Concord Middle School Building Committee
Meeting Minutes
February 13, 2020

PRESENT: Dawn Guarriello, Court Booth, Chris Popov, Matthew Root, Laurie Hunter, Jared Stanton, Kate Hanley, Susan Bates, Justin Cameron Stephen Crane, Pat Nelson, Frank Cannon, Charlie Parker, Jon Harris

ABSENT: Tim Hult, Russ Hughes, Heather Bout

PRESENT FROM HILL INTERNATIONAL: Andy Vo, Senior Project Manager; Julie Leduc, Assistant Project Manager, Mike Caroll

PRESENT FROM SMMA: Kristen Olsen, Matt Rice, Martine Dion, Phil Poinelli

Call to Order
Dawn Guarriello called the meeting to order at 7:34 A.M. in Conference Room 4, Ripley Building.

Approval on Minutes
Dawn Guarriello requested approval of the School Building Committee Meeting Minutes on January 16, 2020. Approval from Building Committee was motioned by Frank Cannon and seconded by Susan Bates.

League of Women Voters Meeting
Laurie Hunter stated she presented on educational vision, that Matt Root and Kate Hanley discussed sustainability and Mike Caroll did an overview of their considered timeline. The meeting was recorded and available on Minuteman Network. The School Department shared the proposed schedule recommendation to the Select Board and will formally have further discussion on this on February 24, 2020.

Project Schedule Update
Andy Vo presented the milestone schedule updates to the committee.

<u>Key Dates Presented</u>
End of feasibility - March 26, 2020
End of Schematic Design - August 18, 2020
Construction Phase 1 - Start October 27, 2021
Construction Substantial Completion - May 23, 2023
Tentative Move-In – May 23, 2023 through August 28, 2023

Mike Carroll stated that Hill is drafting a memo to provide the schedule recommendation to the Select Board for the meeting on February 24, 2020. Hill to provide this letter before the end of the week.

Risk Register
Andy Vo presented the risk register, items in gray are closed and will be hidden the following meeting. Laurie Hunter requested Hill keep 'Item 16 Budget: Confirm if $100M is the project cost limit' open for further discussions.

Project Scope and Budget Check

New England School Development Council (NESDEC) report showed projecting the enrollment of 700 students for Concord Middle School. The future square footage and cost analysis will be based on this enrollment.

The goal of the school organization model and the program is to develop teams of teachers for each grade to support students holistically throughout the day with teachers acting as a team instead of specialized compartments.

Preliminary Space Summary

- The preliminary space summary has been circulated and refined thoroughly.
- Focuses on the Team Teachers program
- Uses a cafetorium
- Allows for a 6000 SF MSBA standard Gym for adequate teaching, but would not support space for spectators and circulation.
- The result is a new GSF of 159,972.

Possible additions

- Increase the Gym size to allow for spectators
- Add an auditorium in lieu of the cafetorium
- The result is a new GSF of 174,072

Sustainability

Martine Dion presented the sustainability goals for the building

LEEDv4 Silver Certifiable goal as it is the baseline for schools

Based on meetings with the sustainability committee meetings, the building's goal is to be designed as NetZero Ready with a recommended ultra-low energy goal.

SMMA has implemented LEED Silver in nearly all of the school buildings and on budget.

Net zero ready buildings do not automatically achieve LEED; LEED has other goals beyond energy such as air and water quality.

Upcoming Meetings

- Design Subcommittee February 13, 2020 at 9:00am
- Community Forum on February 27 at 7:00pm
- School Building Committee March 19, 2020 at 7:30am
- Select Board Meeting in the Townhouse February 24, 2020 at 5:30pm
- Finance Committee Meeting in the Townhouse March 5 at 7:00pm

SMMA requested for a special Building Committee Meeting on February 27, 2020 at 7:30am to review the agenda for the Community Forum.

Public comments

- Feedback on items such as lighting, heating, restroom spaces, and outdoor visions distributed to the committee.

- A suggestion of two full size gyms due to the shortage within the Town and increased parking for a smooth pickup and drop-off. Also providing further opportunities for the public to provide their wish list for the design. In addition, to learn from past lessons in designing other schools in Town and that will be forwarded to the Committee.
- Project team to provide a list of acronyms and team members/roles.
- Will there be any PE spaces dedicated for special education? There will be adaptive PE spaces provided for that purpose in addition to the PE spaces.
- SEPAC hearing provided helpful resources and feedback.
- Laurie Hunter met with SEPAC on February 12, 2020 and discussed with SEPAC about universal accessibility.

Adjournment

Frank Cannon made the motion to adjourn, Chris Popov seconded the motion. The motion carried unanimously.

For additional details and information on this meeting, please refer to the link below.
https://www.youtube.com/watch?v=bsfONcdD__c&list=PL1TTzrWEKOOkQSCY4ADcNvk7hoJ9_lrH8&index=2&t=0s

Concord Middle School Building Committee

Dawn Guarriello, Co-Chairperson
Tim Hult, Co-Chairperson

Thursday, February 13, 2020 7:30 am

Meeting at Ripley School – Main Conference Room

AGENDA

1. Call to Order
2. Approval of Minutes:
    - 1/16/20 Concord Middle School Building Committee Meeting Minutes
3. Update from the League of Women Voters Meeting
4. Update on Project Schedule (Hill)
5. Update on Risk Register (Hill)
6. Update on Feasibility Study
7. Update on Sustainability
8. Upcoming Public Meetings
    - Design Subcommittee on February 13, 2020 at 9am
    - Community Forum on February 27, 2020 at 7pm
    - CMS Building Committee Meeting March 19, 2020 at 7:30am
9. Correspondence
10. Public Comments
11. New Business
12. Adjourn

The above topics represent what the Chair reasonably anticipates will be discussed at this meeting at the time of this posting.

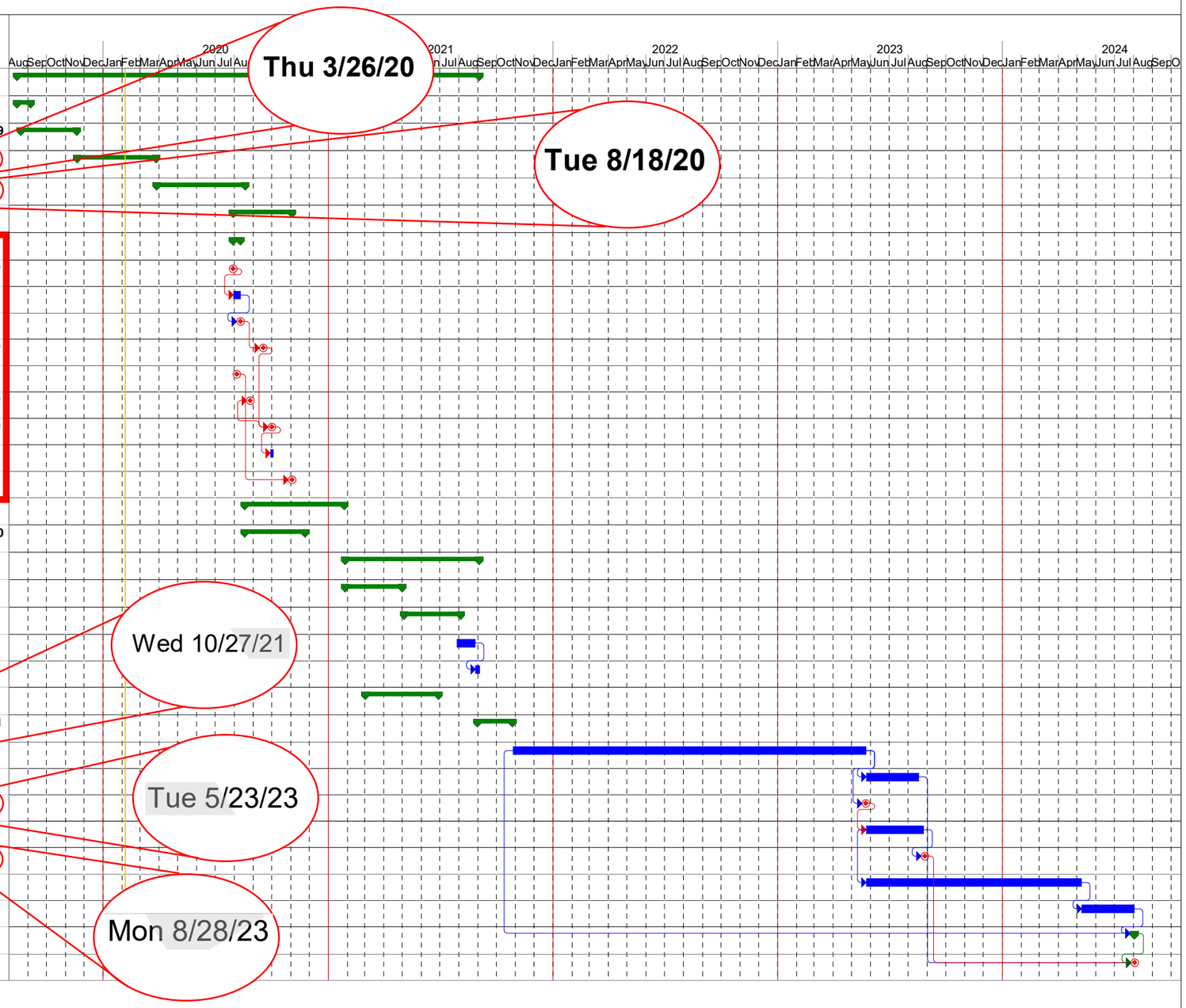
Concord School Building Committee

Stephen Crane, Town Manager	Court Booth, School Committee Representative
Jared Stanton, Director of Finance and Operations CPS	Heather Bout, School Committee Representative
Susan Bates, Select Board	Frank Cannon, Community Volunteer
Laurie Hunter, Superintendent of Schools	Chris Popov, Community Volunteer
Justin Cameron, CMS Principal	Charlie Parker, Community Volunteer
Jon Harris, Budgeting and Purchasing Director	Matt Root, Community Volunteer
Russ Hughes, Facilities Director	Tim Hult, Co-Chair
Pat Nelson, Vice Chair	Dawn Guarriello, Co-Chair
Kate Hanley, Sustainability Director	

Town of Concord
Middle School
Project Schedule

Hill International

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Concord Middle School**	**517 days**	**Wed 8/14/19**	**Thu 9/2/21**
2	✓	**OPM Selection**	**15 days**	**Wed 8/14/19**	**Wed 9/4/19**
7	✓	**Designer Selection**	**62 days**	**Tue 8/20/19**	**Mon 11/18/19**
21		**Feasibility Study**	**88 days**	**Tue 11/19/19**	**Thu 3/26/20**
30		**Schematic Design**	**101 days**	**Fri 3/27/20**	**Tue 8/18/20**
40		**Town Actions**	**66 days**	**Wed 7/29/20**	**Tue 11/3/20**
41		**Warrant**	**8 days**	**Wed 7/29/20**	**Mon 8/10/20**
42		Warrant Initiated	0 days	Wed 7/29/20	Wed 7/29/20
43		Warrant Open	8 days	Thu 7/30/20	Mon 8/10/20
44		Warrant closed (10 days after openning)	0 days	Mon 8/10/20	Mon 8/10/20
45		Special Town Meeting	0 days	Wed 9/16/20	Wed 9/16/20
46		Finalize Language for the Ballot (Presedential Election)	0 days	Wed 8/5/20	Wed 8/5/20
47		Finalize Language for the Ballot (35 days before Election)	0 days	Wed 8/26/20	Wed 8/26/20
48		MS Ballot Question	0 days	Wed 9/30/20	Wed 9/30/20
49		Finalize OPM and Designer Contracts	5 days	Mon 9/28/20	Fri 10/2/20
50		Presidential Election Day	0 days	Tue 11/3/20	Tue 11/3/20
51		**Design Development**	**110 days**	**Mon 8/17/20**	**Tue 1/26/21**
64		**Commissioning Agent Selection**	**68 days**	**Mon 8/17/20**	**Mon 11/23/20**
80		**Construction Documents**	**154 days**	**Wed 1/27/21**	**Thu 9/2/21**
81		**60% Construction Documents**	**66 days**	**Wed 1/27/21**	**Fri 4/30/21**
94		**90% Construction Documents**	**66 days**	**Mon 5/3/21**	**Tue 8/3/21**
104		100% Construction Documents	22 days	Wed 7/28/21	Thu 8/26/21
105		CMSBC Approval of 100% CD Package	5 days	Fri 8/27/21	Thu 9/2/21
106		**GC and Subs Contractor Prequalifications**	**84 days**	**Mon 3/1/21**	**Mon 6/28/21**
113		**Bidding**	**40 days**	**Mon 8/30/21**	**Tue 10/26/21**
122		Construction Phase 1 - Building	396 days	Wed 10/27/21	Tue 5/23/23
123		Construction Phase 1 - Punchlist	60 days	Wed 5/24/23	Thu 8/17/23
124		New Building Substantially Complete	0 days	Tue 5/23/23	Tue 5/23/23
125		Move into new Building	66 days	Wed 5/24/23	Fri 8/25/23
126		New School Open for Classes	0 days	Mon 8/28/23	Mon 8/28/23
127		Reconstruct Fields at Old Building (Construction Phase 2)	240 days	Wed 5/24/23	Tue 5/7/24
128		Construction Phase 2 Punchlist	60 days	Wed 5/8/24	Thu 8/1/24
129		**Construction Details**	**1 day?**	**Thu 8/1/24**	**Fri 8/2/24**
222		Project Complete	0 days	Fri 8/2/24	Fri 8/2/24



Task Milestone Summary MSBA Milestone

PROPERTY SERVICES - PROJECT RISK & ISSUE LOG

PROJECT TITLE	Concord Middle School	PROJECT MANAGER:	Hill International	DRAFT	DATE	February 12, 2020

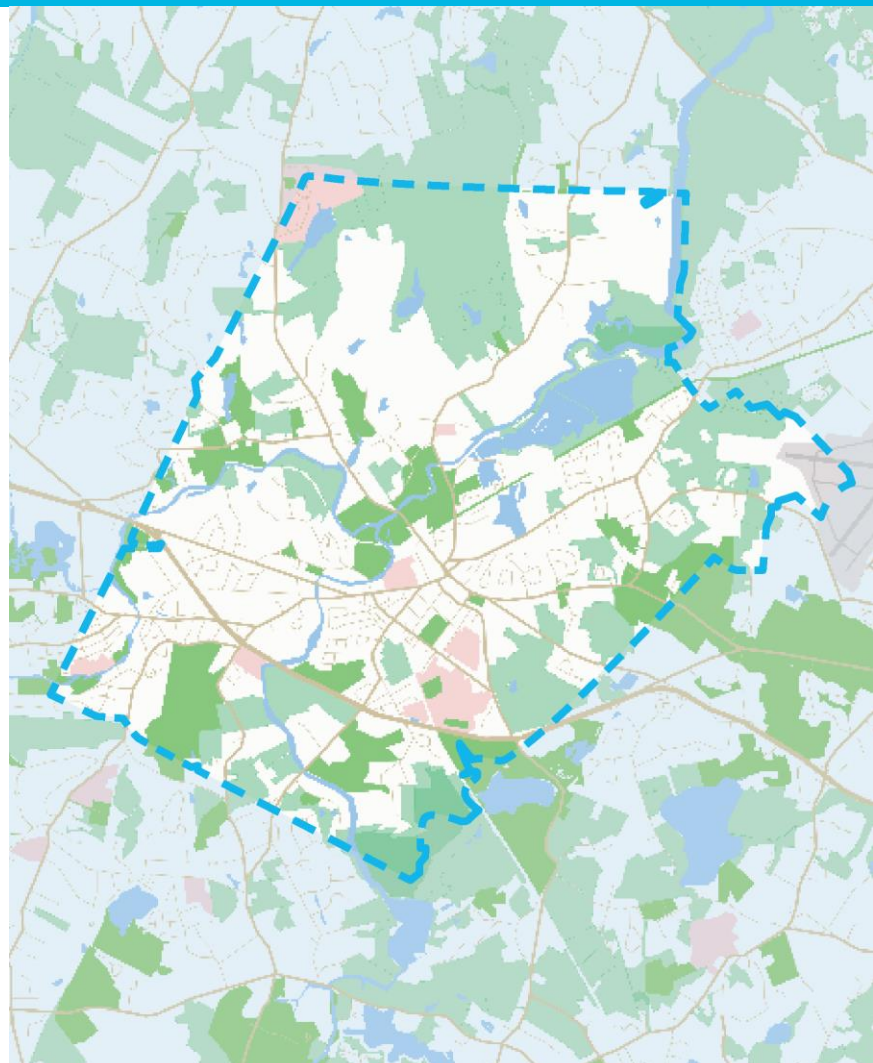
Risk No.	Risk/Issue/ Opportunity	Status Open / Closed	Date raised	Risk Description	Category	Likelihood	Lik Rating	Impact	Imp Rating	Proximity	Prox Rating	Risk Rating	Rating	Approach to Risk	Mitigation / Action	Risk Owner	Escalation to CMSBC	Target Date to Close
1	Risk	Open	13-Dec-19	Auditorium: is this to remain in the project? and if so how large/ number of seats? (7,000SF?)	Cost/Finance	Very likely	4	Major	4	Medium	2	High	16	Accept	- Review Cafetorium vs Auditorium. - Review Educational Programatic Requirements as well as Community Requirements. Work to address all needs, while maintaining Budget.	Owner/ Design Team	Yes	Mar-19-2020
2	Risk	Open	13-Dec-19	Gymnasium -Current program assumes 6,000 sf gym and 2,000 sf fitness/small gym. Do the Town and Community support a 8,000 sf gym in lieu of 6,000 sf?	Cost/Finance	Very likely	4	Major	4	Medium	2	High	16	Accept	Review Educational Programmatic Requirements as well as Community Requirements. Work to maximize benefits, while not overspending budget.	Owner/ Design Team	Yes	Mar-19-2020
3	Risk	Open	13-Dec-19	Construction Delivery Method	Time/Resource	Probable	3	Major	4	Near	3	High	12	Accept	Sooner this decision is made, the better. CM@ Risk could have additional Costs, but could also shorten the schedule, and could also allow for more coordination with PH/ Net Zero.	Hill / Owner / Design Team	Yes	Apr-30-2020
4	Risk	Closed	13-Dec-19	Preliminary Space Summary	Quality	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review Storage Requirements and maximize benefits, while not overspending budget.	Owner/ Design Team		Feb-13-2020
4.1	Risk	Open	13-Dec-19	Finalize Feasibility Space Summary	Quality	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review Storage Requirements and maximize benefits, while not overspending budget.	Owner/ Design Team	Yes	Mar-04-2020
4.2	Risk	Open	13-Dec-19	Finalize Schematic Design Space Summary	Quality	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review Storage Requirements and maximize benefits, while not overspending budget.	Owner/ Design Team	Yes	Jul-06-2020
5	Risk	Closed	13-Dec-19	Additional SF for SPED spaces	Quality	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review Educational Programmatic Requirements as well as Community Requirements. Work to maximize benefits, while not overspending budget.	Owner/ Design Team	Yes	Feb-13-2020
6	Risk	Closed	13-Dec-19	Additional SF for Learning Commons	Quality	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review Educational Programmatic Requirements as well as Community Requirements. Work to maximize benefits, while not overspending budget.	Owner/ Design Team	Yes	Feb-13-2020
7	Risk	Closed	13-Dec-19	Special Town Meeting	Time/Resource	Very likely	4	Major	4	Near	3	High	16	Accept	Special Town Meeting will be 9/16/20 and Ballot Questions will be 9/30/20	Owner	Yes	Feb-06-2020
8	Risk	Open	13-Dec-19	Passive House Design	Environmental/Social	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	The Passive House design may cost more and could impact the schedule due to long lead items. Review required materials and procure the materials early to avoid impact on schedule. Procure the commissioning agent at end SD phase.	Owner/ Design Team	Yes	Apr-16-2020
9	Risk	Open	13-Dec-19	Passive House Certification	Environmental/Social	Possible	2	Moderate	2	Medium	2	Low	4	Accept	Review if certification is required. There will be additional design fee and application fee to apply for Passive House certification.	Owner/ Design Team	Yes	Apr-16-2020
10	Risk	Open	17-Dec-19	Netzero Energy	Environmental/Social	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Design team to identify the long lead items and procure early.	Owner/ Design Team	Yes	Apr-16-2020
11	Risk	Open	17-Dec-19	Netzero Energy - Solar Panels	Environmental/Social	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Solar panels maybe funded separate from the project. Review location for PV site. Design team to present a week before.	Owner	Yes	Apr-16-2020
12	Risk	Open	17-Dec-19	Netzero Energy - HVAC systems	Environmental/Social	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Review the type of building systems early.	Owner/ Design Team	Yes	Apr-16-2020
13	Risk	Open	17-Dec-19	Netzero Energy - Kitchen Equipments	Environmental/Social	Very likely	4	Moderate	2	Medium	2	Medium	8	Accept	Kitchen equipment will all be electric. Are the users aware that all kitchen equipment will be electric?	Owner/ Design Team	Yes	Apr-16-2020
14	Risk	Open	18-Dec-19	Living Building Challenge	Environmental/Social	Probable	3	Moderate	2	Medium	2	Medium	6	Accept	Review if living building challenge is part of the project	Owner/ Design Team	Yes	Apr-16-2020
15	Issue	Closed	18-Dec-19	Enrollment: Confirm enrollment of 700 students.	Cost/Finance	Very likely	4	Major	4	Near	3	High	16	Accept	confirm enrollments of 700?	Owner	Yes	Feb-06-2020
16	Risk	Open	18-Dec-19	Budget: Confirm if $100M is the project cost limit.	Cost/Finance	Very likely	4	Major	4	Near	3	High	16	Accept	Confirm project budget value?	Hill / Owner / Design Team	Yes	Feb-13-2020
17	Risk	Open	16-Jan-20	Vote on Preferred Schematic Design	Time/Resource	Very likely	4	Moderate	2	Far	1	Medium	8	Accept	Design team will present final feasibility study.	Owner	Yes	Mar-19-2020

Town of Concord

Concord Middle School Project

Project Scope and Budget Check

February 13, 2020



Agenda

- Approve Enrollment (NESDEC)
- Approve Program (Summary of Spaces)
- Sustainability Goals
- Approve Schedule / TM date
- Next Steps

Enrollment

- District has confirmed 700 Student enrollment for Grades 6-8
- All future square footage analysis and costs will be based upon this enrollment

Program

School Organization Model

JUNIOR HIGH SCHOOLS operate much the way high schools operate – typically department based with core subjects and a large number of electives. Students are assigned to classes based on a matching of when courses are scheduled, matched with student availability for those times. Classes may have students from across the grade level.

A Junior HS configuration makes it difficult to maintain grade level structures.

Class curricula (subject based) and study methodology remain largely insular with little interdisciplinary and collaborative activities.

Space Summary Development takes the form of:

- Listing classes by discipline, (Math, SS etc.) and how many students would take each class. This determines the number of rooms by discipline
- Teachers don't own the classroom
- Classrooms can be scheduled with an average of an 85% utilization factor
- Junior high schools can be more efficient in floor plan and size
- This process can result in an odd number of rooms that prevent teaming.

MIDDLE SCHOOLS are "Team" based focused around four core subjects: ELA, Social Studies, Math and Science (on-team). Students remain with the same team members throughout all core subjects and remain with many classmates on a variety of off-team classes.

Teams promote:

- Strong student to student relationships
- Strong student to teacher relationships

Interdisciplinary and collaborative activities around Project and Problem based student learning

Teams function properly when the full team is intact. When you force a "half or partial -team", it requires a Junior High school model for some students, which can impact many students. There can be an inherent in-equity for students and a sense of non-belonging. This can extend to the teachers.

Team design provides for teacher ownership of the classrooms. This promotes a deep emersion approach to the classroom appointments. This is somewhat less efficient than junior high schools in terms of percentage of room use.

Space Summary Development takes the form of: (for CMS)

- Three Team scenario:
- Assume 700 students
- 700 students / 3 grades = 234 students per grade
- Assume 3 teams / grade = 78 students / grade
- 78 student teams / 4 core subjects = 19.5 students average class size

Program

Summary of Spaces

- Core Classrooms & Science developed around three (3) Middle School Teams per Grade Level – focused around Team Learning Commons
- Science labs set at 1,200 NSF assuming 20 students per lab (60 sf/student per safety standards)
- Dedicated classrooms for Team Teachers
- Reflects input from teachers and staff: 19 meetings; 160 participants
- Some Spaces are smaller or larger, compared to MSBA Guidelines, to reflect CMS needs
- Gym at 6,000 NSF, reflect PE needs and match the MSBA Guidelines
- Reflects Cafetorium Approach

This results in a new **GSF of 159,972**

Program

Possible Additions

- Increase Gym to 8,000 NSF = 3,000 GSF addition
- Add an Auditorium of 700 seats = 11,100 GSF (gross delta after the cafetorium stage is removed and the auditorium is added back in).

This results in a new **GSF of 174,072**

Proposed Space Summary - Middle Schools

Concord Middle School	Existing Conditions			PROPOSED New		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES			**39,118**		64	**48,150**
(List classrooms of different sizes separately)						
Classroom - General (Sanborn)	varies	22	18,846	850	27	22,950
Classroom - General (Peabody)	varies	14	12,362			
World Languages Classrooms				850	8	6,800
Small Group Seminar (20-30 seats) / Resource						
STE Room- Grade 6						
STE Storage						
Science Classroom / Lab- Grades 6 (Peabody)	varies	3	2,459	1,200	3	3,600
Science Classroom / Lab- Grades 7-8 (Sanborn)	varies	5	5,451	1,200	6	7,200
Prep Room				150	6	900
Central Chemical Storage Rm				80	1	80
Team Learning Commons				700	9	6,300
Departmental Storage (ELA, SS, A, WL)				80	4	320
SPECIAL EDUCATION			**3,847**			**10,060**
(List classrooms of different sizes separately)						
Self-Contained SPED Grades 7-8 (Sanborn)	varies	5	1,776			
Self-Contained SPED (Peabody)	varies	3	1,619			
Self-Contained SPED Toilet				60	1	60
Resource Room						
Small Group Room / Reading				150	18	2,700
SPED Office/Conference	varies	2	355	200	1	
BCBA Office/Conference				200	1	200
Speech Office/Conference	97	1	97	200	1	200
Workshop Classrooms (1 / team)				500	6	3,000
ACCESS sub-separate				850	1	850
Language Based sub-separate				850	1	850
ASD High Needs sub-separate w/ toilet				1,200	1	1,200
Occupational Therapy (OT)				300	1	300
Physical Therapy (PT)				700	1	700
ART & MUSIC			**10,857**			**8,850**
Art Classroom (Sanborn)	varies	2	2,557	1,200	3	3,600
Art Classroom (Peabody)	1,671	1	1,671			
Art Workroom w/ Storage & kiln	varies	2	394	150	3	450

Sustainability Goals

KEY

- In alignment with a LEEDv4 Silver Certifiable/ MA Stretch Code
- Sustainability Goals beyond LEED

Highly Recommended
Ultra-Low Energy Goals:
EUI 25-30

Energy

- Photovoltaic (PV) System
- NZ Ready Facility
- Air Infiltration Testing
- Plug Load Controls
- Sub-Metering / Adv. Controls
- PV Ready Roof EV Charging Ready
- Enhanced Commissioning
- All Electric HVAC
- LED Efficient Lighting
- Advanced Lighting Controls
- Building Enclosure Commissioning
- High Performance Bldg. Enclosure
- Demand Control Ventilation

Water

- Water Sub-metering
- Water Effeciency Appliances
- Kitchen Equipment
- Low-flow Fixtures

Site

- Green Roof
- PV Parking Canopy Ready
- Bioswales
- School Community Garden
- Outdoor Learning Classrooms
- Light Pollution Reduction
- Stormwater Treatment
- Bicycle Facilities
- EV Charging Stations Ready
- Brownfield Remediation

IEQ

- Circadian Rhythm Lighting Design
- Expanded Outside Air–DOAS (HVAC)
- User Friendly Lighting Controls
- Abundant Daylight
- Low Emitting Materials
- Natural Ventilation
- Views
- Thermal Comfort
- Biophilia
- Stair Accessibility / Fitness

Materials

- Flexible Design
- Building Life-Cycle Impact
- Health Product Declaration (HPD)
- Envrion. Product Declaration (EPD)
- Durability
- Low Maintenance
- Recycled Content
- Construction Waste Management
- Regional Materials
- FSC Certified Wood

Post-Occupancy

- Measured Daylight
- Measured Energy Use
- Plug Load Management
- Green Educational Curriculum
- User Behavior

EWING COLE | SMMA

NZE and Green Building Certification Comparison

	Energy	Materials	Water	IEQ	Site
LEEDv4	10% > New Code (MSBA) to NZER/NZE	Sustainable & Healthy Materials	20% + Potable Water Reduction	Optimal Daylight & Thermal Comfort	Enhanced Stormwater Management
Living Building Challenge	NZE & NET Positive	Avoid Red List Substances	Net Zero Site Water	IAQ Testing & Monitoring, Biophilic Materials	Alternate Modes of Transportation
WELL	Equivalent to LEEDv4	Equivalent to LEEDv4	Beyond LEEDv4 (Potable Water Treatment)	Beyond LEEDv4 (Circadian Rhythm Lighting)	Outdoor Pedestrian Activity
Passive House	NZER/NZE Pathway (Air Filtration Reduction)	N/A	N/A	HVAC filters (MERV)	Passive Solar and Cooling Strategies

EWING COLE | SMMA

Building Systems & Design Criteria Comparison

BUILDING CRITERIA	STRETCH CODE	NET ZERO (READY)	PHI - PASSIVE HOUSE	LBC- NZE certification only (Living Bldg Challenge)	LEED SILVER
EUI Goal (kBtu/SF/yr) [Site]	40-50	25-30	38 (Source)	25-30	*Energy Costs based rating* *NZE DOES NOT AUTHOMATICALLY YIELD PLATINUM* *NZE = 10-20 pts* *Silver = 50+ pts*
				NZE required	
Building Enclosure					
Roof Insulation	R-42	R-60	R-60	R-60	
Wall Insulation	R-32	R-40	R-40	R-40	
Glazing Systems (Assembly)	U-0.35 or better	U-0.22 (triple)	0.14 (triple)	U-0.22 (triple)	
WWR	30-40% max	30% max	20-30%	20-30%	
Air Infiltration Reduction (CFM/SF @ 75 PA)	0.4-0.25	0.15 or better	0.08 or better	Not Specified	
Lighting and Electrical Systems					
LPD - Lighting Power Density (w/SF)	0.58 or better	0.5 or better	0.4 or better	0.5 or better	
Lighting Controls	Advanced	Advanced	Advanced	Advanced	
Plug Load Controls (% outlets)	50%	75-90%	75-90%	75-90%	
HVAC Systems					
Conventional					
Natural Gas Heating- DX cooling	Allowed	Allowed (not optimal)	Allowed (not optimal)	NOT Allowed	Allowed
Natural Gas Heating- Chilled water cooling					
All Electric Heating & Cooling	Allowed	Preferred	Preferred	Required	Allowed
ASHP - Air Source Heat Pumps (VRF)					
GSHP - Ground Source Heat Pumps					
DOAS Ventilation System					
Renewable Energy					
Solar Photovoltaic	PV ready	PV or PV ready	Optional	Required	10% PV
Battery Storage	Recommended Readiness	Recommended Readiness	Optional	Preferred	Not Required
Commissioning					
MEP and Enclosure	*MSBA required*	Required	Required	Required	Required
Whole Building Air Infiltration Testing	*Not Required*	Recommended	Required	Recommended	Not Required
Additional Verifcation/Testing	*Not Required*	*Not Required*	Required	*Not Required*	Not Required

LEED Platinum
+80 pts

SMMA

PRELIMINARY INCREMENTAL COSTS						
BUILDING CRITERIA		**STRETCH CODE**	**NET ZERO (READY)**	**PHI - PASSIVE HOUSE**	**LBC- NZE certification only**	**LEED Silver**
Building Systems & Enclosure	$	within ECC	**$355,200**	0.5% over NZE **$400,000**	**$355,200**	Silver=in ECC
	% cost		**0.36%**		0.36%	
	$/SF		$2.22		$2.22	
PV System (Preliminary Estimate)	PV	N/A (C406 option not pursued)	1.7 MW (100%)	N/A (not required)	1.7 MW (100%)	N/A (not required for Silver)
	PV ($)		**$5,908,558**		**$5,908,558**	
	% cost		5.9%		5.9%	
Whole Bldg Air Infiltration Testing	($)	$0	$15,000	$15,000*	$15,000	$0
GC/CM Education	($)	$0	TBD	TBD	TBD	$0
Certification Costs						
Registration/Review Fees				$35,000	$400-$600	$20,000
Consultants Fees				$85,000 - $115,000	$9,000- $14,000	$0-$50,000
Total Fees		N/A	N/A	**$120,000- $150,000**	**$10,000- $15,000****	**$20,000- $70,000**
				*Testing performed by Consultant below.	**NZE Certification Only - does not include Battery Storage	

Note: All PRELIMINARY costs listed above are subject to change, pending design outcome, construction market conditions, etc.

SMMA

Schedule

	Start	Finish
Feasibility Study	Mon 11/18/19	Thu 3/26/20
Schematic Design	Fri 3/27/20	Tue 8/18/20
Special Town Meeting	Thu 9/16/20	Thu 9/16/20
Design Development	Thu 8/17/20	Tue 1/26/21
Ballot Question	Wed 9/30/20	Wed 9/30/20
Construction Documents	Wed 1/27/21	Wed 9/2/21
60% CDs	Wed 1/27/21	Fri 4/30/21
90% CDs	Mon 5/3/21	Tue 7/27/21
100% CDs	Wed 7/28/21	Thu 8/26/21
Bidding	Fri 8/30/21	Tue 10/26/21

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Next Steps

- February 27th Community Meeting – format and agenda

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Thank You

Q/A

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Summary: January 14, 2020 Concord Middle School Building Committee Forum

The goal of this forum was to broadly listen and learn from the community. We were pleased to hear robust feedback from almost a hundred attendees. The Middle School Building Committee leadership team for the project, several other members of the committee, representatives from our Owners Project Manager and architectural partners, school committee members and several school administrators were in attendance. There were questions and discussion around several broad topics including:

1. **Sustainability -** net zero (esp health,water and air quality), waste water run off (as it impact wetlands and local wells), coordination with CMLP (solar and battery storage),integrating sustainability efforts into student learning, Several people asked for a commitment to net zero, and an understanding of barriers to the commitment to net zero. Recycle materials in demolition. Consider use of building as energy storage.
2. **Special needs children** (more inclusivity of special needs students, design around minimizing auditory and visual distractions for sensory sensitive children, drop/off pick up at same location as other children, human-centered / universal design). Include sub committee dedicated to this issue and need to enlist experts in the area, consider impact of reducing out of district placements in design. Special Education classrooms integrated in programming spaces**.**
3. **Community needs** - Better athletic facilities for kids and active community at large (for summer and after hours activities), availability of existing fields during and post construction, request for large auditorium to accommodate Town Meeting, community meeting rooms, etc. Connect school to local trails so kids and residents can bike to school. *It was noted that after school and summer activities are vital for student (and community!) mental well-being. Include plans to use building outside of school hours.*
4. **Safety** - need to consider student safety in building design. Parking / traffic design must minimize impact and maximize safety for middle school and neighborhood.
5. **Cost** - need to emphasize lifespan cost as well as up front cost. Understand potential lifespan of building. This is going to cost more than $100M. Need to have more community outreach events so that everyone finds the cost (and compromises) acceptable given the ambitious goals for this last school building. *Need to be very transparent about choices.*
6. ***Faculty/Teaching*** involvement of staff in design development, professional development for staff relative to the building, balancing technology use, minimizing distractions given possibility of glass walls, what does teaching look like in the newly designed space, how is the flexible collaborative design of learning spaces different from the open classroom model introduced in the “70’s,
7. ***Suggestions for future meetings*** visuals, more informal meeting venue, microphones, target forums to specific areas ie: inclusion, sustainability, educational programming…
8. **Health/ Wellness –** integration of health, wellness, nutrition, fitness in building vision. Ventilation, good air quality, natural light all critical. Access to outdoors. Full size gym. “Warm” welcoming feeling.
9. **Other** What is the plan for Peabody, how can students be involved planning, time-line for construction, How does SMMA design? Templates or from the ground up? Incorporate gardening in greenspace. Incorporate STEM/STEAM integration. Use building project/process as educational opportunity. Be familiar with and avoid pitfalls of high school project. Don’t overdo technology use. Procure the right furnishings for the long term (not just the cheapest). Consider a Media Room where kids could learn to create and edit video. Provide roles for community involvement in the process.

Watch The Forum

https://www.youtube.com/watch?v=r-4QEqDwsGo

Upcoming meetings

League of Women Voters (First Friday Forum)

Feb 7th, 9 AM, West Concord Union Church (across from Fowler Library)

Middle School Building Committee

February 13 7:30 AM Ripley Administration Building

February 27 7:30 AM Ripley Administration Building

February 27, 7 PM, Peabody Middle School Community Forum