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Cape Elizabeth Building Committee Agenda
December 3, 2019

I. Introduction/Update
   a. Where do we stand today?

II. New Construction/Renovation Options
   a. Renovate in Place – Frame-off restoration possible?
   b. New Construction

III. Cape Elizabeth Bonding History and Current Capacity

IV. School Square Footage Discussion

V. Sustainability
   a. Existing fuel and utility consumption at Pond Cove, Middle, and High Schools
   b. New sustainable building energy designs that reduce utility consumption

VI. Possible Cape Elizabeth Town Build Plans
   a. Where school building replacements fall into the timeline of other Town buildings

CAPE ELIZABETH SCHOOL DEPARTMENT
BUILDING COMMITTEE MEETING MINUTES

November 5, 2019
6:30PM Cape Elizabeth Community Services

Committee Members Present:

Donna Wolfrom	Superintendent
Matt Sturgis	Town Manager
Jamie Garvin	Town Council Chair
Valerie Adams	Town Council
Marcia Weeks	Business Manager
Del Peavey	Director of Special Services
Perry Schwarz	CESD Director of Facilities and Transportation
Jeff Thoreck	Director of Athletics
Susana Measelle Hubbs	School Board Chair
Heather Altenburg	School Board Vice Chair
Kimberly Carr	School Board Vice Chair
Elizabeth Scifres	School Board
Nasir Shir	School Board
Jeffrey Shedd	CEHS Principal
Troy Eastman	CEMS Principal
Jason Manjourides	PCES Principal
Steve Price	CEMS Teacher/Performance Director
Caitlin Ramsey	CEMS Music Teacher
Erin Taylor	PCES Nurse
Carla Bryant	Community Member/Parent
Derek Converse	Community Member/Parent
Jennifer Edelmann Grymek	Community Member/Parent
Mary Ann Lynch	Community Member
DJ Nelson	Community Member/Parent
Andrew Patten	Community Member
Terri Patterson	Community Member/Parent
Calen Colby	Colby Company Engineering (CCE)
James Hebert	Colby Company Engineering (CCE)
Scott Simons	Scott Simons Architects
Julia Tate	Scott Simons Architects

Public Present:

Valerie Deveraux
Ruth Anne Haley
Tom Dunham

Welcome and Introduction:

Donna Wolfrom welcomed attendees and restated the task of the Building Committee: to review the Needs Assessment Report; determine priorities; determine the size and scope of a future building project and bond; and then make a recommendation to the School Board.

Presentation:

James Hebert (CCE) presented further details on two options that offer school renovation and phasing building plans over the next 10-15 years as was requested during the first committee meeting. Before going through the options though, Mr. Hebert provided a brief outline of what will be covered in the next two meetings: the December committee meeting will include data on energy costs, maintenance costs, current financing obligations, and an analyzation of the data; the January committee meeting will provide a catalog of the information gathered, options discussed, and efforts made.

Keeping in mind that the Needs Assessment data analysis indicates that the Pond Cove and Middle School buildings are closest to their end of life, the following two phasing options were created. Both Option 1 and Option 2 have three parts, which include possible SRRF projects beginning in February of 2020 and General Renovations, beginning in June of 2020. General Renovations would include Security Renovations and Flooring Renovations (removal of VCT flooring) in all three schools.

OPTION 1

In one option, three new separate buildings could be built over the course of no less than 10 years. This option would require various athletic fields to be temporarily unavailable during construction phases to use as staging fields and would require three municipal bonding cycles, but would not entail utilizing temporary portable classrooms. The timeline could follow the following 3-part cycle:

A. SRRF

- February 2020, State authorization of SRRF projects.
- March - June 2020, Design of SRRF projects.
- June - August 2020, Bidding cycle of SRRF projects.
- August 2020 - July 2021, Construction cycle.

B. General Renovations at Elementary, Middle, and High Schools (Security and Flooring renovations)

- June 2020 - February 2021, Design of renovations.
- March - May 2021, Bidding Cycle.
- June - December 2021, Construction cycle.

C. New Construction

New Elementary School

- March - June 2020, A/E Interviews for project.
- June 2020, Budget vote for 25% of Schematic Design (SD) for pricing.
- June - September 2020, Design of 25% of SD.
- September - November 2020, Warrant/Bond/Public Meetings.
- November 2020, Bond Vote for remainder of design and 100% of Construction Documents (CD).
- November 2020 - June 2021, Design of 100% CD.
- June - August 2021, Bidding cycle.
- September 2021 - January 2023, Construction cycle.
- January - June 2023, Tear down/demolish Pond Cove.

New Middle School

- March - June 2023, A/E interviews for project.
- June 2023, Budget vote for 25% of SD for pricing.
- June - September 2023, Design of 25% of SD.
- September - November 2023, Warrant/Bond/Public Meetings.
- November 2023, Bond Vote for remainder of design and 100% of Construction Documents (CD).
- November 2023 - June 2024, Design of 100% CD.
- June - August 2024, Bidding cycle.

- September 2024 - January 2026, Construction cycle.
- January - June 2026, Tear down/demolish existing Middle School, but renovate the 1934 Historical Building.

New High School
- March - June 2026, A/E interviews for project.
- June 2026, Budget vote for 25% of SD for pricing.
- June - September 2026, Design of 25% of SD.
- September - November 2026, Warrant/Bond/Public Meetings.
- November 2026, Bond Vote for remainder of design and 100% of Construction Documents (CD).
- November 2026 - June 2027, Design of 100% CD.
- June - August 2027, Bidding cycle.
- September 2027 - January 2029, Construction cycle.
- January - June 2029, Tear down/demolish existing High School, but save pool/gym for community, restore athletic fields.

Option 2

The second option revisited the idea of combining renovations with phased construction of two new buildings over a period of potentially 6 years. This option would entail seeking two municipal bonds and would not require temporary portable classrooms. The first bond would be the largest and would include: renovations to existing high school; the design for a new high school; renovations to the elementary and middle school; and the teardown of elementary & middle schools (excluding historical building). The construction of a new K-8 building would be the second bond.

A new high school would be built first, while renovations addressing security concerns at PCES/CEMS are tackled. Once the construction of the high school is completed, the process of building a second school (which would continue to house both the elementary and middle school) could begin. The timeline could follow the following 3-part cycle:

A. SRRF
- February 2020, State authorization of SRRF projects.
- March - June 2020, Design of SRRF projects.
- June - August 2020, Bidding cycle of SRRF projects.
- August 2020 - July 2021, Construction cycle.

B. General Renovations at Elementary, Middle, and High Schools (Security and Flooring renovations)
- June 2020 - February 2021, Design of renovations.
- March - May 2021, Bidding Cycle.
- June - December 2021, Construction cycle.

C. New Construction

New High School
- March - June 2020, A/E interviews for project.
- June 2020, Budget vote for 25% of SD for pricing.
- June - September 2020, Design of 25% of SD.
- September - November 2020, Warrant/Bond/Public Meetings.
- November 2020, Bond Vote for remainder of design and 100% of Construction Documents (CD).
- November 2020 - June 2021, Design of 100% CD.
- June - August 2021, Bidding cycle.
- September 2021 - January 2023, Construction cycle.

- January 2023, Transition students to new High School, transition K-8 students to newly renovated, existing High School.
- January - June 2023, Tear down/demolish existing Middle School, but Renovate 1934 Historical Building.

New K-8 School
- March - June 2023, A/E interviews for project.
- June 2023, Budget vote for 25% of SD for pricing.
- June - September 2023, Design of 25% of SD.
- September - November 2023, Warrant/Bond/Public Meetings.
- November 2023, Bond Vote for remainder of design and 100% of Construction Documents (CD).
- November 2023 - June 2024, Design of 100% CD.
- June - August 2024, Bidding cycle.
- September 2024 - January 2026, Construction cycle.
- Tear down/demolish existing High School, while saving pool/gym for community and restoring athletic fields.

Mr. Hebert stressed that these options are merely meant to serve as a starting point for determining best steps forward by outlining possible solutions and timelines. In particular, the K-8 School schedule could be pushed back based on general renovations that would prolong the end-of-life of the high school by approximately ten years.

Julia Tate provided a comparison for flooring options to replace VCT. The cost to remove the VCT flooring is $1.50/square foot. Once removed, the concrete revealed will most likely not be perfectly smooth, but could be improved with the new polished concrete to be suitable for the end-of-life period. The cost of polished concrete is $1.50/square foot. A second viable option would be quartz, which is $4.22/square foot. Annual maintenance costs for either have to be determined. However, one can estimate approximately a 55% reduction in maintenance over a 10 year period compared to VCT for both quartz and polished concrete.

Ms. Tate also provided information on the cost of ownership based on homes to illustrate that as construction moves towards tighter and high performance structures, costs go down due to improved energy consumption for the household, ventilation, hot water, heating, and renewable energy. For example, a Passive House can expect to see a 90% energy reduction. School buildings would roughly see about 80%. A Net Zero House would actually gain energy. The upfront costs are higher, but are soon paid back over time via savings.

Calen Colby added that the deliverables that his team will provide the Committee are: 1. A Build Plan — for example whether it be for a one, two, or three bond cycle. 2. A Schedule ("Spend") Plan for bond planning.

Committee Discussion:

- Mary Ann Lynch suggested creating third option based on having "three satisfactory buildings" which would keep all the buildings, but modernize them, make them more energy efficient, and complete the projects listed in the Needs Assessment Report. She opined that this would offer the least negative impact to the environment.

- Jamie Garvin asked how much life would be gained by simply renovating, given that the timeline clock does not get set back to zero. The group needs to understand how much money it would take to renovate with a full understanding of how long that would last and what the total operating cost would be vs. to building with improved, more energy efficient methods.

- Mr. Colby agreed that all the comparisons should be made available so that one can answer why a certain choice is made. His feeling is that for not a lot more money, building a new structure(s) would see more green space and buildings that will truly last for another 50-60 years. Based on the Needs Assessment, the high school has about 10 more years left, but the elementary and middle school have less.

- Elizabeth Scifres asked what do we want our buildings to be able to do and can simply renovating them do that? The preliminary answer is, no. For example, regulating temperature in the schools to be consistent throughout, would not be possible with renovations.

- Mr. Colby added another point against renovating would be that the cost associated with temporary moving and staging of classes would be money that is not going directly to building new buildings. This cost would be approximately 10-25% of total operating cost.

- Scott Simons added that school buildings of the 1960s reflect a teaching model that does not support 21st century teaching models.

- Steve Price added that as a teacher, it is evident that updated school goals are reflective of the students of today and what should be offered to them — what teaching can offer is much more than just brick and mortar.

- Nasir Shir asked about using carpet as an alternative flooring option. Also, are there other town properties that might be available for building on?

- Andrew Patten added that if all the 220 projects from the Needs Assessment Report were completed, the cost to do so would be approximately $12.8M for the elementary/middle school, and approximately $7.5M for the high school — which does not include projects that were listed as "TBD." With modern building methods that utilize materials that have much longer lifespans and can potentially provide net zero energy costs, "would we be throwing good money after bad," by staying in the buildings?

- Valerie Adams added that most homeowners would not consider tearing down their homes to save on energy and renovation costs. This makes explaining to the community members the benefits of rebuilding over renovating critical in order to get community support.

- Mr. Colby agreed and added the importance of understanding the options and the downsides associated with them.

- Ms. Tate added that home ownership choices are more personal and fiscal decision do not impact others outside their home.

- Mr. Garvin asked what is the developable capability of any buildings that might be unoccupied in the future which could then be used for commercial uses (e.g., condos) and therefore might help offset some of the costs of new buildings? Also, what is our actual maximum borrowing capacity of the town? This will help guide decisions based on the town's financial capacity.

- Ms. Lynch asked if a study has confirmed that there is enough room at the high school to accommodate the elementary and middle school students? And that we would need to know this in order to consider Option 2.

- Mr. Hebert answered not at the moment.

- Mr. Simons added that he wanted to put this option out there in order to generate conversation and possible approaches to solving the puzzle. He also shared that in his experience as an architect,

school buildings use to be designed to last 25 years. In this generation, school buildings have been designed to last 50 years, and the newest buildings are now being designed to last over 100 years. Savings on ownership costs from building with new technology and improved envelopes will pay for itself within 12 years.

- Dr. Wolfrom stated that creating a "masterplan" which could outline a course for the town over the next 20 years would be very helpful and likely be more acceptable to the community. Especially if it could create a more staggered plan.

- Susana Measelle Hubbs asked the architects if they could provide any case examples of other schools that have opted to pursue building more energy efficient buildings which could demonstrate how the savings found in sustainable buildings eventually pay for the construction over time?

- Mr. Simons answered that they would provide examples from clients who have faced this similar issue, including an addition at Waynflete which eventually improved energy performance by over 80%. The costs of purchasing solar energy for example, has dropped dramatically over time, making sustainable construction more affordable.

- Ms. Lynch asked why would one of the Options tackle building a new high school first, instead of elementary/middle school which have much less life left in them?

- Mr. Hebert added that Option 2 was theoretical with the high school first, simply because high schools are typically the flagship of a town. However starting with elementary/middle school first is also possible and would follow the exact same timeline.

- Tom Dunham added, in response to Mr. Garvin's wanting to know what the town's borrowing capacity is, what would the actual cost to families be when bonds are taken on? All the families have to pay for the schools. Also, he would like to know the projections for demographics within Cape Elizabeth citing that many towns on the Maine Coast are bringing in empty nesters looking for vacation homes. Will enrollment numbers of the future support spending over $100 million on schools?

- Mr. Garvin added that while enrollments have stabilized, there are still other unknowns. One could make an argument that when current homes occupied by empty-nesters become available, are they more likely to be purchased by more empty-nesters or young families? We do not have the forecast for this. Families are staying in their homes longer, which makes planning more difficult.

- Terri Patterson said that there is a big cost to not creating buildings that are more than satisfactory. The schools are the biggest part of our community and maintain our property values.

- Ms. Adams added that while we do need to consider the numbers, the numbers don't say everything. People will support spending based on what they value most. She referenced the town's recently adopted Comprehensive Plan in which data indicates that a majority of citizens want to see the town move towards more sustainable building efforts.

- Ms. Measelle Hubbs, citing her two-year term on the Comprehensive Planning Committee, indicated that in addition to a majority of citizens supporting sustainable projects, data also showed an overwhelming demand by community members for renovating and modernizing the town's school buildings.

- Mr. Colby mentioned that data on the schools' current energy consumption and maintenance costs will be compared to newer technologies prior to the next building in order to give the committee time to digest the information.

- Perry Schwarz asked to include information based on historical data gathered for understanding how the cost per square foot to do any building and/or renovating will increase over time. What would the escalation of these costs look like over time?

- Mr. Hebert confirmed that escalation for construction costs will go up. Furthermore, knowing that borrowing right now is near 0% interest, no one knows how the market will progress in the future or how it might impact interest rates.

- Ms. Scifres asked if we could determine whether or not the elementary and middle school could actually be housed in the current high school in order to know if that is a viable option?

- Mr. Colby, Mr. Hebert, and Ms. Tate said that the timelines listed under the two options offer the quickest cycles possible. The timeline can be stretched out over a much longer period of time if desired.

- Mr. Patten said that we need to have a better handle on what the cost could look like. What would the building costs for three buildings be and what would the community members be asked to pay? It's hard to believe that three buildings could be built for $100 million.

- Ms. Tate offered that it would be interesting to provide a cost analysis of simply maintaining the current buildings if no renovations or new construction occurred.

- Mr. Garvin agreed and said that we don't even have our current cost of operations to make that comparison.

- Mr. Schwarz added that he does not believe that the high school could be renovated to contain both the elementary and middle schools with out also building an addition.

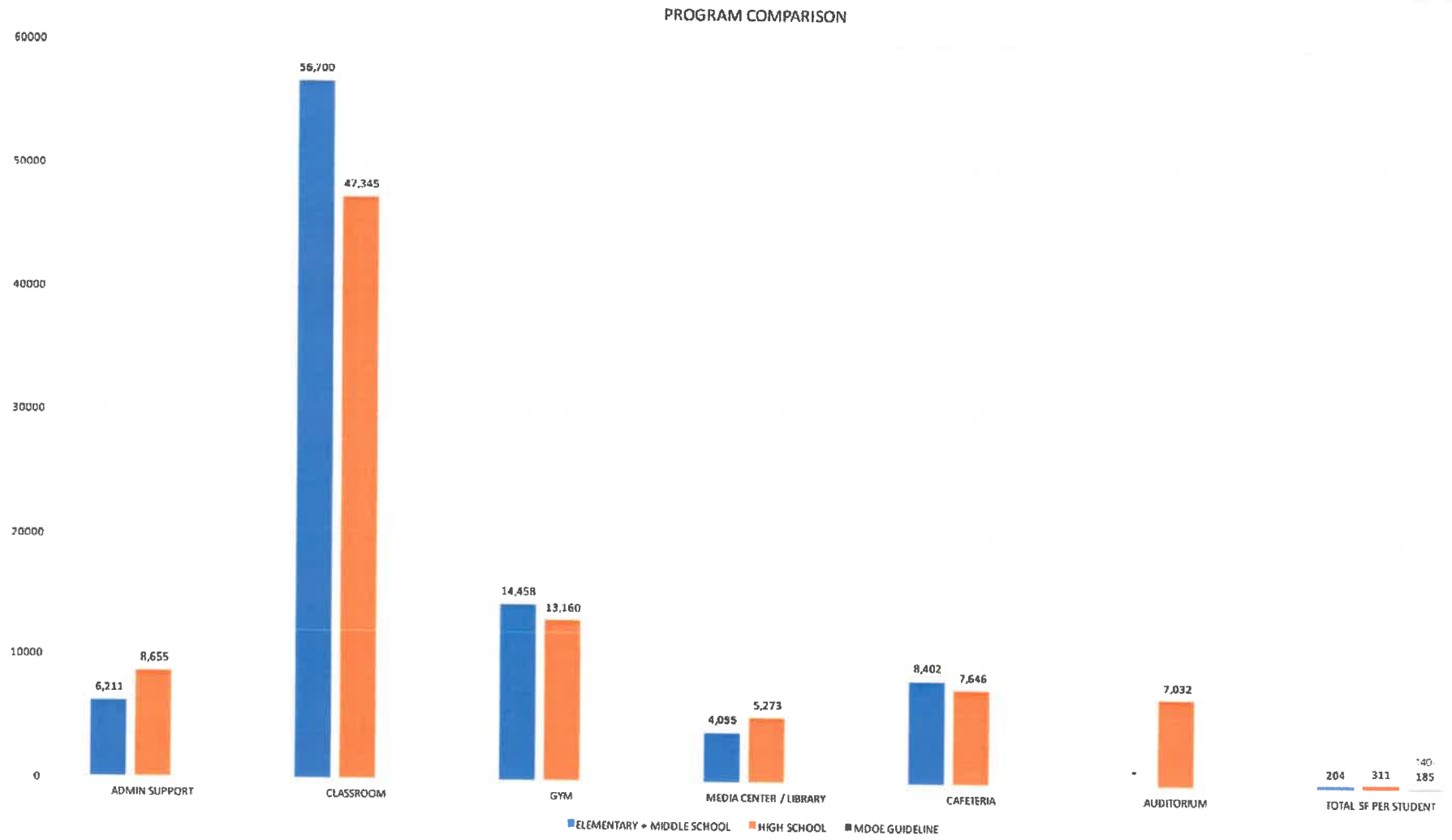
Next Meeting:

Tuesday, December 3rd, 6:30PM - 8:30PM at PCES/CEMS Cafetorium.

Adjourn:

8:30PM

Square Footage Comparisons

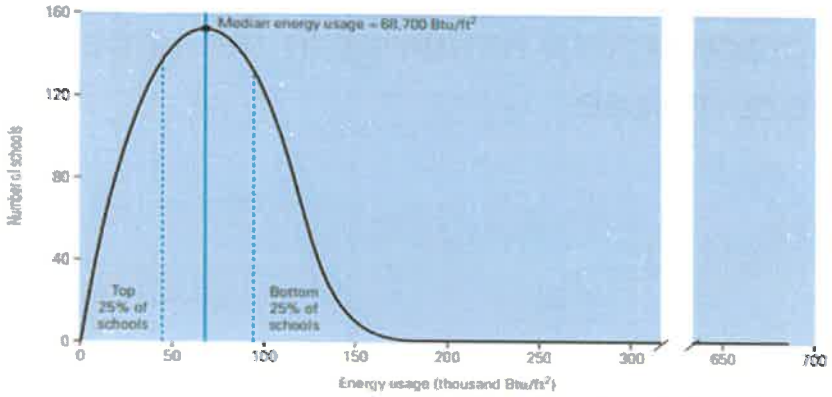


CURRENT CAPE ELIZABETH ENERGY USE

- High School's current combined heating and electric use is over 75,000 BTU/SQFT
- Pond Cove and Middle School use over 120,000 BTU/SQFT
- The Median is typically 68,700 BTU/SQFT, SEE Below:

Figure 10.2: Distribution of energy intensity in school buildings

This curve shows the overall distribution of energy use intensity among a national sample of K–12 school buildings. By fitting a curve to the survey data, we can see that most schools tend to cluster around the median energy use intensity of approximately 68,700 Btu per square foot (ft^2) from all energy sources. Many school buildings are significantly more energy-intensive than the median.



Courtesy: E SOURCE; from Commercial Building Energy Consumption Survey, 2003 data

ENERGY DIVIDEND

- The Elementary and Middle School represent the greatest potential for energy savings. With a potential for over $230k in lower energy cost per year with a school performing under 50,000 BTU/SQFT
- The High School has a potential for over $100k lower energy cost per year with a school performing under 50,000 BTU/SQFT
- This would place school buildings in the upper 25% of schools for energy use.

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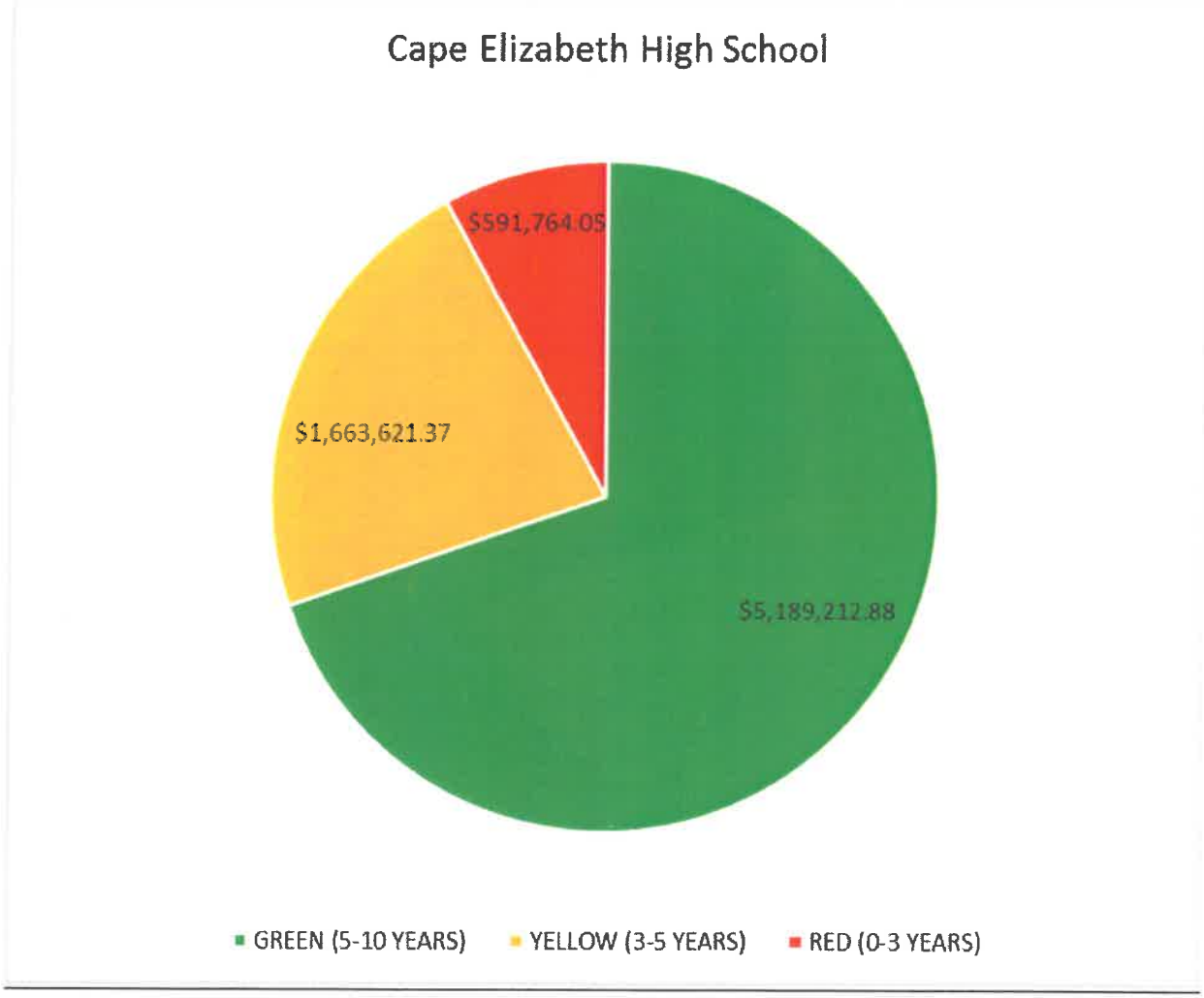
Cape Elizabeth Needs Assessment

Total Estimated Renovation Costs by Priority



*Note: costs indicated above are related to repairs of existing buildings only, and do not include new additions or expansions to the existing buildings. These costs do not include safety and security improvements.

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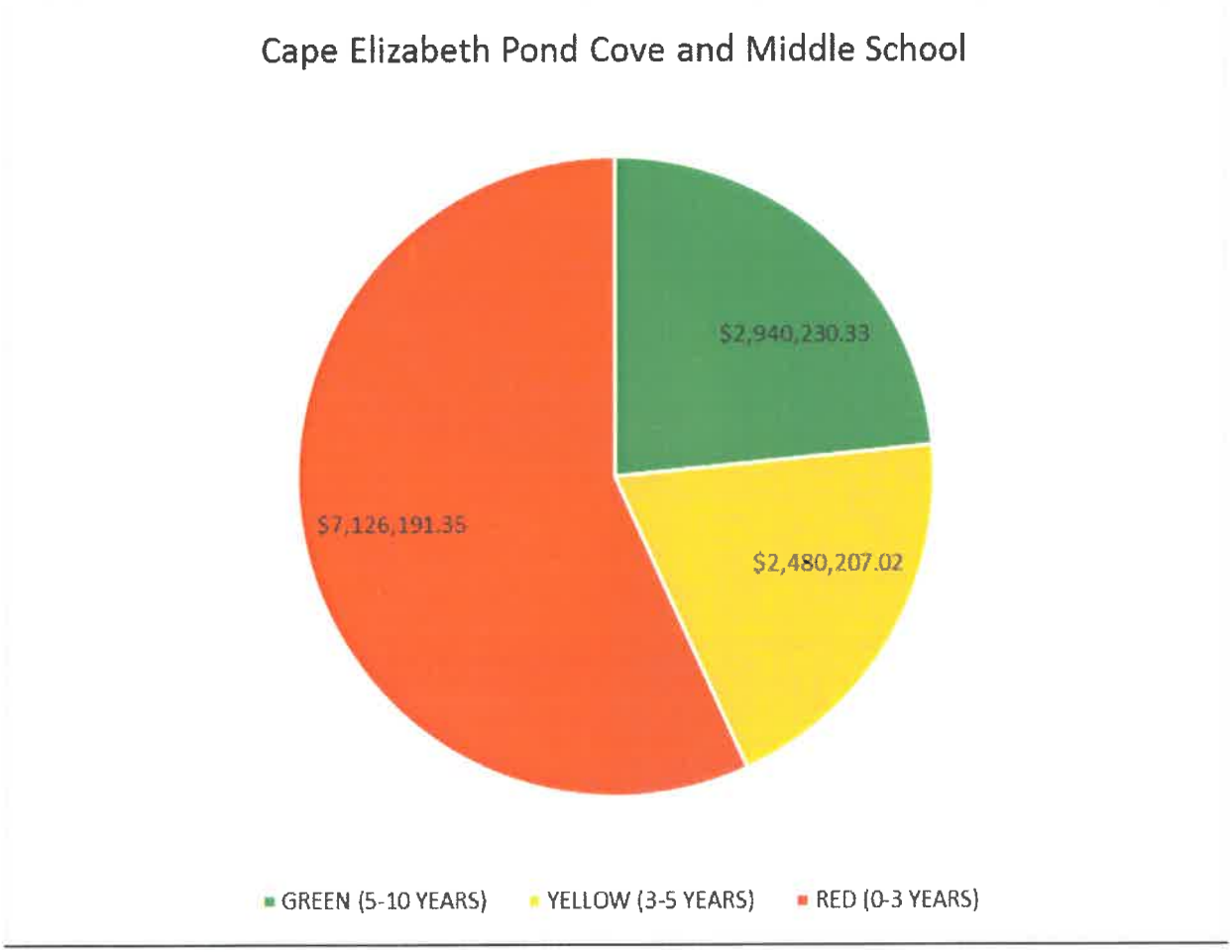
Total Estimated Renovation Costs by Priority



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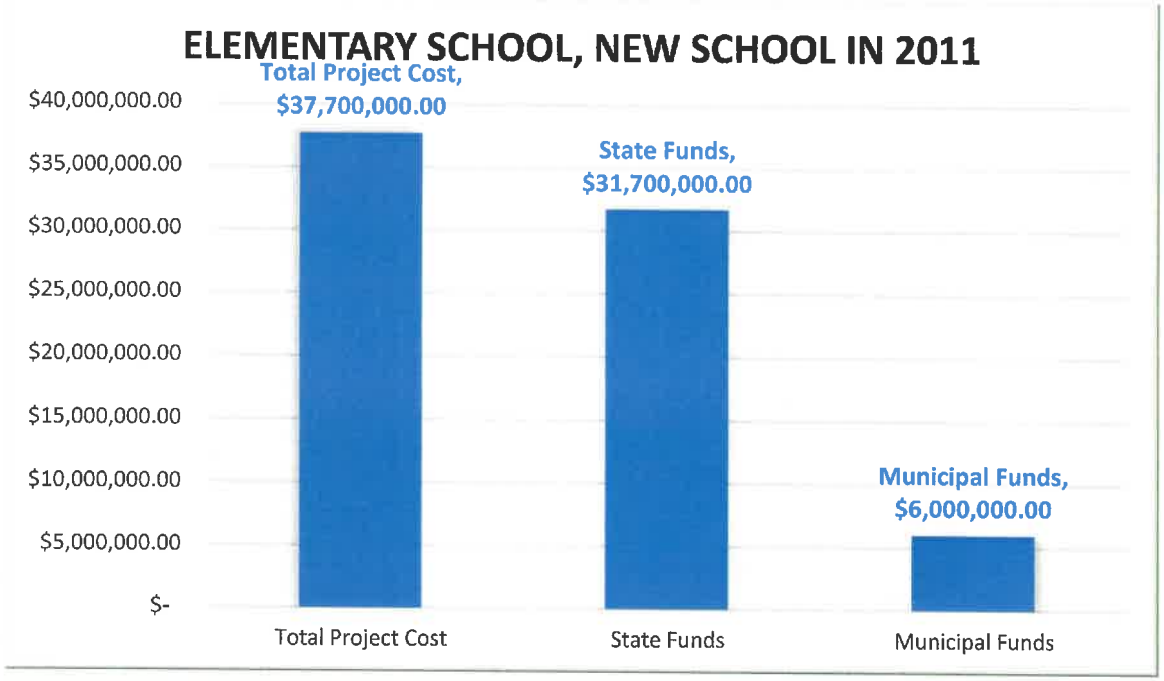
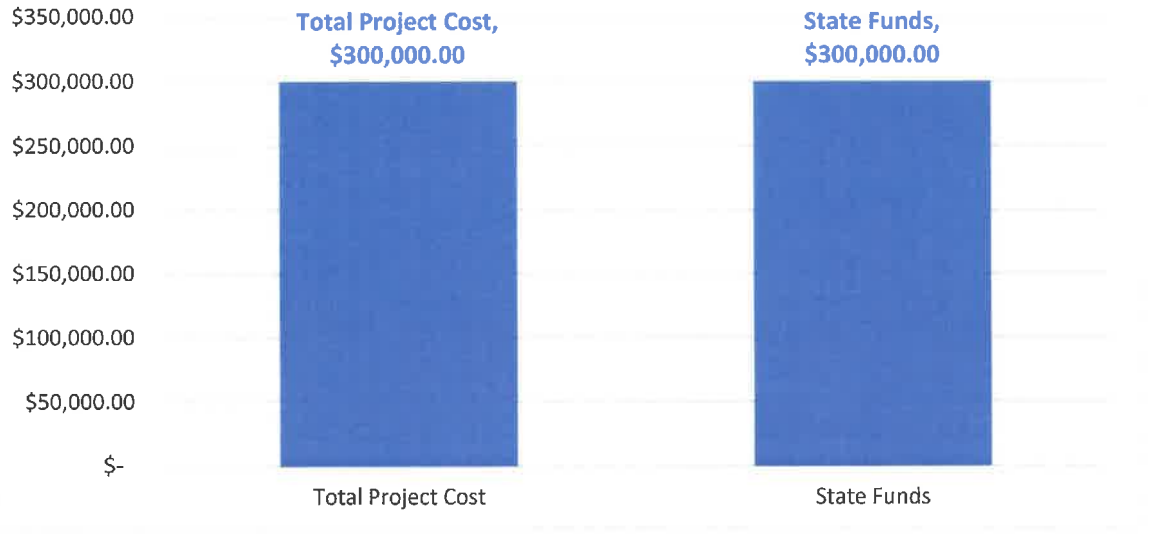


KEY CODE:
TOTAL COST: $37,700,000

MIDDLE/HIGH SCHOOL, SECURITY UPGRADES IN 2017



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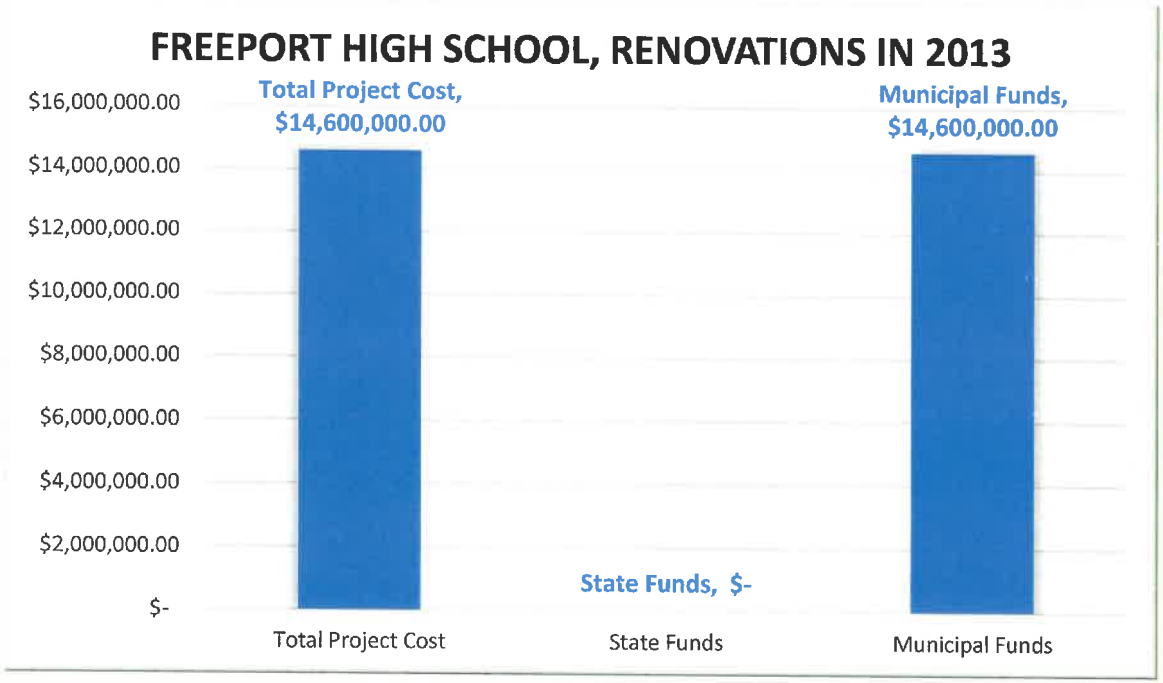

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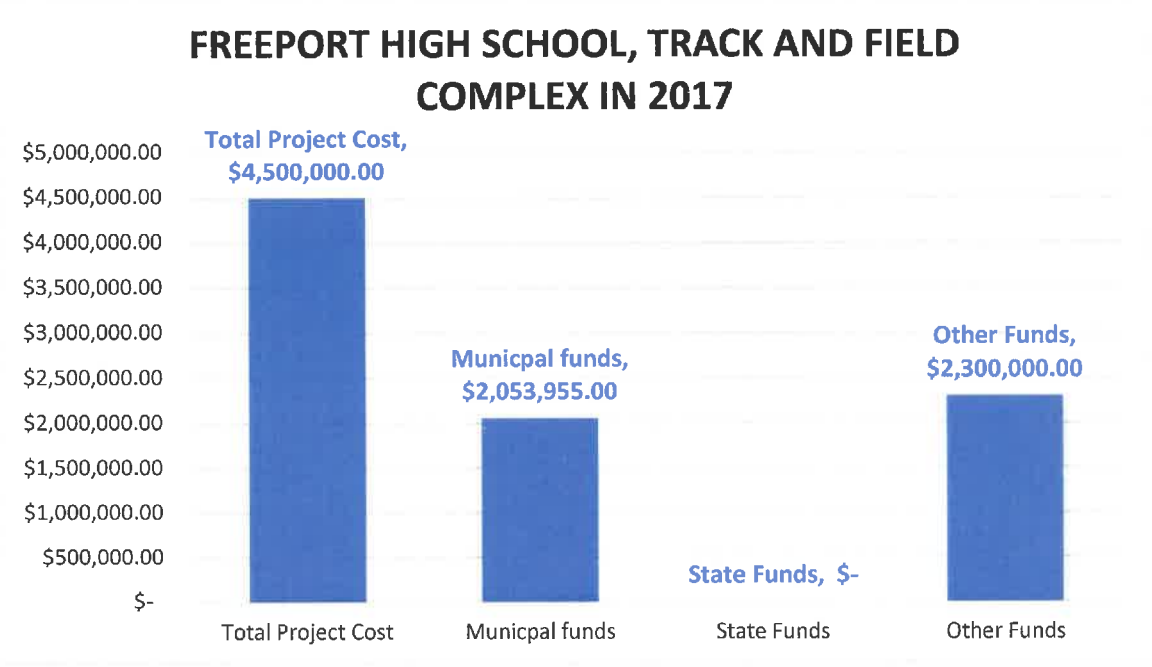

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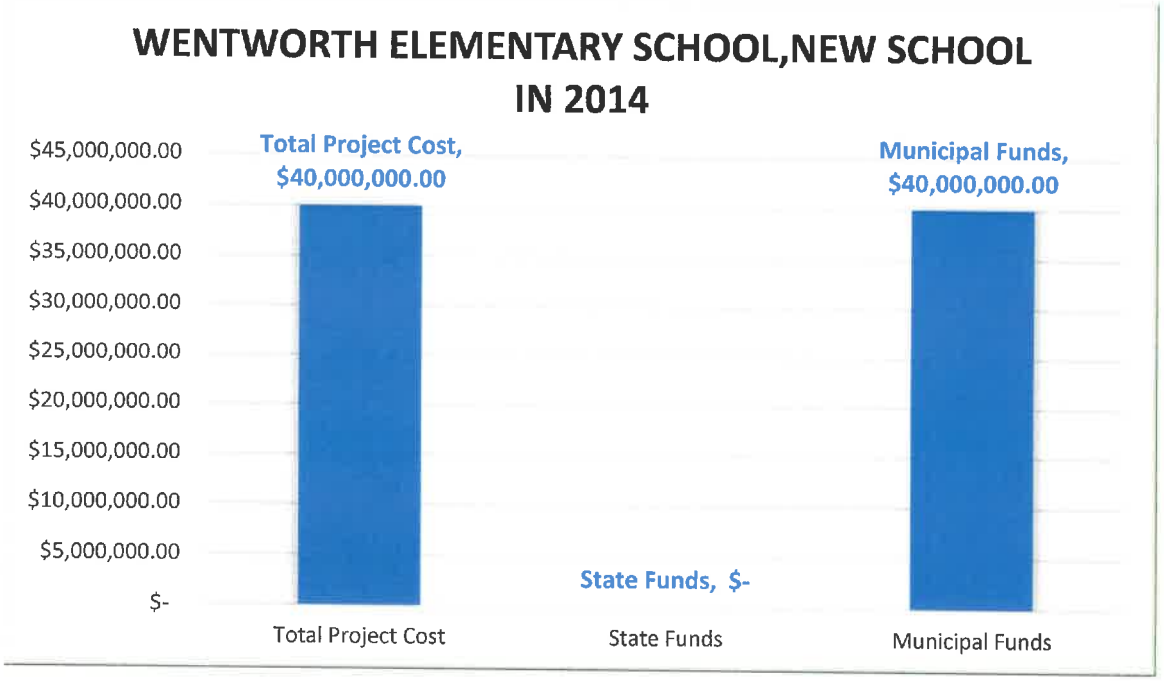
TOTAL COST: $4,500,000

**$2.3M raised by Tri-Town Track & Field Project, complex completed in May 2018



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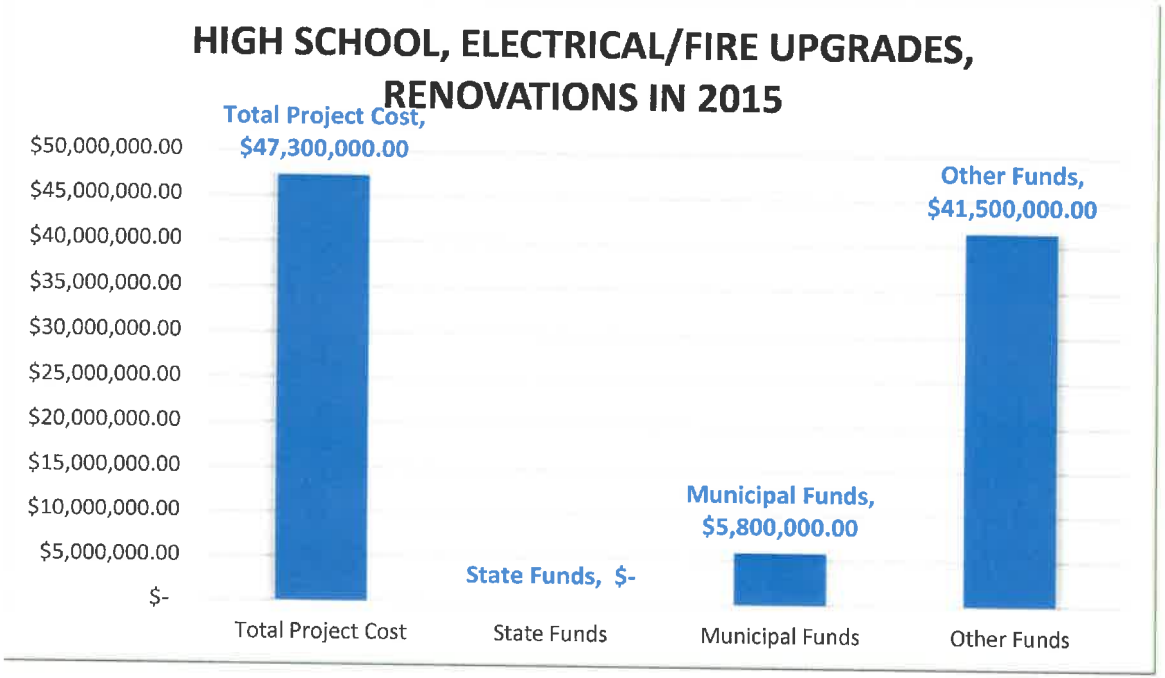
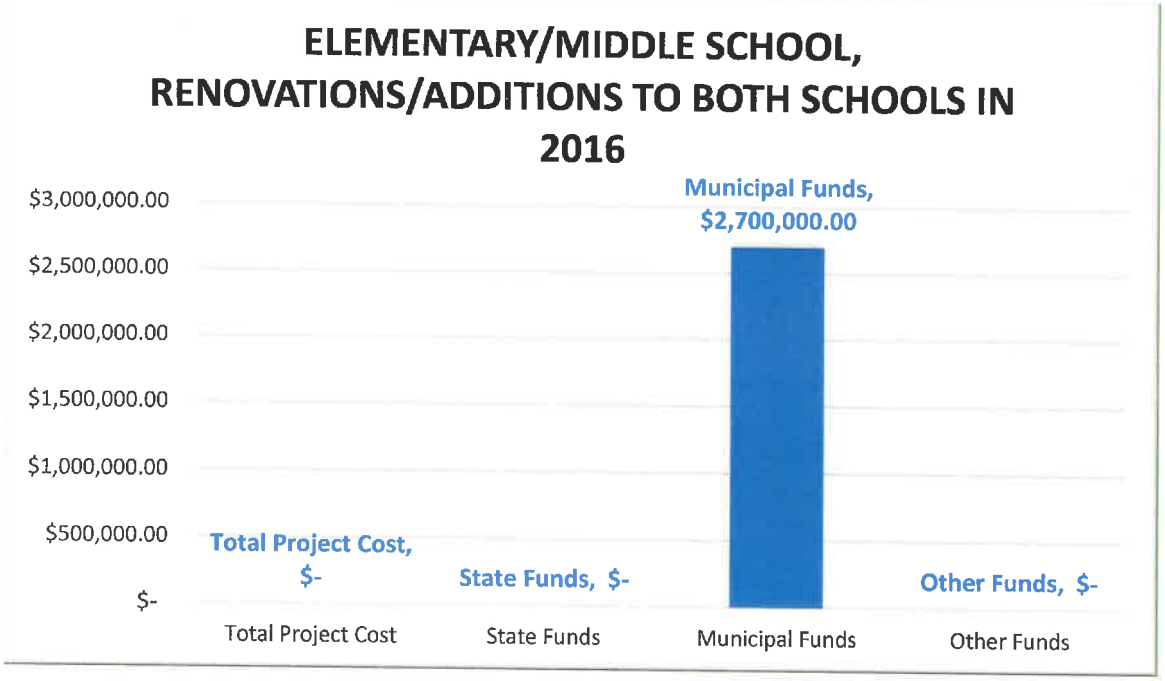


KEY CODE:
TOTAL COST: $47,300,000
** Renovations began in 2012, renovations completed in 2015



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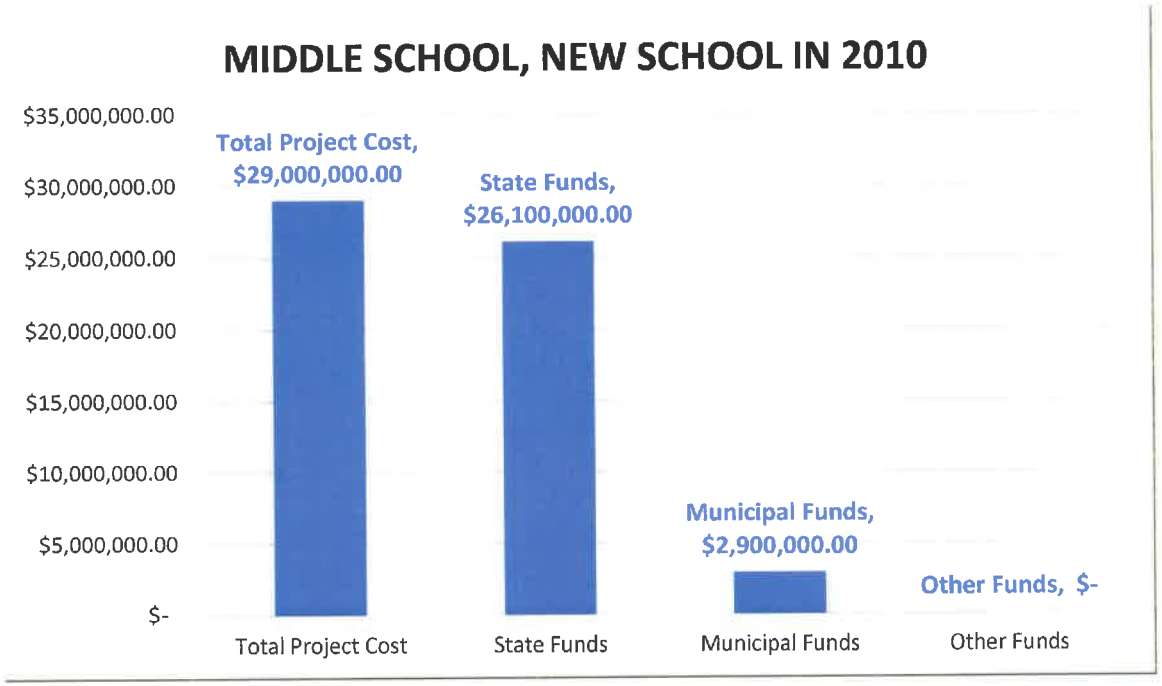
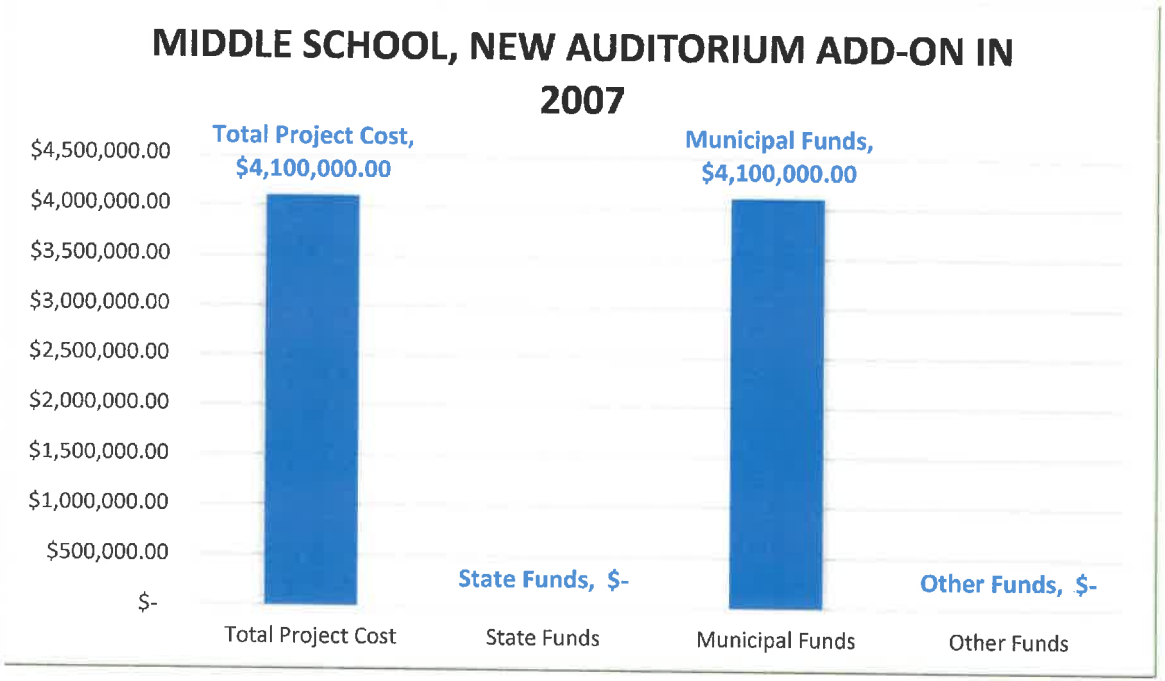


KEY CODE:
TOTAL COST: $29,000,000

** 90 % State funded



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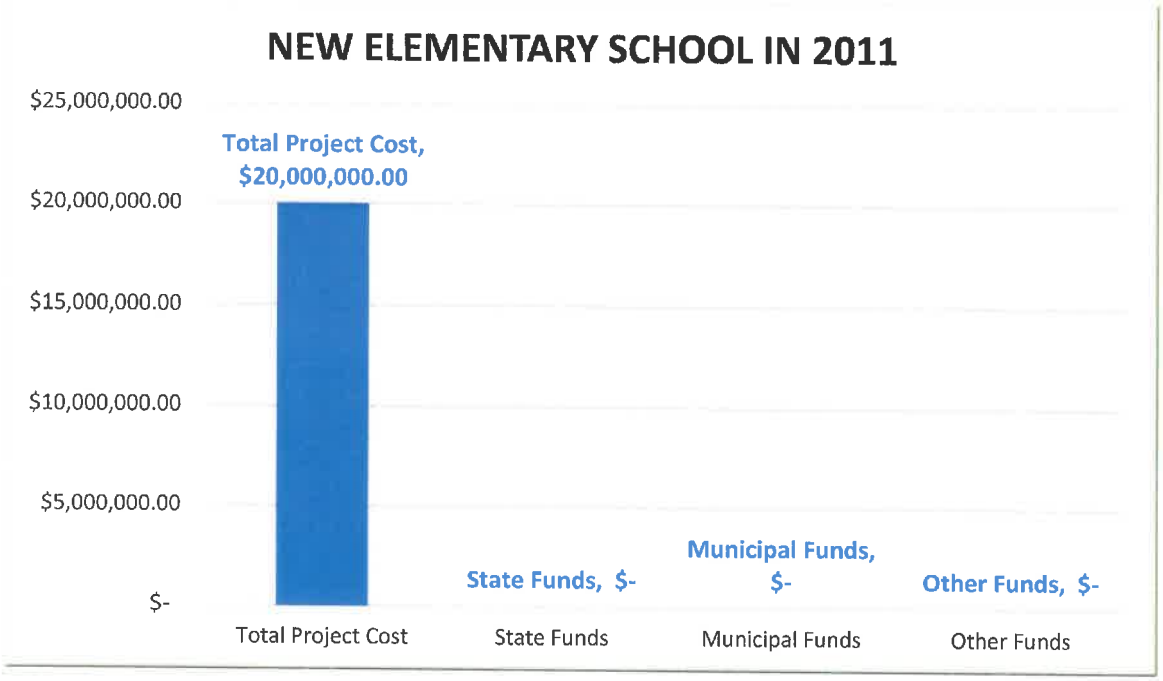

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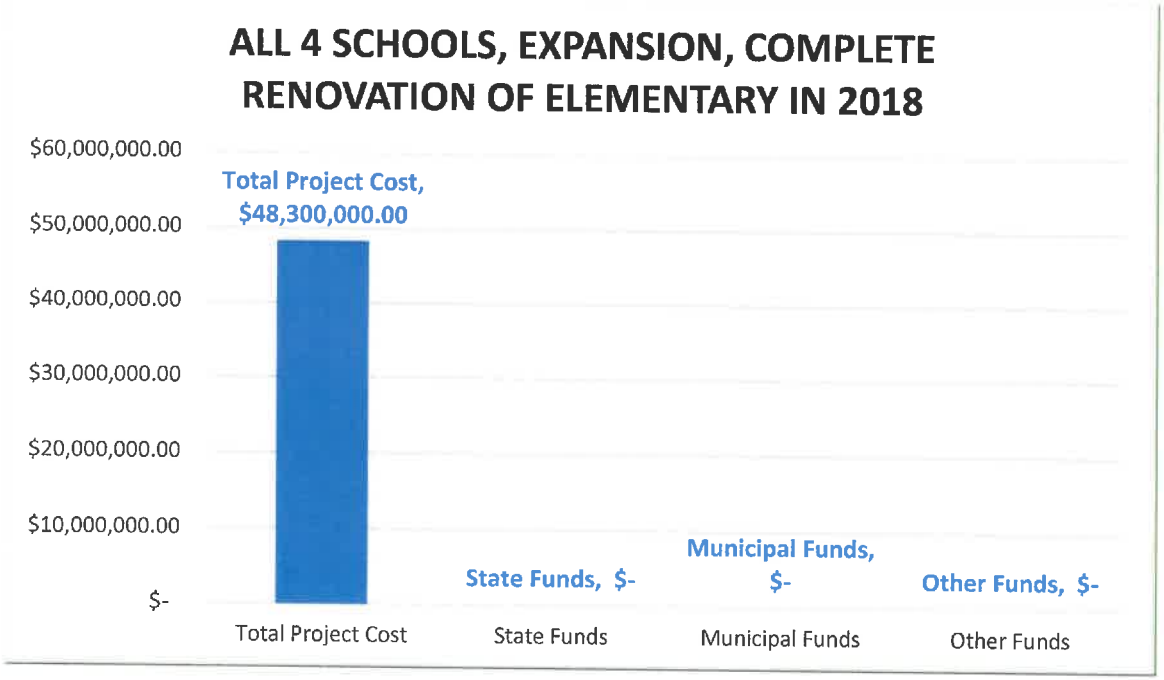
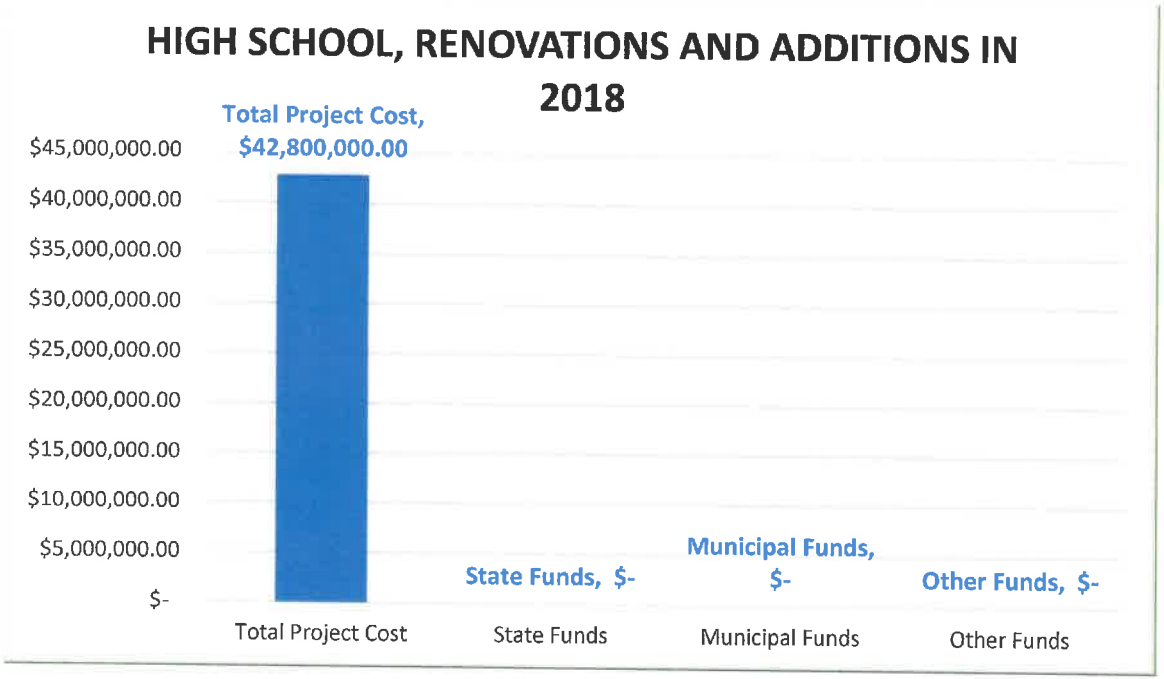


KEY CODE:
TOTAL COST: $48,300,000

** Taxpayers approved two 30-year bond financing plans in the amounts of $39.8 M and $8.5M



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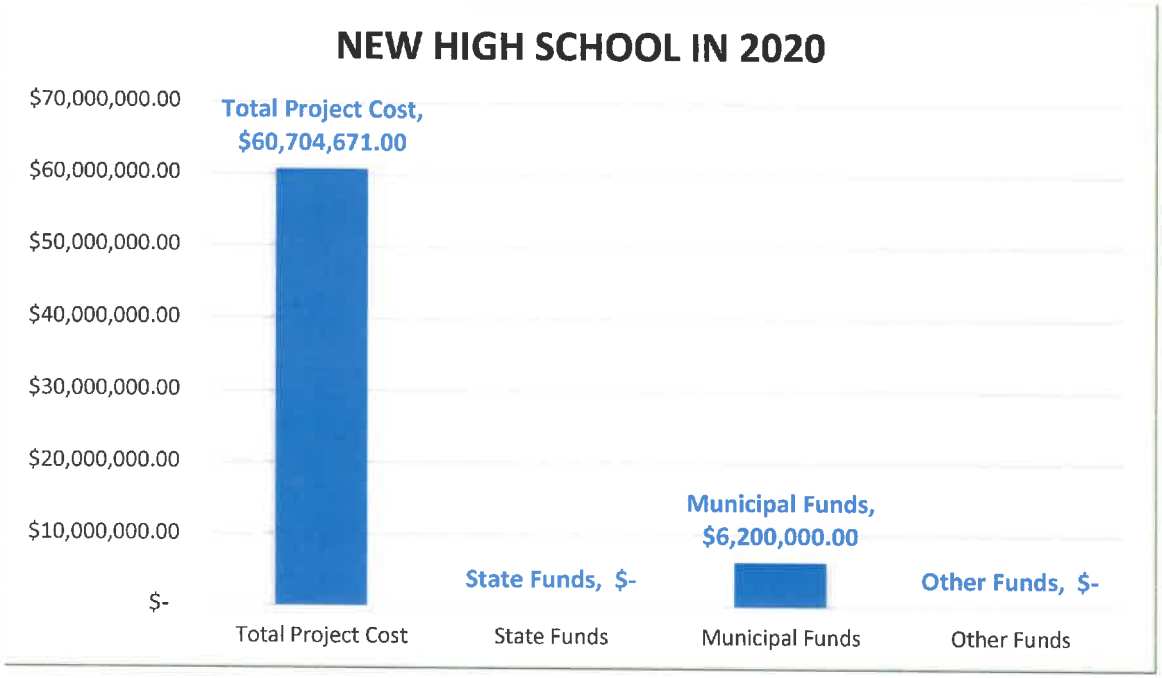

KEY CODE:
TOTAL COST: $60,704,671

**Construction is ongoing, estimated school opening Fall of 2020