

CAVE SPRING MIDDLE SCHOOL

ARCHITECTURAL

Cave Spring Middle School was built in 1956 and last renovated in 2012. The 132,365 SF building is a newly renovated multi-level facility that meets and exceeds handicap accessibility requirements. The building entrance meets the accessibility and security requirements of the RCPS. The building was constructed with a fully automatic fire suppression system.

Exterior Finishes

Exterior Cladding:

Exterior wall material is brick veneer, insulated metal panels and glass. Other exterior materials include metal coping.

Roof:

Building has single ply thermoplastic polyolefin (TPO) roof system that has an average useful life of 20 years. Sealant along coping, roof edges, etc. should be regularly monitored and replaced as needed.

Windows:

The windows throughout the building have aluminum storefront window systems with insulated glazing. Some of these windows have operable vents with screens, which allow natural ventilation. Glazing consists of tinted, insulated glass, and translucent, insulated panels. These windows are generally in very good condition.

Exterior Doors:

The building entrance doors are Aluminum Doors and Frame with insulated glazing. All exterior service doors are hollow metal, doors with hollow metal frames. Door hardware meets and exceeds accessibility requirements. The doors and hardware is in new condition.

Interior Finishes, Fixtures & Equipment

(See assessment tabulations for interior finish conditions).

Vinyl Composition Tile and Ceramic Tile are the predominant floor finishes at Cave Spring High School. Other floor finishes include carpet, painted and unpainted concrete, and Wood flooring. Carpet is present in limited locations.

Interior wall finishes are generally painted concrete block, Ceramic Tile, and painted gypsum Wallboard. Paint and maintain all walls

Window treatments are typically new vinyl roller shades.

Ceilings are 2'x4' suspended acoustical tile (lay-in) with some gypsum wall board ceilings. Exposed painted roof structure is present in the multi-purpose area. The acoustical tile ceilings help reduce noise and hide new HVAC, electrical, and data work.

Most interior doors are new wood doors with new hardware to meet and exceed handicap accessibility standards. All interior doors hardware meets and exceeds the most recent handicap accessibility building code requirements. Doors and door hardware is in excellent shape.

Marker boards, chalk boards and tack boards are present in classrooms. Most are in good/new condition.

Casework (cabinets) is generally in good condition. Most casework is handicap accessible. Student casework is new plastic laminate casework and countertops and some epoxy resin countertops. All casework is new and must be maintained.

Furnishings, fixtures, and equipment design was updated to meet the design standard of the facility. The building design achieved proper coordination between building utilities and furniture types and locations. This also includes library shelving and furnishings.

Kitchen (food service) equipment is less than 5 years old.

Storage and general shelving is new and updated throughout the building.

Accessibility

Building meets handicap accessibility as per today building code. The signage throughout the building meets handicap accessibility code requirements. The facility has the appropriate handicap accessible toilet rooms, casework and building accessibility. The building also provides handicap accessible emergency egress out of the building.

Safety and Security

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

The administration area is the first line of defense in passive school security. Visibility to the exterior and interior of the building are critical to early threat identification and

intervention. The administration area at Cave Spring Middle School has a new state of the art camera system for visibility throughout the school building.

Cave Spring Middle School does have a simple circulation network of main corridors that have relatively long sight lines, which are critical to threat identification.

End of Cave Spring Middle School Architectural Narrative

PLUMBING/FIRE PROTECTION

Plumbing Fixtures:

Water Closets: Water closets observed were wall mounted vitreous china with manual type flush valves. There were several water closets that were ADA compliant. The condition of the water closets was excellent.

Urinals: Urinals observed were wall mounted vitreous china with manual type flush valves. There were several ADA compliant urinals observed. The condition of the urinals and flush valves was excellent.

Lavatories: Lavatories observed were wall mounted vitreous china or enamel cast iron with manual type faucets. There were several lavatories that were ADA compliant. Most lavatories observed did not have ASSE 1970 mixing valves that are required by today's codes. The condition of lavatories was excellent.

Sinks: Sinks observed were stainless steel with kitchen type faucets with swing spouts. The condition of the sinks was excellent.

Laboratory Fixtures: Sinks observed in the laboratory areas were chemical resistant type to match countertops, or stainless steel. Supply faucets and gas fittings on laboratory sinks are new and in excellent condition. Emergency solenoid shut off switches are located within the classrooms as required.

Emergency Fixtures: Emergency showers and eyewash observed appeared to be ADA compliant, and are supplied with tepid water. The condition of the emergency fixtures was excellent.

Electric Water Coolers: There were several wall mounted water coolers noted within building. There were several ADA compliant high/low models. The condition of the water coolers was excellent.

Water Heaters:

Domestic water is heated by two A.O. Smith model BTH 400A 100 gas fired storage tank type water heaters. Each water heater has 130 gallons of storage and 400 MBH gas input firing rate. System has a recirculation system (two loops) with two in-line return pumps. Hot water is then mixed and distributed throughout the building. Hot water system was installed in the 2012 renovation.

Piping:

Water: Copper

Sanitary Piping: Cast iron / PVC

Storm Piping: Cast iron / PVC

Gas Piping: Black steel
Sprinkler Piping: Black steel

Pipe Insulation:

Hot water, cold water, hot water return and horizontal storm drain piping is insulated with fiberglass insulation.

Water Entrance:

The building is served by a 4" cold water line that is assumed to be from a municipal system. There is a RPZ type backflow preventer and a pressure reducing valve observed on the incoming service line.

Kitchen:

Kitchen is up to date with indirect waste connections thru floor sinks. The grease interceptor is the large type located outside the building with manhole access (assume 1000 gallon concrete type). All kitchen equipment is electric with no gas fired equipment.

Sprinklers:

The building is fully sprinkled; the incoming sprinkler service is 6". Incoming sprinkler has a double check backflow preventer. Riser consists of two wet system risers.

Recommendations:

None.

End of Cave Spring Middle School Plumbing/Fire Protection Narrative

MECHANICAL (HVAC)

Heating:

The building is primarily heated by geothermal water source heat pump units. Classrooms typically have a water source heat pump unit located above the ceiling. The larger spaces like the locker rooms or media center are served by water source heat pump rooftop units. The heat pumps, both above ceiling and rooftop units, are 5 years old and are expected to have a useful life of 18 years. There are three gas fired rooftop units which serve the gymnasium, cafeteria, and auditorium that are also 5 years old. These units have an expected useful life of 18 years. There are 8 energy recovery rooftop units that heat parts of the building. The energy recovery units are also 5 years old and have a useful life expectancy of 18 years.

Ventilation: Ventilation is provided to the building by rooftop air handling 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 locker rooms or media center typically have rooftop heat pump units, the same units that provide heat to the building. 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. The pumps are 5 years old and are expected to have a useful life of 25 years. The rest of the building is cooled by the rooftop DX type units and energy recovery units.

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:

In the main mechanical room there is DDC and pneumatic controls. The DDC controls are by Johnson Controls.

Recommendations:

Mechanical equipment is in good working condition. No major complaints or issues.

End of Cave Spring Middle School Mechanical Narrative

ELECTRICAL

Main Switch Gear:

Main Switchboard: The main switchboard is a 3000 Amp, 3 phase, 4 wire, 480Y/277 volt Eaton, service entrance rated switchboard. The existing switchboard is new to the building with the 2012 major renovations and has space and spares available.

Recommendation: In the event of a substantial renovation or addition, existing switchboard can be reused and expanded as necessary.

Transformers:

Transformers: All of the building transformers are Eaton and were added/replaced during the 2012 renovation to convert from 480/277V to 208/120V. All of the transformers are currently in good working condition; however, over time transformers become less energy efficient.

Recommendation: If renovations and additions are pursued, maintain the existing transformers.

Panelboards:

Distribution and Branch circuit Panelboards: All of the panels are new Eaton panels that were added with the 2012 renovation. The panels have space and spares available. The football stadium lighting panel, a Siemens 480/277V, is also located in the main mechanical room and was added in 2004 and backfed from the new service.

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: All of the building wiring is new to the 2012 renovation. All visible wiring appears to be in conduit or raceway.

Recommendation: If renovations and additions occur, inspect and reuse existing wiring as appropriate.

Conduit/Raceway:

Conduit/Raceway: All new conduit and raceway was used for the 2012 renovation.

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 light fixtures consist of primarily 2x4 fixtures with T8 lamps, 1x4 fixtures with T8 lamps, LED can lighting, and some decorative LED pendants. The T8 lamps are current technology, and meet the current needs of the school.

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: Lighting controls throughout the building consist of keyed corridor switching, classroom zoned switching, and toggle switches controlling fixtures within an area. All areas utilize motion lighting control.

Recommendation: In the event of a renovation or addition, reuse switching devices and expand system to match current.

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, clock, and a push-to-talk button. Teachers and staff use the Cisco phone system to call in to the PA for most communications and announcements. Corridors only have a few wall mounted speakers in large areas; hallways do not have PA speakers.

Recommendation: The PA system is current technology. 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 is a new Simplex system that was added during the 2012 renovations. The current system consists of limited area manual pull stations, smoke detectors, and horn/strobe alarms throughout the school and classrooms. Area of refuge rescue zones provided at all stairwells.

Recommendation: If renovations and additions are pursued, expand existing fire alarm system and reconfigure as necessary for renovations.

Generator:

Generator: The generator is a Generac Industrial Power model natural gas generator. The generator is current technology, but recently caught fire during a test run and is out of service. The staff mentioned that the cause of the incident is believed to be from an undersized natural gas line to the generator. The generator normally feeds emergency egress lighting and optional standby.

Recommendation: The generator is out of service currently and is a safety hazard since it provides emergency lighting and powered services for the building. It was mentioned that the generator is currently in the process of being investigated and should be fixed or replaced. For any new additions or renovations after this issue, reuse the existing generator and transfer switches. Reconfigure circuits as necessary for renovations. The generator may need to be replaced, or an additional generator added if additions require more capacity than is currently available.

Site Lighting:

Site Lighting: The site lighting consists of LED pole mounted lights for parking areas and sidewalks, wall packs around the building, and canopy lighting at exterior doors. The fixtures are new to the 2012 renovation and the site is well covered. In ground up-lights around the building are utilized as well, but water is building up on the lenses and causing the fixtures to short out.

Recommendation: To accommodate renovations, maintain existing lighting fixtures around exit doors or lighting areas of egress. For any new addition, provide new general site lighting to maximize energy efficiency and minimize light contamination on neighboring properties and to the sky, connect any new lights to an emergency circuit. In ground lighting fixtures should be investigated for the cause of the water damage. Seal or replace the fixtures as necessary to prevent shorting of the circuits.

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. Laptops are also provided to all students.

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. Phones are provided in all offices and classrooms as required to access outside lines. Push-to-talk buttons with the PA system are included in all classrooms, but the phone system is used for communication with the front office. The system is operational and meets the current needs of the school.

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

End of Cave Spring Middle School Electrical Narrative

CIVIL

Traffic Circulation

Buses: School is served by 27 regular and special needs buses. There is dedicated bus loop on the west side of the school adjacent to Brambleton Avenue.

Morning: Buses enter the bus loop from either the Brambleton Avenue entrance or through the elementary school bus loop depending upon which direction they are approaching the school. After dropping students off at the covered canopy, buses exit through the elementary school bus loop as there is no exit onto Brambleton Avenue.

Afternoon: Buses enter the bus loop similar to the morning drop off, but the buses park in the center of the loop until all students are loaded, and then exit through the elementary school.

Cars: Drop off and pick up occurs at the main entrance to the school.

Morning: Cars are directed by signage through the parking lot to the drop off area at the front of the school. Traffic moves quickly and smoothly with no significant backups.

Afternoon: Cars stack up in two lanes through the parking lot until the final corner entering the loop at the front of the school. Cars alternate entering the loop from each lane. Backups can occur in the afternoon, but rarely go beyond the length of the turn lane into the school parking lot.

Parking: 117 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 is an issue with parents parking wherever possible. The bus loop is occasionally used as overflow parking. There are 63 striped parking spaces in the bus loop with 3 designated ADA spaces.

Service: The service area is located on the northwest corner of the building and shares access with the parking area and parent drop off / pick up loop. Maneuvering area is adequate for all service vehicles.

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

Separation: There is good separation of bus traffic from car traffic. Service and cars share space, but there are no issues.

Adjacent Roadways: With the exception of the bus entrance only from Brambleton Avenue, all traffic enters and exits the site from Merriman Road which is a two lane road that is relatively heavily travelled. Sight distance is good from all entrances.

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

ADA Accessibility

Parking: ADA accessible spaces are provided in various locations around the school. Two spaces are located at the main entrance, three spaces are at the overflow parking area in the bus loop, two are located at the south end of the school, and one is located at the field house. The ADA space at the field house is not van accessible and the aisle is not large enough for a van accessible space.

Recommendation: Re-stripe or relocate ADA parking space at field house to accommodate a van accessible space.

Signage: Signs at the front and rear of the school are adequate. There are no signs at the designated spaces in the bus loop. There is no van accessible space designated at the field house.

Recommendation: Provide ADA signage at the bus loop overflow parking. Provide van accessible space and signage at the field house.

Ramps: There is no curb ramp at the field house ADA parking space. Curb ramps are provided at all other ADA parking areas.

Recommendation: Provide a curb ramp at the field house ADA parking space.

Access to all areas: There is no access to the field house due to the lack of a curb ramp, and there is no access to the tennis courts.

Recommendation: Provide a curb ramp at the field house ADA parking space. Provide an asphalt trail that is ADA compliant to the tennis courts.

Parking Areas, Driveways, and Sidewalks

Asphalt Pavement: Good condition.

Asphalt Walks: Asphalt along stadium / track area is in poor condition.

Recommendation: Repair or replace asphalt track along stadium for smooth surface.

Concrete Pavement: Good condition.

Concrete Walks: Some minor cracking around building. At the bus loop a section of concrete walk has settled adjacent to a curb inlet. The concrete walk to the track has major cracking and spalling.

Recommendation: Replace the concrete walk near the track. Replace the settled section of concrete at the bus loop.

Stairs, Ramps, and Railings: Stairs to track are deteriorated, cracked, and spalling. Railing at the field house to the football stadium is peeling and chipping. Railings at the stairs to the track are deteriorated.

Recommendation: Repair or replace concrete stairs and railings to the track. Sand, prime, and paint railings at the field house.

Concrete Curb and Gutter: Good condition.

Concrete / Brick Pavers: Good condition.

Guardrail, Parking Bumpers, and Miscellaneous: Good condition.

Fire Lane: Fire lane signs are not turned toward oncoming traffic.

Recommendation: Turn fire lane signs to face oncoming traffic.

Utilities

Fire Lines and Hydrants: Sufficient fire hydrant coverage and spacing with four fire hydrants located around the school, a post indicator valve and a fire department connection. No paved fire lane around building, but fire truck access is present around all four sides.

Domestic Water System: The water system is in good condition. Staff indicated no pressure or water discoloration issues. Water is provided to school via tap into public water main. The meter is located in a vault at the main entrance to the school.

Sewer System: The sanitary sewer system consists of old concrete manholes and pipes in fair condition and new concrete manholes and pipes in good condition. Entire system is functional with proper invert shaping. Staff indicated no issues with stoppages, but observations show signs of stagnant waste in older manholes.

Recommendation: Old sections of the sewer system should be flushed to clear and prevent blockages.

Natural Gas System: The gas meter was relocated during recent renovation to a location beside the field house. The meter is well protected, in fair condition and functional, but shows signs of rust and deterioration.

Recommendation: Contact gas company to inspect condition of meter.

Electric: Electric service provided via overhead poles to school property. Service is taken underground to a transformer at the rear of the school and then into the building. The transformer is well protected from traffic behind screen wall and fence. The generator is not functional and recently caught fire due to an undersized gas line.

Recommendation: Replace generator.

Site Lighting: Large site lights illuminate school parking lots and bus loop and building mounted lights and small site lights illuminate sidewalks and entrances. Site lighting is sufficient to ensure safety and security. A few lights seem to be turned on during the day and a few junction boxes uprooted and laying above grade near the new softball field.

Recommendation: Repair junction boxes to be flush with grade. Review lighting controls to ensure proper function.

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 routed to bioretention areas or collected and conveyed to the north. All storm water inlets, manholes and pipes are in good condition.

Detention / Retention Ponds: Bioretention areas are in good condition and are not overgrown or filled with trash and debris.

Stormwater Management BMPs: Bioretention area near track in good condition.

Slopes, Ponding, and other Drainage Issues: Ponding issues at main office entrance and bus loop entrance causing floor lamps to short, due to lack of positive drainage to yard drain at main office entrance.

Site Features

Vegetative Landscaping: Overall, vegetation including trees and shrubs, are healthy. However, several dead trees need replacement in the staff parking lot and bus loop.

Recommendation: Replace dead trees. Continue general maintenance of pruning and mulching.

Lawns: Generally good condition. Minor areas in need of repair.

Recommendation: Repair and reseed bare areas. Provide fencing and erosion control mat to protect seed in high traffic areas.

Fencing and Gates: Limited fencing for campus. Fencing at athletic facilities covered under appropriate sections.

Signage: Good condition for existing signage generally. Minor damage to some signs. Some signs are missing from posts. Other posts 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: Excellent condition.

Site Furnishings: Site furnishings are limited. Polished concrete benches are in good condition. Bike racks are in good condition.

Awnings / Canopies: Canopy at bus loop is in excellent condition.

Site Retaining Walls: Segmental block wall facing road frontage in excellent condition with appropriate code compliant railing.

Accessory Structures: No accessory structures related directly to the school. Accessory structures related to athletic facilities covered in the Competition Stadium system.

Play Areas and Physical Education

Play / PE Fields: A Practice / PE field is provided on interior of track. Turf is in good condition. A separate multipurpose field is provided on south end of campus. Current overall condition is poor due to lack of completion and maintenance. CLF in good condition.

Recommendation: Install aluminum benches that are on-site at multipurpose field. Maintain infield when use is desired.

Athletics

Tennis Courts: Asphalt courts have significant cracks. Color and play surface are in good condition. Areas of ponding are evident.

Lighting: None.

Bleachers / Stadium: No spectator facilities were observed.

Accessory Structures: No accessory structures were observed. Fence condition is in poor condition with signs of rusting and evidence of failure. Court equipment is in fair condition.

Recommendation: Seal cracks and resurface within next five years.

Track and Field Events: Track asphalt and markings are in good condition. Jump tracks and sand pit is in good condition. High jump area is asphalt and in good condition. Throw event areas are in good condition and has fencing.

Shared Athletic Complex: Stadium complex is utilized for football and soccer by CSMA, CSHS, HVMS, and HVHS. Surface is synthetic turf showing evidence of wear due to high volume of use. Synthetic surfaces generally require replacement in 7-10 years.

Lighting: Lighting system is in good condition.

Bleachers / Stadium: Home stands are combination concrete base with aluminum benches in good condition. Visitor stands are all aluminum in good condition. ADA access and seating is provided on the home side is built from wood and is in fair condition. Separate access to visitor stands could be improved with minor paving work near their ticket booth.

Accessory Structures: Locker room facility, concessions, restrooms and press box are provided. All are in good condition.

Recommendation: The current synthetic turf has useful life remaining. However, infill material is gathering at field edges and the turf itself is being worn down. Planning and consultation with a field turf expert is recommended to ensure maximum life from the existing field. Ensure that the field is currently being properly maintained with the manufacturers recommended equipment and maintenance schedule to ensure warranty is covered and field longevity is prolonged.

End of Cave Spring Middle School Civil Narrative

Project Name: RCPS Facilities Assessment		Comm. #: 1637
---	--	----------------------

Subject: Cave Spring Middle School	Total Pages:
Date: 9/21/2016	Location: Roanoke, Virginia
Copies To:	Report Prepared By: JFH

General:

The Facility was constructed in 1956 and last Renovated in 2012. The building is Multi Level Brick, Metal Wall Panels and Glass Structure with a 60 mil Thermoplastic Polyolefin (TPO) roof membrane. The building is fully sprinkled and is equipped with a new GEO Thermal heating and cooling system. The new entrance has become more efficient, secure and better accessible. The handicap accessibility to the building and toilet room accessibility has been updated and meet the current building codes. Handicap Accessible Signage per code is throughout the building.

Entry Vestibule:

VCT Flooring
24x24 Suspended Acoustic Tile Ceiling (SATC)
Tile and Texture Wall finish and Painted Gypsum Wallboard (GWB)
Aluminum Storefront Entrance

Main Office:

Carpeted Flooring
The walls are painted Gypsum Wallboard (GWB).
The ceiling is 24x24 SATC.
The Windows are Aluminum Frames w/insulated glazing
Exterior Door is Aluminum with Insulated Glazing
Interior Doors is Wood with Aluminum Frames

Corridor:

The flooring is VCT
The Walls is Ceramic tile and Gypsum Wallboard (GWB).
The ceiling is made up Suspended Acoustic Tile Ceiling (SATC)

Mechanical Room:

Raw poured Concrete Walls
Concrete floors
Concrete Ceiling

Roof:

Thermoplastic Polyolefin (TPO) membrane



ARCHITECTS AND ENGINEERS

Notes

Kitchen:

- Slip Resistant seamless flooring
- Painted CMU Walls and Ceramic Tile Walls
- 24x24 SATC (Ceiling tiles need to be replaced)
- Wood Doors and HM Frames

Cafeteria:

- Painted CMU Walls and GWB Walls
- VCT flooring
- Curved GWB Clouds with Painted Exposed Structure Ceiling
- Aluminum Storefront
- Acoustic Wall Panels mounted to the GWB separating the Serving and Cafeteria (The flooring show signs of buckling near the Tray return)

Teacher Lounge:

- Painted CMU Walls
- VCT flooring
- SATC
- Plastic Laminate Casework and Countertop

Library:

- 24x24 SATC and Clearstory Ceiling
- Painted GWB
- Carpet Tiles floor
- Wood Veneer Study Pods, Shelving, Computer Standup Tables
- Aluminum Storefront Exterior Glass Wall
- Acoustic Wall Panels mounted high in Clearstory
- Wood Doors with HM Frame
- Aluminum frame and window separate main desk from work room.

Gymnasium:

- Wood Flooring
- Painted CMU walls
- Acoustic Wall Panels MTD on CMU walls
- Exposed Structure with perforated metal Deck (painted)
- Aluminum Windows with insulated glazing
- HM Frame with Wood Doors

Health Classroom:

- Aluminum Windows with insulated glazing and solid plastic stool
- 24x24 SATC
- VCT flooring
- GWB
- Alum door frame with wood door



ARCHITECTS AND ENGINEERS

Notes

Science Lab:

- VCT Flooring
- Painted CMU
- SATC
- Plastic Laminated casework with Epoxy Resin Countertops
- Equipped with Cold Water and Hot Water
- No Gas at student stations
- Gas is at Teachers station
- Eye Wash and Shower
- HM Frame with wood doors

Staff Toilet:

- Wall Hung water Closet coming off of the wall
- Vinyl (Wood Veneer Look) tile Flooring
- Painted GWB
- Wall Mounted Lavatory
- Suspended Acoustic Tile Ceiling
- Toilet Room meets Handicap Accessibility Standards
(Typical each floor)

Janitor 363

- Mop/Floor Sink
- Concrete Floor
- Gypsum Wallboard Walls
- 24x24 SATC
- HM Frame and Wood door
- Roof Access Ladder
- Painted CMU Walls
- Suspended Acoustic Tile Ceiling
- Plastic Laminate Casework and Countertop
- Small toilet room off of classroom has floor mounted water closet with flush valve, ceramic tile flooring, glazed tile wainscot and painted CMU walls.

Stairs:

- Pre-engineer Stairs
- Rubber Treads
- VCT Landings
- Fire Rated 'B' label door
- Painted CMU Walls
- Pipe Railing

Conclusion:

The building is new construction and all handicap accessibility issues are up to today standard. The building has been designed and constructed by the latest building and accessibility codes.

After talking to the staff, several items came up

1. Roof leaking over the cafeteria. (Maintenance and Repair required)
2. The electrical ground lighting is shorting out due to moisture. The light fixtures lenses are covered in moisture. (Need to repair fixtures and raise above ground level).
3. The main entrance concrete walkway has been installed sloping toward the center and not toward the outside. This will cause some accessibility issues this winter when standing water freezes and causes an ice patch right near the main entrance of the building.

Cave Spring Middle 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	5	Life	4 years	Life	
Metal Panels	5	30 years	4 years	26 years	
CMU walls	5	Life	4 years	Life	
Poured Concrete walls	5	Life	4 years	Life	
Wood trim	5	15 years	4 years	11 years	
Interior doors	4	20 years	4 years	16 years	
Exterior doors	4	50 years	4 years	4 years	
Door hardware	3	7 years	4 years	3 years	
Electronic door hardware, Security Entrance	5	5 years	2 years	3 years	
Carpet	5	5 years	2 years	3 years	
Vinyl floor tile	5	12 years	4 years	8 years	
Ceramic/Porcelain floor tile	5	50 years	4 years	46 years	
Wood gym floor	5	10 years	4 years	6 years	
Other wood floors	5	10 years	4 years	6 years	
Exposed concrete floors	5	50 years	4 years	46 years	
Curtain wall, Storefront	5	50 years	4 years	46 years	
Exterior windows	5	30 years	4 years	26 years	
Interior windows	5	20 years	4 years	16 years	
Roof (Including flashings, coping, etc.)	5	20 years	4 years	16 years	
Suspended acoustical tile ceilings (lay-in)	5	25 years	4 years	21 years	
Plaster/GWB ceilings	5	30 years	4 years	26 years	
Sound control panels (wall and ceiling)	5	N/A	4 years	N/A	
Ceiling/exposed structure finish (paint)	3	5 years	4 years	1 year	
Interior wall finishes (paint)	3	5 years	4 years	1 year	
Marker boards, chalk boards, tack boards, projection screens	5	N/A	N/A	N/A	
Casework	5	N/A	4 years	N/A	
Window treatments	5	N/A	4 years	N/A	
Toilet partitions	5	20 years	4 years	16 years	
Toilet accessories	5	N/A	4 years	N/A	
Exterior railing, Interior railings	5	30 years	4 years	26 years	
School sign	5	25 years	4 years	21 years	ADA Code Compliant
ADA Code Compliant	5	N/A	N/A	N/A	ADA Code Compliant
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					

Cave Spring Middle 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				
Chiller or Cooling tower	5	25 years	5 years	21 years	
Mechanical piping	5	30 years	5 years	25 years	
Refrigerant piping	5	30 years	5 years	25 years	
Duct	5	30 years	5 years	25 years	
Outdoor air units	5	20 years	5 years	15 years	
Terminal units	N/A				
Package units	5	18 years	5 years	13 years	
Controls	5	20 years	5 years	15 years	
Exhaust fans	5	25 years	5 years	20 years	
Kitchen hood	5	30 years	5 years	25 years	
Plumbing					
Plumbing fixtures and controls	5	30 years	4 years	26 years	
Floor drains	5	30 years	4 years	26 years	
Water heaters	5	15 years	4 years	11 years	
Pumps	5	15 years	4 years	11 years	
Potable water piping & valves	5	30 years	4 years	26 years	
Sprinkler system	5	30 years	4 years	26 years	
Back-flow preventer	5	30 years	4 years	26 years	
Service line & meter (size appropriate)	5	30 years	4 years	26 years	
Wall and yard hydrants	5	15 years	4 years	11 years	
Eye wash stations	5	20 years	4 years	16 years	
Emergency showers	5	20 years	4 years	16 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					

Cave Spring Middle School Electrical Condition Assessment
Reference Building Owners and Managers Association International (BOMA)
Preventative Maintenance Guidebook

System/Components	Average Useful Life	Current Age	Expected Life Remaining	Condition Category	Notes
Electrical					
Main switch gear	40	4	36	5	
Transformers	30	4	26	5	
Panelboards	30	4	26	5	
Cabling	40	4	36	5	
Conduit/raceway	40	4	36	5	
Light fixtures	20	4	16	5	
Lighting controls	30	4	26	5	
Public address system	30	4	26	5	
Security system	10	4	6	5	
Camera system	10	4	6	5	
Data system	15	4	11	5	
Fire alarm system	30	4	26	5	
Generator	20	4	16	3	\$40,000 - Estimated replacement cost
Site lighting	20	4	16	5	
Classroom media systems (TV, projector, etc.)	10	4	6	5	
Phone system	10	4	6	5	
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					

Cave Spring Middle 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	5	15 years	4 years	11 years	
Asphalt walks	2	20 years	4 years	16 years	
Concrete pavement	5	30 years	4 years	26 years	
Concrete walks	2/4/5	30 years	4+ years	0-26 years	
Stairs	2/5	30 years	4+ years	0-26 years	
Ramps	5	30 years	4 years	26 years	
Railings	2/5	15 years	4+ years	0-11 years	
Concrete curb and gutter	5	30 years	4 years	26 years	
Concrete / Brick Pavers	5	30 years	4 years	26 years	
Guardrail, Parking Bumpers, Misc.	5	Varies	4 years	Varies	
Fire lane	4	Varies by Material	4 years	15 years	
Fire lines and hydrants	5	40 years	4 years	36 years	
Domestic Water system	5	40 years	4 years	36 years	
Sewer system	4/5	40 years	4+ years	0-26 years	
Natural Gas system	4	40 years	Unknown	15-20 years	
Electrical System	3	25 years	4 years	36 years	
Exterior Lighting	4	25 years	4 years	36 years	
Storm water system	4	40 years	4 years	36 years	
Detention / Retention ponds	5	Life	4 years	36 years	
Stormwater Management BMP's	5	Varies by BMP	4 years	36 years	
Surface drainage and grading	4	N/A	N/A	N/A	
Vegetative landscaping	4	Life	4 years	Varies	
Lawns	5	Life	4 years	Life	
Fencing and gates	5	20 years	4+ years	16 years	
Signage	4	10 years	4 years	6 years	
Flagpoles	5	50 years	4 years	46 years	
Site furnishings	5	15 years	4 years	11 years	
Awnings / Canopies	5	50 years	4 years	46 years	
Site retaining walls	5	50 years	4 years	46 years	
Accessory structures	N/A	N/A	N/A	N/A	
Practice/PE fields	5	Life	Unknown	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					

