

MASONS COVE ELEMENTARY SCHOOL

ARCHITECTURAL

A new, 52,200 SF, Masons Cove Elementary School (MCES) was constructed in 2011. The original school was razed and the new built behind the original location. The facility was certified LEED gold. As it was designed under older accessibility standards, many items no longer comply with current standards. Any future renovation work should address non-compliant items.

A seclusion room is located in the former 144 "Closet". A deadbolt was previously installed on the door and a hole drilled in the frame to accommodate the bolt. This has been removed, but holes in door and frame remain. Two small diffusers are located in the space. Verify ventilation rates are appropriate for an occupied space instead of storage.

A dehumidifier is running in the Guidance Area. This humidifier supposedly fills twice each day.

Exterior Finishes

Exterior Cladding:

Exterior walls were clad in a mix of bricks, cultured stone, lap seam metal panels, and concealed seam metal panels. Brick and metal panels were in good condition, and should require general maintenance. Cultured stone pieces were observed lying on surfaces below the walls. Adhesion failures have occurred at most stone panels.

Roof:

The membrane roof system is in good condition. Debris should be removed from the roof, and drains cleared of any obstructing matter. A roof scupper over the loading dock area has a piece of splicing tape obstructing water flow to the conductor head. This appears to have been installed intentionally, but the roof taper pattern indicates water is to flow to this location. A second drain on this roof is dealing with the excess water, but ponding is resulting from the obstructed drain.

A solar water heater array has been installed beside on of the roof drains. The sled is mounted on 6x6 wood members that run perpendicular to the direction of water flow. This is obstructing the water flow to the drain, and may be contributing to a leak that is occurring below this location. Additionally, a condensate pipe has been routed to the overflow drain at this location. This results in a permanent ponding of water.

A delivery vehicle has backed into the loading dock cover, damaging the metal drip edge. Conditions should be monitored for any signs of material failures.

Standing seam metal is used on the skylights and over the rear classroom wing. Standing seam was observed to be in good condition. Snow guards were observed to be in good condition.

Windows:

Windows were aluminum storefront systems with insulated glazing. Classroom and office windows were provided with operable sashes, but staff members indicated they were not given handles to operate the windows. None were observed in open positions. Sealants should be monitored and replaced as required.

Exterior Doors:

Exterior doors and frames were a mix of aluminum storefront and hollow metal systems. These were observed to be in good condition. Glazing at door lites, sidelites, and transoms was observed to be in good condition.

Interior Finishes, Fixtures & Equipment

(See assessment tabulations for interior finish conditions).

Lower corridor floors and classrooms were provided with stained concrete flooring. The cafeteria is a mix of concrete flooring and a maple floor at the stage area. A Vinyl Composition tile ramp extends from the stage to the cafeteria level. The kitchen has a textured tile floor. Office areas are provided with broadloom carpet which is lightly worn in some areas. Upstairs corridors have flexible terrazzo tiles. This tile is thicker than the VCT provided in the classrooms, and no transition strip is provided. The transition is minor; less than 1/8". Bathrooms located in the classrooms have a sheet flooring system that has been turned up the wall to form a coved base. Bathrooms off of corridors had 2" ceramic tile floors. These were observed to be in good condition. The gymnasium has a maple board floor in good condition.

Interior walls were primarily painted concrete masonry units. The lobby area had accents of through-color block and flexible terrazzo tile. Bathrooms have 4" ceramic wall tile wainscots that extend to approximately 6'-0" AFF, with painted CMU above.

Ceilings are a mix of acoustical ceiling panels and suspend acoustical ceiling tile. The panels occur in skylights and areas extending to a clerestory, while the suspended acoustical ceiling tiles in corridors, rooms with no skylights, and at bulkheads. The acoustical panel ceilings were, generally, in good condition. Staining was present on suspended acoustical ceiling tiles throughout the facility. These can be replaced, as required, but condensation issues or leaks contributing to their staining should be addressed. The gymnasium has perforated metal panel ceilings that are in good condition.

Interior doors were typically wood with hollow metal frames. Minimal damage to veneers was observed. Glazing was in good condition. Frames may be repainted as required.

Marker boards and tack boards are present in classrooms. Most boards were in good condition with minimal staining. Marker boards may be replaced in any future renovation. Smart boards have been placed in rooms.

Loose furnishings are a mixture of tables and desks. As needs change and technology evolves, it is anticipated that furnishing needs will change. All furniture and equipment should be replaced during a substantial renovation to provide a uniform appearance, enhance student comfort, and to provide flexibility. Furnishings, fixtures, and equipment design should occur in tandem with building design to achieve proper coordination between building utilities and furniture types and locations. This includes library shelving and furnishings.

Wooden casework was provided at classrooms, and other spaces, throughout the facility. Accessible base cabinets were provided in most areas, but accessible, roll-under work stations were not present. Wall cabinets were installed, but are no longer compliant with accessible reach ranges. Based on any changes in need, additional storage for classroom use and for general school use may be planned for any future renovation work.

Accessibility

Building signage is compliant with older ADA standards, but is not compliant with current standards. Some wall mounted features were typically installed above the reach ranges allowed by current standards. Minimal effort should be required, in any future renovation, to update to meet current standards.

Safety and Security

This section addresses passive security measures, such as how entrances function, visibility within the building, etc.

The vestibule at MCES provides visibility from the office and control over the secure entry. Door position sensors and locks are provided at all other exterior doors. Exterior doors providing access to corridors and other spaces, not accessed via the vestibule, are equipped with card readers. Due to the segmented nature of the building, sight lines are relatively short.

End of Masons Cove Elementary School Architectural Narrative

PLUMBING/FIRE PROTECTION

Plumbing Fixtures:

Water Closets: Water closets observed were floor mounted vitreous china with manual type flush valves. The water closets are from 2011 and seemed to be in good working condition. The flush valves are expected to have a useful life of 12 years and the water closets are expected to have a useful life of 30 years.

Urinals: Urinals observed were wall mounted vitreous china with manual type flush valves. The urinals are from 2011 and seemed to be in good working condition. The flush valves are expected to have a useful life of 12 years and the urinals are expected to have a useful life of 30 years.

Lavatories: Lavatories observed were wall mounted vitreous china with manual type faucets. The lavatories are from 2011 and seemed to be in good working condition. The lavatories are expected to have a useful life of 30 years.

Sinks: Classroom sinks observed were stainless steel with polished chrome gooseneck faucets and wrist blade handles. The sinks are from 2011 and are expected to have a useful life of 30 years.

Electric Water Coolers: The water coolers are wall mounted, ADA compliant high/low models. The water coolers are from 2011 and seemed to be in good working condition. The water coolers are expected to have a useful life of 15 years.

Water Heaters:

Domestic water heating is done by two gas fired units. Water heater #1 (WH-1) and WH-2. There are two hot water storage tanks. Water heaters and tanks were installed in 2011. The domestic water heaters are expected to have a useful life of 15 years. There are 2 Leonard mixing valves on the domestic service. Three hot water circulation pumps circulate the hot water loops throughout the building.

Piping:

Water: 3" and smaller is Copper with fiberglass insulation
3" and above is ductile iron pipe

Sanitary Piping: Cast iron and PVC

Storm Piping: Cast iron

Gas Piping: Black steel

Domestic Water Entrance:

The building is served by a 3" cold water line that is assumed to be from a municipal system. There is a backflow preventer which was installed in 2011. The backflow preventer is expected to have a useful life of 30 years.

Fire Protection:

The building is fully sprinkled. There is a 6" fire line into the building which has a double check assembly backflow preventer which was installed in 2011. The backflow preventer is expected to have a useful life of 30 years.

Recommendations:

None.

End of Masons Cove Elementary School Plumbing/Fire Protection Narrative

MECHANICAL (HVAC)

Heating:

The building is primarily heated by geothermal heat pumps units. Classrooms typically have a heat pump located above the ceiling. The larger spaces like the cafeteria typically have rooftop unit heat pump units. The heat pumps are 5 years old and are expected to have a useful life of 18 years.

Ventilation: Ventilation is provided to the building by rooftop heat pump units.

Air Conditioning:

The building is primarily cooled by geothermal heat pumps units. Classrooms typically have a heat pump located above the ceiling. The larger spaces like the cafeteria typically have rooftop unit heat pump units. The heat pumps are 5 years old and are expected to have a useful life of 18 years. There is a closed circuit cooler or cooling tower which is used to reject heat during cooling season. The cooling tower is 5 years old and has a useful life expectancy of 18 years. There are two distribution pumps that circulate condenser water to all of the heat pumps in the building. These pumps are controlled to act as duty/standby and one of the pumps is not currently operational. The working pumps are 5 years old and are expected to have a useful life of 25 years.

Piping:

There is condenser water piping, black steel, insulated. The piping is 5 years old and should have a useful life expectancy of 30 years.

Controls:

The building automation controls are digital type (DDC) are the Metasys Brand, by Johnson Controls.

Recommendations:

The backup condenser water pump should be repaired or replaced as soon as possible. Should the second pump fail, the entire building will lose heating and/or cooling.

End of Masons Cove Elementary School Mechanical Narrative

ELECTRICAL

Main Switch Gear:

Main Switchboard: The main switchboard is a 2000 Amp, 3 phase, 4 wire, 480Y/277 volt Square D, service entrance rated switchboard. The switchboard is existing from the original building built in 2011.

Recommendation: Expand existing switchboard as required. Provide standard maintenance.

Transformers:

Transformers: The main 480/277V to 208/120V transformers are Square D. The transformers are original to the building and currently in good working condition; however, over time transformers become less energy efficient.

Recommendation: If renovations and additions are pursued, maintain the existing transformer, if possible.

Panelboards:

Distribution and Branch Circuit Panelboards: All of the panels are newer Square D that were added with the original building. The panels have space and spares available. Many of the branch circuit panelboards are flush mounted within the corridors.

Recommendation: If renovations and additions occur, reuse the existing panelboards and space available. Expand as necessary to accommodate new or modified spaces and locate any new panels in areas to minimize student access and to meet National Electrical Code working clearances.

Cabling:

Cabling: Most of the building wiring is original and is in good operating condition. All visible wiring appears to be in conduit. Classrooms in older sections of the building have had original outlets capped off and are now providing power through all new cabling in surface raceway.

Recommendation: If renovations and additions occur, inspect and reuse existing wiring as appropriate. Remove and replace any wiring identifiable as having exceeded its useful lifespan.

Conduit/Raceway:

Conduit/Raceway: The conduit and raceway above ceiling is still in good condition. There is some surface raceway in the main office.

Recommendation: All surface raceway should be evaluated regularly and securely reattached to the wall if it becomes loose. All raceway would be reused if the building were renovated. Conduit would be salvaged where practical.

Light Fixtures:

Light Fixtures: The school has a variety of light fixture types. The lamps are a mixture of T8 and T5. The T8 and T5 lamps are current technology, and meet the current needs of the school. Various emergency wall pack light fixtures are also utilized.

Recommendation: To accommodate a new addition or renovation, provide a new lighting design and reuse existing fixtures. Consider LED fixtures where practical.

Lighting Controls:

Lighting Controls: The building is equipment with Lutron day light harvesting and standard controls. Corridor lighting is controlled through switch bank in the front office.

Recommendation: In the event of a renovation or addition, add automatic lighting controls to each room to comply with building energy codes.

Public Address System:

Public Address System: The public address system is currently a Valcom headend system with speakers located throughout the school. Each classroom has a PA speaker and an unused push-to-talk button. Teachers and staff use the newer Cisco phone system tied into the PA for communications and announcements rather than the Valcom system.

Recommendation: The PA system is current technology; however the phone system is being utilized for all communications. In the event of a renovation or addition, the system could be reused and expanded as necessary.

Security System:

Security System: Security system consists of electronic locks and motion sensors at exterior doors, keypads, and AI phone/Lobbyguard system at entrance. The current system meets the needs of the school and utilizes current technology.

Recommendation: Upgrade, expand, and reconfigure zones of the system as necessary if renovations and additions are pursued.

Camera System:

Camera System: A building wide IP based camera system is installed. It is current technology that meets the current needs of the school.

Recommendation: In renovations and additions, provide additional cameras and Digital video recorders as required for additional areas with desired coverage.

Data System:

Data System: The Data system consists of newer Category 6 and 5e cable. The building is equipped with wireless internet through Cisco access points throughout. Teacher and student computers are provided with access to a local area network.

Recommendation: The current system meets the needs of the building and switches and patch panels could be reused in any renovation or new construction.

Fire Alarm System:

Fire Alarm System: The fire alarm control panel is a Siemens Fire Finder System install with the original building construction. The current system consists of manual pull stations, smoke detectors, and horn/strobe alarms.

Recommendation: If renovations and additions are pursued, expand existing fire alarm system with audible and visual notification devices throughout the school and in classrooms. Reconfigure the existing system as necessary for renovations.

Generator:

Generator: A Cummins, LP Generator is installed to provide emergency power and standby power. The generator has a remote annunciator in the electrical room.

Recommendation: Provide a maintenance contract for the generator to maintain proper startup and operation.

Site Lighting:

Site Lighting: The site lighting consists of pole mounted lights for parking areas, wall packs around the building, and wall sconce lighting at exterior doors.

Recommendation: Maintain existing lighting and upgrade to LED fixtures. Provide new general site lighting to maximize energy efficiency and minimize light contamination on neighboring properties and to the sky.

Classroom Media (TV, Projector, ETC):

Classroom Media: Classroom media typically consists of an Activeboard with attached projector, a teacher computer, printer, and a wall mounted phone. Laptop and iPad carts are also in use. Most classrooms also contain an older CRT TV that appears to be unused; the Activeboard can be used for most media requirements.

Recommendation: Periodic upgrade of equipment will maintain a strong inventory of new equipment and keep students aware of current technology.

Phone System:

Phone System: The phone system consists of a new Cisco IP phone system. Each classroom has a phone connected through the PA system. The system is operational.

Recommendation: It is possible to retain and expand the existing phone system through additions and renovations.

End of Masons Cove Elementary School Electrical Narrative

CIVIL

Traffic Circulation

Buses: School is served by 6 regular buses, 2 special needs buses, and 1 daycare van. There is a dedicated bus loop on the east side of the building.

Morning: Buses utilize the sidewalk along the bus loop for drop off. Staff reports no issues.

Afternoon: Buses park in the diagonal parking spaces in the bus loop to pick up students. Staff reports no issues.

Cars: There is a drop off area around the main parking lot on the north side of the school.

Morning: Cars pull through the drop off area to the main entrance to drop off their students. Cars move through quickly with no significant backups.

Afternoon: Parents park and enter the building to sign their students out. The front parking area is kept clear of faculty parking for this reason. Pick up works smoothly and quickly with no significant backups.

Parking: 79 striped parking spaces are provided with 5 designated ADA spaces. Day to day parking is adequate for faculty / staff / visitors. Parking quantities meet Roanoke County requirements and State recommendations. Event parking utilizes the bus parking lot as an overflow. There are 54 striped parking spaces with 1 designated ADA space.

Service: The service area on the west side of the school has adequate maneuvering area for all deliveries.

Fire Access: Fire apparatus have adequate access around the building.

Separation: Separation of vehicles is good.

Adjacent Roadways: The adjacent roadways are small 2 lane rural roads. Sight distance at the main entrance looking left is marginal.

Pedestrian: Generally there are not many pedestrians who access the school. There are no sidewalks adjacent to the school.

ADA Accessibility

Parking: There are 5 spaces at the main entrance, and 1 space at the bus loop overflow parking area.

Signage: Signs at main entrance are leaning. All indicate van accessible spaces, but only 2 actually measure to be van accessible. The sign at the bus loop is in good condition.

Recommendation: Repair signs at main entrance. Remove “van accessible” designation from spaces which are not large enough.

Ramps: Curb ramps are located correctly and in good condition.

Access to all areas: There is ADA access to all areas and activities on site.

Parking Areas, Driveways, and Sidewalks

Asphalt Walks: Asphalt trail is uneven, has some rutting, and holds water in some areas.

Recommendation: Monitor condition of track for future repairs or repaving.

Concrete Pavement: Concrete pavement at service area has moderate to severe cracking issues. Other concrete pavement areas are in good condition.

Recommendation: Perform crack repair and sealing at service area.

Concrete Walks: Good condition with some minor cracking in various locations.

Stairs, Ramps, and Railings: Paint on railings at steps to track is peeling.

Recommendation: Sand, prime, and repaint railings.

Concrete Curb and Gutter: Good condition.

Concrete / Brick Pavers: Permeable paver parking area and bus loop in good condition.

Guardrail, Parking Bumpers, and Miscellaneous: Parking bumpers in good condition.

Fire Lane: Some fire lane signs are faded and illegible. Some signs are leaning. Fire lane signs are not turned toward oncoming traffic. Brick chip fire lane covering is full of grass and weeds, has no defined edge, can be a maintenance issue.

Recommendation: Replace fire lane signs and ensure that they are turned toward oncoming traffic. Create defined edge of brick chip fire lane, kill and remove vegetation from fire lane, top dress with additional brick chips.

Utilities

Fire Lines and Hydrants: Sufficient fire hydrant coverage and spacing with two fire hydrants located at each end of the school, a fire department connection, a post indicator valve and an 85,000 gallon fire water storage tank. There is a gravel fire lane allowing fire truck access around the entire building.

Domestic Water System: The water system is in good condition. Staff indicated no pressure or water discoloration issues. Water is provided to school via dry well located on site.

Sewer System: The sanitary sewer system consists of concrete manholes and pipes in good condition. System is functional with proper invert shaping. Staff indicated no issues with stoppages. Sewer system drains to septic tank along Bradshaw Road and ties into existing septic system and drainfield located off site.

Natural Gas System: Propane tank is located at the loading dock service area and is protected by bollards from vehicular traffic. Tank is in good condition.

Electric: Electric service provided via overhead poles to school property along Bradshaw Road. Service is taken underground to the transformer at the loading dock service area and then into the building. The meter is mounted on the building and the transformer is safe from vehicular traffic.

Site Lighting: Large site lights illuminate school parking lots and bus loop and building mounted lights illuminate sidewalks and entrances around the building. Site lighting is sufficient for safety and security.

Grading and Drainage

Storm Water System: Roof drains and down spouts are piped underground into the school storm water network. Runoff from the site is treated by permeable pavers or bioretention and routed to the roadside swale along Bradshaw Road. All storm water inlets, manholes and pipes are in good condition. Settlement around the drop inlet at northern end of property near Bradshaw Road poses a safety hazard to kids.

Recommendation: Provide topsoil to grade, erosion control mat, and reseed around drop inlet.

Detention / Retention Ponds: Detention areas are in good shape, but show signs of minor erosion and accumulation of sediment.

Stormwater Management BMPs: Permeable pavers are in good condition and the gravel infill has not spread into adjacent grassed areas through sheet flow.

Slopes, Ponding, and other Drainage Issues: Minor ponding along rear of school due to lack of positive drainage into drop inlets.

Site Features

Vegetative Landscaping: Vegetation, including trees and shrubs, are healthy.

Recommendation: Extensive mulching of trees and islands needed. Continue general maintenance of pruning and mulching.

Lawns: Generally good condition. Minor areas in need of repair. Brick chip fire lane could cause maintenance issues to grow lawn.

Recommendation: Repair and reseed bare areas. Create defined edge of brick chip fire lane, kill and remove vegetation from fire lane, top dress with additional brick chips.

Fencing and Gates: Limited site fencing. Wrought iron along entrance drive is in good condition. Chain link fence at multipurpose games field is in good condition.

Signage: ADA signage is not to code to match parking space striping. Directional signage not provided. Sign legibility is generally good, but some fire lane signs are fading. A majority of the poles for site signage are leaning due to lack of foundations.

Recommendation: Repair or replace damaged or leaning signs. Future signs should utilize 2"x2" square posts in sleeves with concrete foundations. Provide directional signage.

Flagpoles: Poles are in excellent condition.

Site Furnishings: Limited site furnishings. Bike racks and benches at playgrounds are in good condition.

Awnings / Canopies: Front canopy at main entrance in excellent condition.

Accessory Structures: Wood dumpster enclosure in poor condition. Two storage structures with wood framing and vinyl coating in poor to fair condition. Wood gazebo and picnic shelter in good condition. Two out buildings of CMU construction in good condition.

Recommendation: Provide general maintenance to outbuildings to extend useful life. Replace wooden dumpster enclosure with composite PVC boards in near future.

Play Areas and Physical Education

Play / PE Areas (General):

Playgrounds / Stationary Play Equipment: Grade PreK-1 playground in excellent condition. Grade 2-5 playground in excellent condition. Mulch for playgrounds in good condition.

Paved Play Areas: Asphalt paving in good condition. Basketball goals in good condition. Paved walking track in good condition.

Play / PE Fields: Multipurpose game field provided. Turf condition is good. Infield condition is good. Fencing in good condition. Accessory structures in fair condition. Large PE field provided with good turf condition.

End of Masons Cove Elementary School Civil Narrative

Project Name: RCPS Facilities Assessment		Comm. #: 1637
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Subject: Masons Cove Elementary School	Total Pages:
Date: 10/5/2016	Location: Salem, VA
Copies To:	Report Prepared By: AHW

General:

Original school built in 1961. A kitchen addition was done in 1967, and a Classroom and Gymnasium addition in 1968. Classroom and Cafeteria additions and renovations in 1987. Entire facility was demolished and replaced in 2011. LEED Gold building. Signage complies with 2004 ADA, but not current standard. Operable storefront windows were in most classrooms but staff indicated they did not have the removable operator required to open the windows.

Vestibule:

Walkoff mat in good condition. Aluminum storefront with 1" glazing. Stone and ground face block walls. GWB ceiling. Has sprinkler. All good condition. No operators on doors.

Reception:

Patterned SATC has light staining near sprinkler head. Acoustic panel ceilings in skylight. GWB in good condition. Will need paint where tape has been stuck to the walls. Rubber base. Polished concrete floor. Broadloom carpet in good condition. Plastic laminate sills. Principal says classroom locks unlock permanently if someone inside opens the door. They want the doors to stay locked, but still allow egress. Lock functions may need to be reevaluated.

101 Conference:

Broadloom carpet. GWB. HM windows facing skylight in reception. Acoustic panel ceiling with SATC at bulkhead. Powered projection screen and smart board in the room. HM Frames. Wood doors.

Accessible bathroom in mechanical room:

Pipe wrap has been removed. Sensor sink. Mirror at 40" AFF to frame instead of reflective surface. SATC ceiling. Concrete floor. Painted block walls.

115:

Marker board is in good condition. Classroom casework has accessible base cabinet, but no accessible wall cabinets. Windows are operable storefront with removable operator handles.



ARCHITECTS AND ENGINEERS

Notes

115A:

Kiln room has textured floor tile.

Cafeteria:

Stage has maple boards. Ramp at side of stage has VCT.

Storage 111B has VCT.

Exposed metal deck over stage. Painted CMU walls.

Dining area has vinyl base that is in good condition. Acoustic wall panels in good condition. GWB at skylights in good condition. SATC and stained concrete floors in good condition.

Kitchen:

Texture floor tile with 4" ceramic tile wainscot to 6'-0" AFF.

SATC with some splatter stains.

112F:

Office with VCT. Tile needs maintenance. SATC in good condition.

Ground floor Corridors:

Painted CMU with vinyl base. Stained concrete floors and SATC ceilings.

Entry lobby:

There has been a leak at the curved metal ceiling. Inspection of the roof reveals this is where the solar water heaters are located. See roof notes.

Clinic:

SATC, Concrete floor. GWB in good condition. Casework has no accessible station.

Bathroom has 2" floor tile and base. GWB walls and ceiling. Has shower.

Boy's room in lobby:

SATC. 2" floor tile. 4" ceramic tile wainscot. HDPE partitions. Sensor fixtures. Broken coat hook in stall.

147 Counselor:

Stain on SATC near sprinkler.

Broadloom carpet.

Small divots in GWB.

Guidance:

Broadloom carpet.

Some stains on SATC. Dehumidifier runs in the space. Typically fills up twice per day.

Door stop to room 103 is mounted to low on the wall. Door hardware hits the wall.

146:

Stains on SATC.

144 "Closet":

Has been turned into a seclusion room. A deadbolt was previously installed on the door and a hole drilled in the frame to accommodate the bolt. This has been removed, but holes in door and frame remain.

Room has VCT and pads. SATC ceiling. Vision lite on door. Two small diffusers are located in the space. Verify ventilation rates are appropriate for an occupied space instead of storage.



ARCHITECTS AND ENGINEERS

Notes

Gymnasium:

Perforated metal ceiling panels.
GWB at skylights in good condition.
Maple floor in good condition
CMU in good condition. Acoustic panels on walls.

Door 4 hallway:

Stains on the SATC about 20' from the door.

Library:

Broadloom carpet. SATC with some minor stains. Large stain on SATC in one corner.
GWB at skylight. Acoustical panel ceiling in the skylight.

109:

Stains on SATC.

Corridor near door #8:

Heavy staining on SATC.

124:

Has toilet room with sheet goods turned up to form a coved base. SATC. Painted block.
Classroom floor is concrete. Acoustic panel ceilings with SATC at bulkhead.

Second floor corridors:

Have flexible terrazzo tile floors with vinyl base. SATC ceilings.

Classroom 203:

VCT, acoustic ceiling panels in skylight. SATC at bulkhead.

Stair near exit door:

No functional lighting at intermediate landing. There are lights at the upper and lower landings.

Masons Cove Elementary School Architectural Condition Assessment
Reference Building Owners and Managers Association International (BOMA)
Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
Architectural					
Brick		Life	5	Life	
CMU walls		Life	5	Life	
Interior doors	4	20	5	15	
Exterior doors	5	50	5	45	
Door hardware	5	7	5	2	
Electronic door hardware	2	5	5	0	
Flexible Terrazzo Tile	5	50	5	45	
Vinyl floor tile	5	12	5	7	
Ceramic/Porcelain floor tile	5	50	5	45	
Quarry floor tile	5	50	5	45	
Wood gym floor	5	10	5	5	
Other wood floors	5	10	5	5	
Exposed concrete floors	5	50	5	45	
Carpet	5	5	5	0	
Exterior windows	5	30	5	25	
Interior windows	5	30	5	25	
Roof (Including flashings, coping, etc.)	4	20	5	15	
Suspended acoustical tile ceilings (lay-in)	4	25	5	20	
Acoustical Ceiling Panels	5	25	5	20	
Sound control panels (wall and ceiling)	5	N/A	5		
Ceiling/exposed structure finish (paint)	2	5	5	0	
Interior wall finishes (paint)	2	5	5	0	
Marker boards or chalk boards	5	N/A	5		
Tack boards	5	N/A	5		
Projection screens	5	N/A	5		
Casework	5	N/A	5		
Window treatments	5	N/A	5		
Toilet partitions	5	20	5	15	
Toilet accessories	5	N/A	5		
Interior railings	4	30	5	25	
Condition Categories					
1 Immediate replacement required, life safety concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Masons Cove Elementary School Mechanical Plumbing Condition Assessment
Reference Building Owners and Managers Association International (BOMA)
Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
Mechanical					
Boiler	N/A				
Cooling tower	5	18 years	5 years	13 years	
Mechanical piping	5	30 years	5 years	25 years	
Refrigerant piping	N/A				
Duct	5	30 years	5 years	25 years	
Outdoor air units	N/A				
Terminal units	N/A				
Package units (Heat Pumps)	5	18 years	5 years	13 years	
Controls	5	20 years	5 years	15 years	
Exhaust fans	5	25 years	5 years	20 years	
Plumbing					
Plumbing fixtures and controls	5	30 years	5 years	25 years	
Floor drains	5	30 years	5 years	25 years	
Water heaters	5	15 years	5 years	10 years	
Pumps	5	15 years	5 years	10 years	
Potable water piping & valves	5	30 years	5 years	25 years	
Sprinkler system	5	30 years	5 years	25 years	
Back-flow preventer	5	30 years	5 years	25 years	
Service line & meter (size appropriate)	5	30 years	5 years	25 years	
Wall and yard hydrants	5	15 years	5 years	10 years	
Eye wash stations	N/A				
Emergency showers	N/A				
Mixing Valves	5	20 years	5 years	15 years	
Condition Categories					
1 Immediate replacement required, life safety concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Masons Cove Elementary School Civil Condition Assessment
Reference Building Owners and Managers Association International (BOMA)
Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
Civil					
Asphalt pavement	N/A	N/A	N/A	N/A	
Asphalt walks	4	20 years	7 years	13 years	
Concrete pavement	4	30 years	7 years	23 years	
Concrete walks	5	30 years	7 years	23 years	
Stairs	5	30 years	7 years	23 years	
Ramps	5	30 years	7 years	23 years	
Railings	4	15 years	7 years	8 years	
Concrete curb and gutter	5	30 years	7 years	23 years	
Concrete / Brick Pavers	5	30 years	7 years	23 years	
Guardrail, Parking Bumpers, Misc.	5	Varies	7 years	Varies	
Fire lane	4	Varies by Material	7 years	Varies	
Fire lines and hydrants	5	40 years	7 years	33 years	
Domestic Water system	5	40 years	7 years	33 years	
Sewer system	5	40 years	7 years	33 years	
Propane system	5	40 years	7 years	33 years	
Electrical System	5	25 years	7 years	18 years	
Exterior Lighting	5	25 years	7 years	18 years	
Storm water system	4	40 years	7 years	33 years	
Detention / Retention ponds	4	Life	7 years	33 years	
Stormwater Management BMP's	5	Varies by BMP	7 years	20-25 years	
Surface drainage and grading	4	N/A	N/A	N/A	
Vegetative landsaping	5	Life	7 years	Varies	
Lawns	4	Life	7 years	Life	
Fencing and gates	5	20 years	7 years	13 years	
Signage	4	10 years	7 years	3 years	
Flagpoles	5	50 years	7 years	43 years	
Site furnishings	5	15 years	7 years	8 years	
Awnings / Canopies	5	50 years	7 years	43 years	
Site retaining walls	N/A	N/A	N/A	N/A	
Accessory structures	3/5	50 years	7 years	2-43 years	
Playgrounds	5	10 years	7 years	3 years	
Paved play areas	5	20 years	7 years	13 years	
Play / PE fields	5	Life	7 years	Life	
Condition Categories					
1 Immediate replacement required, life safety concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Budgetary Cost Estimate

Estimate Date 12/7/2016

Facility Name **Masons Cove Elementary School**

Client Name **Roanoke County Schools**



Quantity	Description	Unit	Cost / unit	Total w/ OH&P
ARCHITECTURAL				
98	New interior signage-adhesive back/braille ADA compliant	EA	\$42.00	\$4,939.20
CIVIL				
5	ADA signage	EA	\$500.00	\$3,000.00
10	Fire lane signage	EA	\$500.00	\$6,000.00
4	Directional signage	EA	\$1,500.00	\$7,200.00
1	Erosion control mat	EA	\$100.00	\$120.00
1	Demo/Replace dumpster enclosure	LS	\$10,000.00	\$12,000.00
MECHANICAL / PLUMBING				
1	Replace Damaged condenser water pump	PER	\$10,000.00	\$10,000.00
ELECTRICAL				
1	Replace Damaged condenser water pump	EA	\$1,000.00	\$1,000.00
TOTAL Budgetary Cost				\$44,259