

February 23, 2021
School Building Committee

A meeting of the School Building Committee was held on Tuesday, February 23, 2021 at 5:00 pm. Due to current health department restrictions, the meeting was held through remote participation.

Members present by roll call:

	<u>Present</u>
Donald Humason, Jr.	X
Stefan Czaporowski	X
Stacy Burgess	X
Shannon Barry	X
Chris Carey	X
Ramon Diaz	absent
Ralph Figy	X
Bryan Forrette	X
Shelly Hazlett	absent
Bridget Matthews-Kane	X
Bill Parks	absent – entered 5:06 pm
Brian Sullivan	X
Cindy Sullivan	X
Tammy Tefft	X
Chris Tolpa	X
Lisa Benoit	<u>absent</u>
	12

Also in attendance:

OPM-P3 Representative: Dan Pallotta

Caolo & Bieniek Representatives: Jim Hannifin, Bert Gardner

The Green Engineer (Sustainability Consultant: David Anderson, Erik Ruoff, Brad Newkirk

Cindy Minicucci, Superintendent's Secretary

At 5:01 pm Chairman Donald Humason called the meeting to order.

1. Audio recording or video recording of open session: video recording for Channel 15

2. Approval of January 12, 2021 School Building Committee meeting minutes:

Ralph Figy moved, Brian Sullivan seconded to approve the January 12, 2021 School Building Committee meeting minutes, as presented.

	<u>YES</u>	<u>NO</u>
Donald Humason, Jr.	X	
Stefan Czaporowski	X	
Stacy Burgess	X	
Shannon Barry	X	
Chris Carey	X	

Ramon Diaz	absent
Ralph Figy	X
Bryan Forrette	X
Shelly Hazlett	absent
Bridget Matthews-Kane	X
Bill Parks	absent – entered 5:06 pm
Brian Sullivan	X
Cindy Sullivan	X
Tammy Tefft	X
Chris Tolpa	X
Lisa Benoit	<u>absent</u>
	12 motion passes

3. Presentation regarding the MSBA Sustainability Requirements and options for compliance: The Design Team will review the LEED for Schools and CHPS compliance paths, highlighting the differences between the two programs, with the intent of selecting a program and establishing a certification level for the Franklin Avenue School project.

Dan Pallotta reported that MSBA was looking for direction from the City. The single school solution has taken off the table with MSBA

Introduction of Green Engineers: David Anderson, Erik Ruoff, Brad Newkirk

Bert Gardner reviewed the LEED for Schools and CHPS compliance paths. A presentation was shared with the committee that highlighted the differences. (enclosed)

The pro's and con's for the LEEDS for Schools and CHPS compliance paths were reviewed with committee members.

4. General update on PSR progress
Dan Pallotta provided an update. He reported that a visit to a renovated school in Hanover, Massachusetts has been scheduled for March 10. The following people will attend: Representatives from CBA, Bryan Forrette, Facilities Director and representatives from the School Department.
5. Any other items not reasonably anticipated 48 hours prior to the meeting.
Tammy Tefft clarified that another meeting will be held in the middle of March to vote on the selection of LEEDS for Schools or CHPS compliance paths.

Stefan Czaprowski shared the following meetings dates (for planning purposes):

March 8, 2021 Time: 6:00-8:00 pm

Special School Committee meeting. The City Council will be invited.

Dan Pallotta will submit agenda items to Stefan on March 1, 2021.

March 25, 2021 Time: 6:00-8:00 pm

Presentation to families/staff of Franklin Avenue and Abner Gibbs

April 29, 2021 Time: 6:00-8:00pm

Presentation for the all members of community.

6. Adjourn

At 6:07 pm Ralph Figy moved, Cindy Sullivan seconded to adjourn the meeting.

	<u>YES</u>	<u>NO</u>
Donald Humason, Jr.	X	
Stefan Czaporowski	X	
Stacy Burgess	X	
Shannon Barry	X	
Chris Carey	X	
Ramon Diaz	absent	
Ralph Figy	X	
Bryan Forrette	X	
Shelly Hazlett	absent	
Bridget Matthews-Kane	X	
Bill Parks	X	
Brian Sullivan	X	
Cindy Sullivan	X	
Tammy Tefft	X	
Chris Tolpa	X	
Lisa Benoit	<u>absent</u>	

13 motion passes

A true copy, Attest:

Donald Humason, Jr. Chair
Westfield School Building
Westfield School Committee

DH/cm

Minutes approved: _____

WESTFIELD ES

School Building Committee Meeting

February 23, 2021

Team

- **Architect** – Caolo & Bieniek Associates, Inc.
- **M/P/FP Engineer** – Consulting Engineering Services, LLC.
- **Lighting / Electrical Engineer** – Art Engineering
- **Landscape Architect** – Dodson & Flinker
- **Civil Engineer** – Nitsch Engineering
- **Food Service** - Crabtree McGrath Associates, Inc.
- **Acoustics** – Acentech, Inc.
- **Sustainability Consultant** – The Green Engineer, Inc.

Sustainability Commitments, Goals, and Requirements

- **MSBA Green Schools Program**
 - LEED for Schools v4 v. Northeast CHPS v3.2
 - Additional Reimbursement
 - Project Advisory 63 – Commissioning
- **Massachusetts State Energy Code**
 - IECC 2018 with MA amendments
 - C402.1.5 – Envelope Backstop
 - C406.1 – Additional ECMs
- **Utility Incentives**
 - Municipal supplier – Westfield Gas + Electric

MSBA Green Schools Requirements

The MSBA's Green Schools Program provides incentives to a district to increase the energy efficiency and sustainability for new construction and major renovation/addition projects.

Applicable to project with an MSBA approved PSR on or after June 18, 2017.

- **Minimum requirement for ALL MSBA projects (no additional reimbursement):**
 - Achieve a minimum of LEED-Schools v4 "Certified" (40 points)
OR;
 - Achieve a minimum of NE-CHPS "Verified" (110 points for new construction or 85 points for addition / renovation),
AND;
 - Exceed the Massachusetts Energy base code by 10% (IECC 2018).
- Additional requirements for projects pursuing **2 additional reimbursement points**:
 - Meet the minimum requirements described above, and the project must exceed MA State Energy code by 20% (IECC 2018).
- The MSBA also requires and pays for the entire cost of building commissioning (systems, envelope, and monitoring) for all MSBA-funded projects

LEED for Schools v4



- The latest, balloted version of the LEED Rating System.
 - The bar has been raised significantly from the previous version (v09).
- Version 4.1 has been released in beta forms. Teams can use either v4.0 or v4.1 paths.
- A project must satisfy all prerequisites and earn
 - **40-49 points for Certified** (Minimum MSBA requirement)
 - 50-59 points for Silver
 - 60-79 points for Gold
 - 80+ points for Platinum certification
- Requires town commit to LEED Certification agreement with USGBC & share energy and water use data with USGBC for 5yrs post-construction (typically through EPA's Energy Star Portfolio Manager tool).

Northeast CHPS v3.2



- The latest version of the CHPS System.
- A project must satisfy all prerequisites and earn:
 - **"Verified" - 110 points for new construction or 85 points for addition / renovation (Minimum MSBA requirement)**
 - **"Verified Leader" – 160 points for new construction or 135 points for addition / major renovation**
- Credits and Prerequisites are assigned points as it allows for a more accurate accounting of the relative importance and level of effort associated with each individual section.



- **PRO** – LEED for Schools only has 14 prerequisites, so it allows for flexibility to pursue credits that are of the highest priority to the Owner
- **PRO** – The USGBC LEED rating system is well-established with a large database of resources, staff, and certified schools.
- **PRO** – LEED is consensus based and is continually improving its rating systems and online documentation and review process through credit interpretations and addendum.
- **PRO** – The LEED Online documentation and review process is streamlined
- **CON** – Projects in rural/suburban locations are unable to capitalize on a significant amount of points awarded to urban sites with community connectivity and alternative transportation access – so need to focus on energy performance.
- **CON** – More focused on the design and construction measures and less focused on operations and maintenance.
- **CON** – Slightly higher certification review fees than NE-CHPS.
- **PRO** – Adapted from regional stakeholders to mirror climate code, regional educational priorities
- **PRO** – Many issues important to k-12 schools emphasized - IAQ, energy efficiency, healthy materials.
- **PRO** – Sustainable school operations better addressed.
- **CON** – Mandatory requirement to satisfy 28 prereqs (2x LEED) which reduces flexibility to pursue high priority areas for owner.
- **CON** – Construction phase application cannot be submitted for review until after 10-month post-occupancy warranty review for commissioning is completed.
- **CON** – Labor-intensive NE-CHPS credit management and administration can potentially lead to increased consultant fees
- **CON** - Very active involvement by School Administration is necessary to supply the required tracking and documentation of many of the credits
- **CON** - The organizational budget and staff are smaller than that of the USGBC who administers LEED, which can lead to delays
- **CON** – Requires a "completeness review" before the design, construction, and performance reviews can take place

Recommendation

- We have successfully implemented both rating systems on MSBA projects and both have their Pros and Cons as outlined in the previous slide.
- If streamlining the path to MSBA approval/reimbursement is a priority for the Owner then LEED would be more favorable due to the fact that the CHPS Construction Phase application cannot be submitted for review until after the 10-month post-occupancy warranty review for commissioning is completed. As a result, project certification and MSBA reimbursement will potentially be delayed compared to a LEED project that isn't held to this requirement.
- If implementing post-occupancy sustainable operation policies are the biggest priority, then we recommend going with NE-CHPS.
 - *Note that regardless of whether the project pursued LEED or CHPS, the Project Team will continue to refine the scorecard as the design develops to evaluate opportunities for additional points. However, while the project seeks to achieve certification, our approach is not one of "point chasing" to maximize a LEED score. Rather we will use LEED as a validation tool, to check our performance, but in general, will not base design decisions strictly on achieving LEED certification.*

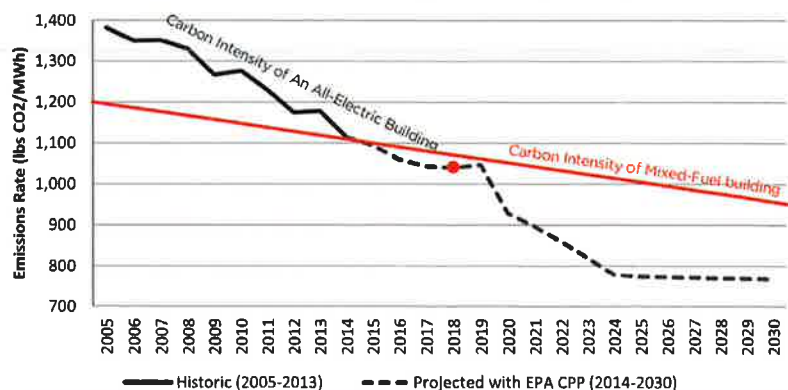
Other Performance Goals

- **Low-Energy Building - Energy Use Intensity (EUI) Target**
 - A building's annual energy use per unit of area.
 - Typically expressed in kBtu/sf/yr.
 - Provides the means to equalize the way that energy use is compared between various types of buildings and evaluate the means of reducing overall energy consumption.
- **Net Zero**
 - Cost
 - Energy
 - Carbon
 - Water

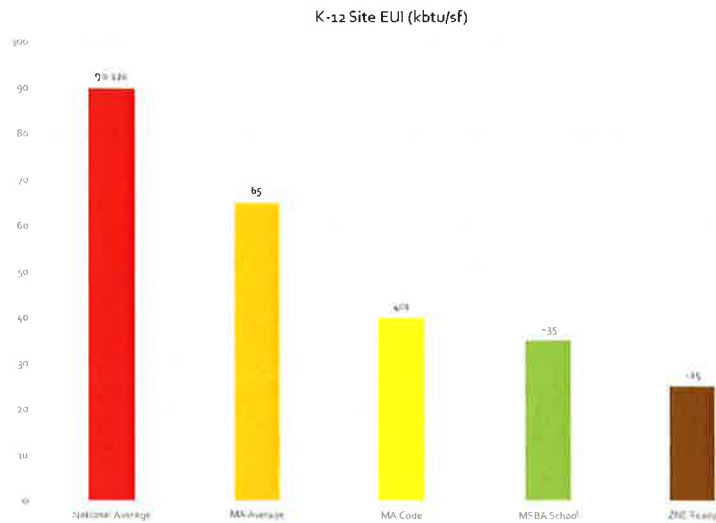
Other Performance Goals

- **Fossil Fuel Free:**
 - Overall carbon impact of the building will continue to decline as the electrical grid continues to become cleaner, which is a stated goal/requirement of MA utilities under the MA Clean Energy Standard

All Electric Buildings Reduce CO₂ Over Time



EUI Data for K-12 Schools



Steps Toward Net Zero

Step 1 - Reduce Demand

Challenge assumptions to right size equipment, reduce plug and lighting loads, and improve the building shell.

Step 2 - Harvest Site Energy

Orient the building to maximize passive solar, and daylighting opportunities. Harvest "waste" energy on site, through heat recovery and other means.

Step 3 - Maximize Efficiency

After you've done your best to reduce loads, use efficient equipment to maximize benefit.

Step 4 - Efficient Operations and Maintenance

The best design concepts won't deliver performance if they are not installed and maintained correctly.

To get to ZNE, we must go beyond simply reducing consumption. No matter how efficient we make systems, some energy must be consumed. Once we have reduced loads and consumption, we must generate enough energy for our needs in a renewable way. Therefore, ZNE requires a fifth step:

Step 5 - Renewable Energy

Generate enough energy on-site to meet all energy demands for the facility.

ARCHITECTURE

- Proper Insulation
- Informed Massing
- Air Tightness
- Solar Orientation
- Direct Solar Gain
- Lagged Solar Heating
- Natural Ventilation
- Daylight Harvesting

SYSTEMS

- Manage Plug Loads
- Efficient Lighting Design
- Efficient HVAC Design

RENEWABLES

- Solar/Photovoltaics
 - 3rd Party Ownership - PPA
 - Community Solar
- RECs / Offsets
- Demand Control

Best Practices

- Explore Enhanced Envelope Strategies (increased insulation, triple glazed windows low-E with $U < 0.20$, SHGC, direct solar shading devices)
- Elongate massing east-west, minimize glazing on direct southern exposure
- Target EUI of 30 and offset remainder w/ renewables energy (on site and/or offsite and/or carbon offsets)
- At minimum, design building and parking areas as PV "ready"
- Efficient HVAC systems with energy recovery
- Explore electric heating options (HPs)
- Low light power density
- Understand synergies (enhanced envelope, LPD reductions will result in small HVAC equipment)
- Low flow plumbing fixtures
- Explore Electric Vehicle Charging
- Commissioning of MEP and envelope systems, consider envelope infiltration testing in Cx scope



LEEDV4 BD+C: Schools (LEEDV4 SC) Project Scorecard



Y	?	N			
0	1	0	INTEGRATIVE PROCESS		
			IPc-1	Integrative Process	1
0	15	0	LOCATION & TRANSPORTATION		
			LTc-1	LEED for Neighborhood Development Location	15
		N	LTc-2	Sensitive Land Protection	1
			LTc-3	High Priority Site	1-2
			LTc-4	Surrounding Density and Diverse Uses	1-5
			LTc-5	Access to Quality Transit	1-4
			LTc-6	Bicycle Facilities	1
			LTc-7	Reduced Parking Footprint	1
			LTc-8	Green Vehicles	1

Y	?	N			
0	12	0	SUSTAINABLE SITES		
			SSp-1	Construction Activity Pollution Prevention	12
			SSPr-2	Environmental Site Assessment	Required
			SSc-1	Site Assessment	Required
			SSc-2	Site Development - Protect or Restore Habitat	1
			SSc-3	Open Space	1-2
			SSc-4	Rainwater Management	1
			SSc-5	Heat Island Reduction	2-3
			SSc-6	Light Pollution Reduction	1-2
			SSc-7	Site Master Plan	1
			SSc-8	Joint Use of Facilities	1

Y	?	N			
0	12	0	WATER EFFICIENCY		
			WEp-1	Outdoor Water Use Reduction	12
			WEp-2	Indoor Water Use Reduction	Required
			WEp-3	Building-Level Water Metering	Required
			WEc-1	Outdoor Water Use Reduction	Required
			WEc-2	Indoor Water Use Reduction	1-2
			WEc-3	Cooling Tower Water Use	1-7
			WEc-4	Water Metering	2
					1

Y	?	N			
0	31	0	ENERGY & ATMOSPHERE		
			EAp-1	Fundamental Commissioning and Verification	31
			EAp-2	Minimum Energy Performance	Required
			EAp-3	Building-Level Energy Metering	Required
			EAp-4	Fundamental Refrigerant Management	Required
			EAc-1	Enhanced Commissioning	2-6
			EAc-2	Optimize Energy Performance	1-16
			EAc-3	Advanced Energy Metering	1
			EAc-4	Demand Response	1-2
			EAc-5	Renewable Energy Production	1-3
			EAc-6	Enhanced Refrigerant Management	1-3
			EAc-7	Green Power and Carbon Offsets	1
					1-2

Y	?	N			
0	13	0	MATERIALS & RESOURCES		
			MRp-1	Storage and Collection of Recyclables	13
			MRp-2	Construction and Demolition Waste Management Planning	Required
			MRc-1	Building Life-Cycle Impact Reduction	Required
			MRc-2	Building Product Disclosure and Optimization - EPD	2-5
			MRc-3	Building Product Disclosure and Optimization - Sourcing of Raw Materials	1-2
			MRc-4	Building Product Disclosure and Optimization - Material Ingredients	1-2
			MRc-5	Construction and Demolition Waste Management	1-2

Y	?	N			
0	16	0	INDOOR ENVIRONMENTAL QUALITY		
			IEOp-1	Minimum Indoor Air Quality Performance	16
			IEOp-2	Environmental Tobacco Smoke Control	Required
			IEOp-3	Minimum Acoustic Performance	Required
			IEO-1	Enhanced Indoor Air Quality Strategies	2
			IEO-2	Low-Emitting Materials	3
			IEO-3	Construction Indoor Air Quality Management Plan	3
			IEO-4	IAQ Assessment	1
			IEO-5	Thermal Comfort	2
			IEO-6	Interior Lighting	1
			IEO-7	Daylight	2
			IEO-8	Quality Views	3
			IEO-9	Acoustic Performance	1

Y	?	N			
0	6	0	INNOVATION		
			INc-1	Innovation: TBD	6
			INc-2	Innovation: TBD	1
			INc-3	Innovation: TBD	1
			INc-4	Innovation: TBD	1
			INc-5	Pilot Credit: TBD	1
			INc-2	LEED Accredited Professional	1

Y	?	N			
0	4	0	REGIONAL PRIORITY (undefined)		
			RPc-1	Regional Priority Credit: TBD	4
			RPc-2	Regional Priority Credit: TBD	1
			RPc-3	Regional Priority Credit: TBD	1
			RPc-4	Regional Priority Credit: TBD	1

Y	?	N			
0	110	0	PROJECT TOTALS (Certification Estimates)		
					110

Certified: 40-49 points
 Silver: 50-59 points
 Gold: 60-79 points
 Platinum: 80+ points

Certified: 40-49 points
 Silver: 50-59 points
 Gold: 60-79 points
 Platinum: 80+ points



NE-CHPSV3.2
Project Checklist

TOTALS
75 175 0
Verified: 110 to 159 points (95 for renovation)
Verified Leader: 160+ points (135 for renovation)

Y	?	N			
6	15	0	Integration & Innovation		21
3			Prereq	Integrated Design	3
1			Prereq	Educational Display	1
2			Prereq	Crime Prevention	2
2			Credit	Enhanced Integrated Design	2
1			Credit	District Level Commitment	1
1			Credit	School Master Plan	1
1			Credit	High Performance Transition Plan	1
1			Credit	Demonstration Area	1
2			Credit	Educational Integration	2
3			Credit	Climate Change Action	3
4			Credit	Innovation	4

Y	?	N			
4	18	0	Sites		22
2			Prereq	Site Selection	2
2			Prereq	Site and Building Best Practices	2
3			Credit	Environmentally Sensitive Land	3
1			Credit	Minimize Site Disturbance	1
1			Credit	Construction Site Runoff Control and Sedimentation	1
1			Credit	Post Construction Stormwater Management	1
1			Credit	Located Near Public Transportation	1
2			Credit	Central Location	2
1			Credit	Joint-Use Facilities	1
2			Credit	Human-Powered Transportation	2
1			Credit	Reduce Heat Islands - Landscaping & Sites	1
1			Credit	Reduce Heat Islands - Cool Roofs and Green Walls	1
2			Credit	Avoid Light Pollution and Unnecessary Lighting	2
1			Credit	Use Locally Native Plants for Landscape	1
1			Credit	School Gardens	1

Y	?	N			
11	10	0	Water		21
5			Prereq	Minimum Reduction in Potable Water Use	5
5			Prereq	Irrigation and Exterior Water Budget-Use Reduction	5
1			Prereq	Irrigation Systems and Commissioning	1
3			Credit	Reduce Potable Water for Sewage Conveyance	3
2			Credit	Reduce Potable Water Use for Non-Recreational Landscaping	2
1			Credit	Reduce Potable Water Use for Recreational Landscaping	1
2			Credit	Rainwater Collection and Storage	2
2			Credit	Water Management System	2

Y	?	N			
13	55	0	Energy		68
6			Prereq	Energy Performance	6
4			Prereq	Commissioning	4
1			Prereq	Environmentally Preferable Refrigerants	1
2			Prereq	Local Energy Efficiency Incentive and Assistance	2
2			Credit	Superior Energy Performance	40
40			Credit	Zero Net Energy Capable	3
3			Credit	Additional Commissioning Qualifications	1
1			Credit	Envelope Commissioning	1
1			Credit	Enhanced Commissioning	1
2			Credit	Energy Management System	2
2			Credit	Advanced Energy Management System and Submetering	2
2			Credit	Natural Ventilation and Energy Conservation Interlocks	2
1			Credit	Variable Air Volume Systems	1
1			Credit	Renewable Energy Performance Monitoring	1
1			Credit	Electric Vehicle Charging	1

Y	?	N			
4	15	0	Materials & Waste Management		19
2			Prereq	Storage & Collection of Recyclables	2
2			Prereq	Minimum Construction Site Waste Management	2
2			Credit	Construction Site Waste Management	2
2			Credit	Single Attribute - Recycled Content	2
1			Credit	Single Attribute - Rapidly Renewable Materials	1
1			Credit	Single Attribute - Certified Wood	1
2			Credit	Locally Produced Materials	2
2			Credit	Multi-Attribute Materials Selection	2
2			Credit	Building Reuse - Exterior (Reno Only)	2
1			Credit	Building Reuse - Interior	1
1			Credit	Single Attribute - Materials Reuse	1
1			Credit	Health Product Related Information Reporting	1

Y	7	N	Indoor Environmental Quality	76
25	51	0	Indoor Environmental Quality	76
8			Prereq HVAC Design - ASHRAE 62.1	8
2			Prereq Pollutant and Chemical Source Control	2
1			Prereq Outdoor Moisture Management	1
2			Prereq Low Emitting Materials	2
4			Prereq Daylighting: Glare Protection	4
1			Prereq Views	1
7			Prereq Acoustical Performance	7
3			Credit Dedicated Outdoor Air System	3
2			Credit Enhanced Filtration	2
2			Credit Ducted Returns	2
5			Credit Construction IAQ Management	5
1			Credit Construction Moisture Management	1
1			Credit Post-Construction IAQ	1
5			Credit Additional Low Emitting Materials	5
1			Credit Low Radon	1
4			Credit Thermal Comfort - ASHRAE 55	4
1			Credit Individual Controllability	1
1			Credit Controllability of Systems	1
5			Credit Daylight Availability	5
2			Credit Additional Views	2
3			Credit Electric Lighting Performance	3
5			Credit Superior Electric Lighting Performance	5
6			Credit Enhanced Acoustical Performance	6
1			Credit Low-EMF Wiring	1
2			Credit Low-EMF Best Practices	2
1			Credit High Intensity Fluorescent Fixtures	1

Y	7	N	Operations & Metrics	23
12	11	0	Operations & Metrics	23
3			Prereq Facility Staff and Occupant Training	3
2			Prereq Performance Benchmarking	2
1			Prereq Systems Maintenance Plan	1
2			Prereq Indoor Environmental Management Plan	2
1			Prereq Integrated Pest Management	1
1			Prereq Anti-Idling Measures	1
2			Prereq ENERGY STAR Equipment and Appliances	2
2			Credit Post-Occupancy Transition	2
4			Credit High Performance Operations	4
2			Credit Green Cleaning	2
2			Credit Green Power	2
1			Credit Computerized Maintenance Management System	1

75 | 175 | 0 TOTAL
Verified: 110 to 159 points, Verified Leader: 160+ points

Possible Points: 250