

HIDDEN VALLEY HIGH SCHOOL

ARCHITECTURAL

Hidden Valley High School was constructed in 2002. The 201,000 SF building is fully sprinkled throughout. The building has a secure and accessible entrance that was constructed by RCPS in 2014. Hidden Valley High School meets the accessibility requirement in many ways but some spaces do not comply with current standards. Some spaces, and especially signage, do not comply with current accessibility standards of today (signage should be placed at lever side of door, not over the door).

Exterior Finishes

Exterior Cladding:

Exterior wall material is, generally, painted concrete block, brick, glass and metal. The brick and block appears to be in very good shape, the building in a whole appears to be in very good shape. Several items of concerns are with the roof and/or mechanical equipment within the ceiling leaking. The flat roof is black EPDM membrane and the sloping roof is standing seam metal roof panels. Several areas throughout the building have polycarbonate type of skylights. Pre-finished metal flashings and drip edges occur at wall/roof intersections and are in, generally, good condition. Joints at these flashings and drip edges have suffered some degradation. Maintenance repairs and fresh Sealant will be required. The aluminum storefronts, curtain walls and windows will require maintenance repairs as well. The roof needs immediate maintenance repairs and service.

Roof:

The building roof is a black EPDM flat (minimum slope to drains) roof with metal coping and membrane flashing. The sloping roof is a standing seam metal roof. In general, the roof appears to be in good shape. While the roofs are reasonably in good shape, they should be consistently monitored for issues and maintained. Several areas of the roof have large amounts of debris that should be removed. Weeds are growing in certain areas of the roof along with drain baskets missing or not attached (North quadrant). Lightning protection cabling is broken and laying on the EPDM roof. The cabling needs to be reattached. The adhered snow guards have come off of the standing seam metal roof panels and will need to be reattached (North quadrant). Sealants along coping, roof edges, etc. should be regularly monitored and replaced as needed. Several joints have experience sealant degradation and cracking and should be resealed.

Skylights were observed to be in good condition. Sealants should be monitored for stability and replaced as required.

Windows:

Windows at the exterior of the building are generally Aluminum insulated windows, storefronts and curtain walls. The conditions are very good and the condition of sealants and glazing should be monitored. Sealant that is cracked or failing in any other way should be replaced. All glazing units were observed to be in good condition with no signs of seal failure.

Exterior Doors:

Exterior doors are aluminum storefront doors, frames and glass. The main entrance provides adequate accessibility and security that allows visitors to be monitored prior to entering the building. All other exterior doors are aluminum as well as the frames. Glazing condition and door condition at all aluminum frames should be monitored. Glazing can be replaced to improve overall energy efficiency of the system. All exterior aluminum doors shall receive new weather seal kits.

Interior Finishes, Fixtures & Equipment

(See assessment tabulations for interior finish conditions).

Vinyl Composition Tile, Quarry Tile and Ceramic Tile are the predominant floor finishes at Hidden Valley High School. Other floor finishes include limited applications of carpeting and wood flooring at the Gymnasium.

Interior wall finishes are generally painted concrete block and Gypsum Wallboard. Window treatments are typically vinyl roller shades. Gymnasium walls are painted block with painted sound block.

Ceilings are generally suspended acoustical tile (lay-in) with some gypsum wall board ceilings. Exposed painted decking and structure is present in the gymnasium area.

Most interior doors are wood and are original to their respective construction periods. Some doors exhibit wear and do not have accessible door hardware. Interior door frames are painted hollow metal and are in good shape. Some door frames would be replaced to achieve accessibility, or because of reconfigured spaces. Other door frames may be salvaged, patched, and painted.

Marker boards and tack boards are present in classrooms. Most are in fair to good condition. Some would be replaced during renovations. Smart boards have been placed in rooms.

Casework (cabinets) condition varies across the facility. Plastic laminate casework, generally, needs to have hardware replaced. Some casework may need to be replaced. Most casework is accessible. Lockers are in very good condition in most locations, and should be painted as required.

Toilet rooms have solid plastic toilet partitions with ceramic tile flooring and painted block walls. The ceiling consist of Suspended acoustic tile ceiling and in some cases a painted gypsum wallboard ceiling. Toilet room maintenance is required at all times especially gang toilet rooms that receive heavy use throughout the day.

Loose furnishings are a mixture of tables and desks of varying ages. The flexibility required of 21st Century classrooms is enabled by flexible, movable furnishings. 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.

Kitchen (food service) equipment is original to the building. RCPS may want to consider updating some of the equipment to ensure maximum efficiency in terms of function and energy. Significant energy savings can be achieved through more efficient kitchen hoods with energy recovery capabilities, and other equipment.

General school storage is scattered throughout the building and consumes spaces intended for other functions such as the second level Mechanical Room which have stored items within the space and a radio classroom is in the mechanical space. This is in violation of the current building and fire code. All stored items and classroom items shall be removed immediately. As part of future renovation plans, general school storage should be planned in several strategic areas serving administration, faculty, and staff. Metal shelving units would be provided in dedicated general storage rooms.

Accessibility

At all exterior doors, the building are accessible. While these serve cannot serve as accessible entrances due to security concerns, they do provide accessible route for egress. Routes to paved play areas, play fields, and play equipment are also accessible.

The building is accessible throughout and within the building most areas are accessible, but others are not, simply because of their age. Some restrooms are not accessible to the latest ADA standard, as the most recent renovation was performed under a previous version. Minor changes may need to be incorporated into any future renovations. Signage, throughout the facility, does not comply with the most recent ADA standard. Accessibility throughout the building would be achieved during any substantial renovation.

Safety and Security

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

Recent renovation work, undertaken by RCPS in 2014, involved the installation of secure entry vestibules at all schools. The vestibule at Hidden Valley High School provides visibility from the office and control over the main entry. Door position sensors and locks are provided at all other exterior doors. Entry at these points is limited to staff members with appropriate keys/cards. Due to the nature of the renovations and additions to the school, the building is reasonably compartmentalized. Sight lines and distance are reasonably long in most areas of the building.

End of Hidden Valley High School Architectural Narrative

PLUMBING/FIRE PROTECTION

Plumbing Fixtures:

Water Closets: Water closets observed were wall mounted vitreous china with manual type flush valves. The water closets are from 2002 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 2002 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 2002 and seemed to be in good working condition. The lavatories are expected to have a useful life of 30 years. The lavatory in the men's bathroom off the vestibule is missing a cover on the P-trap.

Sinks: Classroom sinks observed were stainless steel with polished chrome gooseneck faucets and wrist blade handles. The sinks are from 2002 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 2002 and some of them have leaking issues. 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 is one domestic hot water storage tank. Water heaters were installed in 2002 and the water tank was installed in 2001. The domestic water heaters are expected to have a useful life of 15 years. Two hot water circulation pumps with VFD's 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:

There is one shared inlet for the domestic and fire water services that is 10". The building is served by a 6" cold water line that is assumed to be from a municipal system. There is a reduced pressure backflow preventer which was installed in 2002. The backflow preventer is expected to have a useful life of 30 years.

Fire Protection:

The building is fully sprinkled. There is a 4" fire line into the building which has a double check backflow preventer which was installed in 2002. The backflow preventer is expected to have a useful life of 30 years.

Recommendations: None.

End of Hidden Valley High School Plumbing/Fire Protection Narrative

MECHANICAL (HVAC)

Heating:

Two gas-fired boilers provide heat to the building through a hot water circulation system. Hot water is circulated to the building's heating coils with two base mounted pumps. Coils are located in penthouse air handler units and in terminal units. It is believed that most of the heating equipment is original to the building and was installed in 2002. The boilers and pumps seemed to be in good, working condition for their respective ages. The boilers are 14 years old and are expected to have a useful life expectancy of 30 years. The pumps are 14 years old and are expected to have a useful life expectancy of 25 years.

Ventilation:

Ventilation is provided to the building by air handler units located in multiple penthouses.

Air Conditioning:

The building is primarily cooled by two Trane water cooled chillers located in the main mechanical room. Condenser water is pumped to a cooling tower, which is used to reject heat from the chillers. Chilled water is then pumps to cooling coils located in air handler units. The chiller and chilled water pumps seemed to be in good condition for their respective ages. The chillers are 4 years old and are expected to have a useful life expectancy of 20 years. The chilled water pumps are 21 years old and are expected to have a useful life expectancy of 25 years. The cooling tower is 14 years old and is expected to have a useful life expectancy of 18 years.

Piping:

There is chilled water, condenser water, and hot water piping, black steel, insulated. The piping appears to be in good working condition. The piping is 14 years old and is expected to 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: None.

End of Hidden Valley High School Mechanical Narrative

ELECTRICAL

Main Switch Gear:

Main Switchboard: The main switchboard is a 4000 Amp, 3 phase, 4 wire, 480Y/277 volt Cutler Hammer, service entrance rated switchboard. The existing switchboard is original to the building from 2002 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: The majority of the transformers are original Cutler Hammer. 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, if possible.

Panelboards:

Distribution and Branch circuit Panelboards: The majority of panelboards are original Cutler Hammer. The panels have space available, but some have no panelboard schedules.

Recommendation: Reuse existing panelboards where practical. Over time replace existing panelboard schedules to get updated circuit information.

Cabling:

Cabling: Much of the building wiring is original. All visible wiring appears to be in conduit.

Recommendation: Reuse existing circuits and add new as required.

Conduit/Raceway:

Conduit/Raceway: The conduit and raceway above ceiling is still in good condition. There is not much surface raceway throughout the building, but it could potentially become dislodged from the wall creating a potential shock hazard. Addition receptacles have been added to the classrooms for the 1 to 1 computer.

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. The added computers in

the classroom creates a unique problem when multiple people need their computers charged during classes. Many classrooms had extra long plug strips with long computer cords running to them for student computers. Further information needs to be investigated to figure out the best approach for a solution. Many classrooms were divided into groups this allowed for a group to be plugged into a single plug strip within a tighter group. It eliminated tripping hazards, but potentially created teaching environment complications.

Light Fixtures:

Light Fixtures: The light fixtures consist of primarily 2x4 flat lens fixtures with T8 lamps, some fluorescent can lighting, and 1x4 indirect fixtures with T8 lamps. The T8 lamps are current technology, and meet the current needs of the school. Lamps are likely changed as lamps burn out; however, many of the ballasts and optics have likely not been changed. Over the next few years multiple ballasts will likely need to be replaced.

Recommendation: To accommodate a new addition or renovation, provide a new lighting design. Consider LED fixtures where practical. The T8 lamps are still very practical and very energy efficient.

Lighting Controls:

Lighting Controls: Lighting controls throughout the building consist of toggle switches controlling fixtures within an area, some classrooms have zoned switching.

Recommendation: In the event of a renovation or addition, add automatic lighting controls to each room to comply with building energy codes. Consider providing additional control in the classroom areas for multiple scenes for different types of media.

Public Address System:

Public Address System: The public address system is currently a Bogen headend system with speakers located throughout the school and a Simplex clock system. Each classroom has a PA speaker, clock, and a push-to-talk button. Teachers and staff use the newer Cisco phone system for communications and announcements.

Recommendation: The PA system is still new and could likely be expanded. Reuse existing speakers where available and provide standard maintenance.

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 system is a new Gamewell, Honeywell System that appears to meet current code.

Recommendation: Retain existing fire alarm and expand as required for any modifications.

Generator:

Generator: The existing generator is a Generac 200 Series Natural Gas Generator. The generator provides emergency lighting and standby power for multiple circuits within the building.

Recommendation: It is recommended to have a maintenance contract for the generator to verify it is being exercised regularly and standard engine maintenance performed.

Site Lighting:

Site Lighting: The site lighting consists of pole mounted lights for parking areas, wall packs around the building. These lamps are likely changed as lamps burn out. These lights are in good condition.

Recommendation: Over the length of the building and when a light is replaced it is recommended to replace the fixtures with LED fixtures. The fixtures are already full cut

off, but this will allow for additional controls because of the instant on capability of LED lights and greater energy savings.

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. Some classrooms contain a TV; however, TVs were not consistently present.

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.

Lightning Protection System:

Lighting Protection System: The Lighting Protection system was original and had also been damaged during what appears to be snow related incidents. The system is no longer intact and not functioning as designed.

Recommendation: Have a certified lighting protection installer repair the system and provide a master label for the new system.

End of Hidden Valley High School Electrical Narrative

CIVIL

Traffic Circulation

Buses: School is served by 10 to 11 regular buses, 2 to 3 special needs buses. There is a dedicated bus loop at the south side of the building.

Morning: Buses utilize the bus loop for drop off, special needs buses utilize the main entrance. Drop off has no issues.

Afternoon: Buses line up along the sidewalk in the bus loop. There is adequate stacking room for all required buses. All buses load and leave together. Buses exiting do cause some backup.

Cars: There are several areas for drop off / pick up being utilized.

Morning: Cars drop off at both the main entrance and the student parking lot. Some backup occurs, but not beyond the entrance road.

Afternoon: Parents pick up at the main entrance, student parking lot, and adjacent to the auditorium.

Parking: 719 striped parking spaces are provided in various locations around the site with 33 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 adequate.

Service: The service area located on the north corner of the building has adequate maneuvering area for all deliveries.

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

Separation: There is adequate separation on site, but all vehicles join together at the single access road which can cause backups with vehicles exiting.

Adjacent Roadways: The access road to the school is long and shared with all vehicular traffic. This can cause backups as vehicles exit the site.

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

ADA Accessibility

Parking: There are 13 spaces at the main entrance, 3 spaces at the softball field, 2 spaces at the baseball field, 2 spaces at the tennis courts, 10 spaces at the soccer field, and 3 spaces at the lacrosse field.

Signage: Signs at main entrance are in poor condition and are located at the aisles instead of the parking spaces. Other ADA parking spaces do not have signage.

Recommendation: Provide ADA compliant signage at all ADA parking spaces.

Ramps: Curb ramps are located at the parking spaces at the main entrance. No curb ramps for the other parking spaces.

Recommendation: Provide curb ramps as part of the ADA compliant access routes.

Access to all areas: Although there are ADA compliant parking spaces at all competition areas, there are generally not ADA compliant access routes from the parking spaces to the bleachers, concessions, or restrooms.

Recommendation: ADA compliant access routes should be planned and constructed to all competition areas.

Parking Areas, Driveways, and Sidewalks

Asphalt Pavement: Asphalt in fair condition. Alligator cracking is prevalent throughout.

Recommendation: Repair areas with alligator cracking (subgrade deficiencies) mill and overlay the parking lot areas.

Asphalt Walks: Asphalt paths are in fair condition. Paths are usable but have many poor spots.

Recommendation: Remove and replace poor sections of asphalt path.

Concrete Pavement: Good condition.

Concrete Walks: Minor cracking in some areas.

Stairs, Ramps, and Railings: Some railings are loose. Railings at auditorium entrance have chipped / peeling paint.

Recommendation: Repair loose railings. Sand, prime, and paint railings.

Concrete Curb and Gutter: Good condition.

Concrete / Brick Pavers: Good condition.

Guardrail, Parking Bumpers, and Miscellaneous: Good condition.

Fire Lane: Paint on curbs and asphalt is faded. Some fire lane signs are faded and illegible. Fire lane signs are not turned toward oncoming traffic.

Recommendation: Re-paint curbs and asphalt at fire lanes. Replace fire lane signs. Ensure that fire lane signs are turned toward oncoming traffic.

Utilities

Fire Lines and Hydrants: Sufficient fire hydrant coverage and spacing with five fire hydrants located around the school. No paved fire lane around building, but fire truck access is present around three of 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. Meter is located in vault along the start of the entrance road.

Sewer System: The sanitary sewer system consists of concrete manholes and pipes in fair condition. System is functional with proper invert shaping. Staff indicated no issues with stoppages.

Natural Gas System: Gas meter is located at the loading dock service area at the rear of the school and protected from vehicular traffic. The meter is 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 in 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 and small site lights illuminate sidewalks and entrances. Site lighting is sufficient to ensure safety and security. No lighting at baseball or football field, but lighting at tennis court and soccer field.

Grading and Drainage

Storm Water System: Roof drains and down spouts are piped underground into the school storm water network. Runoff from the entire site is routed to the detention pond and wetlands area in the middle of the property and continues to drain to the northeast. All storm water inlets, manholes and pipes are in good condition, but filled with trash and sediment.

Recommendation: Underground piping system should be flushed and pipe outlets should be cleaned out and inspected for sediment.

Detention / Retention Ponds: Middle of site contains wetlands and detention areas. Areas overgrown and need maintenance.

Recommendation: Provide general landscaping maintenance in detention areas.

Slopes, Ponding, and other Drainage Issues: Minor erosion around baseball field. Sediment accumulation in faculty parking lot due to lack of positive drainage towards inlets.

Site Features

Vegetative Landscaping: Significant pruning and mulching is needed. Shrubs near front appear to be ageing.

Recommendation: Provide paved path through shrub beds created by student traffic. Remove and replace mature shrubs. Provide significant pruning of vegetation against building face at bus loop.

Lawns: Generally fair condition. Several areas require additional repair.

Recommendation: Many bare areas and islands are in need of maintenance. Consider converting all islands in parking lots to brick chips. Recommend to repair and reseed bare areas. Scarify existing surface prior to reseeding and provide fence and erosion control mat until grass firmly established.

Fencing and Gates: No fencing around campus. Fencing at athletic facilities covered under appropriate sections.

Signage: Overall condition is fair. ADA signage not code compliant or provided. No directional signage provided for parent/student/staff/service areas. Fire lane signs at service area are illegible. Poles are fair with significant age, some are leaning or without 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 good condition.

Site Furnishings: Site furnishings are limited. Benches and bikes racks are in good condition. Picnic tables outside of cafeteria are in fair condition.

Awnings / Canopies: There are limited canopies. All are in good condition.

Site Retaining Walls: Site retaining walls are limited to athletic facilities.

Recommendation: Refer to sections regarding Competition Softball Field and Competition Baseball Field.

Accessory Structures: No significant/permanent accessory structures noted. No dumpster enclosure provided.

Physical Education

Practice / PE Fields: Field is used for sports practice as well as P.E. Turf is in good condition. Minor wear observed. No drainage system observed. Vinyl CLF in good condition.

Recommendation: Monitor turf field against track for adequate drainage.

Athletics

Tennis Courts: Asphalt courts showing signs of aging with cracking. Color and play surface are fair. Areas of ponding are evident. Fence condition is generally good.

Lighting: Lighting system utilizes metal poles and appears to be in good condition.

Bleachers / Stadium: No spectator facilities were observed.

Accessory Structures: No accessory structures were observed. Fencing and court equipment are in fair condition.

Recommendation: Seal cracks and resurface within next five years.

Track and Field Events: Track is asphalt base with a black latex surface coat. Track and markings are in good condition. Jump Tracks and High Jump areas match track conditions. Vinyl CLF in good condition. No protective cover for foot traffic/cleats across latex surfaces was observed.

Lighting: None.

Bleachers: Four sets of aluminum bleachers in good condition.

Accessory Structures: Small storage structures with wood framing and vinyl siding in fair condition. Wood pavilion for track judges in good condition.

Recommendation: Continue resurfacing latex to avoid a complete track rebuild. Latex should typically be top coated in seven to ten years after original installation. Recommend to cover jump tracks with protective matting to prevent damage from cleats during football season. Recommend to cover sand pits to protect from damage. Recommend to protect all latex surfaces in obvious foot traffic areas.

Competition Softball Field: Outfield turf is in good condition. Infield condition is in good condition. Field has good drainage from stormwater runoff. All fencing in good

condition. Scoreboard in good condition. Foul poles are solid but aging. Indoor practice facility is new and shared with the baseball team.

Lighting: None.

Bleachers / Stadium: Aluminum bleachers are in good condition. ADA access not to code. Need to repair/raise drop inlet on first base side in pedestrian path.

Accessory Structures: Pressbox/Concessions/Restroom facility of CMU construction provided. Condition is good. Dugouts are in good condition. Batting cage is in good condition. Indoor batting facility shared with baseball team in good condition.

Recommendation: Repair and raise drop inlet on first base side to prevent further damage to otherwise good pavement condition. Provide ADA access to bleacher areas and pressbox structure.

Competition Baseball Field: Outfield turf is in good condition. Infield is in good condition. Field has good drainage from stormwater runoff. All fencing in good condition. Scoreboard in good condition. Foul poles are solid but aging. Indoor practice facility is new and shared with the softball team.

Lighting: None.

Bleachers / Stadium: Aluminum bleachers are in good condition. ADA access not to code.

Accessory Structures: Pressbox/Concessions/Restroom facility of CMU construction provided. Condition is good. Dugouts are in good condition. Batting cage is in good condition. Indoor batting facility shared with softball team in good condition.

Recommendation: Provide ADA access to bleacher areas and pressbox structure.

Competition Football Field: School utilizes a shared synthetic turf field and facilities with CSHS, CSMS, and HVMS for competitions. Refer to Shared Athletic Complex identified on Cave Spring Middle School assessment.

Competition Soccer Field: Turf is in fair condition. Areas of wear observed and surface is uneven. Poor drainage observed. Scoreboard in good condition. Fencing in good condition.

Lighting: Lighting system utilizes metal poles and appears to be in good condition.

Bleachers / Stadium: Aluminum bleachers are in good condition.

Accessory Structures: Pressbox/Concessions/Restroom facility of CMU construction provided. Condition is good.

Recommendation: Consider taking field out of use and re-grading and seeding to provide more optimal conditions.

Competition Lacrosse Field: Turf condition is in fair condition. Field has poor drainage near entrance. Small storage structures with wood framing and vinyl siding in fair condition.

Recommendation: Field is suitable for practice. Significant improvements would be required for competition.

End of Hidden Valley High School Civil Narrative

Project Name: RCPS Facilities Assessment		Comm. #: 1637
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Subject: Hidden Valley High School	Total Pages:
Date: 9/08/2016	Location: Roanoke, Virginia
Copies To:	Report Prepared By: JFH

General:

The masonry and steel facility was constructed in 2002.
 The existing facility does provide adequate accessibility to the Main Secure Entrance.
 This is the newest Facility which meets all accessibility requirements.
 Aluminum storefront entrance doors need new weather seal kits. (Typical throughout)
 The existing signage throughout shall be replaced with new accessibility signage.

Entry Vestibule:

Vinyl Composition Tile (VCT). Suspended Acoustic Tile Ceiling (SATC). Walls are CMU and Alum Storefront.
 The existing Main Entrance Vestibule meets security and accessibility requirements with power assist doors and Security locks.

Main Office:

The flooring is Carpeted, the walls are Gypsum Wallboard and the ceiling is SATC.
 The Doors are Wood with HM Frames.

Corridor:

The flooring is VCT, the Walls are CMU Block with Split Face Block Accent.
 The ceiling is SATC.

Mechanical & Custodian Room:

CMU walls, Concrete floors, Exposed Ceiling.
 HM doors and frame

Kitchen:

Slip resistance Quarry Tile Flooring with SATC ceiling and CMU Walls

Commons:

The floors are VCT with Vinyl Base.
 The ceiling is SATC and the walls are painted CMU.
 The Clerestory is painted Exposed Ceiling.
 The Exterior Windows are Aluminum Thermal Break Insulated Windows
 The Exterior Entrance are Aluminum Storefront.

Library (David W. Blevins):

The flooring is carpeted, the walls are painted CMU and curved Aluminum Storefront.
 The walls are equipped with Acoustical Panels to control sound.
 The ceiling is SATC and the columns are Aluminum Clad.

Corridor (Main Street):

The flooring is VCT with Vinyl Base
The ceiling is painted exposed structure.
The Walls are painted CMU with Painted Split face accent block.
Look over area had code compliant Steel Railing system with Wood cap Rail.

Stair:

VCT flooring
Slip Resistant Rubber Treads
Pre-engineer stairs
Painted CMU walls
SATC
Mesh Railing with wood cap rail
(The stair is design for Area of Refuge)

Gentlemen Toilet near Library:

Men's Toilet room door is wood with a fresh air intake louver and HM door frame.
Women's toilet room door had a broken fresh air intake louver.
The toilet room is HC accessible however the grab bars are missing and a soap dispenser if missing.
The toilet room partitions are solid plastic.

Auditorium:

The floors are carpeted, concrete under the seating.
The Stage has wood floors.
The ceiling is an exposed structure with GWB clouds.
The walls are CMU with Acoustical Panels.

Special Education Classroom:

Floors are carpeted, the ceiling is SATC and the walls are painted CMU.
The doors are wood with painted HM Frames.
The room was experiencing a leak while we were visiting. We anticipated that the Mech condensate drain/pan was the problem.

Art Classroom:

VCT flooring and vinyl base
SATC
CMU walls
Plastic Laminate cabinets and countertops
Projection Screen, Marker Boards, Bulletin Boards.
(Comment from staff was that it leaks when it rains hard)



ARCHITECTS AND ENGINEERS

Notes

Men and Women Dressing Room:

Carpeted flooring with CMU walls and walls with Vinyl Wall Covering

Wood Door with HM Frame (Door Sticks 13# pull)

SATC

Handicapped Toilet off of Men and Women Dressing Room

Wood Door with HM Frame (Door Pull 2# pull)

The accessible toilets have ceramic tile flooring, gypsum wallboard ceiling and CMU Walls

(The women's Handicapped Toilet accessibility is interfered with furniture and stored items)

Choir Room 401:

Leak stained SATC

Floors are carpeted

Painted CMU Walls with acoustical panels

White Boards, Bulletin Boards

Men's Toilet at Gymnasium:

Handicapped Accessible Toilet and Ambulatory Stall

Handicapped Urinal is 32" wide (Meet Accessibility)

Handicapped Lavatory is approx 34" AFF, 4 other Lavatory is approx 31" AFF.
(Meet Accessibility)

Ceramic Tile Flooring

Marble Threshold

Painted CMU Walls

SATC

Solid Plastic Toilet Partitions

Gymnasium Entrance:

Polycarbonate Atrium with VCT flooring, Painted CMU Walls and Brick Columns

Gymnasium:

Exposed Structure

Wood Flooring

Painted CMU walls with sound block at the top with high windows

Aluminum L bracket for baseboard

Wood doors with kick plate and HM Frames

Auxiliary Gymnasium:

Exposed Structure

Wood Flooring

Painted CMU walls (no sound block)

Smaller but similar to main Gymnasium (noticed aux. gym has spit fountain)

Loud deflection noises were noticeable from the Standing Seam Metal Roofing.



ARCHITECTS AND ENGINEERS

Notes

Track and Field Team Room/Laundry:

- Concrete flooring
- SATC
- Painted CMU Walls

Staff Planning:

- Floors carpeted
- SATC
- Painted CMU walls

Exterior brick:

Mortar joints are popping out at various places and building has experienced some cracking throughout the years.

Roof:

The existing roof is EPDM with metal coping, Standing Seam Metal Roofing, and Polycarbonate Skylight roofing.

The existing roofing needs maintenance work.

- Existing roof has weeds growing near corner drains and downspout locations.

- Snow guards have come off the standing seam metal roofing.

- The Lightning protection is disconnected.

- Excessive amount of debris left on the roof such as scrap wood, trash, etc.

Conclusion:

The facility is in good shape and the main entrance meet accessibility and security requirements; however some maintenance work is needed. The roof needs attention.

The debris shall be removed from the roof. The snow guard shall be reinstalled and the Lightning protection shall be hooked back up. The roof itself shall be inspected and flashing shall be repaired along with all roof patches. Staff has informed me that the roof has leaked since the day the school has opened. During our field investigation we were called to room 200 and 202 for a water leak coming from a light fixture. The leak appeared to be from a Mechanical Unit condensate drain or pan. The outdoor weather was hot and dry that day.

The handicapped restrooms need some attention and repairs. The toilet rooms need inspection and grab bars reinstalled, dispensers repaired and reinstalled. Partitions and lavatory heights need adjustments to meet handicapped accessibility.

Hidden Valley High 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 and Exterior Finishes	4	Life	14 years	Life	Maintenance Required on Repointing Brick
CMU walls	5	Life	14 years	Life	CMU and Split Face block Walls
Wood trim	4	15 years	14 years	1 year	
Interior doors	4	20 years	14 years	6 years	Wood
Exterior doors	5	50 years	14 years	36 years	Aluminum
Door hardware (Code Compliant)	2	7 years	14 years	0 years	Code Compliant repair as required
Electronic door hardware, Security Entrance	2	5 years	2 years	3 years	Entrance Security completed 2014
Carpet	5	5 years	2 years	3 years	
Vinyl floor tile	2	12 years	14 years	0 years	
Ceramic/Porcelain floor tile	5	50 years	14 years	36 years	Restrooms
Quarry floor tile	5	50 years	14 years	36 years	Kitchen Flooring
Wood gym floor	3	10 years	14 years	0 years	Gymnasium
Other wood floors	3	10 years	14 years	0 years	Stage Flooring in Gymnasium
Exposed concrete floors	5	50 years	14 years	36 years	Mechanical and parts of the Auditorium
Curtain Wall, Storefront	5	50 years	14 years	36 years	
Exterior windows (Type , Operable, Insul Glazing, Thermal Broken)	5	30 years	14 years	16 years	Aluminum
Interior windows	5	30 years	14 years	16 years	Hollow Metal
Roof (Including flashings, coping, Roof Access, etc.)	3	20 years to 25 years	14 years	6 years to 11 years	EPDM and Standing Seam Metal Roof Need Work
Suspended acoustical tile ceilings (lay-in)	4	25 years	14 years	11 years	Replace damage and Stain Ceiling Tiles
Plaster/GWB ceilings	4	30 years	14 years	16 years	
Sound control panels (wall and ceiling)	5	N/A	14 years	N/A	
Ceiling/exposed structure finish (paint)	5	5 years	14 years	1 year	Paint as required
Interior wall finishes (paint)	5	5 years	14 years	1 year	Paint as required
Marker boards, Chalk boards, Tack Boards, Projection Screen	5	N/A	14 years	N/A	
Casework	4	N/A	14 years	N/A	
Window treatments	5	N/A	14 years	N/A	
Toilet partitions	4	20 years	14 years	6 years	
Toilet Accessories	4	N/A	14 years	N/A	
Exterior and Interior railings	5	30 years	14 years	16 years	
School sign	4	N/A	14 years	N/A	Repair as required
Walkway covering	5	25 years	14 years	11 years	Metal Roof not Structural Framing
Sprinkler/No Sprinkler	5	25 years	14 years	11 years	Sprinkler heads
ADA Code Compliance	4	N/A	14 years	N/A	ADA Code Compliant as of 2002.
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					

Hidden Valley High 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	5	30 years	14 years	16 years	
Chillers	5	20 years	4 years	16 years	
Cooling tower	5	18 years	14 years	4 years	
Mechanical piping	5	30 years	14 years	16 years	
Refrigerant piping	5	30 years	14 years	16 years	
Duct	5	30 years	14 years	16 years	
Outdoor air units	N/A				
Terminal units	5	20 years	14 years	6 years	
Package units	5	18 years	14 years	4 years	
Controls	5	20 years	14 years	6 years	
Exhaust fans	5	25 years	14 years	11 years	
Plumbing					
Plumbing fixtures and controls	5	30 years	14 years	16 years	
Floor drains	5	30 years	14 years	16 years	
Water heaters	2	15 years	14 years	1 years	
Pumps	2	15 years	14 years	1 year	
Potable water piping & valves	5	30 years	14 years	16 years	
Sprinkler system	5	30 years	14 years	16 years	
Back-flow preventer	5	30 years	14 years	16 years	
Service line & meter (size appropriate)	5	30 years	14 years	16 years	
Wall and yard hydrants	2	15 years	14 years	1 year	
Eye wash stations	5	20 years	14 years	6 years	
Emergency showers	5	20 years	14 years	6 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					

Hidden Valley High 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	3	15 years	14 years	1 years	
Asphalt walks	3	20 years	14 years	6 years	
Concrete pavement	5	30 years	14 years	16 years	
Concrete walks	4	30 years	14 years	16 years	
Stairs	5	30 years	14 years	16 years	
Ramps	5	30 years	14 years	16 years	
Railings	3	15 years	14 years	1 years	
Concrete curb and gutter	5	30 years	14 years	16 years	
Concrete / Brick Pavers	5	30 years	14 years	16 years	
Guardrail, Parking Bumpers, Misc.	5	Varies	14 years	Varies	
Fire lane	4	Varies by Material	14 years	0 years	
Fire lines and hydrants	5	40 years	14 years	26 years	
Domestic Water system	5	40 years	14 years	26 years	
Sewer system	5	40 years	14 years	26 years	
Natural Gas system	4	40 years	14 years	26 years	
Electrical System	5	25 years	14 years	26 years	
Exterior Lighting	4	25 years	14 years	26 years	
Storm water system	4	40 years	14 years	26 years	
Detention / Retention ponds	4	Life	14 years	26 years	
Stormwater Management BMP's	N/A	N/A	N/A	N/A	
Surface drainage and grading	4	N/A	N/A	N/A	
Vegetative landsaping	4	Life	14 years	Varies	
Lawns	4	Life	14 years	Life	
Fencing and gates	N/A	N/A	N/A	N/A	
Signage	4	10 years	14 years	1+ years	
Flagpoles	5	50 years	14 years	36 years	
Site furnishings	5	15 years	Unknown	8+ years	
Awnings / Canopies	5	50 years	14 years	36 years	
Site retaining walls	4	Varies by Material	14 years	10+ 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					

Budgetary Cost Estimate

Estimate Date 12/7/2016
 Facility Name Hidden Valley High School
 Client Name Roanoke County Schools



Quantity	Description	Unit	Cost / unit	Total w/ OH&P
ARCHITECTURAL				
185	New interior signage-adhesive back /braille ADA compliant	EA	\$42.00	\$9,324.00
100, 500	Vinyl Composition Tile	SF	\$2.50	\$251,250.00
1	Reinstall snow guards	LS	\$1,000.00	\$1,200.00
CIVIL				
33	ADA signage	EA	\$500.00	\$19,800.00
10,000	Asphalt pavement	SF	\$3.00	\$36,000.00
400,000	Mill and overlay asphalt pavement	SF	\$1.00	\$480,000.00
1,700	Repaint curbs and fire lanes	LF	\$0.10	\$204.00
10	Fire lane signage	EA	\$500.00	\$6,000.00
1	Paved path and stairs to student parking lot	LS	\$8,000.00	\$9,600.00
1	Convert islands in staff parking lot to brick chip	LS	\$10,000.00	\$12,000.00
1	Raise drop inlet at softball field	LS	\$5,000.00	\$6,000.00
MECHANICAL / PLUMBING				
2	Replace domestic water heaters	EA	\$20,000.00	\$40,000.00
2	Replace domestic hot water circulation pump	EA	\$3,000.00	\$6,000.00
ELECTRICAL				
1	Repair Lightning Protection system	EA	\$20,000.00	\$20,000.00
TOTAL Budgetary Cost				\$897,378