



Lunenburg Primary School

30 School Street
Lunenburg, MA 01462

Property Condition Assessment

February 6, 2018

PREPARED FOR:

Town of Lunenburg
17 Main Street, P.O. Box 135
Lunenburg, MA 01462

PREPARED BY:

The Vertex Companies, Inc.
400 Libbey Parkway
Weymouth, MA 02189

PHONE 781.952.6000

VERTEX Project No: 48237

February 6, 2018

Town of Lunenburg
17 Main Street, P.O. Box 135
Lunenburg, MA 01462
Attn: Heather R. Lemieux

Re: Property Condition Assessment
Lunenburg Primary School
30 School Street
Lunenburg, MA 01462
VERTEX Project No. 48237

Dear Ms. Lemieux:

The Vertex Companies, Inc. (VERTEX) is pleased to submit this Property Condition Assessment (PCA) report for the above referenced property (the site).

Our work was conducted in general conformance with P.2489.17, dated September 29, 2017, and in general accordance with the provisions of ASTM E2018-15 (Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process) for commercial real estate.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this report.

Sincerely,
The Vertex Companies, Inc.



Philip Russo, R.A.
Field Observer & Report Author
Project Manager



Matthew Quigley, PE
Field Observer & Report Author
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1.0 EXECUTIVE SUMMARY

The VERTEX Companies, Inc. (VERTEX) performed a Property Condition Assessment (PCA) of Lunenburg Primary School located at 30 School Street in Lunenburg, MA, on December 13, 2017. Overall, the property and improvements appeared to be in poor condition with respect to age, use and location.

A table of salient information associated with the project is presented below and utilized throughout this report.

SALIENT PROPERTY INFORMATION	
Property Name:	Lunenburg Primary School
Location/Address:	30 School Street Lunenburg, MA 01462
Construction Year(s):	1928
Property Type:	Primary School
Number of Units:	Not Applicable
Reported/provided Building Area (SF):	11,700 (Prior Condition Report)
Reported/provided Site Area (Acres):	2.4 (Property Record Card)
Surrounding Property Usage:	Retail, vacant land, agriculture, commercial, residential, recreational
Utility Service:	
	Gas: Not Applicable
	Electric: Unitil
	Water: Lunenburg Water District
	Sanitary: Septic system
	Storm: Town of Lunenburg

The “Quick Look Summary Checklist” presented on the following page, is intended to provide a general, objective* evaluation based on the issues identified at the property and their associated projected costs. Recognizing that the evaluation is general in nature, and subject to the limitations of the assessment as well as cost estimating accuracies, the Summary is simply calculated utilizing a modification of the recognized Facility Condition Index (FCI) utilized by many professionals to evaluate the condition of buildings or groups of buildings. For this assessment, issues identified (Immediate, ADA and Capital Needs) were categorized by building system in

appropriate sections of the report and Cost Table 1. The sum of dollar values for these issues was then divided by an estimated value for building replacement costs, weighted each building category. The following definitions were utilized for these ratings.

- **Good:** Aggregate of identified issues is less than 5% of total replacement costs estimated for the associated system.
- **Fair:** Aggregate of identified issues is greater than 5% and less than 10% of total replacement costs estimated for the associated system.
- **Poor:** Aggregate of identified issues is greater than 10% of total replacement costs estimated for the associated system.

**It is important to note that the ratings assigned in the Quick Look Summary are objective measures based solely on projected dollar amounts relative to total system replacement costs. These ratings may differ from our overall subjective opinion of the condition of the same system or category identified in the text descriptions and discussions in Section 5 of this report.*

"QUICK LOOK" PROJECT SUMMARY AND ESTIMATE OF PROJECTED COSTS

Site Name:	Lunenburg Primary School	# Buildings:	1
Site Location:	Lunenburg , MA	Est. Bldg Area, SF:	11,700
Building Age, yrs:	89	Eval. Term, Yrs:	5
Building Type:	School/Office	Per SF replace cost:	\$227

GENERAL CATEGORY	SUMMARY RATING				# Items	Immediate Needs Estimate	# Items	Capital Needs Est., Uninflated
	G	F	P	NA				
SITE DEVELOPMENT	X				1	\$4,942	2	\$7,926
BUILDING STRUCTURE		X			2	\$37,604	0	\$0
BUILDING EXTERIOR			X		4	\$172,116	4	\$21,527
ROOF			X		4	\$101,540	0	\$0
BUILDING INTERIOR			X		1	\$308,400	8	\$609,918
MECHANICAL SYSTEMS			X		2	\$113,100	1	\$134,166
ELECTRICAL SYSTEMS			X		3	\$168,464	0	\$0
PLUMBING SYSTEMS	X				1	\$1,753	1	\$1,343
CONVEYANCE				X	0	\$0	0	\$0
LIFE SAFETY / FIRE PROTECT			X		3	\$119,361	0	\$0
ANCILLARY STRUCTURES				X	0	\$0	0	\$0
OVERALL RATING / TOTALS			X		21	\$1,027,280	16	\$774,879
ADA IMPROVEMENTS					5	\$73,501		

This "Quick Look" Summary is intended to provide an overall picture of the number of identified and quantified issues at the subject property. The summary ratings above are objective, and are based on the aggregate estimated dollar amount for identified repairs associated with each category. The definitions used for these summary ratings are based on a modified Facility Condition Index (FCI) which is calculated by dividing aggregate costs for Immediate and Short Term Needs by a simply modeled replacement cost value weighted for each category and based on building type.

FCI = $\frac{(\text{Immediate Needs} + \text{Short Term Needs}^*)}{\text{Replacement Cost}^{}}$**

GOOD: 0 to 5 percent
FAIR: 5 to 10 percent
POOR: 10 to 100 percent

*Capital Needs identified in Years 1 and 2 including ADA
** For each individual building category

Overall Property FCI = 70%



2.0 PURPOSE AND SCOPE OF SERVICES

2.1 PURPOSE

The purpose of the Property Condition Assessment (PCA) was to observe and document readily visible material and building system defects that might significantly affect the value of the property. The PCA also assessed existing conditions that might have a significant impact on the continued operation of the facility during the requested term of assessment. The requested term of assessment for this report was five years.

It is understood that the Client is considering the appropriate renovation or re-use of the property described in this report. The report will be utilized to assist with planning decisions, as well as provide information for future capital planning.

Observations performed during the PCA were made without operational testing and/or removing or damaging components of the building systems. Consequently, some system specific assumptions were made regarding the existing conditions and operating performance of each system. Furthermore, recommendations developed for this report were based on information discovered during the PCA. If additional information is discovered concerning the facility, the assumptions, conclusions, and recommendations presented herein may require re-assessment.

The building was vacant and had been for a considerable amount of time. The re-use of the building is being considered but an actual use has not been determined. The recommendations and opinions of cost provided in this report were based on the understanding that the facility will be stored to a vanilla shell suitable for office or classroom space, which would require additional fit out and improvement to accommodate the new use.

2.2 SCOPE OF SERVICES

The PCA included the following: site reconnaissance; limited interviews with property management and maintenance personnel; and a review of available construction documents as provided by the building management. Operational testing of building systems or components was not conducted. Although the building was visually reviewed for suspected hazardous materials, sampling was not conducted and thus, this PCA does not confirm the presence or absence of asbestos, polychlorinated biphenyls (PCBs), mold, or contaminated soils or groundwater on the property.

During the PCA, unless noted otherwise, VERTEX made visual observations of the following facility features: site development systems; building structure systems; building exterior systems; building interior systems; roof systems; mechanical systems; electrical systems; plumbing systems; conveyance systems; and, life and fire safety systems.

VERTEX utilized ASTM E2018-15 as a guideline for the evaluation of the building. This recognized assessment protocol gives specific guidance for the condition assessment of buildings, and provides a framework for an objective and repeatable methodology from an independent assessor.

2.3 REPORT RELIANCE

This report is intended for review as a complete document. Therefore, interpretations and conclusions drawn from the review of any individual section are the sole responsibility of the user.

2.4 DEVIATIONS FROM THE GUIDE

ASTM E2018-15 “Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process,” was utilized as a guideline for the site visit and associated report preparation. ASTM requires that deviations from the guidelines be stated in the report.

The following items were not required by the ASTM standard but were provided as part of this PCA at the request of the client or as value added considerations.

- ★ The field observations were performed by registered professional staff
- ★ Determination of USGS Seismic Hazard and IRC Termite Zone
- ★ A Capital Needs Assessment with a term length of five-years was performed
- ★ A visual review of specific accessibility related issues and general compliance was performed

2.5 INACCESSIBLE AREAS / OBSERVATION LIMITATIONS

Representative observations were made at the facility in accordance with ASTM E2018-15. The following areas were not accessed, or access was limited during the site visit.

- ★ Roof (due to pitched conditions)
- ★ Landscaping (due to snow cover)

2.6 AREAS REVIEWED

Observations of the various systems, materials and building areas were performed as part of the site walk-through. Site observations of similar portions of the building or similar systems or materials were performed until, in VERTEX's professional opinion, a representative sampling was adequate for extrapolation to the remainder of the building.

3.0 REPORT INFORMATION

3.1 ASSESSMENT DEFINITIONS

- GOOD:** Material or building system was in average to above-average condition. Opinion is rendered with consideration to the item’s type, age, design, and location. Generally, other than normal maintenance, no work is recommended or required.
- FAIR:** Material or building system was in average condition. Some work is required or recommended, primarily due to normal aging and wear of the building system, to return the system or material to a good condition.
- POOR:** Material or building system was in below average condition. Significant work is anticipated to return the building system or material to an acceptable condition.

Unless stated otherwise in this report, the material and building systems reviewed were considered to be in good condition and their performance appeared to be satisfactory.

3.2 COMMON ABBREVIATIONS/ACRONYMS

ALEC	Aluminized Emulsion Coating	HP	Horse Power
AC	Alternating Current	HVAC	Heating Ventilation & Air Conditioning
ASHRAE	American Society of Heating, Refrigeration & Air Conditioning Engineers	IN	Inches
A/V	Audio Visual Device	IRMA	Inverted Roof Membrane Assembly
BLDG	Building	KVA	Kilo-volt Amp
BOCA	Building Officials & Code Administrators (Building Code)	KW	Kilowatt
BTU	British Thermal Unit (HVAC / MEP)	LF	Linear Feet
BUR	Built-Up-Roof	LS	Lump Sum
CF	Cubic Feet	MBH	1,000 BTUs per Hour
CIP	Cast Iron Pipe	MEP	Mechanical, Electrical, Plumbing
CMP	Corrugated Metal Pipe	MIL	1/1000 th of an inch
CMU	Concrete Masonry Unit	MP	Manual Pull Station (fire alarm)
CY	Cubic Yard	PSI	Pounds per square inch
DC	Direct Current	PVC	Poly-Vinyl-Chloride (pipe)
DIP	Ductile Iron Pipe	QA/QC	Quality Assurance/Quality Control
DM	Deferred Maintenance	RCP	Reinforced Concrete Pipe
DX	Direct Expansion (air conditioning)	RUL	Remaining Useful Life
EIFS	Exterior Insulation & Finish System	SOG	Slab-on-grade
EMS	Energy Management System	SF	Square feet
EPDM	Ethylene-Propylene-Diene-polymer-Monomer (“rubber” roofing)	SY	Square Yard
EUL	Estimated Useful life	TN	Ton (12,000 BTU cooling, HVAC)
FT	Feet	UBC	Uniform Building Code
HID	High Intensity Discharge (lighting)	VAT	Vinyl Asbestos Tile
		VAV	Variable Air Volume (HVAC)
		VCT	Vinyl Composition Tile
		VWC	Vinyl Wall Covering

3.3 REPORT TENSE

This report was prepared in the past tense as it is intended to only describe observed conditions at the time of the site reconnaissance.

3.4 OPINIONS OF COST

The cost tables associated with the PCA include total amounts for *Immediate Repair* items, *Short-Term Repair* items, and *Capital Needs*. A separate cost table (Table 2) is provided to address accessibility issues.

Immediate Repair items are defined as physical deficiencies that cannot be remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property. Immediate Repair items are typically considered to be: (1) material existing or potential unsafe conditions resultant from damage or deterioration (2) material building or fire code violations as revealed by municipal agencies; or (3) conditions that if left unremedied, have the potential to result in or contribute to critical element or system failure within one year, or will result most probably in a significant escalation of its remedial cost.

Short-Term Repairs are defined as physical deficiencies, such as deferred maintenance, that may not warrant immediate attention, but require repairs or replacements that should be undertaken on a priority basis in addition to routine preventative maintenance. In some cases, Short-Term repairs may include recommendations for testing, exploratory probing, and/or further analysis. Generally, the expected time frame for Short-Term Repairs is within one to two years.

Capital Needs are those items of a capital nature which are expected to require repair, renovation or replacement during the requested evaluation term, in this case five years.

ADA/MAAB Items are those items that would be required to upgrade or update existing systems to provide improved accommodations for handicapped persons.

The opinions of cost presented herein were based on readily visible material and building system defects that might significantly affect the value of the property during the requested assessment term. These opinions were based on approximate quantities and values, and do not constitute a warranty or guarantee that all item(s) requiring repair were included. The estimated costs developed in this report were for the aforementioned Immediate Repair items, Short-Term

Repair items, Capital Needs and ADA/MAAB items. Items not incorporated into the cost tables include operational costs, such as landscaping maintenance and utility (gas or electricity) usage, unpredictable (aesthetic) upgrades, or normal operation and maintenance. The availability of parts or qualified personnel for repairs or renovations may be limited and is not factored into cost estimates unless specifically stated.

Estimated costs were developed with published unit price data and industry experience as summarized below.

Estimating/Quantity Take Off: Costs for selected items were estimated based on provided documentation, general calculations of capacity, area, size or other item features, and VERTEX's experience with buildings of similar size, construction and geographic location.

Like-with-Like Replacement: This assessment was not an attempt to design or address future programming needs, but rather an objective, independent assessment of the current condition of the buildings with a focus on repair, renovation or replacement of building materials, components or systems that have reached or are expected to reach the end of their useful lives in the next five (5) years.

Primary Estimating Source: RS Means 2017 Commercial Cost Renovation Data was utilized as the primary resource and some costs were modified based on our local experience. Unit costs were standardized for the geographic area and for prevailing wage rates and a percentage escalation was added for uncertainty.

It is important to understand that actual costs will vary depending on such factors as contractor expertise, previous contractor commitment, seasonal workload, insurance and bonding, and local labor conditions. These factors may cause wide variations in the actual costs as estimated by different bidders. In addition, since some projected projects may not require general contracting or significant design, GC soft costs (overhead & profit, bond and insurance, general conditions), design fees, owners project management fees and other potential fees are not included in these estimates. In view of these limitations, the costs presented herein should be considered "order of magnitude" estimates and used for preliminary budgeting purposes only. Preparation of scopes of work and contractor bidding are recommended to forecast actual costs.

3.5 ACTIVE CONSTRUCTION

The building was complete, and areas of active construction were not observed during the on-site visit.

4.0 ASSESSMENT INFORMATION

4.1 GENERAL SUMMARY

The VERTEX Companies, Inc. (VERTEX) performed a Property Condition Assessment (PCA) of Lunenburg Primary School located at 30 School Street in Lunenburg, MA, on December 13, 2017. Overall, the property and improvements appeared to be in poor condition with respect to age, use and location.

In our opinion, the Site Contact (Owner's Representative) was fully familiar with the building's operation, condition and associated systems. Our conclusions are based on our visual observations, statements by on-site personnel, review of available records, and limited documentation obtained during the course of follow-up research.

4.2 SITE RECONNAISSANCE

The site reconnaissance portion of the PCA was performed on December 13, 2017, by Philip Russo, R.A., Matthew Quigley, PE, and Jason Mohre, all of VERTEX. Weather conditions during the site reconnaissance were as follows:

On-site Date	Weather Description	Average Temp.
December 13, 2017	Sunny	30° F

The following building features were assessed, if applicable.

- Exterior Site Elements
- Building Structure System
- Building Exterior System
- Roof System
- Mechanical System
- Electrical System
- Plumbing System
- Building Interior System
- Life & Fire Safety System
- Conveyance System

4.3 BUILDING HISTORY

According to the Site Contact, the building has functioned as a school building since construction in 1928. The building was observed to be in a state of disrepair and reportedly had been vacant since 2005. The building was observed to have been vandalized and reportedly used for SWAT exercises. All utilities and services have been turned off except for limited electrical service.

4.4 INTERVIEWS

Interviews were conducted with personnel familiar with the facility to obtain information relative to the condition of the various building systems. Information obtained during the interviews has been incorporated into this report in the applicable sections. The following individuals or agencies were interviewed or contacted.

- Jack Rodriquenz, DPW Director, Town of Lunenburg (Site Contact)
- Adam Burney, Land Use Director, Town of Lunenburg
- John Londa, Director of Facilities, Town of Lunenburg
- Jim Breault, Facilities Manager, Town of Lunenburg

4.5 PRE-SURVEY QUESTIONNAIRE AND REQUEST FOR DOCUMENTATION

Due to ownership of the building and property by the municipality, VERTEX opted not to issue a Pre-Survey Questionnaire and Request for Documentation (PSQ). Information relating to the property history was obtained from other sources as documented in this report.

4.6 DOCUMENTS

The following documents were provided or discovered during VERTEX’s research of the property history.

Description	Author	Date	Reviewed	
			No copy obtained	Copy obtained
Flood Insurance Rate Map (Community Panel # 2503150005B)	Federal Emergency Management Agency	June 15, 1982		✓
Building Assessment & Space Needs Study	Tappe Architects	January 11, 2016		✓
Property Record Card	Lunenburg Board of Assessors	December 21, 2017		✓

4.7 MUNICIPAL RESEARCH & CODE COMPLIANCE

A detailed analysis of whether or not the building and site is compliance with current codes was not performed as part of this assessment. Code compliance research and evaluation was limited to the following.

- a) Visual observation of materials, components or systems that due to obvious deterioration or damage have resulted in an unsafe condition. Such conditions must have been visible without probing, dismantling or uncovering or unblocking access, and must not have required specialized knowledge of any particular code or any measurement or calculation for dimensional, clearance, or other compliance.

Issues of unsafe conditions related to visual deterioration or damage, if observed, are identified and discussed in the various sections of this report specific to the material, component or system.

4.8 SITE CHARACTERISTICS

General site characteristics including site topography, flood zone, seismic considerations, and termite considerations are tabulated and discussed below.

Topography

In general, the property sloped downward from the north to the south. Grass covered slopes defined grade changes in selected locations.

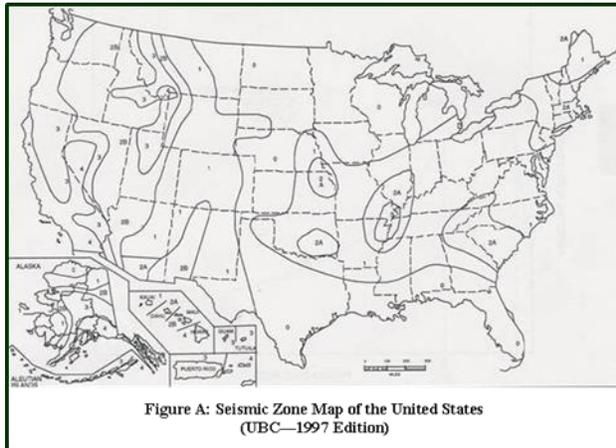
Flood Zone

VERTEX visually plotted the general property location on FEMA Flood Insurance Rate Map. This should not be considered a flood zone certification. Actual determination of flood zones should be performed by a registered surveyor.

Subject Property Flood Zone: Zone C, defined as an area of minimal flooding.

Seismic Considerations

The probability of ground damaging motion within each Seismic Zone is defined below based on the Seismic Zone Map in Figure A, (1997 Uniform Building Code).



- (0 or 1) low probability
- (2A) low to moderate probability
- (2B) moderate probability
- (3) moderate to high probability
- (4) high probability

While there are more recent seismic risk maps, they generally require specific information on the seismic response characteristics of the site and structure. For ease and consistency, and

comparison with previous standards, the ASTM standards associated with Probable Maximum Loss (PML) seismic studies, rely on this 1997 map.

The subject property for this evaluation was located in Seismic Zone:

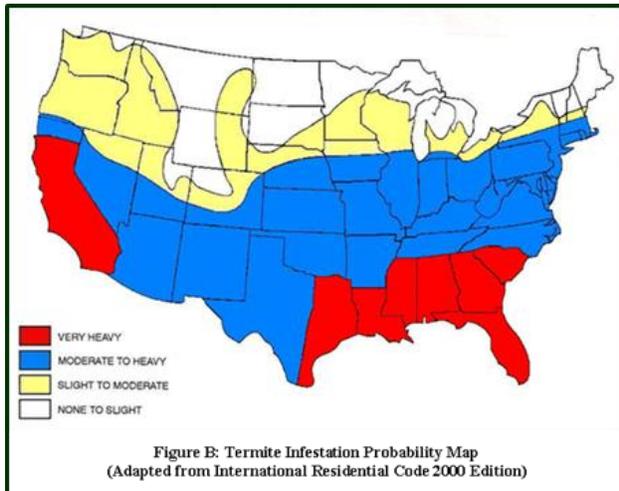
2A

In general terms, those properties located in Zones 3 and 4 have a greater risk of ground damaging motion, and PML studies are typically recommended in these zones. Based on the property location, a PML is not recommended for this site.

Termite Considerations

Termite Zones identified in the 2000 International Residential Code (IRC) are shown in Figure B. Based on the general location, the subject property is located in the following Termite Infestation Region:

Moderate to Heavy



The foundation and exterior walls of the building are constructed with concrete, steel, masonry and glass, which may serve to minimize the risk of building damage due to wood destroying insects.

We did not observe evidence of wood destroying insect activity, and none was reported; however, in the event that certification of the absence or present of termite activity is required, a licensed pest

inspection professional should be engaged to perform a formal survey.

4.9 CLIENT SPECIFIC INFORMATION

After the completion of our site visits, the Town of Lunenburg requested cost information relating to the demolition of this building. VERTEX developed a general rough 'order of magnitude' estimate for demolition, tabulated as follows. These costs would be incurred after completion of abatement of hazardous materials, which are outlined in Table 1 and discussed in Section 5.5, Building Interior, Hazardous Material Considerations.

Building	Sq. Ft.	Demolition Labor and Contractor Cost	Trucking and Disposal	Total Budget Cost
Lunenburg Primary School	11,700	\$36,785	\$22,638	\$59,422

5.0 SYSTEM DESCRIPTION AND CONDITION

The following sub-sections describe the major building systems as observed during the PCA. Comments and/or recommendations offered by VERTEX regarding each system are presented immediately after each description in italic print. Each deficiency is assigned an item number and is cross-referenced in Table 1. Numbered photographs are presented in Appendix A and cross-referenced in Table 1.

5.1 SITE IMPROVEMENTS

Site development systems are those that relate to geographic features of the property and surrounding area, and improvements that serve ancillary roles for the facility. Components of the observed site development systems included paving and parking, sidewalks, retaining walls and fencing, signage, loading docks and dumpster areas, irrigation systems, site lighting and utilities, landscaping, and surface drainage. Operational testing of site development components was not conducted. Clear lines of property demarcation were not provided and as such, our observations relating to the site grounds and surrounding amenities are to be considered approximate.

SITE IMPROVEMENTS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Site Access	The site was accessed from the south end of School Street. The site was easily accessible from major area roadways. The site was located within five miles of Route 2.	G	
Parking	Parking was provided on open surface lots on the north side of the building. Painted striping was provided to delineate parking stalls and directional markings. The site had a reported total of 20 surface parking spaces, none of which were specifically designated for handicapped use.	G	
Asphalt Pavements	The parking lots, driving lanes and access roads serving the property were constructed with asphalt. Information relating to the materials and thicknesses utilized in the construction of the pavement section was not available.	G to F	

SITE IMPROVEMENTS																																												
Item	Description of System or Component	Overall G, F, P	Cost Item #																																									
	<p><i>In general terms, the asphalt pavement areas appeared to be in good to fair condition. We observed the following types of deterioration in relation to <u>asphalt pavement conditions</u>.</i></p> <table border="1"> <thead> <tr> <th colspan="5">Observed ASPHALT Pavement Deficiencies</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>Surface Weathering</td> <td></td> <td>Potholes</td> <td>X</td> <td>Transverse Cracks</td> </tr> <tr> <td></td> <td>Loss of Aggregate</td> <td></td> <td>Rutting</td> <td>X</td> <td>Longitudinal Cracks</td> </tr> <tr> <td>X</td> <td>Map Cracking</td> <td>X</td> <td>Alligator Cracking</td> <td>X</td> <td>Random Cracks</td> </tr> <tr> <td></td> <td>Birdbaths</td> <td></td> <td>Heaving</td> <td></td> <td>Vegetation Growth</td> </tr> <tr> <td colspan="6" style="text-align: center;"><i>Conditions Observed were: Moderate</i></td> </tr> <tr> <td colspan="6" style="text-align: center;"><i>Extent of observed deficiencies: Scattered Locations</i></td> </tr> </tbody> </table> <p><i>We did not observe any asphalt conditions that appeared to require immediate repairs; however, longer term repairs and asphalt pavement renovations should be expected during the evaluation term. Budgetary allowances and forecasts for implementation are included in Table 1.</i></p>	Observed ASPHALT Pavement Deficiencies					X	Surface Weathering		Potholes	X	Transverse Cracks		Loss of Aggregate		Rutting	X	Longitudinal Cracks	X	Map Cracking	X	Alligator Cracking	X	Random Cracks		Birdbaths		Heaving		Vegetation Growth	<i>Conditions Observed were: Moderate</i>						<i>Extent of observed deficiencies: Scattered Locations</i>							1, 2
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Concrete Pavements	Not Applicable.	N/A																																										
Sidewalks	<p>The property was snow covered at the time of our assessment. A few areas of exposed sidewalk were observed and indicated an area of cast-in-place concrete at the front of the building.</p> <p><i>The observed concrete sidewalks appeared to be in good overall condition requiring routine cleaning, repairs and maintenance during the evaluation term.</i></p>	G																																										

SITE IMPROVEMENTS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Curbs	Not Applicable.	N/A	
Fencing	A chain link fence was observed at the south side of the property. The fence provided privacy. <i>Observed fencing appeared to be in good condition requiring routine inspection, repairs and maintenance during the evaluation term.</i>	G	
Retaining Walls	Not Applicable.	N/A	
Drainage	The building roof areas and landscaped areas drained into the landscaping. Open parking surfaces drained to an underground, on-site storm drainage collection system that discharged to the municipal storm water management system. <i>Rooftop drain discharges, inlets and drainage collection structures were visible, free from debris, and appeared to be in good overall condition. Regular inspection and maintenance of drainage components and clearing of the inlets and drainage paths will be required during the evaluation term as part of routine maintenance.</i>	G	
Utilities	Electric, water, and storm sewer services were provided to the site. <ul style="list-style-type: none"> • Water provider: Lunenburg Water District • Electric provider: Unitil • Sanitary sewer provider: On-site Septic System at the south side of the site • Storm sewer provider: Town of Lunenburg 	G	
Exterior Lighting	Lighting was provided at the sides and rear of the building. Observed fixtures consisted of wall-mounted units located above the secondary entrance doors.	P	

SITE IMPROVEMENTS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>The light fixtures appeared to be in poor condition with evidence of corrosion. Immediate replacements are recommended, and estimated costs are included in Table 1 as an item of Immediate Repair.</i>		3
Landscaping	The property was snow covered at the time of our assessment. A few areas of exposed landscaping were observed and indicated areas of grass and shrubs along the perimeter of the building. <i>The observed landscaping elements appeared to be in good overall condition and were well-maintained.</i>	G	
Swimming Pools	Not Applicable.	N/A	
Recreational Facilities	Not Applicable.	N/A	

5.2 BUILDING STRUCTURE

Structural issues are related to those building components that transfer loads within a building and to the underlying ground. Loads may be the result of constant forces such as the weight of the building or other stationary objects within the building (dead loads), or variable forces such as people, operational equipment, vehicular activity or wind (live loads). The building structure assessment included the review of available geotechnical reports and drawings depicting the foundation, floor slab, and framing systems. Visual observations of exposed features were also performed when possible.

BUILDING STRUCTURE & SHELL			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Foundations	<p>Foundation drawings or information relating to the building foundations were not provided for our review. Based on our experience with buildings of similar type, size and geographical locations, it is assumed that the building was founded on conventional spread and continuous concrete wall footings. The building contained a partial basement which housed the boiler room and classrooms.</p> <p><i>No visual indications of significant foundation failure or visual evidence of significant settlement were observed. Minor cracking was observed in the concrete foundation walls. The cracking appears to be shrinkage cracking from initial curing of the concrete. We noted paint within the hairline cracks.</i></p>	G	
Floors	<p>The building was constructed with a cast-in-place concrete floor slab at the grade level / basement level. The majority of the slab-on-grade was covered with various flooring materials.</p> <p>The upper floors consisted of various flooring materials over a plywood subfloor and tongue and groove wood decks. The wood decks were supported by wood floor joists.</p> <p><i>In the boiler room, the concrete slab was exposed, and we observed several cracks throughout the slab. General inspection and monitoring of floor slabs should be performed on a periodic basis to ensure adequate performance of the slabs and to allow for early detection of any worsening conditions. This is considered to be an item of routine maintenance.</i></p> <p><i>Overall the upper floors appeared to be in good condition, we did not observe significant deflection, deterioration or failures of the framing. In two classrooms on the second floor, we observed the floor bulged upwards. The bulging was likely caused by moisture intrusion and subsequent swelling the subfloor. We recommend the flooring and subfloor be removed, the framing and wood deck further reviewed,</i></p>	F	4

BUILDING STRUCTURE & SHELL			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>and a new subfloor installed. An estimated cost for this item is included in Table 1 as an item of Immediate Repair.</i>		
Super-structure	<p>Based on our limited observation of exposed structural elements, the building structure consisted of masonry bearing walls, and a combination of steel and wood framing elements, with a cast-in-place concrete floor slab at the lowest level.</p> <p>The roof deck consisted of wood planking. From the exterior, we did not observe visible evidence of deflection, deterioration or bowing of the roof structure.</p> <p><i>In the boiler room, we observed deteriorated wood framing at a wood stud bearing wall. The deterioration was limited to the sill plate and lower portions of the studs. In our opinion, the deterioration was isolated in the boiler room due to the low elevation of the boiler room slab. We recommend the sill plate be removed and replaced and additional studs installed to reinforce the deteriorated studs.</i></p>	F	5

5.3 BUILDING EXTERIOR

Building exteriors are typically composed of various systems and materials intended to serve three main purposes: (1) aesthetic appeal; (2) weather resistance; and, (3) structural support. Items included in the building exterior assessment include wall assembly, glass and glazing, doors, and sealant.

BUILDING EXTERIOR			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Wall Assembly	<p>The building was clad primarily with brick.</p> <p>The building entrance was located at the mid-point between the first and second floor levels. The windows and doors were trimmed with painted wood and had steel lintels at their heads. The soffit at the roof overhang consisted of painted wood. The brickwork had a belt course consisting of a brick soldier and rowlock course that extended around the large arched opening at the building's main entrance (north elevation). The large arch was glazed with divided lights with a painted wood frame and muntins.</p> <p><i>The building was unoccupied since 2005 and had been in a state of disrepair for some time. The exterior walls appeared to be in fair condition. Renovation of walls including minor brick repair, brick pointing, façade cleaning and refurbishment of the steel lintels will be required during the evaluation term. A budgetary estimate of cost is provided in Table 1.</i></p>	F	6, 7, 8, 9
Sealants	<p>Caulking was observed at exterior wall joints, at material interfaces and around window and door penetrations.</p> <p><i>Observed caulk joints at wall joints and penetrations (window and door openings) appeared to be cracked and brittle with significant deterioration and failure. Replacement will be required early in the evaluation term. A budgetary estimate of cost is provided in Table 1 as an item of Immediate Repair.</i></p>	P	10
Windows	<p>The building windows typically were operable, double-hung style units with insulated glass set in painted wood frames.</p> <p><i>The window units appeared to be in fair to poor overall condition and have surpassed their useful lives. Many of the units appeared to be missing and boarded-up or inoperable and were likely painted shut or require significant repairs and renovations to make them operable. Based on the age, apparent condition and estimated RUL of the</i></p>	P	11

BUILDING EXTERIOR			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>windows, replacements are recommended. A budgetary allowance for replacement of windows with insulated glass alternatives is presented in Table 1 as an item of Immediate Repair.</i>		
Exterior Doors	<p>The main entrance and secondary doors to the building typically were painted wood style swing doors with half glass vision panels set in wood frames.</p> <p><i>Exterior doors were exhibiting signs of corrosion deterioration and general wear. Replacement of all exterior doors is recommended, and a budgetary estimate of cost is included in Table 1, as an item of Immediate Repair.</i></p>	F to P	12, 13
Truck Docks	Not Applicable.	N/A	
Exterior Stairs	<p>Exterior stairs were observed at south side of the building and typically were constructed of wrought iron assemblies with open risers and wrought iron handrails.</p> <p><i>The exterior stairs appeared to be in good condition requiring routine repairs and maintenance during the evaluation term.</i></p> <p>Fire escapes were provided at the south side of the building for egress from the upper floor. The escapes were constructed of painted wrought iron and were anchored to the building walls.</p> <p><i>A detailed review of the fire escapes was not performed. Annual inspections of this equipment should be performed by a qualified fire equipment vendor to determine compliance with local fire safety codes.</i></p>	G	
Balconies	Not Applicable.	N/A	

5.4 ROOF

The purpose of roof system(s) is to protect the building components and occupants from adverse moisture, temperature, collapse, and other unwanted elements. The selection, design, and installation of a roof are critical to a building’s financial performance and can be one of the most expensive building systems to repair, maintain, and replace. Items included in the roof assessment include roof type, age, drainage, warranty status, ancillary roofs, skylights, and roof accessories.

ROOF			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Roof Covering	<p>Roofs were not accessed by VERTEX, due to pitched and snow covered access conditions. As a result, we used information gained from aerial photographs, observations from the ground, building interior observations, and information provided from the Site Contact to assess the roof conditions.</p> <p>The south side of the building had a low-slope/flat roof system that was constructed of wood decking supported by steel framing. The roof covering consisted of an EPDM elastomeric single-ply roofing membrane.</p> <p>The north side of the building had a pitched roof that was supported with steel framing. The roof covering consisted of asphalt composition shingles.</p> <p>The warranties for the roofing systems were reported to have expired.</p> <p>The age of the roofs was unknown. No information regarding history of roof repairs, renovations or re-covering was provided. Based on our observations, we assume the roof coverings were at least 25 years old.</p>	F to P	

ROOF			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<p>Safe access to the roof areas was not available to VERTEX due to snow coverage. Roofs were not accessed by VERTEX. As a result, we used information gained from observations from the ground, building interior observations, and information provided from the Site Contact to assess the roof conditions.</p> <p><i>The building has experienced water damage throughout. Complete replacement of the roofing system is recommended. An allowance for this item is included in Table 1 as an Immediate Repair.</i></p>		14, 15
Roof Drainage	<p>The roof system was provided drainage by perimeter gutters and downspouts, which discharged to the landscaped areas or paved areas at the base of the exterior walls.</p> <p><i>Gutters and downspouts were leaking at seams causing stains to the building façade, and at the gutters were visibly corroded and deteriorated. Replacement of the gutters and downspouts is recommended at the time of re-roofing and a budgetary estimate is included in Table 1 as an Immediate Repair.</i></p>	F to P	16, 17
Skylights & Roof Accessories	<p>The building included two painted wood cupolas at the roof ridge.</p>	G	
Roof Access	<p>Fixed roof access was not provided at the building's low slope/flat roof section (south side).</p> <p><i>Fixed access is recommended so that roof inspections, clearing of roof drains and equipment maintenance can be performed quickly in the event of an emergency. This is considered to be an item of Routine Maintenance.</i></p>	N/A	

ROOF			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Ancillary Roofs	Not Applicable.	N/A	
<p><i>Roof evaluations should be conducted by a professional roofing inspector on an annual basis and corrective or preventative repairs should be made accordingly. A qualified inspector will be the best judge of the need to recover/replace the roofs and the specific timing associated with such actions.</i></p>			

5.5 BUILDING INTERIOR

Building interior systems are those that relate to the visible features of finished rooms, hallways, common areas, service areas, tenant spaces, stairwells and restrooms. Items included in the interior assessment are the floor, wall, ceiling, stair and restroom finishes.

BUILDING INTERIOR			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Public Areas	<p>Public areas at the building included corridors and entrance vestibules. Public area interior finishes at the building included a mixture of the following.</p> <p><u>Floor Coverings:</u> Resilient Tile <u>Wall Coverings:</u> Painted plaster <u>Ceiling Coverings:</u> Painted plaster</p> <p><i>The interior components within the public areas appeared to be in generally poor condition. The building has experienced water damage throughout. Complete replacement of interior finishes is recommended. Since the building's projected use is unknown at this time, a general budgetary estimate of cost for replacement of floor, wall and ceiling coverings is included to</i></p>	P	18, 19

BUILDING INTERIOR			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>restore the building interiors to a vanilla shell suitable for additional tenant configuration and fit-out is included in Table 1.</i>		
Classrooms	<p>Finishes in the classrooms typically were wood and resilient tile floors, painted plaster walls, and decorative tin ceilings.</p> <p><i>The interior components within the classroom areas appeared to be in generally poor condition requiring renovation.</i></p>	P	included in 18, 19
Gymnasium	<p>Finishes in the gymnasium typically were resilient tile floors, painted plaster walls, and ceiling.</p> <p><i>The interior components within the gymnasium appeared to be in generally poor condition requiring renovation.</i></p>	P	included in 18, 19
Stairs	<p>Observed stairs were constructed with wood assemblies with closed risers and painted wood railings and handrails. The stairwells typically had painted plaster walls.</p> <p><i>The interior components within the stairway appeared to be in generally poor condition requiring renovation.</i></p>	P	included in 18, 19
Public Restrooms	<p>Typical restroom finishes at the building included resilient tile flooring, painted plaster walls and ceilings.</p> <p><i>The restrooms appeared to be in poor condition requiring renovation.</i></p>	P	18 thru 25
Hazardous Material Considerations	<p>As part of this assessment, VERTEX conducted a general, visual survey for hazardous materials. The findings of that assessment are included in a letter report attached in Appendix C.</p> <p><i>The letter report provides some general order of magnitude costs for next steps and actions that will be required prior to</i></p>	N/A	26

BUILDING INTERIOR			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>renovations. The aggregate sum of these items is included in Table 1 as an immediate repair.</i>		

5.6 MECHANICAL SYSTEMS

The mechanical systems evaluated include the readily visible components of the heating, ventilation, and air conditioning (HVAC) equipment. The evaluation was intended to be a general overview of the component type, equipment capacity, and distribution methods. Operational testing of mechanical systems was not conducted. Specific equipment included air conditioning and heating units, distribution and ventilation mechanisms, boilers (where applicable), and facility controls.

MECHANICAL SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Air Conditioning	Not Applicable. The building was not equipped with air conditioning. It is expected that most projected uses for the building will require installation of air conditioning systems. A detailed study or design was not performed as part of this assessment; however, we have included a general per-ton air conditioning installation value, based on installation of ductless air cooled split system and the overall building square footage. See Table 1.	N/A	27
Heating	The primary heating source for the building included steam radiators located at the perimeter of the various spaces. Steam delivered to the radiators was produced by a single oil-fired boiler located in the lower level mechanical room. The boiler was manufactured by Smith Cast Iron Boilers and had a rated	P	

MECHANICAL SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<p>input capacity of 1,364 MBH. The boiler reportedly was manufactured in 1980.</p> <p>The boiler's buried oil tank has reportedly been removed and the boiler currently has no source of fuel.</p> <p><i>The boiler reportedly was inoperable. Replacement of this equipment is recommended to restore function to the system. A budgetary allowance of cost for this item is included in Table 1 as an item of Immediate Repair.</i></p> <p><i>It is not known how long the boiler has been out of service; however, based on the long-term vacancy of the building significant renovations and replacement of radiators and steam piping should also be anticipated. A general allowance for this based on building square footage is included in Table 1.</i></p>		28
Ventilation	<p>Ventilation was provided by vents in the rooftop copula's.</p> <p>Passive ventilation was provided by operable windows and natural air infiltration.</p> <p><i>Indoor air quality was not studied as part of this assessment.</i></p>	G	
Control Systems	<p>The controls for the boiler were inoperable. New controls should be installed at the time of the boiler replacement.</p>	P	

5.7 ELECTRICAL SYSTEMS

Electrical items are related to the readily visible components of the electrical systems installed at the facility. This assessment is intended to be a general overview of the component type, equipment capacity, and distribution methods. Operational testing of electrical systems was not

conducted. Items included in the electrical assessment are service distribution, transformers, switchgear, panelboards, conductors, and lighting.

ELECTRICAL SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Transformers and Power Delivery	Electrical service to the building was provided by Unutil. Power was supplied via overhead lines from a pole-mounted transformer located outside the building (north side of site).	G	
Main Switchgear	The switchgear units were located in the main mechanical room. <i>The building has experienced water damage throughout. Complete replacement of the electrical system is recommended. An allowance for this item is included in Table 1 as an Immediate Repair.</i>	P	30
Electrical Distribution	Electrical panels were observed in the main mechanical room. <i>Based on the age and condition of the distribution wiring, replacements should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i>	P	31
Interior Lighting	Lighting fixtures within building common areas and in office spaces typically were fluorescent fixtures surface-mounted. Observed fluorescent units included older T-12 lamps. <i>Based on the age and condition of the lighting fixtures, replacements should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i>	P	32
Emergency Power	Not Applicable.	N/A	

5.8 PLUMBING SYSTEMS

Plumbing items are related to the readily visible components of the plumbing systems installed at the facility. This assessment was intended to be a general overview of the component type, system capacity, and distribution methods. Operational testing of plumbing systems was not conducted. Items included in the plumbing assessment were sanitary sewers, roof drains, domestic water supply, natural gas distribution, and insulation.

PLUMBING SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Water Supply	The building was supplied with water underground from Lunenburg Water District's main line.	G	
Domestic Water Distribution	<p>A main water service line entered the building in the north side of the building.</p> <p>In exposed locations, observed distribution piping for domestic water systems was constructed of copper.</p> <p><i>The domestic water service was not equipped with a backflow prevention device. Future renovation of the water connection will require the installation of a backflow prevention or cross contamination device. Estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	G	33
Hot Water Systems	<p>A 10-gallon electric water heater located in the northeast corner of the first floor provided domestic hot water for the building.</p> <p><i>The water heater appeared to be in fair condition. Based on the estimated RUL of the unit, replacement should be expected early in the evaluation term. Estimated costs for this item are included in Table 1</i></p>	F	34
Sanitary Sewer	Sanitary wastes generated at the building were conveyed to a septic system located at the south side of the building. The system	F	

PLUMBING SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<p>reportedly consisted of a collection tank, distribution box, pumps and a leach field.</p> <p>The septic system has not been used due to long term vacancy and the various elements were snow covered and not observed. It was reported that a tie-in is located at the street edge and is available for future tie-in to the municipal sewer system. It is recommended that connection to the sewer be investigated and implemented along with any significant building renovations.</p>		
Natural Gas	Not Applicable.	N/A	

5.9 CONVEYANCE SYSTEM

Conveyance systems include readily visible and accessible equipment installed at the facility. This evaluation was intended to be a general overview of the systems observed. No operational testing was conducted. These systems included equipment used to transport people or objects vertically or horizontally within the building and include elevators, escalators, conveyors, and platform lifts.

CONVEYANCE SYSTEM			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Elevators	Not Applicable.	N/A	
Escalators	Not Applicable.	N/A	
Platform Lifts	Not Applicable.	N/A	

5.10 LIFE AND FIRE SAFETY

Life and Fire Safety Systems were observed to the extent that components were visually accessible. This evaluation was intended to be a general overview of the systems observed and not an opinion of safety or adequacy. Operational testing was not conducted. These systems include sprinklers and standpipes, emergency lighting, alarm and annunciation components, smoke evacuation, and fire separation.

LIFE & FIRE SAFETY SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Sprinkler Systems	<p>The building was equipped with an automatic, wet-pipe fire sprinkler system, which relied on municipal water pressure to operate.</p> <p>The system was disconnected and not in service at the time of this assessment.</p> <p>The attic portions of the building were reportedly equipped with an automatic, dry-pipe fire sprinkler system.</p> <p><i>The fire suppression system water service did not appear to be equipped with a backflow prevention device. It is likely that future renovation of the water connection will require the installation of a backflow prevention or cross contamination device. Installation of such a device is also considered to be a measure of improved health and safety, and a measure to reduce potential liability.</i></p> <p><i>Based on the age and condition of the sprinkler system, complete replacement of the system should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	P	35
Specialty Suppression Systems	Not Applicable.	N/A	

LIFE & FIRE SAFETY SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Fire Hydrants	Municipal fire hydrants were located along the public roads bordering the property.	G	
Fire Pump	Not Applicable.	N/A	
Standpipes & Hose Connections	Hose connections were provided at the exterior wall of the building adjacent to the sprinkler service room.	G	
Alarm Systems	<p>The building was provided with a fire alarm system with battery backup consisting of sprinkler flow and tamper switches, smoke detectors and pull stations. The building was equipped with audible alarms, which included visual strobe components.</p> <p><i>Based on the age and condition of the alarm system, complete replacement of the system should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	P	36
Illuminated Exit Signs	<p>Illuminated exit signs were provided throughout the building. The common spaces, corridors, and stairwells contained exit light fixtures with battery backup power.</p> <p><i>Based on the age and condition of the illuminated exit signs, complete replacement of the system should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	P	37
Emergency Lighting	<p>Emergency lighting fixtures were provided throughout the building. The office areas and corridors contained emergency lighting fixtures with battery backup power.</p> <p><i>Based on the age and condition of the emergency lighting system, complete replacement of the system should be performed</i></p>	P	37

LIFE & FIRE SAFETY SYSTEMS			
Item	Description of System or Component	Overall G, F, P	Cost Item #
	<i>immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i>		
Smoke Detection and Control	<p>Hard-wired smoke detectors were observed in various building locations. Smoke control measures were not observed.</p> <p><i>Based on the age and condition of the smoke detectors, complete replacement of the system should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	P	37
Fire Extinguishers	<p>Fire extinguishers were provided at various locations throughout the building.</p> <p><i>Based on the age and condition of the fire extinguishers, complete replacement of the extinguishers should be performed immediately, and estimated costs are included in Table 1 as an item of Immediate Repair.</i></p>	P	37

6.0 ANCILLARY STRUCTURES

Ancillary structures are those elements contained within a property, which are considered to be physical plants subject to the provisions of building codes, which may or may not be considered occupied structures, and may or may not include associated mechanical, electrical or plumbing systems. Typical ancillary structures might include parking garages, annex buildings or storage sheds.

ANCILLARY STRUCTURES			
Item	Description of System or Component	Overall G, F, P	Cost Item #
Parking Garage	Not Applicable.	N/A	
Annex Building	Not Applicable.	N/A	
Storage Shed	Not Applicable.	N/A	

7.0 Accessibility (ADA)

The Americans with Disabilities Act (ADA) is not a building code; it is a civil rights law that was enacted in 1990 to provide persons with disabilities with accommodations and access equal to, or similar to, that available to the general public. Title II of the ADA requires that owners of public buildings considered to be places of public accommodations remove those architectural barriers and communications barriers that are considered readily achievable in accordance with the resources available to the building ownership to allow use of the facility by the disabled. The Massachusetts Architectural Access Board (MAAB) Section 521 CMR is the standard designed to make public buildings and facilities accessible to, functional for, and safe for use by persons with disabilities.

As part of this PCA, VERTEX performed a “Baseline Evaluation” of ADA and MAAB requirements consisting of a limited scope visual survey and completion of a checklist extracted from ASTM E2018-15 X2 (Figure X3). This visual review most closely resembles what was previously known as a “Tier I ADA survey.”

Our survey was limited to visual observations unless specifically stated. Measurements were not taken, and compliance with dimensional tolerances stated by the guidelines was only visually assessed. While opinions of cost to correct noted barriers have been provided, they do not constitute a recommendation that removal of the barriers are “readily achievable” and not an “undue burden” as stated in the ADA.

In addition, we have attempted to evaluate the total cost of projected renovations identified in our assessment for calculation of MAAB ‘trigger’ requirements as outlined in CMR 521 Section 3 for Existing Buildings.

If the work being performed amounts to less than 30% of the full and fair cash value of the building and:

- a. if the work costs less than \$100,000, then only the work being performed is required to comply with 521 CMR, or
- b. if the work costs \$100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

The value for full and fair cash value of the building will need to be provided by the Town of Lunenburg to appropriately calculate threshold values.

Representative areas of the following portions of the site were surveyed:

- 1) **Parking** – Comparison of the number of provided parking stalls designated for handicapped use to the number required for the reported parking stall total for the site.
- 2) **Exterior Accessible Route and Building Entrances** - Visual identification of physical barriers from parking to the building entrances.
- 3) **Building Entrances** - Review of the building entrance access to the interior.
- 4) **Interior Accessible Routes and Amenities** – Review of the interior route, obstructions, path of travel and access to public features and equipment.
- 5) **Interior Doors** – Review of doors, clear width, hardware and apparent opening force.
- 6) **Elevators** – Observation of elevator floor area, signals, signs, safety devices, and emergency call systems.
- 7) **Toilet Rooms** - Visual review of common area restrooms available for public use (toilet stalls designed with accessible features, sinks at lower heights with adequate clearances, appropriate sink fixtures and accessories).

 ASTM E2018-15 - Uniform Abbreviated Screening Checklist - 2010 Americans with Disabilities Act				
Item	Yes	No	NA	Comments
A. History				
1.		✓		
2.		✓		
3.		✓		
B. Parking				
1.		✓		<i>ADA-1, One space is required, and none are provided</i>
2.		✓		
3.			✓	

 ASTM E2018-15 - Uniform Abbreviated Screening Checklist - 2010 Americans with Disabilities Act					
4.	Is a sign with the International Symbol of Accessibility at the head of each space?			✓	
5.	Does each accessible space have an adjacent access aisle?			✓	
6.	Do parking spaces and access aisles appear to be relatively level and without obstruction?			✓	
C. Exterior Accessible Route					
1.	Is an accessible route present from public transportation stops and municipal sidewalks on the property?			✓	
2.	Are curb cut ramps present at transitions through curbs on an accessible route?			✓	
3.	Do the curb cut ramps appear to have the proper slope for all components?			✓	
4.	Do ramps on an accessible route appear to have a compliant slope?			✓	
5.	Do ramps on an accessible route appear to have a compliant length and width?			✓	
6.	Do ramps on an accessible route appear to have compliant end and intermediate landings?			✓	
7.	Do ramps on an accessible route appear to have compliant handrails?			✓	
D. Building Entrances					
1.	Do a sufficient number of accessible entrances appear to be provided?		✓		ADA-2
2.	If the main entrance is not accessible, is an alternate accessible entrance provided?		✓		
3.	Is signage provided indicating the location of alternate accessible entrances?			✓	
4.	Do doors at accessible entrances appear to have compliant clear floor area on each side?			✓	
5.	Do doors at accessible entrances appear to have compliant hardware?		✓		
6.	Do doors at accessible entrances appear to have a compliant clear opening width?			✓	
7.	Do pairs of accessible entrance doors in series appear to have the minimum clear space between them?			✓	
8.	Do thresholds at accessible entrances appear to have a compliant height?			✓	
E. Interior Accessible Routes and Amenities					
1.	Does an accessible route appear to connect with all public areas inside the building?		✓		ADA-2



ASTM E2018-15 - Uniform Abbreviated Screening Checklist - 2010 Americans with Disabilities Act

2.	Do accessible routes appear free of obstructions and/or protruding objects?			✓	
3.	Do ramps on accessible routes appear to have a compliant slope?	✓			
4.	Do ramps on accessible routes appear to have a compliant length and width?	✓			
5.	Do ramps on accessible routes appear to have compliant end and intermediate landings?			✓	
6.	Do ramps on accessible routes appear to have compliant handrails?		✓		ADA-3
7.	Are adjoining public areas and areas of egress identified with accessible signage?			✓	
8.	Do public transaction areas have an accessible, lowered counter section?			✓	
9.	Do public telephones appear mounted with an accessible height and location?			✓	
10	Are publicly-accessible swimming pools equipped with an entrance lift?			✓	
F. Interior Doors					
1.	Do doors at interior accessible routes appear to have compliant clear floor area on each side?	✓			
2.	Do doors at interior accessible routes appear to have compliant hardware?		✓		ADA-4
3.	Do doors at interior accessible routes appear to have compliant opening force?			✓	
4.	Do doors at interior accessible routes appear to have a compliant clear opening width?	✓			
G. Elevators					
1.	Are hallway call buttons configured with the "UP" button above the "DOWN" button?			✓	<i>Unless the future use of the facility is changed to a facility that houses a shopping center, a shopping mall, the professional office of a health care provider, a terminal, depot, or other station used for specified public transportation, an elevator is not required.</i>
2.	Is accessible floor identification signage present on the hoistway sidewalls?			✓	
3.	Do the elevators have audible and visual arrival indicators at the entrances?			✓	
4.	Do the elevator hoistway and car interior appear to have a minimum compliant clear floor area?			✓	
5.	Do the elevator car doors have automatic re-opening devices to prevent closure on obstructions?			✓	
6.	Do elevator car control buttons appear to be mounted at a compliant height?			✓	



ASTM E2018-15 - Uniform Abbreviated Screening Checklist - 2010 Americans with Disabilities Act

7.	Are tactile and Braille characters mounted to the left of each elevator car control button?			✓	
8.	Are audible and visual floor position indicators provided in the elevator car?			✓	
9.	Is the emergency call system at the base of the control panel and not require voice communication?			✓	
H. Toilet Rooms					
1.	Do publicly-accessible toilet rooms appear to have a minimum compliant floor area?		✓		ADA-5
2.	Does the lavatory appear to be mounted at a compliant height and with compliant knee area?		✓		
3.	Does the lavatory faucet have compliant handles?		✓		
4.	Is the plumbing piping under lavatories configured to protect against contact?		✓		
5.	Are grab bars provided at compliant locations around the toilet?		✓		
6.	Do toilet stall doors appear to provide the minimum compliant clear width?		✓		
7.	Do toilet stalls appear to provide the minimum compliant clear floor area?		✓		
8.	Do urinals appear to be mounted at a compliant height and with compliant approach width?		✓		
9.	Do accessories and mirrors appear to be mounted at a compliant height?		✓		
I. Hospitality Guestrooms					
1.	Does property management report the minimum required accessible guestrooms?			✓	
2.	Does property management report the minimum required accessible guestrooms with roll-in showers?			✓	

8.0 REPORT QUALIFICATIONS & LIMITATIONS

This report was prepared in accordance with the scope of work, and terms and conditions associated with VERTEX Proposal No. P.2489.17, dated September 29, 2017.

This report was prepared in general conformance with the guidelines of ASTM E2018-15 for Property Condition Assessments. This report was intended to provide a general overview of the building systems at the facility and the general conditions of such. The evaluation was performed using that degree of skill and care normally exercised by reputable consultants performing similar work. The activities of this evaluation included observations of visible and readily accessible areas. In some cases, additional study may be warranted to more fully assess concerns noted.

The opinions and recommendations presented in this report are based on VERTEX's observations, evaluation of the information provided, and interviews with personnel possessing knowledge of the facility. No calculations were made to determine the adequacy of the facility's original or existing design. The possibility exists that defects and deficiencies are present at the subject facility, which were not readily visible or accessible. The development of future problems not identified in this report, on any observed system, at the subject property should be anticipated.

The opinions and recommendations in this report should not be construed in any way to constitute a warranty or guarantee regarding the current or future performance of any system identified.

The following paragraphs are intended to summarize VERTEX's Definition of Property Condition Assessment (PCAs).

A Property Condition Assessment ("PCA") is the process by which VERTEX observes researches and documents in a written report (the PCA Report") the current physical condition of commercial property and, in addition, provides required estimated expenditures to remedy physical deficiencies. A physical deficiency is defined to be a patent, conspicuous defect, or significant deferred maintenance of the subject property's material systems, components or equipment. It could also include material systems, components or equipment that are approaching, have realized, or have exceeded their typical expected useful life ("EUL") or whose remaining useful life ("RUL") should not be relied upon as a result of actual age, abuse, excessive wear and tear, exposure to the elements, lack of proper maintenance, or other factors. This definition specifically excludes routine maintenance, miscellaneous repairs, operating maintenance, etc. It should be noted that items considered as routine or operating maintenance may be defined by the current practices of the management or property personnel operating the

site. Specific definitions of categories of physical deficiencies including Immediate Repairs, Short-Term Repairs, and Capital Needs including the time-period associated with each, are presented within the body of the PCA Report.

This assignment was performed as a **Level II PCA**. For the purposes of clarification and comparison, VERTEX's levels of PCA service are defined as follows:

- **Level I PCA:** This assessment will be prepared by a qualified professional, performing a visual survey of the property to assess the general condition of the property, structures and associated mechanical components. This PCA may be escalated to a more thorough Level II or Level III PCA following the initial site visit and evaluation, following discussion with the Client.
- ***Level II PCA: This assessment includes the Level I PCA, with specific items of concern investigated in more detail by one or more specialist in the respective fields (mechanical, roofing, elevators, etc.). These more detailed visual assessments may be incorporated into a single PCA report discussion, or may be presented in a separate report.***
- **Level III PCA:** This assessment includes the Level I PCA, with specific items of concern investigated in more detail by a team of specialists, including subcontractors where warranted, and including operation, testing, and potentially destructive testing of individual systems or components where warranted and approved. These more detailed assessments may be incorporated into a single PCA report discussion, or may be presented in a separate report, which may include test and evaluation data.

The visual observation portion of the PCA consisted of a walk-through survey of the subject property undertaken to observe readily accessible property components, systems, and elements for the purposes of providing a brief description of same, providing an opinion on their general apparent physical condition, and identifying material physical deficiencies as of the time of VERTEX's site visit. This portion of the PCA was a non-intrusive, visual survey; it is not to be construed as a punch list or detailed survey of the property's major physical deficiencies. It is also not considered to be an inventory of building system or material components.

VERTEX extrapolated representative findings to typical areas and systems of the subject property to provide the Client with a reasonably estimated magnitude of commonly anticipated conditions and to use as a basis for estimating the cost of required expenditures to remedy physical deficiencies at the subject property.

In some cases, where additional study or specific expertise is required to define appropriate repair or renovation methods, an estimated cost for the study is presented. In these cases,

associated repair or renovation costs are typically excluded, unless reasonable order of magnitude budgetary estimates can be assumed without the benefit of a specific scope of work.

Unless specifically requested by Client and included in the agreed upon, written scope of services the following items were excluded from the scope of services for this PCA:

- Removal of materials, furniture or finishes; conducting any exploratory probing or testing; dismantling or operation of any equipment; or disturbing any personal items or property which obstructs access or visibility.
- Preparation of engineering calculations (civil, structural, mechanical, electrical, etc.) to determine any system's components or equipment's adequacy or compliance with any specific or commonly accepted design requirements and building codes, or the preparation of designs or specifications to remedy any physical deficiency.
- Reporting on the condition of subterranean conditions such as underground utilities, separate sewage disposal systems, wastewater treatment plants, wells or systems that are either considered process related or peculiar to a specific tenancy or use, or items or systems that are not permanently installed.
- Entering or accessing any area of the premises deemed to pose a dangerous or adverse condition to the consultant or to perform any procedure which may damage or impair the physical integrity of the property, any system or equipment.
- Providing an opinion on the condition of any system or component which is seasonally shut down.
- Provision of a warranty or guarantee of any systems or component's physical condition or use. A PCA is not to be construed as a substitute for any system's or equipment's warranty transfer inspection.
- Review of compliance with any federal, state, city, trade/design, or insurance industry building codes, local laws, health codes or local zoning ordinances. However, violations of codes, laws and ordinances that are observed by VERTEX and any retroactive or pending requirements contained in such codes, laws, and ordinances that are known to VERTEX, or identified during interviews with code authorities, may be identified in the report.

TABLE 1

IMMEDIATE AND REPLACEMENT RESERVES COST ESTIMATES

TABLE 1
IMMEDIATE REPAIRS, SHORT TERM REPAIRS, and CAPITAL NEEDS ESTIMATE



Site Name:	Lunenburg Primary School
City, ST:	Lunenburg, MA
Age, Yrs:	89
Project No.:	48237

# Buildings:	1
Est. Building SF:	11,700
Eval. Term, Yrs:	5
CPI:	2.50%
# Units:	NA

	Total	Per SF	Per SF/YR
Immediate Repairs \$:	\$1,027,280	\$87.80	
Short Term \$ (no inflation):	\$770,916	\$65.89	\$32.95
Short Term \$ (inflated):	\$770,916	\$65.89	\$32.95
Capital Needs \$ (no inflation)	\$774,879	\$66.23	\$13.25
Capital Needs \$ (inflated)	\$775,260	\$66.26	\$13.25

ITEM						Immediate	Reserves
ITEM No.	PHOTO No.	DESCRIPTION	QTY	UNIT	UNIT COST	YEARS 0-1	YEARS 1-5
BUILDING INTERIOR							
18	17, 18, 21	Gut interior spaces and renovate, basic interior finish level, partitions, floor, wall and ceiling coverings	11,700	SF	\$40.29		\$471,393
19	18	Remove and replace interior doors and frames with new assemblies (solid core wood doors with steel frame)	48	EA	\$1,880.20		\$90,250
20	25, 29	Replace commercial grade toilet, wall hung	9	EA	\$1,544.45		\$13,900
21	23	Replace commercial wall hung urinal	3	EA	\$1,034.11		\$3,102
22	24	Replace toilet stall partitions, plastic laminate	8	EA	\$1,265.11		\$10,121
23	23	Replace ceramic tile wainscot at wet walls	14	EA	\$805.80		\$11,281
24	23	Replace bathroom fixtures, sinks	7	EA	\$698.36		\$4,889
25	23	Replace bathroom cabinetry, vanity	7	EA	\$711.79		\$4,983
26	---	Budgetary allowance for evaluation and abatement of hazardous materials	1	LS	\$308,400.00	\$308,400	
MECHANICAL SYSTEMS							
27	---	General budgetary allowance for installation of ductless split system air-handlers and condensing units	40	Ton AC	\$3,354.14		\$134,166
28	30	Replace cast iron gas/oil fired boiler system, steam	1,364	MBH	\$48.35	\$65,949	
29	---	General allowance for renovation of steam radiators, steam traps, piping	11,700	SF	\$4.03	\$47,151	
ELECTRICAL SYSTEMS							
30	31	Remove and replace circuit breaker panel, 400-amp	2	EA	\$4,699.96	\$9,400	
31	31	Replace branch distribution wiring with copper, average cost	20	EA	\$3,357.50	\$67,150	
32	28	Remove T12 Troffer fixture, 4-bulb, 4 foot with magnetic ballast with T8 and electronic ballast	216	EA	\$425.53	\$91,914	
PLUMBING SYSTEMS							
33	33	Install backflow preventer for domestic water line, 2 inch diameter line	1	EA	\$1,752.62	\$1,753	
34	33	Replace small-capacity, electric water heater (<30 gallons)	2	EA	\$671.50		\$1,343

SHORT TERM					RESERVE TOTAL
YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
\$471,393					\$471,393
\$90,250					\$90,250
\$13,900					\$13,900
\$3,102					\$3,102
\$10,121					\$10,121
\$11,281					\$11,281
\$4,889					\$4,889
\$4,983					\$4,983
					\$0
\$134,166					\$134,166
					\$0
					\$0
					\$0
					\$0
\$1,343					\$1,343
					\$0

TABLE 1
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Capital Needs \$ (inflated)	\$775,260	\$66.26	\$13.25

ITEM						Immediate	Reserves
ITEM No.	PHOTO No.	DESCRIPTION	QTY	UNIT	UNIT COST	YEARS 0-1	YEARS 1-5
CONVEYANCE SYSTEMS							
Not Applicable							
LIFE SAFETY/FIRE PROTECTION SYSTEMS							
35	32	Replace sprinkler system	11,700	SF	\$4.54	\$53,118	
36	34	Budget for replacement of main fire alarm panel to updated system	1	EA	\$4,700.50	\$4,701	
37	34	Replace emergency lighting and life safety elements	11,700	SF	\$5.26	\$61,542	
ANCILLARY STRUCTURES							
Not Applicable							
TOTAL - Immediate Repairs						\$1,027,280	
TOTAL - Capital Needs							\$774,879

SHORT TERM					RESERVE TOTAL
YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
					\$0
					\$0
					\$0
					\$0
					\$0
					\$0
					\$0
					\$0
					\$0

TOTAL CAPITAL NEEDS, BY YEAR, UNINFLATED	\$770,916	\$0	\$0	\$1,164	\$2,799	\$774,879
Inflation Factor	1.000	1.025	1.051	1.077	1.104	
TOTAL CAPITAL NEEDS, BY YEAR, WITH INFLATION	\$770,916	\$0	\$0	\$1,253	\$3,090	\$775,260

Notes/Abbreviations:

*Item Number corresponds to item described in supporting "cost item #" in text report.

LS = Lump Sum; LF = Linear Foot; SF = Square Feet; SY = Square Yard; EA = Each; TN = Ton; kW = Kilowatt; FL = Floor; RUL = Remaining Useful Life

Immediate Needs = material existing or potential unsafe conditions resultant from a damaged or deteriorated condition, material building or fire code violations on file with municipal agencies, or conditions that if left uncorrected, have the potential to result in or contribute to critical element or system failure within one year or will result most probably in a significant escalation of its remedial cost. Also included as immediate needs are items, materials or systems that have exceeded their useful life. Immediate Repair time frame for repair is between 0 and 1 year. These items are generally included regardless of cost.

Short Term Repairs = Items that may not warrant immediate attention, but require repairs or replacements that should be undertaken on a priority basis in addition to routine preventive maintenance. Such opinions of probable costs may include costs for testing, exploratory probing, and further analysis should this be deemed warranted by VERTEX. Short Term repairs are the aggregate sum of Capital Needs repairs within years 1 and 2. See report text for cost thresholds defining Short Term Repairs/Capital Needs versus items of Routine Maintenance.

Capital Needs = Items which are expected to require significant repair, replacement or renovation during the specified evaluation term due to the observed condition and estimated RUL. See report text for cost thresholds defining Short Term Repairs/Capital Needs versus items of Routine Maintenance.

TABLE 2
IMPROVED ADA COMPLIANCE
PRIORITIES AND ESTIMATED COSTS

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



Photo #1: Overview of school (north elevation)



Photo #2: Main front entrance to building (north elevation)



Photo #3: Close-up view of north elevation



Photo #4: Original double hung wood windows with non-insulated glazing



Photo #5: West elevation. Note boarded-up windows



Photo #6: South elevation



Photo #7: Deteriorated condition of mortar joints and brickwork (south elevation)

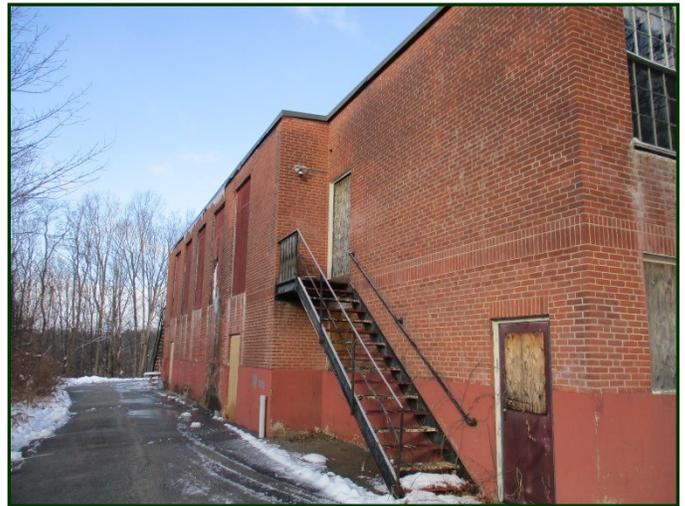


Photo #8: View of south elevation from southeast corner of building



Photo #9: East elevation



Photo #10: North elevation as viewed from the northeast corner of building

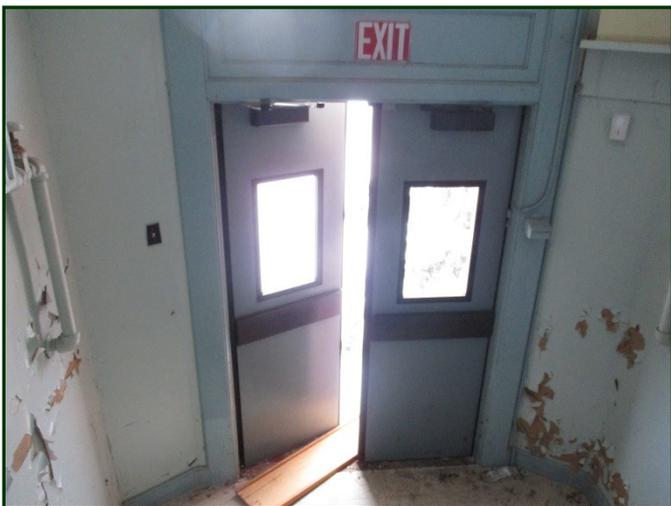


Photo #11: Interior view of main front entrance doors

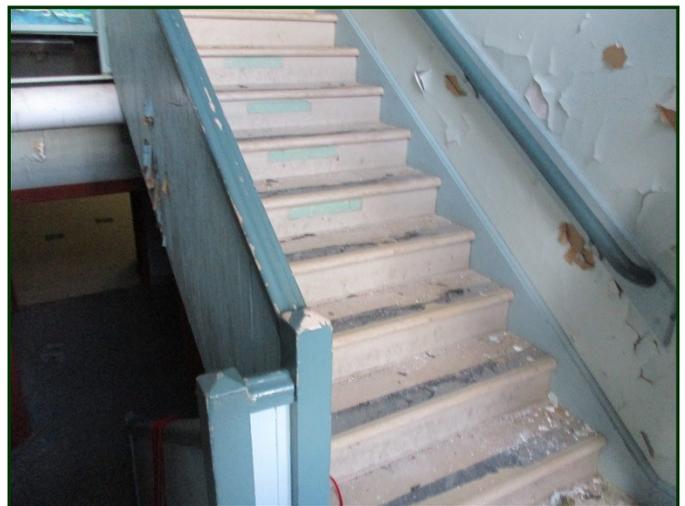


Photo #12: Stairs at front entrance



Photo #13: View of upper level at entrance stairs



Photo #14: Upper level classroom with carpet floor, painted plaster walls and tin ceiling



Photo #15: Wood cabinetry in classroom



Photo #16: Cast iron steam radiators with steel shields in classroom-typical



Photo #17: Upper level classroom at south east corner of building



Photo #18: Upper level classroom with vinyl floor and tin ceiling



Photo #19: Painted tin ceiling with fluorescent lighting fixture and sprinkler system



Photo #20: Buckled floor in classroom (west side of upper level)



Photo #21: Corridor at lower level



Photo #22: View of ramp and stairs at lower level corridor



Photo #23: Boy's toilet room at lower level



Photo #24: Painted wooden partitions in boy's toilet room



Photo #25: Toilet stall in boy's toilet room



Photo #26: Egress doorway at lower level west side



Photo #27: Gymnasium in lower level



Photo #28: Classroom at lower level

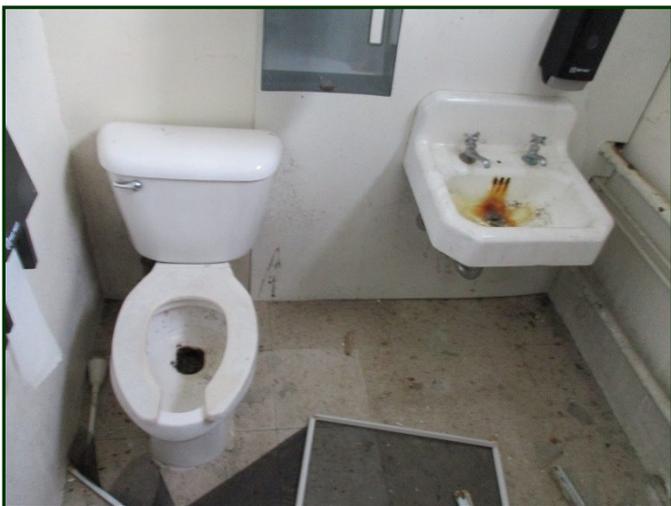


Photo #29: Staff toilet room (lower level east side)



Photo #30: Oil-fired steam boiler in lower level mechanical room. Note oil tank has reportedly been removed



Photo #31: Main electrical service in mechanical room lower level



Photo #32: Wet-type sprinkler service in mechanical room



Photo #33: Electric domestic water heater in lower level east side



Photo #34: Fire Alarm Control Panel at upper level stair landing



Photo #35: Shelf-mounted emergency egress lighting fixture



Photo #36: Fire department hose connection (adjacent to front door)



Photo #37: Front (north) elevation of the Primary School.



Photo #38: West elevation of the Primary School. Note staining on masonry below windows, below downspout and missing brick unit.



Photo #39: Deteriorated mortar joints on the rear (south) elevation of the primary school.



Photo #40: View of a hairline crack in the foundation of the Primary School.



Photo #41: View of a 2nd floor classroom floor. Note bulge in floor near the center of the room.



Photo #42: Measurement of the floor slope adjacent to the bulge. Note digital level reads 3/8-inch per foot.



Photo #43: Boiler room located in the lower level of the Primary School. Note cracks in concrete slab.



Photo #44: Wood framing below 1st floor classroom.



Photo #45: Sill plate below a 1st floor load bearing wall. Note deterioration of sill plate.



Photo #46: Limited bearing of wood stud on sill plate.



Photo #47: View of typical floor system. Note tongue and groove wood deck.



Photo #48: View of subfloor below flooring system.



Photo #49: Photograph depicts general view of Side A



Photo #50: Photograph depicts general view of Side B



Photo #51: Photograph depicts general view of Side C



Photo #52: Photograph depicts general view of Side D

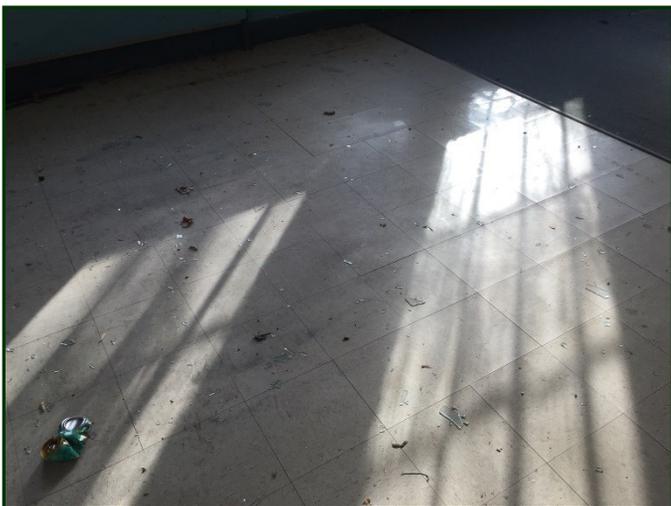


Photo #53: Photograph depicts general view of 12" floor tile within classrooms



Photo #54: Photograph depicts general view of sheet flooring within a Classroom



Photo #55: Photograph depicts general view of floor tile under subfloor within a classroom



Photo #56: Photograph depicts general view of classroom



Photo #57: Photograph depicts general view of cement board paneling within the Boiler Room



Photo #58: Photograph depicts general view of red duct sealant within the Boiler Room



Photo #59: Photograph depicts general view of fluorescent lighting fixtures within a classroom



Photo #60: Photograph depicts general view of peeling/flaking paint within the lower level corridor

APPENDIX B
RELEVANT SUPPORTING DOCUMENTATION

MASSACHUSETTS AVENUE

2A

ROAD

LEOMINSTER

WEST

STREET

LANCASTER

AVENUE

ZONE C



APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
LUNENBURG,
MASSACHUSETTS
WORCESTER COUNTY

PANEL 5 OF 6
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250315 0005 B

EFFECTIVE DATE:
JUNE 15, 1982



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Lunenburg Board of Assessors



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Summary

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[Land Segments](#)

[Detached Structure](#)

[Sales History](#)

[Value History](#)

[Condo](#)

[Commercial](#)

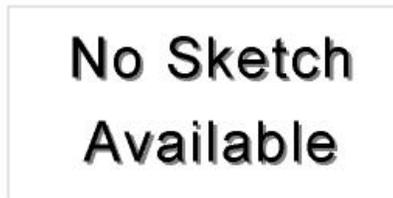
Parcel ID: **162/071.0-0076-0000.0** FY: **2018** Community: **Lunenburg**

Location:	30 SCHOOL ST		
Owner Name:	LUNENBURG, TOWN OF		
Owner Name2:	SCHOOL DEPT		
Owner Address:	P O BOX 135		
City:	LUNENBURG	State:	MA Zip: 01462
Neighborhood:	35	Land Area:	2.40 acres
Use Code:		Total Finished Area:	31200 sqft
Tax Class:	E	Pct-Exempt-Land:	
		Pct-Exempt-Bldg:	
Sewer:	S2	Road Type:	T
Water:	WD	Road Condition:	P

[Photo \(Click on Photo to Enlarge\)](#)



[Sketch \(Click on Sketch to Enlarge\)](#)



Assessments	Current Year	Previous Year
Total Value:	260,500	744,300
Building Value:	120,900	604,700
Land Value:	139,600	139,600
Market Land Value:	139,600	
Chapter Land Value:		

Latest Sale			
Sale Price:	1	Sale Date:	01/01/1901
Arms Length Sale Code:	N-NO-OTHER	Grantor:	
Cert Doc:		Book:	111 Page: 111

APPENDIX C

VISUAL HAZARDOUS MATERIALS SURVEY



January 8, 2018

Ms. Heather R. Lemieux, Town Manager
Town of Lunenburg
17 Main Street
P.O. Box 135
Lunenburg, MA 01462

Reference: Hazardous Materials Visual Assessment
Former Lunenburg Primary School
30 School Street
Lunenburg, MA 01462
VERTEX Project No. 48237

Dear Ms. Lemieux:

The Vertex Companies, Inc. (VERTEX) is pleased to provide you with this letter report summarizing the visual hazardous materials assessment performed at the Former Lunenburg Primary School (the Site).

The Former Lunenburg Primary School is a two-story brick building reportedly constructed in 1926. Interior finish materials include various colored 12" Floor Tile or carpeting, plaster walls and tin or plastered ceilings. Exterior finish materials include a brick finished façade with an asphalt shingled roof as well as a flat rubber membrane roofing over the gym area. According to the site contact, the building has been vacant for approximately 15 years. Based on discussions with the site contact there are no prior survey reports for review.

The following sections identify suspect asbestos-containing materials (ACMs), suspect lead based painted (LBP) surfaces, and regulated materials/universal wastes identified during the assessment.

Suspect Asbestos Containing Materials (ACMs) Assessment

Based on the age of the site building (1926) it is likely that ACMs are present at the site building. Suspect ACMs observed or assumed to be present during the assessment included:

- Various Colored Floor Tile and Associated Mastics
- Various Colored Floor Tile and Associated Mastics under Subflooring
- Sheetflooring and Associated Mastic
- Carpet Adhesive
- Hardwood Flooring Paper
- Various Colored Covebase and Adhesives
- Plaster Skim and Base Coat
- Wall Board
- Joint Compound
- Cement Board Paneling
- Chalkboards
- Duct Sealant
- Fire Doors
- Exterior Window Glazing
- Exterior Window Caulking
- Exterior Door Caulking
- Roofing Materials (i.e. asphalt shingles, roofing paper, tar and gravel, etc.)

At the time of the assessment, the suspect ACMs identified were observed to be in fair to poor condition. Please refer to Attachment A which includes photographic documentation of the suspect ACMs identified during the assessment.

Suspect Lead Based Painted Surfaces Assessment

Based on the age of the site building (1926) it likely that LBPs are present at the site building. Various colored painted surfaces were observed to be in poor condition on the interior as well as exterior. Please refer to Attachment A which includes photographic documentation of the suspect LBP surfaces identified during the assessment.

Regulated Materials/Universal Waste Assessment

The following regulated materials/universal wastes were identified during the visual assessment:

- Fluorescent Light Bulbs
- Poly-Chlorinated Biphenyl (PCB)/Non-PCB Light Ballasts
- Emergency Light/Exit Sign Batteries
- Oil Distribution Lines

Recommendations

Based on the visual assessment conducted, VERTEX offers the following recommendations:

Prior to any renovation or demolition activities, sampling of suspect ACMs that may be disturbed would need to be conducted in applicable areas to determine asbestos content. A comprehensive ACM survey is required to be conducted to comply with the Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 61. Until these materials have been sampled and determined to be non-asbestos containing, these materials should be managed in place as presumed asbestos-containing materials (PACMs).

The General Contractor is required to comply with all applicable Federal, Commonwealth and local Regulations concerning lead-based paint located on surfaces that will be impacted. The General Contractor is required to ensure the protection of workers performing any related demolition work that will affect lead painted surfaces as well as protecting the public and the environment from exposure to lead dust. It is the General Contractor's responsibility to ensure that all applicable regulations are followed. This may include but may not be limited to air quality testing, medical screening of workers, dust barriers, testing of waste for disposal requirements, etc. In addition, composite samples of painted surfaces, including wood, require testing by the Toxicity Characteristics Leaching Procedure (TCLP) for waste classification in accordance with disposal requirements of the EPA. The General Contractor is required to comply with all applicable Federal, Commonwealth and local Regulations concerning lead-based paint located on surfaces that will be affected.

Identified regulated materials/universal wastes are required to be properly packaged, removed and disposed/recycled in accordance with federal, state and local regulations if renovation and/or demolition is planned to disturb.

Estimated Costs

- Preparation of an Asbestos and Lead Operations and Maintenance Plan: \$800.00
- Comprehensive Pre-Renovation/Demolition Survey: \$7,600.00
- Abatement of Identified Assumed ACMs and Regulated Materials: \$240,000.00*
- Environmental Consulting/Clearance Inspections/Monitoring: \$60,000.00*

**The Estimated Costs for Abatement and Consulting provided above will be dependent on the findings of a Comprehensive Pre-Renovation/Demolition Survey as well as the Selected Contractor schedule.*

Limitations

Professional opinions presented in this summary letter are based on information made available to VERTEX either by review of data provided by others or data gained by VERTEX personnel.

Conditions described in this summary letter were observed at the time of the inspection, unless otherwise stated.

VERTEX observed only the conditions and locations described in the summary letter at the time indicated.

This survey was limited to a visual assessment only and should not be utilized for renovation and/or demolition activities.

Please do not hesitate to contact us at your convenience, should you have any questions or comments regarding this summary letter or our recommendations.

Sincerely,
The Vertex Companies, Inc.

A handwritten signature in black ink, appearing to read 'J. Mohre', with a long horizontal line extending to the right.

Jason Mohre
Senior Project Manager

Attachment:
Photographic Documentation

ATTACHMENT A

VERTEX®



Photo #49: Photograph depicts general view of Side A



Photo #50: Photograph depicts general view of Side B



Photo #51: Photograph depicts general view of Side C



Photo #52: Photograph depicts general view of Side D

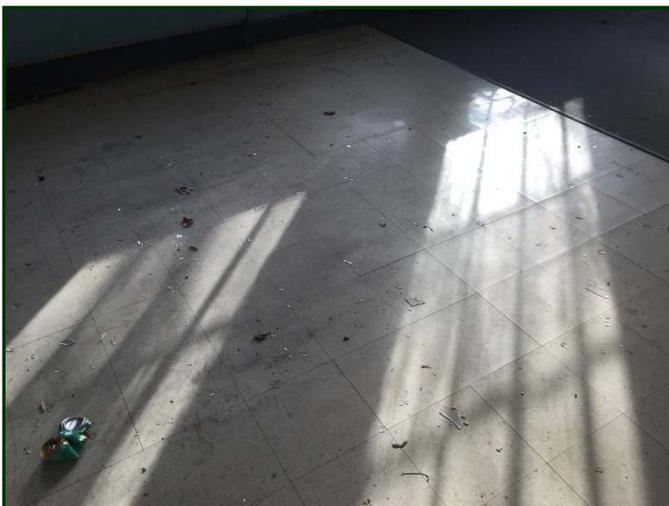


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APPENDIX D

STAFF QUALIFICATIONS



Eric Nelson, PE, LEED AP, CEA
Vice President, Property Condition Assessments

[enelson@vertexeng.com / 484-487-2727]

Expertise:

Indoor Air Quality
Construction Due Diligence
Loan Monitoring
Property Condition Assessments
Construction Estimating
LEED Assessment & Certification
Litigation Support & Expert Testimony (Construction)
Civil Engineering
Civil/Structural
Engineering Geology
Structural
Green Building
Energy Certified Efficiency Auditing
Compliance Audits
PCA

Education/Training:

B.S., Civil Engineering, University of Illinois, 1989
Shallow Foundation Design, University of Missouri-Rolla, 1992
Deep Foundation Design, University of Florida, 1994
Environmental Chemistry, Illinois Institute of Technology, 1996
Earth Retaining Structures, University of Delaware, 2004

Biography:

Mr. Nelson is a Vice President directing the Property Condition Assessment and Energy Savings Investigation practices at VERTEX. He has over 27 years of experience with construction-related services such as construction materials testing and inspection, Geotechnical engineering, foundation design and analysis and design of pavement systems. Since 1997, he has been extensively involved in the performance, review and management of Property Condition Assessments (PCAs) for projects of variable size and complexity throughout North America. In addition, he has provided Construction-Monitoring services to evaluate construction progress, and approve or deny contractor payment requests on multiple projects in the northeast. He has also managed a number of large scale projects involving pre- and post-construction condition assessments of structures to monitor and assess damage from construction-related vibration. Mr. Nelson has also directed VERTEX's building analysis program with respect to energy usage and savings strategies for projects at various locations in North America.

Mr. Nelson has been involved in over 3,000 construction and assessment projects during his career, with extensive involvement in new construction, remodeling and re-development, property acquisition, lender due diligence and financial needs assessments and development of replacement reserves for numerous property types.

Licenses/Certifications:

Professional Engineer (PE) – Civil, DE, 10924
Professional Engineer (PE) – Civil, IL, 62.049214
Professional Engineer (PE) – Civil, IN, PE19500266
Professional Engineer (PE) – Civil, MD, 27232
Professional Engineer (PE) – Civil, NJ, 24GE03972000
Professional Engineer (PE) – Civil, NY, 754035
Professional Engineer (PE) – Civil, PA, PE050115E
Professional Engineer (PE) – Civil, WI, 31086-6
Professional Engineer (PE) – Civil, NC, 041964
Professional Engineer (PE) - Civil, AZ, 62072
LEED® AP
Certified Energy Auditor
Certified Building Inspection Engineer (BIECI)
Photovoltaic Entry Level Certificate of Knowledge
40 Hour OSHA Hazardous Waste Op. Training
Ground Source Heat Pump Loop Installer



Jason Mohre
Senior Project Manager

[jmohre@vertexeng.com / 781-952-6016]

Expertise:

Asbestos
Indoor Air Quality
Industrial Hygiene
Investigations & Remediation
Lead
Mold
O&M Program
LEED Assessment & Certification
Environmental
Green Building
Compliance Audits
Database Review
Environmental Portfolio Reviews
Peer Review
Phase I ESAs
Phase II LSI
Transaction Screen
Claim Investigation
Biology
Environmental Health & Safety
Environmental Permitting
Groundwater & Soil Characterization
Hazardous Materials/Waste
PCB
Remedial Design & Feasibility Studies
Remediation & Construction Management
Site Characterization
UST Removal
Vapor Intrusion Investigations & Remediation
Water & Wastewater
Sustainability Consulting

Education/Training:

B.A., Earth & Geographical Studies, University of Massachusetts
A.S., Environmental Technology, Cape Cod Community College (CCCC)
Coastal Zone Management Certificate, CCCC
Water Supply Certificate, CCCC/Massachusetts Maritime Academy (MMA)
Wastewater Technology Certificate, CCCC/MMA
Geographical Information Systems Certificate, CCCC/MMA
Hydrogeology Certificate, UMASS Boston

Biography:

Mr. Mohre has over 17 years of experience in the environmental industry. Field expertise includes AHERA consulting, Asbestos Inspections, Indoor Air Quality Assessments, Hazardous Material building surveys and Water Intrusion/Mold Cause and Origin Investigations as well as on-site project management related to remedial action oversight, Phase I Environmental Site Assessments (ESAs), Commercial Property Transaction Screens, and Phase II Subsurface Investigations.

Mr. Mohre is currently responsible for managing industrial hygiene projects involving asbestos abatement, mold remediation and indoor air quality. Management tasks include: asbestos inspections; indoor air quality assessments; site investigations; cause and origin determinations; delineation of contaminated media; development of remediation strategies; and oversight and management of contractors. He also provides comprehensive investigative reports, remedial protocols, and operational plans.

Mr. Mohre also works closely with the other divisions of the VERTEX Companies which include environmental site investigations for insurance claims, property development/redevelopment, and/ or property transactions.

Licenses/Certifications:

Asbestos Inspector, RI, AAC-0828
Asbestos Management Planner, MA, AP000080
Asbestos Inspector, MA, AI000262
Asbestos Management Planner, RI, AAC-0828
Asbestos Project Monitor, MA, AM000144
OSHA 10
OSHA 40 Hour HAZWOPER Training
8 Hour OSHA HAZWOPER Refresher Certification, Annual
Transportation Workers Identification Credential (TWIC), US

Presentations:

2-Hour Asbestos Awareness Training for the MBTA and Various MA School Districts



Matthew Quigley, PE
Forensic Engineer

[mquigley@vertexeng.com / 781.952.6070]

Highlights:

Professional Engineer (PE),
Structural
Passed 16 HR. Structural
Engineering (SE) Exam
B.S. Civil Engineering

Expertise:

Civil/Structural
Structural
Damages
Design Plans
Property Claim - Commercial
Property Claim - Personal

Education/Training:

B.S., Civil Engineering, Northeastern University, 2010

Special Training:

SEAMASS - Wind and Waves
SEAMASS - Structural Forensics: Lessons Learned

Biography:

Mr. Quigley has a strong background in structural engineering analysis and design, building envelope review and design and construction administration services. He is a licensed engineer in 5 states and has experience with consultation and design of concrete, steel, masonry, and wood structural systems in residential and commercial applications. He is experienced in state and federal building codes and implementation through forensic analysis of failures and design of new structures.

He has experience in the evaluation, design and rehabilitation of historic structures including structural reinforcement, building envelope renovation and building code upgrades. His responsibilities include evaluating historic materials, designing to match existing material strengths and aesthetics, coordinating with historic commission requirements, implementing building code upgrades for historic structures and review and approval of construction materials and implementation.

Mr. Quigley uses these skills and experience as an integral member of the forensic engineering division within VERTEX to provide cause and origin investigations, damage assessments, and repair and design recommendations for structural and building envelope components on residential and commercial applications.

Licenses/Certifications:

Professional Engineer (PE) – Structural, MA, 51620
Professional Engineer (PE) – Structural, CT, 31035
Professional Engineer (PE) – Structural, NH, 15152
Professional Engineer (PE) – Structural, VT, 123335
Professional Engineer (PE) – Structural, RI, 11959
Professional Engineer (PE), NY, 097406
OSHA 10
Structural Safety Assessment Program Inspector, CA, 74255

Associations:

- American Concrete Institute (ACI)
- American Society for Testing and Materials (ATM)
- American Institute of Steel Construction (AISC)

Presentations:

Presentation and training: *"Expansion and Control Joints"* as part of



Philip Russo, R.A.
Project Manager

[prusso@vertexeng.com / 617-830-1542]

Highlights:

Registered Architect MA Lic
#9077

Expertise:

PCA
Construction Defect
Civil Engineering
Structural
Architecture
Property Claim - Personal
Civil/Structural
Construction Due Diligence
Property Condition
Assessments
Peer Review
Analysis
PCS
Consultation
Design Plans

Education/Training:

B. Arch, Bachelor of Architecture Degree, Boston Architectural College,
Boston, MA, 1984
Diploma in Architectural and Civil Design, Porter School of Design, Rocky
Hill, CT

Biography:

Mr. Russo is a Massachusetts Registered Architect with over 32 years of experience. He has extensive knowledge related to assessment, architectural design, code review, construction documents, specifications, project costs, project forecasting, and construction administration. He has worked on a wide range of building types, including public governmental buildings such as libraries and K-12 school buildings, as well as hospitals and healthcare facilities and other multi-functional buildings of numerous types. Currently, Mr. Russo serves as Project Manager at VERTEX.

Since 2002, he has been extensively involved in the development and review of Property Condition Assessments (PCAs), Property Condition Screens (PCS's), Mold Investigations, review of construction documents for constructability and other due diligence projects for projects of variable size and complexity throughout North America, Europe, Russia and India.

As Project Manager at VERTEX, Mr. Russo's responsibilities include building/site assessment, technical report writing, coordination of external contractors, ADA compliance, municipal research, cost estimating, capital reserve planning and engineering data analysis. Additional responsibilities include peer review and mentoring of junior staff.

Licenses/Certifications:

Registered Architect, MA, MA#9077
Roofing 101 Module 1 : The Basics
Roofing 101 Module 2 : Roof Systems Basics
Roofing 101 Module 3 : Low-slope Roof Assemblies
Roofing 101 Module 4 : Steep-slope Roof Assemblies
Roofing 101 Module 5 : Roof Flashings and Accessories