	\$34,306
2022	JOHN-CTY-SHERF- SHERF-D201703-40	Shower _ Three Wall Ceramic Tile	3	EACH	\$3430.61	\$10,292
2022	JOHN-CTY-SHERF- SHERF-D303113-44	Cooling Tower _ Galvanized _ Outdoor Unit	60	TON	\$631.23	\$37,874
2022	JOHN-CTY-SHERF- SHERF-D303217-109	Split System Full System _ Cooling Only	2	TON	\$4420.54	\$8,841
2022	JOHN-CTY-SHERF- SHERF-D303217-49	Split System Full System _ Cooling Only	1	TON	\$4420.54	\$4,421
2022	JOHN-CTY-SHERF- SHERF-D304205-47	Exhaust Fan	1,100	CFM	\$3.35	\$3,684
2022	JOHN-CTY-SHERF- SHERF-D304205-48	Exhaust Fan	1,100	CFM	\$3.35	\$3,684
2022	JOHN-CTY-SHERF- SHERF-D304205-51	Exhaust Fan	1,100	CFM	\$3.35	\$3,684
2022	JOHN-CTY-SHERF- SHERF-D304205-52	Exhaust Fan	2,000	CFM	\$3.35	\$6,699
2022	JOHN-CTY-SHERF- SHERF-D304210-50	Relief Fans	600	CFM	\$3.35	\$2,010
2022	JOHN-CTY-SHERF- SHERF-D305202-45	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2022	JOHN-CTY-SHERF- SHERF-D305202-46	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-53	Packaged Outdoor Unit _ Cooling and Heating	3	TON	\$4879.11	\$14,637
2022	JOHN-CTY-SHERF- SHERF-D305202-55	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-56	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-58	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-59	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-61	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-62	Packaged Outdoor Unit _ Cooling and Heating	3	TON	\$4879.11	\$14,637
2022	JOHN-CTY-SHERF- SHERF-D305202-63	Packaged Outdoor Unit _ Cooling and Heating	2	TON	\$4879.11	\$9,758
2022	JOHN-CTY-SHERF- SHERF-D305202-64	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D305202-65	Packaged Outdoor Unit _ Cooling and Heating	3	TON	\$4879.11	\$14,637
2022	JOHN-CTY-SHERF- SHERF-D305202-66	Packaged Outdoor Unit _ Cooling and Heating	5	TON	\$4879.11	\$24,396
2022	JOHN-CTY-SHERF- SHERF-D501203-119	Emergency Generator Transfer Switch	1	EACH	\$11672.50	\$11,673
2022	JOHN-CTY-SHERF- SHERF-D502225-112-A1	ECM 001 Update Exterior Lighting to Energy Efficient Lighting	14	EACH	\$556.85	\$7,796
2022	JOHN-CTY-SHERF- SHERF-D502233-111-A1	ECM 002 Update Interior Lighting to Energy Efficient Lighting	26,520	SF	\$16.21	\$430,012
2022	JOHN-CTY-SHERF- SHERF-D503808-121	Security System _ Full Spec	52,520	SF	\$10.67	\$560,493

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2022	JOHN-CTY-SHERF- SHERF-E102602-122	Doors and Frames, Single Plate, 3ft x 7ft	53	EACH	\$11654.96	\$617,713
2022	JOHN-CTY-SHERF- SHERF-E102604-124	Cell Front Rolling Door, 5ft x 7ft High	17	EACH	\$21346.09	\$362,883
2022	JOHN-CTY-SHERF- SHERF-E102605-123	Toilet Apparatus, incl. Wash Basin	52	EACH	\$13021.10	\$677,097
2022	JOHN-CTY-SHERF- SHERF-E102606-125	Visito Cubicle, Vision panel, No Intercom	3	EACH	\$13265.06	\$39,795
2022	JOHN-CTY-SHERF- SHERF-E201201-129	Counter Top _ Laminated	10	LF	\$130.69	\$1,307
2022	JOHN-CTY-SHERF- SHERF-E201203-130	Floor Mounted Base Cabinets _ Standard	10	LF	\$646.87	\$6,469
2022	JOHN-CTY-SHERF- SHERF-E201206-131	Wall Mounted Cabinets _ Standard	5	LF	\$557.66	\$2,788
2022	JOHN-CTY-SHERF- SHERF-G202107-128-A1	Crack Repair, Seal Coating, and Restriping to Parking Lots	2,442	SY	\$17.05	\$41,641
2022	JOHN-CTY-SHERF- SHERF-G202403-110	Vehicle Barrier _ Drive Way Entrance or Exit	1	EACH	\$15247.20	\$15,247
2025	JOHN-CTY-SHERF- SHERF-D202218-89	DHW Circulation Pump and Motors 0.5 HP to 1 HP	2	EACH	\$3964.29	\$7,929
2025	JOHN-CTY-SHERF- SHERF-D305114-70	Unit Heater _ Gas Fired Suspended, 20 MBH	1	EACH	\$3506.85	\$3,507
2026	JOHN-CTY-SHERF- SHERF-D303202-71	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-73	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-75	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-76	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-78	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859

Year	Asset ID	Asset Label	Quantity	Units	Unit Cost	Expenditures
2026	JOHN-CTY-SHERF- SHERF-D303202-80	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-81	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303202-82	Water Source Heat Pump 1 to 2 TONS	1	EACH	\$5858.71	\$5,859
2026	JOHN-CTY-SHERF- SHERF-D303203-72	Water Source Heat Pump 3 to 5 TONS	1	EACH	\$9741.54	\$9,742
2026	JOHN-CTY-SHERF- SHERF-D303203-74	Water Source Heat Pump 3 to 5 TONS	1	EACH	\$9741.54	\$9,742
2026	JOHN-CTY-SHERF- SHERF-D303203-77	Water Source Heat Pump 3 to 5 TONS	1	EACH	\$9741.54	\$9,742
2026	JOHN-CTY-SHERF- SHERF-D303203-79	Water Source Heat Pump 3 to 5 TONS	1	EACH	\$9741.54	\$9,742
2029	JOHN-CTY-SHERF- SHERF-C301214-18	Painted Finish _ Standard	18,937	SF	\$3.65	\$69,196
2029	JOHN-CTY-SHERF- SHERF-C302505-25	Carpet Tiles _ Standard	1,115	SY	\$125.87	\$140,350
2029	JOHN-CTY-SHERF- SHERF-D305113-95	Unit Heater _ Gas Fired Suspended, 100 MBH	1	EACH	\$7013.72	\$7,014
2029	JOHN-CTY-SHERF- SHERF-D305114-101	Unit Heater _ Gas Fired Suspended, 20 MBH	1	EACH	\$3506.85	\$3,507
2031	JOHN-CTY-SHERF- SHERF-C302407-21	Quarry Tile	475	SF	\$30.54	\$14,505
2031	JOHN-CTY-SHERF- SHERF-D202214-88	Domestic Hot Water Heater _ Gas	77	GALS	\$106.73	\$8,219
2031	JOHN-CTY-SHERF- SHERF-D503702-100	Annunciation Panel	1	EACH	\$3058.60	\$3,059
2031	JOHN-CTY-SHERF- SHERF-D503705-99	Fire Alarm Control Panel, FACP, Up to 10 Zone	1	EACH	\$6708.77	\$6,709
		<u></u>				\$5,073,796

FCA Report | Sheriff & Jail

Appendix B - Photographic Records



Acoustic Ceiling System — Standard



Aluminum Window Units — Fixed or Single Hung



Annunciation Panel



Asphalt Parking Lot With Striping



Asphalt Parking Lot With Striping



Cast in place Concrete Beams and Floor Slab



Cell Front Rolling Door, 5ft x 7ft High



Ceramic Tile



Cooling Tower — Galvanized — Outdoor Unit



Counter Top — Laminated



CW Circulation Pump and Motor, 0.5 to 1 HP



DHW Expansion tank



DHW Expansion tank



Domestic Hot Water Heater — Gas



Doors and Frames, Single Plate, 3ft x 7ft



Double Aluminum Glazed Doors



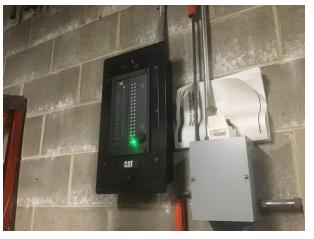
Elevator Cab Renovation



Elevator Cab Renovation



Elevator Controls — Motor Controller



Emergency Generator Transfer Switch



Epoxy Floor Coating



Exhaust Fan



Exhaust Fan



Exhaust Fan



Exhaust Fan







Exhaust Fan

Exterior Recessed Can Light Fixtures





Fire Alarm Control Panel, FACP, Up to 10 Zone

Floor Mounted Water Closets

Appendix C - Document Review and Warranty Information

The following documents were reviewed as part of the facility condition assessment of the Sheriff & Jail facility:

• As-Built Drawings

Appendix D - Equipment Tables

Location	Equipment Type	Equipment Class	Manufacturer	Model No	Serial No	Tag	Capacity	Year
Mechanical Room	D501203 Emergency Generator Transfer Switch	Electrical Equipment	Caterpillar	Not Visible	Not Visible	Not Tagged	400.00000 AMP	Not Visible
Roof	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	1.22E+16	E1	Not Tagged	400.00000 AMP	Not Visible
1st Floor	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	225.00000 AMP	Not Visible
2nd Floor	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	225.00000 AMP	Not Visible
Electrical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	225.00000 AMP	Not Visible
Electrical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	2000.0000 0 AMP	Not Visible
Mechanical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	225.00000 AMP	Not Visible
Mechanical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	400.00000 AMP	Not Visible
Mechanical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	600.00000 AMP	Not Visible
Mechanical Room	D501204 Panelboard, 208Y over 120V, 225 to 1200 AMP	Electrical Equipment	Square D	Not Visible	Not Visible	Not Tagged	1200.0000 0 AMP	Not Visible
Mechanical Room	G409202 Generator Sets _ Diesel Engine, 200 to 1000 kW	Electrical Equipment	Caterpillar	400	CAT00CCKJE 00243	Not Tagged	400.00000 KW	Not Visible

Location	Equipment Type	Equipment Class	Manufacturer	Model No	Serial No	Tag	Capacity	Year
Interior	D101102 Elevator Cab Renovation	Elevators And Lifts	Not Visible	Not Visible	Not Visible	Not Tagged	Not Visible	Not Visible
Mechanical Room	D101103 Elevator Controls _ Motor Controller	Elevators And Lifts	Montgomery	Not Accessible	Not Accessible	1	Not Visible	1981
Mechanical Room	D101105 Hydraulic Elevator _ Standard	Elevators And Lifts	Hydraulik	US-75	1150665	2	Not Visible	2015
Mechanical Room	D101105 Hydraulic Elevator _ Standard	Elevators And Lifts	Montgomery	411H	50384-187	1	Not Visible	1981
Mechanical Room	D101105 Hydraulic Elevator _ Standard	Elevators And Lifts	Not Accessible	Not Accessible	Not Accessible	2	Not Visible	2015
Mechanical Room	D302106 HW Boiler _ Electric, 205 to 716 MBH Range	HVAC Equipment	Lochninvar	KBN285	A08H1005534 5	Not Tagged	285.00000 MBH	Not Visible
Roof	D303113 Cooling Tower _ Galvanized _ Outdoor Unit	HVAC Equipment	Evapco	LRW-29	T011452	Not Tagged	60.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	0707V22341	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	4006V17742	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	4706V17740	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	4706V17743	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	5006V18295	Not Tagged	2.00000 TON	Not Visible

Location	Equipment Type	Equipment Class	Manufacturer	Model No	Serial No	Tag	Capacity	Year
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	5006V18297	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC024S	5006V18298	Not Tagged	2.00000 TON	Not Visible
1st Floor	D303202 Water Source Heat Pump 1 to 2 TONS	HVAC Equipment	Carrier	50RHC036S	4506V16753	Not Tagged	3.00000 TON	Not Visible
1st Floor	D303203 Water Source Heat Pump 3 to 5 TONS	HVAC Equipment	Carrier	50RHC036S	4606V17401	Not Tagged	3.00000 TON	Not Visible
1st Floor	D303203 Water Source Heat Pump 3 to 5 TONS	HVAC Equipment	Carrier	50RHC036S	4706V17769	Not Tagged	3.00000 TON	Not Visible
1st Floor	D303203 Water Source Heat Pump 3 to 5 TONS	HVAC Equipment	Carrier	50RHC036S	4806V18046	Not Tagged	3.00000 TON	Not Visible
1st Floor	D303203 Water Source Heat Pump 3 to 5 TONS	HVAC Equipment	Carrier	50RHC048S	4006V15103	Not Tagged	3.00000 TON	Not Visible
Roof	D303217 Split System Full System _ Cooling Only	HVAC Equipment	Daikin	RKB12AXVJU	Not Visible	Not Tagged	1.00000 TON	Not Visible
Exterior	D303217 Split System Full System _ Cooling Only	HVAC Equipment	Heat Controller	MSS-024	001KA00045	Not Tagged	2.00000 TON	Not Visible
Roof	D303217 Split System Full System _ Cooling Only	HVAC Equipment	Mitsubishi	PUY- A12NHA6	4ZU00396A	Not Tagged	1.00000 TON	Not Visible
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	CUBE-220HP	1108811	Not Tagged	2000.0000 0 CFM	Not Visible
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	G-095	186113925	MARK 1	600.00000 CFM	Not Visible

Location	Equipment Type	Equipment Class	Manufacturer	Model No	Serial No	Tag	Capacity	Year
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	G-095	20313399	MARK 1	600.00000 CFM	Not Visible
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	SB-080	1104566	Not Tagged	1100.0000 0 CFM	Not Visible
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	SB-080	1104567	Not Tagged	1100.0000 0 CFM	Not Visible
Roof	D304205 Exhaust Fan	HVAC Equipment	Greenheck	SB-080	1105788	Not Tagged	1100.0000 0 CFM	Not Visible
Roof	D304210 Relief Fans	HVAC Equipment	Greenheck	RFS-100-15	1107271	Not Tagged	600.00000 CFM	Not Visible
Roof	D304507 CW Circulation Pump and Motor, 0.5 to 1 HP	HVAC Equipment	Weg	SP00118ET3	1044137001	Not Tagged	1.00000 HP	Not Visible
Mechanical Room	D305113 Unit Heater _ Gas Fired Suspended, 100 MBH	HVAC Equipment	Reznor	UDAP200	BNG796EN04 354X	Not Tagged	100.00000 MBH	Not Visible
Electrical Room	D305114 Unit Heater _ Gas Fired Suspended, 20 MBH	HVAC Equipment	Dayton	Not Accessible	Not Accessible	Not Tagged	20.00000 MBH	Not Visible
Mechanical Room	D305114 Unit Heater _ Gas Fired Suspended, 20 MBH	HVAC Equipment	Dayton	Not Accessible	Not Accessible	Not Tagged	20.00000 MBH	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YCC024F	Z344L932H	Not Tagged	2.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC036A	Z36100270L	Not Tagged	3.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC036A	Z36100322L	Not Tagged	3.00000 TON	Not Visible

Location	Equipment Type	Equipment Class	Manufacturer	Model No	Serial No	Tag	Capacity	Year
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC036A	Z36100324L	Not Tagged	3.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100278L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100326L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100354L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100366L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100377L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100384L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100391L	Not Tagged	5.00000 TON	Not Visible
Roof	D305202 Packaged Outdoor Unit _ Cooling and Heating	HVAC Equipment	Trane	YHC060A	Z36100398L	Not Tagged	5.00000 TON	Not Visible

Appendix E - Glossary of Terms

Acronyms & Glossary of Terms

ABC Aggregate Base Course

BUR Built-Up Roof CIP Cast-In-Place

CMU Concrete Masonry Unit

EIFS Exterior Insulation and Finish System
EPDM Ethylene Propylene Diene Monomer

HM Hollow Metal Doors

MH Man Holes SC Solid Core Doors

TPO Thermoplastic Polyolefin AHU Main Air Handling Units

EF Exhaust Fan

EMC Electrical Metallic Conduit
EMT Electrical Metallic Tubing
FACP Fire Alarm Control Panel
FCC Fire Command Center

FCU Fan Coil Unit
FSS Fuel Supply System
MDP Main Distribution Panel
NAC Notification Appliance Circuit

RTU Roof Top Unit

SES Service Entrance Switchboards

VAV Variable Air Volume
VFD Variable Frequency Drives
CRV Current Replacement Value
DM Deferred Maintenance

EOL End of Life

EUL Estimated Useful Life FCI Facility Condition Index

HVAC Heating Ventilating and Air Conditioning

RUL Recommended Useful Life

AMP Amperage

BTU/HR British Thermal Units per Hour FPM Feet per Minute (Elevator Speed)

GPF Gallons Per-Flush HID High-Intensity Discharge

HP Horse Power KVA Kilovolt-Ampere

kW Kilowatt

PSF Pounds-Per-Square-Foot PSI Pounds-Per-Square-Inch

RO Reverse Osmosis
SF Square Foot
SY Square Yards

NEMA National Electrical Manufactures Association

NFPA National Fire Protection Association

Acronyms & Glossary of Terms

British Thermal Unit; the energy required to raise the temperature of one pound of **BTU** water by one degree.

The enclosure of the building that protects the building's interior from the outside **Building Envelope**

elements, namely the exterior walls, roof, and soffit areas.

Interacting of independent components or assemblies, which from single integrated **Building Systems** units, that comprise a building and its site work, such as, pavement and flatwork,

structural frame, roofing, exterior walls, plumbing, HVAC, electrical, etc.

Caulking Soft, putty-like material used to fill joints, seams, and cracks.

Codes See building codes.

A fully functional portion of a building system, piece of equipment, or building Component

element.

Physical deficiencies that cannot be remedied with routine maintenance, normal **Deferred Maintenance** operating maintenance, etc., excluding de minimis conditions that generally do not

present a material physical de3ficiency to the subject property.

Expected Useful Life

(EUL)

the average amount of time in years that an item, component of system is estimated to function when installed new and assuming routine maintenance is practiced.

All of any portion of buildings, structures, site improvements, complexes, equipment, **Facility**

roads, walks, passageways, parking lots, or other real or personal property located

on site.

A think, impervious sheet of material placed in construction to prevent water **Flashing**

penetration or to direct the flow of water. Flashing is used especially at roof hips and valleys, roof penetrations, joints between a roof and a vertical wall, and in masonry

walls to direct the flow of water and moisture.

Remaining Useful Life

(RUL)

A subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of a number of remaining years that an item, component, or system is established to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventative maintenance exercised, climatic conditions, extend of use, etc.

the components or building systems that support the building's non-variable forces

or weights (dead loads) and variable forces or weights (live loads).

Thermal Resistance

Structural Frame

(R)

A unit used to measure a material's resistance to heat transfer. The formula for thermal resistance is: R=Thickness (in inches)/K.

Warranty

Legally enforceable assurance of quality or performance of a product or work, or of the duration of satisfactory performance. Warranty guarantee and guaranty are substantially identical in meaning; nevertheless, confusion frequently arises from supposed distinctions attributed to guarantee (or guaranty) being exclusively indicative of duration of satisfactory performance or of a legally enforceable assurance furnished by a manufacturer or other third party. The uniform commercial code provisions on sales (effective in all states except Louisiana) use warranty but recognize the continuation of the use of guarantee and guaranty.