



POTOMAC CAPITAL
ADVISORS



Property Condition Assessment
And
Long Range Planning Analysis

BUCKLAND SHELBURNE ELEMENTARY SCHOOL
Mohawk Trail Regional School District
Shelburne Falls, MA

June 6, 2013

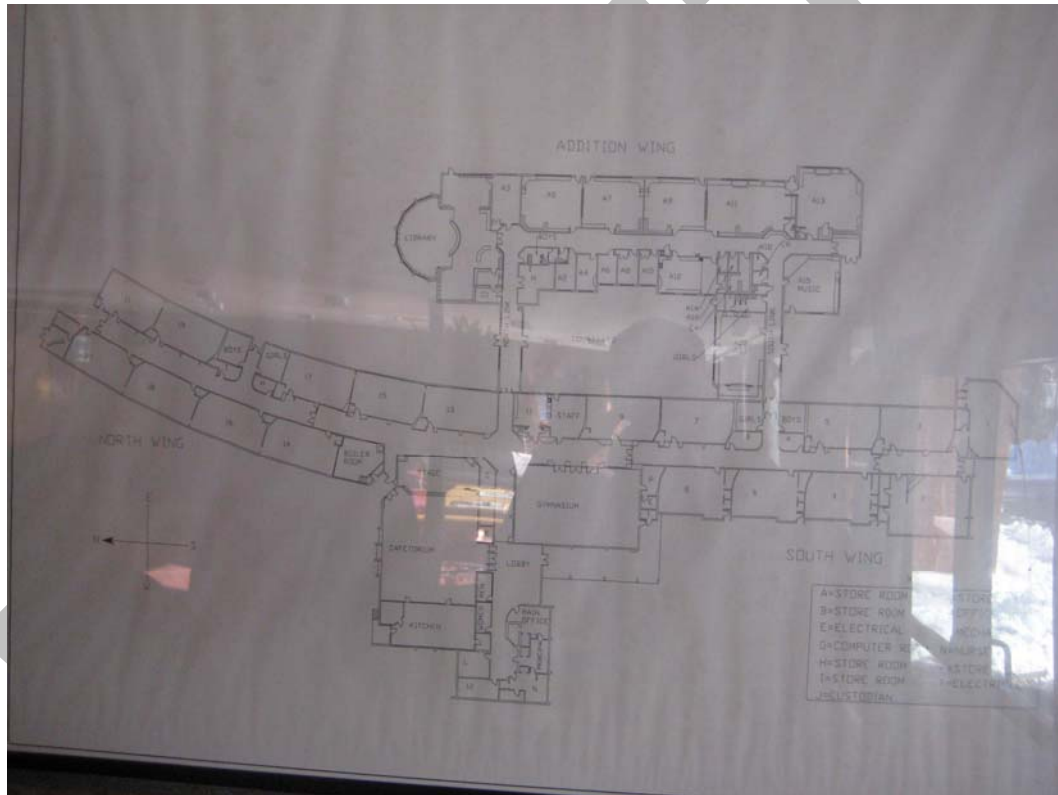
1.0 EXECUTIVE SUMMARY

1.1 Building Description

The Buckland Shelburne Elementary School is located at 75 Mechanic Street, Shelburne, MA. The consists of one single story elementary school building and two external storage buildings land a band shell located on an approximately 30 acre site which is improved with parking lots, a basketball court and athletic fields for baseball and soccer.

The Buckland Shelburne Elementary School was originally constructed in 1958 with additions built in 1965) the "first addition") and 1999 (the "second addition"). It and contains 29 classrooms, an art room, a music, a library, cafeteria with kitchen, gymnasium and administrative offices. There are three parking lots which provide parking for approximately 62 cars including five handicapped parking spaces.

There are two free standing storage sheds one located off the north parking lot and one located at the rear of the building by the south wing and south link connector. The band shell is located to the far south end of the site.



1.2 Condition

In general, based on our visual observations, interviews and research, the buildings appear to be in GOOD to FAIR condition and well maintained. Many of the major building systems were replaced in 1999 during the construction of the second addition. These systems are approximately 13 years old and in good condition. During the evaluation period these systems will require major repairs and/or replacement due to age.

There is visual evidence of deferred maintenance at the building exterior which is contributing to accelerated deterioration of the brick masonry and possible water infiltration into the building.

The roofs on the original school and first addition were completely replaced with new PVC roofs in 2012 and the roof on the second addition is a standing seam metal roof which was installed in 1999. The roofs are in excellent condition and have over 30 years of remaining useful life.

Visual observation and research conducted indicate that the building is reasonably well constructed and maintained.

Significant observations include:

- The site paving including bituminous and concrete sidewalks and bituminous roadways and parking lots are in fair to poor condition and will require replacement and refinishing in the near term.
- The exterior brick masonry walls are in fair to poor condition. The mortar joints are deeply recessed in many areas and there is significant evidence of water infiltration resulting in spalling and cracking brick. The building requires a complete repointing in the near term.
- There are low and tall brick masonry pilasters at the exterior. These pilasters appear not to have adequate through wall flashing resulting in significant brick deterioration. A small number of the low pilasters have been rebuilt to address water infiltration. All of the pilasters will need to be rebuilt in the near term.
- The majority of the windows in the building were replaced or installed new as part of the second addition in 1999. The caulking used at the masonry opening to window frame was a polyurethane caulk with an expected useful life of 10 years. This caulking has begun to fail and needs to be replaced in the near term.

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 \$1,528,960 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				
Buckland Shelburne Elementary School				
Building System Summary		Repair & Maintenance (RM)	Capital Expenditure (CE)	TOTALS
5.1	Site & Features at Grade	\$218,300	\$0	\$218,300
5.2	Roofing	\$7,500	\$0	\$7,500
5.3	Exterior Walls	\$557,610	\$0	\$557,610
5.4	Structural Systems	\$0	\$0	\$0
5.5	Interior Elements	\$488,600	\$0	\$488,600
5.6	Specialties, Equipment, etc.	\$37,200	\$0	\$37,200
5.7	Vertical Transportation	\$0	\$0	\$0
5.8	HVAC	\$131,250	\$0	\$131,250
5.9	Plumbing	\$18,250	\$0	\$18,250
5.10	Fire Protection	\$0	\$0	\$0
5.11	Electrical System, Telephone	\$6,250	\$0	\$6,250
5.12	Lighting	\$0	\$0	\$0
5.13	Fire Alarm & Life Safety	\$29,000	\$35,000	\$64,000
TOTAL		\$1,493,960	\$35,000	\$1,528,960

**Summary of Costs by Building System and Priority
Euclid Shilburne Elementary School**

Building System Summary	Year															TOTAL	
	Immediate	1 2014	2 2015	3 2016	4 2017	5 2018	6 2019	7 2020	8 2021	9 2022	10 2023	11 2024	12 2025	13 2026	14 2027		15 2028
5.1 Site & Features at Grade	\$0.0	\$32.0	\$0.0	\$14.1	\$0.0	\$0.0	\$0.0	\$31.2	\$7.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$218.3
5.2 Roofing	\$0.0	\$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	\$0.5	\$7.5
5.3 Exterior Walls	\$0.0	\$6.3	\$40.8	\$44.7	\$6.8	\$6.8	\$12.0	\$10.0	\$9.8	\$6.8	\$6.8	\$6.8	\$6.8	\$13.1	\$10.0	\$6.8	\$457.6
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	\$29.8	\$0.6	\$0.6	\$133.0	\$108.1	\$130.6	\$20.6	\$20.6	\$6.6	\$8.1	\$14.1	\$10.6	\$0.6	\$2.6	\$6.1	\$488.6
5.6 Specialties, Equipment, etc.	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$7.2	\$0.0	\$0.0	\$0.0	\$15.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$37.2
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	\$27.3	\$16.0	\$8.0	\$23.5	\$6.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$131.3
5.9 Plumbing	\$0.0	\$0.0	\$2.3	\$2.5	\$2.5	\$0.0	\$2.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$18.3
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	\$22.8	\$0.0	\$0.5	\$0.0	\$0.0	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$6.3
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	\$1.0	\$1.0	\$2.5	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$36.0	\$1.0	\$64.0
TOTAL	\$0.0	\$114.1	\$422.4	\$200.8	\$167.3	\$122.4	\$155.3	\$68.8	\$38.9	\$8.9	\$61.4	\$23.9	\$26.9	\$23.2	\$59.6	\$31.4	\$1,829.0

2.0 PROJECT INFORMATION

Building Name: Buckland Shelburne Elementary School Elementary School

Building Location: 75 Mechanic Street, Shelburne, MA

Building Type: School Building, two storage sheds and a band shell

Building Area:

School	+/-63,000	Sq. Ft.
Red Shed	+/-720	Sq. Ft.
Wood Shed	+/-120	Sq. Ft.
Band Shell	+/-1,411	

Building Height: 1 Story

Site Area: Approximately 16.4 acres (714,384 sq. ft.) in two parcels

Year Built:

Original School	1958
First Addition	1964
Second Addition	1999

Present Owner: Towns of Buckland and Shelburne, 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

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	R+M
Capital Expenditures	CE
ADA Items	ADA

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 Buckland Shelburne Elementary School is situated on two parcels of land totaling 16.4 acres located on Mechanic Street in Shelburne, MA. The site is improved by a single story elementary school building two storage sheds and a band shell. 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 and from the front of the school to the street.

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 sixty-two (62) cars including three (3) marked handicapped parking spaces in the main parking lot.

Storm water at the original school and first addition drains to internal storm drains that are connected to the municipal storm water system. At the second addition, the sloped standing seam metal roof drains to grade.

Observations/Comments

In general most of the site improvements and features at grade appeared to be in fair to poor condition, consistent with their expected age and minimal preventative maintenance.

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 1,300 lineal feet of bituminous paved sidewalks which circulate behind the rear of the school that provide sidewalk access to classroom exits. At the front of the school there are bituminous sidewalks providing access from the street and parking lots. These sidewalks are in fair to poor condition, while the exact age is unknown it is estimated that they are approximately 25 years old.

The condition of the bituminous sidewalks varies, with areas that are in fair 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 wear, and cracking. It is recommended that an allowance of 25% of the bituminous sidewalk be budgeted for immediate replacement with the primary focus on those sidewalks at the front of the school. The balance of the bituminous sidewalks should be replaced in the mid term of the evaluation period.

The parking areas and main roadways are generally in fair to poor condition. Bituminous paving has an EUL of 25 years. The existing paving is at least 25 years old and exhibits significant cracking and preliminary evidence of heaving and delamination. The parking lots and roadway areas should be resurfaced in the near term of the evaluation period.

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 poor condition exhibiting significant spalling, cracking and settlement. The sidewalks concrete sidewalks and existing ramp at the main entrance do not provide equal accommodation for handicapped accessibility. The worst sections of sidewalk present a tripping hazard; therefore it is recommended that the cast in place concrete sidewalks be replaced in the near term.

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 25% of bituminous sidewalks at front of school	1,300	SQFT	\$8	\$10,400	RM	1
2. Repair balance of bituminous sidewalks	3,900	SQFT	\$8	\$31,200	RM	7
3. Resurface existing parking lots and roadways	47,000	SQFT	\$3.00	\$141,000	RM	3
4. Preventative maintenance new pavement at parking lots	94,000	SQFT	\$0.15	\$14,100	RM	8,13
5. Replace concrete sidewalks at front of school	2,700	SQFT	\$8	\$21,600	RM	1
Total				\$218,300		

5.2 Roofing

Description

For the purposes of this report we describe the roof on the Buckland Shelburne Elementary School as being composed of three different sections. The roof over the original school, gymnasium and the first addition are one section. The roof over the two connecting corridors to the second addition are another and the second addition is the third section. In general, the roofs are in excellent condition and are either less than one year old, or 13 years old.

Sections One over the original school, gymnasium and first addition is a new mechanically fastened .60 mil PVC roofs manufactured Johns Mansville and installed by JD Rivet in 2012. These roofs drain to internal roof drains connected to the municipal storm system. These roofs are in excellent condition and have an expected useful life of 35 years with proper maintenance. The roof has a warranty for 20 years starting in September of 2012.

Section Two over the two connecting corridors between the original school and the second addition are .60 mil PVC membrane manufactured by Sarnafil. This roof was installed in 1999. These roofs drain to gutters with rain leaders that drain to grade. These roofs are in good condition and are 13 years old. PVC roofs have an expected useful life of 35 years and this roof should continue to provide 37 years of service.

Section Three is the roof over the second addition is a green painted standing seam metal roof install during the construction of the addition in 1999. The roof appears to be good shape. A standing seam metal roof has an expected useful life of 50 years and should provide 37 years of useful service.

There are two storage sheds land a band shell located on the site. The roofs of these structures were observed from the ground.

The larger shed located on the northwest side of the parking lot (the "Red Shed") has a standing seam metal roof of unknown age which drains directly to grade and has no gutters. The roof appears to be in good condition and appears to be approximately 30 years old. This roof should continue to provide another 20 years of useful life.

The smaller shed (the "Wood Shed") appears to be a prefabricated wood shed which has an asphalt shingle roof of unknown age which appeared to be in fair condition. This roof drains directly to grade and has no gutters. While the roof does not require immediate replacement, it is likely that the entire shed will require replacement during the mid term of the evaluation period. Therefore replacement of the roof is not recommended.

The band shell has an asphalt shingle roof of unknown age that appears to be in good condition. This roof is estimated to be approximately 10 years old with an expected useful life of 25 years. The roof should continue to perform well for the next 15 years.

Observations/Comments

All of the roofs on the school building are in excellent condition, with significant remaining useful life. With the recent replacement of the roofs on the main school building and the relatively young roof over the second addition, these roofs should continue to perform for the next 25-35 years.

The standing corrugated 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.

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

It is recommended that an annual roof inspection and maintenance program be implemented. The cost for inspection and minor maintenance is small, but the payback in terms of protecting the long-term roof warranties and continued long-term performance of the roofs is significant.

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. Annual maintenance for PVC and standing seam metal roofs	15	/YR	\$500	\$7,500	RM	1-15
Total				\$7,500		

5.3 Exterior Walls

Description

The exterior walls of the main school building are constructed of brick and decorative masonry units on a masonry block back up wall. At regular intervals along the exterior walls there are brick pilasters which are approximately 9'-0" tall (the "Low Pilasters"). At the cafeteria wall there are also brick pilasters which are approximately 18'-0" tall (the "Tall Pilasters"). At the roof eave, there is a perforated vinyl soffit which transitions from the brick to a wood fascia board and metal drip edge at the perimeter of the roof.

The windows are predominantly a combination of fixed and operable aluminum clad wood windows set in masonry openings with precast concrete sills. There are isolated wood frame windows located at the lobby of the school entrance and also at the mechanical/storage room at the north end of the north wing of the school. The aluminum clad windows were replaced in 1999 and are 13 years old.

At the main entrance to the school, the windows on either side of the entrance doors are single pane glass in wood frames. The entrance doors are a newer storefront type system consisting of insulated glass windows in a painted aluminum frame.

There are two storage sheds and a band stand 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 larger shed located on the northwest side of the parking lot (the "Red Shed") has a painted wood, exterior plywood, T-111 siding. The siding appears to be in good condition and appears to be approximately 30 years old.

The smaller shed (the "Wood Shed") appears to be a prefabricated wood shed which has a vertical natural finish wood board siding.

The band shell is an open air structure, with exterior walls which are clad in painted wood shingle and interior exposed walls and ceiling constructed of painted tongue and groove wood board. The band shell appears to be in good to fair condition.

Observations/Comments

In general the exterior walls of the main school building are in fair to poor condition. The mortar joints of the brick masonry are in need of significant repointing and the caulking at the masonry window openings to window frame is in poor condition.

At the exterior brick we observed significant areas of the brick façade where mortar joints on the exterior walls were deeply receded and showing significant erosion. The mortar joints are an important element of the brick wall assembly and contribute to the prevention of water infiltrating the brick and brick walls. There are numerous locations where it was observed that the brick is both face spalling and generally spalling. Spalling is indicative of water penetrating the brick and then being subject to a freeze/thaw cycle which splits or "spalls" the brick. Isolated areas of the exterior brick walls also displayed evidence of sheer and step cracking in the brick as well as brick dislocation.

It is recommended that the school be repointed in the near term to correct spalling and damaged brick as well as to stop water infiltration which is rapidly breaking down the condition of the brick and which may potentially be allowing moisture into the interior wall systems.

At the low brick pilasters there was significant evidence of water intrusion resulting in erosion of the mortar joints and spalling of the brick due to freeze/thaw action. It appears that there is no through wall flashing at the capstone, which is allowing water to infiltrate the brick and degrade the mortar joints and cause the spalling. We observed several locations where these low pilasters had already been rebuilt and the flashing detail re-worked. In keeping with the proposed brick repair program, it is recommended that these low pilasters be rebuilt and an improved flashing detail be installed.

The tall pilasters at the cafeteria were in poor condition with evidence of spalling, sheer and step cracking and deeply receded mortar joints. Efflorescence, or white staining was visible on the interior side of the pilasters in the cafeteria. This is an active indication of significant water infiltration at the tall pilasters. It was observed that there are cracked bricks which are dislodged and ready to fall off the building. These pilasters are in potentially hazardous condition, and we recommend that these pilasters be rebuilt immediately.

The windows are an aluminum clad wood frame with a double glazed insulated glazing unit ("IGU"). The windows are 13 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.

While window units are relatively new and in good condition, the caulking between the window frame and the masonry window opening appears to be polyurethane. Urethane caulking has an expected useful life of 10 years. Splitting, and delamination of the caulking could be observed at the vast majority of the windows and was failing. Additionally, the caulking was carried down from the jambs of the windows onto the joint between the window and the precast concrete windowsill. This caulk joint is also failing. This caulking should be replaced in the near term of the evaluation period.

It was reported and observed that the seals on isolated IGU's at the second addition had failed resulting in the windows "fogging". On site staff report approximately 50 failed IGU's. It is recommended that these units be replaced in the near term.

The 50 failed IGU's represent about 20% of the total windows in the buildings. At 13 years, that is a fairly substantial rate of failure. It is anticipated that IGU's will continue to fail and is recommended that an allowance of 5 IGU's per year be budgeted for replacement.

At the original school building and first addition, above the brick at the first story, the painted wood fascia boards are in poor condition. The paint is worn off in many areas and the wood fascia is beginning to show signs of distress. These wood fascia boards must be repainted in the near term to stop further deterioration.

The fascia boards at the new addition are extremely discolored which appears to be mold. It is recommended that these fascia boards be power washed with a moldicide and repainted.

The painted T-111 exterior grade plywood siding on the Red Shed appeared to be in good condition. The paint on the Red Shed is beginning to show signs of wear. There is a single wood frame single pane window located on the south elevation of the shed. The paint and glazing on this window is badly deteriorated and the wood sill of the window has begun to warp and crack. The Red Shed should be painted in the near term and the window glazing and sill should be repaired at the same time. After painting and repairing the shed siding it should provide an additional 25 years of useful life with regular painting and maintenance.

The Wood Shed is not built on a foundation, but rather is set on wood sleepers directly on the ground. We observed preliminary signs of wood decay at the base of the shed. Without being set up off the ground, this decay will continue and accelerate. It is anticipated that the Wood Shed will need to be replaced during the mid term of the evaluation period. When the shed is replaced it should be set up on a foundation or blocks to keep the floor of the shed out of contact with the ground.

The band shell appeared to be in good to fair condition. Around the base of the band shell there is a plywood skirt. The skirt is in contact with the ground and is subject to exposure to moisture. Sections of the plywood skirt have begun to delaminate and decay. Wood finishes should never be in direct contact with the ground. It is recommended that the damaged plywood be removed and replaced with a cementitious panel in the near term.

The curved fascia board at the front edge of the stage is in poor condition and should be replaced at the same time that the skirt.

The exterior walls of the band shell are a painted or full body stained wood shingle. It was observed that sections of the wood shingle have been damaged and some shingle is missing. The remaining shingle appears to be in poor condition, exhibiting large gaps between shingles, displacement of shingles and general signs of wear. The shingle siding has reached its useful life and the band shell should be re-shingled in the near term of the evaluation period.

On either of the side walls of the band shell there are large framed openings. The openings are trimmed with wood molding. Large sections of the wood molding are damaged or missing. The damaged and missing molding should be replaced at the time the shingle siding is replaced.

At the conclusion of the foregoing repairs the entire band shell should be repainted both inside and out. Once the repairs and repainting are completed, with regular maintenance and painting the band shell should continue to provide another 25-30 years of useful life.

Inside the band shell the painted wood flooring is in fair to poor condition. This flooring is exposed to the weather experiences a fair amount of wear. It is anticipated that the wood flooring should be sanded and repainted at the mid and late terms of the evaluation period.

Exterior doors from the classrooms and common areas were a metal door with a full height vision window. Generally 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.

At locations where the exterior doors were a double door configuration, some doors were observed to either have worn or missing weather-stripping. A survey should be conducted and the weather-stripping replaced as required in the near term.

At the north end of the first addition in the mechanical/storage room there are small wood windows that are in fair to poor condition. The window paint and glazing has begun to fail. These windows require re-glazing and repainting in the near term.

At several of the double doors from hallways to the exterior, we observed that the weather-stripping between the doors was in poor condition or missing. The weather-stripping at these doors should be replaced in the near term.

At the Art Room, the VCT floor in front of the door to the courtyard exhibited staining and delamination indicating water infiltration beneath the door sill. The door sill should be removed and repaired to improved the waterproofing in the near 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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Repoint masonry at original school and first addition & repair damage brick	12500	SQFT	\$20	\$250,000	RM	2
2. Repairs to low brick pilasters	30	EA	\$750	\$22,500	RM	2
3. Repairs to tall brick pilasters	4	EA	\$750	\$3,000	RM	2
4. Recaulk brick masonry opening to aluminum window frame	5000	LF	\$8.00	\$40,000	RM	2
5. Replace fogged IGU's at windows	50	EA	\$1,350.00	\$67,500	RM	2
6. Allowance to replace fogged IGU's at windows	5	/YR	\$6,750.00	\$87,750	RM	2
7. Scrape & paint wood fascia board at original school and first addition	1600	LF	\$7.50	\$12,000	RM	2
8. addition	900	LF	\$7.50	\$6,750	RM	2
9. Repaint Red Shed vertical wood ship lap siding	3	EA	\$3,300	\$9,900	RM	1,6,13
10. Replace Wood Shed	1	LS	\$1,950	\$1,950	RM	6
11. Replace plywood skirt and curved fascia board at Band Shell	640	SQFT	\$3	\$1,760	RM	3
12. Replace wood shingle siding at Band Shell	1650	SQFT	\$15	\$24,750	RM	3
13. Repaint Band Shell Exterior and Interior	6200	SQFT	\$2	\$12,400	RM	3
14. Sand & repaint Band Shell floor	2	EA	\$3,000	\$6,000	RM	8,13
15. Repaint of exterior doors and frames	3	EA	\$3,200	\$9,600	RM	14
16. Repaint exterior windows at mechanical/storage room north end of	2	EA	\$250	\$500	RM	1
17. Repair weather-stripping at exterior double doors	4	EA	\$250	\$1,000	RM	1
18. Remove, repair, replace exterior sill at door to Art Room	1	EA	\$250	\$250	RM	1
Total				\$557,610		

5.4 Structural Systems

Description

At the time of the inspection it was not possible to review construction drawings for the Buckland Shelburne Elementary School. It appears that the school 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 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 ground on sleepers. The band shell appears to be wood frame on a foundation.

Observations/Comments

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

With the exception of the issues observed at the brick masonry exterior, we did not observe any visual signs of settlement, deflection, cracking or other indications of structural distress or failure.

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 Buckland Shelburne Elementary School has a variety of interior finishes and elements, some of which dates to the original construction and some which have been renovated and updated. These finishes are vary in age and appear to have been well maintained and are in good condition.

Interior finishes at common areas and hallways consist of asbestos composite tile (ACT) floors, clear sealed brick masonry walls and barrel vaulted 1'x1'concealed spline acoustic tile ceiling in the original school and first addition and vinyl composite tile (VCT) floors, brick masonry and painted CMU walls and a 2'x4' acoustic ceiling tile in a painted metal grid in the second addition.

Interior finishes at classrooms consist of asbestos composite tile (ACT) floors, painted CMU walls and a flat or vaulted 1'x1'concealed spline acoustic tile ceiling in the original school and first addition and vinyl composite tile (VCT) floors or carpet in some classrooms, and painted gypsum wall board (GWB) or concrete masonry unit (CMU) walls and a 2'x4' acoustic ceiling tile in a painted metal grid.

Interior finishes at the cafeteria consist of asbestos composite tile (ACT) flooring, clear sealed brick masonry walls and a 1'x1' concealed spline acoustic ceiling tile.

Interior finishes at the gymnasium consist of a synthetic "Mondo" flooring, painted concrete masonry unit (CMU) walls and a 2'x4' acoustic ceiling tile in a painted metal grid installed below a 1'x1' concealed spline acoustic ceiling tile.

Interior finishes at the Library consisted of carpet 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' acoustic ceiling tile in a painted metal grid at the low sections to the south of the main room.

Interior finishes at administrative offices consist of vinyl or asbestos composite tile (VCT or ACT, painted concrete masonry unit (CMU) with a 1'x1' concealed spline acoustic ceiling tile.

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 ACT flooring was in fair to poor condition. We observed large areas of ACT flooring in the original school and first addition that was cupping, delaminated or missing. The VCT flooring in the hallways of the second addition and in several kindergarten rooms was delaminated, cupping or had open joints.

It is recommended that all failed ACT be replaced in phases during the mid term of the evaluation period.

Vinyl flooring products can be expected to have a useful life of 30 years, for areas which did not exhibit distress, with continued maintenance those areas of flooring should last for another 17 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 at Rooms A11 & A13 where the joints in the vinyl sheet goods had begun to open. It is recommended that these areas be repaired.

There are four classrooms in the second addition that have carpet or partial carpet flooring. The carpet in these rooms is 13 years old and has exceeded its expected useful life of 10 years. It is recommended that the carpet be replaced in the near term and again in the late term of the evaluation period.

The flooring in the Library is also carpet and 13 years old. This carpet should be replaced in the near term and again in the late term of 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.

The ceilings of the classrooms and corridors/hallways of the original school and first addition are 1' x 1' concealed spline acoustic tile. This ceiling tile system is difficult to maintain, and it is expected that small areas of repair will be required annually.

The ceilings in the gymnasium and in the second addition are 2' x 4' acoustic tile in a painted metal grid. There is currently a small portion of the gym ceiling that is missing and/or damaged. It is expected that small areas of repair will be required annually.

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 Library walls are painted GWB and in original condition. These walls should be painted in the near and late term of the evaluation period.

The metal walk off mats at the exterior doors of the connector hallways between the original school and second addition have reached the end of their useful life. It is recommended that these be replaced in the near term.

The hallways of the original school and first addition have clear varnished wood closet doors and built in wood benches. It is recommended that these be sanded and varnished every five years due to the extensive wear experienced.

The boys and girls restrooms in the original school and first addition have glazed block walls. There are sinks and other restroom fixtures which have been removed and the remaining block walls have open holes

that have not been repaired. These holes should be repaired and the exposed plumbing properly terminated to avoid further damage.

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. Remove & replace ACT tile in classrooms in original building and first addition	25000	SQFT	\$12	\$300,000	RM	4,5,6
2. Replace damaged VCT in kindergarten room of second addition A11 and A13	2200	SQFT	\$8	\$17,600	RM	4
3. Replace damaged VCT in main corridor of second addition	1600	SQFT	\$8.00	\$12,800	RM	4
4. Replace carpet in 4 classrooms in second addition	2	EA	\$3,500.00	\$7,000	RM	1,11
5. Replace carpet in library	2	EA	\$10,000.00	\$20,000	RM	1,11
6. Replace damaged 2' x 4' acoustic tile in gymnasium ceiling	20	EA	\$5.00	\$100	RM	1
7. Allowance to replace 1' x 1' concealed spline tile	15	/YR	\$500	\$7,500	RM	41289
8. Allowance to replace 2' x 4' concealed spline tile	15	/YR	\$100	\$1,500	RM	41289
9. Repaint classroom walls, section (original, first and second addition) per phase	3	LS	\$20,000	\$60,000	RM	6,7,8
10. Repaint Library	2	EA	\$2,000	\$4,000	RM	4,14
11. Replace walk off mats at both connector halls	2	EA	\$1,800	\$3,600	RM	1
12. Sand and varnish wood closet doors and built in benches at original school and first addition	3	EA	\$7,500	\$22,500	RM	5, 10
13. Repair damaged glazed block walls at boys and girls rooms in original school	4	EA	\$500	\$2,000	RM	1
14. Replace Shades classroom shades (every 5 years)	600	EA	\$50	\$30,000	RM	1
Total				\$488,600		

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 in the original school building and first addition consist of epoxy floors or VCT floors, glazed block walls and a hard plaster ceiling. Restrooms in the second addition consist of VCT flooring, 4" x 4" ceramic tile on the walls to 6'-0" above the floor and painted GWB above and a 2' x 4' acoustic ceiling tile in an exposed painted metal grid.

Toilet partitions throughout are floor and wall mounted painted metal partitions.

Toilets and sinks are wall mounted white vitreous china fixtures with chrome flush valves and faucets.

Window blinds consist of individual and vinyl roller shades in the classrooms and in the library.

The school is equipped with a Simplex time clock system.

Kitchen equipment generally consists of a Star four (4) burner stove, soup kettle unit, Market Forge Steam cooker and warming oven, two (2) Vulcan electric convection ovens and miscellaneous equipment. There is a walk-in refrigerator/freezer and a commercial dishwashing unit. All kitchen equipment is operated on propane.

Observations/Comments

The finishes in the restrooms are in good 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 varies in age 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.

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	250	EA	\$90	\$22,500	RM	6
2. Replacement of library shading devices	24	EA	\$300	\$7,200	RM	6
3. Commercial Kitchen Equipment - replacement allowance (partial equipment replacement at 5 year increments)	2	EA	\$15,000	\$30,000	RM	10,15
Total				\$37,200		

5.7 Vertical Transportation

Description

The Buckland Shelburne Elementary School 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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. No Noted Issues				\$0		
Total				\$0		

5.8 Heating, Ventilation and Air Conditioning

Description

The Buckland Shelburne Elementary School 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) package terminal air conditioning or "PTAC" cooling systems manufactured by McQuay.

Heating is provided throughout the cafeteria and classrooms in the original building and first addition by unit ventilators equipped with hot water coils. The gymnasium is heated by a 1958 air handling unit equipped with hot water heating coils located in the attic near the entrance to the cafeteria.

The second addition, its common corridors and the library are heated and cooled by air handling units equipped with a hot water and a roof top condensing unit, both of which are located in a mechanical room in the second addition. These air handling units were installed during the construction of the second addition, are manufactured by McQuay and are 13 years old. The condensing units for these air handlers are located on the roof of the second addition.

The Buckland Shelburne Elementary School implemented an upgrade to its mechanical systems and boiler in 1999. Hot water for heating is manufactured by two (2) Weil McLein 1,892MBH oil fired boilers located in the boiler room. The boilers were installed in 1999 and are 13 years old. The boilers are operate in a lead/lag configuration to balance run time. The 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 10,000 gallon double wall underground storage tank (UST) with leak detection and alarms that is located under the parking lot. The leak detection alarm light is located outside on the wall directly opposite the boiler room.

Hot water for heating is circulated by three (3) Bell & Gosset 10 horsepower pumps which circulate water at 75 GPM. The school currently operates on Pumps #1 & 3 only.

The building original building and first addition were constructed with utility tunnels incorporated into the foundation design. Hot water circulates to the perimeter of the building through the utility tunnels.

The hot water heating system has an automated water treatment system. Controls are Johnson Metasys which control the boiler operation with hot water temperature tied to outside air temperature and day/night set back. Pneumatic controls on unit ventilators operate by local thermostats. There is a compressor in the boiler room which powers the pneumatic controls which was installed during the 1999 renovation.

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 PTEC units serving the administrative areas are 13 years old and appear to be in fair to poor condition. These units have an expected useful life of 15 years. It is recommended that the PTEC units be replaced in the mid term of the evaluation period.

It was reported that the condensing units for the McQuay air-handling unit serving the library was no longer functioning. It was further stated that the school had purchased a commercial dehumidifier to keep the library dry during days of high humidity. It is recommended that the damaged condensing unit for AHU #2 be replaced and the air conditioning system be restored to operation in the near term.

The air handling units that serve the classrooms and library in the second addition were installed in 1999 will reach 30 years of service at the end of the evaluation term. It is recommended that these air handling unit be rebuilt at that time, to include new motor, bearings etc.

It was reported that the air handling unit for the gymnasium was original construction and may have been refurbished during the 1999 mechanical upgrade. The unit is reportedly controlled by a thermostat located in the gymnasium, however it was stated that the thermostat is not functional and the unit is operated on bypass off return air temperature. This should be repaired to restore the thermostat to operation and improve energy performance.

The air handling unit which serves the gymnasium is 44 years old and was reportedly rebuilt in 1999 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.

There is damaged insulation on the ductwork from this unit; this ductwork should be re-insulated.

The unit ventilators in the original and first addition are 44 and 37 years old. The unit ventilators are composed of a hot water coil, one to three circulating fans and one or more outside air dampers operated by pneumatic controls tied to local thermostats. These units will require periodic repair and replacement of the component parts (fans or damper actuators). It is recommended that the units be re-commissioned to ensure that they are operating as originally intended and then recommend an annual budget for repair and replacement be provided.

The two hot water boilers serving the building are 12 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. The facility has three hot water circulating pumps, however it is reported that it is currently operating on just pumps #1 & #3. Pump #2 was reported to have failed seals. We recommend budgeting for Pump #2 to be rebuilt immediately and for the remaining two pumps to be rebuilt in the near term. It should be budgeted to replace two of the three 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 Johnson Metasys 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 compressor for the pneumatics system appears to be in good condition and is approximately 13 years old. Compressors have an expected useful life of 15 years, and it is anticipated that the compressor will require replacement in the near term 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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Replace PTEC Units	5	EA	\$3,500	\$17,500	RM	4
2. Replace condensing unit for AHU#2	1	LS	\$7,500	\$7,500	RM	2
3. Rebuild McQuay air handling units #1 and #2	2	EA	\$3,000	\$6,000	RM	14
4. Repair gymnasium air handling unit controls to work on thermostat no return air	1	EA	\$2,000	\$2,000	RM	1
5. Rebuild gymnasium air handling unit	1	EA	\$3,500	\$3,500	RM	14
6. Replace damaged and missing insulation on gymnasium air handling	1	EA	\$250	\$250	RM	1
7. Recommission unit ventilators	1	LS	\$15,000	\$15,000	RM	1
8. Allowance to repair/rebuild unit ventilators	50	EA	\$600	\$30,000	RM	1-5
9. Replace burners on oil fired boilers	2	EA	\$5,000	\$10,000	RM	10
10. Rebuild hot water circulating Pump #2	1	EA	\$2,500	\$2,500	RM	1
11. Replace burners on oil fired boilers	2	EA	\$5,000	\$10,000	RM	10
12. Rebuild hot water circulating pump #2	1	EA	\$1,500	\$1,500	RM	1
13. Rebuild hot water circulating pumps #1 and #3	2	EA	\$1,500	\$3,000	RM	3
14. Replace hot water valves	10	EA	\$250	\$2,500	RM	2
15. Replace Johnson Metasys controls	1	EA	\$10,000	\$10,000	RM	12
16. Replace toilet exhaust fans	4	EA	\$2,500	\$10,000	RM	10
Total				\$131,250		

5.9 Plumbing Systems

Description

Domestic water for the Buckland Shelburne Elementary School is delivered from the Town municipal water system. A two-inch (2") incoming water service to the boiler room provides domestic water. The domestic water line is equipped with a backflow preventer. 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 50 gallon Boch 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) Symmons 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 exits by gravity to a 12" municipal sewer system operated by the Town.

Observations/Comments

Generally the plumbing and domestic water systems appear to be in good to excellent condition.

Commercial oil fired hot water heaters have an expected useful life of 15 years. 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 15 years. The current hot water storage tanks have reached the end of their useful life, and while they may continue to operate for several years, replacement should be anticipated in the mid-term 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.

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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Replace oil fired domestic hot water heater	1	LS	\$5,000	\$5,000	RM	7
2. Replace domestic hot water storage tanks	2	EA	\$2,500	\$5,000	RM	4,6
3. Replace missing insulation on kitchen hot water circulating pipe	1	LS	\$250	\$250	RM	0
4. Rebuild domestic hot water circulating pumps	2	EA	\$2,500	\$5,000	RM	2,3
5. Replace domestic hot water mixing valves	3	EA	\$1,000	\$3,000	RM	12,13,14
Total				\$18,250		

5.10 Fire Protection

Description

The Buckland Shelburne Elementary School 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				
	Qty	Unit	Unit Cost	Total Cost	Cat Year
1. No Noted Issues		SF		\$0	
Total				\$0	

5.11 Electrical System, Telephone & Security

Description

The main electrical service for the Buckland Shelburne Elementary School is located in a combined electric/fire alarm/tel/datat closet off the gymnasium. The main electrical service is 600 amps which feeds two (2) main disconnects rated at 400 amps at 120/208 volt, three phase, four wire services in a panel which feeds panel DP and Pane TP and TPA.

Panel DP in turn feeds convenience power and lighting throughout the school. Panel TP and TPA are located in the boiler room and feeds the mechanical room loads and loads for classroom unit ventilators.

Emergency lighting is provided via a combination central battery and individual battery operated wall mounted emergency light fixtures. The battery for the central battery operated emergency lights is located in the custodian's office and serves the original school and first addition. The second addition has individual battery operated emergency lights.

Observations/Comments

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

The emergency lighting in the original school and first addition are a central battery operated system. The batteries in central systems have an expected useful life of 10 years. The central batteries should be replaced in the near term.

The emergency lighting system in the second addition is composed of localized individual battery operated fixtures. The batteries in these fixtures have an expected useful life of 5 years. It was reported that some of these fixtures have been switched to LED style fixtures. It anticipated that the program to replace these fixtures will continue, and we have not budgeted any cost for this work at this time.

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.

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. Replace main central battery on emergency lighting in original school and first addition	1	EA	\$500	\$500	RM	3
2. Infrared testing for main switchgear and distribution every five years	3	/YR	\$1,500	\$4,500	RM	1,6,11
3. Inspect and repair fire safing at electrical and tel/data closets	1	LS	\$500	\$500	RM	1
4. 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				\$6,250		

5.12 Lighting

Description

Lighting is provided via a combination of recessed, surface mounted and pendant style fluorescent =light 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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1 No Noted Issues				\$0		
Total				\$0		

5.13 Fire Alarm System

Description

The building is equipped with a fully addressable Simplex 4020 fire alarm system which is connected to a City master box. The system has two (2) Simplex 4009 N.A.C. power extenders. The head end for the fire alarm system is located in the custodian's office. The fire alarm system underwent its annual test 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. The battery was replaced recently. It is recommended that the battery be replaced in the mid term of the evaluation period.

The fire alarm system was installed in 1999 and is currently 13 years old. The fire alarm end devices have an expected useful life of 10 years and it is anticipated that a small number of end devices will require replacement annually beginning in the mid term of the evaluation period.

The fire alarm system was installed in 1999 and is currently 13 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					
	Qty	Unit	Unit Cost	Total Cost	Cat	Year
1. Install missing F/A devices, heat & smoke detectors as required	10	EA	\$1,250	\$12,500	RM	1
2. Replace Fire Alarm Battery Back Up	1	EA	\$1,500	\$1,500	RM	7
3. Replace fire alarm end devices annually	2	/YR	\$500	\$15,000	RM	1-15
4. Replace Fire Alarm system head end	1	LS	\$35,000	\$35,000	CE	14
Total				\$64,000		

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.