



POTOMAC CAPITAL
ADVISORS

Property Condition Assessment
and
Long Range Planning Analysis



SANDERSON ACADEMY
Mohawk Trail Regional School District
Shelburne Falls, MA

June 6, 2013

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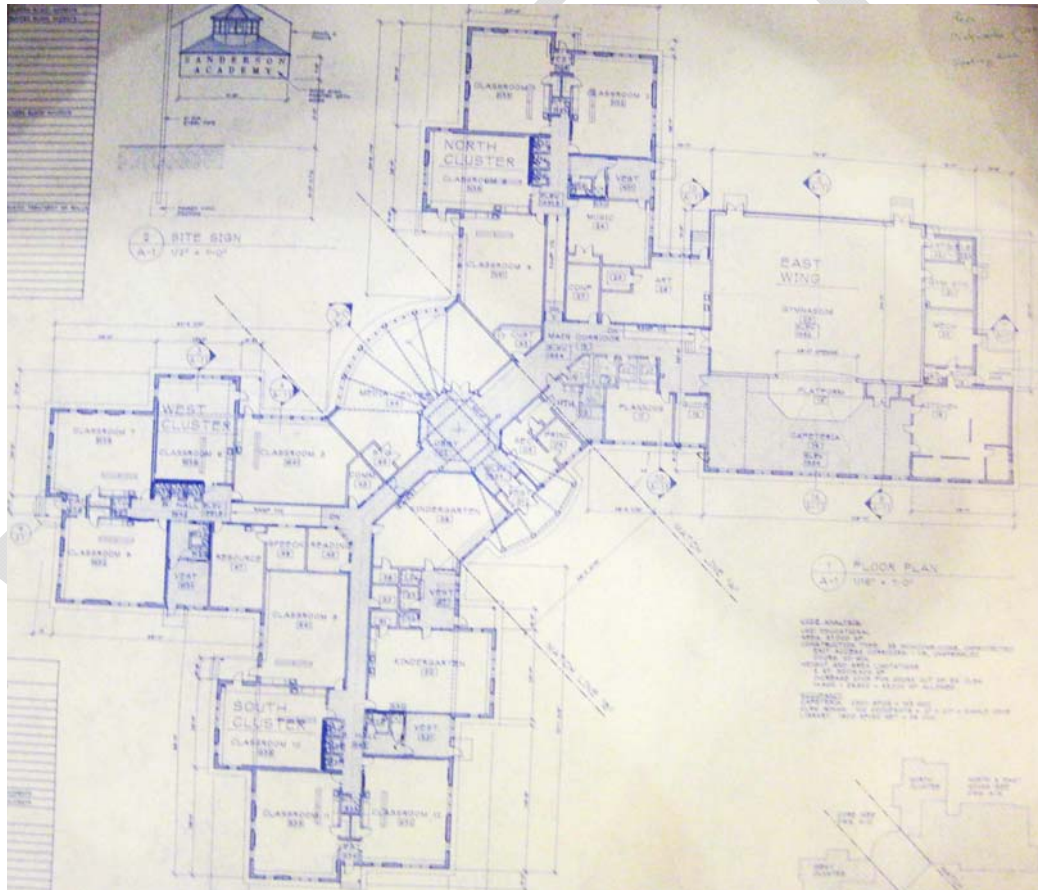
1.0 EXECUTIVE SUMMARY

1.1 Building Description

The Sanderson Academy is located at 808 Cape Street in Ashfield, MA. The consists of one single story elementary school building and two external storage buildings located on an approximately 30 acre site which is improved with parking lots, a basketball court and athletic fields for baseball and soccer.

The Sanderson Academy was constructed in 1997 and contains twelve classrooms, two kindergarten rooms, a library, cafeteria with kitchen, gymnasium and administrative offices. There are three parking lots which provide parking for approximately 52 cars including five handicapped parking spaces.

There are two free standing storage sheds located in the east parking lot area. One shed was constructed at the time the school was built in the same style and materials and a second shed prefabricated shed which was installed subsequent to the original construction.



1.2 Condition

In general, based on our visual observations, interviews and research, the buildings appear to be in GOOD condition and well maintained, with some evidence of water infiltration at the façade below several large mulled window units located in each classroom. Visual observation and research conducted indicate that the building is reasonably well constructed and maintained.

Significant observations include:

- There is significant deterioration of the mortar joints and indications of water infiltration at the large window openings in each classroom and at the cafeteria which consist of three mullied window units. This condition will deteriorate rapidly if not addressed in the immediate future.

1.3 Summary of Costs

Based upon our review of the subject property we have identified the following maintenance and capital requirements.

The total maintenance and capital requirements for the next fifteen (15) years including the items requiring immediate attention is \$690,125 as outlined in the table below.

The following is an estimate of costs associated with the correction of observed issues requiring immediate attention are as follows (in thousands of dollars):

Summary of Costs by Operating Cost or Capital Expense			
Sanderson Academy Elementary School			
Building System Summary	Repair & Maintenance (RM)	Capital Expenditure (CE)	TOTALS
5.1 Site & Features at Grade	\$167,700	\$0	\$167,700
5.2 Roofing	\$59,500	\$3,000	\$62,500
5.3 Exterior Walls	\$181,500	\$0	\$181,500
5.4 Structural Systems	\$0	\$0	\$0
5.5 Interior Elements	\$71,125	\$0	\$71,125
5.6 Specialties, Equipment, etc.	\$43,500	\$0	\$43,500
5.7 Vertical Transportation	\$0	\$0	\$0
5.8 HVAC	\$64,050	\$0	\$64,050
5.9 Plumbing	\$31,000	\$0	\$31,000
5.10 Fire Protection	\$0	\$0	\$0
5.11 Electrical System, Telephone	\$5,750	\$0	\$5,750
5.12 Lighting	\$0	\$0	\$0
5.13 Fire Alarm & Life Safety	\$28,000	\$35,000	\$63,000
TOTAL	\$652,125	\$38,000	\$690,125

Summary of Costs by Building System and Priority
Sanderson Academy Elementary School

Building System Summary	Cost per Year (\$1,000's)																
	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTALS
Immediate	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTALS	
5.1 Site & Features at Grade	\$9.0	\$1.0	\$0.0	\$0.4	\$40.5	\$8.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4.8	\$0.0	\$0.0	\$6.0	\$0.0	\$4.8	\$167.7
5.2 Roofing	\$0.0	\$55.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$62.5
5.3 Exterior Walls	\$0.0	\$134.1	\$5.0	\$0.0	\$0.0	\$0.0	\$4.0	\$0.0	\$0.0	\$0.0	\$0.0	\$13.2	\$0.0	\$0.0	\$4.0	\$0.0	\$181.5
5.4 Structural Systems	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.5 Interior Elements	\$0.0	\$0.0	\$1.2	\$0.0	\$0.0	\$2.7	\$0.0	\$11.2	\$10.0	\$0.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.5	\$71.1
5.6 Specialties, Equipment, etc.	\$0.0	\$0.0	\$0.0	\$9.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$15.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4.5	\$0.0	\$43.5
5.7 Vertical Transportation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.8 HVAC	\$0.0	\$3.6	\$15.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$64.1
5.9 Plumbing	\$0.3	\$2.3	\$2.5	\$2.5	\$3.5	\$10.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.0	\$0.0	\$1.0	\$0.0	\$31.0
5.10 Fire Protection	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.11 Electrical System, Telephone	\$0.0	\$2.8	\$0.0	\$0.0	\$0.0	\$0.0	\$1.5	\$0.0	\$0.0	\$0.0	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$5.8
5.12 Lighting	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.13 Fire Alarm & Life Safety	\$0.0	\$13.5	\$1.0	\$1.0	\$1.5	\$1.0	\$1.0	\$1.0	\$36.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$63.0
TOTAL	\$9.3	\$212.7	\$25.2	\$13.4	\$46.0	\$29.2	\$16.2	\$16.7	\$11.5	\$46.5	\$27.8	\$16.2	\$2.5	\$9.5	\$11.0	\$27.8	\$690.1

2.0 PROJECT INFORMATION

Building Name: Sanderson Academy Elementary School

Building Location: 808 Cape Street, Ashfield, MA

Building Type: School Building and two storage sheds

Building Area:

School	+/-41,200	Sq. Ft.
Red Shed	+/-200	Sq. Ft.
Wood Shed	+/-67	Sq. Ft.

Building Height: 1 Story

Site Area: Approximately 30 acres (1,306,800 sq. ft.)

Year Built: 1997

Present Owner: Town of Ashfield, MA

This APCA Carried Out for: Mohawk Trail Regional School District

Date of Site Visit: December 27 and December 28, 2012

Weather During Site Visit: Snowing 32 degrees F and Sunny and clear 32 degrees F

Report Date: March 20, 2013 (first draft)

Site Visit Conducted By: Brian P. Laroche, AIA
Gregory J. Walsh

Original Architect: Margo Jones, Architects
Greenfield, MA

Original Structural Engineer: Tsiang Engineers, Inc.
West Newton, MA

Original Mechanical/Electrical/Plumbing Engineer: Kohler & Lewis
Keene, NH

Original Landscape Architect: Dodson & Associates
Ashfield, MA

Original Civil Engineer: Macleary Associates
Shelburne Falls, MA

3.0 OBJECTIVE

3.1 *Objective*

The objective of this Abbreviated Property Condition Assessment (APCA) is to assess the general condition of the property and document obvious problems or visible defects based on visual observations, review of available documentation and discussions with property management. The building components and systems assessed include pavement and site improvements, building envelope, mechanical and electrical plumbing, fire protection and alarm systems..

The following is an abbreviated form of the standard Property Condition Assessment ("PCA") report which would contain significantly more detailed information on all of the building systems resulting from a more complete assessment as performed by licensed engineers and consultants specializing in each of the specific disciplines. This report is a summary of observations by a Potomac Capital Advisors, Inc. representative and does not strictly conform to the requirements of ASTM – E2018-99 (Standard Guide for Property Condition Assessment Procedures).

Regardless of its scope, an APCA cannot completely eliminate the potential for physical deficiencies or predict the performance of the Property's systems. This survey was conducted as a visual walk through of the property and did not include any testing or destructive testing of the building or any systems. As such it is not the intent of this survey to uncover every defect in the property, and this report will serve to reduce, but not eliminate uncertainty with regard to potential deficiencies.

THIS REPORT IS THE PROPERTY OF POTOMAC CAPITAL ADVISORS, INC. AND THE MOHAWK TRAIL REGIONAL SCHOOL DISTRICT AND WAS PREPARED FOR A SPECIFIC USE AND PURPOSE. THIS REPORT MAY NOT BE USED OR RELIED UPON BY ANY OTHER PARTY WITHOUT THE EXPRESSED WRITTEN PERMISSION OF POTOMAC CAPITAL ADVISORS, INC. AND THERE SHALL BE NO THIRD PARTY BENEFICIARIES, INTENDED OR IMPLIED, UNLESS SPECIFICALLY IDENTIFIED HEREIN.

3.2 *Scope of Report*

To accomplish the APCA objectives, the Scope of Work includes the following tasks:

1. Review of available documentation such as construction documents, test reports, and previous PCA reports;
2. Interviews with property management or maintenance personnel knowledgeable of the physical characteristics, maintenance and repair of the property;
3. A Walk-Through Survey of the property to visually observe the property so as to obtain information on material systems and components for the purpose of providing a brief description, identifying physical deficiencies to the extent that they are observable, and for obtaining information needed to develop the Property Condition Report;
4. Preparation of Opinions of Probable Costs to remedy observed physical deficiencies; and,
5. Preparation of the Property Condition Report documenting the findings and results of the preceding tasks.
6. No measurements or counts of systems, components, floor areas, rooms etc. or calculations were prepared.
7. A survey for the presence of mold or fungus, or to opine on indoor air quality is explicitly excluded.

4.0 METHODOLOGY

4.1 *Guide Specification*

In general, this is an abbreviated form of Property Condition Assessment report. This is the standard form Potomac Capital Advisors uses for a report of this type, while this form generally follows the ASTM guidelines it does not conform to ASTM E 2018-99 standards for PCA reporting.

4.2 *Documentation Review*

Any documentation provided by property management or on-site personnel which was available was reviewed if it would augment the walk-through survey and assist the assessor in understanding the subject project and identifying physical deficiencies. Such documentation is generally limited to construction drawings, specifications, test reports and previous PCA reports. Other documents thought to be helpful, if available, may have been reviewed. Documents reviewed are listed in Section 2.0 of this report..

4.3 *Interviews*

On site interviews of property management or maintenance personnel familiar with the building were conducted to develop an understanding of the maintenance and service information and history of the building. Any documentation provided by those individuals was reviewed and the information included in this report. The names of those interviewed and documents reviewed are listed in Section 2.0 of this report..

4.4 *Walk-Through Survey*

A visit to the property was conducted to visually observe the property to obtain information on material systems and components for the purposes of providing a brief description, identifying physical deficiencies to the extent that they are observable, and obtaining information needed to address such issues in the abbreviated Property Condition Report. This investigation was strictly a visual inspection of the property and building systems and specifically did not entail any operation, testing or destructive testing of the building or any systems.

A Property Condition Assessment of this type cannot completely eliminate the potential for physical deficiencies or predict the continued performance of the Property's systems. As such it is not the intent of this survey to uncover every defect in the property, and this report will serve to reduce, but not eliminate uncertainty with regard to potential deficiencies.

A Registered Architect has observed the pavement, exterior walls, roofing, mechanical, electrical systems and has reviewed generally the building for requirements of the Americans with Disabilities Act. In addition, components and systems have been evaluated for their expected useful life and effective age, with replacement recommendations noted for those systems or components that will reach the end of their remaining useful life during the analysis term.

Physical deficiencies identified as significant are deemed to be present if they represent either of the following:

1. The physical deficiency represents a cited or apparent code violation, an immediate life safety or health hazard to the occupants or users of the property, or a fire safety hazard to the property itself, or;
2. The physical deficiency, if left uncorrected, could result in accelerating deterioration of the system in question and significantly increase the cost to correct.

Other physical deficiencies of a lesser nature and/or items of deferred maintenance have also been observed and noted for inclusion in an aggregated cost estimate.

Observations consist of one or a combination of the following activities:

1. Walk-through observations on a complete or sample basis to determine the overall condition of the property;
2. Observation of a representative sample of improvements, building, equipment and fixtures and systems to determine serviceability and operating characteristics;
3. Non-invasive and detailed observations to determine representative conditions;
4. Recording of physical deficiencies; and
5. Photos taken of building exteriors, roofs, site features and common areas, sufficient to give a general idea of the character and condition of the building. Where it would help illustrate various points to the reader, specific deficiencies have also been photographed.

4.5 Opinion of Probable Costs

Based upon our observations during our site visit, as well as information gathered from the Documentation Review and Interviews, we have prepared a list of recommended repairs to address present observed physical deficiencies, along with general scope and preliminary budget cost estimates for these repairs. These estimates are for components or systems exhibiting patent or significant deferred maintenance requiring major repairs or replacement. Repairs or replacements that could be classified as cosmetic, decorative, part or parcel of a building renovation program, normal preventative maintenance, or that are the responsibility of tenants, were not included.

These preliminary budget cost estimates were prepared only for expenditures that require immediate action as a result of existing or potentially unsafe conditions, building code violations, poor or deteriorated condition of critical element or system, or a condition that if left "as is" with an extensive delay in correction, would result in or contribute to critical element or system failure within one year or would lead to significantly escalated repair costs.

The budget items were categorized as follows:

Repair & Maintenance	RM
Capital Expenditures	CE

Cost information used is generally obtained from consultants and our recent experience with projects that are similar, where applicable industry recognized databases, such as R.S. Means, F.W. Dodge or similar are consulted. Where appropriate, Potomac Capital Advisors, Inc. consults its own database of construction cost information or obtains cost information from contractors.

Estimated costs are preliminary and require refinement. They are not to be construed as final nor are the work scopes provided necessarily all-inclusive. Such costs and work scopes are "order of magnitude", and are to be used to assist the reader in the overall assessment of the property.

These costs are also net of construction management fees, design fees and contingency budget. Final and actual costs may vary depending on such matters as material, equipment or system selected, field conditions and unknowns. Materials or procedures recommended in this report are suggestions only and need to be researched further and refined. In order to obtain best prices, we recommend that competitive bids be secured. Budgeting for contingencies is advised.

5.0 DESCRIPTIONS & OBSERVATIONS

5.1 *Site & Features at Grade*

Description

The Sanderson Academy is situated on the developed portion of a 30 acre site located on Cape Road in Ashfield, MA. The site is improved by a single story elementary school building and two small storage sheds. Site improvements consist of bituminous paved parking lots and roads, cast in place concrete sidewalks at the front (southwest) elevation and bituminous sidewalks around the remainder of the building.

The site is well landscaped with mature vegetation and has additional hard and soft athletic features including a bituminous basketball court, two playgrounds with playground structures, a baseball field and a soccer field.

There are three parking areas that accommodate parking for approximately fifty-two (52) cars including two (2) marked handicapped parking spaces in the main parking lot to and two (2) additional handicapped parking spaces located off the main driveway immediately in front of the main entrance to the school building.

Storm water drains directly to the exterior grade from the building roof and impervious areas where it further drains by sheet action to vegetated areas and a small storm water detention pond located at the rear of the school building to the northwest.

Observations/Comments

In general most of the site improvements and features at grade appeared to be in good condition, consistent with their expected age.

In general, bituminous paving at parking areas and roadways has an expected useful life (EUL) of 25 years with proper maintenance, while bituminous sidewalks have an EUL of 30 years,

There are approximately 1,200 lineal feet of bituminous paved sidewalks which circulate behind the rear of the school and which also provide sidewalk access to classroom exits. These sidewalks are in fair to poor condition which is not related to use, but rather is due to settlement.

At the north end of the school building in relative proximity to classroom exit door D1 there is a section of bituminous walkway that crosses a drainage culvert. The sidewalk on either side of the culvert has settled significantly, creating a tripping hazard. This section of paving should be repaired immediately.

The condition of the remaining bituminous sidewalks varies, with areas that are in good condition and will likely last for the remainder of the remaining useful life (RUL), and other areas which will require repair/replacement in the near term due to settlement. It is recommended that an allowance of 25% of the bituminous sidewalk be budgeted for replacement which should include removing, filling, compacting and repaving settled portions.

The parking areas and main roadways are generally in good condition. To maximize the performance and useful life of the existing paving it is recommended that preventative maintenance consisting of crack sealing and seal coating be performed in the near term.

Bituminous paving has an EUL of 25 years. The existing paving is 15 years old with an expected RUL of 10 years. It should be anticipated that the paving will need to be resurfaced in approximately 10 years.

Subsequent to resurfacing the paving to maximize the performance and useful life of the new paving it is recommended that preventative maintenance consisting of crack sealing and seal coating be performed in the regularly thereafter.

The cast in place concrete sidewalks are generally in good condition, and concrete sidewalks have an expected useful life of 30 years. There are however some sections of concrete sidewalk where there has been settlement and which require replacement. These sections present a tripping hazard and should be replaced in the near term.

At the rear of the school building there is a cast in place concrete stair that provides access to doors number B3 and B4. The first stair riser has experienced freeze thaw cracking around the base of the concrete encased handrail post. The railing is unrestricted and moves. The step should be chipped out and a new section of step cast in place to secure the railing post.

To prevent similar freeze thaw problems, all embedded rail posts should be caulked with a cant joint to shed water.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.1 Site and Features at Grade						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Repair settled bituminous sidewalk at culvert near Door D1	50	SQFT	\$8	\$400	RM	3
2. Repair/replace 25% of bituminous walkways at rear	1,000	SQFT	\$8	\$8,000	RM	0
3. Preventative maintenance at existing pavement at parking lots	32,000	SQFT	\$0.25	\$8,000	RM	5
4. Re-surface parking lots	32,000	SQFT	\$3	\$96,000	RM	10
5. Preventative maintenance new pavement at parking lots	32,000	SQFT	\$0.15	\$4,800	RM	15
6. Replace damaged sections of concrete walkways	1,000	SQFT	\$8	\$8,000	RM	13
7. Digout and replace surface drainage below eaves w/ filter fabric and river washed stone	1,350	LNFT	\$30	\$40,500	RM	4
8. Repair cast in place concrete stair and railing at Door B3/B4	1	LS	\$1,000	\$1,000	RM	0
9. Caulk all concrete embedded railings and posts	1	LS	\$1,000	\$1,000	RM	1
Total				\$167,700		

5.2 Roofing

Description

The roof on the Sanderson Academy is a green painted standing seam metal roof that was installed during the original construction and is 15 years old. Typically, the roofs all drain directly to grade, although there are isolated areas at shed roofs over building entrances where there are small sections of metal gutter that also drains to grade via direct drainage or by rain leader.

There are two storage sheds located on the site. One shed was constructed at the time the school was built (the "Red Shed") and the other appears to be a prefabricated wood shed that was installed at a later date (the "Wood Shed").

The Red Shed has the same standing seam metal roof that was installed on the main school building. The Wood Shed has an asphalt shingle roof.

Observations/Comments

The roof on the main school building is generally in good condition. At the time of the original installation a minimal number of snow paddles were installed. As a result it was observed that the roofs have experienced some minor damage from sliding ice and snow.

At the eaves of the roof, there are sections where sliding snow and ice have dislodged or broken off the trim caps at the ends of the standing seams. This damage is more of an aesthetic issue than a practical one.

At several large valleys where the classroom wings intersect the central core and library it was observed that sections of the standing seam are arranged perpendicular to the valley. This is the correct installation, however the snow and ice build up in the valleys appears to be significant and the weight and force of the snow and ice sliding down the valleys has bent over the ribs of the standing seam roof.

It was reported that minor leaking has occurred in some of these locations and visual evidence of water infiltration was apparent at the drywall soffit and acoustic ceiling tile in the library. It was reported that roof repairs have been made at these areas using a Tremco roof. While there was still visual evidence of water staining at the library ceiling, it is assumed based upon these reports that the Tremco repairs have resolved the source of the leaking.

It is important to note that these repairs will only maintain their integrity if future ice and snow build up is prevented from sliding down the valley and ripping the Tremco patches off the roof.

We recommend that snow bars be added to both sides of the valley to hold snow and ice in place and minimize sliding, and that heat trace be installed in the valley to ensure that any ice build up will not trap water on the roof.

At the roof overhang above door A4 to the cafeteria there is a complex intersection of roof planes which results in a difficult roofing detail. As the lower, flatter, sloped roof intersects the higher, steeper, sloped roof there is a slip joint in the standing seam roof. Trapped snow and water is able to infiltrate this joint and is leaking into the ceiling of the cafeteria above door A4. It is recommended that snow bars be installed above the slip joint to restrain snow and ice from sliding over the joint and that a Tremco applied roof membrane be installed to seal the slip joint and associated flashing.

There are small shed roofs above the two egress doors from the gymnasium and another over the receiving door/loading dock. These shed roofs are equipped with small sections of gutter which are pitched to drain to grade. The gutters at all three locations have been damaged due to sliding snow and ice. It is recommended that snow bars be installed at these shed roofs and that new gutters be installed.

At the main entrance to the school the roof drains by gutter to two rain leaders on either side of the front door. The rain leaders drain to grade. The rain leader to the right of the main entrance is missing a section at the bottom and the brackets holding the leader up are damaged. The rain leader to the left is intact, however the brackets holding the leader up are damaged. The missing section of leader should be replaced and new brackets should be installed to properly support and fasten the rain leaders to the wall. IT is also advisable to add splash blocks below both rain leaders to prevent erosion.

TO ensure the extended performance life of the standing seam metal roofs, it is recommended that an annual inspection and maintenance program be implemented to identify and correct any potential issues that may arise.

The standing seam metal roof on the original Red Shed building appeared to be in good condition and should be expected to last for another 35 years.

The asphalt shingle roof on the Wood Shed is in good condition and likely has an additional 10-15 years of useful life assuming that the building is approximately ten years old.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.2 Roofing						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Add snow bars and heat tracing at valleys	10	EA	\$5,000	\$50,000	RM	1
2. Add snow bars at roof above door A4 and seal existing slip joint with Tremco sealant membrane	1	LS	\$2,000	\$2,000	RM	1
3. Add snow bars and install new gutters at gym shed roofs and roof over loading dock	3	EA	\$750	\$2,250	CE	1
4. Repair and reattached rain leaders at both sides of main entrance	1	LS	\$750	\$750	CE	1
6. Annual maintenance for standing seam metal roof	15	/YR	\$500	\$7,500	RM	1-15
Total				\$62,500		

5.3 Exterior Walls

Description

The exterior walls of the main school building are constructed of ground face block, brick and decorative masonry units on a masonry block back up wall up to the eave line of the first floor. Above the eave line, at gable ends and vertical transitions, and also at the exterior walls of the gymnasium the exterior walls are vertical painted wood ship lap siding.

Windows are a combination of fixed and operable aluminum clad wood windows set in masonry openings with precast concrete sills

Typically windows are individual units, however each classroom, some administrative rooms and the cafeteria have one or more large windows constructed of three mulled window units.

At the roof perimeter the standing seam metal roof transitions to a metal drip edge which turns down the fascia and transitions to a painted wood fascia board. The soffit below is perforated vinyl.

There are two storage sheds located on the site. One shed was constructed at the time the school was built (the "Red Shed") and the other appears to be a prefabricated wood shed that was installed at a later date (the "Wood Shed").

The Red Shed exterior walls are constructed of the same vertical painted wood ship lap siding used on the main school building.

The Wood Shed has an exterior grade wood board and batten style siding in a natural finish.

Observations/Comments

In general the exterior walls of the main school building are in fair condition. While most major components of the exterior walls are in good condition and are performing satisfactorily, some elements of the wall system

are exhibiting signs of early distress due to water infiltration and other elements of the system are reaching the end of their expected useful life.

At the aluminum clad windows, the caulk joint between the window frame and the masonry window opening appears to be polyurethane. Urethane caulking has an expected useful life of 10 years. This caulk joint has begun to fail and should be replaced in the near term.

The masonry façade has expansion joints which are typically located at window openings. These expansion joints are caulked with what appears to be a silicone sealant. The existing caulk joint appears to be in good condition and should continue to perform well for several more years. It is anticipated that this joint should be maintained and re-caulked during the mid term of the evaluation period.

At the large window openings that contain the three mullied window units, it was observed that there are significant indications of water infiltration and distress at mortar joints in the masonry. The exterior windowsill is constructed of two pieces of precast concrete with a single joint in the middle. This joint was almost universally eroded at every window condition. The ground face block below these windows also exhibited signs of distress with deeply eroded mortar joints and visual staining indicating the presence of water saturation in the block.

A brief review of the architectural drawings did not reveal any detailed illustration of the intended flashing and waterproofing detail at these windows. Based upon the deterioration and staining, it appears that water is infiltrating the window and window sill causing the distress in the masonry joints. This may lack of proper flashing or the improper construction of the flashing.

It is recommended that an exploratory probe be conducted to take apart a window and the masonry wall and determine the built condition. Based upon the findings of that probe, a more detailed remedial program can be developed and implemented to correct the condition, address the water infiltration and enhance the longevity of the exterior wall.

In general, the balance of the brick masonry was in good to excellent condition, with limited evidence of wear at a very small number of mortar joints. These small areas where the mortar joints have eroded should be tuck pointed in the near term.

Above the first story, the vertical painted wood ship lap siding appeared to be in good condition and also seemed to have been recently painted. With regular maintenance and painting, this wood siding should provide another 30-35 years of service.

The vertical painted wood ship lap siding on the Red Shed appeared to be in good condition and also seemed to have been recently painted. With regular maintenance and painting, this wood siding should provide another 30-35 years of service.

The board and batten wood siding on the Wood Shed appeared to be in good condition. It did not appear that this building was being painted or stained. With regular maintenance and staining, this wood siding should provide another 30-35 years of service.

At the north side of the gymnasium and at gable ends on each wing, there are small square wood windows set in the vertical ship lap siding. These wood windows appeared to be in good condition; however the painted wood frames are beginning to peel. These windows should be painted in the near term and periodically through the evaluation term.

The windows are an aluminum clad wood frame with a double glazed insulated glazing unit ("IGU"). The windows are 15 years old and are in good to excellent condition. Aluminum clad wood windows have an expected useful life of 35 years, with continued maintenance these windows will last for at least another 20 years.

Exterior doors from the classrooms and common areas were a metal door with a four pane, true divided light, vision window. These doors appeared to be in good condition; however they will require routine preventive maintenance painting to avoid future rust and corrosion. Periodic painting is recommended throughout the evaluation term.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.3 Exterior Walls							
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year						
	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u>	<u>Year</u>	
1. Recaulk aluminum window frame to brick masonry openings	2200	LNFT	\$8	\$17,600	RM	1	
2. Recaulk expansion joints at exterior brick masonry walls	1000	LNFT	\$8	\$8,000	RM	10	
3. Perform exploratory work at large mulled window openings, including design fees	1	LS	\$10,000	\$10,000	RM	1	
4. Allowance to repair window flashing details at large mulled window	20	EA	\$5,000	\$100,000	RM	1	
5. Allowance for spot repointing throughout exterior	500	SQFT	\$10	\$5,000	RM	2	
6. Repaint vertical wood ship lap siding	2	/5 YR	\$9,000	\$18,000	RM	6,11	
7. Repaint Red Shed vertical wood ship lap siding	2	/5 YR	\$900	\$1,800	RM	6,11	
8. Stain wood prefabricated shed siding	2	/5 YR	\$800	\$1,600	RM	6,11	
9. Repaint of exterior wood windows at gable ends and gym	3	/5YR	\$2,500	\$7,500	RM	1,6,11	
10. Repaint of exterior doors and frames	3	/6YR	\$4,000	\$12,000	RM	14	
Total				\$181,500			

5.4 Structural Systems

Description

The Sanderson Academy is founded on a cast in place concrete slab on grade with perimeter foundation walls. Exterior and interior masonry bearing walls support a wood truss roofing system. At the gymnasium and exterior masonry bearing walls support a wood truss roof. The cafeteria is constructed of masonry bearing walls, and masonry bearing walls with embedded steel columns which support laminated wood beams. The main entry rotunda is similarly constructed with masonry bearing walls, and masonry bearing walls with embedded steel columns which support laminated wood beams.

The Red Shed is a wood frame structure on a concrete slab on grade. The Wood Shed is a wood frame structure which is set up off the parking lot pavement on sleepers.

Observations/Comments

In general, the building structure appeared to be in good condition with limited evidence of structural distress.

At the cafeteria, it was observed that the laminated wood beams which span from the gymnasium wall to the exterior wall exhibited signs of structural settlement, appearing to have pulled away from the exterior wall which has resulted in some cracking of the masonry block wall. While the cause of this movement is not

immediately apparent, after reviewing the structural drawings it seems that this movement may be related to initial shrinkage of the laminated beams.

In the gymnasium, the west wall of the gymnasium is a three-story concrete masonry unit (CMU) block wall. Shear cracking of the block from the foundation wall to the roof was observed. The cause of the cracking is likely the absence of any control joints in the masonry wall combined with changes in the elevation of the foundation wall as it steps down. At this time, a "naturally occurring control joint" has been created and it is unlikely there will be any further movement in the CMU block wall.

Cracks in the CMU block were also observed at inside corners where the classroom wings join the center core, adjacent to the library. In Classrooms #4 & #5 and the CMU block walls have a significant settlement cracks. In Classroom #5 the crack is a stair step crack which starts at the ceiling and ends in the side jamb of a window. In Classroom #4 the crack runs vertically from the ceiling down the wall and has been filled with white urethane caulk.

A review of the architectural plans indicate that the foundations for the center core and the classroom wings are independent. It is likely that these cracks were caused by differential movement between the building sections however it appears at this time to have stabilized.

It appears that these structural issues are related to the original design and construction and resulting settlement or expansion/contraction movement. The issues appear to be stable and there was no apparent significant structural distress evident at the time of the inspection. Continued monitoring is recommended to confirm that all settlement has stopped.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.4 Structural						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. No Noted Issues				\$0	RM	0
Total				\$0		

5.5 Interior Elements

Description

The Sanderson Academy has a variety of interior finishes and elements, all of which date to the original 1997 construction. These finishes are approximately 15 years old and appear to have been well maintained and are in good condition.

Interior finishes at common areas and hallways consist of vinyl composite tile (VCT), painted concrete masonry unit (CMU) and ground faced block walls with a 2'x4' acoustic ceiling tile in a painted metal grid.

Interior finishes at classrooms consist of vinyl sheet goods painted concrete masonry unit (CMU) walls and 2'x4' acoustic ceiling tile in a painted metal grid.

Interior finishes at the cafeteria consist of vinyl composite tile (VCT), painted concrete masonry unit (CMU) walls and a 1'x1' concealed spline acoustic ceiling tile.

Interior finishes at the gymnasium consist of a hardwood floor with painted concrete masonry unit (CMU) walls and a 1'x1' concealed spline acoustic ceiling tile.

Interior finishes at the Library consisted of hardwood flooring, painted CMU and gypsum wall board walls with a combination of 1'x1' concealed spline acoustic tile at the vaulted areas and 2'x4' "second look" acoustic ceiling tile in a painted metal grid at the low sections to the north and south of the main room.

Interior finishes at administrative offices consist of vinyl composite tile (VCT), painted concrete masonry unit (CMU) and ground faced block walls with a 2'x4' acoustic ceiling tile in a painted metal grid.

Observations/Comments

In general the interior finishes and elements were in good condition, having been well maintained. Walls and ceilings were clean and uniform and had an appealing appearance. VCT and vinyl sheet good flooring was well maintained and was in the process of being stripped and waxed during the time of this inspection. Vinyl flooring products can be expected to have a useful life of 30 years, and with continued maintenance in general the flooring throughout the school should last for another 15 years.

We did observe very localized areas where the VCT flooring in corridors adjacent to the center core building and outside the cafeteria exhibited some indication of warping and cracking which may be attributed to moisture migration up through the slab on grade. There were also limited areas in the classrooms where the joints in the vinyl sheet goods had begun to open. It is recommended that these areas be repaired.

The painted CMU block walls in the hallways, Cafeteria, gymnasium and classrooms are extremely durable, and the concrete block has an expected useful life of 50 years. These walls will require only routine painting throughout the evaluation period.

The acoustic ceiling tile ceilings have an expected useful life of 30 years. With the exception of the fact that the tile may continue discolor over time, the ceilings have 15 years of remaining useful life. We recommend budgeting for replacement of damaged and discolored tile throughout the term of the evaluation period.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.5 Interior Finishes						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Repairs to VCT flooring and sheet flooring	100	SQFT	\$8	\$1,200	RM	2
2. Repaint hallway walls	3600	SQFT	\$2	\$7,200	RM	7
3. Repaint classroom walls, one wing per phase	3	LS	\$10,000	\$30,000	RM	8,9,10
Repaint Gymnasium walls, up to 7'-0" AFF	1	LS	\$2,100	\$2,100	RM	5
4. Repaint Gymnasium completely	1	LS	\$25,000	\$25,000	RM	10
Repaint Cafeteria	1	LS	\$4,000	\$4,000	RM	7
5. Refinish Gymnasium Flooring	3	EA	\$500	\$1,500	RM	5,10,15
6. Allowance to replace discolored and damaged ceiling tile	25	EA	\$5	\$125	RM	5
Total				\$71,125		

5.6 Specialties, Equipment and Special Construction

Description

Items under this category include laminate & solid surface countertops, metal toilet partitions, toilet accessories, horizontal window blinds, fire extinguishers and cabinets, building directory, signage, and special equipment, if any.

Restrooms throughout the school are single occupant rooms, and therefore there are no toilet partitions. Finishes in the restrooms consist of 2"x2" ceramic tile flooring, 4"x4" ceramic tile on all walls to 40" above the finished floor and painted CMU block for 40" up to the ceiling. Toilets are wall mounted white vitreous china fixtures. Sinks are white vitreous china wall mounted fixtures with no under cabinet.

Window blinds consist of white Venetian micro blinds in the library and vinyl roller shades in the classrooms.

Kitchen equipment generally consists of a two (2) burner stove, skillet, three (3) convection ovens and a electric convection/steam soup kettle unit. There is a walk-in refrigerator/freezer and a commercial dishwashing unit. All kitchen equipment is operates on propane.

Between the cafeteria and the gymnasium, there is a proscenium opening to allow the cafeteria to be used as a stage. The opening is equipped with a retractable folding wall system.

Observations/Comments

The finishes in the restrooms are in good to excellent condition and can be anticipated to perform satisfactorily for the balance of the evaluation term.

Window treatments have an expected useful life of 10 years, and it is anticipated that the library and classroom window treatments will require replacement in the mid term of the evaluation period.

The commercial kitchen equipment is all approximately 15 years old and appeared to be in good working condition. Periodic replacement of kitchen equipment can be expected during the evaluation term. It is recommended that an allowance for equipment replacement be budgeted in the mid and late term.

The retractable folding wall system at the proscenium opening between the cafeteria and gymnasium has been damaged and was visibly out of alignment at the time of the inspection. It is recommended that the wall system be replaced in the mid term of the evaluation term.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.6 Specialties							
Observation/Issue/Recommended Correction				Estimated Cost, Category and Year			
	Qty	Unit	Unit Cost	Total Cost	Cat	Year	
1. Replacement of classroom shading devices	60	EA	\$90	\$5,400	RM	14	
2. Replacement of library shading devices	15	EA	\$300	\$4,500	RM	14	
3. Commercial Kitchen Equipment - replacement allowance (partial equipment replacement at 5 year increments)	2	EA	\$15,000	\$30,000	RM	10,15	
4. Replacement of moveable wall partition	30	LF	\$300	\$9,000	RM	3	
Total				\$43,500			

5.7 Vertical Transportation

Description

The Sanderson Academy is a single story building and does not have any elevators.

Observations/Comments

None.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.7 Vertical Transportation						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u>	<u>Year</u>
1. No Noted Issues				\$0		
Total				\$0		

5.8 Heating, Ventilation and Air Conditioning

Description

The Sanderson Academy does not have a central air conditioning system, however the administrative offices, teachers lounge, nurses office, psychologists office and library are air conditioned via five (5) split DX cooling systems manufactured by Mitsubishi.

Heating is provided throughout the administrative spaces, library, cafeteria and classrooms by hot water baseboard radiation. The common corridors and gymnasium are heated by hot air energy recovery units with a hot water coil in the corridors and an air handling unit equipped with hot water coil in the gymnasium.

A single Dunham-Bush air handling unit located in the mezzanine of the boiler mechanical room provides hot air by hot water for the gym to supplement wall mounted hot water radiators

There are three (3) Bossaire energy recovery units equipped with hot water heating coils, one for each classroom wing and one for the central core areas. These units are located in the attic above the areas served. The units are enclosed in mechanical rooms.

Hot water for heating is manufactured by two Burnham 1,054MBH oil fired boilers located in the boiler room. The boilers were installed in 1997 and are 15 years old. The boilers are operate in a lead/lag configuration to balance run time when the outside air temperature is 25 degrees or greater. At 25 degrees or below both boilers operated simultaneously. Boilers are maintained annually by S&J Jamroc. All piping for the hot water system is copper.

Oil storage for the boilers is provided by a 5000 gallon double underground storage tank (UST) with leak detection and alarms that is located under the east parking lot.

Hot water for heating is circulated by two (2) Bell & Gosset three horsepower pumps which circulate water at 85 GPM. Pump #1 was rebuilt in August of 2011.

The hot water heating system has an automated water treatment system. Controls are Barber Coleman Network 8000 system.

Kitchen exhaust is provided by a Greenheck stainless steel kitchen hood with an ANSUL fire suppression system. The hood was inspected by Advanced Air Quality in June of 2012.

Observations/Comments

The condensing units for the Mitsubishi split DX cooling system are located directly outside the school building at the north elevation. The location is directly under the eave of the roof at a valley. These units have been badly damaged by sliding snow and ice and several of the units are reported not to operate.

It is recommended that the damaged condensing units be replaced and the air conditioning systems be restored to operation in the near term.

Additionally, it is recommended that a protective shed be constructed over the condensing units to protect the units from sliding ice and snow and ensure the longevity of the new equipment.

The two hot water boilers serving the building are 15 years old and appear to be in good condition and well maintained. The expected useful life of hot water boilers is 25 years, however with good maintenance and chemical water treatment they can be expected to last significantly longer.

The boilers are oil fired and the oil burners should be scheduled for replacement in the late term of the evaluation period.

In general hot water circulating pumps have an expected useful life of 15 years. Pump #1 was rebuilt in year 14. We recommend budgeting for Pump #2 to be rebuilt in the near term and for both pumps to be replaced at the end of the evaluation term.

Hot water valves have an expected useful life of 15 years. While no valves have been replaced at this time, we recommend budgeting for the replacement of hot water valves during the near term of the evaluation period.

The hot water distribution system has an expected useful life of 50 years and should not require any replacement during the evaluation period.

The air separator on the expansion tank is currently leaking and should be replaced.

The filter access panel on air handling unit #2 which serves the Library is missing. Currently there is a temporary sheet metal panel held in place by a piece of wood 2'x4'. The access panel should be replaced.

The Barber Coleman controls system has an expected useful life of 25 years. It is recommended that the controls be replaced in the late term of the evaluation period.

The air handling unit which serves the gymnasium will reach 30 years of service at the end of the evaluation term. It is recommended that the air handling unit be rebuilt at that time, to include new motor, bearings etc..

The Energy Recovery Units will reach 25 years of service at the mid-point of the evaluation period. It is recommended that these units be refurbished with new motor, wheel and media sections at the mid-point of the evaluation period.

The toilet exhaust fans will reach 25 years of service at the mid-point of the evaluation period. It is recommended that these units be refurbished at the mid-point of the evaluation period.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.8 Heating, Ventilation and Air Conditioning						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u>	<u>Year</u>
1. Replace condenser units	5	EA	\$2,500	\$12,500	RM	2
2. Construct protective shed for condensing units	1	LS	\$1,500	\$1,500	RM	2
2. Replace oil burners on boilers	2	EA	\$3,500	\$7,000	RM	5
3. Rebuild hot water circulating Pump	1	EA	\$2,500	\$2,500	RM	1
4. Replace hot water circulating pumps	2	EA	\$1,500	\$3,000	RM	15
5. Replace hot water valves	4	EA	\$250	\$1,000	RM	2
6. Repair air separator valve on expansion tank	1	EA	\$250	\$250	RM	1
7 Replace AHU#2 Access Panel	1	EA	\$300	\$300	RM	1
7 Replace Barber Coleman controls system	1	LS	\$5,000	\$5,000	RM	10
8. Re-build gymnasium air handling unit	1	EA	\$3,000	\$3,000	RM	15
9. Repair Heat Recovery Units	3	EA	\$5,000	\$15,000	RM	10
10. Repair outside air damper	1	LS	\$500	\$500	RM	1
11. Replace toilet exhaust fans	5	EA	\$2,500	\$12,500	RM	10
Total				\$64,050		

5.9 Plumbing Systems

Description

Domestic water for the Sanderson Academy is delivered from a well located on site. The pump house is located approximately 1000 feet away from the building and was not viewed as part of this inspection. On site personnel report that the well is a single drilled well with a pump head that is connected to emergency power.

Well water is connected to seven (7) Well-x-trol pressure tanks which store and pressurize domestic water. The domestic water system is constructed of all copper pipe and water is circulated via two domestic water pumps.

Domestic hot water is manufactured by a 32 gallon Lochnivar oil fired hot water heater connected to two (2) 60 gallon SuperStor hot water tanks. Domestic hot water is made at 135 degrees and feeds two (2) Symons mixing valves which blend the hot water with cold domestic water to provide 110 degree water for general use and 125 degree water for the commercial kitchen.

The kitchen is equipped with a commercial dishwasher with electric hot water booster heater and commercial grade disposal.

There are two in line grease traps serving the kitchen which are located below the floor slab and that are serviced by on site personnel.

Sewage is pumped by an ejector pump to settlement tank connected to a Bioclere chemical treatment system before discharging to septic field located under the baseball field. The Bioclere system is a modified trickling filter over a clarifier.

Observations/Comments

Generally the plumbing and domestic water systems appear to be in good to excellent condition. It was observed that the incoming water line from the well does not have back flow prevention.

Massachusetts Drinking Water Regulations, 310 CMR 22.00 requires all public water systems to have an approved and fully implemented Cross-connection Control Program (CCCP). Currently the hot water heating system is not separated from the water supply. The addition of a back flow preventer is required by the DEP for compliance with the CCCP. In addition to the back flow preventer, it is our recommendation to install a double check valve on the incoming water service from the well. This will protect the well from potential contamination and is good practice.

It was observed that there is a washing machine in the kitchen which is piped to one of the sinks in a three bay sink. This should be corrected so that the washing machine discharges into an indirect waste line.

Commercial oil fired hot water heaters have an expected useful life of 15. The current hot water heater has reached the end of its useful life, and while it may continue to operate for several years, replacement should be anticipated in the mid-term of the evaluation period.

Domestic hot water storage tanks have an expected useful life of 30 years. The current hot water storage tanks will have reached the end of their useful life at the end of the evaluation period.

It was observed that there was a section of the insulation on the kitchen hot water circulating return line was missing or damaged. This should be replaced in the near term.

Hot water circulating pumps have an expected useful life of 15 years. It is anticipated that the domestic hot water circulating pumps should be rebuilt in the near term.

The domestic hot water mixing valves are 15 years old and have an expected useful life of 30 years. It is anticipated that the hot water mixing valves should be replaced in the late term.

The Bioclere chemical treatment system has an expected useful life of 40 years. However it is anticipated that there will be a major service to the pumps, dosing assembly and filter media during the mid-term of the evaluation period.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.9 Plumbing						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u>	<u>Year</u>
1. Install check valve on domestic water supply	1	LS	\$ 750	\$750	RM	1
2. Re-plumb washing machine at kitchen to indirect waste	1	LS	\$ 1,500	\$1,500	RM	1
3. Replace oil fired domestic hot water heater	1	LS	\$3,500	\$3,500	RM	4
4. Replace domestic hot water storage tanks	2	EA	\$3,500	\$7,000	RM	13
5. Replace missing insulation on kitchen hot water circulating pipe	1	LS	\$250	\$250	RM	0
6. Rebuild domestic hot water circulating pumps	2	EA	\$2,500	\$5,000	RM	2,3
7. Replace domestic hot water mixing valves	3	EA	\$1,000	\$3,000	RM	12,13,14
8. Major service to Bioclere sanitary water treatment system	1	EA	\$10,000	\$10,000	RM	5
Total				\$31,000		

5.10 Fire Protection

Description

The Sanderson Academy does not have a sprinkler system for fire protection. The only fire protection located in the school is the ANSUL system which is incorporated into the Kitchen exhaust hood.

Observations/Comments

The ANSUL system appeared to be in good condition and is regularly maintained. No recommendations at this time.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.10 Fire Protection (Sprinkler)						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u>	<u>Year</u>
1. No Noted Issues		SF		\$0		
Total				\$0		

5.11 Electrical System, Telephone & Security

Description

The main electrical service for the Sanderson Academy is located in a combined electric/fire alarm/tel/data closet within gym teacher's office. The main electrical service is an 800 amp 120/208 volt, three phase, four wire in a Square D panel which feeds panel DP.

Panel DP in turn feeds panels L1, L2, L3, L4 and L5, Panel M and Panel K each at 100 amps at 120/208 volt.

Panels L1-5 feed convenience power and lighting throughout the school. Panel M feeds the mechanical room loads while Panel K feeds the kitchen loads.

The building is served by an Olympian. Model, G75F35 propane fired emergency generator.

Emergency lighting is provided via battery operated wall mounted emergency light fixtures.

There is a public address and projection system manufactured by Bogen located in the gym teachers office.

Observations/Comments

In general the electrical, telephone and security systems appeared to be in good to excellent condition. The main electrical service and distribution systems are not regularly inspected. It is recommended that the main service and distribution panels be infra-red tested every fifth year to ensure that all breakers are functional and that all wired connections are tight.

Generally, electrical rooms and mechanical rooms were observed to be in good condition, however there were isolated instances where penetrations were not properly fire stopped. Perform a survey of all electrical and mechanical spaces and perform fire stopping as required.

Generally, electrical rooms and mechanical rooms were observed to be in good condition, however there were isolated instances where open junction boxes, exposed wire terminations and other housekeeping issues were observed. Perform a survey of all electrical and mechanical spaces and perform repairs and housekeeping as required.

The emergency generator is tested every.....regular maintenance is performed by...

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.11 Electrical, Telephone & Security						
Observation/Issue/Recommended Correction	Estimated Cost, Category and Year					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Infrared testing for main switchgear and distribution every five years	3	/YR	\$1,500	\$4,500	RM	1,6,11
2. Inspect and repair fire safing at electrical and tel/data closets	1	LS	\$500	\$500	RM	1
3. Inspect and repair open boxes and other housekeeping items at electrical and tel/data closets and mechanical spaces	1	EA	\$750	\$750	RM	1
Total				\$5,750		

5.12 Lighting

Description

Lighting is provided via a combination of recessed fluorescent 2'x4' light fixtures, florescent linear up-lighting fixtures and incandescent light fixtures.

Observations/Comments

In general the lighting systems and equipment appeared to be in good to excellent condition and suitable for long term use. No recommendations at this time.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.12 Lighting						
Observation/Issue/Recommended Correction		Estimated Cost, Category and Year				
		<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u> <u>Year</u>
1	No Noted Issues				\$0	
Total					\$0	

5.13 Fire Alarm System

Description

The building is equipped with a fully addressable Notifier 5128/29 fire alarm system. The head end for the fire alarm system is located in main electrical closet. The fire alarm system underwent its annual test d on August 16, 2012/. The test was conducted by New England Fire & Security, W. Springfield, MA. The system passed without any identified issues.

Observations/Comments

In general the fire alarm system appeared to be in good operating condition and suitable for several additional years of continued service.

It was observed that there were limited areas where additional fire alarm device coverage is required. We recommend surveying the facility and installing additional fire alarm devices and heat or smoke detectors as required.

The fire alarm system is equipped with a small battery to provide uninterrupted power during power failures. These batteries typically last approximately 15 years. It is recommended that the battery be replaced in the near term.

The fire alarm system was installed in 1997 and is currently 15 years old. The fire alarm head end has an expected useful life of 25 years and it is anticipated that the head end will require replacement in the late term of the evaluation period.

Observed issues, recommended corrections, estimated costs to correct and priority are as follows:

5.13 Fire Alarm						
Observation/Issue/Recommended Correction		Estimated Cost, Category and Year				
		<u>Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cat</u> <u>Year</u>
1.	Install missing F/A devices, heat & smoke detectors as required	10	EA	\$1,250	\$12,500	RM 1
2.	Replace Fire Alarm Devices	2	/YR	\$1,000	\$15,000	RM 1-15
3.	Replace Fire Alarm Battery Back	1	EA	\$500	\$500	RM 4
4.	Replace Fire Alarm system head	1	LS	\$35,000	\$35,000	CE 9
Total					\$63,000	

6.0 LIMITING CONDITIONS

Potomac Capital Advisors, Inc. conducted this Property Condition Assessment to opine on the subject's general physical condition and develop a Long Range Plan for capital expenditure in accordance with our agreement for this work.

The scope of this study was limited to a walk-through visual observation only of those areas that were readily observable and easily accessible. Tests, exploratory or destructive probing, exhaustive studies, removal or disassembly of any system or construction, or dismantling or operating of electrical, mechanical, or conveyance equipment were not performed. It does not include an in-depth system/component problem analysis or study, preparing engineering calculations of the structural, mechanical, electrical or other systems to determine compliance with any drawings that may have been submitted or with commonly accepted design or construction practice. Not all typical areas such as corridors or toilet rooms were surveyed; only a sampling of such areas.

Excluded from the scope of this survey was any seismic evaluation of the building.

No responsibility is assumed for matters of a legal nature such as building encroachments, easements, zoning issues, or compliance with the requirements of governmental agencies having jurisdiction.

Potomac Capital Advisors, Inc. assumes no responsibility for the accuracy or completeness of information provided by others, nor is Potomac Capital Advisors, Inc. responsible for any patent or latent defects which an owner or his agent may have withheld from Potomac Capital Advisors, Inc., whether by non-disclosure, passive concealment or fraud.

Potomac Capital Advisors, Inc.'s observations, opinions and this report are not intended, nor should they be construed, as guarantee or warranty, express or implied, regarding the property's condition or building code compliance. Potomac Capital Advisors, Inc.'s opinions are based solely upon those areas that we observed on the day of our site visit and information resulting from our interviews and research. Actual performance of individual components may vary from a reasonable expected standard and will be affected by circumstances which occur after the date of our site visit.

Services associated with the identification and elimination of hazards associated with hazardous and toxic materials, including asbestos, lead paint and PCBs, are not included within the scope of this evaluation.