

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | November 15, 2018



ARROWSTREET



Agenda

» 150 Jackson Road and 687 Watertown Street

Existing buildings observations

» Lincoln-Eliot Educational Programming

- Visioning workshop summary
- Space summary template

» NECP Educational Programming

- Visioning workshop summary
- Programming summary

» Next Steps/ Feasibility guiding questions

150 Jackson Road / Newton, MA



150 Jackson Road / Existing Building Conditions

Site and Civil



150 Jackson Road

Site and Civil

Observations

Parking spaces	140
Existing play structures	●
Neighborhood concerns	●
Existing parking lot pavement	●
ADA accessible site	●
Separation of vehicles and pedestrians	●
Hazardous soils	●
Wetlands buffer zone (Wetlands Protection Act)	n/a

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable

150 Jackson Road / Existing Building Conditions

Architecture and Code



150 Jackson
Road

Architecture and Code

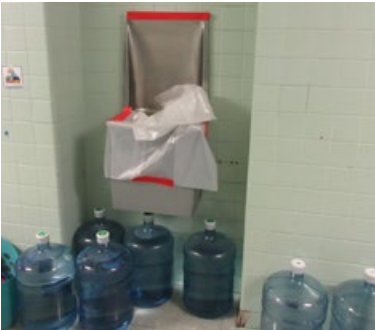
Observations

Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	●
Fire protection system	●
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend

●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road / Existing Building Conditions Structural and Plumbing/ Fire Protection



Legend	
●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road

Structural

Observations

Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	n/a
Concrete spalling	n/a
Noticeable floor deflection	n/a

Plumbing and Fire Protection

Observations

Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	●
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	●
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

150 Jackson Road / Existing Building Conditions

Heating Ventilation, and Air Conditioning (HVAC)



150 Jackson
Road

Heating, Ventilation, and Air Conditioning (HVAC)

Observations

Chiller	●
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

Legend

●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable



Electrical

Observations

Life safety lighting	●
Backup generator	●
Fire alarm system	●
Lighting systems	●
Lightning protection system	●
Tel/ Com and IT Systems	●
Building communication system	●
Main switchboard and branch circuit panels	●
Receptacle quantity and quality (GFCI)	●

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable

150 Jackson Road / Building Observation Summary

- » *Site/ Civil* - Anticipate overall improvements to support the project
- » *Exterior* - Generally in good condition; miscellaneous repairs as required
- » *Interiors* - Substantial renovation to support the Educational program, upgrade finishes, and address ADA accessibility
- » *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- » *Fire Protection* - Incorporate needed fire protection/ suppression system
- » *HVAC* - System is functional, but has reached its life expectancy and should be replaced to improve building performance, thermal comfort, energy efficiency, and indoor air quality
- » *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT needs upgrade/ replacement.

687 Watertown Street / Newton, MA



687 Watertown Street / Existing Building Conditions Site and Civil



687 Watertown Street

Site and Civil

Observations

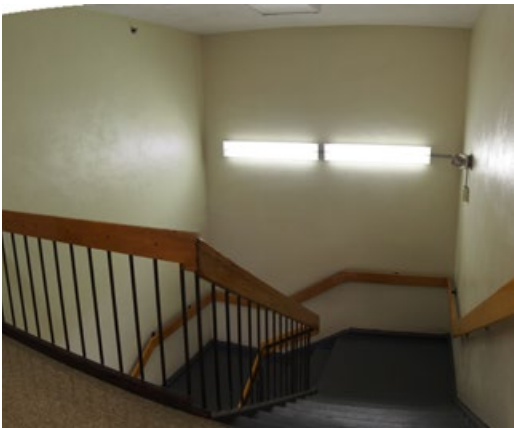
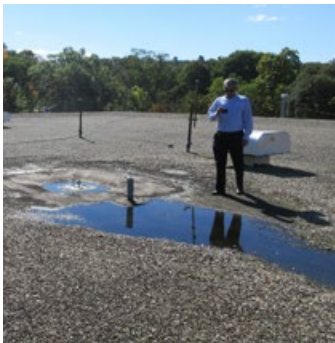
Parking spaces	22 On site
Existing play structures	●
Neighborhood concerns	Unknown
Existing parking lot pavement	●
ADA accessible site	●
Separation of vehicles and pedestrians	●
Hazardous soils	Unknown
Wetlands buffer zone (Wetlands Protection Act)	●

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable

687 Watertown Street / Existing Building Conditions Architecture and Code

687 Watertown
Street



Architecture and Code

Observations

Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	●
Fire protection system	●
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable

687 Watertown Street / Existing Building Conditions
Structural and Plumbing/ Fire Protection

687 Watertown
Street



Structural

Observations

Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	●
Concrete spalling	●
Noticeable floor deflection	●

Plumbing and Fire Protection

Observations

Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	●
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	n/a
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

687 Watertown Street / Existing Building Conditions Heating Ventilation, and Air Conditioning (HVAC)

687 Watertown
Street

Heating, Ventilation, and Air Conditioning (HVAC)

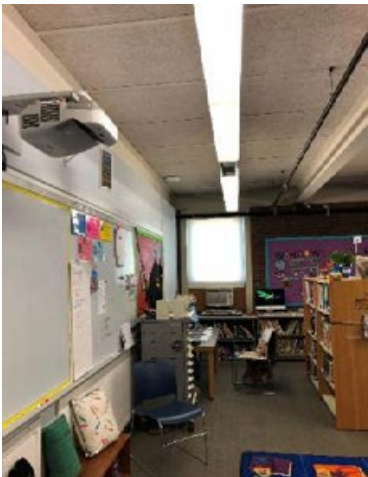
Observations

Chiller	n/a
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable





Electrical

Observations

Life safety lighting	n/a
Backup generator	●
Fire alarm system	●
Lighting systems	●
Lightning protection system	n/a
Tel/ Com and IT Systems	●
Building communication system	●
Main switchboard and branch circuit panels	●
Receptacle quantity and quality (GFCI)	●

Legend

- Good
- Repair/ Update
- Replace/ Needed/ Address
- n/a Not applicable

687 Watertown Street / Building Observation Summary

- » *Site/ Civil* - Anticipate overall improvements to support the project and anticipated programming
- » *Exterior* - Structurally performing adequately with some noticeable floor deflection and spalling concrete
- » *Interiors* - Renovation to upgrade finishes, support the Educational program, and address ADA accessibility, including adding an elevator
- » *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- » *Fire Protection* - Provide sprinklers at underside of exterior canopies
- » *HVAC* - System is functional, but has reached its useful life expectancy and should be replaced to improve building performance, energy efficiency, and indoor air quality
- » *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT systems need upgrade/ replacement.

Lincoln-Eliot / Educational Planning Workshop Summary



ORGANIZATION

	5	5	5
A. GROUND FLOOR	5	5	5
B. MULTICOMMUNITY	3	3	4
C. TRANSITION/RENTAL	2	2 1/2	3
D. MULTICOMMUNITY	2	1	1
E. W/OPEN/CHILD	2 1/2	1	1
F. TEACHER COOP	2 1/2	3	3 1/2
G. TEACHER/TEACHER	3	4	4
H. STUDENT/TEACHER	3 1/2	4	8 1/2
I. OTHER	-	-	-



JPS ES MODEL
LATITUDE FOR INNOVATION
EQUITY IS IMPORTANT
COOKIE CUTTER
LETTER
STALEY - DOES PULL OUT/WORKS
- SINGING
- VOICES SOUND CONTROL
- TONER OF TALKS LEADS TO
BE IN CASE PROBLEM
- GRADUATION
- MANY OTHER SHIPMENTS
CLASS GRADE



- » Half day session with Lincoln-Eliot team
- » Design for flexibility and inclusiveness
- » Develop small learning communities, learning spaces arranged in clusters
- » Maximize teacher planning space to foster collaboration, interdisciplinary teaching
- » Maximize circulation spaces that offer opportunities for breakout spaces and group learning
- » Improve pick-up/ drop off and entry to provide better access and security for families and caregivers

Lincoln-Eliot / Programming and Enrollment

- » Enrollment = 465 Students / Grades K - 5
- » 20 - 23 Students per classroom
- » 24 Classrooms (22 Typical + 2 Special Education)

	K	1	2	3	4	5	Total
Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other
Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

**Lincoln-Eliot
Preliminary Design Program**

ROOM TYPE
CORE ACADEMIC SPACES
<i>(List classrooms of different sizes separately)</i>
Pre-Kindergarten w/ toilet
Kindergarten w/ toilet
General Classrooms - Grade 1-5
ELL Program
SPECIAL EDUCATION
<i>(List rooms of different sizes separately)</i>
Self-Contained SPED
Self-Contained SPED - toilet
Resource Room
Substantially Separate Classroom
Learning Centers (K-2; 3-5)
Breakout Rooms (small group/ individual instruction) 1/grade average. Extended Learning Areas
OT/PT
Sensory Room/ additional OT/PT
Safe Room/ Mindful Room 1/ academic floor
Speech + Language
Reading Program/ Literacy Room
Inclusion Facilitators (office for 6 adults; 150SF per person)
Literacy Specialist (Office + teaching area for 6 students)
Math Coach
Team Specialist + IEP Conf Room (12 adults)
Psychologist (Office, testing, therapy, storage)
Social Worker (Office, testing, conferences)
ART & MUSIC
Art Classroom - 25 seats
Art Workroom w/ Storage & kiln
Music Classroom / Large Group - 25-50 seats
Music Practice / Ensemble (Groups 4-10 students)
Music Practice / Ensemble (Groups 4-10 students)
HEALTH & PHYSICAL EDUCATION
Gymnasium
Gym Storeroom
Health Instructor's Office w/ Shower & Toilet

* Where discrepancy between Angier, Zervas, and
Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot (Target Program) 465 Students			
ROOM NFA ¹	# OF RMS	area totals	Comments
	22 + 2 (SpEd)	20,700	
1,200	4	4,800	
850	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.
300	2	600	Due to larger ELL population
		10,775	
850	2	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program
		0	
		0	
450	2	900	Currently 1 Learning Center in existing L-E
125	8	1,000	Currently 1 Small Group Instruction in existing L-E.
475	1	475	Difference due to high needs, assume 1 shared breakout space per 2 classrooms
450	1	450	
100	3	300	
150	2	300	
850	3	2,550	Currently 1 Reading Program in existing L-E.
450	2	900	Difference due to higher needs and Title 1 school
250	3	750	Difference due to higher needs and Title 1 school
250	3	750	Difference due to higher needs and Title 1 school
400	1	400	
150	1	150	
150	1	150	
		2,650	
1,000	1	1,000	1 Art Classroom currently in existing L-E
150	1	150	
1,200	1	1,200	1 Music Classroom currently in existing L-E
150	2	300	
		6,300	
6,000	1	6,000	
175	1	175	
125	1	125	

EXISTING NEWTON PUBLIC SCHOOLS								
Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals
		21,472			23,450			22,690
1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
925	18	16,650	925	20	18,500	888	20	17,760
298	1	298	150	1	150	250	1	250
		5,965			5,500			6,900
925	1	925	900	1	900	925	2	1,850
470	2	940	450	2	900	475	2	950
121	7	845	125	6	750	125	6	750
511	1	511	450	1	450	475	1	475
106	2	212	100	2	200	100	3	300
298	1	298	150	2	300	250	1	250
925	1	925	900	1	900	925	1	925
238	1	238	150	1	150	300	1	300
176	1	176	125	1	125	250	1	250
161	1	161	125	1	125	150	1	150
428	1	428	400	1	400	400	1	400
155	1	155	150	1	150	150	1	150
151	1	151	150	1	150	150	1	150
		2,608			2,725			2,575
1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
178	1	178	150	1	150	150	1	150
1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
162	1	162	150	2	300	150	1	150
100	1	100	75	1	75	75	1	75
		6,105			6,300			6,300
5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
176	1	176	200	1	200	175	1	175
120	1	120	100	1	100	125	1	125

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other
Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

**Lincoln-Eliot
Preliminary Design Program**

ROOM TYPE
MEDIA CENTER
Media Center / Reading Room
DINING & FOOD SERVICE
Cafeteria / Dining
Stage
Chair / Table / Equipment Storage
Kitchen
Staff Lunch Room (1/3 of staff = 60 staff/3)
MEDICAL
Medical Suite Toilet
Nurses' Office / Waiting Room
Examination Room / Resting
ADMINISTRATION & GUIDANCE
General Office / Waiting Room / Toilet
Teachers' Mail and Time Room
Duplicating Room
Records Room
Principal's Office w/ Conference Area
Principal's Secretary / Waiting
Assistant Principal's Office
Supervisory/ Intinerant teachers/ Extended Program
Conference Room
Guidance Office/ Storeroom
SPED/ Specialist Work Room
Teachers' Work Room
Lactation Room
CUSTODIAL & MAINTENANCE
Custodian's Office
Custodian's Workshop
Custodian's Storage
Recycling Room / Trash
Receiving and General Supply
Storeroom
Network / Telecom Room
Total Building Net Floor Area (NFA)
Proposed Student Capacity / Enrollment
Total Building Gross Floor Area (GFA) ²
Grossing factor (GFA/NFA)

Multi-Grade Gathering Space

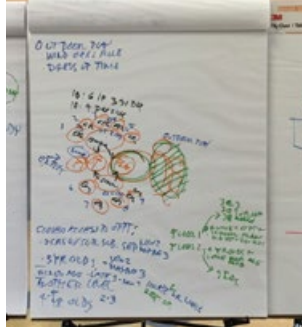
* Where discrepancy between Angier, Zervas, and
Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot (Target Program) 465 Students			
ROOM NFA ¹	# OF RMS	area totals	Comments
		2,800	
2,800	1	2,800	
		6,960	
3,400	1	3,400	
1,000	1	1,000	
360	1	360	
1,700	1	1,700	
250	2	500	
		510	
60	1	60	
250	1	250	
100	2	200	
		3,225	
700	1	700	
Included in General Office			
Included in General Office			
100	1	100	
300	1	300	
Included in General Office			
125	1	125	
750	1	750	
250	1	250	
400	1	400	Difference due to higher needs and Title 1 school
250	2	500	
100	1	100	Difference due to needs of the population
		2,080	
150	1	150	
375	1	375	
375	1	375	
400	1	400	
260	1	260	
320	1	320	
200	1	200	
		56,000	
		465	
		84,225	
		1.50	

1,500 1 1,500 100 students at 15 SF per student

EXISTING NEWTON PUBLIC SCHOOLS								
Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals
		2,770			2,875			2,830
2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
		6,321			6,663			6,960
3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
950	1	950	1,000	1	1,000	1,000	1	1,000
408	1	408	363	1	363	360	1	360
1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
234	2	468	250	2	500	250	2	500
		569			510			510
73	1	73	60	1	60	60	1	60
306	1	306	250	1	250	250	1	250
95	2	190	100	2	200	100	2	200
		2,305			2,515			2,595
750	1	750	680	1	680	650	1	650
Included in General Office			Included in General Office			Included in General Office		
Included in General Office			Included in General Office			Included in General Office		
79	1	79	60	1	60	100	1	100
301	1	301	300	1	300	300	1	300
Included in General Office			Included in General Office			Included in General Office		
117	1	117	125	1	125	125	1	125
428	1	428	650	1	650	750	1	750
218	1	218	200	1	200	250	1	250
206	2	412	250	2	500	210	2	420
		1,785			1,865			2,080
102	1	102	125	1	125	150	1	150
0	0	0	0	0	0	375	1	375
583	1	583	147	3	440	375	1	375
712	1	712	650	1	650	400	1	400
Included above			Included above			260		260
78	2	156	200	2	400	320	1	320
232	1	232	250	1	250	200	1	200
		49,900			52,403			53,440
		465			490			480
		74,960			78,800			80,160
		1.50			1.50			1.50

Newton Early Childhood Program/ Educational Planning Workshop Summary



- » Full day session with NECP team
- » Design different learning modalities, teaching styles, and program changes
- » Design for inclusiveness and spaces for specialists adjacent or within classrooms
- » Create shared specialist offices to foster collaboration and sharing between teachers
- » Improve pick-up/ drop off and entry to provide better access and security for families and caregivers
- » Reflect the culture of the community

Newton Early Childhood Program/ Programming and Enrollment

- » Enrollment = 200 - 300 students / Pre-Kindergarten
10 - 15 students added per month
- » 16 students maximum per integrated classroom
- » 9 students maximum per STRIDE classroom
- » 14 - 18 classrooms total

	Integrated Classroom	STRIDE Classroom	Total
Number of Students	176 - 288	18	+/- 300
Maximum Number of students/CR	16	9	
Number of Classrooms	15 - 16	2 -3	14 - 18

Newton Early Childhood Program/ Program Summary

Program Needs: (based on NECP Ed Program August 2018):

- Maintain classroom student to teacher ratios
- Small group OT/PT and Speech spaces
- Dedicated spaces for screening and testing
- Workspace for OT/PT and Speech Therapists
- Administration and Guidance with several multi-sized conference rooms and specialist spaces
- Gross motor space

Program Wishes:

- In-classroom toilets
- Dedicated PE space
- All school/ large group gathering multi-purpose space/ indoor play area
- Lactation room(s)

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential benefits of Lincoln-Eliot and NECP located on the same site:

- Shared learning opportunities
- Collaboration between Pre-K and Kindergarten teachers to facilitate student transition
- Shared administrative support
- Shared resources, such as medical suite
- Some families may benefit when Pre-K students continue to Lincoln- Eliot Elementary School

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential disadvantages of Lincoln-Eliot and NECP located on the same site:

- Educational spaces should be sized for each student cohort (for example, an elementary school sized gym may be too large/loud for Pre-K)
- Minimal program overlap (for example, Pre-K students eat in the classrooms so would not benefit from a shared cafeteria)
- Minimal benefit from age group interaction as Pre-K age students benefits more from interaction with High School age students
- Need separate entrances to avoid overwhelming Pre-K students. May be difficult to co-locate front offices activities with separate entries
- Minimal staffing overlap

Sequence of Program Movement / Option 1

Lincoln-Eliot at Jackson Road, NECP at Watertown Street

	CURRENT	SEPTEMBER 2019	SEPTEMBER 2020	SEPTEMBER 2021	SEPTEMBER 2022	SEPTEMBER 2023	SEPTEMBER 2024
225 NEVADA STREET Carr School	Cabot Students	Horace Mann Students					
229 CABOT STREET Cabot Elementary School	Under Construction	Cabot Students					
687 WATERTOWN STREET Horace Mann Elementary School	Horace Mann Students	Design and Construction		NECP Students			
150 JACKSON ROAD Former Aquanis Building	NECP Students			Under Construction			Lincoln-Eliot Students
191 PEARL STREET Lincoln-Eliot Elementary School	Lincoln-Eliot Students						Permanent Swing Space

Sequence of Program Movement / Option 2

Lincoln-Eliot and NECP at 150 Jackson Road

	CURRENT	SEPTEMBER 2019	SEPTEMBER 2020	SEPTEMBER 2021	SEPTEMBER 2022	SEPTEMBER 2023	SEPTEMBER 2024
225 NEVADA STREET Carr School	Cabot Students	Horace Mann Students					
229 CABOT STREET Cabot Elementary School	Under Construction	Cabot Students					
687 WATERTOWN STREET Horace Mann Elementary School	Horace Mann Students	Design and Construction		NECP Students		Permanent Swing Space	
150 JACKSON ROAD Former Aquanis Building	NECP Students			Under Construction		NECP Students Lincoln-Eliot Students	
191 PEARL STREET Lincoln-Eliot Elementary School	Lincoln-Eliot Students					Permanent Swing Space	

Feasibility Study: Guiding Questions for Further Investigations

- » What improvements are necessary to accommodate the Lincoln-Eliot space needs at 150 Jackson Road for 465 students and 24 core classrooms?
- » Should Lincoln-Eliot and NECP co-locate at Jackson Road, or separate?
- » Is the use of 687 Watertown Street for NECP a temporary use or permanent location?
- » What are the traffic and parking impacts to both 150 Jackson and 687 Watertown?
- » What is the best use of the existing auditorium at 150 Jackson Road? Can it become a shared community resource in addition to serving the school's program needs?
- » What use, if any, can be located in the former Convent portion of the building? What building and system improvements are necessary to support the re-use?
- » What are projected scope, schedule, and budget for the proposed project?

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | November 15, 2018

» Discussion



ARROWSTREET

