

In association with

**SMMA**

March 16, 2023

Nina Pappacostas, Project Coordinator  
Massachusetts School Building Authority  
40 Broad Street, Suite 500  
Boston, MA 02109

Re: East Longmeadow High School  
Preferred Schematic Report - Review Comments & Response

Dear Nina:

Thank you for the comments regarding the Preferred Schematic Report Submission for the East Longmeadow High School Project received on March 6<sup>th</sup>. Below, please find responses to the PSR comments. MSBA comments requesting a response are included in italics. Responses from the District and Design Team follow in blue text:

### **3.3.1 INTRODUCTION**

*No review comments for this section*

### **3.3.2 EVALUATION OF EXISTING CONDITIONS**

*In response to these review comments, provide the timeline associated with completing the work identified above into the overall project schedule. Also, please note and acknowledge that all cost increases subsequent to a Project Scope and Budget Approval from the MSBA's Board of Directors will be the sole responsibility of the District and considered ineligible for reimbursement.*

Noted. Additional geotechnical borings are not planned until Design Development and after local approval. The preliminary borings will provide enough information to the Design Team for the Schematic Design efforts.

### 3.3.3 FINAL EVALUATION OF ALTERNATIVES

*2) As part of the schematic design documents provide further detail that clearly describes and illustrates the separation, safety provisions, and possible construction laydown areas that will be applied during construction on the occupied site for the Preferred Schematic. Please acknowledge.*

Noted. The Design Team will do our best to illustrate this during Schematic Design, but this information really should come from the Construction Manager. Recently, the School Building Committee formally voted to proceed with a Construction Manager at Risk – which will be brought on-board early in the Design Development process. Their input on phasing, staging, and separation will be appreciated.

*5) The information provided indicates that a hydrant flow test is required to determine or verify if a fire pump is required. In response to these review comments, provide a timeline associated with this testing and confirm that the test results will inform the scope of work proposed in the schematic design phase and will be accounted for in the District's proposed total project budget.*

A Hydrant Flow Test will be done in Schematic Design. The Design Team is currently reaching out to the town to coordinate on this.

*6) The information provided references a Building Management System ("BMS"). In response to these review comments, confirm that building and District maintenance, facilities, and custodial personnel have been included in discussions regarding the following items:  
The selection and long-term operational and maintenance costs of the BMS and mechanical systems; and,  
That the training program will be coordinated with the District's facility staff and will include sufficient training hours to learn how to operate the proposed BMS before the opening of the proposed project as well as hours post turnover.*

Noted and agreed. Proprietary systems will be reviewed in detail with Town and District representatives during Schematic Design. The Design Team has met with District and Town maintenance staff as part of the programming effort and the DPW Director, responsible for the high school building, is a member of the Systems and Sustainability Focus Group, which has met twice during the Feasibility Study phase.

*7) The information provided indicates the District's potential local share of the project cost. Please note that a potential grant from the MSBA is calculated at the conclusion of the schematic design phase and the District and project team should be cautious in how this is communicated as the project further develops. Please acknowledge.*

Noted.

*Also, please note that the MSBA updates district reimbursement rates annually and applies the reimbursement in effect at the time the MSBA Board of Directors approves a district's proposed project scope and budget. Please acknowledge.*

Noted.

*As part of the schematic design documents, please provide the following:*

- *Identify estimated cost associated with removal of any existing fuel storage tanks;*
- *Identify estimated costs associated with the removal of existing flooring and ceiling materials containing asbestos;*
- *Complete the "CSI" tab within the MSBA's total project budget spreadsheet; and,*
- *If add/deduct construction alternates are proposed, please complete the "Alternates" tab within the MSBA's total project budget spreadsheet detailing the cost and the rationale associated with each alternate. Please acknowledge.*

Noted and understood. These will be addressed in the Schematic Design cost estimates and the Schematic Design binder submission.

*8) Please note that all permitting requirements and approvals must be obtained prior to construction bidding. Please acknowledge.*

Noted and understood.

*10) The information provided indicates the District's Preferred Schematic includes an estimated total construction cost of \$147.5 million (\$769/sf) and an estimated total project cost of \$176.6 million. In response to these review comments, please provide additional information that describes the cost drivers that contribute to an estimated square foot cost of \$769 and describe opportunities that could adjust the proposed design to reduce the cost per square foot heading into the schematic design phase.*

*Additionally, the MSBA encourages the District and its consultants to further evaluate the proposed design and describe the underlying factors leading to the estimated costs.*

Noted. Some of the cost drivers include:

- General public construction bidding environment in Massachusetts
  - Nothing the Design Team can do about this.
- Costs are escalated to 2025
  - Nothing the Design Team can do about this.
- There is +/- \$800k of unsuitable material/ structural fill under the building
  - Design team will continue to evaluate this – and look at ways to save on soils in general going into Schematic Design.
- Triple glazed windows
  - This is being evaluated with the new stretch energy code requirements, and TEDI modeling. To be determined, but likely will need to remain in the design.
- \$1.6 M photovoltaic system

- The District is extremely interested in this, since the energy code is pushing them to go with an all-electric mechanical approach. Nevertheless, this scope will continue to be evaluated – and could end up as an add alternate, or postponed for a later project.
- Site includes concession building at ~\$720k.
  - This is a need for the District, but perhaps can be constructed in a more cost-effective manner. Design team to continue to evaluate.
- Site includes tennis court lighting and field sports lighting at ~ \$1.2M.
  - This was included – largely because it was a common request from the town and from the general public during public outreach meetings. The Design Team will continue to evaluate – and this may turn into an add-alternate item.

Additional reductions will continue to be evaluated and incorporated.

### 3.3.4 PREFERRED SOLUTION

*3) Please note that although the 2018 International Energy Conservation Code (“IECC”) is currently in effect as the basis of the Massachusetts Energy Code, the 2021 IECC may be in place when the District submits its Schematic Design submittal to the MSBA. The schedule provided indicates the District is currently targeting Project Scope and Budget approval at the MSBA’s Board of Director’s Meeting on October 25, 2023, with a Schematic Design submittal date on August 31, 2023. Please note that compliance with the MSBA Green Schools Program Policies is based on the energy code current at the time of the Schematic Design submittal, and the version of LEED or NE-CHPS used for project registration.*

*Note that if the 10th edition/2021 IECC is in effect when the District submits its Schematic Design submittal, the submitted LEED scorecard appears to achieve 20% more than new energy code to receive the potential 2% additional reimbursement.*

Noted.

*Additionally, please note that a 10th edition of the Massachusetts Building Code based on the 2021 IBC and 2021 IECC (including any MA amendments) is currently scheduled to take effect on July 1, 2023. In response to these review comments, please confirm the design team will review the project’s anticipated permit date based on the project schedule and verify coordination with the code analysis and all systems basis of design in subsequent phases.*

Noted. The Design Team is expecting to fall under the 10<sup>th</sup> edition of the code.

*4) The conceptual floor plans should be further developed in order to clearly demonstrate the proposed circulation and should include at minimum the following items: (Provide in response to these review comments.)*

- door openings/door swings;
- exterior door locations; and,
- room abbreviation legend for clarity.

*In response to these review comments, provide interior circulation diagrams that illustrate how students will:*

- *transition into the school from the drop off areas;*
- *transition from the classrooms to the cafeteria; and,*
- *exit the school at time of dismissal.*

*Also, provide the same information for an individual that is physically challenged as the intent is to understand how students will be traveling through the building daily.*

Noted.

Please see the attached supplemental building circulation diagram – as well as the updated floor plans. Please also see the attached supplemental site plan exhibit illustrating the proposed pedestrian routes from the school bus drop-off, parent drop-off, and accessible parking to the school entrance.

*Additionally, if the proposed building is intended to be used by the community, provide a narrative that describes how:*

- *the proposed building will be used by the community;*
- *the proposed building will be secured and monitored; and,*
- *the community will enter and use the proposed building.*

Noted. The building is certainly planned to be used by the community. The Gym, Auditorium, and Cafeteria in particular are targeted for community use. The Design Team will work with the District and School Building Committee to make sure that these spaces are as open and accessible as possible, in a controlled manner, and that the rest of the school is able to be secured for after-hours use. A diagram will be included in our SD submission illustrating “night use” of the building.

*5a) In response to these review comments, please confirm that roof access provisions have or are being discussed with the District’s maintenance, facilities, and custodial personnel as well as local safety officials to ensure an appropriate level of access and safety will be incorporated into the schematic design documents. Please provide any preliminary details or supplemental information that may be available relevant to proposed roof access.*

Roof access will be reviewed in detail with Town and District personnel in Schematic Design once the roof plans are developed.

*5b, e-h) In response to these review comments, provide the following information:*

*Updated site plans that include the following items:*

- *Elevation heights on site;*
- *Site access and circulation;*
- *Zoning setbacks and limitations;*
- *Emergency vehicle access; and*
- *Safety and security features.*

*The proposed building layout provides two entrances and indicates one as an entrance plaza and the other one as entry commons. Clarify if both entrances will be used as a main entry and how these two entrances will be overseen and staffed during the school day and after hours.*

*Provide site sections that indicate the elevation heights and note each site section should provide a corresponding plan key that clearly indicates the location of the section cut.*

Please see the attached supplemental site plan exhibits and cross sections for this information.

*5g) In response to these review comments, please confirm that local emergency representatives have been consulted in the planning process and associated requirements have been incorporated into the Preferred Schematic.*

The design team attended a meeting with the Superintendent, Police Chief, and Fire Chief in July 2022, and emergency access measures have been incorporated into the Preferred Schematic. The proposed site layout and emergency access will continue to be evaluated and refined during Schematic Design.

*6e) The information provided indicates that the District's not-to-exceed budget for the proposed project has been set to \$180 million. As noted in Section 3.3.3, Item 7, please note the MSBA does not calculate a potential grant until the conclusion of schematic design and the District should take caution in communicating as the potential project develops.*

Noted and understood. However – we need to do these preliminary calculations in order for the client to understand the possible local share of the project. We try to err on the side of caution when presenting these numbers.

*7a) The information provided indicates a Project Notification Form (“PNF”) was submitted to the Massachusetts Historical Commission (“MHC”) on February 7, 2023, and a response is anticipated within 30 days of receipt. Please note MHC approval is required prior to construction bids, and the District should continue to keep the MSBA informed of any decisions and/or proposed actions and should confirm that the proposed project is in conformance with Massachusetts General Law 950, CRM 71.00. Please acknowledge.*

Noted. Please see attached for a response from MHC indicating approval.

### **3.3.5 LOCAL ACTIONS AND APPROVALS**

*Based on the information provided, the MSBA understands the District is targeting Project Scope and Budget approval at the October 25, 2023 MSBA Board of Director's meeting. Please note, the MSBA's current funding policy outlined in the “Recommendation to Revise MSBA Project Funding Limits Policy” memorandum, which was approved at the MSBA Board of Director's meeting on December 21, 2022 and will be used to calculate the District's grant. Please acknowledge.*

Noted and acknowledged. Thank you.

*The MSBA issues project advisories from time to time, as informational updates for Districts, Owner's Project Managers (“OPM”), and Designers in an effort to facilitate the efficient and effective administration of proposed projects currently pending review by the MSBA. The advisories can be found on the MSBA's website. In response to these review comments, please*

*confirm that the District's consultants have reviewed all project advisories and they have been incorporated into the proposed project as applicable.*

Noted and confirmed.

*The MSBA offers the following information to assist the District and its OPM in completing the total project budget template that is required as part of its Schematic Design submittal. The District must include negotiated costs for OPM and Designer fees for the remainder of the project as part of their Total Project Budget. The fees must be listed separately by the applicable line items that are included in the MSBA's Total Project Budget Template. In response to these review comments, please confirm that the District and its consultants will negotiate fees for the remainder of the project that are to be included in the District's schematic design documents to the MSBA.*

Noted.

*The MSBA encourages the District and its consultants to look for ways to improve efficiencies and reduce costs in the subsequent Project Scope and Budget phase of the Feasibility Study.*

Noted. This is a goal shared by the Design Team and the School Building Committee. Nevertheless, the School Building Committee is also cognizant of the fact that this is a 50+ year investment.

*Please acknowledge the District's understanding of the proposed scope, costs, and estimated impact to the District's share of the proposed project costs.*

Noted and acknowledged.

## ATTACHMENT B            PREFERRED SCHEMATIC SPACE SUMMARY REVIEW

**General Classroom** – *The District is proposing (25) 850 nsf General Classrooms totaling 21,250 nsf, which is below the MSBA guidelines by (2) classrooms and a total of 1,700 nsf. Based on the information provided, the MSBA accepts this variation to the guidelines. As the project further develops, please note and acknowledge that 825 nsf is the minimum size for all newly constructed General Classrooms in a high school.*

Noted.

**Green House** – *The District is proposing (1) 200 nsf Green House space which exceeds the MSBA guidelines. Please note that the MSBA does not object to the District including this additional space in the project; however, all square footage in excess of MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

Noted and understood.

**Special Education** – *The District is proposing a total of 10,194 nsf which exceeds the MSBA guidelines by 1,134 nsf. The proposed area in this category has decreased by 456 nsf since the PDP submittal. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (“DESE”). Formal approval of the District’s proposed Special Education program by the DESE is a prerequisite for executing a Project Funding Agreement with the MSBA.*

Noted.

**Health & Physical Education** – *The District is proposing a total of 21,730 nsf which exceeds the MSBA guidelines by 1,050 nsf. The proposed area in this category has decreased by 100 nsf since the PDP submittal. As stated in the MSBA’s PDP review comments, please note that any square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

Noted and understood.

**Dining & Food Service** – *The District is proposing a total of 8,850 nsf which exceeds the MSBA guidelines by 1,350 nsf. The proposed area in this category has increased by 50 nsf since the PDP submittal. Please note that the MSBA does not object to the District including this additional space in the project; however any square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

Noted and understood.

**Administration & Guidance** – *The District is proposing a total of 4,570 nsf which exceeds the MSBA guidelines by 775 nsf. The proposed area in this category has decreased by 375 nsf since the PDP submittal. The MSBA will participate in the (1) 125 nsf School Resource Officer (“SRO”) Office; however, any additional square footage beyond this will be considered ineligible for reimbursement. Please acknowledge. .*

Noted and understood.

**Other** – The District is proposing 6,600 nsf which exceeds the MSBA guidelines. The following spaces are proposed:

**East Longmeadow Cable Access Television (“ELCAT”) Offices & Editing** – The District is proposing (1) 390 nsf Office in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District SPED Staff Offices** – The District is proposing (3) 150 nsf totaling 450 nsf District SPED Staff Offices in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**Consult Room** – The District is proposing (1) 100 nsf Consult Room in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District SPED Conference Room** – The District is proposing (1) 430 nsf District SPED Conference Room in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District SPED Waiting Room** – The District is proposing (1) 165 nsf District SPED Waiting Room in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District SPED Admin Room** – The District is proposing (1) 315 nsf District SPED Admin Room in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**Superintendent Office** – The District is proposing (1) 290 nsf Superintendent Office in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District Bookkeeping** – The District is proposing (1) 150 nsf District Bookkeeping in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District Accounts** – The District is proposing (1) 150 nsf District Accounts in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District CFO** – The District is proposing (1) 150 nsf District CFO in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**Curriculum and Instruction** – The District is proposing (1) 150 nsf Curriculum and Instruction space in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**District Administration Secondary** – The District is proposing (1) 290 nsf District Administration secondary space in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

**Safe/Storage Space** – The District is proposing (1) 335 nsf District Safe/Storage space in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be

*considered ineligible for reimbursement, unless it can be accommodated within the overall building grossing factor without exceeding 1.50. Please acknowledge.*

**District Storage** – *The District is proposing (1) 290 nsf District Storage in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement, unless it can be accommodated within the overall building grossing factor without exceeding 1.50. Please acknowledge.*

**District Office Conference Room** – *The District is proposing (1) 550 nsf District Storage in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**IT Office A** – *The District is proposing (1) 400 nsf IT Office A in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**IT Office B** – *The District is proposing (1) 400 nsf IT Office B in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**IT Storage Computers** – *The District is proposing (1) 400 nsf IT Storage Computers in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement, unless it can be accommodated within the overall building grossing factor without exceeding 1.50. Please acknowledge.*

**IT Director** – *The District is proposing (2) 150 nsf IT Director space totaling 300 nsf in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**IT Tech Repair** – *The District is proposing (1) 350 nsf IT Tech Repair in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered **ineligible for reimbursement. Please acknowledge.***

**IT Tech Support** – *The District is proposing (1) 350 nsf IT Tech Support in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**Server** – *The District is proposing (1) 100 nsf Server in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

**Kitchenette** – *The District is proposing (1) 160 nsf Kitchenette in excess of the MSBA guidelines. Please note that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.*

All of the above is noted and understood.

*Please note that upon moving forward into subsequent phases of the proposed project, the Designer will be required to provide, with each submission, a signed, updated space summary that reflects the design and demonstrates that the design remains, except as agreed to in writing by the MSBA, in accordance with the guidelines, rules, regulations and policies of the MSBA. Should the updated space summary demonstrate changes to the previous space summary include a narrative description of the change(s) and the reason for the proposed changes to the project.*

Noted and understood.

\*\*\*

Please let us know if you have any further questions. Thank you again for your thorough review and comments.

Best,



Kristian Whitsett, AIA

Enclosures:

1. Architectural Diagrams / Drawings
  - Updated floor plan – Level 1
  - Updated floor plan – Level 2
  - Building circulation diagram
2. Site Diagrams / Drawings
  - Site Topography & Buildable Area
  - Pedestrian Routes
  - Vehicular Circulation
  - East-West Site Section
  - North-South Site Section
3. MHC Project Notification Form – Reviewed and approved 2/27/23

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
<b>CORE ACADEMIC SPACES</b>						
General Classroom 24 students	16	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		28	Student chair, 4 legs	\$ 95.00	\$ 2,660.00	
		23	Student desk, trapezoid	\$ 210.00	\$ 4,830.00	
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00	
		2	Student desk, sit-to-stand	\$ 335.00	\$ 670.00	
		1	Activity table, round, 48", casters	\$ 700.00	\$ 700.00	
		1	Mobile bookcase	\$ 400.00	\$ 400.00	
					<b>\$ 11,950.00</b>	<b>\$191,200.00</b>
General Classroom 24 students	8	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		24	Student chair, 4 legs	\$ 95.00	\$ 2,280.00	
		2	Student desk, sit-to-stand	\$ 335.00	\$ 670.00	
		6	Activity table, round, 48", casters	\$ 700.00	\$ 4,200.00	
		1	Mobile bookcase	\$ 400.00	\$ 400.00	
					<b>\$ 10,010.00</b>	<b>\$80,080.00</b>
Teacher Planning	4	4	Teacher workstation	\$ 2,000.00	\$ 8,000.00	
		4	Teacher task chair, no arms	\$ 540.00	\$ 2,160.00	
		1	Collaboration table, 120"x42"	\$ 2,250.00	\$ 2,250.00	
		8	Side chair	\$ 500.00	\$ 4,000.00	
		4	Lounge chair	\$ 1,960.00	\$ 7,840.00	
		2	Side table	\$ 520.00	\$ 1,040.00	
		1	Locker allowance	\$ 10,000.00	\$ 10,000.00	
					<b>\$ 35,290.00</b>	<b>\$141,160.00</b>
Small Group	3	1	Activity table, mobile, flip top, 72"x30"	\$ 985.00	\$ 985.00	
		6	Student chair, 4 legs	\$ 95.00	\$ 570.00	
					<b>\$ 1,555.00</b>	<b>\$4,665.00</b>
Small Group	2	1	Activity table, mobile, 96"x36"	\$ 1,500.00	\$ 1,500.00	
		8	Student chair, 4 legs	\$ 95.00	\$ 760.00	
					<b>\$ 2,260.00</b>	<b>\$4,520.00</b>
Seminar	3	1	Activity table, 84"x30"	\$ 1,400.00	\$ 1,400.00	
		6	Student chair, 4 legs	\$ 95.00	\$ 570.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
					<b>\$ 3,135.00</b>	<b>\$9,405.00</b>
Science Classroom 24 students	8	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		24	Student stool, adjustable height, with back and glides	\$ 200.00	\$ 4,800.00	
					<b>\$ 6,840.00</b>	<b>\$54,720.00</b>
Science Prep Room	4		No FF&E required			
Chem Prep Room	1		No FF&E required			
Business Classroom 24 students	4	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		28	Student chair, 4 legs	\$ 95.00	\$ 2,660.00	
		23	Student desk, trapezoid	\$ 210.00	\$ 4,830.00	
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00	
		2	Student desk, sit-to-stand	\$ 335.00	\$ 670.00	
		1	Activity table, round, 48", casters	\$ 700.00	\$ 700.00	
		1	Mobile bookcase	\$ 400.00	\$ 400.00	
					<b>\$ 11,950.00</b>	<b>\$47,800.00</b>
Large Group Instruction	1	24	Mobile flip top table, 60"x30"	\$ 1,100.00	\$ 26,400.00	
		48	Stack chair, high density	\$ 150.00	\$ 7,200.00	
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	A/V Podium	\$ 4,000.00	\$ 4,000.00	
					<b>\$ 39,640.00</b>	<b>\$39,640.00</b>
Hallway Breakout	4	4	Lounge chair	\$ 1,600.00	\$ 6,400.00	
		1	Occasional table, 30"	\$ 600.00	\$ 600.00	
					<b>\$ 7,000.00</b>	<b>\$28,000.00</b>
Hallway Breakout	1	8	Lounge chair	\$ 1,600.00	\$ 12,800.00	
		4	Occasional table, 30"	\$ 600.00	\$ 600.00	
					<b>\$ 13,400.00</b>	<b>\$13,400.00</b>

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
<b>ART &amp; MUSIC</b>						
Art Classroom	2	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		24	Stool, perch	\$ 125.00	\$ 3,000.00	
		6	Art table, epoxy top, casters, 60"x36"	\$ 1,800.00	\$ 10,800.00	
		1	<i>Drying rack and storage in equipment allowance</i>			
					<b>\$ 15,840.00</b>	<b>\$31,680.00</b>
Art Storage	1	6	Adjustable metal shelving	\$ 375.00	\$ 2,250.00	
					<b>\$ 2,250.00</b>	<b>\$2,250.00</b>
Art Storage	1	1	Adjustable metal shelving	\$ 375.00	\$ 375.00	
					<b>\$ 375.00</b>	<b>\$375.00</b>
Band	1	1	Conductor's podium, stand and stool	\$ 1,350.00	\$ 1,350.00	
75 students		75	Music chair	\$ 75.00	\$ 5,625.00	
		75	Music stand	\$ 80.00	\$ 6,000.00	
		4	Music stand cart	\$ 575.00	\$ 2,300.00	
		5	Music chair cart	\$ 450.00	\$ 2,250.00	
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
					<b>\$ 19,985.00</b>	<b>\$19,985.00</b>
Chorus/Midi Lab	1	1	Conductor's podium, stand and stool	\$ 1,350.00	\$ 1,350.00	
50 students		62	Music chair	\$ 75.00	\$ 4,650.00	
		4	Music chair cart	\$ 450.00	\$ 1,800.00	
		7	Choral riser, each	\$ 3,100.00	\$ 21,700.00	
		20	Midi music station, 42"x28"	\$ 1,075.00	\$ 21,500.00	
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
					<b>\$ 53,460.00</b>	<b>\$53,460.00</b>
Practice	3	2	Music chair	\$ 75.00	\$ 150.00	
2 students		2	Music stand	\$ 80.00	\$ 160.00	
					<b>\$ 310.00</b>	<b>\$930.00</b>
Ensemble	1	8	Music chair	\$ 75.00	\$ 600.00	
8-10 students		8	Music stand	\$ 80.00	\$ 640.00	
					<b>\$ 1,240.00</b>	<b>\$1,240.00</b>
Music Storage	1	1	<i>Instrument storage by Wenger estimate, confirm quantity</i>	\$ 35,470.00	\$ 35,470.00	
					<b>\$ 35,470.00</b>	<b>\$35,470.00</b>
Stage/Auditorium	1		<i>Choral risers and conductor podium to be moved here when needed</i>			
Dressing	2	2	Garment rack	\$ 1,030.00	\$ 2,060.00	
					<b>\$ 2,060.00</b>	<b>\$4,120.00</b>
Auditorium Storage	1	16	Adjustable metal shelving	\$ 375.00	\$ 6,000.00	
					<b>\$ 6,000.00</b>	<b>\$6,000.00</b>
<b>VOCATIONS &amp; TECHNOLOGY</b>						
Video	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		2	AV cabinet	\$ 2,000.00	\$ 4,000.00	
		16	Student task chair, no arms	\$ 165.00	\$ 2,640.00	
		8	Student table, computer, 60"x 24", powered	\$ 1,000.00	\$ 8,000.00	
					<b>\$ 16,055.00</b>	<b>\$16,055.00</b>
Edit Suite	1	6	Student task chair, no arms	\$ 165.00	\$ 990.00	
		1	Mobile flip top table, 30"x60"	\$ 1,100.00	\$ 1,100.00	
					<b>\$ 2,090.00</b>	<b>\$2,090.00</b>
ELCAT Office	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Lateral file, 30"/2-hi	\$ 500.00	\$ 500.00	
		1	Storage cabinet, 30"/4-hi	\$ 800.00	\$ 800.00	
					<b>\$ 3,760.00</b>	<b>\$3,760.00</b>
ELCAT Storage	1	5	Adjustable metal shelving	\$ 375.00	\$ 1,875.00	
					<b>\$ 1,875.00</b>	<b>\$1,875.00</b>

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total		
Graphics	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00			
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00			
		1	Teacher lectern	\$ 625.00	\$ 625.00			
		1	Mobile pedestal	\$ 420.00	\$ 420.00			
		4	Activity table, 60"x30", casters	\$ 600.00	\$ 2,400.00			
		24	Student chair, adjustable height, casters	\$ 165.00	\$ 3,960.00			
		12	Student table, computer, 60"x24", powered	\$ 1,000.00	\$ 12,000.00			
						\$ 20,820.00	\$20,820.00	
Dark Room	1	12	Stool, perch	\$ 125.00	\$ 1,500.00	\$0.00		
Culinary	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00			
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00			
		1	Teacher lectern	\$ 625.00	\$ 625.00			
		24	Stack chair, high density	\$ 150.00	\$ 3,600.00			
		4	Dining table, 36"x72"	\$ 985.00	\$ 3,940.00			
		1	Equipment carried in equipment allowance			\$ 9,580.00	\$9,580.00	
Pre-K	1	2	Student table, 22"H, trapezoid	\$ 415.00	\$ 830.00			
		10	Student chair, 12"H	\$ 90.00	\$ 900.00			
		3	Student table, trapezoid	\$ 600.00	\$ 1,800.00			
		15	Student chair, 4 legs	\$ 95.00	\$ 1,425.00			
		2	Mobile bookcase	\$ 400.00	\$ 800.00			
		2	Cubbies, set of 4	\$ 800.00	\$ 1,600.00			
		1	Storage cabinet, 36"/4-hi	\$ 900.00	\$ 900.00			
		1	Area rug, 8'x10'	\$ 550.00	\$ 550.00			
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00			
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00			
							\$ 10,220.00	\$10,220.00
STEM/Robotics	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00			
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00			
		1	Teacher lectern	\$ 625.00	\$ 625.00			
		6	Student table, epoxy top, casters, 60"x36"	\$ 1,800.00	\$ 10,800.00			
		24	Stool, perch	\$ 185.00	\$ 4,440.00			
					\$ 17,280.00	\$17,280.00		
SPED Medically Fragile 3-5 students	1	10	Student chair, 4 legs	\$ 95.00	\$ 950.00			
		2	Twin bed	\$ 1,475.00	\$ 2,950.00			
		1	Sofa, 2 seat	\$ 2,575.00	\$ 2,575.00			
		2	Lounge chair	\$ 1,960.00	\$ 3,920.00			
		1	Activity table, round, 48"	\$ 700.00	\$ 700.00			
		2	Occasional table, 18" dia.	\$ 520.00	\$ 1,040.00			
		1	Clothing rack	\$ 1,030.00	\$ 1,030.00			
		1	Area rug, 8x10	\$ 550.00	\$ 550.00			
		1	Activity table, 60"x30"	\$ 900.00	\$ 900.00			
		2	Student desk, trapezoid, ADA	\$ 230.00	\$ 460.00			
		2	Teacher task chair, no arms	\$ 540.00	\$ 1,080.00			
		2	Teacher desk, mobile	\$ 875.00	\$ 1,750.00			
		4	Mobile partition	\$ 675.00	\$ 2,700.00			
							\$ 20,605.00	\$20,605.00
		Life Skills	2	1	Dining table, 72"x36"	\$ 985.00	\$ 985.00	
12	Student chair, 4 legs			\$ 95.00	\$ 1,140.00			
1	Twin bed			\$ 1,475.00	\$ 1,475.00			
1	Sofa, 2 seat			\$ 2,575.00	\$ 2,575.00			
1	Lounge chair			\$ 1,960.00	\$ 1,960.00			
2	Occasional table, 18" dia.			\$ 520.00	\$ 1,040.00			
1	Clothing rack			\$ 1,030.00	\$ 1,030.00			
1	Area rug, 8x10			\$ 550.00	\$ 550.00			
2	Activity table, 60"x30"			\$ 900.00	\$ 1,800.00			
2	Student desk, trapezoid, ADA			\$ 230.00	\$ 460.00			
					\$ 13,015.00	\$26,030.00		
Resource	4	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00			
		1	Teacher lectern	\$ 625.00	\$ 625.00			
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00			
		8	Student chair, 4 legs	\$ 95.00	\$ 760.00			
		2	Activity table, flip-top, mobile, 72"x30"	\$ 985.00	\$ 1,970.00			
		6	Stool, wobble	\$ 175.00	\$ 1,050.00			
		2	Soft rocker	\$ 700.00	\$ 1,400.00			
					\$ 7,220.00	\$28,880.00		

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total	
Grad Coach Room 12 students	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher lectern	\$ 625.00	\$ 625.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		8	Student chair, 4 legs	\$ 95.00	\$ 760.00		
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00		
		3	Activity table, round, casters, 48"	\$ 700.00	\$ 2,100.00		
		4	Stool, wobble	\$ 175.00	\$ 700.00		
		1	Area rug, 8'x10'	\$ 550.00	\$ 550.00		
		2	Soft rocker	\$ 700.00	\$ 1,400.00		
						<b>\$ 7,780.00</b>	<b>\$7,780.00</b>
SEL 20-25 students	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher lectern	\$ 625.00	\$ 625.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		8	Student chair, 4 legs	\$ 95.00	\$ 760.00		
		4	Activity table, round, casters, 48"	\$ 700.00	\$ 2,800.00		
		4	Stool, wobble	\$ 175.00	\$ 700.00		
		1	Area rug, 8'x10'	\$ 550.00	\$ 550.00		
		4	Soft rocker	\$ 650.00	\$ 2,600.00		
						<b>\$ 9,450.00</b>	<b>\$9,450.00</b>
ASD	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher lectern	\$ 625.00	\$ 625.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		6	Student chair, 4 legs	\$ 95.00	\$ 570.00		
		5	Student desk, trapezoid	\$ 210.00	\$ 1,050.00		
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00		
		2	Activity table, round, casters, 48"	\$ 700.00	\$ 1,400.00		
		8	Stool, wobble	\$ 175.00	\$ 1,400.00		
		1	Area rug, 8'x10'	\$ 550.00	\$ 550.00		
		4	Mobile partition	\$ 625.00	\$ 2,500.00		
		2	Soft rocker	\$ 650.00	\$ 1,300.00		
						<b>\$ 11,040.00</b>	<b>\$11,040.00</b>
ELL	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher lectern	\$ 625.00	\$ 625.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		12	Student chair, 4 legs	\$ 95.00	\$ 1,140.00		
		11	Student desk, trapezoid	\$ 210.00	\$ 2,310.00		
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00		
						<b>\$ 5,720.00</b>	<b>\$5,720.00</b>
WR	2	4	Half moon table	\$ 800.00	\$ 3,200.00		
		16	Student chair, 4 legs	\$ 95.00	\$ 1,520.00		
		1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher lectern	\$ 625.00	\$ 625.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		1	Area rug, 8'x10'	\$ 550.00	\$ 550.00		
				<b>\$ 7,310.00</b>	<b>\$14,620.00</b>		
WR Spt	2	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00		
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00		
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00		
		2	Student chair, 4 legs	\$ 95.00	\$ 190.00		
				<b>\$ 2,155.00</b>	<b>\$4,310.00</b>		
<b>MEDIA CENTER</b>							
Media Center	1	2	Task chair, arms	\$ 600.00	\$ 1,200.00		
		24	Study chair, casters	\$ 350.00	\$ 8,400.00		
		6	Study table, 72"x30"	\$ 2,000.00	\$ 12,000.00		
		2	Study table, counter height, 84"x36"	\$ 4,500.00	\$ 9,000.00		
		12	Stool, upholstered, counter height	\$ 625.00	\$ 7,500.00		
		4	Lounge seating	\$ 2,870.00	\$ 11,480.00		
		4	Laptop table	\$ 500.00	\$ 2,000.00		
		8	Lounge chair, swivel	\$ 2,000.00	\$ 16,000.00		
		2	Ottoman table, 30"	\$ 935.00	\$ 1,870.00		
		2	Mobile pedestal	\$ 420.00	\$ 840.00		
		6	Mobile bookcart	\$ 520.00	\$ 3,120.00		
		2	Storage cabinets, 36"/2-hi	\$ 575.00	\$ 1,150.00		
		2	Book display	\$ 2,700.00	\$ 5,400.00		
		1	Shelving and End Panel Allowance Circulation desk, by general contractor	\$ 50,000.00	\$ 50,000.00		
						<b>\$ 129,960.00</b>	<b>\$129,960.00</b>
		Media Center Office	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00
1	Task chair, arms			\$ 600.00	\$ 600.00		
1	Meeting table, round, 30"			\$ 550.00	\$ 550.00		
2	Side chair			\$ 500.00	\$ 1,000.00		
3	Bookcase			\$ 600.00	\$ 1,800.00		
				<b>\$ 6,600.00</b>	<b>\$6,600.00</b>		

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
Media Center Small Group	2	8	Student chair, 4 legs	\$ 95.00	\$ 760.00	\$3,490.00
		1	Mobile flip top table, 72"x30"	\$ 985.00	\$ 985.00	
					\$ 1,745.00	
Hallway	1	8	Counter stool, upholstered	\$ 625.00	\$ 5,000.00	\$5,000.00
Tech Support	1	3	Task chair, arms	\$ 600.00	\$ 1,800.00	\$3,060.00
		3	Mobile pedestal	\$ 420.00	\$ 1,260.00	
					\$ 3,060.00	\$3,060.00
<b>HEALTH &amp; PHYSICAL EDUCATION</b>						
Health Classroom 24 students	2	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	\$23,800.00
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Teacher lectern	\$ 625.00	\$ 625.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		28	Student chair, 4 legs	\$ 95.00	\$ 2,660.00	
		23	Student desk, trapezoid	\$ 210.00	\$ 4,830.00	
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00	
		2	Student desk, sit-to-stand	\$ 335.00	\$ 670.00	
		1	Activity table, round, casters	\$ 650.00	\$ 650.00	
		1	Mobile bookcase	\$ 400.00	\$ 400.00	
					\$ 11,900.00	
OT/PT	1	1	Teacher task chair, no arms	\$ 540.00	\$ 540.00	\$3,590.00
		1	Teacher desk, mobile	\$ 875.00	\$ 875.00	
		1	Mobile pedestal	\$ 420.00	\$ 420.00	
		1	Student desk, trapezoid, ADA	\$ 230.00	\$ 230.00	
		5	Student chair, 4 legs	\$ 95.00	\$ 475.00	
		1	Activity table, round, 48", casters	\$ 650.00	\$ 650.00	
		1	Mobile bookcase	\$ 400.00	\$ 400.00	
Gymnasium	1	Equipment carried in equipment allowance				
Alternate PE	1	Equipment carried in equipment allowance				
Weights	1	Equipment carried in equipment allowance				
Trainer	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	\$5,360.00
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Taping table	\$ 700.00	\$ 700.00	
		1	Exam table, adjustable	\$ 1,200.00	\$ 1,200.00	
		2	Guest chair	\$ 500.00	\$ 1,000.00	
					\$ 5,360.00	\$5,360.00
Athletic Director	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	\$4,750.00
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Lateral file, 36"/2-hi	\$ 500.00	\$ 500.00	
		2	Guest chair	\$ 500.00	\$ 1,000.00	
					\$ 4,750.00	\$4,750.00
Locker Room	1	No FF&E required				
Locker Room	1	No FF&E required				
Gym Storage	1	15	Adjustable metal shelving	\$ 375.00	\$ 5,625.00	\$5,625.00
PE Storage	1	7	Adjustable metal shelving	\$ 375.00	\$ 2,625.00	\$2,625.00
Athletic Storage	1	10	Adjustable metal shelving	\$ 375.00	\$ 3,750.00	\$3,750.00
PE Instructor Office	2	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	\$6,920.00
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Lateral file, 36"/2-hi	\$ 500.00	\$ 500.00	
		1	Guest chair	\$ 500.00	\$ 500.00	
					\$ 3,460.00	\$6,920.00

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
<b>ADMINISTRATION &amp; GUIDANCE</b>						
Waiting	1	8	Guest chair, upholstered	\$ 500.00	\$ 4,000.00	
		2	Occasional table, round, 18"	\$ 520.00	\$ 1,040.00	
					<b>\$ 5,040.00</b>	<b>\$5,040.00</b>
Principal Secretary	1	3	Task chair, arms	\$ 600.00	\$ 1,800.00	
		3	Mobile pedestal	\$ 420.00	\$ 1,260.00	
					<b>\$ 3,060.00</b>	<b>\$3,060.00</b>
Principal's Office	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 48"	\$ 700.00	\$ 700.00	
		6	Guest chair, upholstered	\$ 500.00	\$ 3,000.00	
		1	Bookcase, 30"/4-hi	\$ 750.00	\$ 750.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 8,570.00</b>	<b>\$8,570.00</b>
SRO Office	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
					<b>\$ 4,330.00</b>	<b>\$4,330.00</b>
Mail Time	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		2	Lateral file, 36"/4-hi	\$ 870.00	\$ 1,740.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
					<b>\$ 5,750.00</b>	<b>\$5,750.00</b>
Records	1	13	Lateral file, 36"/5-hi	\$ 950.00	\$ 12,350.00	
					<b>\$ 12,350.00</b>	<b>\$12,350.00</b>
AP Office	2	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 5,670.00</b>	<b>\$11,340.00</b>
SPED Administration	1	3	Task chair, arms	\$ 600.00	\$ 1,800.00	
		3	Mobile pedestal	\$ 420.00	\$ 1,260.00	
					<b>\$ 3,060.00</b>	<b>\$3,060.00</b>
Waiting	1	8	Guest chair, upholstered	\$ 500.00	\$ 4,000.00	
		2	Occasional table, round, 18"	\$ 520.00	\$ 1,040.00	
					<b>\$ 5,040.00</b>	<b>\$5,040.00</b>
Speech	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$4,880.00</b>
SPED Office	3	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$14,640.00</b>
SPED Conference	1	1	Conference table	\$ 4,500.00	\$ 4,500.00	
		10	Conference chair, casters	\$ 650.00	\$ 6,500.00	
					<b>\$ 11,000.00</b>	<b>\$11,000.00</b>
Consult	1	1	Conference table	\$ 2,000.00	\$ 2,000.00	
		6	Conference chair, casters	\$ 650.00	\$ 3,900.00	
					<b>\$ 5,900.00</b>	<b>\$5,900.00</b>
Co Records	1	14	Lateral file, 36"/4-hi	\$ 870.00	\$ 12,180.00	
					<b>\$ 12,180.00</b>	<b>\$12,180.00</b>
Co Stor-Safe	1	22	Lateral file, 36"/4-hi	\$ 870.00	\$ 19,140.00	
					<b>\$ 19,140.00</b>	<b>\$19,140.00</b>
IT Dir.	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, no arms	\$ 540.00	\$ 540.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,820.00</b>	<b>\$4,820.00</b>

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
IT AD	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, no arms	\$ 540.00	\$ 540.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,820.00</b>	<b>\$4,820.00</b>
IT Shared Office	1	5	Desk, single pedestal	\$ 1,860.00	\$ 9,300.00	
		5	Task chair, no arms	\$ 540.00	\$ 2,700.00	
		1	Meeting table, round, 48"	\$ 700.00	\$ 700.00	
		6	Guest chair, upholstered	\$ 500.00	\$ 3,000.00	
					<b>\$ 15,700.00</b>	<b>\$15,700.00</b>
IT Repair/Storage	1	2	Desk, single pedestal	\$ 1,860.00	\$ 3,720.00	
		3	Task chair, no arms	\$ 540.00	\$ 1,620.00	
		6	Perch stool	\$ 185.00	\$ 1,110.00	
		6	Storage cabinet, 36"/4-hi	\$ 900.00	\$ 5,400.00	
					<b>\$ 11,850.00</b>	<b>\$11,850.00</b>
Career Center	1	1	Mobile flip top table, 72"x30"	\$ 985.00	\$ 985.00	
		6	Student chair, 4 legs	\$ 100.00	\$ 600.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
		1	Teacher desk, mobile	\$ 840.00	\$ 840.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
					<b>\$ 3,895.00</b>	<b>\$3,895.00</b>
Guidance Records	1	5	Lateral file, 36"/5-hi	\$ 950.00	\$ 4,750.00	
					<b>\$ 4,750.00</b>	<b>\$4,750.00</b>
Guidance Storage	1	6	Adjustable metal shelving	\$ 375.00	\$ 2,250.00	
					<b>\$ 2,250.00</b>	<b>\$2,250.00</b>
Waiting	1	4	Guest chair, upholstered	\$ 500.00	\$ 2,000.00	
					<b>\$ 2,000.00</b>	<b>\$2,000.00</b>
Conference Room	1	1	Conference table, 120"x42"	\$ 4,500.00	\$ 4,500.00	
		10	Conference chair, casters	\$ 650.00	\$ 6,500.00	
					<b>\$ 11,000.00</b>	<b>\$11,000.00</b>
Adjust Counselor	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$4,880.00</b>
Counselor	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$4,880.00</b>
Guidance Office	4	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$19,520.00</b>
Psych Office	1	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 4,880.00</b>	<b>\$4,880.00</b>
<b>MEDICAL</b>						
Waiting	1	6	Side chair, plastic	\$ 250.00	\$ 1,500.00	
		1	Occasional table, round, 18"	\$ 520.00	\$ 520.00	
					<b>\$ 2,020.00</b>	<b>\$2,020.00</b>
Exam Room	4	1	Exam table	\$ 1,200.00	\$ 1,200.00	
		1	Occasional table, round, 18"	\$ 520.00	\$ 520.00	
		1	Medical stool	\$ 155.00	\$ 155.00	
		1	Side chair, plastic	\$ 250.00	\$ 250.00	
				<i>Medical equipment by others</i>		
					<b>\$ 2,125.00</b>	<b>\$8,500.00</b>
Interview Room	2	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		2	Side chair, plastic	\$ 250.00	\$ 500.00	
					<b>\$ 2,960.00</b>	<b>\$5,920.00</b>

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
<b>DINING &amp; FOOD SERVICE</b>						
Cafeteria	1	11	Cafeteria table, 8 attached seats	\$ 2,750.00	\$ 30,250.00	
300 seats		96	Barstool, plastic	\$ 325.00	\$ 31,200.00	
		116	Café Chair, plastic stacking	\$ 180.00	\$ 20,880.00	
		24	Café table, round, 36"	\$ 750.00	\$ 18,000.00	
		6	Café table, 72"x30"	\$ 1,500.00	\$ 9,000.00	
		12	Café table, bar height, 96"x30"	\$ 2,100.00	\$ 25,200.00	
		12	Booth, single sided	\$ 1,950.00	\$ 23,400.00	
					<b>\$ 157,930.00</b>	<b>\$157,930.00</b>
Servery	1		Equipment, by others			
Kitchen	1		Equipment, by others			
Kitchen Office	2	1	Desk, single pedestal	\$ 1,860.00	\$ 1,860.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Lateral file, 36"/2-hi	\$ 450.00	\$ 450.00	
		2	Side chair, plastic	\$ 250.00	\$ 500.00	
					<b>\$ 3,410.00</b>	<b>\$6,820.00</b>
<b>CUSTODIAL &amp; MAINTENANCE</b>						
Custodial Workshop/Office	1	2	Work bench, hardwood top	\$ 3,500.00	\$ 7,000.00	
		2	Perch stool	\$ 125.00	\$ 250.00	
		1	Meeting table, round, 48"	\$ 700.00	\$ 700.00	
		4	Side chair, plastic	\$ 250.00	\$ 1,000.00	
		2	Desk, single pedestal	\$ 1,860.00	\$ 3,720.00	
		2	Task chair, arms	\$ 600.00	\$ 1,200.00	
					<b>\$ 13,870.00</b>	<b>\$13,870.00</b>
Custodial Storeroom	1	12	Adjustable metal shelving	\$ 375.00	\$ 4,500.00	
					<b>\$ 4,500.00</b>	<b>\$4,500.00</b>
Trash	1	3	Adjustable metal shelving	\$ 375.00	\$ 1,125.00	
					<b>\$ 1,125.00</b>	<b>\$1,125.00</b>
Receiving	1	4	Adjustable metal shelving	\$ 375.00	\$ 1,500.00	
					<b>\$ 1,500.00</b>	<b>\$1,500.00</b>
Custodial Storage	2	1	Adjustable metal shelving	\$ 375.00	\$ 375.00	
					<b>\$ 375.00</b>	<b>\$750.00</b>
Custodial Storage	1	2	Adjustable metal shelving	\$ 375.00	\$ 750.00	
					<b>\$ 750.00</b>	<b>\$750.00</b>
Custodial Storage	4	3	Adjustable metal shelving	\$ 375.00	\$ 1,125.00	
					<b>\$ 1,125.00</b>	<b>\$4,500.00</b>
Chair Storage	1	15	Chair dolly	\$ 500.00	\$ 7,500.00	
		300	Stacking chair, plastic	\$ 180.00	\$ 54,000.00	
					<b>\$ 61,500.00</b>	<b>\$61,500.00</b>
<b>ADDITIONAL ITEMS &amp; EQUIPMENT</b>						
Equipment allowance is an estimate which assumes majority new equipment. Necessary equipment needs to be verified per the school's needs.	1		Equipment Allowance		\$ 324,500.00	
					<b>\$ 324,500.00</b>	<b>\$324,500.00</b>
			Subtotal, Furniture and Equipment			<b>\$2,000,455.00</b>
			Contingency (8%)			<b>\$160,036.40</b>
			Grand Total			<b>\$2,160,491.40</b>
			Cost Per Student (800 Students)			<b>\$2,700.61</b>

**NOTES**

1. Copy, plotter, printer and fax equipment are not included in this budget.
2. Computers and AV equipment are not included in this budget.
3. Library book security system are not included in this budget.
4. Residential appliances are not included in this budget.
5. Pricing assumes CAL-117 compliance for upholstered seating and CAL-133 compliance for molded plastic seating, per MA 527 CMR.

Room Type	# of Rms	Qty	Description	Unit Price	Extended	Type Total
<b>DISTRICT OFFICES</b>						
CO Admin	1	3	Task chair, arms	\$ 600.00	\$ 1,800.00	
		3	Mobile pedestal	\$ 420.00	\$ 1,260.00	
						<b>\$ 3,060.00</b>
Super Office	1	1	Desk, U Shape	\$ 3,500.00	\$ 3,500.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 48"	\$ 700.00	\$ 700.00	
		6	Guest chair, upholstered	\$ 500.00	\$ 3,000.00	
		1	Bookcase, 36"/4-hi	\$ 800.00	\$ 800.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 9,470.00</b>	<b>\$9,470.00</b>
Dir Cur Office	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 5,670.00</b>	<b>\$5,670.00</b>
CFO Office	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		1	Meeting table, round, 30"	\$ 550.00	\$ 550.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
		1	Lateral file, 36"/4-hi	\$ 870.00	\$ 870.00	
					<b>\$ 5,670.00</b>	<b>\$5,670.00</b>
Kitchen	1	1	Dining table, 84"x30"	\$ 1,800.00	\$ 1,800.00	
		6	Side chair, plastic	\$ 250.00	\$ 1,500.00	
					<b>\$ 3,300.00</b>	<b>\$3,300.00</b>
Conference Room	1	1	Conference table, 196"x42"; powered	\$ 7,000.00	\$ 7,000.00	
		10	Conference chair, casters	\$ 650.00	\$ 6,500.00	
		1	Credenza	\$ 2,000.00	\$ 2,000.00	
					<b>\$ 15,500.00</b>	<b>\$15,500.00</b>
Acct/Book Office	1	1	Desk, with return	\$ 2,650.00	\$ 2,650.00	
		1	Task chair, arms	\$ 600.00	\$ 600.00	
		6	Lateral file, 36"/4-hi	\$ 870.00	\$ 5,220.00	
		2	Guest chair, upholstered	\$ 500.00	\$ 1,000.00	
					<b>\$ 9,470.00</b>	<b>\$9,470.00</b>
Subtotal, Furniture						<b>\$52,140.00</b>
Contingency (10%)						<b>\$5,214.00</b>
<b>DISTRICT OFFICE - Grand Total</b>						<b>\$57,354.00</b>

**East Longmeadow High School  
Technology Equipment Cost Estimate  
Enrollment Projection 800 Students**

**DRAFT**

8/22/2023

ROOM TYPE	# OF RMS	Large Flat Panel Displays - Wall Mounted	Large Flat Panel Displays on Mobile Cart	Large Interactive Displays on Mobile Carts	Printer (B&W)	Printer (Color)	High Volume Printer / Copier	Large LCD TV Monitor	Document Camera	Scanner
<b>CORE ACADEMIC SPACES</b>										
<i>(List of Spaces)</i>										
Classroom - General	25	25								
Teacher Planning	4		4							
Small Group Seminar (20-30 seats)	2									
Science Classroom / Lab	8	8								
Green House	3									
Business Classrooms	4	4								
Health Classroom	2	2								
EL Classroom	1	1								
<b>SPECIAL EDUCATION</b>										
S C Medically Fragile	1		1							
Resource Room, incl C Grid	4	4								
Small Group Room (150)?	150									
Self Contained Life Skills	1	1								
Self Contained Life Skills 18 - 22	1	1								
ASD Classroom / di-esclation	1		1							
OT / PT	1									
Willy Ross Deaf Program	2	2								
Willy Ross Deaf Program Support	1									
SPED Conference Room	1	1								
<b>ART &amp; MUSIC</b>										
Art Classroom - 25 seats	2	2								2
Band - 50 - 100 seats	1	1								
Chorus - 50 - 100 seats	1	1								
Ensemble	1	1								
Music Practice	3									
<b>VOCATIONS &amp; TECHNOLOGY</b>										
Technology/Engineering CR / Lab	1	1								1
Graphic Design Lab	1	1								1
Culinary Arts Lab	1	1								1
PK-Child Care Lab	1		1							
TV Production	1	1								1

ROOM TYPE	# OF RMS	Large Flat Panel Displays- Wall Mounted	Large Flat Panel Displays on Mobile Cart	Large Interactive Displays on Mobile Carts	Printer (B&W)	Printer (Color)	High Volume Printer / Copier	Large LCD TV Monitor	Document Camera	Scanner
<b>HEALTH &amp; PHYSICAL EDUCATION</b>										
Gymnasium	1									
PE Alternatives	1									
Gym Storeroom	1									
Locker Rooms - Boys / Girls w/ Toilets	1									
Athletic Director's Office	1									
Health Instructor's Office w/ Shower & Toilet	2									
Trainers Room	1									
<b>MEDIA CENTER</b>										
Media Center / Reading Room	1	1		2						1
Computer Lab										
<b>AUDITORIUM / DRAMA</b>										
Auditorium	1									
Stage	1									
<b>Alternative</b>										
<b>OR</b>										
Large Group Instruction	1			1						
Black Box Theater	1			1						
<b>DINING &amp; FOOD SERVICE</b>										
Cafeteria / Student Lounge / Break-out	1									
Scramble Serving Area	1									
Kitchen	1									
Staff Lunch Room	1									
<b>MEDICAL</b>										
Nurses' Office / Waiting Room	1									1
Interview Room	2									
Examination Room / Resting	4									
<b>ADMINISTRATION &amp; GUIDANCE</b>										
General Office / Waiting Room / Toilet	1									
Teachers' Mail and Time Room	1									
Duplicating Room	1									
Principal's Office w/ Conference Area	1	1								
Principal's Secretary / Waiting	1									
Assistant Principal's Office - AP1	1									
Assistant Principal's Office - AP2	1									
Supervisory / Spare Office	1									
Conference Room	1	1								
Guidance Office	4									
Guidance Waiting Room	1									
Career Center	1	1								
Teachers' Work Room	1			1						
SRO Office	1	1								
Psychologist	1									

ROOM TYPE	# OF RMS	Large Flat Panel Displays- Wall Mounted	Large Flat Panel Displays on Mobile Cart	Large Interactive Displays on Mobile Carts	Printer (B&W)	Printer (Color)	High Volume Printer / Copier	Large LCD TV Monitor	Document Camera	Scanner
<b>CUSTODIAL &amp; MAINTENANCE</b>										
Custodian's Office	1									
Custodian's Workshop	1									
Receiving and General Supply	1									
Network / Telecom Room	1									
<b>Other</b>										
Swimming Pool Complex (15K gross)	1									
District Central Offices										
<b>NON-PROGRAMMED SPACES</b>										
		44		2	3	22	8		10	
<b>ADDITIONAL OWNER SPACES</b>										
	Total Qty. Equip.	107	7	7	3	22	8	0	10	8
	Estimated Unit Cost:	\$ 5,000.00	\$ 5,400.00	\$ 8,300.00	\$ 900.00	\$ 1,200.00	\$ 10,000.00	\$ 1,300.00	\$ 600.00	\$ 500.00
	Estimated Cost Per Category	\$ 535,000.00	\$ 37,800.00	\$ 58,100.00	\$ 2,700.00	\$ 26,400.00	\$ 80,000.00	\$ -	\$ 6,000.00	\$ 4,000.00
										<b>Technology Equipment: \$ 750,000.00</b>

<b>Additional Technology Systems</b>										
1	Network Electronics									\$ 125,000.00
2	Wireless Access Distribution System									\$ 175,000.00
3	Telephone System									\$ 100,000.00
4	Network Servers (N/A)									
5	Technology Education/Engineering/CADD Plotter									\$ 10,000.00
										<b>Total Additional Technology Systems: \$ 410,000.00</b>

<b>Technology Equipment Estimate Cost Summary</b>										
										<b>Technology Equipment: \$ 750,000.00</b>
										<b>Additional Technology Equipment: \$ 410,000.00</b>
										<b>Subtotal: \$ 1,160,000.00</b>
										<b>Recommended Budget (\$1,500/Student): \$ 1,200,000.00</b>
										<b>Delta: \$40,000</b>

<b>Notes</b>										
1	All Classrooms and Learning Spaces will be Equipped With Sound Field Systems Under the Base Building Contract									
2	Assisted listening devices are provided for the Auditorium, Cafeteria and Gymnasium are included in the Under the Base Building Contract									
3	The base bid will carry the following allowances for AV EQ in these spaces:									
	Gym - \$150,000									
	Auditorium - \$450,000									
	Cafeteria - \$150,000									
	LGI - \$50,000									
	Band - \$50,000									
	Chorus - \$50,000									

## East Longmeadow High School – Schematic Design Appendix Section:

### Building Systems Life Cycle Cost Analysis (LCCA)

A 50-year life cycle cost analysis was developed to compare three different HVAC heating and cooling systems (refer to the table below) within the comprehensive set of building energy systems including high efficiency lighting and highly insulated building enclosure.

Based on the LCCA assessment, Base System - VRF – Heat Pumps Heating & Cooling + DOAS is the preferred HVAC system with a consideration of the system life cycle cost, energy efficiency goals, efficient use of the facility management resources and flexibility for the space programming.

Please note that the predicted annual energy savings and energy costs savings are not representative of actual annual energy costs upon building occupancy. Many variables such as operational practices, actual occupancy schedules additional equipment and occupant behaviors will likely impact the actual energy usage of the facility.

**Table 4 – Life Cycle Cost Analysis – HVAC Systems & Building Enclosure**

Life Cycle Cost Analysis (50 yrs) - HVAC Systems & Building Enclosure								
		System Costs as Present Value					Predicted	Predicted GHG emissions Reduction (%)
		Installation	Replacement	Maintenance	Energy	50-Year Life	EUI kBtu/S F/yr	
<b>Code baseline</b>	ALL ELECTRIC PACKAGED DX DOAS + DX HEAT PUMP HEATING/COOLING	\$12,638,806	\$4,720,206	\$643,244	\$15,007,059	<b>\$33,009,000</b>	48.1	
<b>Base System - VRF</b>	VRF HEAT PUMPS HEATING & COOLING + DOAS	\$14,600,000	\$11,913,214	\$656,109	\$8,299,159	<b>\$35,468,000</b>	26.6	44.7%
<b>Option M1</b>	GEO THERMAL HEAT PUMPS HEATING & COOLING + DOAS	\$24,700,000	\$7,768,648	\$546,757	\$7,473,898	<b>\$40,489,000</b>	24.0	50.2%
<b>Option M2</b>	HEAT RECOVERY CHILLER + WSHP HEATING & COOLING + DOAS	\$16,645,000	\$13,037,429	\$868,380	\$9,746,442	<b>\$40,297,000</b>	31.3	35.1%

Notes:

1. Installation costs are based on project cost estimates.
2. Replacement costs are specific to each system, based on ASHRAE useful life data and using unit costs brought forward as Present Value costs.
3. Maintenance costs are estimated to include third-party service to systems, but in-house routine maintenance.

4. Energy costs are based on energy modeling analysis and current energy costs based on East Longmeadow Utilities \$0.2177/kWh. NOTE: potential electricity rate increases may be implemented at the completion of this project. The rate increase will further improve the LCCA analysis and payback.
5. Total Cost is the sum of Installation, Replacement, Maintenance and Energy costs.
6. Present Value modeled on a 50-year lifecycle cost, 3% cost depreciation.

**Table 5 – Initial Project Cost & Payback Analysis**

Initial Project Cost & Payback Analysis						
System Options		Installation Costs	Incremental Costs		Predicted Annual Savings	Payback
		(\$)	(\$)	(%)	(\$)	(Years)
Code Baseline	ALL ELECTRIC PACKAGED DX DOAS + DX HEAT PUMP HEATING/COOLING	\$12,638,806				
Base System - VRF	VRF HEAT PUMPS HEATING & COOLING + DOAS	\$14,600,000	\$1,961,194	1.4%	\$260,706	7.5
Option M1	GEOHERMAL HEAT PUMPS HEATING & COOLING + DOAS	\$24,700,000	\$12,061,194	8.8%	\$292,780	41.2
Option M2	HEAT RECOVERY CHILLER + WSHP HEATING & COOLING + DOAS	\$16,645,000	\$4,006,194	2.9%	\$204,456	19.6

Notes:

1. Utility costs savings are based on current utility costs: based on East Longmeadow Utilities \$0.2177/kWh. Electricity rate may increase by the completion of this project. The rate increase will further improve the LCCA analysis and payback.
2. All cost estimates are sourced from recent project costs estimate and bids (SMMA Schools).
3. Incremental Costs percentage (%) is compared to the estimated construction costs and budget: \$136,669,110.

Table 3 shows the energy model inputs for the Massachusetts Energy Code baseline and the proposed design.

**Table 3 – Baseline and Proposed Design Model Inputs**

Description	Baseline IECC 2021 with MA Amendments	Base System – VRF (Design Case)- VRF Heat Pumps Heating & Cooling + DOAS	Option M1 - Geothermal Heat Pumps Heating & Cooling + DOAS	Option M2 – Heat Recovery Chiller + WSHP Heating & Cooling + DOAS
Building Enclosure	Wall assembly U-factor=0.055 Btu/h·ft <sup>2</sup> ·°F	Wall assembly U-factor=0.027 Btu/h·ft <sup>2</sup> ·°F	Wall assembly U-factor=0.027 Btu/h·ft <sup>2</sup> ·°F	Wall assembly U-factor=0.027 Btu/h·ft <sup>2</sup> ·°F
	Roof assembly U-factor=0.032 Btu/h·ft <sup>2</sup> ·°F	Roof assembly U-factor=0.0188 Btu/h·ft <sup>2</sup> ·°F	Roof assembly U-factor=0.0188 Btu/h·ft <sup>2</sup> ·°F	Roof assembly U-factor=0.0188 Btu/h·ft <sup>2</sup> ·°F
	Roof reflectance=0.50	Roof Reflectance=0.5	Roof Reflectance=0.5	Roof Reflectance=0.5
	WWR all facades = 22%	WWR all facades = 25%	WWR all facades = 25%	WWR all facades = 25%
Glazing Systems	Curtain wall U-factor=0.38 Btu/h·ft <sup>2</sup> ·°F	Curtain wall U-factor=0.23 Btu/h·ft <sup>2</sup> ·°F	Curtain wall U-factor=0.23 Btu/h·ft <sup>2</sup> ·°F	Curtain wall U-factor=0.23 Btu/h·ft <sup>2</sup> ·°F
	SHGC=0.38	SHGC=0.32	SHGC=0.32	SHGC=0.32
Lighting Power Density	0.61 W/ft <sup>2</sup>	0.5 W/ft <sup>2</sup>	0.5 W/ft <sup>2</sup>	0.5 W/ft <sup>2</sup>
Equipment Power Density	0.750 W/ft <sup>2</sup>	0.750 W/ft <sup>2</sup>	0.750 W/ft <sup>2</sup>	0.750 W/ft <sup>2</sup>

HVAC System Type	ASHRAE Baseline System 8 – VAV with Air Cooled Chillers + Resistance Heating	VRF Heat Pumps with 100% DOAS units with Energy Recovery, and AHU units with heat recovery	100% DOAS ventilation units with Energy Recovery, VRF units and Ground Source Heat Pumps	100% DOAS ventilation units with Energy Recovery with Air Source Heat Pump Water Loop and Chillers
Heating	Electric Resistance	All-electric VRF (3.52 COP)	All-electric GSHP (4.8 COP)	All-Electric ASHP Water Loop (COP 6.5)
Cooling	All-electric Chilled Water System – Auto sized with an EER of 10.8	All-electric VRF (12.0 EER)	All-electric GSHP (29.6 EER)	All – Electric WSHP (20.1 EER)
DHW Heaters	97% thermal efficiency	All-electric high efficiency hot water heaters (100% eff.), with point of use water heaters	All-electric high efficiency hot water heaters (100% eff.), with point of use water heaters	All-electric high efficiency hot water heaters (100% eff.), with point of use water heaters