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02/24/2022

Dr. Christopher Record, Superintendent of Schools
Ms. Marcia Weeks, Business Manager
Cape Elizabeth Schools
320 Ocean House Road
Cape Elizabeth, Maine 04107

Subject: Final Report, Cape Elizabeth Pond Cove Elementary and Middle Schools Concept Design

Dear Dr. Record and Ms. Weeks,

Simons Architects and Colby Company Engineering, LLC are pleased to submit the attached final report for use by the Cape Elizabeth School Board and the Cape Elizabeth Town Council. This report represents the effort to date to develop supporting documentation for a bond that will provide for a new Pond Cove Elementary and Cape Elizabeth Middle School.

As you review this report, please note that this final version of the report serves as the concept phase of design for the proposed schools and will be further developed in support of the referendum to be voted on by the citizens of Cape Elizabeth, currently anticipated to occur in November 2022. It is expected that additional materials will be created to further support the Public Outreach effort, which we anticipate to be on-going through the spring and summer of 2022.

The information presented in this report reflects an exciting moment in the timeline of this project. In the months to come, we hope that these design ideas will be developed and explored with an even broader group of Cape Elizabeth community members in Public Workshops and other planned Public Outreach forums. The Building Oversight Committee has established a solid foundation on which the design process can continue if accepted by the Cape Elizabeth voters.

If you, or any members of the School Board or Town Council, have questions or comments about the content of this report, please do not hesitate to reach out to Mr. Marc Dube at mdube@colbycoengineering.com. The design team looks forward to progressing the design of these schools and feels that we are continuing on the road to provide the finest public education facilities for the students, faculty, staff and parents of Cape Elizabeth.

Sincerely,

Marc Dube, PE
Colby Co. Engineering
47A York Street
Portland, Maine 04101
207.553.7753 (Main)

Cc: Calen Colby, Colby Company, LLC
Julia Tate, Simons Architects

Attached: Report

Prepared for:

Cape Elizabeth Schools

320 Ocean House Road

Cape Elizabeth, ME 04107

Pond Cove Elementary and Cape Elizabeth Middle Schools

Concept Design Report

FINAL SUBMISSION

February 24, 2022

COLBY COMPANY, LLC
CCE
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1. Executive Summary

The team of Colby Company Engineering (CCE) and Simons Architects (SA) are pleased to present this Conceptual Design report in support of the Bond Warrant proposed by the Cape Elizabeth School District (CESD) for construction of a new 216,000 square foot Pond Cove Elementary School (PCES) and Cape Elizabeth Middle School (CEMS), along with improvements to the Cape Elizabeth High School. The design team has been collaborating with the Building Oversight Committee and the subcommittees to evaluate the existing school facilities and develop a program to provide the students, parents, faculty, staff and community of Cape Elizabeth with first-class facilities.

In order to balance the priorities of providing all of the amenities desired by the school community, and successful passage of the bond initiative, we propose breaking the funding of the bond question into five separate parts. We feel that this will give the voters of Cape Elizabeth the opportunity to select those options that are most important to them, while allowing control over the amount of the bond package.

1. Bond Question 1 calls for funding of the new PCES and CEMS with basic amenities. This will give all stakeholders the amenities for which they advocated, while keeping the cost at a minimum. It will be noted that all stakeholder requirements are included in this base amount.
    a. Bond Question 1a, which is contingent on approval of Question 1, would provide for a larger auditorium with seating increased from 350 in Question 1 to 650.
    b. Bond Question 1b, which is contingent on approval of Question 1, would provide for additional athletic field improvements.
    c. Bond Question 1c, which is contingent on approval of Question 1, would provide for space for a Pre-K program at the school.
2. Bond Question 2 is **not** contingent on approval of Question 1, and will fund the renovations of the Cape Elizabeth High School, currently estimated to be approximately $18 million.

This approach is under consideration by the School District and Building Oversight Committee at this time; Final wording and organization presented for the bond vote may differ from what has been included here. Whenever large investments in local schools are made, the question of renovation vs. reconstruction will come up. As will be detailed in the report, the team took into consideration not just the condition of the current facilities, but also the adequacy of these facilities to accomplish the District Goals set forth in the *Cape Elizabeth 2020-2025 Strategic Plan* as well as meeting the *Maine Department of Education Design Guidelines*. This process also aligns with Goal 4 of the Public Services and Facilities Goals of the *Cape Elizabeth 2019 Comprehensive Plan*, which states that "the town shall maintain and modernize the school campus buildings to promote quality public education, security and appeal to potential new residents." While Cape Elizabeth has been diligent in maintaining the school and its systems, the facility is reaching the end of its design life, and a school building is now needed to meet the needs of the students, faculty, staff and parents of the Cape Elizabeth community. Building on the work completed to date, the town has the opportunity to provide facilities that will provide a true 21st century learning environment for Cape Elizabeth.

The design team has been meeting regularly with the various subcommittees on a regular basis through the fall and winter of 2021-2022 to create the concept design discussed here that takes all of the stakeholder requirements into consideration. It should be noted at this early stage in the design process, particular building design elements, systems and site features have not been determined. As the design progresses through the schematic phase, more in-depth analyses will be conducted, to include full site investigation, survey, traffic analysis, and a life cycle cost analysis for various building systems, leading to a more defined school facility to be presented.

2. Brief History of Work to Date

In the Fall of 2017 Colby Company and Simons Architects were hired to conduct a study of existing school facilities in Cape Elizabeth and determine their remaining lifespan. As part of the study, a needs assessment was conducted from June through October of 2019, resulting in a Needs Assessment Report submitted to CESD in October of 2019. Through the Fall of 2019 and Winter 2020, the needs assessment was reviewed and options for moving forward were discussed including renovation versus new construction. In October of 2019, The School Board adopted the Goals set forth in the 2020-2025 Strategic Plan, and discussed in Section 8 of this report. The School Building Committee voted to send the recommendation to the School Board to replace PCES and CEMS. In April of 2021, the School Board voted to approve and recommend to the Town Council to budget for new Pond Cove Elementary and Cape Elizabeth Middle School Facilities and the renovation of Cape Elizabeth High School (CEHS). Colby Company Engineering and Simons Architects were selected to complete the Concept Design and Cost Estimate in support of a Bond Warrant to be presented to the Town of Cape Elizabeth and presented to the voters on a June 2022 ballot. In the Fall of 2021, the Building Oversight Committee established four subcommittees to guide the design consultants in developing the Conceptual Design materials to support the Bond Warrant for the schools project. The organization of the subcommittees is discussed below and their work is included in the appendix and discussed in following sections.

3. Committee and Subcommittee Organization

The Building Oversight Committee (BOC) is tasked with providing guidance to the design team and information to the School Board, Town Council and Cape Elizabeth community regarding the concept design effort and bond initiative. The committee and its subcommittees are staffed by key stakeholders of the school community: students, faculty, staff, administration, parents, the community at large and local officials. In order to facilitate a seamless working relationship, members of the design team are also on the committees. In order to best execute the mission of the Building Oversight Committee, four subcommittees were formed, listed below and shown in Figure 1 with Committee and Subcommittee assignments.

- The Building Design Subcommittee: This subcommittee is tasked with coordinating the design effort for the physical form of the school building with the design architect.

- The Site Location Subcommittee: This subcommittee worked with the design civil engineer to evaluate both where the new school could be located on the site along with the plan for school operations during construction.

- The Fiscal Subcommittee: This subcommittee worked with the Town to determine the impact of the bond on Town Citizens, investigate alternative sources of private funding, and to ensure that the plan developed was in accordance with the District Goals as part of the Strategic Plan developed in 2019.

- The Public Outreach Subcommittee: This subcommittee continues to develop the strategy and plan to communicate the concept design to the community and to develop messaging to advocate and generate enthusiasm for the bond vote.

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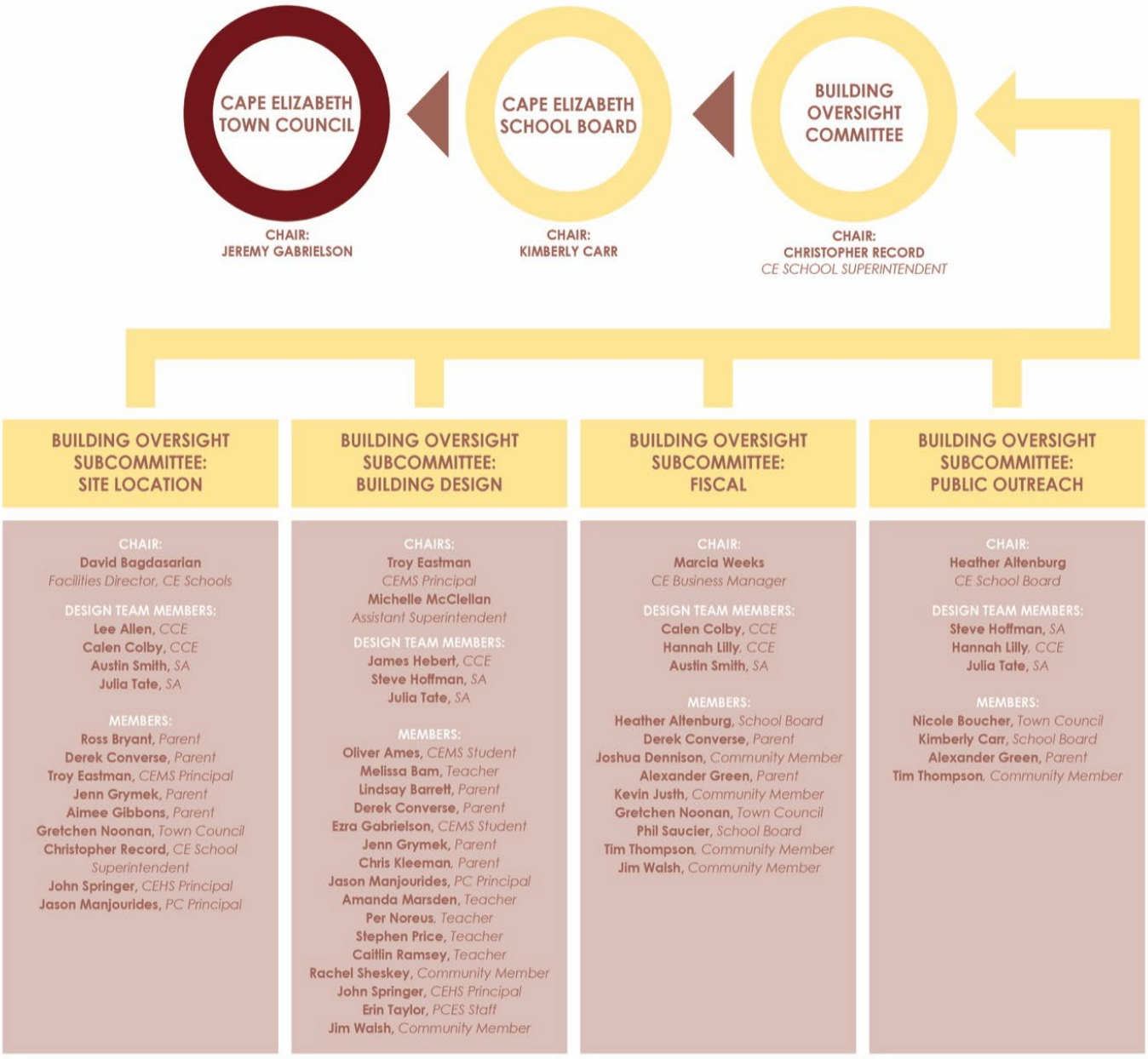


Figure 1: *Building Oversight Committee Participants and Reporting Structure*

4. The Design Team

Simons Architects is a multi-disciplinary firm based in Portland, Maine, providing architectural, landscape, planning and interior design services. They are known for their projects that integrate site planning, master planning and combinations of new buildings with renovated and historic buildings. They have a strong ability to envision future facility and space needs and to create sustainable design solutions that add lasting value for owners and their communities. They have designed educational facilities for students of all ages, from Pre-K through higher education. Their role in the project is to evaluate the condition of the existing facilities, and develop the program that will provide an elementary and middle schools campus that will serve the needs of the students, faculty and community for decades to come.

Colby Company Engineering, LLC is a multi-disciplinary design firm based in Portland, Maine with expertise in the electrical, mechanical, fire protection, structural and civil fields as well as an experienced group of architects and architectural designers. With professionals registered in multiple states and Canadian Provinces, they provide engineering services for numerous types of projects, such as boiler design, energy audits, building renovations, arc-flash analysis, chiller system design and construction administration. Colby Company prides itself on the diversity of project experience on which they can draw to provide comprehensive design services for their clients. Their role in the project is to provide the engineering expertise to create a full set of construction documents, based on the work completed by Simons Architects. This includes preliminary code study, site evaluation, concept site design and generation of site drawings. They will also produce a cost estimate and potential construction schedule based on the program developed.

Both Simons Architects and Colby Company have worked (and continue to work) with the various subcommittees to assist with community engagement in the bond support effort.

5. Conceptual Design – Process overview

Building upon the work done for the 2019 Needs Assessment Report, the design team, in conjunction with the newly formed Building Oversight Committee and subcommittees, began development of the Conceptual Design for the new Pond Cove Elementary School and Cape Elizabeth Middle School in October of 2021. Each subcommittee established goals related to tasks and deliverables as a framework to guide its work in establishing the basis of design. Definitions were established to inform the discussion of several dedicated planning meetings to follow.

Starting in October and continuing throughout the development of this report, the Building Oversight Committee has held monthly public meetings and provided interim updates at School Board meetings. The four subcommittees have met with varying frequency as needed, sometimes meeting as frequently as every two weeks. Most of these meetings have been virtual due to COVID-19 precautions and have been recorded and made available to the general public on the Cape Elizabeth School District website.

It was determined early in the process that Cape Elizabeth was not likely to receive State funding for this project, but it was established that following best practice guidelines and procedures set forth by the

Maine Department Of Education (MDOE) as closely as possible as a baseline requirement would ensure the project might be considered for state funding should the opportunity arise in the future. This goal was also intended to establish a commitment and dedication to a quality facility matching the highest standards found in other Maine School districts. Since the inception of this work, the Cape Elizabeth School District has remained in contact with the planning office of MDOE to keep them apprised of the progress and receive feedback, and will continue to maintain this mutually beneficial relationship going forward.

In parallel with the work of the Building Oversight Committee sessions, new rounds of extensive interviews with school faculty, staff and administration were conducted by the design team. The purpose of these discussions was to get their feedback and comments with the specific goal of a new building in mind, and also learn how the COVID-19 pandemic may have impacted their experiences and needs. This information, along with other District background information, historic data, the MDOE design guidelines, and of course the work of the BOC subcommittees helped inform the development of a new Program for the facility. This Program is meant to reflect a right sized approach to meet the needs of providing a 21st Century education for Cape Elizabeth today and for the next 75 years. The detailed Conceptual Design Program breakdown is shared in the Appendix, along with the interview summaries.

Preliminary Conceptual Adjacency Plan diagrams were developed to convey how this Program might begin to translate into a physical manifestation of the ideas and vision shared by the various Cape Elizabeth stakeholders involved in this project over these past four months. A Conceptual Site Plan shows how the schools may be re-imagined on the site, and how they work within the overall Cape Elizabeth Town Center context. Collectively, the work to date supports a comprehensive cost estimate developed to determine the basis of the Bond amount.

The materials presented in this report reflect an exciting moment in the timeline of this project. In the months to come, we hope that these design ideas will be developed and explored with an even broader group of Cape Elizabeth community members in Public Workshops and other planned Public Outreach forums. The Building Oversight Committee has established a solid foundation on which the design process can commence if accepted by the Cape Elizabeth voters.

6. Existing Conditions

'Good Enough' does not reflect a Cape Elizabeth Education

A description of the physical Existing Conditions can be found in the 2019 Needs Assessment Report. To highlight one summary, the report referred to the existing facilities as *"...functionally satisfactory. This means that basic needs are met, but the building is not otherwise outstanding."*

The word 'satisfactory' was chosen by the report authors out of respect and acknowledgement for the dedicated maintenance regimen the Cape Elizabeth School Department has performed over the life of the buildings. It has allowed these buildings to remain in service for as long as 89 years in some cases. It was not intended to be an endorsement of the existing facilities. One can look to the dictionary to establish that 'satisfactory' is a relative term: Merriam-Webster defines satisfactory as "good enough

for a particular purpose"; Oxford Languages defines it as "fulfilling needs; acceptable, though not outstanding." By no means are these definitions glowing or positive; they simply mean passable. Likewise, the Needs Assessment Report qualifies 'satisfactory' in this case to mean that only basic functional needs are met. The full Needs Assessment Report goes on to outline numerous deficiencies with the existing buildings and establishes that each of the structures, as well as systems contained within, are at the end of their useful lives. In this context, the use of the word 'satisfactory' anticipates that further use of these buildings for the purpose of education should be continued for a relatively short duration.

Considering the Options

After the completion of the Needs Assessment Report, the Building Committee and School Board reviewed the recommendations and discussed possible paths forward. Members of the Board and members of the general public alike asked excellent questions. In their discussions they considered whether it was a good investment to fund costly renovations to buildings that were inherently deficient. Relative to building performance, maintenance implications and energy use were also investigated on a comparative basis to further evaluate undertaking renovations versus constructing a new building.

Some challenges connected with the work of renovation were easy to understand in a general way, such as the risk of unanticipated discoveries 'behind the walls'. Similarly, the costs, impact on site, and negative student and teacher experience of living with portable classrooms were understood to be a considerable detraction. Specific to the actual buildings, many improvements were simply not possible unless significant renovations or even complete re-builds were pursued. Reconfiguration and additions at the entrances to address security concerns would still be needed. Another addition would be required to support expanded cafeteria space in order to reduce current scheduling strains in connection with the existing Cafetorium. Travel distances, particularly for Pond Cove elementary students would still be an inherent problem with the plan of the existing building itself. The existing schools initially appeared generous when looking at a square foot per student calculation, however those figures did not reflect the existing facilities' inefficient and sprawling configuration. Subsequent analysis revealed that many curriculum support spaces do not meet current minimum recommended MDOE guidelines while the area dedicated to circulation exceeded recommended MDOE ratios. A more detailed discussion of the programmatic shortcomings can be found in Section 8.

Looking specifically at building performance, the same inefficient layout would make efficient distribution of heating and cooling upgrades difficult to realize. The existing building envelope (wall assemblies, slab assembly, roof assembly and glazing) would all require upgrades to meet current code requirements for thermal performance but would still not provide the same performance benefits that new 'high performance' assemblies would achieve, in most cases by a factor of half. Improvements such as the installation of insulation and vapor barriers under the entire slab were infeasible. It was noted that the existing structure would need to be surveyed and analyzed to determine whether it had the capacity to support the increased snow load if insulation were to be added to the roof, or if roof-mounted photovoltaic panels were to be considered for installation. It was noted that HVAC, envelope and structural upgrades would incur an imbalance of increased renovation costs that would not directly translate to a perceived improvement in the quality of space.

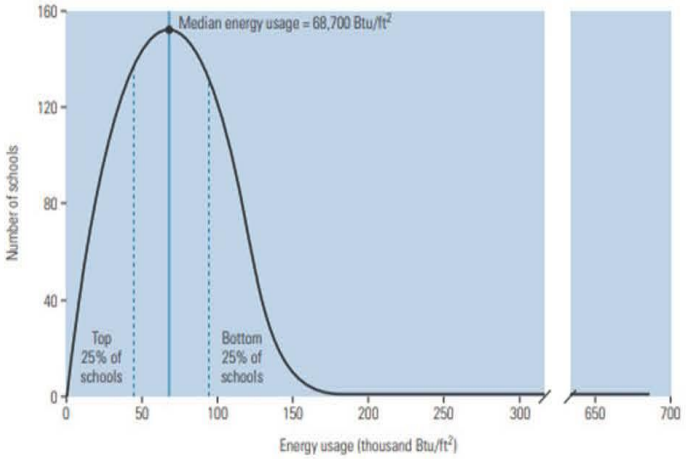
An assessment of the existing building's energy usage underscored the impact of these factors when considering long term operating costs versus initial costs of renovation versus new construction. Embodied value was acknowledged within the existing buildings, but it was also determined that the existing Pond Cove and Middle School building was utilizing over 120,000 BTU/sf per year compared to a median comparable educational facility utilizing around 69,000 BTU/sf per year. A new building would target a performance benchmark of less than 50,000 BTU/sf per year. (Figures 2 and 3)

As with the rest of this process, recordings of these meetings are available on the Cape Elizabeth School Board web-site. As part of future design phases, the design team will conduct more in-depth life cycle cost assessments and energy modeling, discussed further in Section 7.

Current Cape Elizabeth Energy Use

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

- 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

Figure 2: *Current Cape Elizabeth Schools Energy Use*

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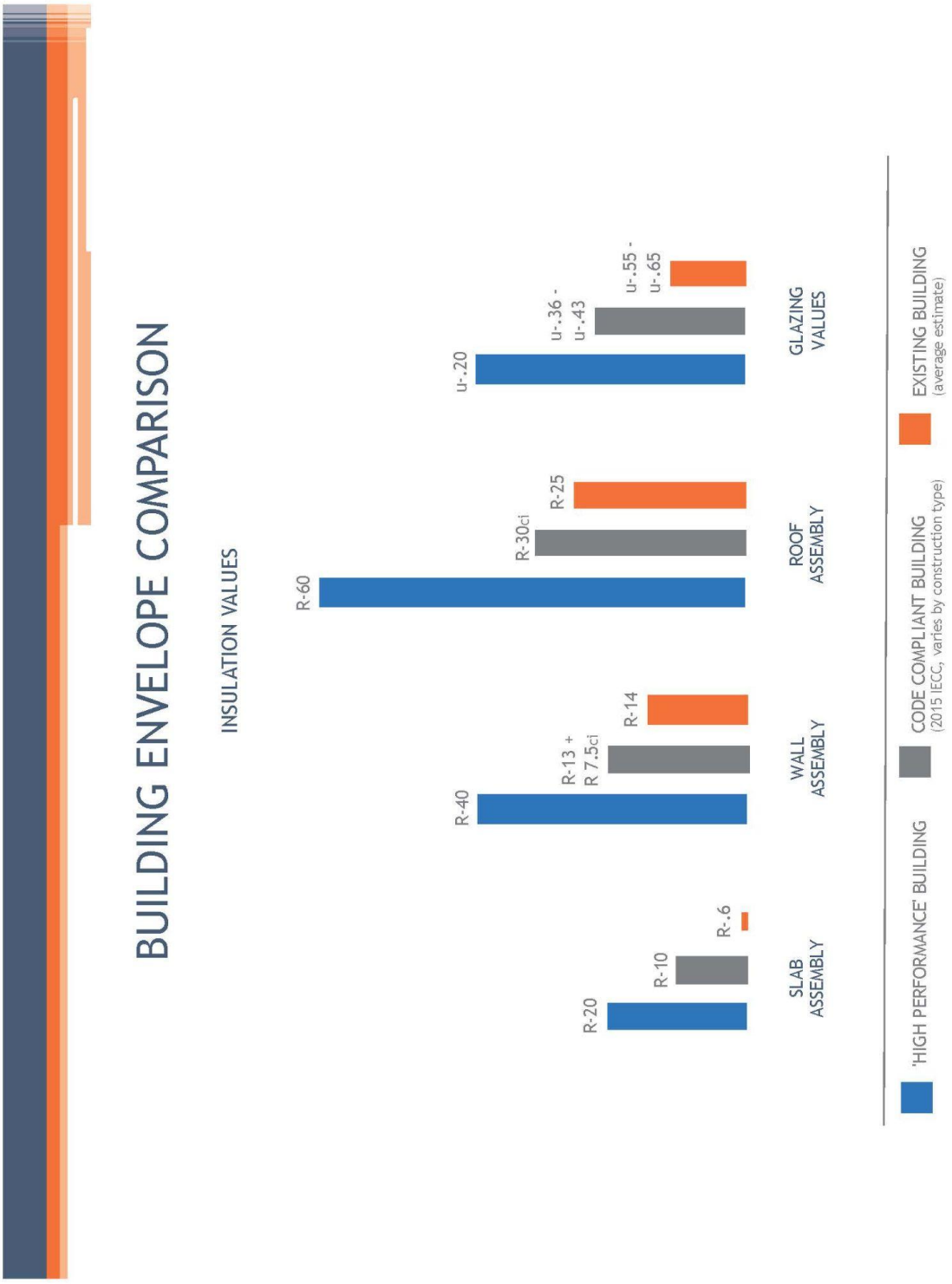

Figure 3: *Current Cape Elizabeth Schools level of Insulation*

The Historic 1933 Structure

The 1933 Neo-Classical Revival structure, known as the Old High School Building (currently part of the Middle School), is the oldest part of the school. The building is listed as a 'Special Feature' Cultural Landmark (listed as C-9) of medium significance and medium viewership but with high visibility according to the Assessment of Visual Resources, 1989. This document describes 'Special Features' as 'places that contribute to a high-quality visual experience,' and provide a 'distinctive sense of place and historical continuity.' 'Cultural Landmarks' can be buildings that are 'recognized as symbolizing the town (such as a community building).'

This building is also included in the 1999 survey by Barba Architecture & Preservation as one of 199 structures of historical significance within Cape Elizabeth. It is noted as an 'excellent example of how the Neo-Classical Revival style was used in educational buildings.'

The building has been listed as an historic resource within the Cape Elizabeth 2019 Comprehensive Plan and within the current Zoning Ordinance, Appendix C. Zoning Section 19-8-6 'Archaeological and Historic Resources', prevents disturbance of sites until importance can be documented and reviewed by the Maine Historic Preservation Commission, the Town Manager and the Code Enforcement Officer. There is a 45-day demolition delay period applicable to the 1933 structure, after which the building may be subject to normal demolition permit review standards. The building is not listed in the National Register of Historic Resources. The 2014 Town Center Plan does not list this building as an historic town center structure.

The design team recognizes that the residents of Cape Elizabeth may wish to retain this building when the balance of the existing school structures are demolished. This will be investigated during Public Workshops and through consultation with the Maine Historic Preservation Commission, Town Manager and Code Enforcement Officer as appropriate during the design process.

If the Old High School Building is retained as a stand-alone structure, some improvements will be needed to ensure it will be a stable, viable and healthy building with independent systems. At this time, the full scope of work required to achieve that is not known. An assessment will be required during the schematic design phase to support the development of a Rehabilitation Plan and associated cost estimate. An allowance for this work has been included in the working budget. For the purposes of the Conceptual Design phase, the design team has assumed this building will remain and undergo rehabilitation for continued service as a Town building in some capacity.

School Revolving Renovation Fund (SRRF) Improvements

Since the completion of the Needs Assessment Report, some components of the building systems have continued to present escalated maintenance challenges and increased costs. On the other hand, with the help of School Revolving Resource Fund Grants, some issues have been remedied. Wherever feasible, those upgrades were made with the possibility of re-using those system improvements in a new facility.

The Pond Cove Elementary School and Cape Elizabeth Middle School Buildings

The PCES and CEMS are physically connected schools originally built in 1934 and 1948, with additions following in 1955, 1960, 1962, 1994 and 2004. As stated in the Needs Assessment Report generated by CCE and SA in 2019, "Overall, the physical condition of all of the buildings, particularly given the age of some of them, is functionally satisfactory. This means that basic needs are met, but the building is not otherwise outstanding. The school has implemented a successful maintenance program that has served them well over the years." While the building has been maintained well over the years, it is showing its age in both appearance and functionality. The long, linear layout of the building contributes to inefficiencies and requires very long paths of travel between areas, especially between some of the fourth grade classrooms and the Band Practice and Technology Education spaces.

Access and physical security are also of concern with the current school building. The current location of the main entrance allows for direct access to the Elementary School Gymnasium or Cafetorium, without direct supervision by either school's main office. There are also approximately thirty exterior doors for the combined schools, which could allow for unauthorized access should one of these doors be left improperly propped open.

7. Elementary School and Middle School – New Building Site Selection and Building Concept Design

Site Considerations

The long-standing school campus locates all three of the Cape Elizabeth School District facilities within the 109-acre Town Center. As the school campus is part of the Town Center Master Plan and Zoning District, the site and building design are guided by the overarching goals of the Town Plan. The new school building and reconfigured site will seek to provide opportunities for gathering; promote safe and improved pedestrian, vehicle and bicycle circulation; as well as contribute to the overall visual appeal of the Town Center.

The Site Location subcommittee initially considered 6 locations within the school campus. Utility connection, site security, impact on existing school operation, impact on athletic fields, proximity to neighboring residential neighborhoods and construction access and logistics were the most significant factors considered. Ultimately, it was determined that a hybrid approach combining two of those locations provided the most advantageous opportunities for siting the new building (see Figure 4)

A relatively sizable drop in topography within a short distance provided an opportunity to nestle the building into the site and minimize excavation costs. It would also allow potential for grade level egress on effectively two levels of Pond Cove Elementary, which provides greater flexibility when locating program spaces serving the schools' youngest children.

The site's relationship to surrounding athletic fields was also taken into account.

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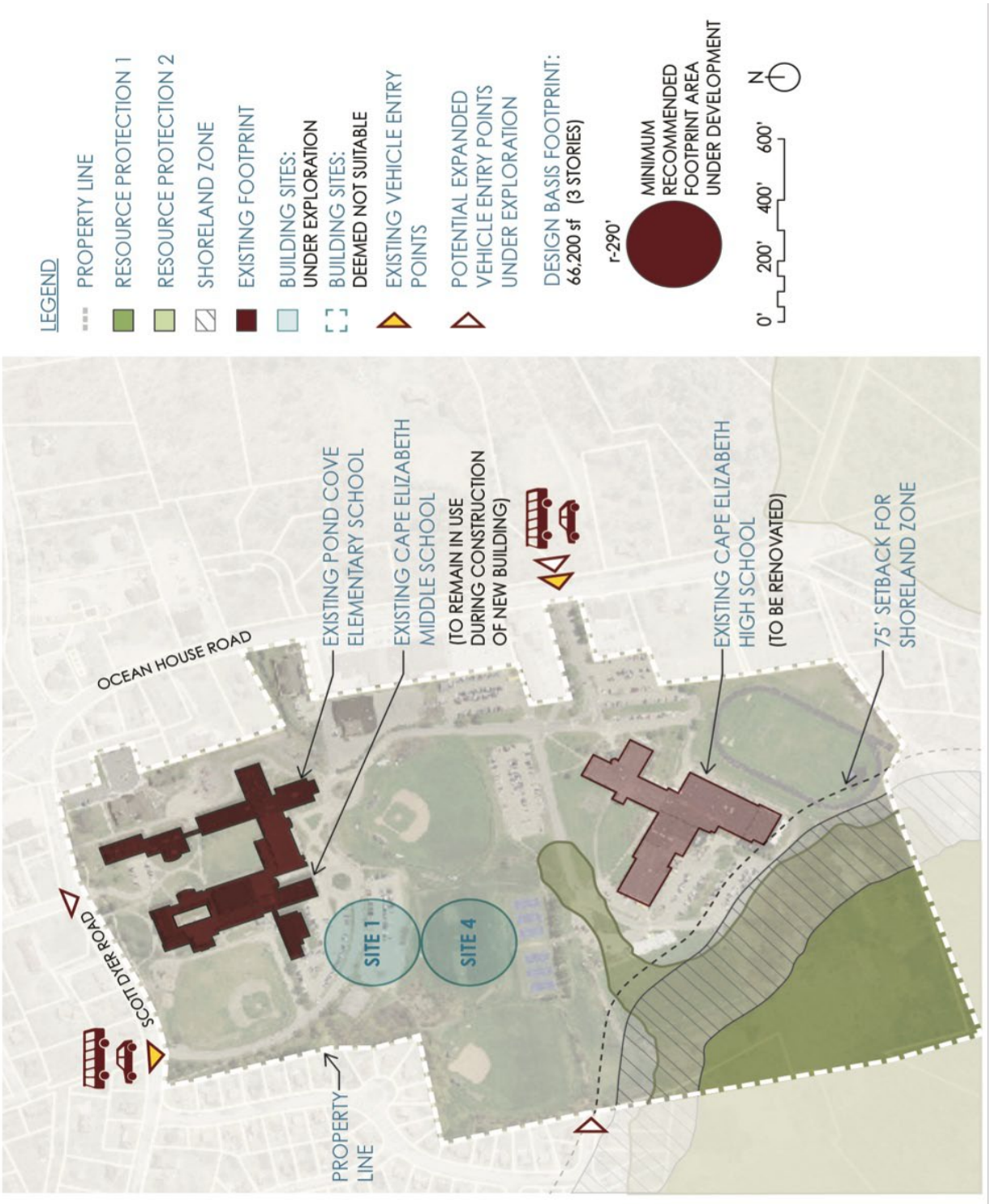


Figure 4. *Site Location Selection*

During the Conceptual Design phase, the design team has heard that open, green spaces and the ability to connect with nature and Maine's outdoors are invaluable educational resources. While the primary educational function of the school building takes precedence, the design is also intended to honor the position of the campus as part of the central hub of the Green Belt Trail System and reinforce the relationship the school has with the Cape Elizabeth Land Trust.

To further emphasize the distinct identities of Pond Cove Elementary and Cape Elizabeth Middle School, a green corridor and outdoor plaza is proposed between the two schools. This creates a view corridor that extends from the wetlands buffer on the southwestern side of the site all the way to the original historic 1933 building to the north. It is envisioned that the plaza will provide discrete but critical site security features with strategically located plantings, bike racks and bollards, while creating an outdoor space that doubles as an inviting and interactive learning zone which can be used by both schools.

Permeable pavers will be a key feature here and in other select areas of the site. While minimizing stormwater impact, they will allow outdoor spaces to support vehicular traffic when appropriate, and be pedestrian friendly at other times. The pavers will be a unifying indicator that gathering and play is welcome and invited; that function can also be fun.

In keeping with Cape Elizabeth Comprehensive Plan recommendations, a traffic study is to be included as part of the Bond Referendum package in support of the initial Schematic Design phase.

A zoning summary has been included in the appendix (see Appendix G). To illustrate the development of the site during construction, Figures 5, 6, and 7 show how vehicle circulation and the campus appear before construction, and will appear during construction, when the current school building is still open, and after construction when the current building is removed and the new athletic fields are constructed.

Figure 5: *The Cape Elizabeth Schools Campus as it appears today*

Figure 6: *The Cape Elizabeth Schools Campus during construction of the new schools building*

Figure 7. *The Cape Elizabeth Schools Campus as it will appear after construction completion*

Building Design Considerations

Architectural Narrative

The proposed new facility is designed to reflect the Cape Elizabeth School District's desire for "Two Schools in One Building" as a departure from thinking of it as a combined K-8 building. This guiding principle represents the need for PCES and CEMS to retain institutional individuality and autonomy, while functionally sharing certain spaces and infrastructure.

A change in elevation of 12 feet across the site allows for the lower level of the new building to partially tuck into the grade, such that from the upper level (accessed from Scott Dyer Road) the schools appear as two separate buildings. At the lower level, circulation spaces from each school provide access to their shared programmatic elements: Kitchen/Cafeteria, Gymnasium, Auditorium and Mechanical/Support spaces

Bus Drop-off and Parent Drop-off areas, as well as visitor and staff parking, are situated at the upper level and address a landscaped plaza of approximately 100ft x200ft that sits between the PCES and CEMS wings. This shared gathering and arrival space looks to the southwest, across the athletic fields of the CE High School to the adjacent lowlands/wetlands and picturesque sunsets, thus establishing the school site's connection to the local landscape, a defining aspect of Cape Elizabeth's community identity. (Figure 8)

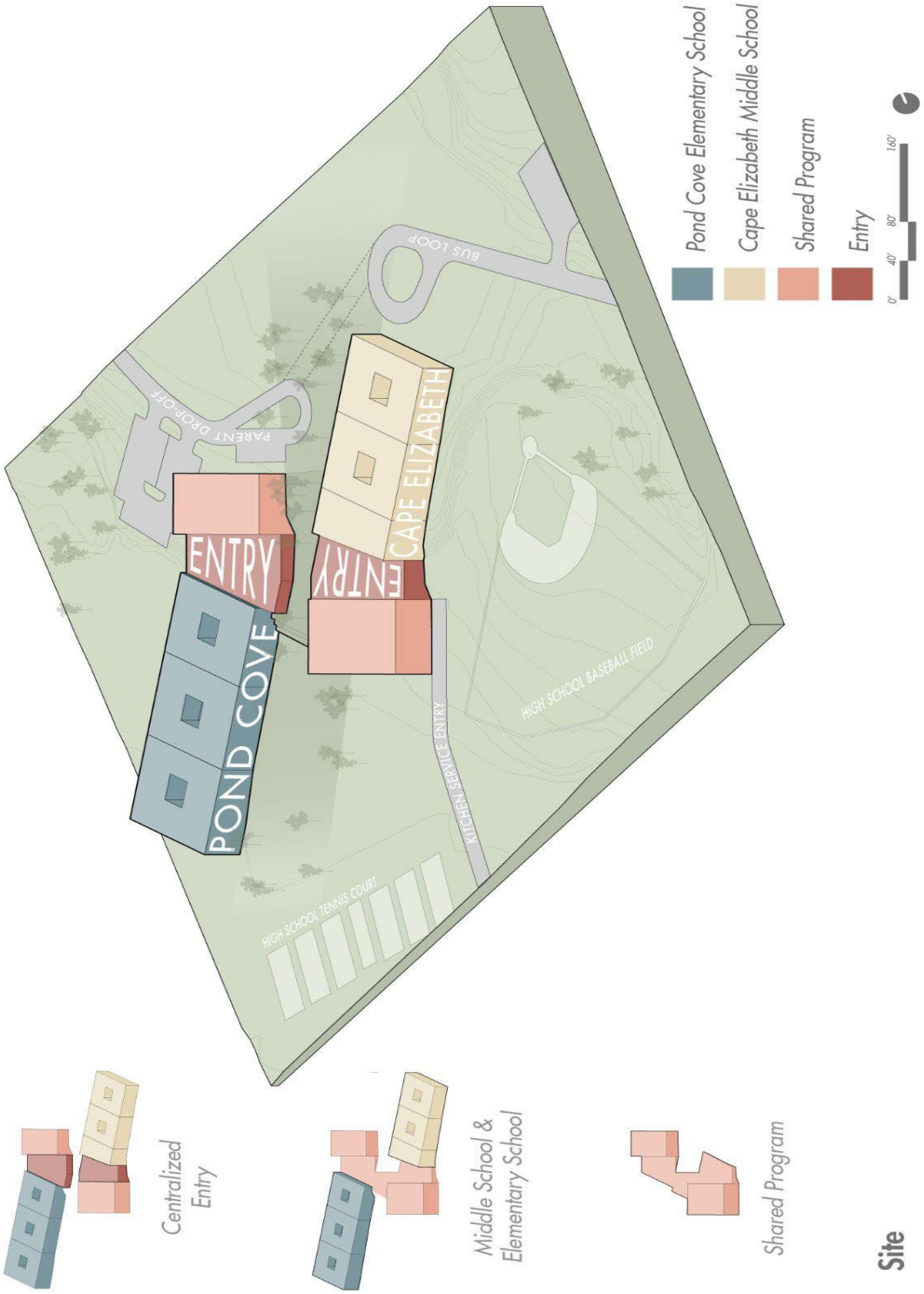


Figure 8. *Conceptual Massing and Approach Diagram*

Clearly defined entries to each school face onto the shared plaza, monitored and controlled by adjacent Administration offices. Upon entering PCES and CEMS, welcoming lobbies allow community access to The Gymnasium and the Auditorium respectively, while safely restricting access to the rest of the school areas.

Beyond the entry point, each school is organized on two levels connected by a central grand "amphitheater" staircase that offers opportunity for small informal assemblies and socializing. Classrooms and other instructional and support spaces are organized into clusters that each center around a two-story atrium space; clusters are interconnected by hallways that have break-out spaces along the path of circulation (Figure 9). The atriums bring natural light into the interior of the building and provide flexible spaces for collaboration and gathering. Adjacent stairways allow upper floors to directly access the atrium spaces. In this fashion the different grade level groupings, Allied Art spaces and Teacher Resource spaces are arranged in a connected network from end to end and level to level throughout each school. This physical network, with its variety of sizes and types of spaces, is designed to break down "siloed" approaches to education and to foster new paradigms for teaching that are cross-grade / cross-discipline, and that take place in flexible settings outside of the typically-structured classroom environment. (Figures 10, 11 and 12)

The two wings that constitute PCES and CEMS are oriented to the East/South East so that classrooms and the interior atriums get maximum daylight throughout the school day. In PCES, the youngest students are situated on the lower level with direct access to play areas and outdoor learning spaces. The two main floors of CEMS are located on the higher portion of the site, positioned adjacent to the existing High School Baseball Field, and with close access to a new soccer field.

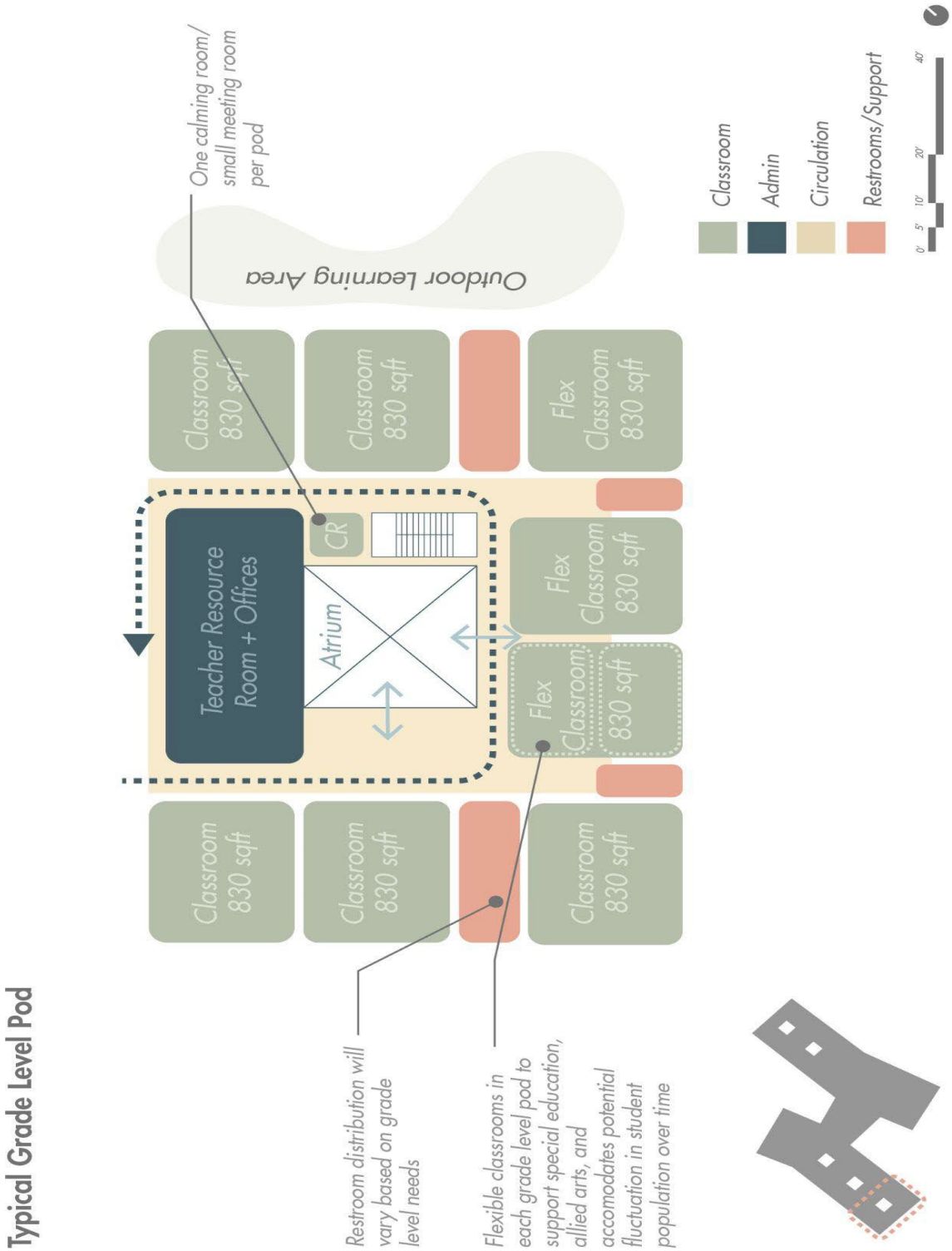


Figure 9. *Typical Grade Level Pod Diagram*

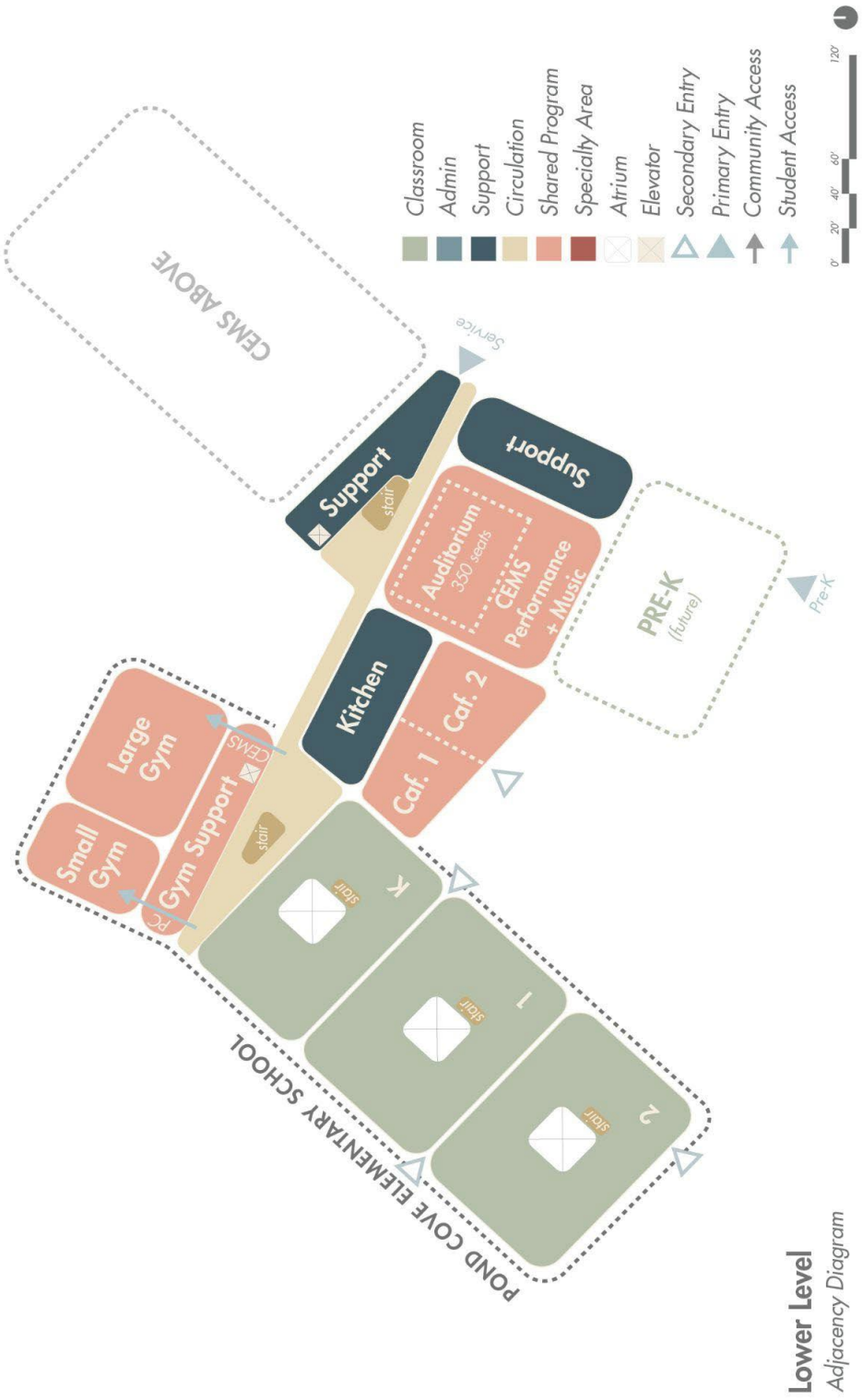


Figure 10. *Conceptual Adjacency Plan Diagram*

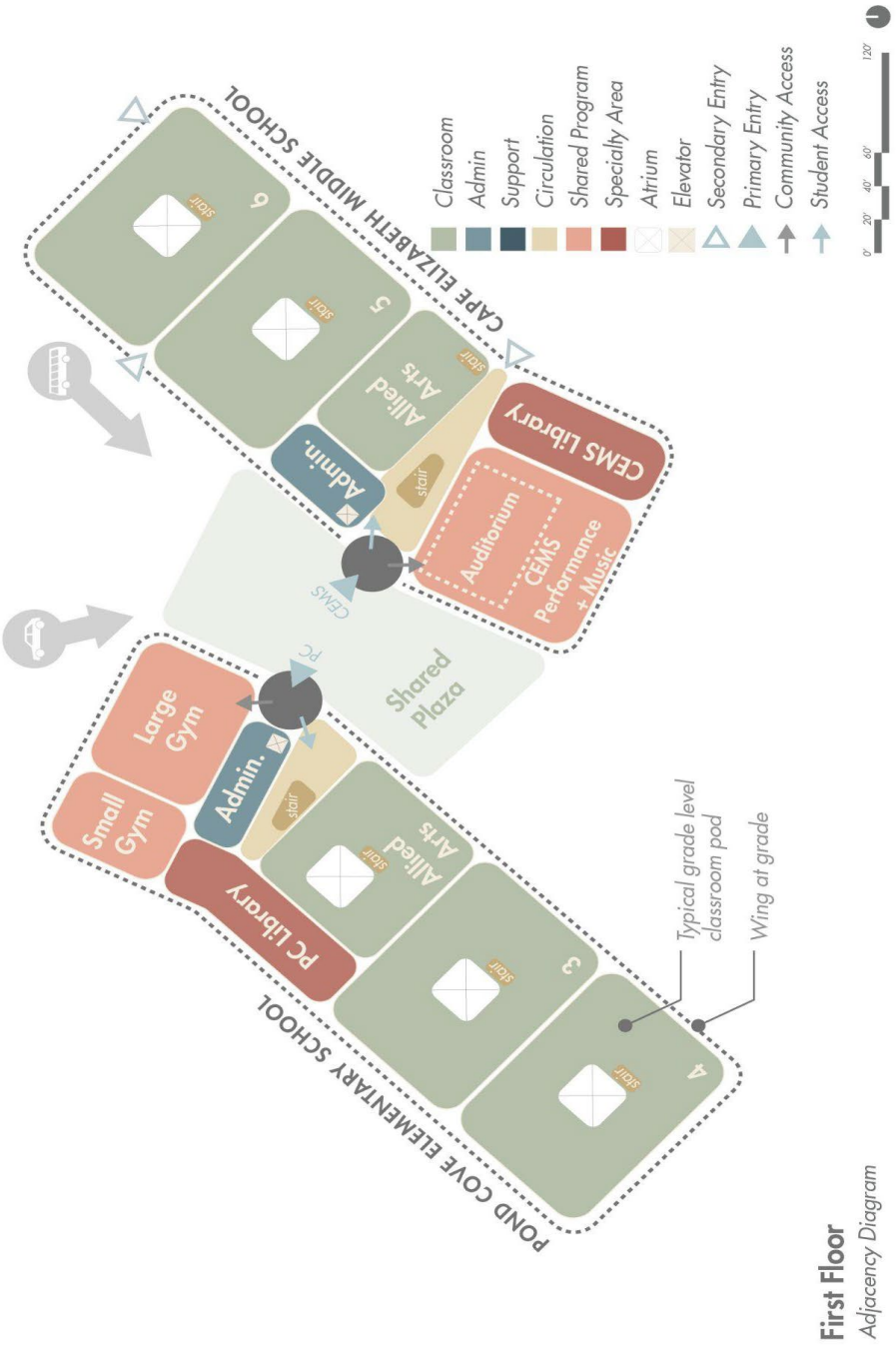


Figure 11. *Conceptual Adjacency Plan Diagrams Continued*

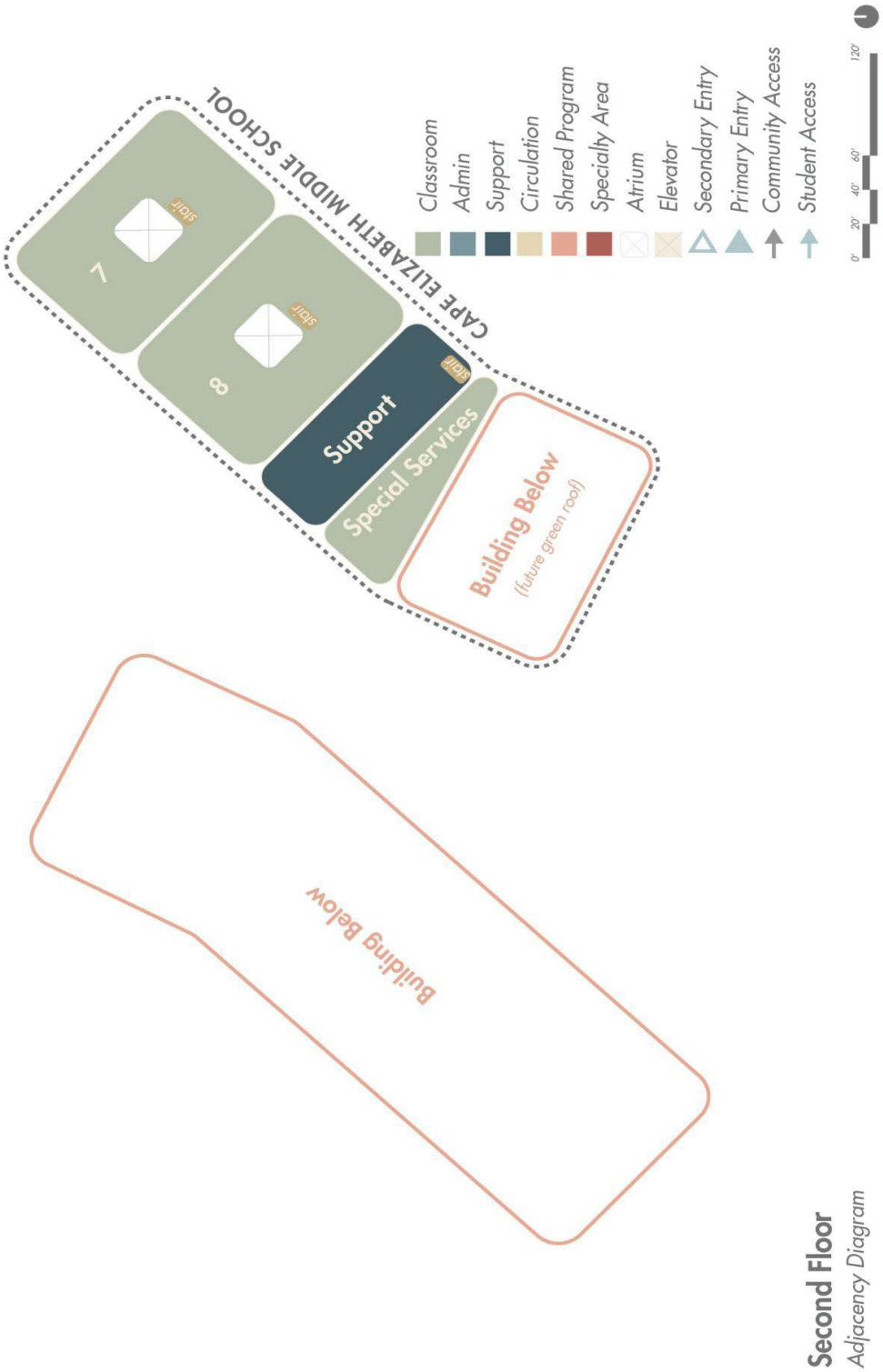


Figure 12. *Conceptual Adjacency Plan Diagrams Continued*

Structural

The structural team has been asked to incorporate economical, mass-timber structural elements into the project. The idea behind the use of mass-timber structural elements being that the school is to be a showpiece, and a reflection of the community's values of sustainability, efficiency, and connection to Maine's history of timber production and forestry. The structure for the building will be an optimized hybrid structure incorporating both steel and mass timber structural elements. The scope of mass-timber elements to be included will be driven by the architectural design team and cost considerations.

The superstructure will be a blend of steel, concrete and wood components. The basis for the conventional framing system will be steel columns, beams and open web joists. These elements will be used to support a concrete slab on metal deck at the elevated floor, and a metal deck at the roof. Lateral loads, imposed on the building from wind and seismic activity, will be transferred from the building to the subgrade via braced frames. The braced frames will be, for the most part, steel, but may incorporate timber braces in the, public-facing, entry areas. Where mass-timber elements are desired and have been deemed economical, cross-laminated timber floor, wall and roof elements can be used in lieu of the conventional steel and concrete deck. Glulam beams may be used in lieu of steel beams and girders, solid timber may be used for columns, and wood members can even replace steel braces on braced-frame systems.

The proposed building is assumed to be supported on shallow foundations for the main wings with a sizable retaining wall at the intersection of the upper and lower schools. The perimeter walls will be supported on 4-foot-deep frost walls and conventional spread footings. The interior columns will be supported on isolated footings located below the slab, while the exterior column footings will be located 4 feet deep.

Mechanical/Plumbing

The proposed Mechanical design addresses airborne viruses as well as COVID concerns with Bipolar Ionization in the air stream, followed by air filtration to capture the resulting particles, and UV (ultraviolet) treatment of the air filters. The design calls for separate HVAC (heating, ventilation and air conditioning) systems for each building area. At this stage of design, the areas have been modeled with VAV (Variable Air Volume) with hot water reheat in each VAV box. The Kitchen includes a makeup air system and commercial kitchen hoods. Areas anticipated to be heating only (no cooling) include Storage, Restroom, Fire Protection, Mechanical/Electrical, and Janitor Closets.

The heating fuel type has not been determined at this stage. The design assumptions are based on current fuel price volatility, and other factors. The team will investigate all design options based on consideration of sustainability, cost, and perform a full life cycle cost analysis to determine the impact to the school district as the design progresses. In keeping with the goal of maximizing "green" building technologies, consideration will be given to incorporating environmental conditioning features such as natural ventilation, demand based ventilation, geothermal ground source heating and cooling, and energy recovery methods that will reduce, or perhaps eliminate, the need for more traditional fuel types. The team will also look to all cost reduction programs available, such as Efficiency Maine rebates, to maximize value to the School District.

The plumbing system is standard, with hot water supplied by indirect water heaters that use hydronic water from the boiler system for heat. A hot water recirculation system provides hot water to fixtures

quickly. The lab includes a gas supply for burners, eye wash stations, and a small exhaust system, but not special drains for acid waste, or large exhaust hoods. As with the heating and air handling systems, sustainable plumbing options, such as reduced flow fixtures, rainwater harvesting and greywater reuse will be considered as the design progresses.

Electrical

The new elementary and middle school will be served by the same electrical underground utility service that currently serves the existing Pond Cove and Middle School. Coordination and phasing with the electrical utility will be required during construction for connection and extending the existing underground feed to a new transformer and utility service disconnect.

There is an existing 400kW generator that was provided in 2020 to serve the existing Pond Cove and Middle School. This generator will be brought over to the new elementary and middle school and will provide backup power to emergency building systems in the event of a power outage. The schematic design phase of this project will include calculations to validate the reuse of the 400kW generator.

New LED light fixtures and energy-saving controls will be designed to maximize energy savings throughout the school. These controls are well thought out to provide sensible and practical levels of lighting control where needed, and will not be a distraction to students and staff. The building will also be designed to maximize natural light which, in conjunction with lighting controls, will provide the most appropriate lighting levels while reducing energy consumption. To provide the greatest savings to the School District, programs through Efficiency Maine will also be investigated.

WiFi accessibility will be provided throughout the school and within the immediate campus outside of the principal structures. This is to allow students and faculty to have WiFi reception in all locations in and around the entire school building. To support this, telecommunications closets will be located strategically throughout the building to ensure overlapping areas of WiFi coverage. The telecommunications infrastructure will also incorporate many of the security features at the new school, and are noted in the Security section below.

All major pieces of electrical equipment will be provided with a networked energy meter or have a connection to a building management system to provide real-time information regarding energy consumption. This serves two purposes: 1) providing usable data to Cape Elizabeth Facilities Staff, and 2) provide an educational opportunity for students to view, and interact with, the energy system via a publicly located video display graphically showing this power consumption.

Life Safety (Fire, Site Security, Building Security)

An evaluation of the existing water pressure serving the school was conducted to determine if adequate pressure is provided to the building for fire suppression purposes. After consulting with the Portland Water District, it has been determined that the water pressure at local hydrants is considered “borderline” for fire suppression. As the design progresses, hydrant flow tests will be conducted in conjunction with the PWD to confirm hydrant pressure. In order to ensure that the fire suppression system has adequate pressure, it was assumed that a 1,500 gallon per minute fire pump and 65,000-gallon storage tank would be required. If hydrant pressure proves sufficient, these items can be eliminated from the design.

The building will also be equipped with an addressable fire alarm system which will be integrated with the Mass Notification System. The Mass Notification System is separate from, but tied into, the Public Address System. Areas within the building needing special systems, like dry chemical for a science lab or kitchen, will be accommodated as the design progresses. The new buildings life safety program will allow students and staff to quickly exit the building in the event of an emergency.

Site Security

In addition to providing ample distance at the approach to the main entrance, a layered use of physical site features such as trees, plantings and planters, benches, the strategic use of permeable pavers for emergency vehicle access, bollards and site lighting will augment the technical site security infrastructure. While these features will contribute to site security, the intent is that they will be pedestrian-friendly amenities during the day-to-day experience. In contrast to the existing school building and playground locations, the new building will be located more centrally within the site, with a significant distance separating surrounding student play zones from general public vehicular and foot traffic.

Building Security

The new building will need to be able to be responsive to a variety of potential scenarios related to safety and security. Card reader activated door hardware, paired with a limited number of entry points with clear visual oversight are the primary lines of defense both inside and out. This card reader access system will be specified to be compatible with Cape Elizabeth's existing card reader system. A non-masonry construction type may also improve wireless and cellular connectivity options at a baseline level in comparison to the existing building.

High definition security cameras will be provided throughout the school and will also monitor all entries and points of egress from the building.

The design team will work closely with the District as well as the local authorities throughout the design and construction process to ensure the most up-to-date security practices and protocols are incorporated and anticipated. Most critically, these features should be accommodated in a way that does not noticeably detract from the educational experience or enjoyment of the building.

Sustainability Narrative

The Cape Elizabeth School District has established sustainability, defined as environmental stewardship, as a primary goal for the design of the new schools, to be addressed in two ways. As a baseline, they wish to realize Operations and Maintenance savings and reduce the schools' environmental impacts through efficient building systems and the use of sustainable and healthy materials. Furthermore, they desire for the school itself to act as a teaching tool to integrate sustainable practices and ideals into the educational curriculum, engendering environmentally proactive habits and attitudes in students and staff.

The design team has been encouraged to include and prioritize the following:

- Maximize Natural Daylighting - large windows and skylights, integrated with daylight harvesting electrical fixtures
- Green Roof & site Stormwater catchment in bio swales to limit impact on the surrounding ecosystem & local watershed

- Making nature present in the Educational Environment, through connections to outdoors and inclusion of natural materials in both finishes and structure where possible
- High Performance envelope & energy efficient heating & cooling systems
- Solar Photo-voltaic arrays to provide on-site power generation aimed at making the new facility “Net-Zero” (having zero energy-related carbon emissions)
- Active ventilation, and the use of materials that are low-VOC and otherwise non-toxic, to promote a healthy interior environment with good air quality.
- Incorporating recycled and sustainably harvested or produced building materials in construction.
- Existing features within the present school building that can be reused in the new building while meeting sustainability goals will be incorporated into the design.

8. Elementary School and Middle School – New Building Programming Goals

General Discussion

Assessing the Programmatic needs of the new building has followed a multi-pronged approach including key stakeholders from a broad spectrum of the Cape Elizabeth community. In order to best inform the development of the Conceptual Design, interviews were conducted with educators, directors, and school staff from every department, and the Building Design Subcommittee dedicated a workshop to a discussion of programming goals and adjacencies over the course of two working sessions. The resultant draft program was also reviewed by the Cape Elizabeth School District and administrative heads from each school.

Why Renovation Is Not Enough

As part of the Programmatic needs assessment, existing scheduling and program distribution were considered. However, as already documented in the Needs Assessment Report, it should be underscored that the existing schedule and program distribution reflect the District's and its educators' perseverance in making the best possible use of existing spaces that are inadequate in comparison with current educational standards. In a new facility, improved scheduling and arrangement of program elements can be optimized. Some of the chief deficiencies that would be inherently unlikely to be remedied by renovation of the existing facilities are as follows:

Based on the Maine Department of Education (MDOE) Design Guidelines, the existing Schools provide only 83% of what would be the baseline minimum anticipated gross area for these schools by current standards. It should be noted that the MDOE Design Guidelines provide a *minimum* framework and do not reflect special programming needs that may exist within a given community. For example, a tailored Special Services program including Occupational and Physical therapy and a dedicated Auditorium serving these grade levels are examples of programmatic elements that are not included in the baseline standard.

With 70% of the Middle School population alone participating in performance based programming, along with social strides towards inclusion and equity, we know these elements have strong support and need within the Cape Elizabeth community. The minimum MDOE guidelines also do not account for newer requirements such as universal free lunch for all students, which over the past 18 months alone has more than doubled the volume of service the schools' kitchens provide. When these critical additional services and program support areas that are integral to Cape Elizabeth's signature education are considered, it is evident that the existing facilities fall much farther short of the initial 83% figure.

Further analysis into select program-specific areas demonstrates several major deficiencies. 78% of classroom spaces do not meet the minimum recommended size requirements per MDOE, nor can they accommodate current leading teaching methods such as learning circle configurations or provide sufficient areas for independent learning. Music and Visual Arts instruction spaces are among those that fall below minimum guidelines. As noted above, even without the recent increase in production with free lunch for all, the existing kitchen support area only provides 83% of the recommended area per

minimum MDOE guidelines. And while the cafetorium is technically adequate per the guidelines, the space limitations require 5 lunch service periods throughout the day to serve the student population. This hampers the ability to use the space for other programming outside of these lunch periods and leaves students eating lunch at times that are not necessarily appropriate for their age groups, or supportive of their curriculum.

Teacher and staff support areas are more difficult to quantify in terms of the MDOE guidelines as leeway is given to allow for responsiveness to staffing needs. Based on the Needs Assessment Report and our most recent round of interviews we do know that even though every habitable square inch of the building is being utilized to try to meet these needs, the consensus is that enough space is not provided. This means that several staff members are working in areas that are not suited for their use, or are working in areas that are not reliably dedicated for their use and may not have adequately secure accommodations, or are isolated from their colleagues. Many shared that they have regularly adapted to displacement or disruptions throughout their time in the existing building. In almost every interview session, we heard faculty express that the existing support spaces fell short of fulfilling basic needs for human comfort such as access to restrooms. The new building provides an opportunity to provide teachers and staff with spaces that meet these needs and acknowledge the current spectrum of services provided. It will also look to do so in a way that promotes interaction, collaboration and community when appropriate.

The existing schools' sprawling configuration results in long travel distances and poor programmatic adjacencies, which have in turn resulted in scheduling issues and poor utilization of space resources by staff and students (Figure 13). Organizationally, the new building will provide improved adjacencies and relationships between learning and activity spaces to reflect current interdisciplinary goals and foster community connection. Most critically, the new building does this in a way that does not compromise school security and resolves existing issues with interconnection of spaces and life safety systems, as noted in the sections above. The table below demonstrates the significant reduction in travel distance compared to the existing for most programmatic elements with the new building. This should improve current scheduling constraints by limiting time spent traveling between areas, and making essential services easier to access for students.

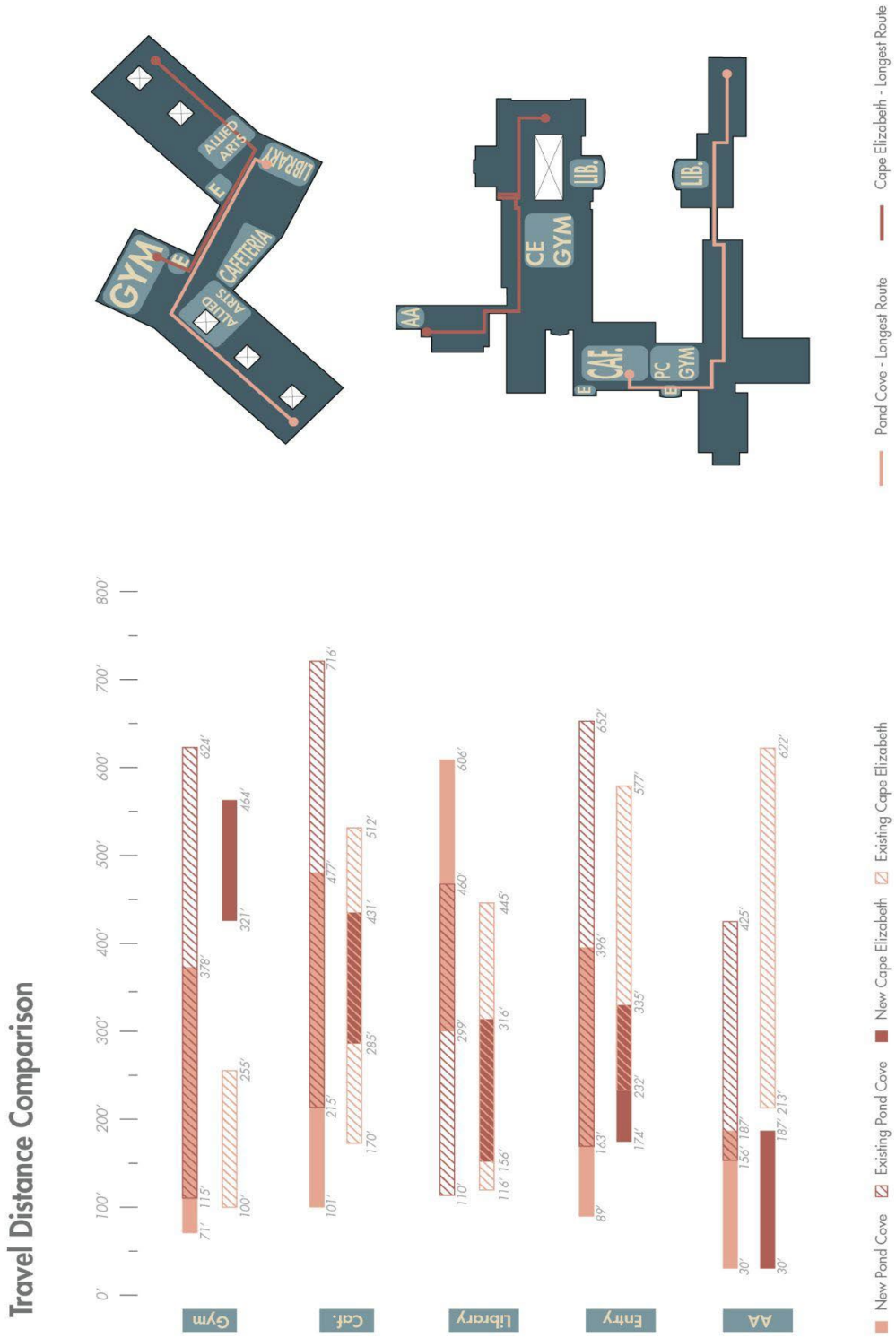


Figure 13. *Travel Distance Analysis, existing PCEM/CEMS*

Taken together, the deficiencies outlined above constitute a compelling argument for why a new school building is needed, as they cannot be remedied through renovation alone. Additionally, and equally compelling, are the maintenance, operative and performative shortcomings of the existing building discussed in the Existing Conditions section and Needs Assessment Report.

Cape Elizabeth District Strategic Goals

At the onset of the design team's work with the Building Design Subcommittee, the existing Cape Elizabeth School District Strategic Goals which reflect the input of the broad Cape Elizabeth Community were established as governing principles and definitions for the work ahead.

Health and Well-Being

Our schools will provide a supportive learning environment in which physical, social, and emotional well-being are valued and promoted.

Global Competency

Our students will be personally responsible, aware, empathetic, and engaged local and global citizens.

Multiple Pathways and Definitions of Success

Our schools will value, promote, and celebrate multiple pathways and definitions of success.

Safe, Sustainable, and Effective Facilities

Our schools will be safe and effective facilities. They will be updated and maintained to meet the needs of students and staff in accordance with long-term financial planning.

Environmental Responsibility

The school department will prioritize environmental responsibility, including stewardship and sustainability.

The subcommittee's first task was to identify and envision how these goals might manifest themselves in a physical space unique to Cape Elizabeth, representing a 'mission of high quality education in the 21st Century'. This was the foundation for four subsequent Conceptual Design Level workshops over the course of three months where the Building Committee considered and identified goals for Program and Organization; Materials and Finishes; Sustainability and Performance Goals; and Building Systems: MEP, Structural, Security and Safety. The final workshop culminated in collective input from all stakeholders into an Education Specification document workbook. This will be developed by a writing task-force of subcommittee members into a formal Education Specification (Ed Spec) document that will guide the future phases of design. This Ed Spec Workbook is included here as Appendix C.b. The Building Design Subcommittee Meeting recordings, agendas and presentation materials may be found on the Cape Elizabeth School Board's website. The Subcommittee has created a brief Summary Report collecting their formal recommendations on the other workshop topics above, see Appendix C.a.

Right Sizing for a 21st Century 'Caper' Education

Declining population may cause some to question whether the strain on the existing Pond Cove Elementary and Cape Elizabeth Middle School building may ease over the coming years as student enrollment is projected to decline. The virtual learning and teaching platforms that have come to exist in the past two years due to COVID-19 may cause others to question whether brick and mortar school buildings will be needed in the future at all.

Cape Elizabeth Schools are renowned for the quality of education they provide despite the limitations of their existing facilities. But regardless of population fluctuation, the existing school buildings do not provide the flexibility of use, quality of spaces, emphasis on community engagement and holistic, interdisciplinary learning reflected in today's preferred educational practices. The way schools were organized in the 1930s, 1960s and even in the 1990s does not map to the current need for a balance of more individually responsive and attuned teaching and learning experiences and opportunities.

A new building, with classroom and support spaces organized to reduce 'siloed' learning experiences, and to provide flexible configurations and uses, will allow the School District to tune the building to their needs as they change over time, even in pandemic conditions. With a mix of both core classrooms for each grade level and flexible classrooms shared between grade levels, classroom configurations can be adjusted as needed as population trends inevitably fluctuate over the entire life of the building. Additionally, a comprehensive design approach to integrating & planning for Technology, both now and in the future, will ensure that teachers will be able to teach both in person and remotely. It will also ensure that both regular and special education students will benefit from using the most up-to-date technology in environments that are equally equipped.

An analysis of population trends to determine Basis of Design student enrollment figures and target classroom needs was reviewed with the Building Oversight Committee. This is an important target to establish and work will continue on this in the early Schematic Design phase. See the figures following for an assessment of contributing data. (Figures 14 and 15) This comparison includes both historical data and NESDEC projections covering a ten-year time frame. We understand that while NESDEC figures are highly accurate statistical assessments, their application is only expected to accurately predict a few years into the future. The building has been designed for a median potential student population so that it may successfully handle peak years yet not be underutilized during periods of population decline.

While the overall program has been tailored to meet the specific needs shared by Cape Elizabeth faculty and Staff, the design team and the Cape Elizabeth School District have taken care to find balance between best-practice wants and fundamental needs to ensure that this facility responsibly serves the entire Cape Elizabeth community during its lifetime. Being located in the Town Center, there is an opportunity for this building to better serve both Cape Elizabeth students and faculty and be more accessible to the broader community so that spaces within the school, particularly gathering spaces, can have maximized functionality, use and enjoyment. A detailed Conceptual Program List is included as Appendix H. Interview Summaries with faculty and staff are included as Appendix D. In future phases of design work feedback from both Cape Elizabeth Schools stakeholders and community members will be collected and further opportunity for programmatic adjustments will be provided.

POPULATION EVALUATION UPDATE

	ENROLLMENT SNAPSHOT 2019-2021	NESDEC PROJECTIONS 2019-2029	NESDEC PROJECTIONS 2021-2031	NESDEC PROJECTION AVERAGES		ADJUSTED COUNTS FOR BASIS OF DESIGN	
	TOTAL	RANGE	RANGE	TOTAL	AVG GRADE	TOTAL	AVG GRADE
POND COVE ELEMENTARY	517	517 - 581	484 - 509	523	105	525	105
CAPE ELIZABETH MIDDLE SCHOOL	529	469 - 527	404 - 453	462	116	520	130

Figure 14. *Student Population Assessment for Basis of Design*

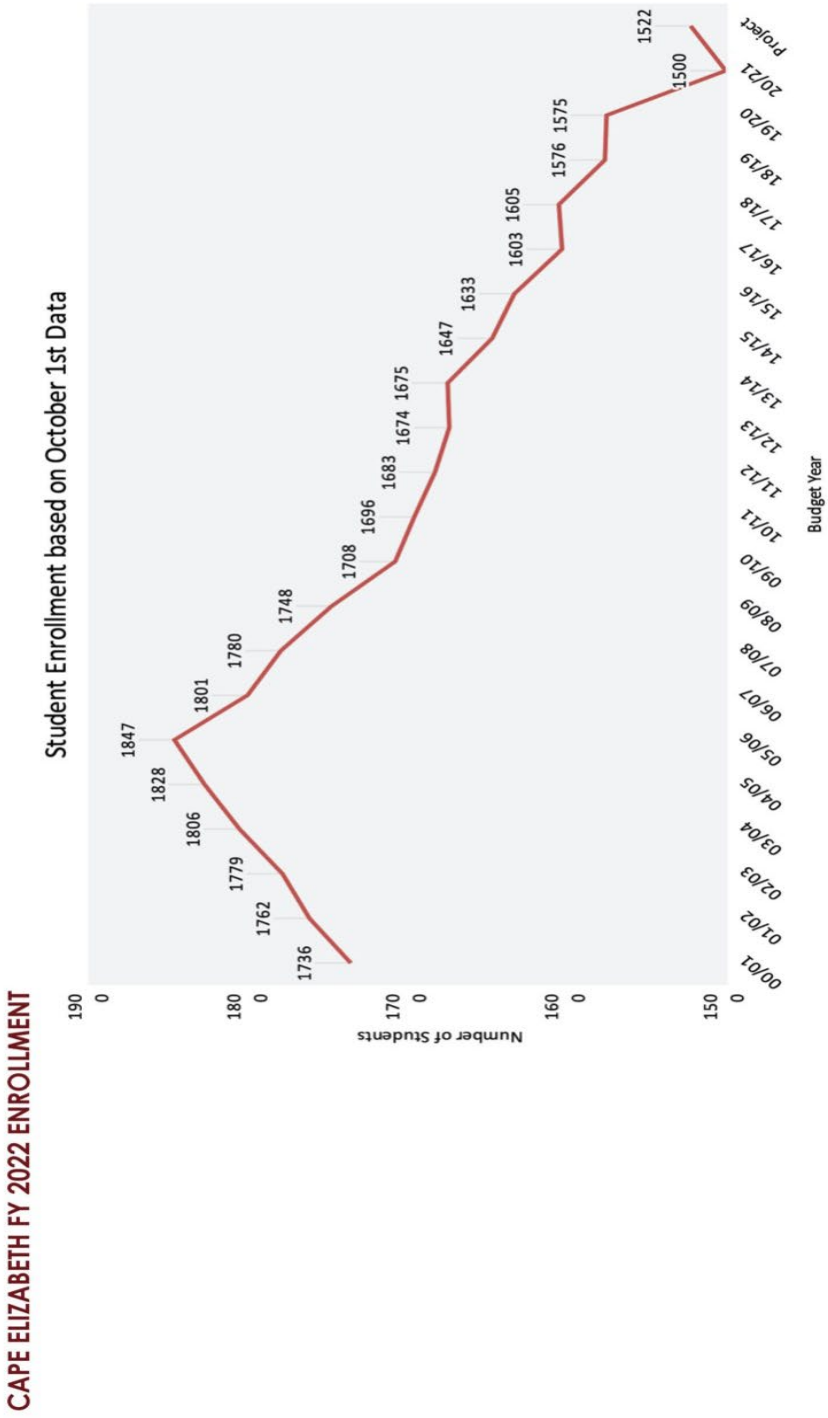


Figure 15. *Student Population Trajectory (PCES, CEMS & CEHS)*
(Note enrollment in Figure 14 is for the elementary and middle schools only)

9. Design Cost Estimate

A cost estimate was generated to determine the anticipated construction cost at a Conceptual Design level. A Project Budget Summary is included here; the structure reflects the target bond initiatives for the proposed new building and renovations to the high school as separate line items. As part of the effort to present a fiscally responsible proposal to the town of Cape Elizabeth, select augmented programmatic features are currently anticipated to be broken out as elective additions to the budget as discussed in the Executive Summary.

Specific to the figures for Pond Cove and Cape Elizabeth Middle School, the design team has elected to present the cost estimate data as a range, with the high-end number being the recommended 'not to exceed' figure to be reflected in the bond warrant. The cost estimate was developed based upon the Conceptual Design level program and site plan, as well as historical data from comparable education projects. Because a range is being presented, an estimating contingency has not been shown as a line item and is represented by the differential in the range. The low end of the range anticipates a return to what would be historically normal construction escalation costs, while the high end of the range reflects trends seen more recently under the pressures of the pandemic with unprecedented and unpredictable material supply issues and labor markets. It should also be noted that the costs shown here are for construction and direct costs associated with construction of the new school. As the design progresses, a more comprehensive listing of costs not directly related to construction will be determined.

Though the estimated figures presented here were independently developed, they are in alignment with recent guidance received from the Maine State Department of Education as to project budget trends. This estimate has undergone peer review by the MDOE. Review by a third-party estimating professional is recommended.

Estimation for the future Pre-K was done strictly at a cost per square foot based on MDOE guidelines as no detailed program is available at this time. The High School renovations estimates are based on improvements to the existing facility identified during the needs assessment. The improvements are to mechanical, electrical and plumbing systems, as well as the fire alarm. Improvements to the structural and architectural features in the building are also recommended. A more detailed cost estimate table which lists the sixteen construction subdivisions is provided as an Appendix F.

Figure 16 below illustrates the range of costs anticipated for the PCES/CEMS project. The costs per square foot shown at the top of the table are used to calculate the construction cost only. The final project cost per square foot is determined once all other project costs are taken into consideration.

Item Description *216,000 s.f.*	*Low: $356.25/s.f.*	*High: $384.19/s.f.*
Construction Estimate	$76,950,000	$82,985,000
Site work (includes demolition)	$5,685,876	$5,685,876
Subtotal	**$82,635,876**	**$88,670,916**
Furniture and Equipment - 4%	$3,305,435	$3,546,837
Technology - 2%	$1,652,718	$1,773,418
Subtotal	**$87,594,029**	**$93,991,171**
Contingency - 10% of construction costs	$8,263,588	$8,867,092
Architect/Engineer costs - 6% of construction costs	$4,958,153	$5,320,255
PCES/CEMS PROJECT TOTAL	***$100,815,769***	***$108,178,518***
Final Project Cost per square foot*	***$466***	***$500***

Figure 16*: Pond Cove Elementary/Cape Elizabeth Middle Schools Cost Estimate*

As stated earlier, certain features within the program are being presented as individual items to be voted upon for inclusion in the bond package. Since the recommendation from the design team is to plan to use the higher of the square foot costs, only that figure is listed for the additional items. Questions 1.a, 1.b, and 1.c are contingent upon approval of Question 1. (Figure 17)

Item Description *$384.19/s.f.*	***Item Cost***
1.a. Augmented Auditorium with 302 additional seats, increasing from 348 to 650, additional 3,020 s.f.	$1,512,496
1.b. Athletic Field Enhancements	$600,000
1.c. Provide space for Pre-K Program, estimated at 105 students, additional 16,470 s.f.	$6,327,609
2. Cape Elizabeth High School Renovations	$18,000,000

***Figure 17**: Additional Items to be considered on the Bond*

As part of the cost estimating process, the impact of the bond on the property taxpayers of Cape Elizabeth was calculated by the Finance Director for the Town. Calculations were based on bond amounts of $80 million, $95 million and $100 million, based over terms of 20 years and 30 years. These estimated impacts on taxpayers are included in Appendix F with the cost estimate detail.

10. Next Steps – Anticipated Timeline of Events

Upon approval of the Bond Resolution by the School Board and submission to the Town, a 90-day commenting period will begin during which the citizens of Cape Elizabeth will have a chance to review the bond initiative and ask questions about what is being proposed. During this time, public outreach will continue and stakeholder involvement will be expanded in support of the referendum. As part of this outreach, a website has been established which will provide information regarding the Bond and the work that went into the proposal. The Building Oversight Committee will continue to meet and the Public Outreach Subcommittee will develop support material for distribution at sporting events and throughout the community. Through this and following phases of design, interactive forums will be held that will give the citizens of Cape Elizabeth a voice in the design of the new schools.

Upon approval of the bond in June 2022, the next stage of design can begin. Added site investigation will be conducted and should include geotechnical surveys to determine the suitability of soils and establish depth to bedrock; a traffic survey to determine the impact of the new school building on present traffic patterns in the area; and updated boundary and topographic surveys to ensure the accuracy of the proposed site design layout.

During the next stage of design, the building will be designed in much greater detail and with further stakeholder engagement, materials, HVAC/plumbing/electrical systems, as well as site layout will be determined. This level of detail in design will allow for a much more refined cost estimate. The result of this phase of design will be construction bid documents that will allow the Town to advertise the project for construction. Following the bid cycle, construction can begin and it's anticipated that it will take two academic school years to complete construction.

BENCHMARK DATES

Bond Approval:	**June 2022 (may be extended)**
Design continues:	August 2022
Design complete:	July 2023
Construction Bid:	August 2023
Construction begins:	**October 2023**
Construction complete:	August 2025
Occupy New School:	**September 2025**
Demolish Existing School:	September 2025 – June2026
Build new athletic fields:	June 2026 – August 2026

11.Summary

As the result of a needs assessment process that took place in 2019, it was determined that the Pond Cove Elementary and Cape Elizabeth Middle Schools should be replaced. This decision will provide a state-of-the-art facility meeting the latest Maine Department of Education standards, current building code requirements, enhanced school security standards and provide the students of Cape Elizabeth an environment that will allow them to grow and thrive in the future. The new, modern school building will also make Cape Elizabeth a more attractive community for new, young families to settle. Cape Elizabeth has a long history of providing among the finest public education system available to its youth, and this effort will solidify Cape's reputation as a leader in the state.

While the bidding and construction environment have recently become less favorable due to supply chain interruptions and pandemic related labor shortages, the advantages to proceeding with this project now outweigh any potential (and questionable) benefits to waiting. First, there are some indications that construction costs are starting to come down, and proceeding now will allow the Town to take advantage of these reductions. Secondly, interest rates are still relatively low for the Municipal Bond market and waiting may mean paying a higher interest rate on funds borrowed. Even a small increase in interest over the life of the Bond could mean substantially higher costs for the Town. Finally, the age of the existing facilities is the primary reason for new school construction, and waiting will not only extend the time Cape Elizabeth students and staff have to spend days learning and teaching in increasingly sub-par facilities, but the ongoing operational and maintenance costs will also continue to increase.

While the Town has maintained the existing facilities as well as could be expected, the school buildings are now showing their age, and efforts to continue to maintain these existing systems in the future we become counterproductive. On the contrary, the ability of the Town to maintain the schools so well indicates that new facilities are a worthwhile and safe investment, and assured to last many decades to come.

There is enthusiasm within the Cape Elizabeth School Community for this effort to move forward, and as the Public Outreach Subcommittee continues to engage the wider community, it is anticipated this

enthusiasm will grow. Those interviewed by the design team have expressed their desire to ensure that the students of Cape Elizabeth are provided with the finest learning environment available, and the staff with the tools necessary to fulfill the School District's Strategic Goals.

12.APPENDICES

A. Needs Assessment Report

https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/988876/October_29__2019_School_Facility_Needs_Assessment_Report.pdf

B. **Committee and Subcommittee Meeting Schedule, Minutes and Presentations**

https://www.cape.k12.me.us/browse/93671

47A York St
Portland, ME 04101
colbycoengineering.com

75 York St
Portland, ME 04101
simonsarchitects.com

C. Building Oversight Committee - Building Design Subcommittee Recommendations

a. Conceptual Design Recommendation Report

b. Ed Spec Workbook (document forthcoming)

CAPE ELIZABETH SCHOOL DEPARTMENT
Open Minds and Open Doors

The mission of the Cape Elizabeth School Department is to provide a high quality education to every Cape Elizabeth student, every day. It is with this in mind that the Concept Design Committee submits its report of the conceptual findings for the new school design.

Concept Design Final Report

By creating state of the art school facilities, Cape Elizabeth Middle School and Pond Cove Elementary School will be well equipped to meet the needs of 21st Century learners, allowing them to attain a high quality education and achieve their greatest potential. Through the design of safe and physically comfortable spaces that promote personalized learning, Cape Elizabeth Middle School and Pond Cove Elementary students will be exceptionally prepared for their world upon graduation, a world that is constantly changing and evolving. In order to best support a future-forward design, the schools will demonstrate the greatest flexibility in use of space, materials, equipment and furnishings. Systems used throughout and shared between both buildings will ensure environmental aesthetics and low impact, while demonstrating high degrees of efficiency and long term sustainability. The building and campus design will instill pride in the Cape Elizabeth community for all users and serve as a beacon and hub for years to come.

The Process and Membership

The Concept Design Committee is made up of twenty-four members representing the following diverse stakeholder groups:

- Teachers and staff
- Students
- Administrators
- Parents
- Community members
- Design Team members from Colby Engineering and Simons Architects.

Over the course of five meetings from November 2021 through January 2022, the Concept Design Committee used an iterative process of work sessions to address design considerations. These considerations focused on five areas of design:

- Programming and Organizational Layout
- Sustainability and Performance goals
- Materials and Finishes
- Building Systems, MEP (Mechanical, Electrical, Plumbing)
- Structural Security and Safety

Hinging the discussions on the Cape Elizabeth School Department Strategic Plan Goals, conceptual aspects of 21st century schools were identified and broad themes emerged quickly. Members identified the need for schools that are safer, more efficient, more flexible and more accessible than what we currently have today. Spaces that spur greater collaboration and creativity were envisioned. Organizational layouts that foster strong relationships and academic advancement were conceptualized. By designing spaces to serve multiple functions and considering the learning opportunities in outdoor spaces, the schools become resources and accessible to the wider community and its partners. The idea of welcoming the community into the schools while simultaneously engaging our students in learning outside its walls is a cornerstone of the design.

Strategic Plan Goals

Health and Well-Being

Our schools will provide a supportive learning environment in which physical, social, and emotional well-being are valued and promoted.

The learning environment plays a key role in maintaining and promoting the health and wellbeing of children (and their teachers). Students spend 175 days a year in their schools with approximately 70% of that time either in the classroom or indoor spaces. This committee believes that better educational outcomes can be achieved if students are able to learn in welcoming spaces that have been flexibly designed to provide opportunities for both community and quiet reflection, with access to a nature filled environment.

Welcoming Spaces

- A wellness suite that accommodates for full spectrum of student needs (physical, social, and emotional)
- Safe bathrooms for all students
- Spaces that are accessible to all students
- Adequate access to bathrooms and water fountains throughout the building
- Thoughtful acoustical design to promote meaningful interaction, especially in larger spaces
- Spaces designed to reflect sensory needs of some individuals

Flexible Spaces Designed for Various Sized Groups

- Additional collaborative spaces beyond classrooms
- Cafeteria space that allows for small groups and circular tables
- Alcoves and window seating for breakout spaces
- Cozy spaces for quiet individual work
- Spaces that allow for movement/activity (outside of the gym)
- Developmentally appropriate spaces for varying age groups

Nature Filled Environment

- Sunlight and views of the outdoors throughout the building
- Multiple learning spaces will be created with the use of hardscape positioning and structures, allowing learning to extend beyond the walls of the classroom and schools.
- The school campus will provide ample outdoor areas that can be safely used in all (or most) seasons, including seating and sun/rain/wind protection.
- Outdoor learning areas will be easily accessible and separate from busy playground spaces to enable classes to quickly transition outdoors and have minimal distractions.
- School garden and playground will continue to be accessible to all grade levels to regularly complement the curriculum.



Global Competency

Our students will be personally responsible, aware, empathetic, and engaged local and global citizens.

The demands on 21st century students for global competency are fluid and unparalleled in history. The design and building process will encourage student stewardship of the building, the local community and wider world. Since authentic, productive, and diverse in-person relationships and access to the wider world via technology are cornerstones of developing global competency, the new design will reflect this priority in every detail, addressing myriad challenges that exist in the current buildings for collaboration, gathering, and connection.

Stewardship opportunities and connection to place

- Accessible opportunities for students to care for and understand their school building and greater environment (e.g., energy-use monitoring tools)

- Displays and design features help students to understand sustainable design decisions and impact on school functions
- Architecture inspired by the building's place in the community landscape and wider world (e.g., design details celebrate local materials, ocean, forest, salt marsh, farmland)

Encouragement of diverse relationships

- A variety of spaces and furniture allow different combinations of adults and peers to work together effectively
- Options for special services to be delivered in integrated or separate settings
- Viable options for gatherings and performances of various sizes both during and outside of school hours

Hassle-free, effective technology capacity for global connection

- Connectivity and appropriate technology and A/V capacity in gathering spaces for large group virtual presentations
- Access to tech tools in breakout spaces for small group and individual learning
- Connectivity outdoors for students to use technology in connection with nature-based curricula

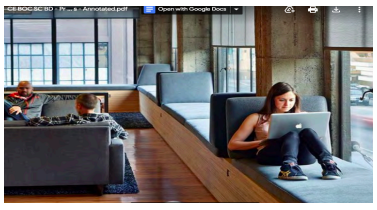
Multiple Pathways and Definitions of Success

Our schools will value, promote, and celebrate multiple pathways and definitions of success.

As we plan for educating Cape Elizabeth students over the next 80 years it is important to think beyond our current educational model. This committee spent time discussing what students and teachers need in a new school and how the physical building will evolve to accommodate the needs of our future scholars.

Student centered design

- Appealing flexible spaces that can meet the needs and interests of all learners
- Provide many ways for students to engage with the space
- Breakout spaces that allow teachers to monitor and engage with students
- Provide multiple outlets for students to demonstrate and develop their talents (large performance to small intimate group spaces/bulletin board to gallery range)
- Spaces for students to explore high level technical concepts before they arrive at the High School



Multiple outdoor spaces- so there is access for everyone who needs to use it

- Play, eat, learn: Multiple easy access to outdoor spaces for recess and distraction-free learning
- Covered outdoor space for recess choices (cards, board games, etc.)
- Appropriate outdoor learning furniture, equipment and storage

Safe, Sustainable, and Effective Facilities

Our schools will be safe and effective facilities. They will be updated and maintained to meet the needs of students and staff in accordance with long-term financial planning.

Ensuring CESD schools are safe places for students to thrive and grow is of highest priority in the design of our new facilities. Because of this, the building design will incorporate state of the art school safety and security systems, ensuring the highest levels of safety and wellbeing, while maintaining a welcoming environment for those accessing our schools.

Safe and Secure Schools

- State of the art security measures while maintaining a warm and welcoming environment.
- Pond Cove and CEMS will have uniquely identifiable and distinct main entries that are inviting while providing safe, efficient and easy access to the schools.
- Entry points around the schools will account for security, emergency access and ADA compliance.
- Safe outdoor spaces (learning, eating, etc.) are easily accessed and allow for effective supervision

Sustainability and Efficiency

- Building systems and common use spaces will be shared to increase cost effectiveness and efficiency
- Classrooms are designed for content learning needs with ease of access to necessary utilities - electricity, water, wi-fi, lighting - customized to the needs of the content delivery within the space
- Faculty work stations clustered in a common space promotes collaboration and efficiency
- Layout allows for community usage and access of spaces after-school, evening, and weekends while maintaining security of the schools and "school-only" areas
- Building materials and design reflect the community and highlight use of local materials and reflect

iconic town landmarks when possible

Environmental Responsibility

The school department will prioritize environmental responsibility, including stewardship and sustainability.

This committee consistently voiced the importance of building a school that promotes, incorporates and prioritizes the importance of being environmentally responsible. This belief exists both in the removal of the existing buildings and the construction of new buildings.

Cape Elizabeth values the environment; any new construction must prioritize local and global awareness

- Limit environmental impacts during the demolish process, focus on recycling and reusing over landfills.
- Energy efficient mechanical systems that allow for regulated heating and cooling
- Functional, student-facing compost and recycling facilities

- Materials and finishes will allow for sustainable and environmentally responsible maintenance
- The design will predict and allow for future sustainability goals to be realized (e.g., conduits for future electric vehicle charging stations, roof support to allow for future additions of photovoltaics or green roof areas)

Maximize the physical location of the school

- The building will have a southern orientation to optimize light and energy efficiency
- The design will use renewable energy sources as is beneficial
- Energy efficient windows and blinds to maximize the solar benefits while limiting heat loss

Submitted on behalf of Concept Design Committee Members

Oliver Ames - CEMS student
Melissa Bam - Pond Cove Special Education teacher
Lindsay Barrett - Parent
Kimberly Chouinard - Pond Cove teacher
Derek Converse - Community member
Troy Eastman - CEMS Principal (co-chair)
Ezra Gabrielson - CEMS student
Jenn Grymek - Parent/ Community member
James Hebert (design team) - Colby Engineering
Steve Hoffman (design team) - Simons Architects
Christopher Kleeman - Parent/ Community member
Jason Manjourides - Pond Cove Principal
Amanda Marsden - Pond Cove 2nd grade teacher
Michelle McClellan - Assistant Superintendent (co-chair)
Julie Merriam - Pond Cove 3rd Grade teacher
Angela Meyer - Parent/ Community member
DJ Nelson - Parent/ Community member
Per Noreus - CEMS Math teacher
Stephen Price - CEMS Science teacher/Performing Arts Director
Caitlin Ramsey - CEMS Music teacher
Rachel Sheskey - Pond Cove substitute teacher/Community member
John Springer - CEHS Principal
Julia Tate (design team) - Simons Architects
Erin Taylor - Pond Cove School Nurse

Supporting Document

CESD Concept Design Agenda

47A York St
Portland, ME 04101
colbycoengineering.com

75 York St
Portland, ME 04101
simonsarchitects.com

D. Stakeholder Interview Summaries: Pond Cove Elementary and Cape Elizabeth Middle Schools ***(as a hyperlink)*** ***(document forthcoming)***

47A York St
Portland, ME 04101
colbycoengineering.com

75 York St
Portland, ME 04101
simonsarchitects.com

E. Stakeholder Surveys: Cape Elizabeth High School Renovation *(as a hyperlink)* *(document forthcoming)*

47A York St
Portland, ME 04101
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F. Detailed Cost Estimate & Bond Impact on Taxpayers

COLBY COMPANY ESTIMATE			
NEW CONSTRUCTION			
	GENERAL CONDITIONS		$526,592
	CONCRETE		$6,020,000
	MASONRY		$1,600,000
	METALS		$12,000,000
	MECH		$9,670,874
	ELECT		$7,682,440
	SUBTOTAL		$37,499,906
	DIV 7-14	Note 1 Below	$45,485,134
TOTAL NEW CONSTRUCTION	**COST/SF**	**$384.19**	**$82,985,040**
SF	216,000		
SITE COSTS INCL. DEMO			$5,685,876
SUBTOTAL BUILDING & SITE			**$88,670,916**
	COST/SF	**$410.51**	
F & E	4%		$3,546,837
INCL. TECHNOLOGY	2%		$1,773,418
CONTINGENCY			
Construction	5%		$4,433,546
Bidding	5%		$4,433,546
AE COSTS	6%		$5,320,255
TOTAL PROJECT COST		**Note 2 Below**	**$108,178,517**
	COST/SF	**$500.83**	

Note 1: Architectural costs (Divisions 7-14) determined by applying escalation factors to previous MDOE projects for total building costs, then deducting costs determined by analysis for other Divisions for this project (structural, MEP, fire protection, site). The remainder is the escalated Architectural costs estimated for this project.

Note 2: TOTAL PROJECT COST HAS BEEN DETERMINED USING THESE FIGURES TO DETERMINE ESCALATION FACTORS AND SOFT COSTS OVER AND ABOVE CONSTRUCTION/SITE COSTS. ESCALATION FACTORS IN THE "SUMMARY- BASE BID" WORKSHEET ARE STILL UNDER EVALUATION BY THE DESIGN TEAM.

PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	DATE: **2/1/22**		PROJECT NUMBER: **366.007.001**
	ESTIMATED BY: **Colby Company Engineering**		ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: **Concept Design Cost**		CCE JOB NUMBER: **366.007.001**

PROJECT SUMMARY	**Total Material Cost**	**Total Labor Cost**	**Engineering Estimate Total Cost**
DIVISION 1 - GENERAL CONDITIONS	$ 520,085.29	$ -	$ 520,085.29
DIVISION 2 - SITE	$ 1,610,285.00	$ 2,317,591.30	$ 5,685,876.30
DIVISION 3 - CONCRETE	$ -	$ -	$ 6,020,000.00
DIVISION 4 - MASONRY	$ -	$ -	$ 1,600,000.00
DIVISION 5 - METALS	$ -	$ -	$ 12,000,000.00
DIVISION 7 - THERMAL AND MOISTURE PROTECTION	$ -	$ -	$ -
DIVISION 8 - OPENINGS	$ -	$ -	$ -
DIVISION 9 - FINISHES	$ -	$ -	$ -
DIVISION 10 - SPECIALTIES	$ -	$ -	$ -
DIVISION 11 - EQUIPMENT	$ -	$ -	$ -
DIVISION 12 - FURNISHINGS	$ -	$ -	$ -
DIVISION 13 - SPECIAL CONSTRUCTION	$ -	$ -	$ -
DIVISION 14 - CONVEYING EQUIPMENT	$ -	$ -	$ -
DIVISION 15 - MECHANICAL	$ 7,416,775.83	$ 2,254,097.99	$ 9,670,873.82
DIVISION 16 - ELECTRICAL	$ 6,896,244.75	$ 135,533.95	$ 7,031,778.70
Subtotal:			**$ 36,322,652.52**
SUBCONTRACTOR OVERHEAD AND PROFIT - 20%			$ 7,264,530.50
Subtotal:			**$ 43,587,183.02**
GENERAL CONDITIONS - 10%			$ 4,358,718.30
Subtotal:			**$ 47,945,901.33**
CONTRACTOR OVERHEAD & PROFIT - 15%			$ 7,191,885.20
Subtotal:			**$ 55,137,786.53**
PAYMENT & BONDS - 1.5%			$ 827,066.80
Subtotal:			**$ 55,964,853.32**
DESIGN/ESTIMATING CONTINGENCY - 20%			$ 11,192,970.66
Subtotal:			**$ 67,157,823.99**
ESCALATION TO MIDPOINT OF CONSTRUCTION - 7.5%			$ 5,036,836.80
Subtotal:			**$ 72,194,660.79**
OWNER CONTINGENCY - 0% (accounted for in DOE budget sheet			$ 3,609,733.04
Subtotal:			**$ 75,804,393.83**
Base Bid TOTAL:			**$ 75,804,393.83**

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PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	DATE: **2/1/22**						PROJECT NUMBER: **366.007.001**		
	ESTIMATED BY: **Colby Company Engineering**						ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**		
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: **Concept Design Cost**						CCE JOB NUMBER: **366.007.001**		
DIVISION 1 - GENERAL CONDITIONS	**Quantity**		**Cost**		**Labor Cost**		**Engineering Estimate**		
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	
Mobilization	1	LS	$ 100,000.00	$ 100,000.00	$ -	$ -	$ 100,000.00	$ 100,000.00	
General Conditions (monthly)	18	MO	$ -	$ -	$ -	$ -	$ -	$ -	
Commissioning - Electrical	1	LS	$ 210,042.64	$ 210,042.64	$ -	$ -	$ 210,042.64	$ 210,042.64	
Commissioning - HVAC	1	LS	$ 210,042.64	$ 210,042.64	$ -	$ -	$ 210,042.64	$ 210,042.64	
Total:				**$ 520,085.29**		**$ -**		**$ 520,085.29**	

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PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**			DATE: **2/1/22**				PROJECT NUMBER: **366.007.001**		
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PROJECT LOCATION: **Cape Elizabeth, Maine**			STATUS OF DESIGN: **Concept Design Cost**				CCE JOB NUMBER: **366.007.001**		
DIVISION 2 - SITE	**Quantity**		**Cost**		**Labor Cost**		**Total Cost**		
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	
Demolition - Existing Building	135200	SF	$ 1.50	$ 202,800.00	$ 4.50	$ 608,400.00	$ 6.00	$ 811,200.00	
Demolition - Existing Utilities	2075	LF	$ 15.00	$ 31,125.00	$ 10.00	$ 20,750.00	$ 25.00	$ 51,875.00	
Demolition - Clearing and Grubbing	0.5	AC	$ 7,500.00	$ 3,750.00	$ 7,500.00	$ 3,750.00	$ 15,000.00	$ 7,500.00	
Hazardous Materials Abatement	1	Allow					$ 55,000.00	$ 55,000.00	
Earthwork	66000	CY	$ 10.00	$ 660,000.00	$ 10.00	$ 660,000.00	$ 20.00	$ 1,320,000.00	
Utilies - Water, Domestic (includes valves, tees, bends)	250	LF	$ 40.00	$ 10,000.00	$ 60.00	$ 15,000.00	$ 100.00	$ 25,000.00	
Utilities - Water, Fire Suppression (includes valves, tees, be	70	LF	$ 80.00	$ 5,600.00	$ 60.00	$ 4,200.00	$ 140.00	$ 9,800.00	
Utilities - Underground Electric/Comm	270	LF	$ 10.00	$ 2,700.00	$ 50.00	$ 13,500.00	$ 60.00	$ 16,200.00	
Utilities - Sewer	460	LF	$ 40.00	$ 18,400.00	$ 60.00	$ 27,600.00	$ 100.00	$ 46,000.00	
Flexible Pavement - Parking (includes subbase)	50780	SF	$ 2.00	$ 101,560.00	$ 3.26	$ 165,542.80	$ 5.26	$ 267,102.80	
Flexible Pavement - Drives (includes subbase)	83,350	SF	$ 2.00	$ 166,700.00	$ 4.91	$ 409,248.50	$ 6.91	$ 575,948.50	
Stormwater Management	1.00	LS					$ 338,000.00	$ 338,000.00	
Fire Water Storage Tank - Precast Concrete (65,000 Gallon	1	LS					$ 90,000.00	$ 90,000.00	
Retaining Walls	3870	SF	$ 70.00	$ 270,900.00	$ 30.00	$ 116,100.00	$ 100.00	$ 387,000.00	
Walkway Pavers	27,200	SF	$ 5.00	$ 136,000.00	$ 10.00	$ 272,000.00	$ 15.00	$ 408,000.00	
Landscaping	1	LS					$ 50,000.00	$ 50,000.00	
Athletic Field MS Baseball & Soccer	1	LS					$ 600,000.00	$ 600,000.00	
Athletic Field Upgrade (Gullcrest)	1.0	LS					$ 600,000.00	$ 600,000.00	
Fencing - Chain Link	150.0	LF	$ 5.00	$ 750.00	$ 10.00	$ 1,500.00	$ 15.00	$ 2,250.00	
Erosion and Sedimentation Control	1.0	LS					$ 25,000.00	$ 25,000.00	
Total:				**$ 1,610,285.00**		**$ 2,317,591.30**		**$ 5,685,876.30**	

						1/0/1900		
PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**		DATE: **2/1/22**				PROJECT NUMBER: **366.007.001**		
		ESTIMATED BY: **Colby Company Engineering**				ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**		
PROJECT LOCATION: **Cape Elizabeth, Maine**		STATUS OF DESIGN: **Concept Design Cost**				CCE JOB NUMBER: **366.007.001**		
DIVISION 3 - CONCRETE	**Quantity**		**Cost**		**Labor Cost**		**Total Cost**	
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**
Cast in Place Concrete - Strip Footing	1500	LF	$ -	$ -	$ -	$ -	$ 150,000.00	$ 150,000.00
Cast in Place Concrete - Frost Wall	1500	LF					$ 400,000.00	$ 400,000.00
Cast in Place Concrete - Isolated Footings	1400	SF					$ 1,300,000.00	$ 1,300,000.00
CIP - Retaining Wall Footing	700	LF					$ 1,200,000.00	$ 1,200,000.00
CIP - Retaining Wall	7000	SF					$ 1,400,000.00	$ 1,400,000.00
Cast in Place Concrete - Slabs	191000	SF					$ 570,000.00	$ 570,000.00
Foundation Excavation	95500	SF					$ 1,000,000.00	$ 1,000,000.00
Total:				**$ -**		**$ -**		**$ 6,020,000.00**

		DATE: 10/17/13
PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	**DATE** **2/1/22**	PROJECT NUMBER:
	ESTIMATED BY: **Colby Company, LLC**	ESTIMATED COST OF CONSTRUCTION:
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: (SUBMISSION) **60%**	CCS JOB NUMBER: **2013-80**

DIVISION 4 - MASONRY	**Quantity**		**Cost**		**Labor Cost**		**Total Cost**	
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**
Masonry - Concrete Masonry Wall units		SF	-	-	-	-	-	1,600,000.00
Stone - Architectural		SF	-	-	-	-	-	-
Total:				**$ -**		**$ -**		**$1,600,000.00**

		1/0/1900
PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	DATE: **2/1/22**	PROJECT NUMBER: **366.007.001**
	ESTIMATED BY: **Colby Company Engineering**	ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: **Concept Design Cost**	CCE JOB NUMBER: **366.007.001**

DIVISION 5 - METALS	Quantity		Cost		Labor Cost		Total Cost	
	Number	Unit	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
STEEL OPTION								
Enclosure Framing								
Structural Steel Framing		TON	$ -	$ -	$ -	$ -	$ -	$ 10,000,000.00
Cold Formed Metal Framing		TON	$ -	$ -	$ -	$ -	$ -	$ 2,000,000.00
Metal Stairs and Railings		TON	$ -	$ -	$ -	$ -	$ -	$ -
Architectural Metal		TON	$ -	$ -	$ -	$ -	$ -	$ -
Total:				**$ -**		**$ -**		**$ 12,000,000.00**

							1/0/1900	
PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	DATE: **2/1/22**						PROJECT NUMBER: **366.007.001**	
	ESTIMATED BY: **Colby Company Engineering**						ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**	
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: **Concept Design Cost**						CCE JOB NUMBER: **366.007.001**	

DIVISION 15 - MECHANICAL	**Quantity**		**Cost**		**Labor Cost**		**Total Cost**	
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**
Plumbing								
Domestic water heater, indirect fired	3	ea	$ 12,000.00	$ 36,000.00	$ 700.00	$ 2,100.00	$ 12,700.00	$ 38,100.00
Water closet, wall hung, with sensor flushometer	151	ea	$ 1,200.00	$ 181,200.00	$ 150.00	$ 22,650.00	$ 1,350.00	$ 203,850.00
Water closet rough-in, supply, waste and vent	151	ea	$ 1,370.00	$ 206,870.00	$ 203.00	$ 30,653.00	$ 1,573.00	$ 237,523.00
Lavatory with sensor faucet	75	ea	$ 900.00	$ 67,500.00	$ 150.00	$ 11,250.00	$ 1,050.00	$ 78,750.00
Lavatory rough-in, supply, waste and vent	75	ea	$ 628.00	$ 47,100.00	$ 313.00	$ 23,475.00	$ 941.00	$ 70,575.00
Shower enclosure with fixture and drain	6	ea	$ 2,734.00	$ 16,404.00	$ 258.00	$ 1,548.00	$ 2,992.00	$ 17,952.00
Shower rough-in, supply, waste and vent	6	ea	$ 420.00	$ 2,520.00	$ 254.00	$ 1,524.00	$ 674.00	$ 4,044.00
Sink, laboratory, single bowl, single drain board	10	ea	$ 926.00	$ 9,260.00	$ 173.00	$ 1,730.00	$ 1,099.00	$ 10,990.00
Sink, laboratory, rough-in, supply, waste and vent	10	ea	$ 215.00	$ 2,150.00	$ 258.00	$ 2,580.00	$ 473.00	$ 4,730.00
Sink, kitchen, double bowl	4	ea	$ 2,551.00	$ 10,204.00	$ 113.00	$ 452.00	$ 2,664.00	$ 10,656.00
Sink, kitchen, rough-in, supply, waste and vent	4	ea	$ 1,400.00	$ 5,600.00	$ 350.00	$ 1,400.00	$ 1,750.00	$ 7,000.00
Sink, janitor	3	ea	$ 267.00	$ 801.00	$ 87.00	$ 261.00	$ 354.00	$ 1,062.00
Sink, janitor, rough-in, supply, waste and vent	3	ea	$ 1,275.00	$ 3,825.00	$ 317.00	$ 951.00	$ 1,592.00	$ 4,776.00
Water cooler, non-recessed, dual height	6	ea	$ 1,975.00	$ 11,850.00	$ 130.00	$ 780.00	$ 2,105.00	$ 12,630.00
Water cooler rough-in, supply, waste and vent	6	ea	$ 350.00	$ 2,100.00	$ 131.00	$ 786.00	$ 481.00	$ 2,886.00
Eye wash station, wall mounted	2	ea	$ 307.00	$ 614.00	$ 130.00	$ 260.00	$ 437.00	$ 874.00
Eye wash station rough-in, supply, waste and vent	2	ea	$ 350.00	$ 700.00	$ 131.00	$ 262.00	$ 481.00	$ 962.00
Floor drain	20	ea	$ 416.00	$ 8,320.00	$ 43.00	$ 860.00	$ 459.00	$ 9,180.00
Floor drain rough-in, trap primer, waste and vent	20	ea	$ 300.00	$ 6,000.00	$ 100.00	$ 2,000.00	$ 400.00	$ 8,000.00
Trap primer, electronic	2	ea	$ 170.00	$ 340.00	$ 23.00	$ 46.00	$ 193.00	$ 386.00
Trap primer, mechanical	16	ea	$ 50.00	$ 800.00	$ 18.00	$ 288.00	$ 68.00	$ 1,088.00
Floor cleanout	12	ea	$ 450.00	$ 5,400.00	$ 36.00	$ 432.00	$ 486.00	$ 5,832.00
Wall cleanout	6	ea	$ 475.00	$ 2,850.00	$ 80.00	$ 480.00	$ 555.00	$ 3,330.00
Hose bibb	25	ea	$ 75.00	$ 1,875.00	$ 20.00	$ 500.00	$ 95.00	$ 2,375.00
Wall hydrant, non-freeze	8	ea	$ 879.00	$ 7,032.00	$ 19.00	$ 152.00	$ 898.00	$ 7,184.00
Domestic hot water circulator pump with control	1	ea	$ 1,181.00	$ 1,181.00	$ 86.00	$ 86.00	$ 1,267.00	$ 1,267.00
Domestic hot water mixing valve	1	ea	$ 1,441.00	$ 1,441.00	$ 250.00	$ 250.00	$ 1,691.00	$ 1,691.00
Water meter 2-1/2"	1	ea	$ 2,504.00	$ 2,504.00	$ 173.00	$ 173.00	$ 2,677.00	$ 2,677.00
Backflow preventer 2-1/2"	1	ea	$ 5,410.00	$ 5,410.00	$ 115.00	$ 115.00	$ 5,525.00	$ 5,525.00
Backflow preventer 3/4" for boiler room	2	ea	$ 425.00	$ 850.00	$ 18.00	$ 36.00	$ 443.00	$ 886.00
DW - Copper Pipe - Type L	1	lot	$ 50,000.00	$ 50,000.00	$ 35,000.00	$ 35,000.00	$ 85,000.00	$ 85,000.00

Insulation, fiberglass with ASJ, 1" wall	1	lot	$ 10,000.00	$ 10,000.00	$ 2,000.00	$ 2,000.00	$ 12,000.00	$ 12,000.00
Drainage Pipe, PVC, 1-1/2" diameter, includes couplings	100	ft	$ 9.85	$ 985.00	$ 12.08	$ 1,208.00	$ 21.93	$ 2,193.00
Drainage Pipe, PVC, 2" diameter, includes couplings 10'	200	ft	$ 11.35	$ 2,270.00	$ 13.24	$ 2,648.00	$ 24.59	$ 4,918.00
Drainage Pipe, PVC 4" diameter, includes couplings 10' C	600	ft	$ 15.70	$ 9,420.00	$ 14.68	$ 8,808.00	$ 30.38	$ 18,228.00
Drainage Pipe, PVC, 6" diameter, includes couplings 10'	40	ft	$ 27.50	$ 1,100.00	$ 20.21	$ 808.40	$ 47.71	$ 1,908.40
Vent Pipe, PVC, 1-1/2" diameter, includes couplings 10' C	100	ft	$ 9.85	$ 985.00	$ 12.08	$ 1,208.00	$ 21.93	$ 2,193.00
Vent Pipe, PVC, 2" diameter, includes couplings 10' O.C.	300	ft	$ 11.35	$ 3,405.00	$ 13.24	$ 3,972.00	$ 24.59	$ 7,377.00
Vent Pipe, PVC, 4" diameter, includes couplings 10' O.C.	200	ft	$ 15.70	$ 3,140.00	$ 14.68	$ 2,936.00	$ 30.38	$ 6,076.00
Sanitary Waste Fittings	1	lot	$ 15,000.00	$ 15,000.00	$ 3,000.00	$ 3,000.00	$ 18,000.00	$ 18,000.00
Condensate Drain, PVC, 1" diameter	1	lot	$ 1,500.00	$ 1,500.00	$ 500.00	$ 500.00	$ 2,000.00	$ 2,000.00
Foundation Drains	1	lot	$ 6,000.00	$ 6,000.00	$ 1,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00
Roof drain	20	ea	$ 720.00	$ 14,400.00	$ 37.00	$ 740.00	$ 757.00	$ 15,140.00
Downspout for roof drain	20	ea	$ 87.00	$ 1,740.00	$ 12.00	$ 240.00	$ 99.00	$ 1,980.00
Roof drain piping	1500	ft	$ 15.70	$ 23,550.00	$ 14.68	$ 22,020.00	$ 30.38	$ 45,570.00
Laboratory gas piping	1	lot	$ 2,000.00	$ 2,000.00	$ 500.00	$ 500.00	$ 2,500.00	$ 2,500.00
Plumbing testing and cleaning	30	hours	$ -	$ -	$ 50.00	$ 1,500.00	$ 50.00	$ 1,500.00
HVAC								
Auditorium Displacement Air System 6,400 cfm	1	lot	$ 55,600.00	$ 55,600.00	$ 6,100.00	$ 6,100.00	$ 61,700.00	$ 61,700.00
Circulation VAV system 20,700 cfm	1	lot	$ 152,000.00	$ 152,000.00	$ 14,200.00	$ 14,200.00	$ 166,200.00	$ 166,200.00
Classroom Displacement Air System 4 @ 32,000 cfm	4	lot	$ 157,000.00	$ 628,000.00	$ 15,000.00	$ 60,000.00	$ 172,000.00	$ 688,000.00
Dining Displacement Air System 13,800 cfm	1	lot	$ 110,000.00	$ 110,000.00	$ 10,800.00	$ 10,800.00	$ 120,800.00	$ 120,800.00
Gymnasium Air Distribution System 14,000 cfm	1	lot	$ 111,600.00	$ 111,600.00	$ 11,000.00	$ 11,000.00	$ 122,600.00	$ 122,600.00
IT Room heating and ventilation	1	lot	$ 20,000.00	$ 20,000.00	$ 1,800.00	$ 1,800.00	$ 21,800.00	$ 21,800.00
Kitchen / Support MAU and exhaust 12,000 cfm	1	lot	$ 96,000.00	$ 96,000.00	$ 19,000.00	$ 19,000.00	$ 115,000.00	$ 115,000.00
Commercial Kitchen Hoods	32	lf	$ 950.00	$ 30,400.00	$ 70.00	$ 2,240.00	$ 1,020.00	$ 32,640.00
Lab Space Displacement Air System 22,000 cfm	1	lot	$ 167,000.00	$ 167,000.00	$ 16,000.00	$ 16,000.00	$ 183,000.00	$ 183,000.00
Library Displacement Air System 5,000 cfm	1	lot	$ 39,700.00	$ 39,700.00	$ 6,300.00	$ 6,300.00	$ 46,000.00	$ 46,000.00
Locker Room makeup / exhaust	1	lot	$ 20,000.00	$ 20,000.00	$ 5,000.00	$ 5,000.00	$ 25,000.00	$ 25,000.00
Office VAV System 2 @ 23,000 cfm	1	lot	$ 175,000.00	$ 175,000.00	$ 16,000.00	$ 16,000.00	$ 191,000.00	$ 191,000.00
Energy Recovery Ventilation 80,000 cfm	1	lot	$ 130,000.00	$ 130,000.00	$ 4,000.00	$ 4,000.00	$ 134,000.00	$ 134,000.00
Bipolar Ionization and UVC air filter disinfection	1	lot	$ 300,000.00	$ 300,000.00	$ 160,000.00	$ 160,000.00	$ 460,000.00	$ 460,000.00
Heating Only Systems 275 MBH	1	lot	$ 15,000.00	$ 15,000.00	$ 4,000.00	$ 4,000.00	$ 19,000.00	$ 19,000.00
Garage exhaust fan	2	ea	$ 800.00	$ 1,600.00	$ 100.00	$ 200.00	$ 900.00	$ 1,800.00
Oil boilers 9,000 MBH system capacity	1	lot	$ 200,000.00	$ 200,000.00	$ 45,000.00	$ 45,000.00	$ 245,000.00	$ 245,000.00
Fuel oil tanks, above ground, double wall, 5,000 gal each	2	ea	$ 34,000.00	$ 68,000.00	$ 7,200.00	$ 14,400.00	$ 41,200.00	$ 82,400.00
Chiller 870 Ton capacity	1	lot	$ 441,000.00	$ 441,000.00	$ 35,000.00	$ 35,000.00	$ 476,000.00	$ 476,000.00
Pump systems	1	lot	$ 80,000.00	$ 80,000.00	$ 16,000.00	$ 16,000.00	$ 96,000.00	$ 96,000.00
Hydronic piping	1	lot	$ 1,200,000.00	$ 1,200,000.00	$ 300,000.00	$ 300,000.00	$ 1,500,000.00	$ 1,500,000.00
Hydronic piping insulation	1	lot	$ 163,000.00	$ 163,000.00	$ 107,000.00	$ 107,000.00	$ 270,000.00	$ 270,000.00
Ductwork	92,000	lb	$ 0.71	$ 65,320.00	$ 2.79	$ 256,680.00	$ 3.50	$ 322,000.00
Ductwork insulation	43,000	sf	$ 0.26	$ 11,180.00	$ 1.47	$ 63,210.00	$ 1.73	$ 74,390.00
Grease duct with insulation	1	lot	$ 14,000.00	$ 14,000.00	$ 4,000.00	$ 4,000.00	$ 18,000.00	$ 18,000.00

Grilles and diffusers	400	ea	$ 70.00	$ 28,000.00	$ 40.00	$ 16,000.00	$ 110.00	$ 44,000.00
Fuel oil pump	2	ea	$ 1,800.00	$ 3,600.00	$ 200.00	$ 400.00	$ 2,000.00	$ 4,000.00
Fuel oil piping	1	lot	$ 12,000.00	$ 12,000.00	$ 4,000.00	$ 4,000.00	$ 16,000.00	$ 16,000.00
Building Automated Control System	300	point	$ 1,000.00	$ 300,000.00	$ 100.00	$ 30,000.00	$ 1,100.00	$ 330,000.00
Testing Adjusting and Balancing	80	hour	$ -	$ -	$ 100.00	$ 8,000.00	$ 100.00	$ 8,000.00
Commissioning	160	hour	$ -	$ -	$ 100.00	$ 16,000.00	$ 100.00	$ 16,000.00
Escalation multiplier for 2021 RS Means data	1.3			$ 1,629,658.80		$ 434,549.52		$ 2,064,208.32
Fire Supression								
Fire Pump, 1500 GPM, 150 psi, 228 HP, diesel	1	ea	$ 75,855.00	$ 75,855.00	$ 5,500.80	$ 5,500.80	$ 81,355.80	$ 81,355.80
Fire Sprinkler Riser Assembly w/ 6" alarm valve, compon	1	ea	$ 10,480.20	$ 10,480.20	$ 2,185.04	$ 2,185.04	$ 12,665.24	$ 12,665.24
6" Backflow preventor with OS&Y valves	1	ea	$ 5,481.00	$ 5,481.00	$ 591.92	$ 591.92	$ 6,072.92	$ 6,072.92
Wet pipe sprinkler system, steel, light hazard, 1 floor	150,000	sf	$ 1.23	$ 184,500.00	$ 1.72	$ 258,000.00	$ 2.95	$ 442,500.00
Wet pipe sprinkler system, steel, light hazard, additional f	46,314	sf	$ 0.85	$ 39,366.90	$ 1.35	$ 62,523.90	$ 2.20	$ 101,890.80
Fire sprinkler floor control assembly 4"	4	ea	$ 719.65	$ 2,878.60	$ 218.50	$ 874.00	$ 938.15	$ 3,752.60
Wet pipe sprinkler system, steel, ordinary hazard, 1 floor	17,911	sf	$ 2.03	$ 36,359.33	$ 2.31	$ 41,374.41	$ 4.34	$ 77,733.74
Total:				**$ 7,416,775.83**		**$ 2,254,097.99**		**$ 9,670,873.82**

						1/0/1900		
PROJECT TITLE: **Cape Elizabeth Pond Cove and Middle School Bond Support**	DATE: **2/1/22**					PROJECT NUMBER: **366.007.001**		
	ESTIMATED BY: **Colby Company Engineering**					ESTIMATED COST OF CONSTRUCTION: **$ 75,804,393.83**		
PROJECT LOCATION: **Cape Elizabeth, Maine**	STATUS OF DESIGN: **Concept Design Cost**					CCE JOB NUMBER: **366.007.001**		
DIVISION 16 - ELECTRICAL	**Quantity**		**Cost**		**Labor Cost**		**Total Cost**	
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**
Electric Power & Lighting								
2000A Switchboard	1	EA	$ 35,000.00	$ 35,000.00	$ 3,500.00	$ 3,500.00	$ 38,500.00	$ 38,500.00
Branch Panelboards	35	EA	$ 7,500.00	$ 262,500.00	$ 1,200.00	$ 42,000.00	$ 8,700.00	$ 304,500.00
Transformers (dry type)	12	EA	$ 5,000.00	$ 60,000.00	$ 1,200.00	$ 14,400.00	$ 6,200.00	$ 74,400.00
Electrical conduit	216887	SF	$ 1.75	$ 379,552.25	$ -	$ -	$ 1.75	$ 379,552.25
Electrical conductors	216887	LS	$ 5.50	$ 1,192,878.50	$ -	$ -	$ 5.50	$ 1,192,878.50
Wiring devices	1	LS	$ 125,000.00	$ 125,000.00	$ -	$ -	$ 125,000.00	$ 125,000.00
Elevator electrical (motor disconnects, shunt trip)	1	LS	$ 75,000.00	$ 75,000.00	$ -	$ -	$ 75,000.00	$ 75,000.00
Interior Lighting Fixtures	216887	SF	$ 5.00	$ 1,084,435.00	$ -	$ -	$ 5.00	$ 1,084,435.00
Exterior Lighting Fixtures (with poles)	18	EA	$ 1,750.00	$ 31,500.00	$ -	$ -	$ 1,750.00	$ 31,500.00
Exterior Lighting Fixtures (wall mounted)	20	EA	$ 750.00	$ 15,000.00	$ -	$ -	$ 750.00	$ 15,000.00
Lighting control system (daylight color tuning)	1	LS	$ 85,000.00	$ 85,000.00	$ -	$ -	$ 85,000.00	$ 85,000.00
Lighting control system (exterior wall/pole)	1	EA	$ 35,000.00	$ 35,000.00	$ -	$ -	$ 35,000.00	$ 35,000.00
Lighting control system (auditorium)	1	LS	$ 45,000.00	$ 45,000.00	$ -	$ -	$ 45,000.00	$ 45,000.00
Auditorium lighting and theatrical controls	1	LS	$ 175,000.00	$ 175,000.00	$ -	$ -	$ 175,000.00	$ 175,000.00
(PV) Solar equipment (student stewardship)	1	LS	$ 52,000.00	$ 52,000.00	$ -	$ -	$ 52,000.00	$ 52,000.00
Mechanical equipment connections	1	LS	$ 75,000.00	$ 75,000.00	$ -	$ -	$ 75,000.00	$ 75,000.00
Generator relocation and reconnection (existing)	1	LS	$ 25,000.00	$ 25,000.00	$ -	$ -	$ 25,000.00	$ 25,000.00
New Automatic Transfer Switch	1	EA	$ 3,500.00	$ 3,500.00	$ -	$ -	$ 3,500.00	$ 3,500.00
New Electrical Service								
Utility Connection Fee	1	LS	$ 85,000.00	$ 85,000.00	$ -	$ -	$ 85,000.00	$ 85,000.00
Utility Service Transformer	1	EA	$ 35,000.00	$ 35,000.00	$ -	$ -	$ 35,000.00	$ 35,000.00
Utility Meter & Disconnect	1	EA	$ 7,500.00	$ 7,500.00	$ -	$ -	$ 7,500.00	$ 7,500.00
Safety and Security								
Electronic Access Control System	1	LS	$ 50,000.00	$ 50,000.00	$ -	$ -	$ 50,000.00	$ 50,000.00
Video Surveillance System	1	LS	$ 60,000.00	$ 60,000.00	$ -	$ -	$ 60,000.00	$ 60,000.00
Emergency Responder Radio Coverage	1	LS	$ 35,000.00	$ 35,000.00	$ -	$ -	$ 35,000.00	$ 35,000.00
Communications				$ -	$ -	$ -	$ -	$ -

Communications Cabling, backbone (fiber)	216887	SF	$ 3.50	$ 759,104.50	$ -	$ -	$ 3.50	$ 759,104.50
Communications Cabling, horizontal (copper)	216887	SF	$ 2.50	$ 542,217.50	$ -	$ -	$ 2.50	$ 542,217.50
Communications Room Equipment	12	EA	$ 15,000.00	$ 180,000.00	$ -	$ -	$ 15,000.00	$ 180,000.00
WiFi and Distributed Antenna System	216887	SF	$ 5.50	$ 1,192,878.50	$ -	$ -	$ 5.50	$ 1,192,878.50
Public Address (different but tied to Mass Notification)	1	LS	$ 35,000.00	$ 35,000.00	$ -	$ -	$ 35,000.00	$ 35,000.00
Fire Alarm Infrastructure								
Mass Notification System	1	LS	$ 50,000.00	$ 50,000.00	$ -	$ -	$ 50,000.00	$ 50,000.00
Fire Detection and Alarm Equipment (see below)			$ -	$ -	$ -	$ -	$ -	$ -
Fire Alarm System								
Detection system, smoke detector, addressable type, excl. wi	100	ea	$ 278.48	$ 27,848.00	$ 130.79	$ 13,079.00	$ 409.27	$ 40,927.00
Detection system, smoke detector, duct type, addressable, ex	50	ea	$ 233.64	$ 11,682.00	$ 246.01	$ 12,300.50	$ 479.65	$ 23,982.50
Fire alarm, fire alarm temporal horn/strobe, 102/98 DB, lumin	100	ea	$ 167.56	$ 16,756.00	$ 76.81	$ 7,681.00	$ 244.37	$ 24,437.00
Fire alarm, manual pull station	20	ea	$ 77.80	$ 1,556.00	$ 103.14	$ 2,062.80	$ 180.94	$ 3,618.80
Detection system, fire alarm control panel, addressable with v	1	ea	$ 13,098.00	$ 13,098.00	$ 2,153.85	$ 2,153.85	$ 15,251.85	$ 15,251.85
Communication and alarm systems, fire detection, addressabl	100	ea	$ 372.39	$ 37,238.50	$ 383.57	$ 38,356.80	$ 755.95	$ 75,595.30
Total:				**$ 6,896,244.75**		**$ 135,533.95**		**$ 7,031,778.70**

TOWN OF CAPE ELIZABETH
ESYIMATED IMPACT ON TAX RATE AND $400,000 HOME BY $80 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 80,000,000	$ 80,000,000
Interest	21,000,000	30,999,994
Total Cost	**$ 101,000,000**	**$ 110,999,994**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 4,000,000	$ 2,666,667
P&I Year 1	$ 6,000,000	$ 4,666,667
P&I Year 2	5,900,000	4,600,000
P&I Year 3	5,800,000	4,533,333
P&I Year 4	5,700,000	4,466,667
P&I Year 5	5,600,000	4,400,000

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 3.412	$ 2.654
Year 2	3.355	2.616
Year 3	3.298	2.578
Year 4	3.241	2.540
Year 5	3.185	2.502

Estimated Impact on $400,000 Home

	$ 400,000	$ 400,000
	20 Years Term	**30 Years Term**
Year 1	$ 1,364.80	$ 1,061.60
Year 2	1,342.00	1,046.40
Year 3	1,319.20	1,031.20
Year 4	1,296.40	1,016.00
Year 5	1,274.00	1,000.80

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $400,000 home

Preparted by: John Quartararo, Finanace Director

TOWN OF CAPE ELIZABETH
ESYIMATED IMPACT ON TAX RATE AND $400,000 HOME BY $80 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 80,000,000	$ 80,000,000
Interest	21,000,000	30,999,994
Total Cost	**$ 101,000,000**	**$ 110,999,994**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 4,000,000	$ 2,666,667
P&I Year 1	$ 6,000,000	$ 4,666,667
P&I Year 2	5,900,000	4,600,000
P&I Year 3	5,800,000	4,533,333
P&I Year 4	5,700,000	4,466,667
P&I Year 5	5,600,000	4,400,000

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 3.412	$ 2.654
Year 2	3.355	2.616
Year 3	3.298	2.578
Year 4	3.241	2.540
Year 5	3.185	2.502

Estimated Impact on $500,000 Home

	$ 500,000	$ 500,000
	20 Years Term	**30 Years Term**
Year 1	$ 1,706.00	$ 1,327.00
Year 2	1,677.50	1,308.00
Year 3	1,649.00	1,289.00
Year 4	1,620.50	1,270.00
Year 5	1,592.50	1,251.00

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $500,000 home

Preparted by: John Quartararo, Finanace Director

TOWN OF CAPE ELIZABETH
ESYIMATED IMPACT ON TAX RATE AND $400,000 HOME BY $95 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 95,000,000	$ 95,000,000
Interest	24,937,500	36,812,496
Total Cost	**$ 119,937,500**	**$ 131,812,496**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 4,750,000	$ 3,166,667
P&I Year 1	$ 7,897,261	$ 6,313,928
P&I Year 2	7,667,255	6,123,505
P&I Year 3	7,308,441	5,804,275
P&I Year 4	6,951,459	5,486,876
P&I Year 5	6,829,282	5,404,282

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 4.491	$ 3.591
Year 2	4.360	3.482
Year 3	4.156	3.301
Year 4	3.953	3.120
Year 5	3.884	3.073

Estimated Impact on $400,000 Home

	$ 400,000	$ 400,000
	20 Years Term	**30 Years Term**
Year 1	$ 1,796.40	$ 1,436.40
Year 2	1,744.00	1,392.80
Year 3	1,662.40	1,320.40
Year 4	1,581.20	1,248.00
Year 5	1,553.60	1,229.20

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $400,000 home

Preparted by: John Quartararo, Finanace Director

TOWN OF CAPE ELIZABETH
ESYIMATED IMPACT ON TAX RATE AND $500,000 HOME BY $95 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 95,000,000	$ 95,000,000
Interest	24,937,500	36,812,496
Total Cost	**$ 119,937,500**	**$ 131,812,496**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 4,750,000	$ 3,166,667
P&I Year 1	$ 7,897,261	$ 6,313,928
P&I Year 2	7,667,255	6,123,505
P&I Year 3	7,308,441	5,804,275
P&I Year 4	6,951,459	5,486,876
P&I Year 5	6,829,282	5,404,282

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 4.491	$ 3.591
Year 2	4.360	3.482
Year 3	4.156	3.301
Year 4	3.953	3.120
Year 5	3.884	3.073

Estimated Impact on $500,000 Home

	$ 500,000	$ 500,000
	20 Years Term	**30 Years Term**
Year 1	$ 2,245.50	$ 1,795.50
Year 2	2,180.00	1,741.00
Year 3	2,078.00	1,650.50
Year 4	1,976.50	1,560.00
Year 5	1,942.00	1,536.50

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $500,000 home

Preparted by: John Quartararo, Finanace Director

TOWN OF CAPE ELIZABETH
ESTIMATED IMPACT ON TAX RATE AND $400,000 HOME BY $100 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 100,000,000	$ 100,000,000
Interest	26,250,000	38,750,000
Total Cost	**$ 126,250,000**	**$ 138,750,000**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 5,000,000	$ 3,333,333
P&I Year 1	$ 8,272,261	$ 6,605,594
P&I Year 2	8,036,005	6,411,005
P&I Year 3	7,670,941	6,087,608
P&I Year 4	7,307,709	5,766,042
P&I Year 5	7,179,282	5,679,281

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 4.704	$ 3.756
Year 2	4.570	3.646
Year 3	4.362	3.462
Year 4	4.156	3.279
Year 5	4.083	3.230

Estimated Impact on $400,000 Home

	$ 400,000	$ 400,000
	20 Years Term	**30 Years Term**
Year 1	$ 1,881.60	$ 1,502.40
Year 2	1,828.00	1,458.40
Year 3	1,744.80	1,384.80
Year 4	1,662.40	1,311.60
Year 5	1,633.20	1,292.00

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $400,000 home

Preparted by: John Quartararo, Finanace Director

TOWN OF CAPE ELIZABETH
ESTIMATED IMPACT ON TAX RATE AND $500,000 HOME BY $100 MILLION DEBT ISSUANCE
7 DECEMBER 2021

Total Debt Service

	Level Prin 20 Years Term	Level Prin 30 Years Term
Principal	$ 100,000,000	$ 100,000,000
Interest	26,250,000	38,750,000
Total Cost	**$ 126,250,000**	**$ 138,750,000**

First Five Years Debt Service

	20 Years Term	30 Years Term
Principal	$ 5,000,000	$ 3,333,333
P&I Year 1	$ 8,272,261	$ 6,605,594
P&I Year 2	8,036,005	6,411,005
P&I Year 3	7,670,941	6,087,608
P&I Year 4	7,307,709	5,766,042
P&I Year 5	7,179,282	5,679,281

Estimated Impact on Tax Rate using 4/1/2021 Assessed Value

	$ 1,758,468,200	**$ 1,758,468,200**
	20 Years Term	**30 Years Term**
Year 1	$ 4.704	$ 3.756
Year 2	4.570	3.646
Year 3	4.362	3.462
Year 4	4.156	3.279
Year 5	4.083	3.230

Estimated Impact on $500,000 Home

	$ 500,000	$ 500,000
	20 Years Term	**30 Years Term**
Year 1	$ 2,352.00	$ 1,878.00
Year 2	2,285.00	1,823.00
Year 3	2,181.00	1,731.00
Year 4	2,078.00	1,639.50
Year 5	2,041.50	1,615.00

Assumes interest rate of 2.50%
Assumes level principal payments
Assumes declining interest payments
Assumes no change in total assessed value
Assume no change in home assessed value
Assume tax impact on $500,000 home

Preparted by: John Quartararo, Finanace Director

47A York St
Portland, ME 04101
colbycoengineering.com

75 York St
Portland, ME 04101
simonsarchitects.com

G. Applicable Zoning Summary

75 York Street
Portland, Maine 04101
phone 207.772.4656
fax 207.828.4656
www.simonsarchitects.com

CAPE ELIZABETH SCHOOLS
ZONING SUMMARY

ZONE: TC (Town Center District)

SECTION 19-6-4

B. PERMITTED USE: 3-i - Institutional (School)

D. STANDARDS

2. BULK

MINIMUM LOT AREA: (4) Other Uses: None
MINIMUM STREET FRONTAGE: (1) School Uses: None
MAXIMUM LOT COVERAGE: (1) School Uses: 40%
MINIMUM SETBACKS: (1) School Uses
- SIDE & REAR: 50 ft. / 100 ft. Abutting Residential
- FRONT: 75 ft. (street frontage)

MINIMUM SETBACK OF PARKING: (2) Municipal & Other Uses: 5 ft. / 0 ft.
MAX. BUILDING HEIGHT: All Uses: 35 ft.

3. DESIGN REQUIREMENT

(B) Scale: "New Construction shall be compatible in scale with other structures in the district. Determination of compatibility shall be based on the maximum dimension of the structure the degree of articulation on building surfaces, the magnitude of unbroken faces of a structure, the impact of the building mass upon view sheds, and the integration of mechanical equipment within the structure.

(C) Height and Roof Pitch: "New roof construction shall conform to the predominant heights of roofs of nearby buildings in the Town Center District and to the design of the structure."

(D) Building and Parking Orientation: (Not Applicable)

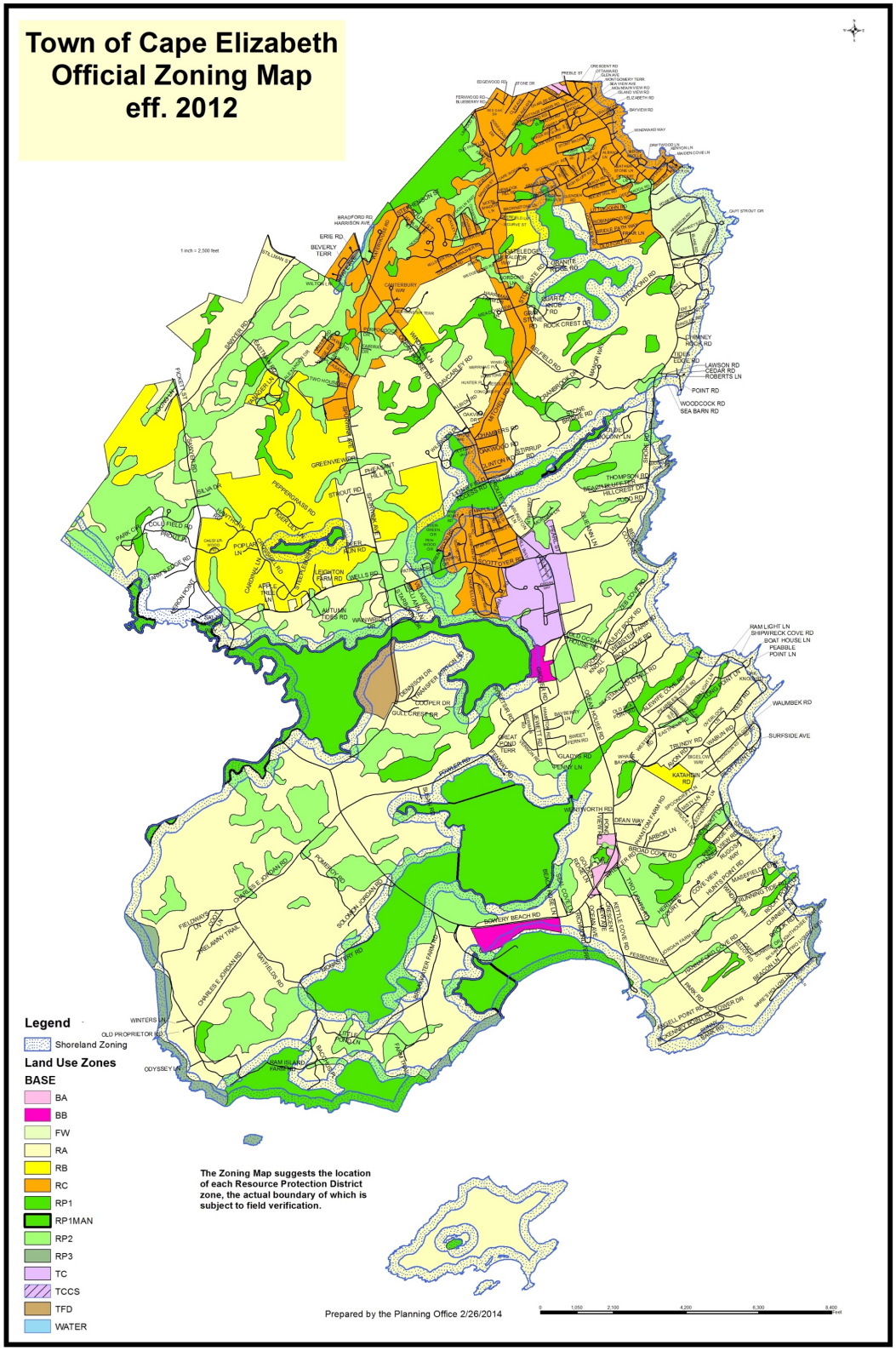
(E) Openings: (Not Applicable)

(F) Exterior Materials: "Exterior materials shall be compatible with nearby buildings and with the design of the structure."

(G) Landscaping & Site Development:

2. Parking Lot: "At least one landscaped island shall be included for each row of at least ten (10) parking spaces and shall be located within the interior of the parking lot. The landscaped island(s) shall be sufficient to accommodate and be planted with at least one (1) road tree."

3. Buffering: "Each lot shall provide a landscaped side and rear yard buffer. The depth and density of the buffer shall be determined by the type of use proposed, its compatibility with adjacent uses and with the Town Center."


Town of Cape Elizabeth
Official Zoning Map
eff. 2012
Legend
Shoreland Zoning
Land Use Zones
BASE
BA
BB
FW
RA
RB
RC
RP1
RP1MAN
RP2
RP3
TC
TCCS
TFD
WATER
The Zoning Map suggests the location of each Resource Protection District zone, the actual boundary of which is subject to field verification.
Prepared by the Planning Office 2/26/2014

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H. Program - Conceptual Level

KEYED NOTES:

1. PARENT DROP–OFF
2. ADA PARKING (8 SPACES)
3. SCHOOL BUS DROP–OFF
4. MAIN ENTRY – LANDSCAPED AND PAVER WALKWAYS
5. RECESS AND PLAY AREA – PAVERS
6. RECESS AND PLAY AREAS – PAVERS
7. STAFF PARKING (25 SPACES)
8. STAFF PARKING (28 SPACES)
9. DELIVERY AND LOADING AREA
10. DELIVERY VEHICLE TURNAROUND
11. GENERATOR/TRANSFORMER WITH FENCED ENCLOSURE
12. RETAINING WALL
13. STAFF AND VISITOR PARKING (147 SPACES)
14. STAFF AND VISITOR PARKING (49 SPACES)
15. MIDDLE SCHOOL BASEBALL FIELD
16. PARKING BY BASEBALL FIELD (38 SPACES)
17. EXISTING HIGH SCHOOL BASEBALL FIELD
18. SOCCER FIELD
19. EXISTING PLAYGROUND/PARK
20. CONSOLIDATED PLAYGROUND/PARK
21. 1933 BUILDING TO PRESERVE
22. EMERGENCY VEHICLE CONNECTION (PAVERS)
23. MAINTENANCE VEHICLE ACCESS TO FIELDS
24. EXISTING FIRE AND RESCUE BUILDING
25. FIRE AND RESCUE ROAD CONNECTION
26. EXISTING LIBRARY
27. EXISTING POLICE STATION

N

0 100' 200'
Scale: 1" = 100'–0"

CONCEPTUAL SITE PLAN

SCALE: 1" = 100'

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REV	DESCRIPTION	DWN	APP	DATE
A	CONCEPTUAL PLAN	DSE	LDA	02/24/22

CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

CONCEPTUAL SITE PLAN

SIZE: ANSI D
DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
CKD BY: CSC

PROJECT NO. 366.007.001

SHEET 9 OF 9

DRAWING NO. CP-101

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I. Site Plans

LEGEND

- BUILDING
- EDGE OF PAVED DRIVEWAY
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- COMMUNICATIONS MANHOLE
- HYDRANT
- SIGN
- TREE
- TREELINE
- STONEWALL
- FENCELINE
- PROPERTY BOUNDARY
- WATER LINE (W)
- SANITARY SEWER (SS)
- STORM DRAIN (SD)
- UNDERDRAIN (UD)
- SEWER FORCE MAIN (FM)
- UNDERGROUND ELECTRIC (UGE)
- UNDERGROUND COMMS (UGC)

KEYED NOTES:

1. PARENT DROP-OFF
2. ADA AND VISITOR PARKING (18 SPACES & 6 ADA)
3. LOWER SCHOOL AND MIDDLE SCHOOL BUS DROP-OFF
4. STAFF AND VISITOR PARKING (178 SPACES)
5. DELIVERY AND LOADING AREA
6. HIGH SCHOOL BASEBALL FIELD
7. MIDDLE SCHOOL BASEBALL FIELD
8. SOCCER FIELD
9. BASKETBALL COURT
10. PLAYGROUND/PARK
11. GAZEBO GARDEN

N

0 100' 200'

Scale: 1" = 100'-0"

EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

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A	CONCEPTUAL PLAN	DSE	LDA	02/24/22

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

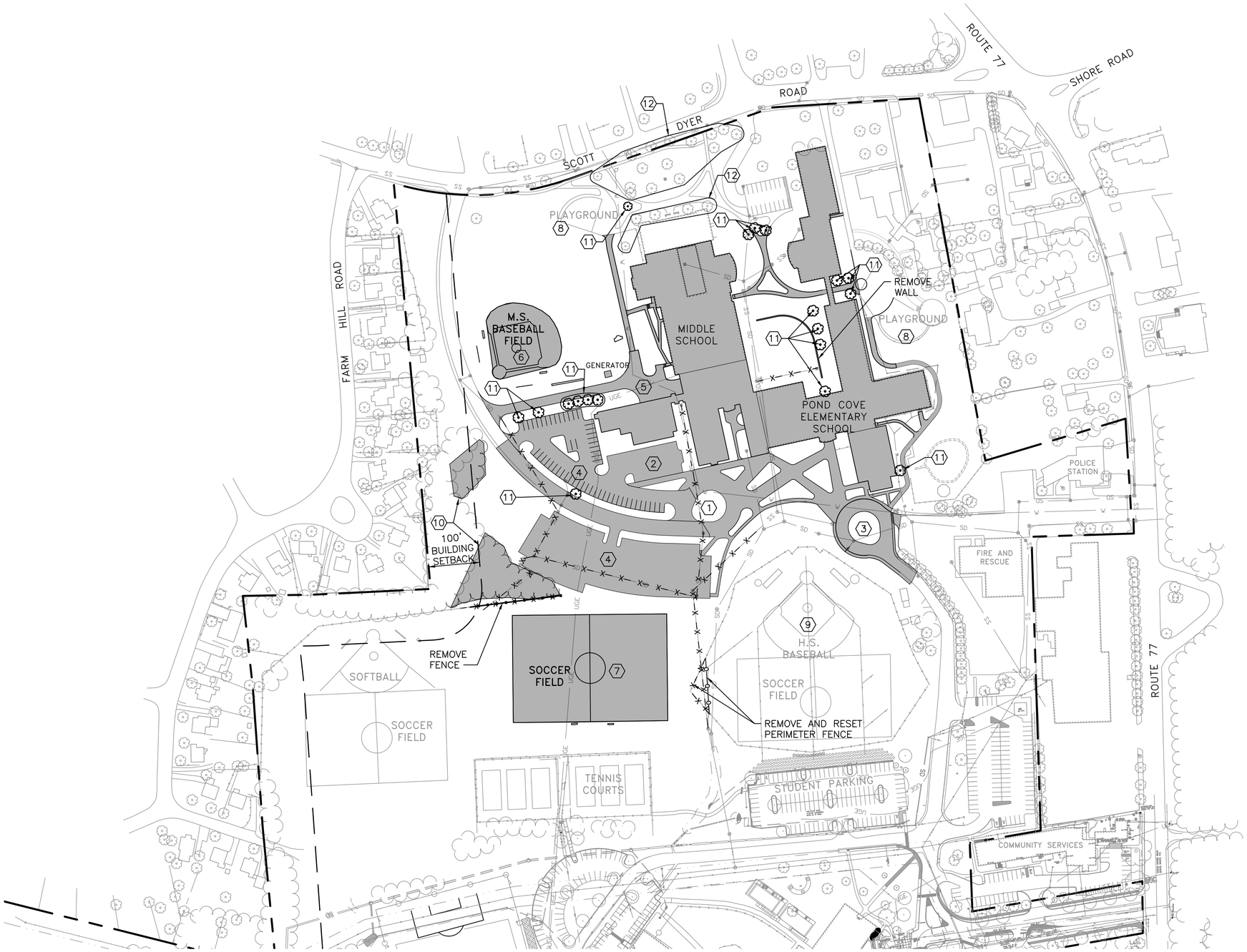
EXISTING CONDITIONS PLAN

SIZE:	ANSI D
DATE:	12/15/21
DES BY:	LDA
DWN BY:	DSE
CKD BY:	CSC

PROJECT NO. 366.007.001

SHEET 1 OF 9

DRAWING NO. C-100



KEYED NOTES:

1. PARENT DROP–OFF
2. ADA AND VISITOR PARKING (18 SPACES & 6 ADA)
3. LOWER SCHOOL AND MIDDLE SCHOOL BUS DROP–OFF
4. STAFF AND VISITOR PARKING (178 SPACES)
5. DELIVERY AND LOADING AREA
6. MIDDLE SCHOOL BASEBALL FIELD
7. SOCCER FIELD
8. RELOCATE PLAYGROUND/PARKS
9. MAINTAIN HIGH SCHOOL BASEBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
10. TREE CLEARING AS REQUIRED BY SITE GRADING
11. RELOCATE TREES ON PROPERTY
12. PROTECT TREES DURING CONSTRUCTION

LEGEND

BUILDING, FIELD AND PAVEMENT DEMOLITION

—x —x —x —x —x — UNDERGROUND UTILITY DEMOLITION

SEE SHEET C–100 FOR LEGEND OF EXISTING CONDITIONS

N

CCE

0 100' 200'
Scale: 1" = 100'–0"

DEMOLITION PLAN

SCALE: 1" = 100'

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

DEMOLITION PLAN

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DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
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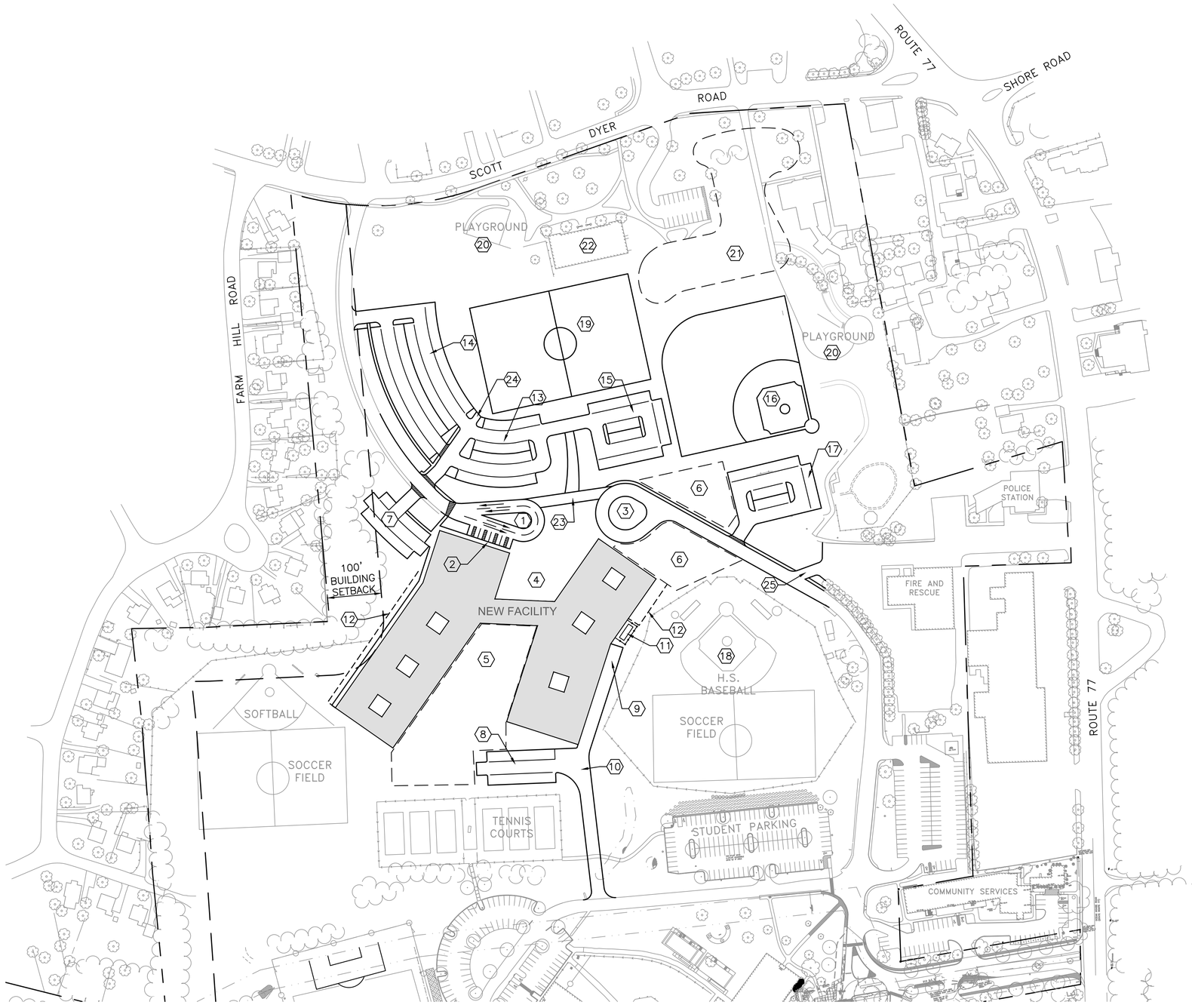
PROJECT NO. 366.007.001

SHEET 2 OF 9

DRAWING NO. CD-101



SITE PLAN
SCALE: 1" = 100'

KEYED NOTES:

1. PARENT DROP–OFF
2. ADA PARKING (8 SPACES)
3. SCHOOL BUS DROP–OFF
4. MAIN ENTRY – LANDSCAPED AND PAVER WALKWAYS
5. RECESS AND PLAY AREA
6. RECESS AND PLAY AREAS – PAVERS
7. STAFF PARKING (25 SPACES)
8. STAFF PARKING (28 SPACES)
9. DELIVERY AND LOADING AREA
10. DELIVERY VEHICLE TURNAROUND
11. GENERATOR/TRANSFORMER WITH FENCED ENCLOSURE
12. RETAINING WALL
13. STAFF AND VISITOR PARKING (50 SPACES)
14. STAFF AND VISITOR PARKING (97 SPACES)
15. STAFF AND VISITOR PARKING (49 SPACES)
16. MIDDLE SCHOOL BASEBALL FIELD
17. PARKING BY BASEBALL FIELD (38 SPACES)
18. HIGH SCHOOL BASEBALL FIELD
19. SOCCER FIELD
20. PLAYGROUND/PARK
21. CONSOLIDATED PLAYGROUND/PARK
22. 1933 BUILDING TO PRESERVE
23. EMERGENCY VEHICLE CONNECTION (PAVERS)
24. MAINTENANCE VEHICLE ACCESS TO FIELDS
25. FIRE AND RESCUE ROAD CONNECTION

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CROSSWALK
- TRAFFIC DIRECTIONAL ARROW

SEE SHEET C–100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
Scale: 1" = 100'–0"

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

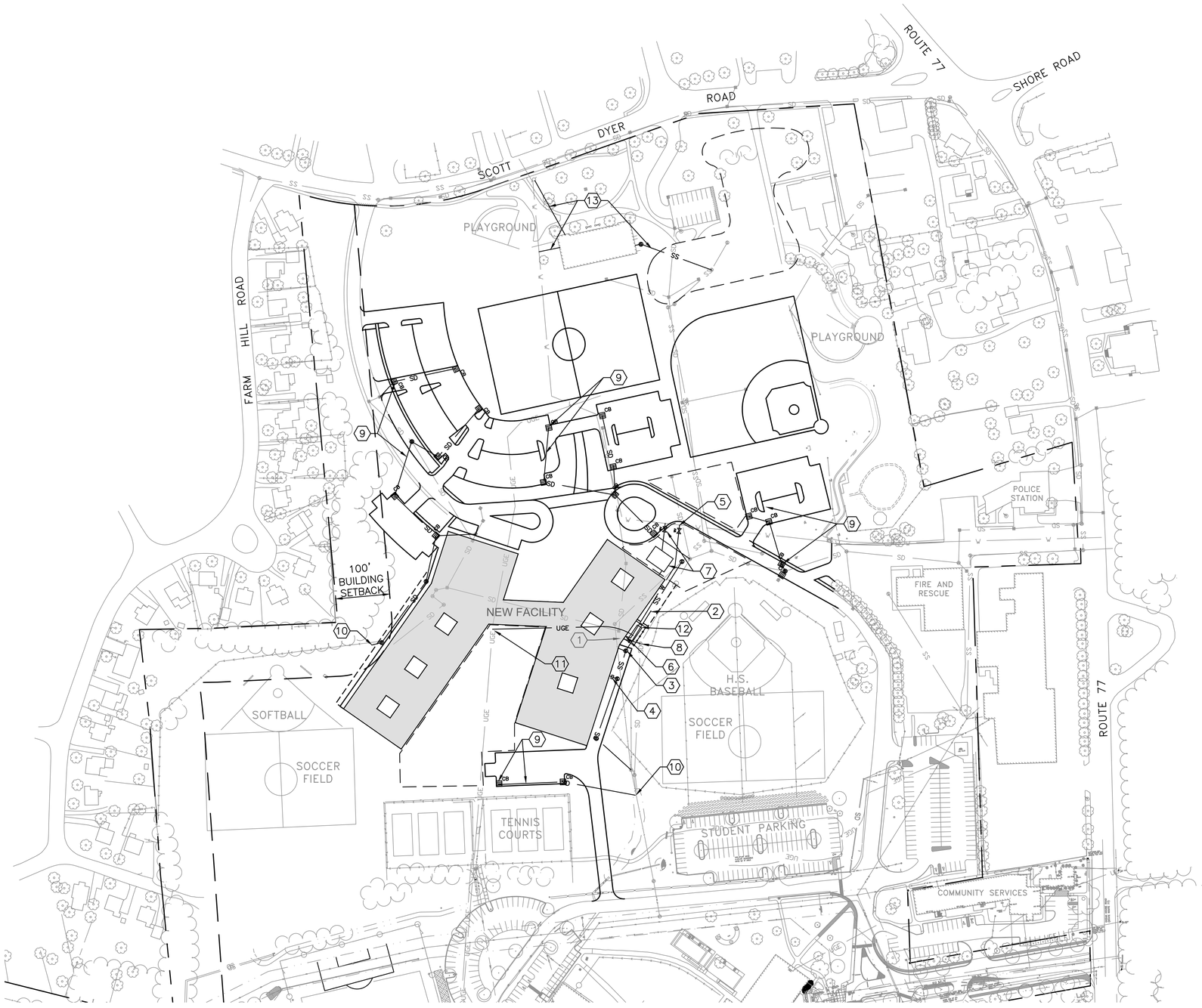
POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

SITE PLAN

SIZE: ANSI D
DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
CKD BY: CSC

PROJECT NO. 366.007.001
SHEET 3 OF 9

DRAWING NO. C-101



KEYED NOTES:

1. MAINTENANCE AREA
2. RELOCATE SEWER LINE OUTSIDE BUILDING ENVELOPE
3. BUILDING SANITARY SEWER TO NEW SEWER MANHOLE
4. KITCHEN SANITARY FLOWS TO GREASE TRAP THEN NEW SEWER MANHOLE
5. NEW DOMESTIC WATER SERVICE TEE FROM EXISTING 8" MAIN
6. BUILDING WATER SERVICE ENTRANCE
7. FIRE WATER: 8" SERVICE AND UNDERGROUND STORAGE TANK
8. BUILDING ROOF DRAIN CONNECTION INTO STORM DRAIN
9. ADD STORM DRAIN STRUCTURES AND PIPING
10. STORM DRAIN OUTLET
11. ELECTRICAL SERVICE CONNECTION
12. GENERATOR AND TRANSFORMER IN FENCED AREA
13. PROVIDE WATER, SANITARY SEWER AND POWER SERVICE TO 1933 BUILDING

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- UGE — PROPOSED UNDERGROUND ELECTRIC SERVICE
- SD — PROPOSED STORM DRAIN SYSTEM
- SS — PROPOSED SANITARY SEWER SYSTEM
- W — PROPOSED WATER SERVICE

SEE SHEET C-100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
Scale: 1" = 100'-0"

UTILTY PLAN
SCALE: 1" = 100'

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

UTILITY PLAN

SIZE: ANSI D
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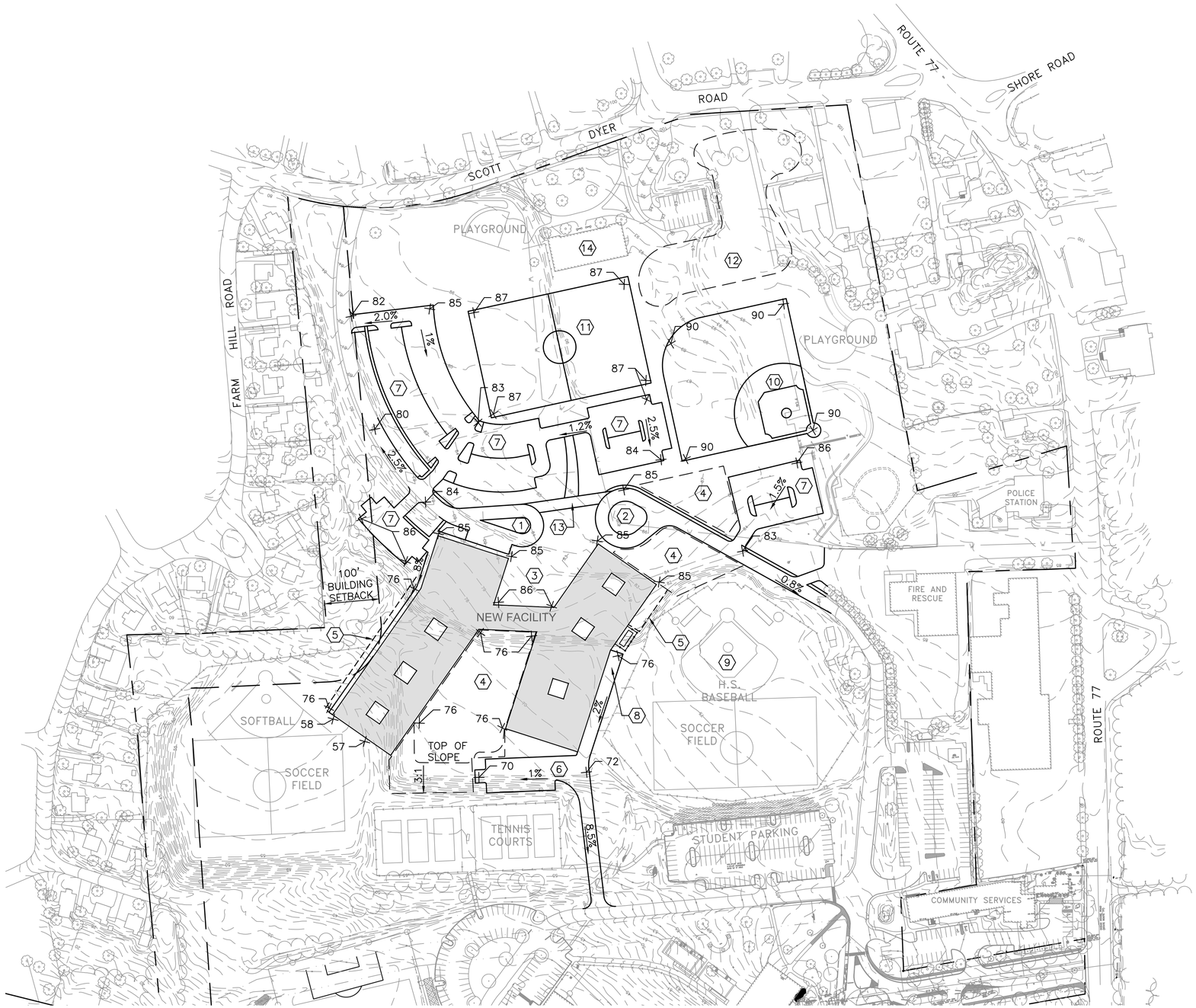
SHEET 4 OF 9
DRAWING NO. C-102



KEYED NOTES:

1. PARENT DROP–OFF
2. SCHOOL BUS DROP–OFF
3. MAIN ENTRY
4. RECESS AND PLAY AREA
5. RETAINING WALL
6. STAFF PARKING/DELIVERY VEHICLE TURNAROUND
7. STAFF/VISITOR PARKING
8. DELIVERY AND LOADING AREA
9. HIGH SCHOOL BASEBALL FIELD
10. MIDDLE SCHOOL BASEBALL FIELD
11. SOCCER FIELD
12. CONSOLIDATED PLAYGROUND/PARK
13. EMERGENCY VEHICLE CONNECTION (PAVERS)
14. 1933 BUILDING TO PRESERVE

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- 87 PROPOSED SPOT GRADE
- 1% PROPOSED SLOPE

SEE SHEET C–100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
Scale: 1" = 100'–0"

GRADING CONCEPT PLAN

SCALE: 1" = 100'

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

GRADING CONCEPT PLAN

SIZE: ANSI D
DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
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PROJECT NO. 366.007.001

SHEET 5 OF 9

DRAWING NO. C-103

KEYED NOTES:

1. TEMPORARY PARENT DROP-OFF
2. TEMPORARY DROP-OFF VEHICLE QUEUE (225LF x 3 LANES = 27 VEHICLES)
3. TEMPORARY STAFF PARKING (110 SPACES)
4. MAINTAIN RECESS AND PLAY AREA THROUGHOUT CONSTRUCTION
5. MAINTAIN VISITOR/STAFF PARKING THROUGHOUT CONSTRUCTION (56 SPACES)
6. TEMPORARY MIDDLE SCHOOL BUS DROP-OFF
7. MAINTAIN BUS DROP-OFF
8. DELIVERY AND LOADING AREA
9. MAINTAIN HIGH SCHOOL BASEBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
10. MAINTAIN MIDDLE SCHOOL SOFTBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
11. CONSTRUCTION ACCESS AND ENTRANCE
12. CONSTRUCTION LAY-DOWN AREA
13. CONSTRUCTION FENCE

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- F — CONSTRUCTION FENCING
- TRAFFIC DIRECTIONAL ARROW

SEE SHEET C-100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
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CONSTRUCTION PLAN – PHASE I

SCALE: 1" = 100'

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

CONSTRUCTION PLAN - PHASE I

SIZE: ANSI D
DATE: 12/15/21
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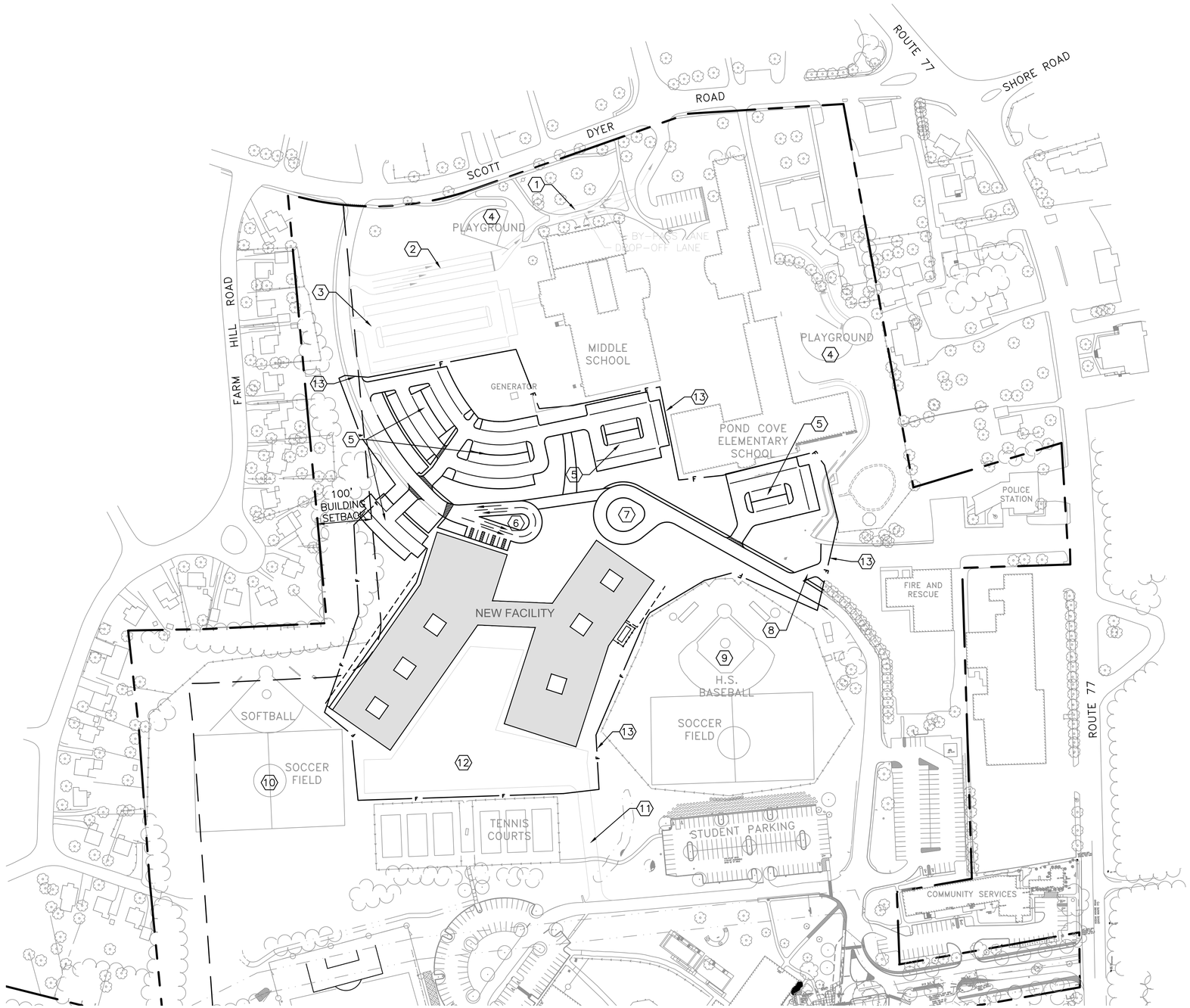
SHEET 6 OF 9

DRAWING NO. C-104



KEYED NOTES:

1. TEMPORARY PARENT DROP–OFF
2. TEMPORARY DROP–OFF VEHICLE QUEUE (225LF x 3 LANES = 27 VEHICLES)
3. TEMPORARY STAFF PARKING (110 SPACES)
4. MAINTAIN RECESS AND PLAY AREA THROUGHOUT CONSTRUCTION
5. CONSTRUCT VISITOR/STAFF PARKING (207 SPACES)
6. CONSTRUCT PARENT DROP–OFF
7. CONSTRUCT BUS DROP–OFF
8. RE–WORK FIRE AND RESCUE ROAD CONNECTION
9. MAINTAIN HIGH SCHOOL BASEBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
10. MAINTAIN MIDDLE SCHOOL SOFTBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
11. CONSTRUCTION ACCESS AND ENTRANCE
12. CONSTRUCTION LAY–DOWN AREA
13. CONSTRUCTION FENCE

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- F — CONSTRUCTION FENCING
- TRAFFIC DIRECTIONAL ARROW

SEE SHEET C–100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
Scale: 1" = 100'–0"

CONSTRUCTION PLAN – PHASE II

SCALE: 1" = 100'

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320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

CONSTRUCTION PLAN - PHASE II

SIZE: ANSI D
DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
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SHEET 7 OF 9

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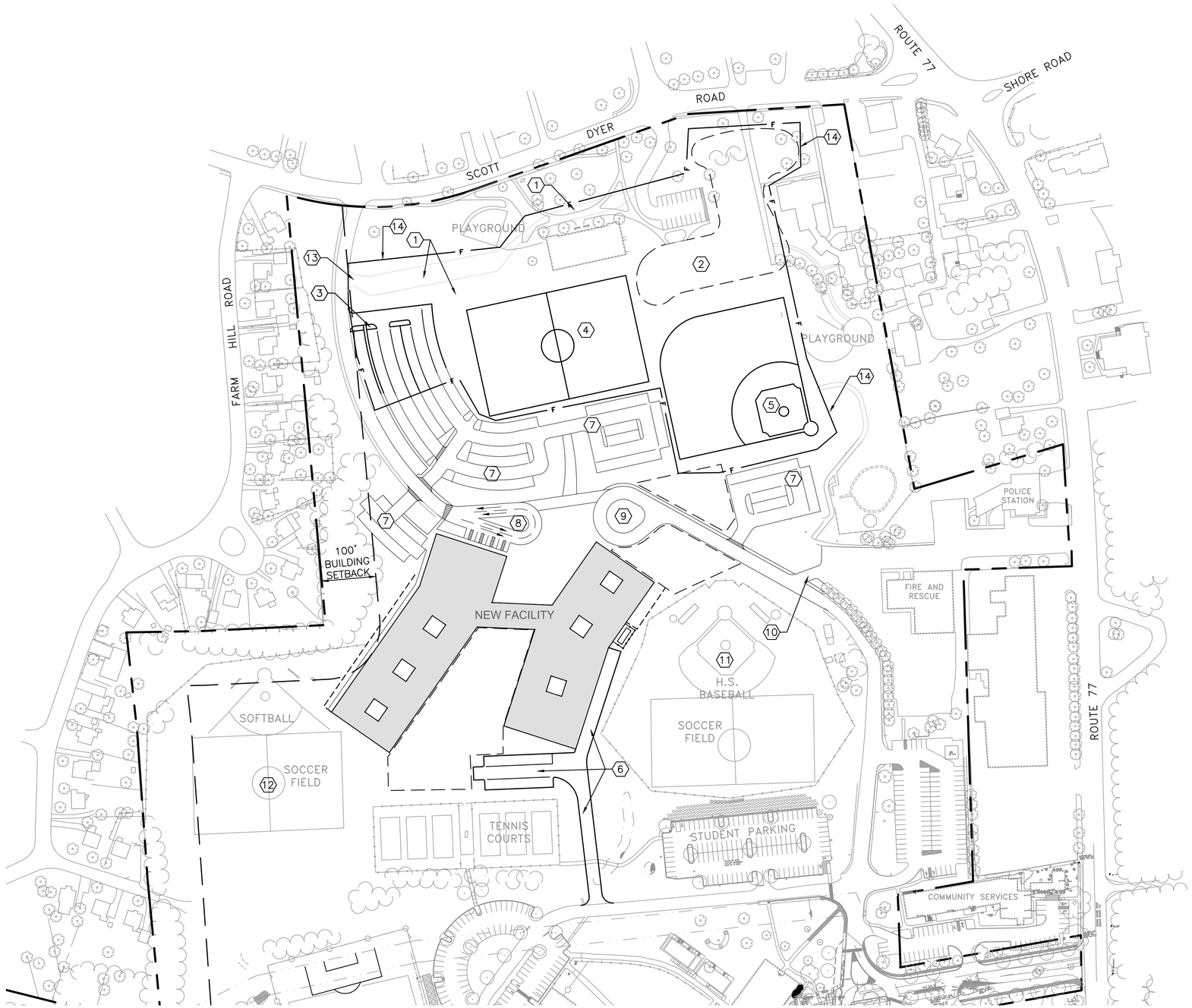

KEYED NOTES:

1. REMOVE TEMPORARY PARENT DROP–OFF AND PARKING, RESTORE AREA
2. CONSOLIDATED PLAYGROUND PARK
3. EXTEND VISITOR/STAFF PARKING AREA
4. CONSTRUCT NEW SOCCER FIELD
5. CONSTRUCT NEW MIDDLE SCHOOL BASEBALL FIELD
6. CONSTRUCT NEW STAFF PARKING/DELIVERY ACCESS
7. VISITOR/STAFF PARKING
8. PARENT DROP–OFF
9. BUS DROP–OFF
10. FIRE AND RESCUE ROAD CONNECTION
11. MAINTAIN HIGH SCHOOL BASEBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
12. MAINTAIN MIDDLE SCHOOL SOFTBALL/SOCCER FIELD THROUGHOUT CONSTRUCTION
13. CONSTRUCTION ENTRANCE AND LAY–DOWN AREA
14. CONSTRUCTION FENCE

LEGEND

- PROPOSED BUILDING
- PROPOSED EDGE OF PAVEMENT
- F — CONSTRUCTION FENCING
- TRAFFIC DIRECTIONAL ARROW

SEE SHEET C–100 FOR LEGEND OF EXISTING CONDITIONS

N

0 100' 200'
Scale: 1" = 100'–0"

CONSTRUCTION PLAN – PHASE III

SCALE: 1" = 100'

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CAPE ELIZABETH SCHOOL DEPARTMENT
320 OCEAN HOUSE ROAD, CAPE ELIZABETH, MAINE

POND COVE/MIDDLE SCHOOL/HIGH SCHOOL BOND SUPPORT PROJECT

CONSTRUCTION PLAN - PHASE III

SIZE: ANSI D
DATE: 12/15/21
DES BY: LDA
DWN BY: DSE
CKD BY: CSC

PROJECT NO. 366.007.001
SHEET 8 OF 9

DRAWING NO. C-106