

Existing Conditions

2

2.0 Methodology

Methodology (Physical Conditions Assessment)

Drumme Rosane Anderson Inc. (DRA) and our consultants’ team visited the three school buildings on Lunenburg’s central campus on several occasions. The purpose of our visits was to determine the general condition of each building and give our assessment on the general states of repair. We understand that the information provided in this report may be used in formulating the Town’s response to the Massachusetts School Building Authority’s (MSBA) application for school construction assistance grant.

Our assessment is based upon a visual inspection, our review of previous reports, and discussion with Mr. John Londa, Director of Facilities. No physical or destructive testing was performed, and our observations were made without the use of special tools or equipment. The results of our inspections were recorded in the Existing Conditions Reports that were incorporated into this report as part of the Appendix. At the Town’s request the design team also prepared the Capital Needs Upgrades Recommendations document that is included in this study.

All of our recommendations are based on our experience with similar buildings and systems, constructed in the same era.

The following pages provide a summary of the major issues for the Lunenburg school campus.

The following definitions were utilized:

CRITICAL REPAIRS - CR

Conditions that require immediate action or action in the next year

NECESSARY REPAIRS - NR

Require repair in order to avoid deterioration. 2-5 years

RECOMMENDED - R

Repairs that improve overall usability and reduce long term maintenance. 5-7 years

GRANDFATHERED - G

Does not meet current codes, but does not need to be addressed unless a larger building project is undertaken

2.1 Lunenburg High School

Constructed – 1955 Addition - 1960

CRITICAL REPAIRS

- Exterior Windows in poor condition need to be replaced
- Roofing in poor condition existing Tar & Gravel roofs installed in 1984 need to be replaced
- Handicapped Accessibility a number of significant issues
- Asbestos containing materials VAT floor and Plaster ceilings abatement required

NECESSARY REPAIRS

- Exterior Walls require re-pointing and re-caulking
- Outdated P.A./Intercom system needs replacement
- Floor slabs settlement of the slab-on-grade need to be addressed
- Kitchen Equipment beyond its useful service life should be replaced
- Sewer ejector pumps 10 years old, water infiltration into the tank must be addressed

RECOMMENDED REPAIRS

- Casework beyond its useful life should be replaced
- Controlled access to building needs to be improved

GRANDFATHERED

- Fire Protection - no sprinkler system, any significant renovation should include sprinkler system
- Fire Alarm System needs upgrades
- Plumbing fixtures need replacement
- Electrical distribution system & lighting needs upgrades



* Please see Appendix for full report

2.2 Turkey Hill Middle School

Constructed – 1967

CRITICAL REPAIRS

- Gymnasium bleachers need replacement
- Handicapped Accessibility a number of issues

NECESSARY REPAIRS

- Interior finishes in fair condition, re-painting should be considered.
- Asbestos containing materials VAT floor abatement required.
- Exterior Walls appear to be in sound condition, minor re-caulking required
- Exterior Windows in poor condition replacement required
- Kitchen Equipment beyond its expected service life
- HVAC system beyond its expected service life, replacement recommended (The Boiler Plant was replaced in 2003)
- Fire Alarm System needs upgrades doesn't comply with current codes

RECOMMENDED REPAIRS

- Replace existing elevator with new code compliant
- Electrical – insufficient power in the office and copy room needs upgrades

GRANDFATHERED

- Fire Protection - no sprinkler system, any significant renovation should include sprinkler system
- Roofing replaced in 1994 appears to be in fair condition.
- Electrical – update electrical distribution system
- Additional hallway lighting recommended



* Please see Appendix for full report

2.3 T.C. Passios Elementary School

Constructed – 1951 Addition -1976

CRITICAL REPAIRS

- Handicapped Accessibility a number of significant issues
- Interior finishes in 1976 in poor condition, replacement required
- Site lighting inadequate, additional lighting recommended
- Underground 20,000 gallon Oil tank must be removed

NECESSARY REPAIRS

- Asbestos containing materials VAT floor abatement required.
- Kitchen Equipment beyond its expected service life

RECOMMENDED REPAIRS

- Roofing replaced in 1986 appears to be in fair condition. Re-roofing project in 5 to 7 years should be considered
- Interior finishes in fair condition, re-painting should be considered.
- Fire Alarm System needs upgrades doesn't comply with current codes

GRANDFATHERED

- Electrical Distribution System is outdated no adequate capacity
- Additional hallway lighting recommended
- Exterior Walls appear to be in sound condition, minor re-finishing required
- Exterior Windows appear to be in good condition (window replacement projects in 1986 and 2000)
- Fire Protection sprinkler system beyond its expected service life and requires replacement



2.4 Site/Campus

62 Acre Site



Major Issues:

- Lack of Playing Fields for 3 school complex
- Pedestrian/Vehicular conflicts
- Poor Site Circulation
- Inappropriate Loading zones
- Inadequate Site Lighting
- Site Drainage needs improvement

* Please see Appendix for full report

2.5 Capital Needs Upgrades Recommendations

Summary

Lunenburg Public Schools - Capital Needs Upgrade

High School
 TCP Elementary School
 Turkey Hill Middle School
 Date: 3/14/07

Site	CR*	NR*	R*	G*	Construction Cost	Project Cost**
High School	\$ 1,078,750	\$ 50,000	\$ 300,000	\$ 964,375	\$ 2,393,125	\$ 2,871,750
Turkey Hill Middle	\$ 2,117,625	\$ 569,375	\$ 2,114,063	\$ 3,834,975	\$ 8,636,038	\$ 11,658,651
TCP Elementary	\$ 398,875	\$ 3,163,883	\$ 357,500	\$ 3,460,925	\$ 7,381,183	\$ 9,595,537
Total Cost:	\$ 3,874,750	\$ 3,934,258	\$ 4,783,563	\$ 10,722,900	\$ 23,315,470	\$ 30,502,600

Priority Legend:

- CRITICAL REPAIRS - CR
- NECESSARY REPAIRS - NR
- RECOMMENDED - R
- GRANDFATHERED - G

- Conditions that require immediate action or action in the next year
- Require repair in order to avoid deterioration. 2-5 years
- Repairs that improve overall usability and reduce long term maintenance. 5-7 years
- Does not meet current codes, but does not need to be addressed unless a larger building project is undertaken

All costs are based on 2007 construction costs.

Proper cost escalation should be projected based on the expected construction start dates.

*These Costs include 25% contingency factor.

**Project Cost includes "soft costs" as well as inefficiency and disruption factors associated with performing separate repair/renovation projects.

Soft costs include fees, project administration, testing, temporary storage and related expenses.

2.5 Capital Needs Upgrades Recommendations

Site

Lunenburg Public Schools - Capital Needs Upgrade
 School Campus Site
 High School
 TCP Elementary School
 Turkey Hill Middle School
 Date: 3/14/07

Item	Trade	Recommendations	Unit Cost	Qty	Cost	Priority
Site Lighting	ELEC	Increase number of 14' pole mounted site lights	\$4,000	30.00	\$120,000	CR
ADA Curb Cuts	SITE	Install concrete aprons at each drop off crosswalk location	LS	16.00	\$25,000	CR
ADA Access Ramps @ Entries	SITE	Install concrete ramps and handrails at main entries	LS		\$375,000	CR
Septic Tanks	SITE	Abandon existing 10,000 gallon septic tanks	\$24,000	2.00	\$48,000	CR
Site Drainage System	SITE	Clean existing closed drainage system	\$10,000	1.00	\$10,000	CR
Site Utilities	SITE-ENV	Remove Underground Oil Tank near Passios	LS	1.00	\$35,000	CR
Site Utilities	SITE-EL	Provide new underground electric service	LS		\$150,000	CR
Site Utilities	SITE-EL	Replace underground telephone wiring	LS		\$100,000	CR
Prune/Remove Dead Limbs	SITE	Certified Arborist Needed	LS		\$40,000	NR
Site Lighting	ELEC	Replace and increase number of 14' pole lights	\$4,000	60.00	\$240,000	R
Resurface Roadways	SITE	Scarify and resurface	\$6/SF	75000.00	\$450,000	G
Site Drainage System	SITE	Construct storm water detention basin	\$50,000	1.00	\$50,000	G
Site Grading	SITE	Drainage Improvements / spot regrading	\$15,000	6.00	\$90,000	G
Site Utilities	SITE	New Fire Hydrants / Water main installation	\$142,000	1.00	\$142,000	G
Site Technology Connections	S-TECH	Cabling between HS and TCP Elementary School	LS		\$14,500	G
Site Technology Connections	S-TECH	Cabling between HS and Turkey Hill Middle School	LS		\$25,000	G

Subtotal Critical Repairs - CR \$863,000
 Subtotal Necessary Repairs - NR \$40,000
 Subtotal Recommended - R \$240,000
 Subtotal Grandfathered - G \$771,500

Subtotal: \$1,914,500
 Contingency (25%): \$478,625
 Site Construction Cost Total: \$2,393,125

2.5 Capital Needs Upgrades Recommendations

High School

Item	Trade	Recommendations	Unit Cost	Qty	Cost	Priority
Exterior Envelope	ARCH	Window System Replacement	\$65	12000.00	\$780,000	CR ¹
Roof	ARCH	Replace Roofing system (Except Gym and Auditorium)	\$9	64000.00	\$576,000	CR ¹
H/P access	ARCH-HP	Access to the Greenhouse	\$4,000	2.00	\$8,000	CR
H/P access	ARCH-HP	Gymnasium Entrance	\$4,000	1.00	\$4,000	CR
H/P access	ARCH-HP	Replace Garaventa lift with Elevator	\$160,000	1.00	\$160,000	CR
H/P access	ARCH-HP	Modify non compliant slope at existing corridor ramp	LS		\$20,000	CR
H/P access	ARCH-HP	Modify entrance vestibule to meet the min. depth requirements	\$6,000	1.00	\$6,000	CR
H/P access	ARCH-HP	Replace door hardware	\$300	160.00	\$48,000	CR
H/P access	ARCH-HP	Modify Lockers (5%)	\$50	40.00	\$2,000	CR
H/P access	ARCH-HP	Eliminate protruding objects hazards	LS		\$2,000	CR
H/P access	ARCH-HP	Interior Signage	LS		\$5,000	CR
H/P access	ARCH-HP	Modifications to the single accessible male and female toilet	LS		\$4,000	CR
H/P access	ELEC-HP	Provide accessible public telephone	LS		\$600	CR
H/P access	ARCH-HP	Make accessible counter for the Main Office	\$2,000	1.00	\$2,000	CR
H/P access	ARCH-HP	Modify lunch line	LS		\$5,000	CR
H/P access	ARCH-HP	Provide accessible seating in Auditorium	LS		\$2,500	CR
H/P access	FF&E-HP	Provide accessible furniture in multiple locations	LS		\$25,000	CR
Finish	ARCH	Refinish Existing Gymnasium Floor	LS		\$14,000	CR
Sewer	Plumb	Replace Sewer Ejector Pumps	LS		\$30,000	CR
Exterior Envelope	ARCH	Caulking replacement at C.J.'s and misc. masonry re-pointing	LS		\$30,000	NR
H/P access	ARCH-HP	Misc. stair modifications, repairs	LS		\$10,000	NR
Day light control	ARCH	Replace window shades	LS		\$18,000	NR
Asbestos Abatement	ENVIRO	Misc. Asbestos Abatement as required for work on this list	LS		\$100,000	NR
Kitchen Equipment	ARCH	Replace outdated Kitchen Equipment	LS		\$95,000	NR
Heating and Ventilation System	HVAC	Upgrade heating and ventilation which was not upgraded in 04-05	LS		\$50,000	NR ¹
Technology	TECH	Provide new P.A. / Intercom System	LS		\$46,000	NR
Security	SEQ.	Install new Property Protection / Surveillance Systems	LS		\$106,500	NR
H/P access	ELEC-HP	Modifications and additional visual alarms	LS		\$120,000	R
H/P access	ARCH-HP	Provide access to Locker Rooms	LS		\$200,000	R
H/P access	ARCH-HP	Provide access to the Music Room	LS		\$20,000	R
Casework	ARCH	Replace casework that is beyond its useful life	LS		\$200,000	R
Technology	TECH	Provide new Network Voice / Data / Video Cabling Systems	LS		\$377,300	R
Technology	TECH	Provide new Voice / Phone System	LS		\$68,000	R
Technology	TECH	Provide new Master Clock System	LS		\$32,000	R
Technology	TECH	Provide new Video Head End System	LS		\$30,000	R
Technology	TECH	Provide new Local Sound Systems	LS		\$65,000	R
Electrical upgrades for Technology	T-ELEC	Back boxes, conduits and pathways for technology cabling	LS		\$145,750	R
Electrical upgrades for Technology	T-ELEC	Electrical receptacles for technology equipment	LS		\$233,200	R
Fire Alarm System	ELEC	Upgrade existing system to be code compliant	LS		\$200,000	R
Plumbing	Plumb	Replace Plumbing Fixtures and Stop Valves	LS		\$150,000	G
Sprinkler System	FP	Provide new Code compliant sprinkler system	\$11	100620.00	\$1,106,820	G
Electrical Distribution System	ELEC	Update the electrical Distribution and Lighting System	\$18	100620.00	\$1,811,160	G

Subtotal Critical Repairs - CR	\$1,694,100	CR
Subtotal Necessary Repairs - NR	\$455,500	NR
Subtotal Recommended - R	\$1,691,250	R
Subtotal Grandfathered - G	\$3,067,980	G

Subtotal:	\$6,908,830	\$6,908,830
Contingency (25%):	\$1,727,208	
HS Construction Cost Total:	\$8,636,038	

¹ Potential State Reimbursement Items. (reimbursement rate TBD)

The Massachusetts School Building Authority (MSBA) will reimburse communities for certain capital repair projects. The assumption at this time is that eligible projects will include repair/replacement of: roofs, windows and HVAC systems.

Subtotal:	\$1,406,000
Contingency (25%)	\$351,500
HS Construction Cost Total:	\$1,757,500

2.5 Capital Needs Upgrades Recommendations

Turkey Hill Middle School

Item	Trade	Recommendations	Unit Cost	Qty	Cost	Priority
Roof	ARCH	Repair to roofing system at Entrance Canopy	LS		\$30,000	CR ¹
Gym Floor	ARCH	Refinish Gymnasium Floor	LS		\$12,000	CR
H/P access	ARCH-HP	Replace main entry doors with wider doors.	LS		\$7,000	CR
H/P access	ARCH-HP	Replace double doors to provide 32" clear width	\$2,500	21.00	\$52,500	CR
H/P access	ARCH-HP	Replace door hardware	\$300	120.00	\$36,000	CR
H/P access	ARCH-HP	Interior Signage	LS		\$2,500	CR
H/P access	ARCH-HP	Modifications to the single accessible male and female toilet	LS		\$40,000	CR
H/P access	ELEC-HP	Provide accessible public telephone	LS		\$600	CR
H/P access	ARCH-HP	Make accessible counter for the Main Office	\$2,000	1.00	\$2,000	CR
H/P access	ARCH-HP	Modify Lockers (5%)	\$50	30.00	\$1,500	CR
H/P access	ARCH-HP	Modifications to the toilet located in the Nurse's Office	LS		\$35,000	CR
H/P access	Plumb-HP	Provide accessible Drinking Fountains	\$2,500	2.00	\$5,000	CR
H/P access	FF&E-HP	Provide accessible furniture in multiple locations	LS		\$25,000	CR
Equipment	ARCH	Replace Gymnasium Bleachers	LS		\$35,000	CR
Asbestos Abatement	ENVIRO	Misc. Asbestos Abatement as required for work on this list	LS		\$35,000	CR
Exterior Envelope	ARCH	Window System Replacement	\$65	9500.00	\$617,500	NR ¹
Exterior Envelope	ARCH	Caulking replacement at C.J.'s and misc. masonry re-pointing	LS		\$7,000	NR
H/P access	ELEC-HP	Modifications and additional visual alarms	LS		\$100,000	NR
Kitchen Equipment	ARCH	Replace outdated Kitchen Equipment	LS		\$95,000	NR
Heating and Ventilation System	HVAC	Upgrade heating and ventilation which was not upgraded in 04-05	\$22	67573.00	\$1,486,606	NR ¹
Fire Alarm	ELEC	Update Fire Alarm System	LS		\$150,000	NR
Security	SEQ.	Provide new Property Protection / Surveillance Systems	LS		\$75,000	NR
Interior Finishes	ARCH	Repaint corridors and other common areas	LS		\$30,000	R
H/P access	ARCH-HP	Replace existing elevator with new code compliant	LS		\$200,000	R
H/P access	ARCH-HP	Misc. stair modifications, repairs	LS		\$10,000	R
H/P access	ARCH-HP	Access to Cafeteria Stage - Wheelchair Lift	\$16,000	1.00	\$16,000	R
H/P access	ARCH-HP	Access to Girls Locker Room - Wheelchair Lift	\$30,000	1.00	\$30,000	R
Plumbing	Plumb	Replace Plumbing Fixtures and Stop Valves	LS		\$75,000	G
Sprinkler System	FP	Upgrade existing system to be code compliant	\$12	67573.00	\$810,876	G
Electrical Distribution System	ELEC	Update the electrical Distribution and Lighting System	\$18	67573.00	\$1,216,314	G
Technology	TECH	Install new Network Voice / Data / Video Cabling Systems	LS		\$227,500	G
Technology	TECH	Provide new Voice / Phone System	LS		\$55,000	G
Technology	TECH	Provide new PA / Intercom System	LS		\$39,500	G
Technology	TECH	Provide new Master Clock System	LS		\$28,000	G
Technology	TECH	Provide new Video Head End System	LS		\$30,000	G
Technology	TECH	Provide new Local Sound Systems	LS		\$35,000	G
Electrical upgrades for Technology	T-ELEC	Back boxes, conduits and pathways for technology cabling	LS		\$96,750	G
Electrical upgrades for Technology	T-ELEC	Electrical receptacles for technology equipment	LS		\$154,800	G

Subtotal Critical Repairs - CR	\$319,100	C
Subtotal Necessary Repairs - NR	\$2,531,106	N
Subtotal Recommended - R	\$286,000	R
Subtotal Grandfathered - G	\$2,768,740	G

Subtotal:	\$5,904,946	\$5,904,946
Contingency (25%):	\$1,476,237	
THMS Construction Cost Total:	\$7,381,183	

¹ Potential State Reimbursement Items. (reimbursement rate TBD)
 The Massachusetts School Building Authority (MSBA) will reimburse communities for certain capital repair projects. The assumption at this time is that eligible projects will include repair/replacement of: roofs, windows and HVAC systems.

Subtotal:	\$2,134,106
Contingency (25%)	\$533,527
THMS Construction Cost Total:	\$2,667,633

2.5 Capital Needs Upgrades Recommendations

T.C. Passios Elementary School

Item	Trade	Recommendations	Unit Cost	Qty	Cost	Priority
Roof	ARCH	Replace Roofing system & skylights at 1976 addition	\$9	1400.00	\$12,600	CR ¹
Exterior	ARCH	Replace Exterior Doors	\$1,700	20.00	\$34,000	CR
Interior Finishes	ARCH	Renovations/Finish materials replacements at 1976 addition	LS		\$42,000	CR
Gym Floor	ARCH	Refinish Gymnasium Floor	LS		\$11,000	CR
H/P access	ARCH-HP	Replace double doors to provide 32" clear width	LS		\$12,000	CR
H/P access	ARCH-HP	Interior Signage	LS		\$2,000	CR
H/P access	ARCH-HP	Modifications to the single accessible male and female toilet	LS		\$35,000	CR
H/P access	Plumb-HP	Provide accessible Drinking Fountains	\$2,500	2.00	\$5,000	CR
H/P access	FF&E-HP	Provide accessible furniture in multiple locations	LS		\$15,000	CR
Asbestos Abatement	ENVIRO	Misc. Asbestos Abatement as required for work on this list	LS		\$35,000	CR
Security System	ELEC	Provide new Door Cameras, Electr. Latches, motion detectors	LS		\$20,000	CR
H/P access	ARCH-HP	Access to cirm's door clearance install electric openers	\$1,700	24.00	\$40,800	NR
Kitchen Equipment	ARCH	Replace outdated Kitchen Equipment	LS		\$80,000	NR
Roof	ARCH	Entire Roof replacement project in 5 to 7 years	\$9	53800.00	\$484,200	R ¹
Interior Finishes	ARCH	Repaint corridors and other common areas	LS		\$30,000	R
H/P access	ARCH-HP	Provide access to Teacher's Lunch rm. - Wheelchair lift	\$30,000	1.00	\$30,000	R
H/P access	ARCH-HP	Misc. Stair Modifications	LS		\$7,000	R
Plumbing	Plumb	Replace Plumbing Fixtures and Stop Valves	LS		\$50,000	R
Heating and Ventilation System	HVAC	Replace heating and ventilation systems through building	\$17	55200.00	\$938,400	R ¹
Fire Alarm System	ELEC	Upgrade fire alarm system	LS		\$70,000	R
Sprinkler System	FP	Upgrade existing system to be code compliant	\$9	55200.00	\$496,800	G
Electrical Distribution System	ELEC	Update the electrical Distribution System	\$18	55200.00	\$993,600	G
Technology	TECH	Provide new Network Voice / Data / Video Cabling Systems	LS		\$149,100	G
Technology	TECH	Provide new Voice / Phone System	LS		\$46,000	G
Technology	TECH	Provide new PA / Intercom System	LS		\$34,000	G
Technology	TECH	Provide new Master Clock System	LS		\$22,000	G
Technology	TECH	Provide new Video Head End System	LS		\$30,000	G
Technology	TECH	Provide new Local Sound Systems	LS		\$27,000	G
Electrical upgrades for Technology	T-ELEC	Back boxes, conduits and pathways for technology cabling	LS		\$66,000	G
Electrical upgrades for Technology	T-ELEC	Electrical receptacles for technology equipment	LS		\$105,600	G

Subtotal Critical Repairs - CR	\$223,600	CR
Subtotal Necessary Repairs - NR	\$120,800	NR
Subtotal Recommended - R	\$1,609,600	R
Subtotal Grandfathered - G	\$1,970,100	G

Subtotal:	\$3,924,100	\$3,924,100
Contingency (25%):	\$981,025	
TCPES Construction Cost Total:	\$4,905,125	

¹ Potential State Reimbursement Items. (reimbursement rate TBD)
 The Massachusetts School Building Authority (MSBA) will reimburse communities for certain capital repair projects. The assumption at this time is that eligible projects will include repair/replacement of: roofs, windows and HVAC systems.

Subtotal:	\$1,435,200
Contingency (25%)	\$358,800
TCPES Construction Cost Total:	\$1,794,000