

# Capital Needs Assessment

Prepared for:

**SAU-39**

1 School Street  
Amherst, NH 03031



Amherst Middle School

Amherst, NH

May 30, 2017

*Preliminary Report*

# Amherst Middle School: Property Overview

**Total Buildings:** 1

**Total Area (sf)** 112,000

<b><u>Building Type</u></b>	<b><u># Bldgs</u></b>
Elevator	1
Walk-up	
Townhouse	-
<b>Totals:</b>	<b>1</b>

**Occupancy:** School  
**Financing:** Municipal  
**Property/Development Age:** 45 years  
**Year of Construction:** 1972  
**Year of Most Recent Rehab:** 2001

**City & State:** Amherst, NH 03031  
**Addresses:** 14 Cross Road

**OSI Project Number:** 17255  
**Assessment Date:** May 8, 2017  
**Assessment Conditions:** Cloudy, 50°F  
**Assessor:** David Jackson



## **Property Description:**

This low-rise middle school was built in 1972 and expanded in 2001. The building is clad with brick and has multiple roof coverings: tar and gravel, rubber and PVC membranes, and architectural shingles. Windows are double glazed metal framed models. The central mechanical room houses the hydronic heat boilers which is controlled by an EMS. The classrooms have through-wall convectors (heat and fresh air). The building uses municipal water and has its own leaching field.

## Executive Summary

### Amherst Middle School

Amherst, NH

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**Amherst Middle School** is a low-rise building that serves over 600 students in grades 5 through 8. The original building was built in 1972 and expanded most recently in 2001. Remarkable and excellent maintenance and service has helped to extend the useful life of many building systems and components. There are however several key needs that should be addressed in the near-term, including replacements of original roof coverings, classroom through-wall convectors (heat and ventilation), movable partitions in the pod classrooms, and asphalt paving repairs. Future capital actions are based on useful life expectations and assume continued effective maintenance and physical management. Costs for the twenty-year plan total \$4,081,666 or \$36.44 per square feet in in inflated dollars.

### Site

The site, located on a large relatively flat parcel of land adjacent to municipal ball fields and near the Souhegan High School campus, features asphalt paved parking, driveways, walkways, and outdoor basketball courts, surrounding landscaping, masonry retaining walls, and a gravity fed leaching field.

**1. Costs for the development's site related elements total \$520,242 or \$4.65 per square foot in inflated dollars.**

2. The parking lots, driveways, and walkways have areas that are cracked and damaged. The cost to repair these surfaces (crack-fill, sealcoat, and re-stripe) is shown in Years 1, 6, and 16; resurfacing is shown in Year 11. The outdoor recreation area is in good condition and surface repairs are anticipated in Years 4, 9, and 13; resurfacing is shown toward the end of the plan in Year 17.
3. An allowance to replace a damaged wall section near a service area is shown in Year 1. The plan also includes an allowance to upgrade the landscaping in Year 12. The plan also includes the cost for future servicing to the septic system and leaching field, in Year 15.

## **Mechanical Room**

The central mechanical room contains natural gas-fired systems: three condensing boilers to produce hydronic (forced hot water) heat and a domestic hot water (DHW) tank that serves the entire facility. The heating system is augmented with a pair of in-line fractional horsepower pumps used to distribute hydronic heat. Two additional DHW tanks are located in mechanical closets in other areas of the facility. The boiler plant is governed by an energy management system (EMS), which also controls the rooftop equipment (discussed in the Building Mechanical and Electrical report section), and monitors and controls space temperature throughout the building.

4. **Costs related to the development's boilers and boiler room systems total \$298,903 or \$2.67 per square foot in inflated dollars.**
5. The cost to upgrade the EMS is shown in Years 8 and 15. The boilers, pumps, and DHW tanks are to be replaced in Year 12.

## **Building Mechanical and Electrical Systems**

Major building systems include the fire sprinkler system, distribution piping for hydronic heat, domestic hot and cold water, sanitary wastewater, and natural gas services, heating, ventilation and air conditioning (HVAC) services, electrical, fire detection, security, and elevators.

- 6. Costs related to the development's mechanical and electrical systems total \$680,007 or \$6.07 per square foot in inflated dollars.**
7. The original through-wall convectors have been repaired and serviced to help extend their useful life. Some of these units appear to no longer have functioning outside air louvers which could impact the indoor air quality. A recent air quality study performed by a third party, showed several areas where carbon dioxide (CO<sub>2</sub>) readings exceeded the desired level of 1,000 ppm (the maximum level for acceptable ventilation), indicating a need to provide reliable ventilation throughout the facility. The cost to replace the original through-wall convectors is shown over the first 2 years of the plan. The newer through-wall convectors are to be refurbished over a two-year period starting in Year 13.
8. The ceiling mounted air handlers, located in the industrial arts area, are original and are to be replaced in Year 3. The series of rooftop packaged units provide heating and cooling to specific areas of the building; each unit has a natural gas-fired combustion element and a direct expansion (DX) cooling coil; there are also several split DX air conditioning units each serving specific program/support areas. The rooftop units and the split DX air conditioners are to be replaced in Year 10. The air-cooled condensers for the commercial refrigeration units are also to be maintained as operating concerns. The exhaust fans are to be upgraded in Year 12.

9. An allowance to upgrade the video monitoring system, public address system, and the central clock is Years 3, 10, and 17. The generator, which provides 50 kW of emergency power, is to be replaced in Year 5. The fire alarm system is to be upgraded toward the end of the plan in Year 17.
10. The elevator, which appears to be lightly used, is maintained by a full service contract. The age of the equipment could not be determined but it possible that it is original. The cost for a major upgrade is shown in Year 7. Also, the cost to refurbish the elevator cab interior and door operators is shown in Years 7 and 19.

## **Building Architectural Systems and Program Areas**

This building features flat roofs covered with a variety of membranes: fastened rubber, white PVC, and tar and gravel; the roofs have interior drains for drainage. There is also a pitched roof section that is covered with architectural shingles. The exterior walls are clad with brick. The windows are metal framed double glazed models. A metal frame storefront-type door is at the primary entrances. The secondary doors are single leaf solid metal models. Interior common areas include the classrooms, science labs, and industrial arts shops, hallways, stairways, a gymnasium, locker rooms and restrooms. The support areas feature the cafeteria with a stage, library, administration/support offices, and the central kitchen.

### **11. Costs related to the development's architectural systems total \$2,153,984 or \$19.23 per square foot in inflated dollars.**

12. The cost to replace the caulking, in which there were sections found to be dried, cracked, and in some isolated areas voids were also noted, is shown in Years 1 and 16. Repainting of the lintels is also shown in Years 1 and 16. The brickwork appears to be in good condition and future repointing is shown in Year 16.

13. An allowance for anticipated failed window glazing replacement is shown starting in Year 8. Replacement of the secondary and service doors is shown in Year 18.
14. The original tar and gravel roof covering has been well-maintained to help extend the expected useful life significantly. There are sections that appear to show signs of minor water retention (ponding). The cost to replace this roof covering, is shown over a two-year period starting in Year 2. The existing PVC membrane has an isolated area in which the interior drain is higher than the surrounding membrane resulting in ponding; this issue is to be corrected in the first year of the plan. The costs to replace the PVC membrane and the rubber membrane are shown in Years 6 and 10, respectively. Preferably, the replacement roof coverings should be PVC membranes, which will provide a cooling benefit to the building during the summer months. The architectural shingles are to be replaced starting in Year 18.
15. The pod classrooms have movable partitions, which can be used to vary the size of these areas, however the partitions transmit sound between the classrooms and over time have become difficult to use. An allowance to replace these partitions with newer ones, designed to limit sound transmission and to also be easier to use is shown over the first 3 years of the plan. This item should be discussed at the client review meeting.
16. Wall repainting and ceiling tile and carpet replacement is shown every ten years starting in Year 8. Replacement of the vinyl composite tile (VCT) flooring is shown in Year 18.
17. An annual allowance to repair the lockers starts in the first year of the plan. Also, allowances to replace classroom furnishings and equipment start in Year 5.
- 18. Costs related to the school's support areas total \$428,530 or \$3.83 per square foot in inflated dollars.**

19. Future replacement of ceiling panels and repainting in the other program areas is shown in Years 8 and 18. The VCT is to be replaced in Year 18. The Library furnishing and equipment replacement is shown starting in Years 9 and 19. The furnishing within the Cafeteria/Stage area is to be replaced in Year 15, and the equipment within this same space is to be replaced at the end of the plan in Year 20. In the central kitchen, the ceiling tiles are to be replaced and the walls repainted in Years 8 and 18. The linoleum sheet flooring is to be replaced in Year 15. The dishwasher is failing and is to be replaced in the first year of the plan. An allowance to replace the other appliances is shown in Year 15.

Additional Notes:

1. The Physical Assessment of the property was conducted on May 8, 2017. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by David Jackson. We would like to thank site staff for their assistance.
2. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.
3. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.





A block retaining wall at the student garden area.



A view of the asphalt paved parking lot.



A close-up of cracks in a section of the asphalt paving.



Damage on a section of asphalt paving and this wall.



Close-up of damage at this catch basin.



The paved play area.



A view of the front elevation.



A view of the side elevation of the older building section.



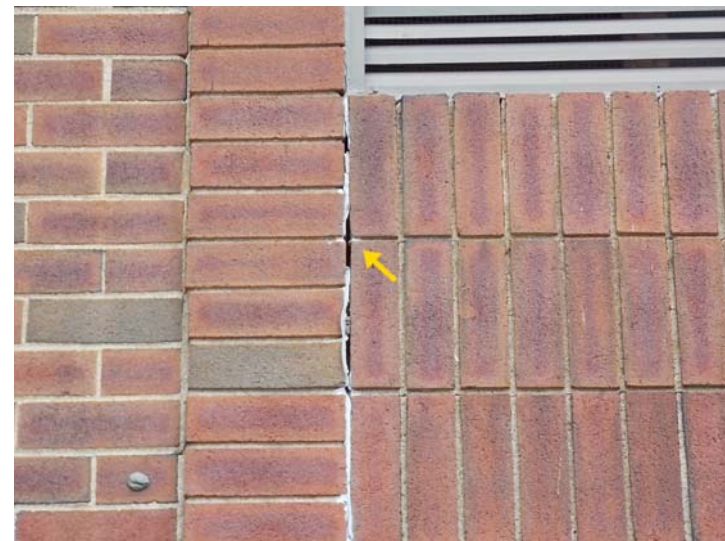
This is the main entrance.



One of the secondary entrances.



An example of a caulked building joint.



A close-up of missing caulking.



This elevation section shows the newer building wing on the left (arrow) and the older building wing on the right.



Peeling paint observed on an air intake grill on the older building section.



A close-up of a metal lintel that is showing rust along the front edge.



Tar and gravel roof covering on a building section.



In the foreground is a rubber membrane (black), and at the center is a PVC membrane including on a pitched roof section augmented with snow guards. Also shown is a pair of rooftop units.



A close-up of a roof drain that is seated above the membrane (which should be pitched to the drain). This is confirmed with the standing water to the right.



A close-up view of one of the solar light tubes.



This pitched roof section is covered with architectural shingles.



A classroom in the original building wing featuring ceiling tiles, VCT flooring, movable partitions and fixed walls.



A classroom in the newer building wing with ceiling tiles, VCT flooring and fixed walls.



The Gymnasium floor was refinished prior to the assessment.



A bank of lockers in the newer building wing.



A view of the Cafeteria; in the background is the stage.



This is the kitchen, which is adjacent to the Cafeteria.



An outside view of the walk-in refrigerator/freezer. The air-cooled compressor is mounted on top.



One of the restrooms.



The group of natural gas-fired boilers used to produce hydronic heat.



The energy management system (EMS) panel in the mechanical room (opened for photo).



The pair of base-mounted 7.5 hp hydronic heat circulating pumps.



One of the natural gas-fired DHW tanks.





One of the original through-wall convectors.



A newer through-wall convector.



This air handler serves the Wood Shop



A view of the fire alarm control panel (FACP).



The fire sprinkler system includes this backflow preventer, which keeps stagnant sprinkler water from flowing back into the potable water system.



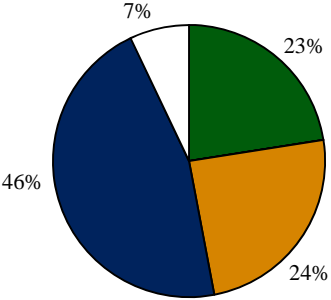
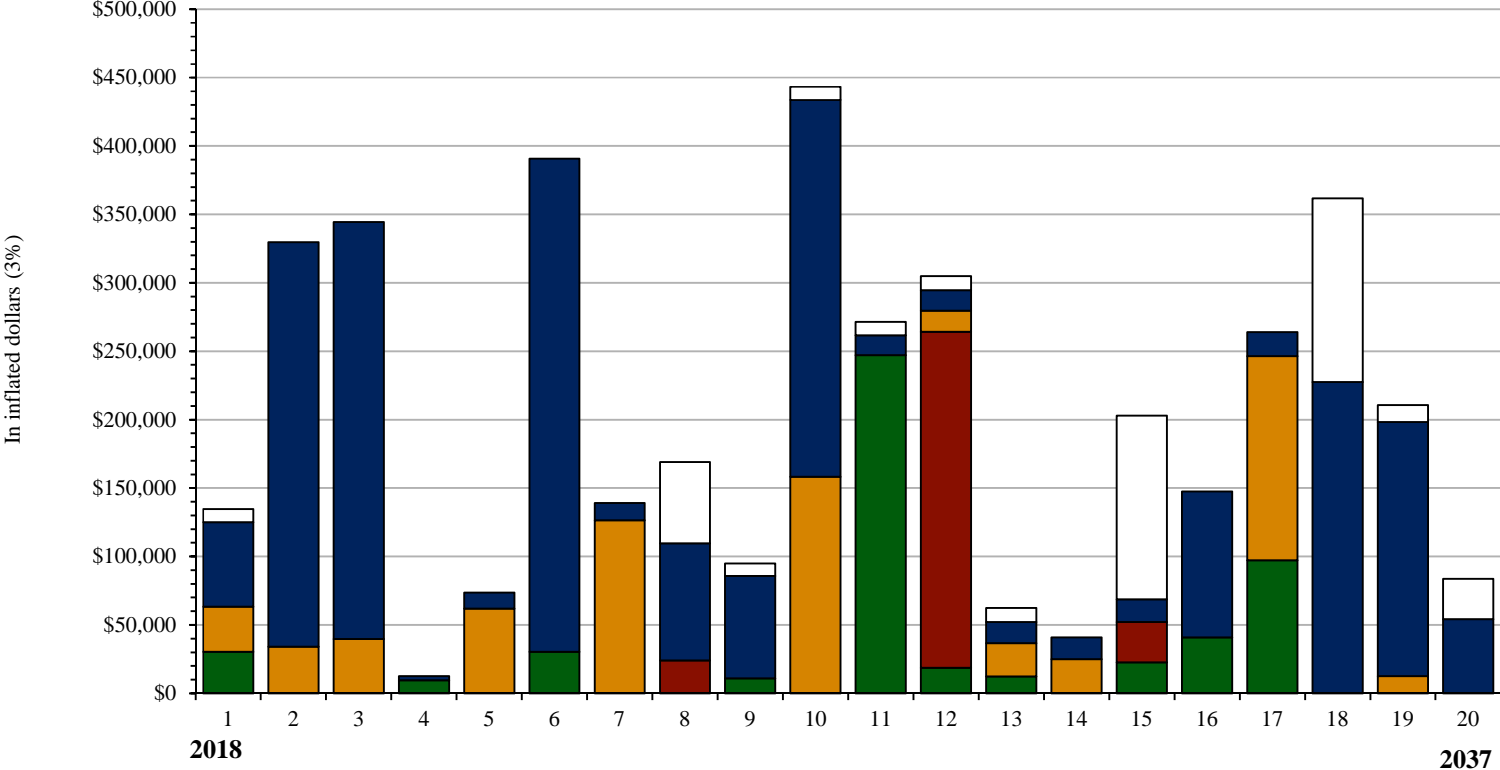
This is the diesel powered emergency generator; it produces 50 kW of power.



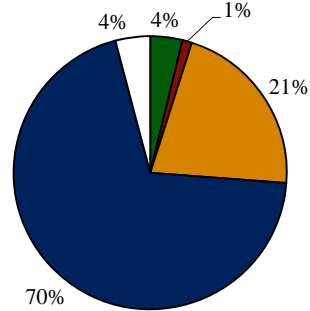
This is the school's waste compactor.



LED exterior light fixture.



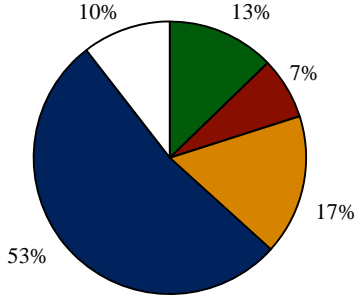
Year One Distribution



Ten Year Distribution

Total Costs by Building System (inflated dollars)

	In Year 1	In Years 1-10	In Years 1-20
Site Systems	\$30,320 or \$.27 / SF	\$81,203 or \$.73 / SF	\$520,242 or \$4.65 / SF
Mechanical Room		\$23,983 or \$.21 / SF	\$298,903 or \$2.67 / SF
Building Mech. & Elec.	\$33,000 or \$.29 / SF	\$453,396 or \$4.05 / SF	\$680,007 or \$6.07 / SF
Building Architectural	\$61,825 or \$.55 / SF	\$1,485,490 or \$13.26 / SF	\$2,153,984 or \$19.23 / SF
Program Areas	\$9,500 or \$.08/SF	\$87,660 or \$.78/SF	\$428,530 or \$3.83/SF
<b>In inflated dollars:</b>	<b>\$134,645 or \$1.20/SF</b>	<b>\$2,131,732 or \$19.03/SF</b>	<b>\$4,081,666 or \$36.44/SF</b>
<b>In current dollars:</b>	<b>\$134,645 or \$1.20/SF</b>	<b>\$1,861,697 or \$16.62/SF</b>	<b>\$3,139,108 or \$28.03/SF</b>



Twenty Year Distribution

# Capital Needs Summary

**Amherst Middle School**  
Amherst, NH 03031

OSI Ref: 17255  
Property Age: 45 Years  
Financing: Municipal

Number of Buildings: 1  
Total Number of Units: 112000  
Occupancy: School

	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
<b>Site Systems</b>										
Surface	\$30,320	\$0	\$0	\$9,461	\$0	\$30,454	\$0	\$0	\$10,968	\$0
Site Distribution Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Sub-Total	<b>\$30,320</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,461</b>	<b>\$0</b>	<b>\$30,454</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,968</b>	<b>\$0</b>
<b>Mechanical Room</b>										
Boilers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,983	\$0	\$0
Boiler Room Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical Sub-Total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$23,983</b>	<b>\$0</b>	<b>\$0</b>
<b>Building Mech. &amp; Electrical</b>										
Mechanical	\$33,000	\$33,990	\$30,766	\$0	\$0	\$0	\$0	\$0	\$0	\$147,178
Electrical	\$0	\$0	\$9,018	\$0	\$61,903	\$0	\$0	\$0	\$0	\$11,091
Elevators	\$0	\$0	\$0	\$0	\$0	\$0	\$126,450	\$0	\$0	\$0
Mechanical & Electrical Sub-Total	<b>\$33,000</b>	<b>\$33,990</b>	<b>\$39,784</b>	<b>\$0</b>	<b>\$61,903</b>	<b>\$0</b>	<b>\$126,450</b>	<b>\$0</b>	<b>\$0</b>	<b>\$158,269</b>
<b>Building Architectural</b>										
Structural and Exterior	\$23,875	\$0	\$0	\$0	\$0	\$0	\$0	\$425	\$437	\$451
Roof Systems	\$1,200	\$257,798	\$265,532	\$0	\$0	\$348,185	\$0	\$0	\$0	\$261,257
Classrooms/Halls/Stairs	\$34,000	\$35,020	\$36,071	\$0	\$8,723	\$8,984	\$9,254	\$61,243	\$9,817	\$10,112
Gym/Restrooms/Locker Rms	\$2,750	\$2,833	\$2,917	\$3,005	\$3,095	\$3,188	\$3,284	\$23,982	\$64,465	\$3,588
Building Architectural Sub-Total	<b>\$61,825</b>	<b>\$295,651</b>	<b>\$304,520</b>	<b>\$3,005</b>	<b>\$11,818</b>	<b>\$360,357</b>	<b>\$12,538</b>	<b>\$85,649</b>	<b>\$74,720</b>	<b>\$275,407</b>
<b>Support Areas</b>										
Cafeteria/Stage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,276	\$0	\$0
Library	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,773	\$9,247	\$9,525
Admin Offices	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,665	\$0	\$0
Kitchen	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$5,674	\$0	\$0
Program Areas Sub-Total	<b>\$9,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$59,388</b>	<b>\$9,247</b>	<b>\$9,525</b>
<b>Total Capital Costs</b>	<b>\$134,645</b>	<b>\$329,641</b>	<b>\$344,304</b>	<b>\$12,466</b>	<b>\$73,721</b>	<b>\$390,812</b>	<b>\$138,988</b>	<b>\$169,020</b>	<b>\$94,935</b>	<b>\$443,201</b>

# Amherst Middle School

Costs on these two pages are aggregated by category from the Capital Needs worksheets which follow. Total capital costs on these two pages are carried forward to line F of the Replacement Reserve Analysis(es) that follow.

2028 Year 11	2029 Year 12	2030 Year 13	2031 Year 14	2032 Year 15	2033 Year 16	2034 Year 17	2035 Year 18	2036 Year 19	2037 Year 20	
\$247,136	\$18,687	\$12,344	\$0	\$0	\$40,928	\$97,254	\$0	\$0	\$0	<b>Site Systems</b> Surface Site Distribution Systems
\$0	\$0	\$0	\$0	\$22,689	\$0	\$0	\$0	\$0	\$0	
<b>\$247,136</b>	<b>\$18,687</b>	<b>\$12,344</b>	<b>\$0</b>	<b>\$22,689</b>	<b>\$40,928</b>	<b>\$97,254</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	Site Sub-Total
\$0	\$202,652	\$0	\$0	\$29,495	\$0	\$0	\$0	\$0	\$0	<b>Mechanical Room</b> Boilers Boiler Room Systems
\$0	\$42,773	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>\$0</b>	<b>\$245,425</b>	<b>\$0</b>	<b>\$0</b>	<b>\$29,495</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	Mechanical Sub-Total
\$0	\$15,573	\$24,238	\$24,965	\$0	\$0	\$0	\$0	\$0	\$0	<b>Building Mech. &amp; Electrical</b> Mechanical Electrical Elevators
\$0	\$0	\$0	\$0	\$0	\$0	\$149,238	\$0	\$0	\$0	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,598	\$0	
<b>\$0</b>	<b>\$15,573</b>	<b>\$24,238</b>	<b>\$24,965</b>	<b>\$0</b>	<b>\$0</b>	<b>\$149,238</b>	<b>\$0</b>	<b>\$12,598</b>	<b>\$0</b>	Mechanical & Electrical Sub-Total
\$464	\$478	\$492	\$507	\$522	\$90,212	\$554	\$18,917	\$588	\$606	<b>Building Architectural</b> Structural and Exterior Roof Systems
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,336	\$0	\$0	
\$10,415	\$10,728	\$11,050	\$11,381	\$11,723	\$12,074	\$12,436	\$115,375	\$47,256	\$48,674	Classrooms/Halls/Stairs Gym/Restrooms/Locker Rms
\$3,696	\$3,807	\$3,921	\$4,038	\$4,160	\$4,284	\$4,413	\$81,835	\$137,729	\$4,822	
<b>\$14,575</b>	<b>\$15,012</b>	<b>\$15,463</b>	<b>\$15,927</b>	<b>\$16,405</b>	<b>\$106,571</b>	<b>\$17,404</b>	<b>\$227,463</b>	<b>\$185,573</b>	<b>\$54,102</b>	Building Architectural Sub-Total
\$0	\$0	\$0	\$0	\$45,378	\$0	\$0	\$67,277	\$0	\$16,658	<b>Support Areas</b> Cafeteria/Stage Library
\$9,811	\$10,105	\$10,408	\$0	\$0	\$0	\$0	\$40,012	\$12,428	\$12,801	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,390	\$0	\$0	Admin Offices Kitchen
\$0	\$0	\$0	\$0	\$88,979	\$0	\$0	\$7,625	\$0	\$0	
<b>\$9,811</b>	<b>\$10,105</b>	<b>\$10,408</b>	<b>\$0</b>	<b>\$134,357</b>	<b>\$0</b>	<b>\$0</b>	<b>\$134,304</b>	<b>\$12,428</b>	<b>\$29,459</b>	Program Areas Sub-Total
<b>\$271,521</b>	<b>\$304,802</b>	<b>\$62,453</b>	<b>\$40,892</b>	<b>\$202,945</b>	<b>\$147,499</b>	<b>\$263,896</b>	<b>\$361,767</b>	<b>\$210,599</b>	<b>\$83,560</b>	<b>Total Capital Costs</b>

		<b>Reserve Funding In Year 1</b> Replacement Reserve (RR) analysis starts here with the starting RR balance reported, or imputed, to have been on hand at the start of Year 1, and current annual RR contributions. The projections below reflect Starting RR Balance (Line A), plus the Total Annual RR Contributions (Line D) and Interest Earnings on RR (Line E), minus Total Annual Capital Costs (Line F), taken from the CNS above. This is expressed arithmetically as (A+D+E)-F=G, Year-End Balances, then carries forward to Line A of the following Year.								
Start replacement reserve balance:		\$0 or \$00/unit								
Contributions to Reserves:		\$0 or \$00/unit								
	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
<b>(A) Reserve Balances</b>										
Starting Replacement Reserves	\$0	\$814,295	\$708,023	\$589,868	\$806,154	\$974,005	\$836,322	\$953,050	\$1,050,166	\$1,231,407
<b>(B) Annual Funding</b>										
Contributions Indexed at 3%	\$0	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
<b>(C) Additional Unit Contributions</b>	\$1.75									
	2	2	2	2	2	2	2	2	2	2
<b>(D) Total Annual Reserve Funding</b>	\$196,000	\$196,000	\$201,880	\$207,936	\$214,174	\$220,600	\$227,218	\$234,034	\$241,055	\$248,287
<b>(E) Interest on Reserves at 3%</b>	\$2,940	\$27,369	\$24,269	\$20,815	\$27,397	\$32,529	\$28,498	\$32,102	\$35,121	\$40,667
<b>Total Funds Available</b>	<b>\$198,940</b>	<b>\$1,037,664</b>	<b>\$934,172</b>	<b>\$818,620</b>	<b>\$1,047,726</b>	<b>\$1,227,134</b>	<b>\$1,092,038</b>	<b>\$1,219,186</b>	<b>\$1,326,343</b>	<b>\$1,520,361</b>
<b>(F) Total Capital Cost</b>	\$134,645	\$329,641	\$344,304	\$12,466	\$73,721	\$390,812	\$138,988	\$169,020	\$94,935	\$443,201
<b>(G) Reserve Balances</b>	<b>\$64,295</b>	<b>\$708,023</b>	<b>\$589,868</b>	<b>\$806,154</b>	<b>\$974,005</b>	<b>\$836,322</b>	<b>\$953,050</b>	<b>\$1,050,166</b>	<b>\$1,231,407</b>	<b>\$1,077,160</b>
Outside Capital:	\$750,000									
Adjusted Reserve Balances	\$814,295	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Notes:**

1. Same starting reserve balance as shown in Plan 1.
2. In Year 1, \$750,000 is added to the reserve balance and the annual contribution is established at \$93,963 (\$1.75 per square foot).
3. Plan is fully funded.

\*ANNUAL RR CONTRIBUTIONS are shown being indexed for inflation at the % specified above except when Additional Contributions are called for.

Line C, Additional Contributions allows for material adjustments in annual RR funding that would enable the property to meet all projected needs out of reserves through Year 20.

\*\*INTEREST EARNINGS ON RESERVES are calculated on 100% of starting balances and on 50% of the total annual contribution for the year at the rate shown

# Amherst Middle School

## SITE SYSTEMS

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
						Year of action AND duration of project		
<b>SURFACE</b>								
Parking/Driveways	65,071 sf	2.45	\$159,424	Varies	20	11	in 1 Year	Asphalt paved; cracked and damaged areas observed <u>Resurface in Year 11</u>
Crack-Fill and Sealcoat	75,058 sf	0.35	\$26,270	Varies	5	1 /6 /16	in 1 Year	Cracks and surface damage observed. Crack-fill, sealcoat, and re-stripe in Years 1, 6, and 16
Sidewalks	9,987 sf	2.45	\$24,468	Varies	20	11	in 1 Year	Asphalt; cracks observed, included in Crack-fill/Sealcoat repair. <u>Resurface in Year 11</u>
Outdoor Courts	24,737 sf	0.35	\$8,658	3	20	17	in 1 Year	Basketball courts and recreation area, in good condition
Retaining Walls	105 lf		\$0	45	20	4 /9 /13	in 1 Year	Crack-fill/sealcoat/re-stripe Yrs 4, 9, 13. <u>Resurface in Yr 17</u> Large masonry blocks at student garden, in good condition
Retaining Walls	45 lf	90.00	\$4,050	45	25			<u>Maintain out of Operating</u> Damaged masonry block wall
Fencing	lf							<u>Replace in Year 1</u>
Dumpsters & Enclosures	ls							
Play Equipment	ls							
Site Lighting	ls							
Site Lighting	ea							
Landscaping	1 ls	13500.00	\$13,500	45	60	12	in 1 Year	Surround lawn, garden beds, and trees <u>Upgrade allowance</u>
Entry Signage	ea							
Storage Shed	ls							
Concession Stand Building	ls							
<b>SITE DISTRIBUTION SYSTEMS</b>								
Gas Lines	1 ls		\$0	45	60			<u>Maintain out of Operating</u>
Sanitary Lines	1 ls		\$0	45	60			<u>Maintain out of Operating</u>
Cold Water Lines	1 ls		\$0	45	60			<u>Maintain out of Operating</u>
Electric Distribution	1 ls		\$0	45	60			<u>Maintain out of Operating</u>
Sanitary Leach fields	1 ls	15000.00	\$15,000	45	60	15	in 1 Year	Gravity-fed, recent sewer line repair <u>Service allowance</u>
Miscellaneous	lf							

# Projected Capital Needs Over Twenty Years

# Amherst Middle School

*Costs projected at 3%*

## SITE SYSTEMS

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
<b>SURFACE</b>																				
Parking/Driveways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$214,252	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Crack-Fill and Sealcoat	\$26,270	\$0	\$0	\$0	\$0	\$30,454	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,928	\$0	\$0	\$0	\$0
Sidewalks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,883	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Outdoor Courts	\$0	\$0	\$0	\$9,461	\$0	\$0	\$0	\$0	\$10,968	\$0	\$0	\$0	\$12,344	\$0	\$0	\$0	\$97,254	\$0	\$0	\$0
Retaining Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retaining Walls	\$4,050	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fencing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Dumpsters & Enclosures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Play Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,687	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Entry Signage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage Shed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Concession Stand Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>SITE DISTRIBUTION SYSTEMS</b>																				
Gas Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Water Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electric Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Leach fields	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,689	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0



**Amherst Middle School  
MECHANICAL ROOM**

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	(Expected Useful life)		Replacement Schedule		Notes
				AGE (Years)	EUL (Years)	Year of action AND duration of project		
<b>BOILERS</b>								
Boilers	3 ea	44100.00	\$132,300	8	20	12	in 1 Year	Natural gas-fired condensing PK Mach blrs (1050 MBH input) Replace in Year 12
Controls - EMS	1 ea	19500.00	\$19,500	12	20	8 /15	in 1 Year	JCI Metasys, governs boiler plant and rooftop equipment Allowance to upgrade in Years 8 and 15
Circulating Pumps	2 ea	7050.00	\$14,100	8	20	12	in 1 Year	Base-mounted 7.5 hp pumps Replace in Year 12
Boiler Secondary Pumps	2 ea		\$0	45	25			In-line fractional hp pumps Included in boiler plant replacement cost
Chilled Water Pumps	ls							
Cooling Water Pumps	ls							
Condensate & Feed Water	ea							
Variable Frequency Drives	ls							
Miscellaneous	ls							
Combustion Air	1 ls		\$0	8	30			Ducted air source, sealed combustion Maintain out of Operating
Flue Exhaust	1 ls		\$0	8	30			Stainless steel (boilers) and CPVC (DHW tanks); in good condition. Maintain out of Operating
<b>BOILER ROOM SYSTEMS</b>								
Boiler Room Piping/Valves	1 ls		\$0	Varies	25			No observed leaks or pipe corrosion Maintain out of Operating
Heat Exchanger	ea							
DHW Generation	3 ea	10300.00	\$30,900	8	20	12	in 1 Year	Natural gas-fired condensing: 199 MBH/230 gph/100 gal cap ea Replace in Year 12
DHW Storage	ea							
DHW Pumps	1 ls		\$0	45	20			Fractional hp in-line models Maintain out of Operating
DHW Pumps	ea							
Boiler Room Piping Insulation	1 ls		\$0	45	30			
Fuel Oil Storage	1 ea		\$0	45	25			Day tank for generator; maintain out of Operating
Fuel Oil Transfer System	ls							
Sump Pumps	ea							

# Projected Capital Needs Over Twenty Years

## Amherst Middle School MECHANICAL ROOM

*Costs projected at 3%*

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
<b>BOILERS</b>																				
Boilers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$183,134	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Controls - EMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,983	\$0	\$0	\$0	\$0	\$0	\$0	\$29,495	\$0	\$0	\$0	\$0	\$0
Circulating Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Boiler Secondary Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chilled Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cooling Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Condensate & Feed Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable Frequency Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Combustion Air	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Flue Exhaust	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>BOILER ROOM SYSTEMS</b>																				
Boiler Room Piping/Valves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heat Exchanger	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Generation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,773	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Boiler Room Piping Insulation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel Oil Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel Oil Transfer System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sump Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

# Amherst Middle School

## BUILDING MECHANICAL AND ELECTRICAL

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
						Year of action AND duration of project		
<b>BUILDING MECHANICAL</b>								
Building Fire Suppression	1 ls		\$0	45	50			Connected to water main <u>Backflow preventer in place; maintain out of Operating</u>
Hydronic Heat Distribution	1 ls		\$0	45	50			No observed or reported systemic problems <u>Maintain out of Operating</u>
Domestic Hot/Cold Water Dist.	1 ls		\$0	45	50			No observed or reported systemic problems <u>Maintain out of Operating</u>
Building Sanitary Waste & Vent. Dist.	1 ls		\$0	45	40			No observed or reported systemic problems <u>Maintain out of Operating</u>
Building Gas Distribution	1 ea		\$0	45	50			No observed or reported systemic problems <u>Maintain out of Operating</u>
Rooftop Units	5 ea	21300.00	\$106,500	Varies	20	10	in 1 Year	Trane units; gas heat and 15-tons of cooling <u>Replace in Year 10</u>
Air Handler Unit	2 ea	14500.00	\$29,000	45	25	3	in 1 Year	Usefulness extended from servicing and repairs <u>Replace in Year 3</u>
Split DX Air Conditioning	3 ea	2100.00	\$6,300	5	15	10	in 1 Year	Rooftop mounted condensers, terminal units in various areas <u>Replace in Year 10</u>
Convectors/Fan Coils - Old	24 ea	2750.00	\$66,000	45	25	1	over 2 Years	Original through-wall hydronic fan coils <u>Replace starting in Year 1</u>
Convectors/Fan Coils - New	20 ea	1700.00	\$34,000	12	25	13	over 2 Years	Newer through-wall hydronic fan coils. Refurbish <u>starting in Year 13 (motor, coils, controls)</u>
Exhaust Fans	1 ls	11250.00	\$11,250	Varies	20	12	in 1 Year	Rooftop fans, in good condition <u>Upgrade in Year 12</u>
Recirculating Fans	ea							
<b>BUILDING ELECTRICAL</b>								
Building Power Wiring	1 ls		\$0	45	99			Main switchgear, panels, and transformers <u>Monitor</u>
Emergency Generator	1 ls	55000.00	\$55,000	45	35	5	in 1 Year	ONAN 50 kW; lights and key bldg systems <u>Replace in Yr 5</u>
Emergency Lights	ls							
Smoke / Fire Detection	1 ls	84500.00	\$84,500	3	20	17	in 1 Year	Notifier FACP w/hardwired detection and alarm devices <u>Upgrade in Year 17</u>
Signaling / Communication	1 ls	8500.00	\$8,500	Varies	20	3 /10 /17	in 1 Year	Video monitoring, central clock, P/A system <u>Upgrade allowance</u>
<b>BUILDING ELEVATORS</b>								
Shafts and Doorways	1 ea		\$0	45	35			Dover hydraulic elevator <u>Maintained by full service contract</u>
Cabs	1 ea	7400.00	\$7,400	5	12	7 /19	in 1 Year	Cab interior and door operators not in service contract <u>Allowance to refurbish in Years 7 and 19</u>
Machine Room Equipment	1 ls	98500.00	\$98,500	45	35	7	in 1 Year	Major upgrade: hydraulic pump station, controller/dispatcher <u>in Year 7</u>
Service Lift	1 ls		\$0	45	35			

# Projected Capital Needs Over Twenty Years

## Amherst Middle School

Costs projected at 3%

### BUILDING MECHANICAL AND ELECTRICAL

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
<b>BUILDING MECHANICAL</b>																				
Building Fire Suppression	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydronic Heat Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Domestic Hot/Cold Water Dist.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Sanitary Waste & Vent. Dist.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Gas Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$138,958	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Air Handler Unit	\$0	\$0	\$30,766	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Split DX Air Conditioning	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,220	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Convectors/Fan Coils - Old	\$33,000	\$33,990	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Convectors/Fan Coils - New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,238	\$24,965	\$0	\$0	\$0	\$0	\$0	\$0
Exhaust Fans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,573	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recirculating Fans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>BUILDING ELECTRICAL</b>																				
Building Power Wiring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Generator	\$0	\$0	\$0	\$0	\$61,903	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Lights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Smoke / Fire Detection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$135,598	\$0	\$0	\$0
Signaling / Communication	\$0	\$0	\$9,018	\$0	\$0	\$0	\$0	\$0	\$0	\$11,091	\$0	\$0	\$0	\$0	\$0	\$0	\$13,640	\$0	\$0	\$0
<b>BUILDING ELEVATORS</b>																				
Shafts and Doorways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cabs	\$0	\$0	\$0	\$0	\$0	\$0	\$8,836	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,598	\$0
Machine Room Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$117,614	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Lift	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

# Amherst Middle School

## BUILDING ARCHITECTURE

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
						Year of action AND duration of project		
<b>STRUCTURE</b>								
Foundation	2,274 lf		\$0	45	50			Concrete slab Monitor
Framing	ls							
Slab	sf							
Miscellaneous	ls							
<b>BUILDING EXTERIOR</b>								
Exterior Common Doors	4 ea		\$0	Varies	35			Metal framed glass storefront type, varying sizes Maintain out of Operating
Automatic Door Openers	ea							
Secondary Doors	8 ea	1200.00	\$9,600	Varies	35	18	in 1 Year	Solid core metal doors Replace
Service Doors	1 ea	1500.00	\$1,500	12	30	18	in 1 Year	Double leaf metal doors, in good condition Replace
Storm Doors	ea							
Exterior Walls - Brick	56,850 tll sf 2,843 sf	11.85	\$33,684	45	60	16	in 1 Year	In good condition, no signs of cracks or deterioration Allowance for repointing in Year 16
Exterior Walls - Clean/Paint	sf							
Exterior Caulking	1 ls	14500.00	\$14,500	Varies	15	1 /16	in 1 Year	Areas of dried, cracked, caulking, with some openings Allowance to replace caulking in Years 1 and 16
Trim, Soffit & Fascia	ls							
Exterior Ceilings	ls							
Window Frames	74 ea		\$0	12	35			Metal framed double glazed Maintain out of Operating
Window Lintels	1 ls	9375.00	\$9,375	45	65	1 /16	in 1 Year	Metal, some rust observed on exposed edges Scrape, prime, and repaint in Years 1 and 16
Window Frames	ea							
Window Glass	37 ea	140.00	\$5,180	12	20	8	over 15 Years	Allowance for glazing damage (breaks and fogging) starts in Year 8
Storm / Screen Windows	ls							
Balcony Railings	ea							
Fire Escapes	ea							
Bldg Mounted Lighting	1 ls		\$0	45	15			LED wall-mounted Maintain out of Operating

# Projected Capital Needs Over Twenty Years

## Amherst Middle School

*Costs projected at 3%*

### BUILDING ARCHITECTURE

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
<b>STRUCTURE</b>																				
Foundation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Framing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Slab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>BUILDING EXTERIOR</b>																				
Exterior Common Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Automatic Door Openers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Secondary Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,867	\$0	\$0
Service Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,479	\$0	\$0
Storm Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Walls - Brick	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,478	\$0	\$0	\$0	\$0
Exterior Walls - Clean/Paint	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Caulking	\$14,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,591	\$0	\$0	\$0	\$0
Trim, Soffit & Fascia	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Frames	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Lintels	\$9,375	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,606	\$0	\$0	\$0	\$0
Window Frames	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Glass	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$425	\$437	\$451	\$464	\$478	\$492	\$507	\$522	\$538	\$554	\$571	\$588	\$606
Storm / Screen Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balcony Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fire Escapes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bldg Mounted Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

# Amherst Middle School

## BUILDING ARCHITECTURE--continued

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
						Year of action AND duration of project		
<b>ROOF SYSTEMS</b>								
Structure	48,752 sf		\$0	45	40			Wood framed, wood decking Monitor
Roof - Tar & Gravel	33,709 sf	14.85	\$500,579	45	20	2	over 2 Years	Original, good maintenance and repairs Replace starting in Year 2, consider PVC membrane
Roof - Rubber Membrane	13,484 sf	14.85	\$200,231	10	20	10	in 1 Year	In good condition Replace in Year 10, consider PVC membrane
	20,225 sf	14.85	\$300,347			/6	in 1 Year	Membrane ponding at section that is lower than drain
Roof - PVC Membrane	1 ls	1200.00	\$1,200	18	20	1	in 1 Year	Repair in Year 1, replace in Year 6
								In good condition
Roof - Asphalt Shingles	1,559 sf	4.40	\$6,858	5	23	18	in 1 Year	Replace in Year 18
								Interior drains; existing drainage problem shown in Year 1 under PVC Membrane.
Roof Drainage	1 ls		\$0	Varies	40			Channels light into interior spaces without glare Maintain out of Operating
Solar Light Tubes	5 ea		\$0	5	25			
Penthouses	ea							
Chimney	ls							
<b>CLASSROOMS</b>								
Walls	37,060 sf	0.70	\$25,942	Varies	10	8 /18	in 1 Year	Painted Repaint in Years 8 and 18
								Suspended ceiling tiles
Ceilings	14,640 sf	1.10	\$16,104	Varies	10	8 /18	in 1 Year	Replace
								VCT, in good condition
Floors	14,640 sf	4.10	\$60,024	Varies	20	18	over 3 Years	Replace starting in Year 18
								Durability and noise concerns. Replace w/sound attenuating and resilient folding partitions. <b>Discuss</b>
Movable Partitions	30 ea	3400.00	\$102,000	Varies	20	1	over 3 Years	
Lighting	1 ls		\$0	Varies	25			Fluorescent fixtures Maintain out of Operating; consider LEDs -Discuss
Furniture	1 ls	105000.00	\$105,000	Varies	20	5	over 20 Years	Desks, chairs, tables, etc. Replacement allowance
Equipment	1 ls	50000.00	\$50,000	Varies	25	5	over 20 Years	Computers, projectors, screens, whiteboards, etc. Replacement allowance
Miscellaneous	ls							
<b>HALLS/STAIRS/LOBBY</b>								
Walls	24,850 sf	0.70	\$17,395	2	10	8 /18	over 2 Year	Painted Repaint in Years 8 and 18
								Suspended ceiling tiles
Ceilings	14,640 sf	1.10	\$16,104	2	10	8 /18	over 2 Year	Replace
								VCT, in good condition
Floors	14,640 sf	4.10	\$60,024	Varies	20	18	over 2 Year	Replace starting in Year 18
								Metal lockers, older ones with combination locks
Lockers	1 sf	55000.00	\$55,000	Varies	30	1	over 20 Year	Repair allowance
								Fluorescent fixtures
Lighting	1 ls		\$0	45	20			Maintain out of Operating; consider LEDs -Discuss

# Projected Capital Needs Over Twenty Years

# Amherst Middle School

Costs projected at 3%

## BUILDING ARCHITECTURE--continued

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
<b>ROOF SYSTEMS</b>																				
Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof - Tar & Gravel	\$0	\$257,798	\$265,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof - Rubber Membrane	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$261,257	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof - PVC Membrane	\$1,200	\$0	\$0	\$0	\$0	\$348,185	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof - Asphalt Shingles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,336	\$0	\$0
Roof Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Solar Light Tubes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Penthouses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chimney	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>CLASSROOMS</b>																				
Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,905	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,878	\$0	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,806	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,617	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,070	\$34,062	\$35,084
Movable Partitions	\$34,000	\$35,020	\$36,071	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Furniture	\$0	\$0	\$0	\$0	\$5,909	\$6,086	\$6,269	\$6,457	\$6,651	\$6,850	\$7,056	\$7,267	\$7,485	\$7,710	\$7,941	\$8,179	\$8,425	\$8,677	\$8,938	\$9,206
Equipment	\$0	\$0	\$0	\$0	\$2,814	\$2,898	\$2,985	\$3,075	\$3,167	\$3,262	\$3,360	\$3,461	\$3,564	\$3,671	\$3,781	\$3,895	\$4,012	\$4,132	\$4,256	\$4,384
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>HALLS/STAIRS/LOBBY</b>																				
Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,697	\$11,018	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,376	\$14,807	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,903	\$10,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,309	\$13,708	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,605	\$51,093	\$0
Lockers	\$2,750	\$2,833	\$2,917	\$3,005	\$3,095	\$3,188	\$3,284	\$3,382	\$3,484	\$3,588	\$3,696	\$3,807	\$3,921	\$4,038	\$4,160	\$4,284	\$4,413	\$4,545	\$4,682	\$4,822
Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0



# Amherst Middle School

## BUILDING ARCHITECTURE--continued

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
						Year of action AND duration of project		
<b>GYMNASIUM/LOCKER ROOMS/RESTROOMS</b>								
Walls	2,835 sf	0.85	\$2,410	1	10	9 /19	in 1 Year	Painted Repaint
Ceilings	11,906 sf	0.85	\$10,120	1	10	9 /19	in 1 Year	Painted Repaint
Floors	11,906 sf 8,200 sf	2.30	\$18,860	1	10	9 /19	in 1 Year	Floor recently refinished Refinish in Years 9 and 19
Fixtures	1 ls		\$0	45	25			Maintain out of Operating
Accessories	1 ls		\$0	45	20			Maintain out of Operating
<b>SUPPORT AREAS CAFETERIA and STAGE</b>								
Walls	14,105 sf	0.70	\$9,874	2	10	8 /18	in 1 Year	Painted Repaint
Ceilings	6,105 sf	0.95	\$5,800	2	10	8 /18	in 1 Year	Painted surface and supports Repaint
Floors	6,105 sf	4.10	\$25,031	2	20	18	in 1 Year	VCT, in good condition Replace
Furnishings	1 ls	30000.00	\$30,000	Varies	20	15	in 1 Year	Tables, benches, stage equipment Replacement allowance
Equipment	1 ls	9500.00	\$9,500	Varies	20	20	in 1 Year	Stage lighting, A/V system Replacement allowance
<b>LIBRARY</b>								
Walls/Ceilings	9,942 sf	0.84	\$8,351	2	10	8 /18	in 1 Year	Ceiling tiles, painted walls Replace tiles, repaint walls
Floors	5,766 sf	2.75	\$15,857	2	10	8 /18	in 1 Year	Carpet Replace, consider carpet tiles
Furnishing	1 ls	11500.00	\$11,500	Varies	10	9 /19	over 5 Years	Tables, chairs, shelving, etc. Replacement allowance
Equipment	1 ls	25000.00	\$25,000	Varies	10	9 /19	over 5 Years	Computers Replacement allowance
Miscellaneous								
<b>ADMIN/SUPPORT OFFICES</b>								
Walls/Ceilings	4,516 sf	0.84	\$3,793	2	10	8 /18	in 1 Year	Ceiling tiles, painted walls Replace tiles, repaint walls
Floor Covering	1,936 sf	4.10	\$7,938	Varies	20	18	in 1 Year	VCT Replace
Equipment	1 ls		\$0	Varies	10			Desks, chairs, cabinets, computers, copier, etc. Maintain out of Operating
<b>KITCHEN</b>								
Walls/Ceilings	5,492 sf	0.84	\$4,613	2	10	8 /18	in 1 Year	Ceiling tiles, painted walls Replace tiles, repaint walls
Floors	2,447 sf	5.65	\$13,826	15	30	15	in 1 Year	Linoleum sheet, in good condition Replace in Year 15
Cabinets/Countertops	1 ls		\$0	45	20			Stainless steel cabinets and countertops Maintain out of Operating
Appliances	1 ls	45000.00 9500.00	\$45,000 \$9,500	45	25	15	in 1 Year	Walk-in refrig/freezer, gas range, dishwasher, comm equip. Replace dishwasher in Yr 1; future replacements in Yr 15

# Projected Capital Needs Over Twenty Years

# Amherst Middle School

Costs projected at 3%

## BUILDING ARCHITECTURE--continued

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037	
<b>GYMNASIUM/LOCKER ROOMS/RESTROOMS</b>																					
Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,053	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,102	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,229	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,891	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,108	\$0
Fixtures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accessories	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>CAFETERIA and STAGE</b>																					
Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,143	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,319	\$0	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,133	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,586	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,372	\$0	\$0
Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,378	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,658
<b>LIBRARY</b>																					
Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,271	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,803	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,501	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,208	\$0	\$0
Furnishing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,914	\$3,001	\$3,091	\$3,184	\$3,279	\$0	\$0	\$0	\$0	\$0	\$0	\$3,916	\$4,033
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,334	\$6,524	\$6,720	\$6,921	\$7,129	\$0	\$0	\$0	\$0	\$0	\$0	\$8,512	\$8,768
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>ADMIN/SUPPORT OFFICES</b>																					
Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,665	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,270	\$0	\$0
Floor Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,120	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>KITCHEN</b>																					
Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,674	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,625	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,912	\$0	\$0	\$0	\$0	\$0	\$0
Cabinets/Countertops	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliances	\$9,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$68,067	\$0	\$0	\$0	\$0	\$0	\$0

## Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. The report and analysis may be relied upon by you as a description of the observed current conditions of the building and site improvements, only as of the date of this report, and with the knowledge that certain limitations and exceptions within the report that are the reflective of the scope of services as defined in our contract. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.
2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.
3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.
4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.
5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.
6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.
7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.
8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management. Any unauthorized reliance on or use of the report, including any of its information or conclusions, will be at the third party's sole risk. For the same reasons, no warranties or representation, express or implied in this report, are made to any such third party. Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the contract Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of ON-SITE INSIGHT's liability to the client and all relying parties.
9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.