CAPE ELIZABETH SCHOOL DEPARTMENT
BUILDING COMMITTEE MINUTES

January 7, 2020
6:30PM Cape Elizabeth Middle School Cafetorium

Committee Members Present:

Donna Wolfrom	Superintendent
Matt Sturgis	Town Manager
Valeria Adams	Town Council, Chair
Jamie Garvin	Town Council, Finance Chair
Marcia Weeks	Business Manager
Cathy Stankard	Director of Teaching & Learning
Del Peavey	Director of Special Services
Perry Schwarz	CESD Director of Facilities & Transportation
Peter Esposito	Director of Food Services
Heather Altenburg	School Board Chair
Kimberly Carr	School Board Vice Chair
Elizabeth Scifres	School Board Finance Chair
Phil Saucier	School Board
Jason Manjourides	PCES Principal
Troy Eastman	CEMS Principal
Jeffrey Shedd	CEHS 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
Susana Measelle Hubbs	Community Member/Parent
DJ Nelson	Community Member/Parent
Andrew Patten	Community Member
Terri Patterson	Community Member/Parent
Tim Thompson	Community Member
Calen Colby	Colby Company Engineering (CCE)
James Hebert	Colby Company Engineering (CCE)
Austin Smith	Scott Simons Architects
Julia Tate	Scott Simons Architects

Public Present:

Tom Dunham
Liz Dunham, Reporter from Forecaster

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 started with a brief update of the meetings and reports thus far, beginning with the hiring of Colby Company and Scott Simons Architects in the Fall of 2017 to assess remaining lifespan of all school buildings.

- During Fall of 2017 through the Spring 2018, a preliminary report on school conditions was provided with the suggestions that a complete Needs Assessment be conducted in order to provide a thorough report. The amount for the Needs Assessment was not included in the FY19 School Board Budget due to lack of ample community buy-in.

- During the Fall of 2018 and early part of 2019, a Building Committee was formed in order to review the possibility of recommending to the School Board that a Needs Assessment be completed by Colby Company. In January 2019, the committee determined that they did recommend a Needs Assessment Study. In the same month, the School Board voted to include the fee for a thorough Needs Assessment in the FY20 School Board budget.

- During the June 2019 public election, the community voted in favor of approving the entire School Board budget as posted. As a result, the Needs Assessment began and was completed in October 2019.

- At the same time of completing the Needs Assessment Study, 12 applications to the State of Maine for SRRF funds totaling $988,341 were submitted.

- Starting in October, a new Building Committee was formed to review the findings of the Needs Assessment. The Building Committee has met a total of three times and will likely hold a final meeting on Tuesday, February 4, 2020.

Next, Calen Colby provided a comparison of the options involved with “new construction” vs. “renovations.”

Renovations factors that should be considered include:

- The need for temporary facilities. Based on the way the schools are situated, students would have to be moved out into temporary facilities in order to renovate. This would also entail a temporary loss of adjacent athletic fields in order to facilitate the contractors equipment and layout space.

- Renovations would likely not resolve the HVAC issues because of the existing inefficient footprint for proper distribution of heating and cooling in the buildings, especially in the PCES & CEMS.

- With renovations, there are always unanticipated discoveries (aka, “unforeseen conditions”). These things drive up the costs because during the planning of renovations contingencies are higher, which allows for less new building.

- Due to the age of buildings (especially in PCES and CEMS) addressing security concerns with the school entry points, would be a lot of work and expense that could be totally lost upon a new building being constructed.

New Construction factors include:

- No temporary facilities would be required by following a phased building plan that allows for students to remain in classrooms.
- Temporary loss of athletic fields and parking is likely.
- Phased construction that would be less disruptive to the schools.
- New construction allows for maximum energy savings utilizing sustainable design practices and significant savings on energy costs.
- Flexible incorporation of current teaching methods that support what teachers need, rather than forcing teachers to adjust based on the limits/demands of older classrooms.
- Directly addresses main entrance and building security concerns with new design.

Cape Elizabeth Bond History and Debt Capacity:

A review of Cape Elizabeth's bonding history was provided by Matt Sturgis, Cape Elizabeth Town Manager. Bond issuances are influenced by statutory limits set by the state on how much a town can borrow — based on equalized state valuation levels. The maximum a Town can carry in debt (of all forms) is 15% of the last full State Valuation.

Cape Elizabeth's current state valuation is $2,125,200,00. With the 15% maximum, the total permissible debt that Cape Elizabeth could carry is $318,780,000. Currently, the town's total debt load is $15,700,000 — which is roughly 0.74% of our allowed debt limit. Per capita, this equals 1,742.

For schools, there is a statutory limit of 10% based on last full state valuation. In Cape Elizabeth, this maximum level of permissible debt equals $212,520,000. The current school debt service is $4,322,200 or 0.02% of state valuation (or 479/per capita). Current Town Debt and Sewer Debt Service is $11,377,800 or 0.62% of state valuation (or 1.262/per capita).

Based on conversations with lenders, how much a town might be able to take on debt is also influenced by what is considered an acceptable amount to the market in addition to town's rating. The town of Cape Elizabeth has a Triple A rating for risk assessment and is considered one of the best within the state. Historically, an acceptable range usually approved by lenders and voters is $3,000 - $4,000 per capita or 2% of state valuation).

Using these ranges for Cape Elizabeth $3,000/per capita would amount to $27,000,000 in allowable debt which, after the current debt load of $15,700,000, leaves approximately $12,000,000.

$4,000/ per capita would be $36,060,000 which, after current debt load of $15,700,000, leaves approximately $21,000,000.

Using the 2% range, the maximum acceptable amount of debt service could be $42,504,000 — or $4,714/per capita.

Mr. Sturgis provided the following information on existing bonds and dates of maturity (most of them being 20-year bonds).

- Pool & Public Works (1999): $2,899,639
- Public Safety/Misc (2001): $2,110,000
- Community Center Renovation (2002): $780,000 • Drainage/Roads (2006): $1,890,000
- Town Center & Roads (2008): $2,550,000
- Thomas Memorial Library (2015): $5,450,000
- Pool & Recycling Center (2016): $2,100,000

Retiring debt services within the next couple of years is about $500,000. There will also be future items that will need to be bonded and must be included in the equation.

State of Maine Funding Possibilities:

Marcia Weeks provided a review on state funding for major capital school construction funding. The last time the State of Maine offered funding for new construction was in 2016. From this cycle, only 3 of 75 schools were granted funding.

Currently, there are no funding initiatives available and no known future grants scheduled.

The SSRF grants have been submitted and are awaiting news on whether funding will be given to Cape Elizabeth in February.

Square Footage Analysis:

Julia Tate reviewed a graph comparing the amount of square footage used by programs within each building. Within the administrative, gymnasium, media center and cafeteria, all three schools used approximately the same amount of space. The most notable difference was with the amount of classroom space used. The combined total for PCES and CEMS is 56,700 square feet, whereas CEHS uses 47,3400 square feet. The second major difference is in the presence of an auditorium at CEHS in the amount of 7,030 square feet — whereas there is no dedicated auditorium at PCES/CEMS.

The Maine Department of Education provides baseline minimum standards based on square footage per pupil. For high schools, the minimum is 185 square feet per pupil. Currently, CEHS is at 311 square feet per pupil. The MDOE minimum for elementary schools is 140. The combined total of PCES and CEMS is currently 204 square feet per student.

These figures do not account for efficiency in layout. Based on conversations with teachers, these extra square feet do not serve their needs efficiently.

As result, in response to previous questions on whether or not it would be feasible for the elementary and middle school to move into the high school as a possible plan, it become clear that it would not be a viable option.

Every square foot you save on a new design is a square foot that does not require energy.

Sustainability:

Austin Smith reviewed the components of building sustainably for the committee to consider into six categories.

1. Location & Transportation —
   • Pedestrian connections • Bicycling access
   • Right sized parking lots

2. Sustainable Sites —
   • Avoid sensitive habitats
   • Low-Impact development methods • Reduced lighting pollution
   • Supporting wildlife habitats
   • Bird Friendly Glazing

3. Water Efficiency —
   •Proper site planning
   •Alternative water sources
      - Gray water/rainwater harvesting
      - use of gray water for irrigation/flushing
   •Low flow plumbing fixtures

4.Material and Resources:
   • Reduction/recycling of construction waste • Locally sourced building materials
   • Renewable materials

5. Energy and Atmosphere:
   • Building orientation and shape • Window glazing selections
   • Passive heating and cooling
   • Natural ventilation
   • High efficiency HVAC and heat recovery systems
   • "Smart" controls
   • Generation of renewable energy
      - Solar/photovoltaic (on/offsite)
      - Solar thermal hot water systems

6. Indoor Environmental Quality:
   • Air quality, lighting quality, acoustic design • Ventilation and thermal control
   • Daylight harvesting
   Use of low emission products, low VOC paints • VOC=volatile organic compound

Ms. Tate offered a comparison of buildings with optimal insulation standards, code compliant standards as of 2015, and Cape Elizabeth schools' current scoring. A building using slab assembly could see a RU rating of R-20 for a high performance building, versus R-10 using current code standards; and R-0.6 for current scores in CESD. Similarly, a building utilizing high performance wall construction would score a R-40, versus current codes with R-13 to R-7 ratings and R-14 for current CESD buildings. For roof assembly, where a building has the capacity of saving the most energy, a high performance roof has a value of R-60. Current codes allow for R-30 and CESD is at R-12.5. Increasing insulation on existing roofs is not an option for most and not an option for CESD because it will impact the load the roof is capable of holding. Glazing (windows, glass, etc.) values for a high performance is u -.20; current codes allow for u .36 -u .43; CESD is currently at u .55 - U.65.

- Ms. Lynch asked what would it take to bring existing buildings to an above average score. Ms. Tate responded that to answer that question one would have to know what the target is — high performance standards or current code standards. In either situation, the short answer entails reconstructing the assembly or creating a secondary closure envelope. Roof upgrades cannot happen without significant upgrades and reconstruction. Slab assembly cannot be changed. In addition, when renovations exceed a small portion, codes that have been "grandfathered" in the past, must now meet current codes — which thus increases the cost of improvements by forcing upgrades on multiple related systems.

- Heather Altenburg clarified that although the Needs Assessment report found all school buildings "satisfactory" actually to improve them is a huge challenge and a significant expense.

- Ms. Tate pointed out that one must consider the cost required to improve/renovate the current buildings versus new construction.

- Mr. Colby added that the cost per square foot to make renovations will likely come in at around 30% of what it would take to build new and when you add the cost associated with the sprawling envelope and the cost to bring in temporary trailers, the cost begins to match the cost of building new.

- Mr. Smith added that with taking the path of renovations, the security issues would still be present; the cafetorium with five lunch periods that last twenty minutes each. Now is the time to address these issues.

Mr. Colby provided information on CESD current energy use gathered from Perry Schwarz. The three most important data points being that:

1. CEHS's current combined heating and electrical use is over 75,000 BTU/SQFT.
2. PCES & CEMS use over 120 BTU/SQFT.
3. The Median is typically 68,700 BTU/SQFT.

Given the age of the elementary and middle schools, and the sprawling envelope, it is not surprising that the energy use is as high as it is. Much heat is lost through the slab on wall construction, the inefficient path of the heating element.

CEHS appears to be within the median range — given that is still has about 10 - 15 years of life. However, when you consider the potential to reduce energy by utilizing passive construction you can bring down the 68,700 BTU/SQFT to 40,000 - 50,000 BTU/SQFT — and save significantly on the cost of energy. Approximately, CEHS could save over $100K per year by lowering energy costs.

The greatest potential for savings on energy costs would be seen at the elementary and middle school. Utilizing high performance construction, the energy savings could be over $230K per year by lowering energy to less than 50,000 BTU/SQFT.

The potential of $230,000 on annual savings is a significant payback and could represent over 13% over the life of the building for the cost for a new building.

- Ms. Lynch asked if 13% of the build cost is referenced, then is there an estimate cost for building?

- Mr. Colby answered that without the ability to utilize right-sizing in making estimates, the building cost would be within the following range: $350 to $450 per square foot.

Mr. Schwarz provided a review of CESD Annual Utility Costs:

- Average annual oil usage (#2 fuel oil) at CEHS & Richards Pool is 69,259 gallons/year and at PCES & CEMS it is 70,233 gallons/year. Currently, the quote is $70 per gallons, but it can fluctuate — the difference 10 cents, for example, can be a $12,000 difference for Cape Elizabeth.

- Average annual electrical usage at CEHS & Richards Pool is 1,075 KWh/year and at PCES & CEMS it is 862,215 KWh/year. Currently the cost is 6 cents/KWh.

- Average annual water usage at CEHS & Richards Pool is 2,543,200 gallons/year and at PCES & CEMS it is 2,478,124 gallons/year.

- Average annual propane usage at CEHS & Richards Pool is 26,347 gallons/year and at PCES & CEMS it is 4,056 gallons/year.

    - Mr. Hebert pointed out that although the PCES/CEMS at 106,000 square feet is approximately 50,000 square feet less than CEHS, which is 165,000 square feet, the use of oil at PCES & CEMS is still greater than at CEHS.

- Annual operating cost per square foot at CEHS is $1.88/SQFT and at PCES/CEMS it is $2.17/SQFT.

- Annual operating cost comparisons per square foot at other schools shows that Scarborough High School spends $1.05/SQFT and Wayneflete's Lower School spends $0.65/SQFT.

    Example: Comparing Scarborough High School at $1.05/SQFT with PCES/CEMS at $2.17/SQFT — the potential operating cost savings could be estimated to be $191,335 annually.

    - Mr. Thompson asked if CESD goes in to purchasing block with other schools to secure a lower cost for fuel? Mr. Schwarz answered that they do not, but that he uses a vendor that hunts down the lowest price. Currently is is locked in at $1.75/gallon.

    - Peter Esposito asked about the savings that could be had if the schools switched from VCT tiles to something like polished concrete. Mr. Smith answered that they have estimated that there would be approximately a $600,00 savings per year in maintenance by switching flooring in all schools. This, along with the $191,000 in savings for operating costs adds up to nearly $700,000 savings annually.

Mr. Schwarz pointed out that PCES/CEMS building is valued at by Maine Municipal at little over $28 million. The minimum cost to make repairs and needed upgrades would be approximately $12 million. Plus, the cost to improve glazing, insullation, and roofing — the work begins to exceed the value of the buildings.

Mr Hebert provided a new potential plan forward which would being with replacing the K-8 buildings and making specific renovations at CEHS to bring it to its end of life 10-15 years.

There would be a multi-phase approach to replace the elementary and middle school. The first step would be to build a new middle school on the site of the current athletic field/middle school playground, while students remain in the existing middle school. All utilities are currently located within the middle school at a location that would allow for it join a new energy plant location in the new middle school.

The older 1930s building would remain. It could be a freestanding building or it could be connected to the two schools. It is flexible.

Once the new middle school is completed, the middle school students would move in. Elementary grades would move into the old middle school, while a new elementary school is being constructed. The new elementary school would also have it's own energy plant. Upon completion, elementary students would move into the new building and the older buildings would be taken down.

A new cafeteria and new auditorium would be built in the middle and would officially join the lower and middle schools.

The potential timeline could be:

February 2020: Complete Needs Assessment
June 2020: Bond Preparation Documents
June 2021: Vote on Bond to replace PCES & CEMS and renovate CEHS
June 2021: April 2022 — Design both schools and start construction
May 2022 - August 2023: Phase 1 — New CEMS and CEHS renovation complete
June 2023 - August 2024: Phase 2 — New PCES complete

Future replacement of CEHS would be included in longterm planning/timeline.

Committee Comments:

- Ms. Lynch asked how can this plan be afforded if according to Mr. Sturgis, the maximum range that Cape Elizabeth could borrow would be approximately $27 million and the cost of new construction is roughly $300 - $450/SQFT. At a combined total of 100,000 square feet the cost for building a new CEMS/PCES would be approximately $30 million to $45 million. Should we be prioritizing? She also said she is worried about the Superintendent being able to manage the construction of new buildings while also serving as the district's Superintendent.

- Mr. Colby appreciated the importance for long range planning.

- Terri Patterson pointed out that this is just the first step, but we are faced with "three cars to replace." A firm timeline does not exist at this point, but we need to address what is needed now and create a plan — even if it's 15 - 20 years.

- Elizabeth Scifres asked for clarification for the maximum range on borrowing from Mr. Sturgis, given that the debt figures are recommendations. We need to know the figures for each incremental increase in debt.

- Mr. Sturgis agreed that these are recommendations and that some towns do not heed the advice. It depends on the appetite of the town and the amount they are comfortable leveraging.

- Mr. Thompson pointed out that it is hard for young families to move here, but that right now the schools have solid support from the citizens — but going beyond "responsible borrowing" and/or lowering our rating might cause pushback from the citizens. Also, the importance of right-sizing the schools for now and looking into the future. Demonstrate to the town's people that part of what is entailed in new construction is maximizing efficiency of square footage per student.

- Valerie Adams added that if the town does accept a large bond, they would expect to see a decrease in overall school budget.

- Dr. Wolfrom suggested that for the next meeting, that only the Committee members attend (and interested citizens) to talk about where we go from here and to start talking about recommendations. The biggest question is figuring out if we can even tackle Phase 1.

- Mr. Thompson suggested that perhaps Phase 1 would include improving security at the elementary and middle school entrances. The desire from the community for improving this is large and he would like to see it addressed in some form.

- Tom Dunham agreed that safety is critical. Also he wanted to get clarity on the actual number of square footage for the elementary and middle schools. In addition, what would it take improve the inside of the buildings to give teachers the environments that they need. He also wanted to know the R values of the current roofs.

- Ms. Tate said that according to the 2012 report, the roofs had a maximum R value of 12.5.

- Ms. Lynch said that she knows it's time to do something, but she wants to know what can be done with the $27 million debt referenced by Mr. Sturgis. She believes with buildings that are in "satisfactory" condition, that a lot could be done — including improving securing and fixing the cafetorium at PCES/CEMS.

- DJ Nelson returned to the $27 million figure to say that it will increase over time as other debts retire.

- Mr. Hebert responded to the question on "what can e done with the existing buildings" that the challenge of slab flooring and masonry walls makes reconfiguring floors (e.g, in the cafetorium) would be very costly to modify in place. Furthermore, the square foot cost estimate is a range depending on the market. In the past several years, bids are coming in higher than expected. Forcing some construction to cease. Investigating options based on costs is a viable option for the committee.

- Derek Converse agreed that construction costs are going up and there is a labor shortage in Maine, especially in construction, since the last recession. Young people are not going into trades and the cost of construction will only go up.

- Steve Price reminded the committee that the original plan from two years ago to address only the security and cafetorium issues at CEMS/PCES was estimated to cost approximately $30 million. This did not include improving teaching spaces or improvements of the schools in general.

- Mr. Schwarz, pointed out that the early estimate did not include estimated $7-$12 million in needed improvements that resulted from the completed Needs Assessment report.

- Susana Measelle Hubbs asked about the option of only building a new middle school, since this building is the oldest and in need of the greatest attention. The two buildings would be closer together.

- Mr. Hebert pointed out that a new utilities plant would still have to be built in order to best serve both schools, but that it is an option. Options 1. do nothing 2. go through substantial renovations and 3. phased replacement of buildings.

- Andrew Patten, looking at the option of phased replacement of buildings, that it would occur over a stretch of time which could be long enough that it could be financially manageable and acceptable. Each new building would be about a three-year cycle, stretching out the complete entire cycle to over 10 year.

- Mr. Hebert added that it's possible that a new round of state funding might also be made available over the period of time involved in addressing all three schools.

Next Meeting:

Tuesday, February 4th at CEHS Library, 6:30PM - 8:30PM

Adjourn:

8:35PM