



JOHNSON ELEMENTARY SCHOOL  
1645 CHERRY AVENUE  
CHARLOTTESVILLE, VIRGINIA

ECS PROJECT NO. 46:6713

FOR

CITY OF CHARLOTTESVILLE - FACILITIES DEVELOPMENT

OCTOBER 29, 2021





October 29, 2021

Mr. Josh Bontrager  
City of Charlottesville - Facilities Development  
305 4th Street NW  
Charlottesville, Virginia, 22903

ECS Project No. 46:6713

Reference: Facility Condition Assessment Report for Johnson Elementary School, 1645 Cherry Avenue,  
Charlottesville, Virginia

Dear Mr. Bontrager:

ECS Mid-Atlantic, LLC is pleased to provide the results of our Facility Condition Assessment (FCA) for the referenced property. The scope of the FCA was performed in general accordance with ASTM and industry guidelines and items contained within the ECS Proposal No. 46:7239-FP, dated June 12, 2020. We understand that our work is being performed under the City of Charlottesville Purchase Order Number 4500313133.

It has been our pleasure to be of service to you on this project. Should you have any questions or comments with regard to the findings and recommendations, please feel free to contact us at your convenience.

Respectfully,

ECS Mid-Atlantic, LLC

A handwritten signature in black ink, appearing to read 'Don M. Goglio'.

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703-471-8400

A handwritten signature in blue ink, appearing to read 'Michael G. Doyle'.

Michael G. Doyle, AIA  
Principal Architect  
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703-471-8400

## Project Summary

Construction System	Good	Fair	Poor	Action	Immediate	Over Term Years 1-20
3.2.1 Topography	X			None		
3.2.2 Storm Water Drainage	X			None		
3.2.3 Access and Egress	X			None		
3.2.4 Paving, Curbing, and Parking	X	X		Repair		\$10,000
3.2.5 Flatwork		X		Replace		\$10,000
3.2.6 Landscaping and Appurtenances	X			None		
3.2.7 Recreational Facilities		X		Replace		\$55,000
3.2.8 Special Utility Systems		NA		None		
3.3.1 Foundation	X			None		
3.3.2 Building Frame	X			None		
3.3.3 Building Exteriors	X	X		Repair		\$60,000
3.3.4 Exterior Doors	X			None		
3.3.5 Exterior Windows	X	X		Replace		\$25,000
3.3.6 Roofing Systems	X	X		Replace		\$590,000
3.4.1.1 Supply and Waste Piping	X			None		
3.4.1.2 Domestic Hot Water Production		X		Replace		\$4,000
3.4.2.1 Equipment	X	X		Replace		\$439,500
3.4.2.2 Distribution System	X			None		
3.4.2.3 Control Systems	X			None		
3.4.3.1 Service and Metering	X	X		Replace		\$30,000
3.4.3.2 Distribution	X			None		
3.5 VERTICAL TRANSPORTATION SYSTEMS	X			None		
3.6.1 Sprinklers and Suppression Systems	X			None		
3.6.2 Alarm Systems	X	X		Replace		\$30,000
3.6.3 Security and Other Systems	X			None		
3.7.1 Interior Finishes	X			None		
3.8 Accessibility (ADA) Compliance	X	X		REMOVE PROTRUSIONS	\$12,000	
5.1 MOISTURE AND MOLD	X			None		
Totals					\$12,000	\$1,253,500

Summary	Today's Dollars	\$/Square Feet
Immediate Repairs	\$12,000	\$0.23

	Today's Dollars	\$/Square Feet	\$/Square Feet/Year
Replacement Reserves, today's dollars	\$1,253,500.00	\$24.21	\$1.21
Replacement Reserves, w/20, 2.5% escalation	\$1,384,151.02	\$26.74	\$1.34

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## 1.0 EXECUTIVE SUMMARY

### 1.1 BACKGROUND

ECS Mid-Atlantic, LLC (ECS) performed a Facility Condition Assessment (FCA) in general conformance with ASTM guidelines and general scope items contained within the ECS Proposal 46:7239-FP dated June 12, 2020 for the Johnson Elementary School property in Charlottesville, Virginia - hereinafter known as the Property.

The FCA was conducted by ECS in response to the authorization of our Proposal by Ms. Susan Dyer on November 23, 2020. The report was completed and reviewed by the following team members:

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Donald M. Goglio	Project Manager
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### Reliance

This report is provided for the exclusive use of City of Charlottesville - Facilities Development. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance.

### 1.2 METHODOLOGY

ECS observations and historical property data provided by the owner were utilized to determine the effective age of the property components. Various factors including exposure to weather elements, system manufacturer quality, level of maintenance, and usage determine the effective age of property components. Depending on the impact of these various factors, the effective age of property components can reduce the Remaining Useful Life (RUL) of a property component. The general requirements of the owner to address facility needs were requested to be prioritized based on the RUL and type of property component. The following Priorities were established by the Owner as follows:

#### Priority 1: Immediately Critical Items (Year 0)

Items in this Priority category include physical deficiencies that require immediate action as a result of (i) existing or potentially unsafe conditions, (ii) significant negative conditions impacting tenancy, (iii) material building code violations or Title II American with Disabilities Act (ADA) items.

## **Priority 2: Critical Items (Year 0-1)**

Items in this Priority category include physical deficiencies that require immediate action as a result of (i) poor or deteriorated condition of critical element or system, or (ii) a condition that is left “as is,” with an extensive delay in addressing same, would result in or contribute to critical element or system failure within one year.

## **Priority 3: Near Term Items (Years 2-5)**

Items in this category include physical deficiencies that require near term action as a result of (i) poor or deteriorated condition of critical element or system, or (ii) a condition that is left “as is,” with an extensive delay in addressing same, would result in or contribute to critical element or system failure within two to five years.

## **Priority 4: Reserve Items (Years 5-20)**

Items in this Priority category include Capital Reserves for recurring probable expenditures, which are not classified as operational or maintenance expenses, which should be annually budgeted for in advance. Capital reserves are reasonably predictable both in terms of frequency and cost. However, they may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within an estimated time period. A component method has also been included within this report as well.

Reserve items excludes systems or components that are estimated to expire after the reserve term and that are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that were not deemed to have a material affect on the use were also excluded. Costs that are caused by acts of God, accidents or other occurrences that are typically covered by insurance, rather than reserved funds, are also excluded.

Replacement costs were solicited from ownership/property management, ECS’ discussions with service companies, manufacturers’ representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by ownership’s or property management’s maintenance staff were also considered.

ECS’s reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the evaluation period. Additional information concerning systems or components respective replacement costs (in today’s dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Capital Reserve Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Needs Cost Estimates.

## **1.3 PROPERTY DESCRIPTION**

Johnson Elementary School, located at 1645 Cherry Avenue, in Charlottesville, Virginia, consists of a Two-story building. The building totals approximately 51,768 square feet. Parking is provided with Asphalt pavement. The School building was reportedly constructed in 1955.

#### SURVEY INFORMATION

Date of Assessment	July 8, 2021
Assessor	William R. Pratt, P.E.
Weather Conditions	Overcast   82F
Property Contact	Josh Bontrager, Project Manager for the City of Charlottesville - Facilities Development

#### SITE INFORMATION

Land Area	17.35 acres
Major Cross Streets	Shamrock Road
Pavement - Parking	Asphalt pavement
Number of Parking Spaces	63
Number of Accessible Spaces	Three
Number of Van Accessible Spaces	Three
Pedestrian Sidewalks	Concrete sidewalks

#### BUILDING INFORMATION

Building Type	School
Number of Buildings	One
Building Height	Two-story
Square Footage	51,768
Year Constructed	1955
Year Remodeled	1993

#### BUILDING CONSTRUCTION

Foundation	Assumed shallow spread footings
Structural System	Concrete masonry unit bearing walls with steel roof framing
Roof	Single-ply sheet membrane
Exterior Finishes	Brick veneer
Windows	Aluminum frame double pane, aluminum frame double pane

### BUILDING CONSTRUCTION

Entrance	Storefront entrance
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### BUILDING SYSTEMS

HVAC System	Central plant HVAC system with supplemental heating/cooling equipment
Domestic Hot Water	Gas domestic water heater
Water Distribution	Copper
Sanitary Waste Line	PVC and cast iron
Electrical Service	3-phase, 4-wire, 2,000 amps
Branch Wiring	Copper
Elevators	One passenger elevator
Fire Suppression System	Wet sprinkler system and fire extinguishers with automated fire alarm system with alarm bell, strobe, and pull down stations

### UTILITY SERVICE PROVIDERS

Water	Charlottesville Water
Sewer	Charlottesville Public Utilities - Wastewater
Electric	Dominion Virginia Power
Natural Gas	City of Charlottesville

## 1.4 OPINIONS OF COST

The opinions of cost are provided in the attached reserve replacement table and a summary of immediate repairs included in this report. The reserve replacement table covers capital expenditure items only. Items less than \$1,000 in cost have been excluded, except for immediate repairs, ADA or safety issues. Please refer to section 6.0 of this report for a detailed explanation on how these costs are derived.

## 1.5 COST TABLES



Immediate Repair Cost

Item	Quantity	Unit	Unit Cost	Replacement Percent	Immediate Total
<b>3.8 Accessibility (ADA) Compliance</b>					
REPLACE OR RELOCATE DRINKING FOUNTAINS	4	EA	\$3,000.00	100%	\$12,000
Total Repair Cost					\$12,000.00

Capital Reserve Schedule																													
Item	EUL	EFF AGE	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Year 11 2031	Year 12 2032	Year 13 2033	Year 14 2034	Year 15 2035	Year 16 2036	Year 17 2037	Year 18 2038	Year 19 2039	Year 20 2040	Total Cost
3.2.4 Paving, Curbing, and Parking																													
ASPHALT PAVEMENT REPAIRS	20	15	5	2	Allow	\$5,000.00	\$10,000	100%					\$5,000										\$5,000						\$10,000
3.2.5 Flatwork																													
REPLACE CONCRETE SIDEWALK SECTIONS AS NEEDED	25	24	1	2	EA	\$5,000.00	\$10,000	100%					\$5,000										\$5,000						\$10,000
3.2.7 Recreational Facilities																													
REPLACE PLAYGROUND EQUIPMENT	20	15	5	1	EA	\$45,000.00	\$45,000	100%					\$45,000																\$45,000
RESURFACE BASKETBALL COURT	20	10	10	1	LS	\$10,000.00	\$10,000	100%										\$10,000											\$10,000
3.3.3 Building Exteriors																													
REPOINT BRICKWORK	20	8	12	1	LS	\$30,000.00	\$30,000	100%												\$30,000									\$30,000
REPLACE SEALANTS	12	11	1	1	LS	\$15,000.00	\$15,000	100%	\$15,000																				\$15,000
PAINT WOOD TRIM	7	6	1	1	LS	\$10,000.00	\$10,000	100%	\$10,000																				\$10,000
REPAIR DAMAGED LOADING DOCK AREA				1	LS	\$5,000.00	\$5,000	100%	\$5,000																				\$5,000
3.3.5 Exterior Windows																													
REPLACE WINDOW GASKETS	20	19	1	1	LS	\$25,000.00	\$25,000	100%	\$25,000																				\$25,000
3.3.6 Roofing Systems																													
REPLACE SINGLE-PLY ROOFING SYSTEM	15	14	1	40,000	SF	\$14.00	\$560,000	100%	\$560,000																				\$560,000
REPAIR SLATE SHINGLE ROOFING SYSTEM	50	49	1	4	EA	\$5,000.00	\$20,000	100%	\$5,000				\$5,000					\$5,000					\$5,000						\$20,000

Item	EUL	EFF AGE	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Year 11 2031	Year 12 2032	Year 13 2033	Year 14 2034	Year 15 2035	Year 16 2036	Year 17 2037	Year 18 2038	Year 19 2039	Year 20 2040	Total Cost
REPLACE SKYLIGHTS AS NEEDED	20	19	1	1	LS	\$10,000.00	\$10,000	100%	\$10,000																				\$10,000
3.4.1.2 Domestic Hot Water Production																													
REPLACE WATER HEATERS	12	11	1	4	EA	\$1,000.00	\$4,000	100%	\$2,000												\$2,000								\$4,000
3.4.2.1 Equipment																													
REPLACE BOILERS	20	13	7	3	EA	\$25,000.00	\$75,000	100%							\$75,000														\$75,000
REPLACE CONDENSERS	15	14	1	2	EA	\$10,000.00	\$20,000	100%	\$20,000																				\$20,000
REPLACE AIR HANDLERS	15	14	1	4	EA	\$10,000.00	\$40,000	100%	\$40,000																				\$40,000
REPLACE WATER SOURCE HEAT PUMPS	20	9	11	85	EA	\$2,500.00	\$212,500	100%											\$42,500	\$42,500	\$42,500	\$42,500	\$42,500						\$212,500
REPLACE PACKAGE UNITS	20	9	11	3	EA	\$20,000.00	\$60,000	100%											\$60,000										\$60,000
REPLACE COOLING TOWER	18	15	3	1	EA	\$30,000.00	\$30,000	100%			\$30,000																		\$30,000
REPLACE SPLIT SYSTEM	15	10	5	1	EA	\$2,000.00	\$2,000	100%					\$2,000																\$2,000
3.4.3.1 Service and Metering																													
REPLACE GENERATOR AND TRANSFER SWITCH	25	24	1	1	EA	\$30,000.00	\$30,000	100%	\$30,000																				\$30,000
3.6.2 Alarm Systems																													
REPLACE FIRE ALARM PANELS	25	24	1	1	LS	\$30,000.00	\$30,000	100%	\$30,000																				\$30,000
Total (Uninflated)									\$752,000.00	\$0.00	\$30,000.00	\$0.00	\$57,000.00	\$5,000.00	\$75,000.00	\$0.00	\$0.00	\$10,000.00	\$107,500.00	\$72,500.00	\$44,500.00	\$42,500.00	\$52,500.00	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,253,500.00
Inflation Factor (2.5%)									1.0		1.025	1.051	1.077	1.104	1.131	1.16	1.189	1.218	1.249	1.28	1.312	1.345	1.379	1.413	1.448	1.485	1.522	1.56	1.599
Total (inflated)									\$752,000.00	\$0.00	\$31,518.75	\$0.00	\$62,917.33	\$5,657.04	\$86,977.01	\$0.00	\$0.00	\$12,488.63	\$137,609.09	\$95,126.28	\$59,847.55	\$58,586.72	\$74,181.13	\$7,241.49	\$0.00	\$0.00	\$0.00	\$0.00	\$1,384,151.02

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									Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
Item	EUL	EFF AGE	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	Total Cost
Evaluation Period:									20																				
# of Square Feet:									51,768																				
Reserve per Square Feet per year (Uninflated)									\$1.21																				
Reserve per Square Feet per year (Inflated)									\$1.34																				

## 2.0 PURPOSE AND SCOPE

### 2.1 SCOPE OF SERVICES

This Facility Condition Assessment (FCA) was conducted in general accordance with items and terminology requested by the Owner herein and ASTM E 2018-15, "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process".

The primary purpose of a FCA is to note construction deficiencies and to identify components which appear to exhibit less than expected service life or which have been poorly maintained. The assessment is not intended to develop detailed remedial plans for identified problems. The services are qualitative in nature and do not include engineering calculations or design. Photographic documentation of our observations is attached.

The following building systems were observed in accordance with ASTM E 2018-15:

- Site Conditions
- Structural Frame and Building Envelope
- Plumbing, Mechanical and Electrical Systems
- Vertical Transportation Systems
- Life Safety and Fire Protection
- Interior Elements
- ADA Considerations
- Building Code Violations

### Out of Scope Items

Environmental issues and concerns are considered to be outside of the ASTM scope of services for a Facility Condition Assessment. Although properties may have possible environmental contamination, including, but not limited to radon, mold, lead based paint, asbestos, lead piping, PCB's or volatile chemicals, these issues and concerns should be addressed by an Environmental Assessment, as defined by ASTM Guidelines. ECS recommends that properties be studied by a qualified environmental assessor who can appropriately access, identify, and quantify issues related to environmental safety concerns.

ECS is providing a Facility Condition Assessment consistent with commercial and customary practices and the ASTM E-2018, current at the time the services are provided. The parties expressly acknowledge and agree that ECS is not providing a Reserve Study, which is subject to the National Reserve Study Standards and requires much more detail than a typical Facility Condition Assessment.

### 2.2 Deviations from Guide (ASTM E2018-15)

ASTM E2018-15 requires that any deviations from the Guide be noted within the report. ECS reduced the cost threshold from \$3,000 to \$1,000 to allow for smaller items needing repair, replacement or refurbishment. Therefore items with costs less than \$1,000 are typically not included in this report unless related to life, safety or accessibility items.

ECS interviewed personnel associated with the Johnson Elementary School facility and other government agencies based upon availability. These individuals are identified in Section 4.2. Information obtained from the interviews are included in the applicable sections of this report.

## 2.3 ASSESSMENT PROCEDURES

The FCA included site reconnaissance, limited interviews with property management, and inquiries or attempted inquiries with the local building and fire departments. Operational testing of building systems or components was not conducted. During the FCA, ECS conducted observations of the following facility features: site development systems; building structure systems; building exterior systems; building interior systems; roof systems; mechanical systems; electrical systems; plumbing systems; and life and fire safety systems.

This report is intended for review as a complete document. Therefore, interpretations and conclusions drawn from the review of any individual section are the sole responsibility of the User.

## 2.4 DEFINITIONS

**Fair**, adj - the property or component is functional but will likely require immediate maintenance or repairs during the duration of the term.

**Good**, adj - the property or component is functional and should continue to provide its intended service with continued routine maintenance through the duration of the term.

**Poor**, adj - the property or component is not functional. Immediate or near term repairs are required to bring the component back into service or replacement is expected during the duration of the term.

### 2.4.1 Partial List of ASTM Definitions

**de minimis condition** - a physical deficiency that is not material to the conclusions of the report.

**deferred maintenance**, n - physical deficiencies that could have been remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property.

**easily visible**, adj - describes items, components, and systems that are conspicuous, patent, and which may be observed visually during the walk-through survey without: intrusion, relocation or removal of materials, exploratory probing, use of special protective clothing, or use of any equipment (hand tools, meters of any kind, telescope instruments, stools, ladders, lighting devices, etc.).

**effective age**, n - the estimated age of a building component that considers actual age as affected by maintenance history, location, weather conditions, and other factors. Effective age may be more or less than actual age.

**expected useful life (EUL)**, n - the average amount of time in years that an item, component or system is estimated to function without material repair when installed new and assuming routine maintenance is practiced.

**immediate cost**, n - opinions of costs that require immediate action as a result of any of the following: (1) material existing or potentially unsafe conditions, (2) material building or fire code violations, (3) physical deficiencies that if left uncorrected would be expected to result in or contribute to critical element or system failure within one year or will result most probably in significant escalation of its remedial cost.

**observation**, n - the visual survey of items, systems, conditions, or components that are readily accessible and easily visible during a walk-through survey of the subject property.

**observe**, v - to conduct an observation pursuant to this guide within the context of easily visible and readily accessible.

**obvious**, adj - plain, evident, and readily accessible; a condition easily visible or fact not likely to be ignored or overlooked by a field observer when conducting a walk-through survey or that which is practically reviewable and would be understood easily by a person conducting the FCA.

**opinions of costs**, n - opinion of costs that may be encountered in correction of physical deficiencies.

**physical deficiency**, n - a conspicuous defect or deferred maintenance of a subject property's material systems, components, or equipment as observed during the completion of the FCA. - This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not present material physical deficiencies of the subject property.

**Point of Contact (POC)**, n - owner, owner's agent, or user-identified person or persons knowledgeable about the physical characteristics, maintenance, and repair of the subject property.

**practically reviewable**, adj - describes information that is provided by the source in a manner and form that, upon review, yields information relevant to the subject property without the need for significant analysis, measurements, or calculations. Records or information that feasibly cannot be retrieved by reference to the location of the subject property are not generally considered practically reviewable.

**primary commercial real estate improvements**, n - the site and building improvements that are of fundamental importance with respect to the commercial real estate. This definition specifically excludes ancillary structures, that may have been constructed to provide support uses such as maintenance sheds, security booths, utility garages, pool filter and equipment buildings, etc.

**property**, n - the site improvements, which are inclusive of both site work and buildings.

**readily accessible**, adj - describes areas of the subject property that are promptly made available for observation by the field observer at the time of the walk-through survey and do not require the removal or relocation of materials or personal property, such as furniture, floor, wall, or ceiling coverings; and that are safely accessible in the opinion of the field observer.

**readily available**, adj - describes information or records that are easily and promptly provided to the consultant upon making a request in compliance with an appropriate inquiry and without the need for the consultant to research archive files.

**reasonably ascertainable**, adj - describes information that is publicly available, as well as readily available, provided to the consultant's offices from either its source or an information research/retrieval service within reasonable time, practically reviewable, and available at a nominal cost for either retrieval, reproduction or forwarding.

**remaining useful life (RUL)**, n - a subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of the number of remaining years that an item, component, or system is estimated 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 preventive maintenance exercised, climatic conditions, extent of use, etc.

**representative observations**, n - observations of a reasonable number of samples of repetitive systems, components, areas, etc., which are conducted by the field observer during the walk-through survey. The concept of representative observations extends to all conditions, areas, equipment, components, systems, buildings, etc., to the extent that they are similar and representative of one another.

**routine maintenance**, n - a repair that does not require specialized equipment, profession services, or contractors, but rather can be corrected within budget and skill set of typical property maintenance staff.

**short term cost**, n - opinions of costs to remedy physical deficiencies, such as deferred maintenance, that may not warrant immediate attention, but require repairs or replacements that should be undertaken on a priority basis in addition to routine preventive maintenance.

**technically exhaustive**, adj - describes the use of measurements, instruments, testing, calculations, exploratory probing or discovery, or other means to discover, or a combination thereof, or troubleshoot physical deficiencies or develop architectural or engineering findings, conclusions, and recommendations, or combination thereof.



### 3.0 SYSTEM DESCRIPTION AND OBSERVATIONS

#### 3.1 PROPERTY DESCRIPTION

The Property contains a Two-story School building.

##### 3.1.1 Property Location

The Property is located at 1645 Cherry Avenue in Charlottesville, Virginia.

Surrounding Properties	
North	Cherry Avenue
East	Residential properties
South	Residential properties
West	Residential properties

A Site Location Map and Aerial View are included in Appendix I.

##### 3.1.2 Construction History

We understand that the building was constructed approximately 66 years ago in 1955.

##### 3.1.3 Current Property Improvements

The School building, located at 1645 Cherry Avenue, in Charlottesville, Virginia, consists of a Two-story building. The building totals approximately 51,768 square feet. Parking is provided with Asphalt pavement.

#### 3.2 SITE CONDITIONS

##### 3.2.1 Topography

TOPOGRAPHY		
Item	Description	Condition
Slope of the property	The property generally slopes to the south	Good
Adjoining Properties	Generally down slope	Good

##### Comments

The property is generally level and slopes to the south. The adjoining properties are located down gradient from the property.

### 3.2.2 Storm Water Drainage

STORM WATER DRAINAGE		
Item	Description	Condition
Storm Water Collection System	Municipal	Good
Storm Water (Retention) Pond		N/A
Storm Water Filtration Structure		N/A
Pavement Drainage	Curb inlets and field drains	Good
Landscape Drainage		Good
Sump Pumps		N/A

#### Comments

The storm water collection system is a municipal system.

### 3.2.3 Access and Egress

SITE ACCESS AND EGRESS		
Item	Description	Condition
Entrance Aprons	Asphalt	Good
Fire Truck Access	North side of the property	Good
Easements		N/A

#### Comments

Vehicular access to the site is located on the north and east side of the property. The entrance apron is constructed of asphalt and was observed to be in generally good condition. Fire truck access is available on the north side of the building.

### 3.2.4 Paving, Curbing, and Parking

PARKING		
Item	Description	Condition
Striping	Painted	Fair
Quantity of Parking Spaces	63	Good
Quantity of Loading Spaces		N/A
Arrangement of Spaces	Parallel and perpendicular spaces	Good
Site Circulation	Large drive aisles	Good
Lighting		N/A
Accessible Spaces	Three	Poor
Accessible Aisles	Two	Fair

SURFACE PAVEMENT		
Item	Description	Condition
Pavement Surface	Asphalt pavement	Good/Fair
Drainage	Curb and grated inlets	Good
Repair History	Some repairs were noted	Good
Concrete Curbs and Gutters	Damaged areas noted	Fair
Dumpster Pad	Asphalt	Fair
Asphalt Curbs		N/A
Fire Lane Painting	Painted curb	Fair

### Comments

Asphalt-paved drive lanes and parking areas are located on the north and east side of the site which also provides access to the site. The asphalt pavement was observed to be in generally good to fair condition with minor cracks observed on the pavement. Striping was in fair condition. The expected useful life of asphalt pavement is 20 years. We have provided allowances to repair the cracked areas of asphalt pavement.

## Photographs



Asphalt drive lane - note cracks and previous repair



Asphalt apron - alligator cracking



Asphalt pavement parking area north side of site

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
ASPHALT PAVEMENT REPAIRS	20	15	5	5 15	\$5,000 \$5,000
Total					\$10,000

### 3.2.5 Flatwork

SIDEWALKS		
Item	Description	Condition
Walkways	Concrete sidewalks	Fair
Patios	Concrete	Good
Steps	Concrete	Good
Landings	Concrete	Good
Handrails	Steel tube	Good
Ramps	Concrete	Good
Curb Ramps	Concrete	Good
Truncated Domes		Good

### Comments

At the perimeter of the building, concrete sidewalks of undetermined thickness are provided. Regularly spaced control joints were observed. The concrete sidewalks were generally in fair condition, with some cracked sections observed. We recommend the cracked and settled sections of sidewalk and the concrete pad around the storm inlet be replaced as necessary.

The steps and ramps were observed to be in generally fair condition. Previously repaired concrete sidewalks appeared to be in good condition. The handrails adjacent to the steps and ramps were observed to be in generally good condition, however there are no railings installed at north ramp to main entrance. We recommend railing be installed at this location.

There is a concrete patio on the northwest side of the building. The patio was generally in fair condition.

An asphalt sidewalk is located on the south side of the site. The asphalt sidewalk was in good condition.



## Photographs



Typical storm water drainage



Typical concrete sidewalk - note cracking



Concrete ramp



Concrete ramp north side of the building

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE CONCRETE SIDEWALK SECTIONS AS NEEDED	25	24	1	5 15	\$5,000 \$5,000
Total					\$10,000

### 3.2.6 Landscaping and Appurtenances

LANDSCAPING		
Item	Description	Condition
Trees	Located throughout the site	Good
Planting Beds	Located at north side of the building	Good
Lawn Areas	Located on south side of the building	Good
Irrigation System		N/A
Monumental Sign	Located on north side of the building	Good
Landscape Lighting		N/A
Retaining Walls		N/A
Fences and Gates	At playground area	Good
Dumpster Area	Located at northwest end of the building	Good
Fountains		N/A

#### Comments

The landscaping consists generally of mature trees, small shrubs, and grassed areas around the site. The landscaping was observed to be in generally good condition.

#### Photographs



Typical landscaping

### 3.2.7 Recreational Facilities

BASKETBALL COURT		
Item	Description	Condition
Playing Surface	East side of the site, asphalt	Good
Fencing		N/A
Lighting		N/A

PLAYGROUND		
Item	Description	Condition
Playing Surface	Mulched	Good
Fencing	Vinyl coated chain link	Good
Equipment	Vinyl coated and plastics	Good
Lighting		N/A

SOCCER FIELD AND SOFTBALL FIELD		
Item	Description	Condition
Playing Surface	Obvious worn areas of grass	Fair
Fencing	Chain link back fence	Good
Equipment	End goals and "dug-outs"	Good
Lighting		N/A

### Comments

#### Basketball Court

The basketball court was located on the east side of the property. The surface was in good condition and appeared to have been installed recently. The expected useful life of the surface is approximately 20 years. We recommend an allowance be provided to resurface the basketball court.

#### Playground

Various playground equipment is located on the south and north side of the property. The playground consisted of various plastic play equipment and was located on a mulched play surface. The playground equipment was in good condition and was reportedly replaced in 2006. Mulching of the playground when required is considering a maintenance item. The expected useful life of playground equipment is 15 to 20 years with proper maintenance. An allowance for replacement of the equipment is included later in the study period.



### Soccer Field

The soccer field and softball field are located at the south side of the property. The soccer field and softball field were in fair condition.

### Photographs



Playground area



Playground area



Playground area



Basketball court area

### Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE PLAYGROUND EQUIPMENT	20	15	5	5	\$45,000
RESURFACE BASKETBALL COURT	20	10	10	10	\$10,000

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
Total					\$55,000

### 3.2.8 Special Utility Systems

Item	Description	Condition
Water Well		N/A
Lift Station		N/A
Septic Field		N/A
Solar Power		N/A
Wind Power		N/A

#### Comments

The Property does not contain special utility systems.

## 3.3 STRUCTURAL FRAME AND BUILDING EXTERIOR

### 3.3.1 Foundation

FOUNDATION		
Item	Description	Condition
Load Bearing Support	Assumed shallow spread footings	Good
Basement		N/A
Crawl Space		N/A

#### Comments

The foundation of the building includes Assumed shallow spread footings. Large cracks were not observed in the exterior walls. The foundation system appeared to provide adequate structural support to the building. The foundation was generally in good condition.

### 3.3.2 Building Frame

BUILDING FRAME		
Item	Description	Condition
Floor Framing	Concrete	Good
Roof Framing	Steel trusses	Good

BUILDING FRAME		
Item	Description	Condition
Columns	Concrete	Good
Load Bearing Walls	CMU	Good
Balconies		N/A
Decks		N/A

### Comments

The structure of the building consists of Concrete masonry unit bearing walls with steel roof framing for low slope roofing system and steel truss and beam roof framing for pitched roofing system. The structural frame of the building was generally in good condition.

### Photographs



Structural framing

### 3.3.3 Building Exteriors

EXTERIOR FINISHES		
Item	Description	Condition
Masonry	Brick veneer	Good/Fair
Glass Store Front		N/A
Glass Curtain Wall		N/A
Metal		N/A
Concrete	Exposed columns	Good/Fair



EXTERIOR FINISHES		
Item	Description	Condition
Wood Siding		N/A
Accent/Trim	Wood and metal	Fair
Covered Soffits	Concrete and steel	Good
Awnings	Concrete and steel	Good
Paint	Peeling on wood trim observed	Fair
Sealants	Noted deterioration	Fair

### Comments

The primary exterior of the building consists of Brick veneer. Painted exposed concrete beams and columns were located on the west side of building. The building exteriors were generally in good condition with limited deterioration observed. The expected useful life of mortared joints is approximately 20 years before re-pointing is required. Limited deterioration of mortar joints was observed. We recommend re-pointing of the deteriorated mortar joints. Cracking was observed in the exposed concrete elements. We recommend a concrete repair project to seal cracks and repair delaminated concrete, as required. The paint was in fair condition.

Exterior sealants are located around the window and door frames. The expected useful life of exterior sealants is approximately 10 to 12 years before replacement is needed. The exterior sealants were generally in fair condition. The sealants were observed to be hard and separated from the substrate. We recommend that the exterior sealants be replaced.

### Photographs



Building exterior northwest side of the building



Building exterior southwest side of the building



Building exterior - note sealant condition



Building exterior - note efflorescence



Building exterior - note vertical sealant condition



Building exteriors at loading dock area - note damage

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPOINT BRICKWORK	20	8	12	12	\$30,000
REPLACE SEALANTS	12	11	1	1	\$15,000
PAINT WOOD TRIM	7	6	1	1	\$10,000
REPAIR DAMAGED LOADING DOCK AREA	-	-	-	1	\$5,000



Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
Total					\$60,000

### 3.3.4 Exterior Doors

DOORS		
Item	Description	Condition
Main Entrance Doors	Storefront entrance	Good
Personnel Doors	Hollow metal	Good
Door Hardware	Lever handles	Good
Accessibility Controls		N/A
Overhead/Roll-up Doors		N/A

### Comments

The main entrance is located at the southwest portion of the building and consists of a Storefront entrance. The main entrance doors were generally in good condition.

Metal and glass personnel doors are located throughout the building. The personnel doors were generally in good condition. It also appeared that many of the doors had been replaced over time. Exterior doors typically have an expected useful life of 20 to 30 years.

### Photographs



Main entrance doors



Entrance doors

### 3.3.5 Exterior Windows

WINDOWS		
Item	Description	Condition
Window Frame	Aluminum framed	Fair
Glass Pane	Double-pane	Fair
Operation	Tilt-out	Good
Screen		N/A
Exterior Header	Steel lintel	Good
Exterior Sill	Precast concrete	Good
Gaskets or Glazing	Neoprene	Poor

#### Comments

The window system for the building primarily consists of aluminum frame double pane window units. Aluminum double-pane windows have a typical expected useful life of 25 years. Replacement of windows was reported.

Window gaskets typically have an expected useful life of 15 to 20 years. Some of the gaskets were observed to be separating. We recommend replacing the window gaskets.

#### Photographs



Typical exterior window



Typical exterior windows - note separation of gasket



Building exterior northwest side of the building



Typical exterior windows - note separation of gasket

### Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE WINDOW GASKETS	20	19	1	1	\$25,000
Total					\$25,000

### 3.3.6 Roofing Systems

ROOFING		
Item	Description	Condition
Single-Ply Sheet Membrane	Patching and ponding observed	Fair
Slate Shingle	Located at north central portion of the building	Fair
Parapet Walls		Fair
Cap Flashing/Coping	Metal coping	Fair
Insulation	Rigid	Good
Substrate/Deck	Metal decking	Fair
Slope/Pitch	Some ponding noted	Fair
Drainage	Internal drains, scuppers, gutters, and downspouts	Fair
Plumbing Vents	Clamped boots	Fair



ROOFING		
Item	Description	Condition
Exhaust Vents	Counter flashed	Fair
Equipment Curbs	Counter flashed	Fair
Pitch Pockets		N/A
Skylights	Deterioration noted	Fair
Flashing	Metal	Fair
Expansion Joints		N/A
Roof Age	Reportedly replaced in 2003	Fair
Warranty		N/A

### Comments

The main roofing system consists of an single-ply roofing system. The roofing system was reportedly replaced in 2003. The custodial staff communicated that there were multiple leaks, some of which had been patched, but some still leaking. The sealant in the flashing appeared to be experiencing UV deterioration, but was still adhered to the surface. The expected useful life of a sheet membrane roofing system is typically 15 years. We recommend replacing the roofing system during the report period.

The north central portion of the building consists of a slate shingle roofing system for the sloped roof section. Some of the slate shingles were misaligned and/or damaged. We recommend a schedule of periodic repairs to the slate shingle roofing system as needed.

Drainage for the roofing system is provided by internal drains with overflow scuppers. Gutters and downspouts provided drainage from higher roofs to lower roofs at some locations. Roofing penetrations included plumbing vents and exhaust vents throughout the roofing system.

The skylights are showing noticeable signs of deterioration. The expected useful life of skylights of this type is typically 20 years. We recommend the skylights be replaced early in the report period.

## Photographs



Single-ply membrane roofing system looking west



Single-ply membrane roofing system - note ponding



Single-ply membrane roofing system - note patching separation



Slate shingle roofing system



Slate shingle roofing system - note misalignment of slate



Typical skylight



Typical mechanical duct

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE SINGLE-PLY ROOFING SYSTEM	15	14	1	1	\$560,000
REPAIR SLATE SHINGLE ROOFING SYSTEM	50	49	1	1	\$5,000
				6	\$5,000
				11	\$5,000
				16	\$5,000
REPLACE SKYLIGHTS AS NEEDED	20	19	1	1	\$10,000

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
Total					\$590,000

### 3.4 PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS

#### 3.4.1 Plumbing Systems

##### 3.4.1.1 Supply and Waste Piping

PLUMBING - WATER SUPPLY SYSTEM		
Item	Description	Condition
Piping Material	Copper	Good
Pipe Insulation	Fiberglass	Good
Water Shut-offs	Ball valves	Good
Water Flow and Pressure		Good

PLUMBING - WASTE SUPPLY SYSTEM		
Item	Description	Condition
Piping Material	PVC and cast iron	Good
Vertical Vent Stacks		Good
Clean-outs		Good

#### Comments

##### Water Lines

The main water supply lines inside the building are Copper. The expected useful life of Copper piping is approximately 40 years. The water supply pipes were generally in good condition.

##### Waste Lines

The waste lines in the building are PVC and cast iron. The expected useful life of PVC and cast iron waste line is approximately 50 years. The waste lines were generally in good condition and it was observed that some pipes had been replaced over time.



### 3.4.1.2 Domestic Hot Water Production

HOT WATER PRODUCTION		
Item	Description	Condition
Heating Equipment	Gas domestic water heater	Fair
Water Storage	In water heaters	Fair

#### Comments

Domestic hot water to the building is provided by two Gas domestic water heaters. Both Gas domestic water heaters are located in the mechanical room on the north side of the building.

The expected useful life of a Gas domestic water heater is approximately 15 years with proper maintenance. We recommend the Gas domestic water heaters be replaced during the study period.

#### Photographs



Gas domestic water heaters

#### Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE WATER HEATERS	12	11	1	1 13	\$2,000 \$2,000
Total					\$4,000

### 3.4.2 HVAC Systems

### 3.4.2.1 Equipment

EQUIPMENT		
Item	Description	Condition
Boilers	Located in mechanical room	Good
Chillers		N/A
Cooling Towers	Located outside at north side of the building	Fair
Fan Coil Units	Located in stairwells	Fair
Heat Exchangers		N/A
Radiators	Located in restrooms	Good
Variable Air Volume (VAV) Boxes		N/A
Condensing Units	Located at building exterior north side	Fair
Air Handlers	Located in mechanical room and throughout the building	Fair
Package Units	Located on roof and mezzanine level	Fair
Ceiling Fans		N/A
Exhaust Fans		Fair
Split System	Located in IT room and book room	Fair
Water Source Heat Pumps (WSHP)	Located throughout the building	Fair
Space Heaters (wall or ceiling mounted)	Located in mechanical room	Fair
Air Conditioners (Window)		N/A

### Comments

The building is served by a Central plant HVAC system with supplemental heating/cooling equipment and includes a cooling tower, boilers, package units, air handlers, condensers, radiators, fan coil units, and water source heat pumps.

#### Boilers

The PX Mach Boilers have an expected useful life of 20 years with proper maintenance. The three boilers were located in the mechanical room at the north side of the building. The boilers were installed in 2008 and were generally in good condition. We recommend replacing the boilers during the report period.

### Cooling Tower

The cooling tower is located at the north side of the building at the exterior enclosure near the mechanical room. The Evapco cooling tower was installed in 2006 and was in fair condition. Cooling towers have a typical expected useful life of approximately 18 years. The cooling tower should be replaced during the study period.

### Condenser Units

Three condenser units are located at the north side of the building at the exterior enclosure near the mechanical room. The condensing units were manufactured by Trane in 2006. The expected useful life of a condensing unit is 15 years with proper maintenance. The condensing units were observed to be in fair condition. We recommend that the condensing units be replaced during the report period.

### Air Handlers

There are air handlers located in the mechanical room on the north side of the building and throughout the building. The units in the mechanical room were manufactured by McQuay in 2006 and were in fair condition. The expected useful life of air handlers is 15 years with proper maintenance. We recommend that the air handlers be replaced during the report period.

### Rooftop Package Units

Three package units are located on the roof and mezzanine level. The AAON roof top units were installed in 2012. The expected useful life of package units is 15 years with proper maintenance. We recommend that the units be replaced during the report period.

### Water Source Heat Pumps (WSHP)

There are approximately 85 WSHP units located throughout the building. The typical expected useful life of the water source heat pumps is 20 years and they were recently replaced in 2012 and 2013. We recommend a scheduled replacement of the units near the end of the term.

### Split System

The two split systems were manufactured by Friedrich. The systems serve the IT room and book room. The system installation date was unknown and was in fair condition. Split systems have an expected useful life of 15 years and should be replaced during the study period.

The City of Charlottesville self performs the mechanical service for the equipment.

## Photographs



Boilers located in mechanical room



Cooling Tower located at north side of the building



Condenser Units located exterior north side of the building



Typical Air Handler Unit





Typical Package Unit



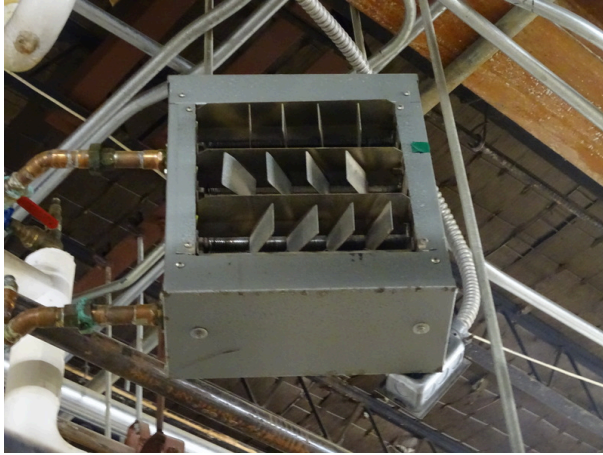
Typical split system



Typical Water Source Heat Pump



Typical Package Unit



Typical space heater

### Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE BOILERS	20	13	7	7	\$75,000
REPLACE CONDENSERS	15	14	1	1	\$20,000
REPLACE AIR HANDLERS	15	14	1	1	\$40,000
REPLACE WATER SOURCE HEAT PUMPS	20	9	11	11	\$42,500
				12	\$42,500
				13	\$42,500
				14	\$42,500
				15	\$42,500
REPLACE PACKAGE UNITS	20	9	11	11	\$60,000
REPLACE COOLING TOWER	18	15	3	3	\$30,000
REPLACE SPLIT SYSTEM	15	10	5	5	\$2,000
Total					\$439,500

### 3.4.2.2 Distribution System

HVAC DISTRIBUTION		
Item	Description	Condition
Ducts	Sheet metal	Good
Return Air	Sheet metal	Good

#### Comments

The distribution system includes ducted supply and a plenum return. Exposed ductwork was observed in limited locations within the building and was in generally good condition.

### 3.4.2.3 Control Systems

HVAC CONTROL SYSTEMS		
Item	Description	Condition
Thermostats	Digital	Good
Variable Frequency Drives	Located in main mechanical room	Good
Energy Management System	BAS	Good

#### Comments

The thermostats are located throughout the interior spaces. The thermostats were observed to be in generally good condition. It was reported that the existing NOVAR BAS (Building Automation System) is being phased out and an Allerton system that was installed in 2015 is replacing it. The BAS system was in good condition.

### 3.4.3 Electrical Systems

#### 3.4.3.1 Service and Metering

SERVICE AND METERING		
Item	Description	Condition
Service Entrance	North side of building	Good
Master (House) Meter	Located in the main electrical room	Good
Emergency Power	Kohler	Fair
Transfer Switch	Kohler	Fair

## Comments

Electricity is provided to the building by Dominion Virginia Power. The main electrical entrance is located on the north side of the building and provides 2,000 amp, 3-phase, 4-wire service.

A Kohler emergency power generator is located at the north side of the building at the exterior enclosure near the mechanical room. The generator installation date was unknown. A typical expected useful life of 25 years. Based on the age of the emergency generator and typical replacement schedule, we recommend replacing the emergency generator during the report period.

The emergency back up power generator transfer switch was manufactured by Kohler and is located in the main mechanical room. The transfer switch installation date was unknown with an expected useful life of 25 years with proper maintenance. The transfer switch should be replaced in conjunction with the generator.

## Photographs



Main electrical switchgear



Emergency power generator



Emergency power transfer switch

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE GENERATOR AND TRANSFER SWITCH	25	24	1	1	\$30,000
Total					\$30,000

### 3.4.3.2 Distribution

ELECTRICAL DISTRIBUTION SYSTEM		
Item	Description	Condition
Electrical Sub-panels	Square D	Good
Branch Wiring	Copper	Good
GFCI Devices		Good
Building Transformers	Pad mounted	Good
Sub-Meters		N/A

## Comments

Power is distributed by copper wire from circuit breaker panels located throughout the building. The expected useful life of sub-panels is 50 years with proper maintenance. The circuit breaker panels were reportedly recently replaced. The circuit breaker panels were observed to be in generally good condition.



## Photographs



Typical circuit breaker panel

## 3.5 VERTICAL TRANSPORTATION SYSTEMS

ELEVATORS		
Item	Description	Condition
Quantity	One passenger elevator	Good
Capacity	2,100 pounds	Good
Manufacturer and Type	Dover - hydraulic	Good
Maintenance Contractor	Southern Elevator	Good
Date of Last Maintenance Inspection	2/22/2021	Good
Cab Finishes	Paint, stainless	Good
Elevator Certificates	Located in Facilities Maint. Ofc.	Good
Door Sensors	Operable	Good
Speed	100 feet per minute	Good
Floor Leveling	Operable	Good
Control System	Operable	Good
Fire Recall System	Operable	Good
Lighting	Operable	Good
Equipment Room		Good

## Comments

The elevator is located at near the center of the building. The expected useful life of the elevator controls is 30 to 40 years with proper maintenance. Routine maintenance is considered adequate to keep the elevator system in good condition during the projection period of this report. The last annual inspection was in February 2021 and monthly maintenance is provided by KONE.

## 3.6 LIFE SAFETY AND FIRE PROTECTION

### 3.6.1 Sprinklers and Suppression Systems

SPRINKLER AND SUPPRESSION SYSTEMS		
Item	Description	Condition
Sprinkler System (wet)	Automatic sprinkler system	Good
Sprinkler Heads	Fully sprinklered	Good
Date of Last Inspection (sprinkler system)	April 6, 2021	Good
Sprinkler Pump		N/A
Fire Extinguishers	Throughout building	Good
Date of Last Inspection (Fire Extinguishers)	June 11, 2021	Good
Fire Standpipes	Black steel and galvanized, Victalic	Good
Fire Department Connections	Located on east side of building	Good
Hose Cabinets		N/A
Fire Hydrants	On site	Good

## Comments

The fire suppression system is a Wet sprinkler system and fire extinguishers. The fire suppression system was observed but not tested. The sprinklers are connected to the fire alarm. The sprinkler risers are located in the sprinkler room. The sprinkler system was inspected in April of 2021.

Sprinkler heads are located throughout the building. The sprinkler heads were generally in good condition.

Fire extinguishers were observed throughout the building including in mechanical rooms. The fire extinguishers were observed to have recent inspection tags issued in June of 2021. These devices are required to be inspected annually. Replacement of the fire extinguishers is considered routine maintenance.

Fire hydrants are located at the building exterior. The fire hydrants were observed to be in good condition.

## Photographs



Fire sprinkler system

### 3.6.2 Alarm Systems

ALARM SYSTEMS		
Item	Description	Condition
Public Address System	Located in the Main Office	Good
Central Fire Alarm Control Panel	Located in at main entrance	Fair
Automatic Notification	Monitored	Good
Bells	Located throughout the building	Good
Strobes	Located throughout the building	Good
Exit Signs	Located throughout the building	Good
Exit Lights	Located throughout the building	Good
Pull Stations	Located throughout the building	Good
Smoke Detectors	Located throughout the building	Good
Carbon Monoxide Detectors		N/A



## Comments

The fire alarm system was observed but not tested. A fire control panel is located in the Main Office. The fire control panel was reportedly an older system and observed to be in fair condition. Emergency exit signs and lighting, pull stations, fire extinguishers, smoke detectors, and alarm bells and strobes are located throughout the building.

## Photographs



Fire alarm panel - note older panel

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE FIRE ALARM PANELS	25	24	1	1	\$30,000
Total					\$30,000

### 3.6.3 Security and Other Systems

SECURITY AND OTHER SYSTEMS		
Item	Description	Condition
Security Cameras		N/A
Alarm System	Monitored	Good
Access Control		N/A
Security Fencing		N/A
Lightning Protection		N/A

#### SECURITY AND OTHER SYSTEMS

Item	Description	Condition
Roof Anchors		N/A

#### Comments

The building is reportedly monitored by a motion detector security system with alarms. The security system was reported to be in good condition.

### 3.7 INTERIOR BUILDING COMPONENTS

#### 3.7.1 Interior Finishes

##### MAIN OFFICE

Item	Description	Condition
Floor Finishes	Carpet	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile, painted gypsum board	Good
Lighting	Fluorescent fixtures	Good
Accessories	Millwork	Good

##### RESTROOMS

Item	Description	Condition
Floor Finishes	Ceramic tile	Good
Wall Finishes	Ceramic tile, painted concrete masonry unit, and painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good
Fixtures	Toilets, wall hung lavatories	Good
Accessories	Grab bars, mirrors, soap and paper dispensers	Good
Ventilation	Exhaust fans	Good
Lighting	Fluorescent fixtures	Good
Doors	Wood	Good
Door Hardware	Operable	Good

### CORRIDORS

Item	Description	Condition
Floor Finishes	Vinyl tile and finished concrete	Good
Wall Finishes	Glazed and painted CMU block	Good
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Doors	Wood	Good
Door Hardware	Operable	Good

### STAIRS

Item	Description	Condition
Location	East and west ends of the building	Good
Enclosure	CMU	Good
Framing Support	Steel	Good
Treads	vinyl	Good
Risers	Steel	Good
Nosing	Vinyl	Good
Handrails	Steel	Good
Lighting	Fluorescent	Good
Pressurized Stairwells		N/A
Doors	Wood	Good
Door Hardware	Operable	Good

### KITCHEN

Item	Description	Condition
Floor Finishes	Ceramic tile	Good
Wall Finishes	Ceramic tile and painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good
Counters	Stainless	Good
Sink	Stainless	Good
Cabinets	Stainless	Good

KITCHEN		
Item	Description	Condition
Appliances	Commercial grade	Good
Stove/Range	Stainless	Good
Exhaust Vent/Hood	Commercial	Good
Refrigerator	Stainless	Good
Dish Washer	Commercial	Good
Microwave Oven	Stainless	Good

UTILITY ROOMS/ MECHANICAL ROOMS		
Item	Description	Condition
Floor Finishes	Unfinished concrete	Good
Wall Finishes	Painted gypsum board/ CMU	Good
Ceiling Finishes	Unfinished	Good
Janitor Sink Area	Soiled	Fair
Lighting	Fluorescent fixtures	Good

AUDITORIUM		
Item	Description	Condition
Floor Finishes	Coated concrete and carpet	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Painted gypsum board	Good
Lighting	Fluorescent fixtures	Good
Accessories	Curtains	Good
Seating	Theater	Good
Stage	Wood	Good

CAFETERIA		
Item	Description	Condition
Floor Finishes	Vinyl tile	Good
Wall Finishes	Glazed block and painted CMU	Good

CAFETERIA		
Item	Description	Condition
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Accessories	Folding tables	Good

CLASSROOMS		
Item	Description	Condition
Floor Finishes	Vinyl tile and/or carpet	Good
Wall Finishes	Painted gypsum board/ painted CMU	Good
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Doors	Wood	Good
Door Hardware	Operable	Good

LIBRARY		
Item	Description	Condition
Floor Finishes	Carpet	Good
Wall Finishes	Painted gypsum board/ painted CMU	Good
Ceiling Finishes	Unfinished & acoustical ceiling tile	Good
Lighting	Fluorescent fixtures	Good
Doors	Wood	Good
Door Hardware	Operable	Good

### Comments

The interior building areas include a main office, restrooms, corridors, classrooms, a kitchen, an auditorium, a cafeteria, a library, and mechanical/utility spaces. We understand that the interiors are largely original to construction.

The finishes in the main office include carpet floors, painted gypsum board walls, and both painted gypsum board and suspended acoustical ceiling tile ceilings. The finishes in the main office were observed to be in generally good condition.

Restrooms are located throughout the building as accessed from corridors and are also located in classrooms. The finishes in the restrooms include ceramic tile floors, ceramic tile, painted gypsum board, and/or painted concrete masonry unit walls, and suspended acoustical tile ceilings. The restrooms were observed to be in generally good condition.

The finishes in the corridors include vinyl tile and finished concrete floors, glazed and painted CMU block walls, and suspended acoustical tile ceilings. The finishes in the corridors were observed to be in generally good condition.

The finishes in the kitchens include ceramic tile floors, ceramic tile and painted gypsum board walls, and suspended acoustical tile ceilings. The finishes in the kitchens were observed to be in generally good condition.

The utility and mechanical rooms were generally unfinished, with concrete floors and CMU walls. Some utility rooms had painted gypsum board walls.

The finishes in the auditorium consist of carpeted aisles and coated concrete flooring in the seating area. The stage consisted of wood. The walls consist of painted gypsum board and the ceiling is painted gypsum board. The finishes were generally in good condition.

The finishes in the cafeteria area consist of vinyl tile flooring, glazed block and painted CMU walls, and suspend acoustical tile ceiling. The finishes were generally in good condition.

The classrooms consist of vinyl tile flooring and/or carpet, painted gypsum board and painted CMU walls, and suspended acoustical tile ceilings. The doors generally had compliant lever hardware. The finishes were generally in good condition.

The finishes in the library consist of carpet flooring, painted CMU and painted gypsum board walls, and both unfinished and acoustical ceiling tile ceilings. The finishes in the library were generally in good condition.



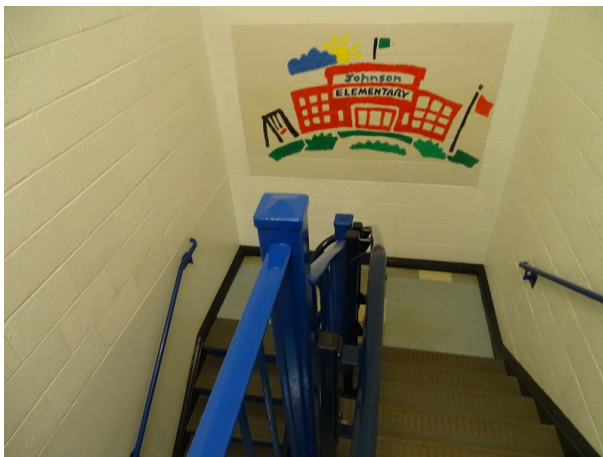
## Photographs



Interior finishes of the classroom area



Interior finishes of the classroom area



Interior finishes of stair area



Interior finishes of corridor area



Interior finishes of the classroom area

### 3.8 Accessibility (ADA) Compliance

#### Comments

Facilities, including site features and buildings, completed and occupied after January 26, 1992 are required to comply fully with the Americans with Disabilities Act (ADA). Facilities constructed after this date must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Existing facilities constructed prior to this date are held to the lesser standard of complying with the extent allowed by structural feasibility and the financial resources available, or a reasonable accommodation must be made. Title III, for the purposes of the ECS scope of work is to address public accommodations. ECS will note work that shall remove architectural barriers in existing facilities, including communication barriers, that are structural in nature, where such removal is readily achievable and able to be carried out without much difficulty or expense.

The Johnson Elementary School property is considered by the City of Charlottesville - Facilities Development to be within "areas of public accommodations" or a "commercial facility" and is therefore is subject to compliance with Title III of the ADA.

The parking area serving the property has a total of approximately 63 parking spaces. Of the parking spaces, Three are accessible with Three being van accessible. Accessibility requires that three accessible parking spaces be provided in parking areas with a total of 51 to 100 spaces. One in six of the accessible parking spaces are required to be van accessible. A minimum of a 60-inch wide access aisle is required to be provided for every two accessible parking spaces. Accessible aisles were observed to be provided. The number of parking spaces provided does meet accessibility requirements.



## Photographs



Accessible asphalt pavement parking area  
northeast side of site



Accessible curb cut ramp with truncated domes



Accessible ramp



Accessible chair lift



Water fountain - note protruding and not accessible



Accessible toilet

## Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE OR RELOCATE DRINKING FOUNTAINS	-	-	-	Immediate	\$12,000
Total					\$12,000

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	Yes/ No	Comments
<b>A.</b>	<b>History</b>		
1.	Has an ADA Survey been completed for this property?	Yes	EMG report dated November 2, 2005
2.	Have any ADA improvements been made to the property since original construction?	Yes	installation of elevator for interior and curb cuts with truncated domes at exterior
3.	Has building ownership/management reported any ADA complaints or litigation?	No	not reported
<b>B.</b>	<b>Parking</b>		
1.	Does the required number of standard ADA-designated spaces appear to be provided?	Yes	Three out of the 63 are accessible.

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	Yes/ No	Comments
2.	Does the required number of van-accessible designated spaces appear to be provided?	Yes	Three out of the Three accessible spaces are van accessible
3.	Are accessible spaces part of the shortest accessible route to an accessible building entrance?	Yes	
4.	Is a sign with the International Symbol of Accessibility at the head of each space?	Yes	
5.	Does each accessible space have an adjacent access aisle?	Yes	
6.	Do parking spaces and access aisles appear to be relatively level and without obstruction?	Yes	
<b>C.</b>	<b>Exterior Accessible Route</b>		
1.	Is an accessible route present from public transportation stops and municipal sidewalks in the property?	Yes	
2.	Are curb cut ramps present at transitions through curbs on an accessible route?	Yes	
3.	Do curb cut ramps appear to have the proper slope for all components?	Yes	
4.	Do ramps on an accessible route appear to have a compliant slope?	Yes	
5.	Do ramps on an accessible route appear to have a compliant length and width?	Yes	
6.	Do ramps on an accessible route appear to have a compliant end and intermediate landings?	Yes	
7.	Do ramps on an accessible route appear to have compliant handrails?	Yes	
<b>D.</b>	<b>Building Entrances</b>		
1.	Do a sufficient number of accessible entrances appear to be provided?	Yes	
2.	If the main entrance is not accessible, is an alternate accessible entrance provided?	N/A	

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	Yes/ No	Comments
3.	Is signage provided indicating the location of alternate accessible entrances?	N/A	
4.	Do doors at accessible entrances appear to have compliant clear floor area on each side?	Yes	
5.	Do doors at accessible entrances appear to have compliant hardware?	Yes	
6.	Do doors at accessible entrances appear to have complaint opening width?	Yes	
7.	Do pairs of accessible entrance doors in series appear to have the minimum clear space between them?	N/A	
8.	Do thresholds at accessible entrances appear to have compliant height?	Yes	
<b>E.</b>	<b>Interior Accessible Routes and Amenities</b>		
1.	Does an accessible route appear to connect with all public areas inside the building?	Yes	
2.	Do accessible routes appear free of obstructions and/or protruding objects?	No	drinking fountains protrude into corridors
3.	Do ramps on accessible routes appear to have compliant slope?	Yes	
4.	Do ramps on accessible routes appear to have compliant length and width?	Yes	
7.	Are adjoining public areas and areas of egress identified with accessible signage?	Yes	
8.	Do public transaction areas have an accessible, lowered counter section?	Yes	
9.	Do public telephones appear mounted with an accessible height and location?	N/A	
10.	Are publicly-accessible swimming pools equipped with an entrance lift?	N/A	
<b>F.</b>	<b>Interior Doors</b>		
1.	Do doors at interior accessible routes appear to have compliant clear floor area on each side?	Yes	



<b>Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act</b>			
	<b>Item</b>	<b>Yes/ No</b>	<b>Comments</b>
2.	Do doors at interior accessible routes appear to have compliant hardware?	Yes	
3.	Do doors at interior accessible routes appear to have compliant opening force?	Yes	
4.	Do doors at interior accessible routes appear to have a compliant clear opening width?	Yes	
<b>G.</b>	<b>Elevators</b>		
1.	Are hallway call buttons configured with the "UP" button above the "DOWN" button?	Yes	
2.	Is accessible floor identification signage present on the hoistway sidewalls?	Yes	
<b>H.</b>	<b>Toilet Rooms</b>		
1.	Do publicly-accessible toilet rooms appear to have a minimum compliant floor area?	Yes	
2.	Does the lavatory appear to be mounted at a compliant height and with compliant knee area?	Yes	
3.	Does the lavatory faucet have compliant handles?	Yes	
4.	Is the plumbing piping under lavatories configured to protect against contact?	Yes	
5.	Are grab bars provided at compliant locations around the toilet?	Yes	
6.	Do toilet stall doors appear to provide the minimum compliant clear width?	N/A	
7.	Do toilet stalls appear to provide the minimum compliant clear floor area?	N/A	
8.	Do urinals appear to be mounted at a compliant height and with compliant approach width?	N/A	
9.	Do accessories and mirrors appear to be mounted at a compliant height?	Yes	

## **4.0 DOCUMENT REVIEW**

### **4.1 DOCUMENTATION REVIEW**

ECS requested relevant documentation from Josh Bontrager, to gain insight into the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. ECS' review of documents submitted does not include commenting on the accuracy of such documents or their preparation, methodology, or protocol.

### **4.2 INTERVIEW SUMMARY**

ECS was escorted through the property by Josh Bontrager and Chris Woods who provided information about the property.

## **5.0 ADDITIONAL CONSIDERATIONS**

### **5.1 MOISTURE AND MOLD**

#### **Comments**

If present, evidence of mold and moisture issues are noted in the interior section of the report.

## 6.0 RECOMMENDATIONS AND OPINIONS OF COST

The opinion of cost are based upon approximate quantities, costs, and published information, and they include labor, material, design fees, and appropriate overhead, general conditions, and profit. A detailed analysis of quantities for cost estimating purposes is not included. The opinion of cost to repair, replace, or upgrade the improvements are considered typical for the marketplace. No contractors have provided pricing. The actual cost of repairs may vary from our opinions. ECS has not included contingency funds in our opinions. Amounts indicated represent today's dollars. ECS offers the following comments relative to Immediate and Capital Reserves criteria:

### Immediate Issues

Physical deficiencies that require immediate action as a result of (i) existing or potentially unsafe conditions, (ii) significant negative conditions impacting tenancy, (iii) material building code violations, (iv) poor or deteriorated condition of critical element or system, or (v) a condition that is left "as is," with an extensive delay in addressing same, would result in or contribute to critical element or system failure within one year.

ECS has also included physical deficiencies inclusive of deferred maintenance that may not warrant immediate attention, but requiring repairs or replacements that should be undertaken on a priority basis, taking precedence over routine preventative maintenance work within a zero to one year time frame. Included are such physical deficiencies resulting from improper design, faulty installation, and/or substandard quality of original systems or materials. Components or systems that have realized or exceeded their Expected Useful Life (EUL) that may require replacement to be implemented within a zero to one year time frame are also included.

### Capital Reserves

Capital Reserves are for recurring probable expenditures, which are not classified as operational or maintenance expenses, which should be annually budgeted for in advance. Capital reserves are reasonably predictable both in terms of frequency and cost. However, they may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within an estimated time period. A component method has also been included within this report as well.

Capital Reserves excludes systems or components that are estimated to expire after the reserve term and that are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that were not deemed to have a material affect on the use were also excluded. Costs that are caused by acts of God, accidents or other occurrences that are typically covered by insurance, rather than reserved funds, are also excluded.

Replacement costs were solicited from ownership/property management, ECS' discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by ownership's or property management's maintenance staff were also considered.

ECS's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the evaluation period. Additional information concerning systems or components respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Capital Reserve Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Needs Cost Estimates.

## 7.0 FACILITY CONDITION INDEX (FCI)

In accordance with our proposal add alternate, ECS determined the Facility Condition Index (FCI) value for the Johnson Elementary School building. ECS determined the FCI value in accordance with industry standards and methodology sponsored by The National Association of College and University Business Officers (NACUBO). The FCI calculation methodology consists of dividing the total cost of Maintenance, Repair, and Replacement Deficiencies of the Facility by the Current Replacement Value of the Facility. FCI values and condition of the buildings based on the industry accepted interpretation of FCI values with ratings: good (under 0.05), fair (0.05 to 0.10), and poor (over 0.10).

Based on our Facility Condition Assessment, the total repair and replacement costs for the Johnson Elementary School is \$1,253,500.00. The replacement construction cost value obtained from the RS MEANS square foot estimator application is \$8,519,176.05. Please see attached documentation from RS MEANS program output as an appendix to the report. The calculated FCI value is determined to be 0.15. In accordance with the industry standards and methodology sponsored by The National Association of College and University Business Officers (NACUBO), the condition of Johnson Elementary School is rated as poor.

The letter rating for the school buildings is based on the FCI values with the ratings system provided by you referenced from the City of Alexandria as follows : A (under 0.10), B (0.11 to 0.20), C (0.21 to 0.40), D (0.41 to 0.60), and F (0.61 to 1.00+).

The letter rating for the Johnson Elementary School was determined to be B.



## 8.0 LIMITATIONS AND QUALIFICATIONS

ECS's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a property's building systems. Preparation of a FCA in accordance with ASTM E 2018-15 "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process" is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and cannot reduce the potential that such component or system may not be initially observed.

This FCA was prepared recognizing the inherent subjective nature of ECS's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of any given component or system. It should be understood that ECS's suggested remedy may be determined under time constraints, formed without the aid of engineering calculations, testing, exploratory probing, the removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the physical deficiency. ECS's opinions are generally formed without detailed knowledge from individuals familiar with the component's or system's performance.

The opinions ECS expresses in this report were formed utilizing the degree of skill and care ordinarily exercised by a prudent professional in the same community under similar circumstances. ECS assumes no responsibility or liability for the accuracy of information contained in this report which has been obtained from the Client or the Client's representatives, from other interested parties, or from the public domain. The conclusions presented represent ECS' professional judgment based on information obtained during the course of this assignment. ECS's evaluations, analyses and opinions are not representations regarding the design integrity, structural soundness, or actual value of the property. Factual information regarding operations, conditions and test data provided by the Client or their representative has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations made, and conditions that existed specifically on the date of the assessment.

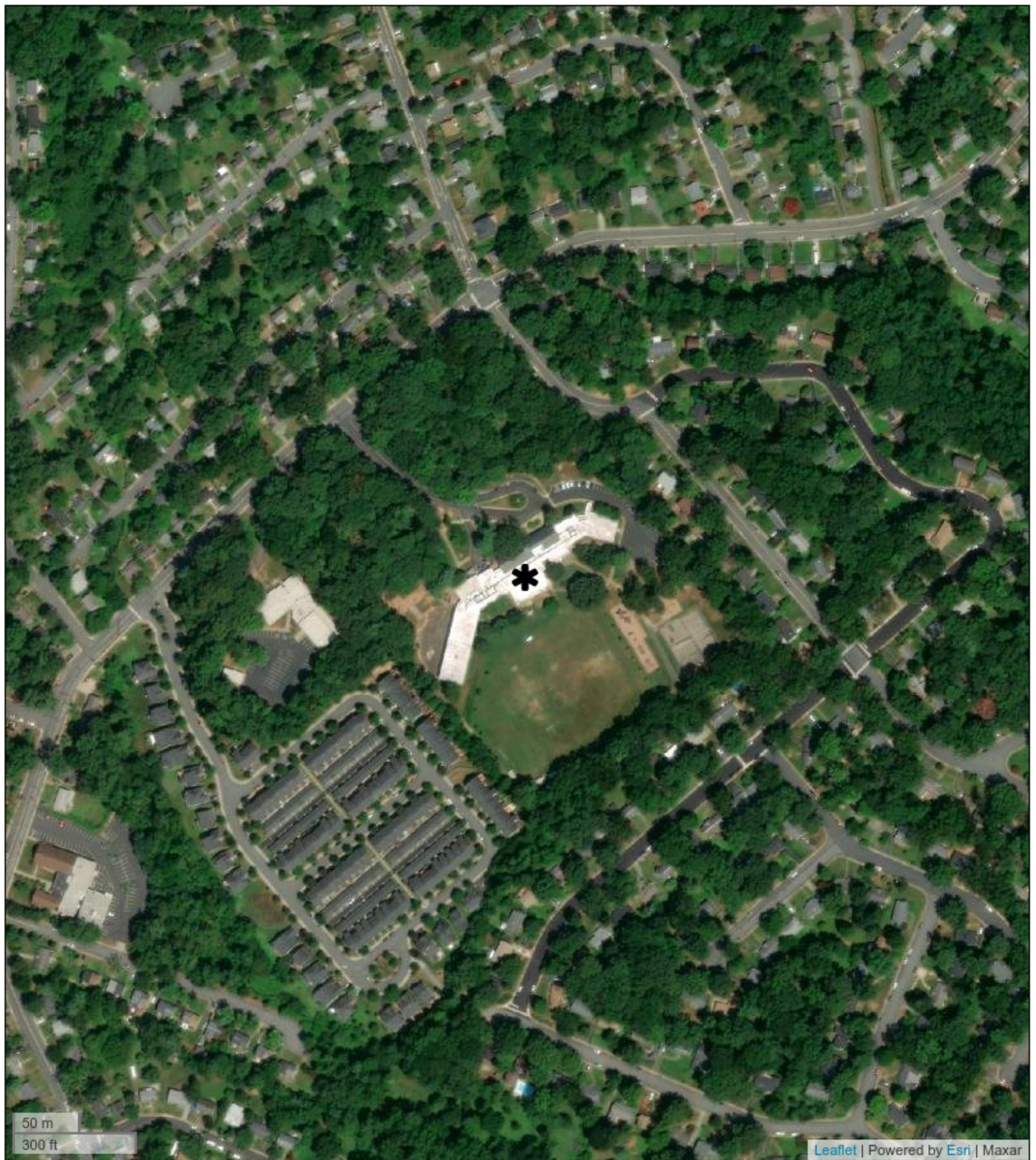
# **Appendix I: SITE MAP AND AERIAL PHOTOGRAPH**



Untitled Map







Untitled Map



## **Appendix II: FIRE SPRINKLER INSPECTION**

## INSPECTION AND TESTING FORM OF WATER BASED FIRE PROTECTION SYSTEMS

### 1. PROPERTY INFORMATION

Name of property: Johnson Elementary (4433-22903-00023)

Address: Johnson Elementary

Description of property:

Name of property representative: City of Charlottesville (30548899), Jason Davis (434-964-6771) davisja@charlottesville.org

Address: 315 4th St NW, Charlottesville, VA 22903

Phone: 434-962-3643 Fax: 434-970-3026 E-mail: staplesk@charlottesville.org

### 2. TESTING INFORMATION

Testing Organization: SIEMENS Organization License No.:

Address: 5106 Glen Alden Drive, Richmond, VA 23231

Phone: 804-222-6680 Fax: None E-mail: None

Start Date/Time: 06 Apr 2021 Completion Date/Time: 06 Apr 2021

Contract Info: City of Cville Sprinkler (2600105673) Notification Number: 5102050596

Inspection Type: Quarterly

**NOTES:** 1) All questions are to be answered Yes, No, or Not Applicable (NA). Explain all No answers in Parts 6, 7, or 8 of this form.  
2) Inspection, Testing, and Maintenance are to be performed with water supplies (including fire pumps) in service, unless the impairment procedures of NFPA 25 are followed.

### 3. GENERAL INFORMATION (TO BE COMPLETED BY OWNER)

Is the building fully sprinklered? \_\_\_\_\_

Has the occupancy classification and hazard of contents remained the same since last inspection? \_\_\_\_\_

Are all fire protection systems in service? \_\_\_\_\_

Has the system remained in service without modification since last inspection? \_\_\_\_\_

Have any fire systems, devices or alarms activated since the last inspection? \_\_\_\_\_

If a fire has occurred since the last inspection, have all damaged sprinkler system components been replaced? \_\_\_\_\_

### 4. INSPECTOR'S SECTION

#### 4.1 Inspections

Control valves in the correct (open or closed) position and free from external leaks? \_\_\_\_\_

Yes

Control valves locked, sealed or supervised? \_\_\_\_\_

Yes

Hydraulic nameplate (calculated systems) securely attached and legible? \_\_\_\_\_

Yes

Alarm and/or dry pipe valves free from physical damage, trim valves in appropriate position and no leakage? \_\_\_\_\_

Yes

Water flow alarm devices free from physical damage? \_\_\_\_\_

Yes

Fire department connections visible, signage, accessible, free from damage, couplings free, and caps in place? \_\_\_\_\_

Yes

Gauges in good condition showing normal pressure? \_\_\_\_\_

Yes

Adequate heat in areas with wet piping? \_\_\_\_\_

Yes

Post indicator valves are provided with a correct wrench and in the normal position? \_\_\_\_\_

(NA)

Backflow preventers relief port on RPZ device not discharging? \_\_\_\_\_

(NA)

For freezer systems, is the gauge near the compressor reading the same as the gauge near the dry-valve? \_\_\_\_\_

(NA)

Pressure Reducing valves are in the open position, not leaking, maintain downstream pressure accordance with the design criteria, good condition, and handwheels not broken? \_\_\_\_\_

(NA)

Valve encloser for pre-action, deluge and dry systems are above 40f? \_\_\_\_\_

(NA)

#### 4.2 Testing

Post indicating valves opened until spring or torsion is felt in the rod, then backed off one-quarter turn? \_\_\_\_\_

(NA)

Valve supervisory switches indicate movement? \_\_\_\_\_

(NA)

Mechanical water flow alarm device passed tests by opening the inspector's test or bypass connection with alarms actuating and flow observed? \_\_\_\_\_

Yes



Electrical Waterflow (Vane type, Paddle-type, and Pressure Switch-type) alarm devices passed tests by opening the inspector's test connection or bypass connection with alarm actuating, and flow is observed?	<div>(NA)</div>
Priming level of dry pipe valves correct?	<div>(NA)</div>
Quick opening devices of dry pipe systems passed?	<div>(NA)</div>
Air compressor or nitrogen system in good condition per manufacture maintenance procedure?	<div>(NA)</div>
Low air pressure signal of dry pipe system passed?	<div>(NA)</div>
Main Drain Test water pressure is within 10% reduction in full flow pressure compared to previous test?	<div>(NA)</div>

## 5. MAIN DRAIN / TRIP TESTS RESULTS

### 5.1 Report Totals

Total Qty	Functionally Tested Qty	Functionally Tested %	Visually Tested Qty	Visually Tested %	Failed Qty	Failed %
4	2	50%	2	50%	0	0%

### 5.2 Report Totals by Type

Total Qty	Functionally Tested Qty	Functionally Tested %	Visually Tested Qty	Visually Tested %	Failed Qty	Failed %	Device or System Type
1	0	0%	1	100%	0	0%	Dry Sprinkler Systems
1	1	100%	0	0%	0	0%	Wet Sprinkler Systems
1	0	0%	1	100%	0	0%	Sprinkler FDC - 2 Inlets
1	1	100%	0	0%	0	0%	Sprinkler Waterflow Alarm Devices

### 5.3 Report Details by Type

Dry Sprinkler Systems																	
Row	Date	Address	Location	Model	Water Source	Source PSI	Test Pipe Size	Static PSI	Trip Test	Initial Air PSI	Tripped Air PSI	Water PSI	Trip Time (sec)	Restore Time (sec)	5 Year Performed	Visual/Functional	Pass/Fail
1	04/06/21	01:Dry	Basement Mechanical Room	4 inch CSC	City	80	2	85	Alarm	40	NA	80	NA	1	Yes	Visual	Pass
Wet Sprinkler Systems																	
Row	Date	Address	Location	Model	Water Source	Source PSI	Test Pipe Size	Static PSI	Restore Time (sec)	5 Year Performed	Visual/Functional	Pass/Fail					
1	04/06/21	01:Wet	Basement Mechanical Room	4 inch GEM F2001	City	80	2	85	1	Yes	Functional	Pass					
Sprinkler FDC - 2 Inlets																	
Row	Date	Address	Location	Model	Type	Size	Visual/Functional	Pass/Fail									
1	04/06/21	01:Wet:FDC	Loading Dock	Powhatan	2 inlet	2.5	Visual	Pass									
Sprinkler Waterflow Alarm Devices																	
Row	Date	Address	Location	Model	Type	Visual/Functional	Pass/Fail										
1	04/06/21	01:Wet:WMG	Loading Dock	Tyco	Mechanical	Functional	Pass										

**6. COMMENTS**

Address	Location	NFPA Classification	Comment:
01:Dry	Basement Mechanical Room	Dry Sprinkler	5 Year service performed 11-2020
01:Wet	Basement Mechanical Room	Wet Sprinkler	5 Year service performed 11-2020

**7. DEFICIENCIES (ONLY RELATED TO NFPA 25)**

A condition that will or has the potential to adversely impact the performance of a system or portion thereof but does not rise to the level of an impairment.

Address	Location	NFPA Classification	Deficiencies:
01:Dry	Basement Mechanical Room	Dry Sprinkler	None to report.
01:Wet	Basement Mechanical Room	Wet Sprinkler	None to report.
01:Wet:FDC	Loading Dock	Sprinkler FDC - 2 Inlet	None to report.
01:Wet:WMG	Loading Dock	Sprinkler Waterflow Alarm Device	None to report.

**8. IMPAIRMENTS**

A condition where a fire protection system or unit or portion thereof is out of order, and the condition can result in the fire protection system or unit not functioning in a fire event.

Address	Location	NFPA Classification	Impairments:
01:Dry	Basement Mechanical Room	Dry Sprinkler	None to report.
01:Wet	Basement Mechanical Room	Wet Sprinkler	None to report.
01:Wet:FDC	Loading Dock	Sprinkler FDC - 2 Inlet	None to report.
01:Wet:WMG	Loading Dock	Sprinkler Waterflow Alarm Device	None to report.

**9. CERTIFICATION**

This Testing Was Performed in Accordance with Applicable NFPA Standards.

I state that the information on this form is correct at the time and place of my inspection and that all equipment tested at this time was left in operational condition upon completion of this inspection except as noted in Parts 6, 7, and 8 above.

Name of Inspector: \_

Inspector License #: \_\_\_\_\_

Signature: CRAIG BROWN

Date: 4.6.21

**10. ACCEPTANCE BY OWNER OR OWNER'S REPRESENTATIVE**

Name of Owner or Representative: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

The owner and/or designated representative acknowledges the responsibility of the operating condition of the component parts at the time of this inspection. Pursuant to the National Fire Protection Association Form 25, Chapter 4, the owner is responsible for proper maintenance and care of the sprinkler system. It is agreed that the inspection service provided by the contractor as prescribed herein is limited to performing a visual inspection and/or routine testing, and any investigation or unscheduled testing, modification, maintenance, repair, etc., of the component parts is not included as part of the inspection work performed. It is understood that this inspection pertains to the condition of the sprinkler system on the day of inspection only. This inspection meets or exceeds NFPA 25 requirements and or local AHJ requirements. AHJ requirements supersede all other code requirements. The inspector shall not be liable for future defaults or defects in the sprinkler system which are beyond the inspector's control, including, but not limited to, failure from malicious tampering, accidents, lack of proper inspection, material failure or inadequate heating. The inspector can give no assurance, nor will be held liable, with regard to work that may have been previously performed or work performed at a future date by other companies. It is further understood that all information contained herein is provided to the best of the knowledge of the party providing such information.

## **Appendix III: FIRE EXTINGUISHER INSPECTION**

# Inspection Certificate

*For*

Charlottesville-Johnson  
Elementary  
1645 Cherry Ave  
Charlottesville, VA 22903

*This Inspection was performed in accordance with applicable Standards. The subsequent pages of this report provide performance measurements, listed ranges of acceptable results, and complete documentation of the inspection. Whenever discrepancies exist between acceptable performance standards and actual test results, notes and/or recommended solutions have been proposed or provided for immediate review and approval.*


*Inspection Date*  
*Jun 11, 2021*

Building: Charlottesville-Johnson Elementary  
Contact: Jason Davis  
Title: Security Maint.

Company: Fire Solutions  
Contact: Tommy VO  
Title: Technician

# Executive Summary

Generated by: BuildingReports.com

Building Information								
<b>Building:</b> Charlottesville-Johnson Elementary			<b>Contact:</b> Jason Davis					
<b>Address:</b> 1645 Cherry Ave			<b>Phone:</b> 434-964-6771					
<b>Address:</b>			<b>Fax:</b>					
<b>City/State/Zip:</b> Charlottesville, VA 22903			<b>Mobile:</b>					
<b>Country:</b> United States of America			<b>Email:</b> davisja@charlottesville.org					
Inspection Performed By								
<b>Company:</b> Fire Solutions			<b>Inspector:</b> Tommy VO					
<b>Address:</b> 205 Haley Road			<b>Phone:</b> 804-385-3301					
<b>Address:</b>			<b>Fax:</b>					
<b>City/State/Zip:</b> Ashland, Virginia 23005			<b>Mobile:</b> 804-385-3301					
<b>Country:</b> United States			<b>Email:</b> tommyv@firesolutionsinc.com					
Inspection Summary								
Category:	Total Items		Serviced		Passed		Failed/Other	
	Qty	%	Qty	%	Qty	%	Qty	%
Fire	15	100.00%	15	100.00%	15	100.00%	0	0%
<b>Totals</b>	<b>15</b>	<b>100%</b>	<b>15</b>	<b>100.00%</b>	<b>15</b>	<b>100.00%</b>	<b>0</b>	<b>0%</b>
Verification								
			<b>Company:</b> Fire Solutions			<b>Building:</b> Charlottesville-Johnson Elementary		
			<b>Inspector:</b> Tommy VO			<b>Contact:</b> Jason Davis		
Fire Solutions Certifications								
Certification Type						Number		
WBENC Certified						2005121836		



# Inspection & Testing

Generated by: BuildingReports.com

Building: Charlottesville-Johnson Elementary				
<p><i>The Inspection &amp; Testing section lists all of the items inspected in your building. Items are grouped by Passed or Failed /Other. Items are listed by Category. Each item includes the services performed, and the time &amp; date at which testing occurred.</i></p>				
Device Type	Location	ScanID : S/N	Service	Date Time
<b>Passed</b>				
<b>Fire</b>				
Fire Extinguisher, 5 Lbs, A.B.C.	1st boiler room 417.09	39853271 F75958839	Inspected	06/11/21 7:24:24 AM
Fire Extinguisher, 5 Lbs, A.B.C.	1st hallway by elevator 417.03	39853270 F75958841	Inspected	06/11/21 7:17:45 AM
Fire Extinguisher, 5 Lbs, A.B.C.	1st hallway to gym 417.10	39853272 XF-108371	Inspected	06/11/21 7:21:46 AM
Fire Extinguisher, 5 Lbs, A.B.C.	1st in stairway 1 417.01	39853268 XF-108370	Inspected	06/11/21 7:16:32 AM
Fire Extinguisher, 5 Lbs, A.B.C.	1st in stairway 2 417.02	39853267 XF-108368	Inspected	06/11/21 7:15:57 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd by stairway 1 417.04	39853170 XF-108380	Inspected	06/11/21 7:01:43 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd elevator pump room 417.08	39853169 YA679171	Inspected	06/11/21 7:03:31 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd hallway by exit 417.05	39853168 F75958908	Inspected	06/11/21 7:00:36 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd hallway by exit 417.13	39853173 XF-108350	Inspected	06/11/21 7:11:30 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd hallway by library 417.11	39853171 XF-108372	Inspected	06/11/21 7:05:24 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd in custodial closet 417.12	39853172 X709622	Inspected	06/11/21 7:12:15 AM
Fire Extinguisher, 6 Ltr, Class K	2nd kitchen by dock doors 417.06	39853175 AC607752	Inspected	06/11/21 6:59:24 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd stage area 417.17	39853273 BZ468776	Inspected	06/11/21 7:06:44 AM
Fire Extinguisher, 5 Lbs, A.B.C.	2nd stage area by exit 417.16	39853274 CC-791990	Inspected	06/11/21 7:07:16 AM
Fire Extinguisher, 5 Lbs, A.B.C.	3rd mechanical room 301 417.14	39853174 B-14706165	Inspected	06/11/21 7:09:41 AM

# Service Summary

Generated by: BuildingReports.com

Building: Charlottesville-Johnson Elementary		
The Service Summary section provides an overview of the services performed in this report.		
Device Type	Service	Quantity
<i>Passed</i>		
Fire Extinguisher, 5 Lbs, A.B.C.	Inspected	14
Fire Extinguisher, 6 Ltr, Class K	Inspected	1
<b>Total</b>		<b>15</b>
<b>Grand Total</b>		<b>15</b>

# Fire Extinguisher Maintenance Report

Generated by: BuildingReports.com

Building: Charlottesville-Johnson Elementary					
<i>This report provides details on the Hydrostatic Test and Maintenance/Breakdown dates for fire extinguishers. Items that will need either of these services at any time in the next two years are displayed. Items are grouped together by year for budgeting purposes.</i>					
ScanID	Location	Serial #	Hydro	Breakdown	Mfr Date
<b>Due in 2022</b>					
<b>Hydrostatic Test</b>					
<b>Fire Extinguisher, A.B.C., 5 Lbs</b>					
39853172	2nd in custodial closet 417.12	X709622	04/06/10	04/06/16	04/06/10
Total Fire Extinguisher, A.B.C., 5 Lbs:					<b>1</b>
<b>Due in 2023</b>					
<b>Breakdown/Maintenance</b>					
<b>Fire Extinguisher, A.B.C., 5 Lbs</b>					
39853170	2nd by stairway 1 417.04	XF-108380	05/01/17	05/01/17	04/06/05
39853171	2nd hallway by library 417.11	XF-108372	05/01/17	05/01/17	04/06/05
39853173	2nd hallway by exit 417.13	XF-108350	05/01/17	05/01/17	04/06/05
39853267	1st in stairway 2 417.02	XF-108368	05/01/17	05/01/17	04/06/05
39853268	1st in stairway 1 417.01	XF-108370	05/01/17	05/01/17	04/06/05
39853272	1st hallway to gym 417.10	XF-108371	05/01/17	05/01/17	04/06/05
Total Fire Extinguisher, A.B.C., 5 Lbs:					<b>6</b>

# Inventory & Warranty Report

Generated by: BuildingReports.com

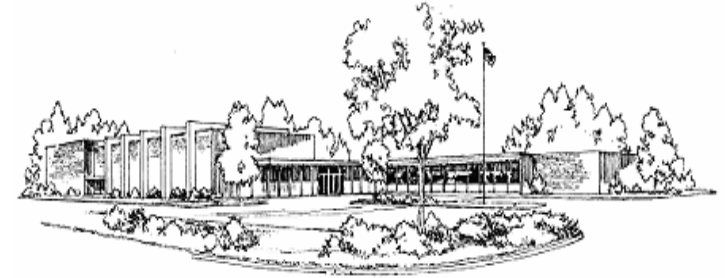
Building: Charlottesville-Johnson Elementary				
<p>The Inventory &amp; Warranty Report lists each of the devices and items that are included in your Inspection Report. A complete inventory count by device type and category is provided. Items installed within the last 90 days, within the last year, and devices installed for two years or more are grouped together for easy reference.</p>				
Device or Type	Category		% of Inventory	Quantity
Fire Extinguisher	Fire		100.00%	15
Type	Qty	Model #	Description	Manufacture Date
<b><i>In Service - 2 Years to 3 Years</i></b>				
<b>Buckeye</b>				
Fire Extinguisher	3	5 HI SA40 ABC	A.B.C.	08/05/2019
<b><i>In Service - 5 Years to 10 Years</i></b>				
<b>Ansul</b>				
Fire Extinguisher	1	X-A05S	A.B.C.	04/06/2016
Fire Extinguisher	1	X AA05-1	A.B.C.	04/06/2014
Fire Extinguisher	1	XA05	A.B.C.	04/06/2013
<b><i>In Service - 10 Years to 15 Years</i></b>				
<b>Ansul</b>				
Fire Extinguisher	1	XK01-2	Class K	08/05/2011
<b>Amerex</b>				
Fire Extinguisher	1	AB500-10	A.B.C.	04/06/2010
<b><i>In Service - 15 Years to 25 Years</i></b>				
<b>Amerex</b>				
Fire Extinguisher	1	A2500-06	A.B.C.	04/06/2006
<b>Badger</b>				
Fire Extinguisher	6	B5M-05	A.B.C.	04/06/2005

## **Appendix IV: RS MEANS ESTIMATE FOR FACILITY CONDITION INDEX (FCI)**

# Square Foot Cost Estimate Report

Date: 2/11/2022

Estimate Name	Johnson Elementary
	<b>City of Charlottesville</b> 1645 Cherry Avenue Charlottesville Virginia 22902
Building Type	School, Elementary with Brick Veneer / Reinforced Concrete
Location	CHARLOTTESVILLE, VA
	2.00
Stories Height	15.00
Floor Area (S.F.)	51,768.00
LaborType	OPN
Basement Included	No
Data Release	Year 2021
Cost Per Square Foot	\$164.56
<b>Total Building Cost</b>	<b>\$8,519,176.05</b>



Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.

**\*\* Stories entered is outside the range recommended by RSMeans.**

## Assembly Customization Type :

- ⊕ Added
- ⦿ Partially Swapped
- Fully Swapped

		Quantity	% of Total	Cost Per SF	Cost
<b>A Substructure</b>			<b>5.9%</b>	<b>\$7.23</b>	<b>\$374,379.74</b>
<b>A1010</b>	<b>Standard Foundations</b>			<b>\$4.66</b>	<b>\$241,286.67</b>
	Foundation wall, CIP, 4' wall height, direct chute, .148 CY/LF, 7.2 PLF, 12" thick	2,000.00		\$2.61	<b>\$135,282.00</b>
	Strip footing, concrete, reinforced, load 11.1 KLF, soil bearing capacity 6 KSF, 12" deep x 24" wide	2,000.00		\$1.40	<b>\$72,406.00</b>
	Spread footings, 3000 PSI concrete, load 100K, soil bearing capacity 6 KSF, 4' - 6" square x 15" deep	92.03		\$0.65	<b>\$33,598.67</b>
<b>A1030</b>	<b>Slab on Grade</b>			<b>\$2.46</b>	<b>\$127,564.12</b>
	Slab on grade, 4" thick, non industrial, reinforced	25,884.00		\$2.46	<b>\$127,564.12</b>



		Quantity	% of Total	Cost Per SF	Cost
<b>A2010</b>	<b>Basement Excavation</b>			<b>\$0.11</b>	<b>\$5,528.95</b>
	Excavate and fill, 30,000 SF, 4' deep, sand, gravel, or common earth, on site storage	45,297.00		\$0.11	<b>\$5,528.95</b>
<b>B Shell</b>			<b>42.0%</b>	<b>\$51.71</b>	<b>\$2,676,910.27</b>
<b>B1010</b>	<b>Floor Construction</b>			<b>\$1.25</b>	<b>\$64,734.72</b>
	Cast-in-place concrete column, 12", square, tied, minimum reinforcing, 150K load, 10'-14' story height, 135 lbs/LF, 4000PSI	1,200.00		\$1.25	<b>\$64,734.72</b>
<b>B1020</b>	<b>Roof Construction</b>			<b>\$7.33</b>	<b>\$379,564.27</b>
	Roof, concrete, beam and slab, 25'x25' bay, 40 PSF superimposed load, 20" deep beam, 9" slab, 152 PSF total load	25,884.00		\$7.33	<b>\$379,564.27</b>
<b>B2010</b>	<b>Exterior Walls</b>			<b>\$24.17</b>	<b>\$1,251,490.80</b>
	Brick wall, composite double wythe, standard face/CMU back-up, 8" thick, perlite core fill, 3" XPS	42,000.00		\$24.17	<b>\$1,251,490.80</b>
<b>B2020</b>	<b>Exterior Windows</b>			<b>\$12.93</b>	<b>\$669,580.46</b>
	Windows, aluminum, awning, insulated glass, 4'-5" x 5'-3"	521.74		\$7.05	<b>\$365,070.26</b>
	Aluminum flush tube frame, for 1/4"glass, 1-3/4"x4", 5'x20' opening, three intermediate horizontals	6,000.00		\$2.58	<b>\$133,323.30</b>
	Glazing panel, insulating, 1" thick units, 2 lites, 1/4" float glass, clear	6,000.00		\$3.31	<b>\$171,186.90</b>
<b>B2030</b>	<b>Exterior Doors</b>			<b>\$0.84</b>	<b>\$43,510.22</b>
	Door, aluminum & glass, with transom, narrow stile, double door, hardware, 6'-0" x 10'-0" opening	4.60		\$0.59	<b>\$30,649.42</b>
	Door, steel 18 gauge, hollow metal, 1 door with frame, no label, 3'-0" x 7'-0" opening	4.60		\$0.25	<b>\$12,860.80</b>
<b>B3010</b>	<b>Roof Coverings</b>			<b>\$4.93</b>	<b>\$255,272.65</b>
	Roofing, single ply membrane, EPDM, 60 mils, loosely laid, stone ballast	25,884.00		\$0.86	<b>\$44,766.38</b>
	Insulation, rigid, roof deck, extruded polystyrene, 40 PSI compressive strength, 4" thick, R20	25,884.00		\$1.98	<b>\$102,559.66</b>
	Base flashing, rubber, neoprene, 1/16" thick, 24 ga galv reglet, 24 ga galv counter flashing	2,000.00		\$0.92	<b>\$47,819.40</b>
	Roof edges, aluminum, duranodic, .050" thick, 8" face	2,000.00		\$1.00	<b>\$51,860.40</b>
	Flashing, aluminum, no backing sides, .019"	2,000.00		\$0.16	<b>\$8,266.82</b>
<b>B3020</b>	<b>Roof Openings</b>			<b>\$0.25</b>	<b>\$12,757.14</b>
	Roof hatch, with curb, 1" fiberglass insulation, 2'-6" x 3'-0", galvanized steel, 165 lbs	4.60		\$0.11	<b>\$5,785.13</b>
	Smoke hatch, unlabeled, galvanized, 2'-6" x 3', not incl hand winch operator	4.60		\$0.13	<b>\$6,972.01</b>
<b>C Interiors</b>			<b>17.3%</b>	<b>\$21.23</b>	<b>\$1,099,010.31</b>

		Quantity	% of Total	Cost Per SF	Cost
<b>C1010</b>	<b>Partitions</b>			<b>\$3.45</b>	<b>\$178,665.60</b>
	Concrete block (CMU) partition, light weight, hollow, 6" thick, no finish	25,884.00		\$3.45	<b>\$178,665.60</b>
<b>C1020</b>	<b>Interior Doors</b>			<b>\$1.55</b>	<b>\$80,154.24</b>
	Door, single leaf, kd steel frame, hollow metal, commercial quality, flush, 3'-0" x 7'-0" x 1-3/8"	73.95		\$1.55	<b>\$80,154.24</b>
<b>C1030</b>	<b>Fittings</b>			<b>\$1.05</b>	<b>\$54,444.74</b>
	Toilet partitions, cubicles, ceiling hung, painted metal	51.77		\$0.71	<b>\$36,885.06</b>
	Chalkboards, liquid chalk type, aluminum frame & chalktrough	1,035.36		\$0.34	<b>\$17,559.67</b>
<b>C3010</b>	<b>Wall Finishes</b>			<b>\$4.19</b>	<b>\$217,047.85</b>
	2 coats paint on masonry with block filler	51,768.00		\$2.00	<b>\$103,343.42</b>
	2 coats paint on masonry with block filler	42,000.00		\$1.62	<b>\$83,843.76</b>
	Ceramic tile, thin set, 4-1/4" x 4-1/4"	5,176.80		\$0.58	<b>\$29,860.66</b>
<b>C3020</b>	<b>Floor Finishes</b>			<b>\$5.76</b>	<b>\$297,935.19</b>
	Carpet, tufted, nylon, roll goods, 12' wide, 36 oz	5,176.80		\$0.49	<b>\$25,253.67</b>
	Carpet, padding, add to above, 2.7 density	5,176.80		\$0.09	<b>\$4,646.28</b>
	Terrazzo, maximum	5,176.80		\$1.88	<b>\$97,395.28</b>
	Vinyl, composition tile, maximum	31,060.80		\$1.46	<b>\$75,788.04</b>
	Oak strip, sanded and finished, minimum	10,353.60		\$1.44	<b>\$74,794.61</b>
	Underlayment, plywood, 3/8" thick	10,353.60		\$0.39	<b>\$20,057.30</b>
<b>C3030</b>	<b>Ceiling Finishes</b>			<b>\$5.23</b>	<b>\$270,762.69</b>
	Acoustic ceilings, 3/4" mineral fiber, 12" x 12" tile, concealed 2" bar & channel grid, suspended support	51,768.00		\$5.23	<b>\$270,762.69</b>
<b>D Services</b>			<b>34.6%</b>	<b>\$42.58</b>	<b>\$2,204,431.65</b>
<b>D2010</b>	<b>Plumbing Fixtures</b>			<b>\$6.93</b>	<b>\$358,712.38</b>
	Water closet, vitreous china, bowl only with flush valve, wall hung	51.77		\$3.31	<b>\$171,365.02</b>
	Urinal, vitreous china, wall hung	17.26		\$0.40	<b>\$20,641.89</b>
	Lavatory w/trim, wall hung, PE on CI, 20" x 18"	51.77		\$1.66	<b>\$85,757.57</b>
	Kitchen sink w/trim, countertop, stainless steel, 43" x 22" double bowl	6.90		\$0.31	<b>\$16,005.29</b>
	Service sink w/trim, PE on CI, wall hung w/rim guard, 24" x 20"	2.30		\$0.19	<b>\$10,001.41</b>
	Water cooler, electric, wall hung, wheelchair type, 7.5 GPH	26.46		\$1.06	<b>\$54,941.21</b>
<b>D2020</b>	<b>Domestic Water Distribution</b>			<b>\$0.73</b>	<b>\$37,592.47</b>
	Gas fired water heater, commercial, 100< F rise, 300 MBH input, 278 GPH	1.96		\$0.73	<b>\$37,592.47</b>
<b>D2040</b>	<b>Rain Water Drainage</b>			<b>\$0.89</b>	<b>\$46,089.83</b>

		Quantity	% of Total	Cost Per SF	Cost
	Roof drain, CI, soil, single hub, 5" diam, 10' high	17.26		\$0.81	<b>\$41,871.25</b>
	Roof drain, CI, soil, single hub, 5" diam, for each additional foot add	86.28		\$0.08	<b>\$4,218.57</b>
<b>D3010</b>	<b>Energy Supply</b>			<b>\$9.19</b>	<b>\$475,692.01</b>
	Commercial building heating system, fin tube radiation, forced hot water, 10,000 SF, 100,000 CF, total 2 floors	51,768.00		\$9.19	<b>\$475,692.01</b>
<b>D3050</b>	<b>Terminal &amp; Package Units</b>			<b>\$9.72</b>	<b>\$503,428.27</b>
	Splt sys, air cooled condensing unit, schools and colleges, 20,000 SF, 76.66 ton	51,768.00		\$9.72	<b>\$503,428.27</b>
<b>D4010</b>	<b>Sprinklers</b>			<b>\$2.47</b>	<b>\$127,737.02</b>
	Wet pipe sprinkler systems, steel, light hazard, 1 floor, 50,000 SF	51,768.00		\$2.47	<b>\$127,737.02</b>
<b>D4020</b>	<b>Standpipes</b>			<b>\$0.45</b>	<b>\$23,348.40</b>
	Wet standpipe risers, class III, steel, black, sch 40, 4" diam pipe, 1 floor	1.15		\$0.21	<b>\$11,085.14</b>
	Wet standpipe risers, class III, steel, black, sch 40, 4" diam pipe, additional floors	5.75		\$0.24	<b>\$12,263.26</b>
<b>D5010</b>	<b>Electrical Service/Distribution</b>			<b>\$0.83</b>	<b>\$42,899.14</b>
	Overhead service installation, includes breakers, metering, 20' conduit & wire, 3 phase, 4 wire, 120/208 V, 800 A	1.25		\$0.25	<b>\$12,698.44</b>
	Feeder installation 600 V, including RGS conduit and XHHW wire, 800 A	60.00		\$0.18	<b>\$9,386.70</b>
	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 3 phase, 800 A	1.20		\$0.40	<b>\$20,814.00</b>
<b>D5020</b>	<b>Lighting and Branch Wiring</b>			<b>\$8.30</b>	<b>\$429,707.79</b>
	Receptacles incl plate, box, conduit, wire, 8 per 1000 SF, .9 W per SF, with transformer	51,768.00		\$2.43	<b>\$125,936.01</b>
	Wall switches, 2.0 per 1000 SF	51,768.00		\$0.33	<b>\$16,979.90</b>
	Miscellaneous power, 1.2 watts	51,768.00		\$0.25	<b>\$12,879.88</b>
	Central air conditioning power, 4 watts	51,768.00		\$0.51	<b>\$26,593.22</b>
	Fluorescent fixtures recess mounted in ceiling, 1.6 watt per SF, 40 FC, 10 fixtures @32watt per 1000 SF	59,533.20		\$4.78	<b>\$247,318.77</b>
<b>D5030</b>	<b>Communications and Security</b>			<b>\$3.01</b>	<b>\$155,648.49</b>
	Communication and alarm systems, includes outlets, boxes, conduit and wire, sound systems, 12 outlets	0.71		\$0.24	<b>\$12,449.21</b>
	Communication and alarm systems, fire detection, addressable, 100 detectors, includes outlets, boxes, conduit and wire	1.44		\$1.68	<b>\$87,037.83</b>
	Fire alarm command center, addressable with voice, excl. wire & conduit	1.15		\$0.26	<b>\$13,518.35</b>

		Quantity	% of Total	Cost Per SF	Cost
	Communication and alarm systems, includes outlets, boxes, conduit and wire, master clock systems, 10 rooms	0.77		\$0.28	\$14,272.50
	Communication and alarm systems, includes outlets, boxes, conduit and wire, master TV antenna systems, 12 outlets	1.20		\$0.28	\$14,270.55
	Internet wiring, 2 data/voice outlets per 1000 S.F.	31.06		\$0.27	\$14,100.05
<b>D5090</b>	<b>Other Electrical Systems</b>			<b>\$0.07</b>	<b>\$3,575.85</b>
	Generator sets, w/battery, charger, muffler and transfer switch, gas/gasoline operated, 3 phase, 4 wire, 277/480 V, 15 kW	5.46		\$0.07	\$3,575.85
<b>E Equipment &amp; Furnishin</b>			<b>0.2%</b>	<b>\$0.28</b>	<b>\$14,745.44</b>
<b>E1020</b>	<b>Institutional Equipment</b>			<b>\$0.28</b>	<b>\$14,745.44</b>
	Architectural equipment, laboratory equipment, counter tops, stainless steel	57.52		\$0.28	\$14,745.44
<b>E1090</b>	<b>Other Equipment</b>			<b>\$0.00</b>	<b>\$0.00</b>
<b>F Special Construction</b>			<b>0.0%</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>G Building Sitework</b>			<b>0.0%</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Sub Total</b>			<b>100%</b>	<b>\$123.04</b>	<b>\$6,369,477.42</b>
<b>Contractor's Overhead &amp; Profit</b>			<b>25.0 %</b>	<b>\$30.76</b>	<b>\$1,592,369.35</b>
<b>Architectural Fees</b>			<b>7.0 %</b>	<b>\$10.77</b>	<b>\$557,329.27</b>
<b>User Fees</b>			<b>0.0 %</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Total Building Cost</b>				<b>\$164.56</b>	<b>\$8,519,176.05</b>

## **Appendix V: SITE PHOTOGRAPHS**



1 - Monument sign



2 - Johnson Elementary School





3 - Asphalt drive lane - note cracks and previous repair



4 - Asphalt drive lane - note cracking



5 - Asphalt apron - alligator cracking



6 - Asphalt pavement parking area north side of site





7 - Typical storm water drainage



8 - Typical storm water drainage





9 - Typical concrete sidewalk



10 - Typical concrete sidewalk - note cracking





11 - Typical concrete sidewalk - note cracking



12 - Concrete ramp





13 - concrete curb - note deterioration



14 - Typical concrete steps





15 - Concrete ramp north side of the building



16 - Typical landscaping





17 - Dumpster area northwest side of the building



18 - Playground area





19 - Basketball court area



20 - Playground area





21 - Playground area



22 - Structural framing



23 - Structural framing



24 - Building exterior northwest side of the building





25 - Building exterior southwest side of the building



26 - Building exterior - note sealant condition



27 - Building exteriors at loading dock area - note damage



28 - Building exterior - note efflorescence





29 - Building exterior - note vertical sealant condition



30 - Main entrance doors





31 - Entrance doors



32 - Typical exterior windows



33 - Typical exterior window



34 - Typical exterior windows - note separation of gasket





35 - Typical exterior windows - note separation of gasket



36 - Single-ply membrane roofing system looking west



37 - Single-ply membrane roofing system looking southwest



38 - Single-ply membrane roofing system - note ponding





39 - Single-ply membrane roofing system looking east



40 - Single-ply membrane roofing system - note patching separation





41 - Typical internal drain



42 - Typical mechanical vent



43 - Typical skylight



44 - Parapet wall - note deterioration





45 - Slate shingle roofing system



46 - Slate shingle roofing system - note misalignment of slate



47 - Gas domestic water heaters



48 - Boilers located in mechanical room





49 - Cooling Tower located at north side of the building



50 - Condenser Units located exterior north side of the building



51 - Typical Air Handler Unit



52 - Typical Package Unit





53 - Typical Package Unit



54 - Typical split system

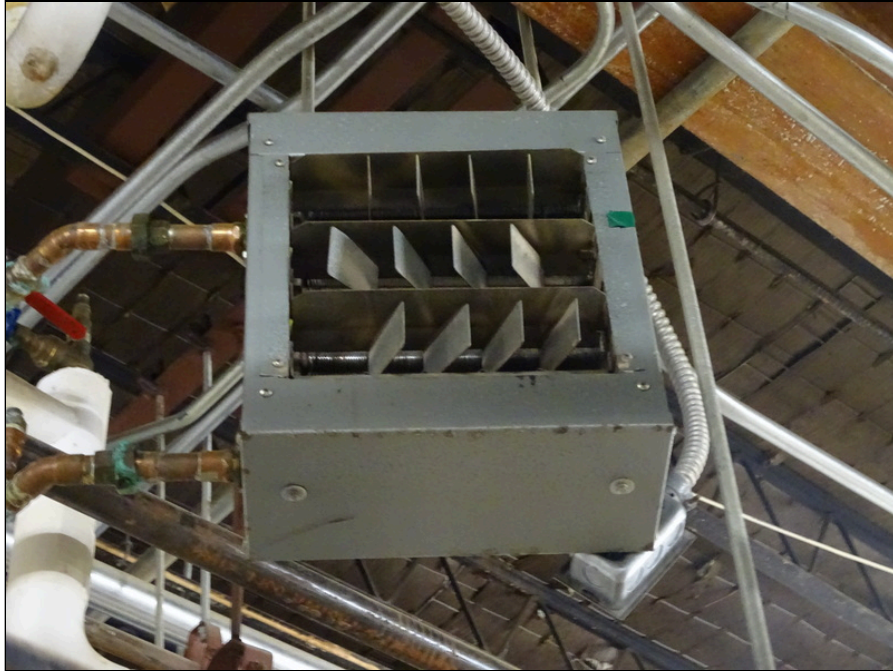


55 - Typical Water Source Heat Pump



56 - Typical Water Source Heat Pump





57 - Typical space heater



58 - Typical mechanical duct



59 - Typical mechanical duct



60 - Typical thermostat





61 - Variable frequency drive for mechanical system



62 - Main electrical switchgear



63 - Emergency power generator



64 - Emergency power transfer switch





65 - Typical circuit breaker panel



66 - Elevator system



67 - Fire sprinkler system



68 - Typical fire sprinkler head





69 - Typical fire extinguisher



70 - Fire Department connections



71 - Fire alarm panel - note older panel



72 - Typical fire alarm bell and strobe





73 - Fire alarm pull station



74 - Typical exit sign



75 - Typical gas meter

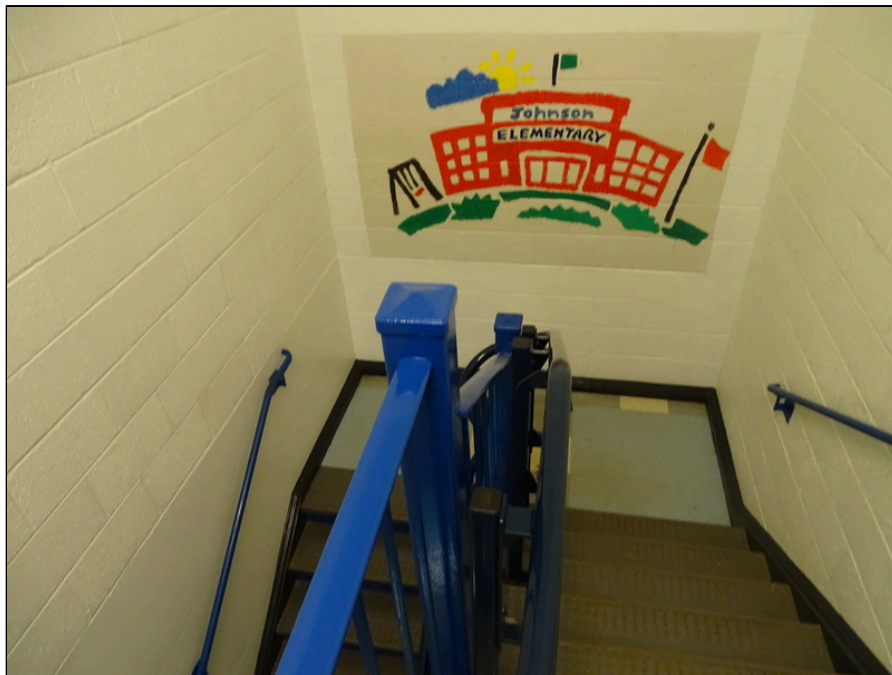


76 - Typical fire hydrant





77 - Typical corridor interior



78 - Interior finishes of stair area



79 - Interior finishes of the classroom area



80 - Interior finishes of the classroom area





81 - Corridor Finishes



82 - Interior finishes of corridor area



83 - Interior finishes of auditorium area



84 - Typical ceiling - note water leakage





85 - Interior finishes of the classroom area



86 - Accessible asphalt pavement parking area northeast side of site



87 - Accessible asphalt pavement parking area northeast side of site



88 - Accessible curb cut ramp with truncated domes





89 - Accessible ramp



90 - Accessible chair lift



91 - Water fountain - note protruding and not accessible



92 - Accessible toilet

## **Appendix VI: RESUMES**

# Michael G. Doyle, AIA

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## *Principal Architect – Facilities Department*

### EDUCATION

Bachelor of Architecture, 1987, Architecture, Virginia Polytechnic Institute and State University, Blacksburg, VA

### REGISTRATIONS

Registered Architect: AZ, DC, MD, VA, NC, IL  
The Leadership in Energy and Environmental Design (LEED) Accredited Professional: 2009

Mr. Doyle serves as a Principal Architect for the Facilities Engineering Group in ECS Chantilly. He has over 25 years of experience in the construction industry, and his expertise includes the Americans with Disabilities Act, Property Condition Surveys, Pre and Post Construction Survey Services, Pavement Assessments, and Third-Party Plan Review. He has worked with numerous government agencies and has significant experience with local government and educational facilities; commercial high-rise buildings; multi-unit, residential, and correctional facilities. Mr. Doyle also has had experience on several high-profile historic projects, including the Jefferson Memorial, the Tivoli Theater, the Tariff Building, The White House, the Court of Appeals in Washington, DC; the Valley Bank Building in Leesburg, Virginia; and the Shenandoah Courthouse at Woodstock, Virginia.

**Property Condition Assessments** - Mr. Doyle has extensive experience performing property condition assessments from small commercial properties, large high rise buildings, to government-owned properties. Mr. Doyle has performed assessment in general accordance with ASTM E 2018, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Mr. Doyle also has experience in performing property condition assessments in accordance with lender and specific client requirements. Mr. Doyle has worked with teams of experts in providing detailed reports and simple reserve analysis for properties.

### RELEVANT PROJECT EXPERIENCE

**Darien Lake, Darien Center, NY** – Mr. Doyle was the Principal Architect for the property assessment of the Darien Lake amusement park. The property included over 200 buildings including buildings within the park, maintenance and administration buildings, hotel, campground buildings, and sewer treatment center.

**Ballston Park Apartments, Arlington, VA (2014)** - originally developed in 1938, this complex includes 50 two-story apartment buildings, one three-story apartment building, one single-family residence, and a single-story office/clubhouse. A PCA and a Phase I Environmental Site Assessment was conducted and documented.

**Hyatt House Lodging, Sterling, VA (2014)** - This six-story, 162-room, 98,793-square-foot hotel with surface parking was constructed in 2007 as a Sierra Suites and subsequently converted to a Hyatt House. Recreational facilities include a swimming pool, fitness center, a grill area, and a fire pit. Building systems observed per ASTM E 2018 included site conditions, the structural frame and building envelope; plumbing, mechanical and electrical systems, vertical transportation Systems, life safety and fire protection, and ADA Considerations. A Phase I Environmental Site Assessment was also conducted.

**WHMO Facilities Assessment, Washington, DC (2015)** - This is a privately owned, government-leased facility with a sensitive mission. The structure is believed to be a 1920s vintage building designed as a multi-story car dealership. The government has occupied this space continuously since 1963. Mr. Doyle conducted a survey of the complete facility, identified and documented areas of concerns. He also provide a recommendation for remediation for each area of concern, a Rough Order Magnitude (ROM) cost for remediation, and categorized each area of concern as critical, non-critical or aesthetic.

### ADDITIONAL PROJECT EXPERIENCE

- City of Charlottesville Portfolio, Charlottesville, VA
- Liberty Park, Herndon, VA
- Oakcrest School, McLean, VA
- Signature Flight Support, Arlington, VA
- The Gap, Washington, DC
- Lanham Crossing, Lanham, MD
- ZIM American Headquarters Building, Suffolk, VA
- The Portrait Building, Washington, DC
- The Aventine of Alexandria, Alexandria, VA





# DONALD GOGLIO

## CODE COMPLIANCE PROJECT MANAGER



### CERTIFICATIONS

Master Plumber  
Master Gasfitter  
Cross Connection Technician  
Commercial Building Inspector  
Commercial Plumbing Inspector  
Commercial Mechanical Inspector  
Accessibility Inspector/Plan  
Reviewer  
Fire Inspector I and II  
LEED Green Associate  
CPR/First Aid Training  
OSHA 30 hr Training

### SKILLS

Code Compliance  
Construction Administration  
Special Inspection Services  
Condition Assessments  
Forensic Consultation

### PROFESSIONAL MEMBERSHIPS

American Wood Council  
USGBC

### EDUCATION

Montgomery College, 1991  
Silver Spring, MD

### YEARS OF EXPERIENCE

ECS: <1 Other: 38

### PROFESSIONAL PROFILE

Mr. Goglio has 38 years of construction, mechanical trade, and management experience. He manages code compliance projects, including reviewing plans, providing technical support, and conducting inspections.

### PROJECT EXPERIENCE

**Fort Lee AIT Barracks, Ft. Lee, VA – Quality Control Manager** – The Fort Lee AIT Barracks project is a soldiers' basic combat training facility for over 1,200 Army personnel. The complex is a cohesive development, providing both housing and affiliated functions for soldiers in the AIT program. In addition to housing, the facility includes an outdoor jogging track, physical training pits, and access drivers and parking areas that meet USACE requirements. The project's five-story brick buildings meet DoD Minimum Antiterrorism Standards for Buildings and obtained LEED® Gold certification from the US Green Building Council. The Fort Lee project is part of the Northeast Region Multiple Award Task Order Contract (MATOC).

**Terrapin Row, College Park, MD – Assistant Superintendent** – Terrapin Row is a transformative student housing complex located on the University of Maryland's historic South Campus. The mixed-use community features 1,493 beds across 418 apartments as well as a 489-space parking garage. Terrapin Row boasts ample amenities centered around a college lifestyle, including a swimming pool, volleyball court, outdoor kitchens and fire pits, exterior TVs, a fitness center, bike storage, a cyber cafe and game room, and numerous live-learn spaces. The multi-phase project consists of seven buildings and encompasses a pedestrian and bike-friendly Village Green surrounded by over 11,856 square feet of retail space. The Village Green flows into a grand stairway and amphitheater that opens to a pedestrian plaza to welcome pedestrians towards the main academic centers of campus.

**The Hartley at the Parks, Washington, DC – Assistant Superintendent** – The Hartley is a 323-unit mixed-use apartment community with a Whole Foods Market as its retail anchor in Northwest DC. This six-story community consists of five stories of wood framing over a one-story concrete podium with 317 apartments and six townhomes. It is a part of The Parks at Walter Reed, a mixed-use master-planned redevelopment of the 66-acre historic Walter Reed Army Medical Center with 2,200 residential units plus office and retail. The Hartley features two interior courtyards: the north courtyard includes pool and amenity space, and the south courtyard includes a Zen Garden. The second-floor amenity space includes a lounge, multi-purpose room, fitness center, and pet spa. The studio, one-, two-, and three-bedroom units feature high-end finishes, including quartz countertops and EnergyStar® appliances.



# DONALD GOGLIO

CODE COMPLIANCE PROJECT MANAGER



## CERTIFICATIONS

Master Plumber  
Master Gasfitter  
Cross Connection Technician  
Commercial Building Inspector  
Commercial Plumbing Inspector  
Commercial Mechanical Inspector  
Accessibility Inspector/Plan  
Reviewer  
Fire Inspector I and II  
LEED Green Associate  
CPR/First Aid Training  
OSHA 30 hr Training

## SKILLS

Code Compliance  
Construction Administration  
Special Inspection Services  
Condition Assessments  
Forensic Consultation

## PROFESSIONAL MEMBERSHIPS

American Wood Council  
USGBC

## EDUCATION

Montgomery College, 1991  
Silver Spring, MD

## YEARS OF EXPERIENCE

ECS: <1 Other: 38

## PROFESSIONAL PROFILE

Mr. Goglio has 38 years of construction, mechanical trade, and management experience. He manages code compliance projects, including reviewing plans, providing technical support, and conducting inspections.

## PROJECT EXPERIENCE

- Fort Lee AIT Barracks, Ft. Lee, VA
- Terrapin Row, College Park, MD
- The Hartley at the Parks, Washington, DC
- River Point, Washington, DC
- Juniper, Columbia, MD
- The Smith, King of Prussia, PA
- Banner Hill, Baltimore, MD
- Jefferson Square, Baltimore, MD
- Metropolitan at Largo Station, Largo, MD
- The Village at Leesburg, Leesburg, VA
- The Elms at Clarksburg Village, Clarksburg, MD
- Hidden Creek, Gaithersburg, MD
- Paramount, Gaithersburg, MD
- Thayer & Spring, Silver Spring, MD





## William R. Pratt, PE

*Principal Engineer, ECS Mid-Atlantic, LLC*  
*Professional-In-Charge*

### EDUCATION

Bachelor of Science, 1989, Mechanical Engineering, University of Massachusetts

### REGISTRATIONS

Professional Engineer: DC, VA, MD

ICC Commercial Building, Plumbing, and Mechanical Inspector

Mr. Pratt serves as Senior Project Engineer for ECS Mid-Atlantic, LLC. Mr. Pratt is responsible as the Professional-In-Charge of the code compliance group and provides supervision of code compliance inspection programs for the local jurisdictions. Additionally, he oversees execution of project management for construction materials testing, property condition assessments.

**PROPERTY CONDITION ASSESSMENTS** - Bill has extensive experience in performing property condition assessments for a variety of properties and structures. These assessments include evaluation of site improvements, building components, roofing, pavements, electrical systems, mechanical systems, and HVAC systems. He performs assessment in general accordance with ASTM E 2018 – 08, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Bill also has experience in performing property condition assessments that meet with lender and specific client requirements. He works with teams of experts in providing detailed reports and simple reserve analysis for properties.

### SELECT PROJECT EXPERIENCE – PCA

- City of Charlottesville, VA - 51 Property
- Portfolio including schools, libraries, museums, fire and police stations, and court buildings
- Home Properties 800+ Apartment Units, 4-Property Portfolio to Freddie Mac Standard, Hampton and Virginia Beach, VA
- Boulders Office Park 300,000+ SF, 3-Property Portfolio, Richmond, VA
- Darien Lake Theme Park, Darien Center, NY
- Madison Place Office Building, Alexandria, VA
- King of Glory Lutheran Church, Williamsburg, VA
- Comfort Inn, Charlottesville, VA
- The Wisconsin Building, Washington, DC

### SELECT PROJECT EXPERIENCE – CODE COMPLIANCE AND SPECIAL INSPECTIONS

- City Center DC, Washington, DC
- DC Courts Judiciary Square, IDIQ Contract, Washington, DC
- Hilton Garden Inn, Washington, DC
- Waterfront Mall, Washington, DC
- 4<sup>th</sup> Street Reconstruction, Washington, DC
- Sibley Memorial Hospital Addition, Cancer Center, Washington, DC
- Washington Headquarters Services, Arlington, VA
- Walmart #5968-00, Washington, DC
- Progression Place, 7<sup>th</sup> Street, NW, Washington, DC
- National Gallery of Art, Washington, DC
- City Market @ O, Washington, DC

