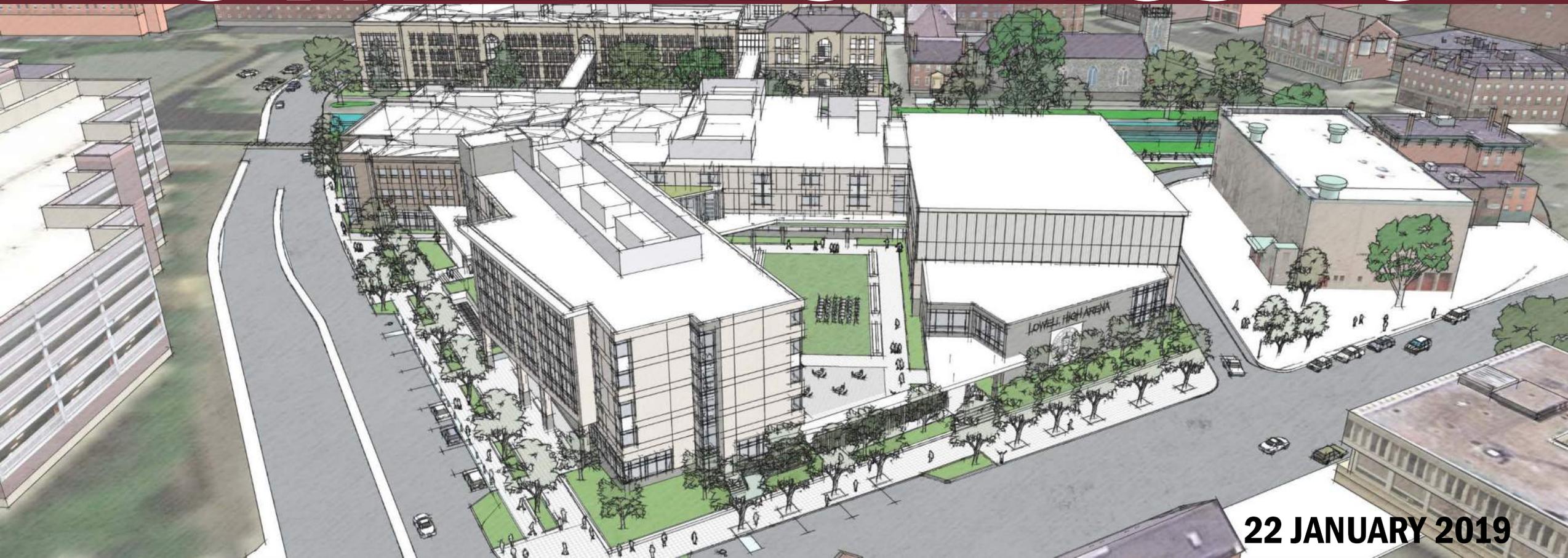


PERKINS —  
EASTMAN

CITY COUNCIL

# LOWELL HS PROJECT



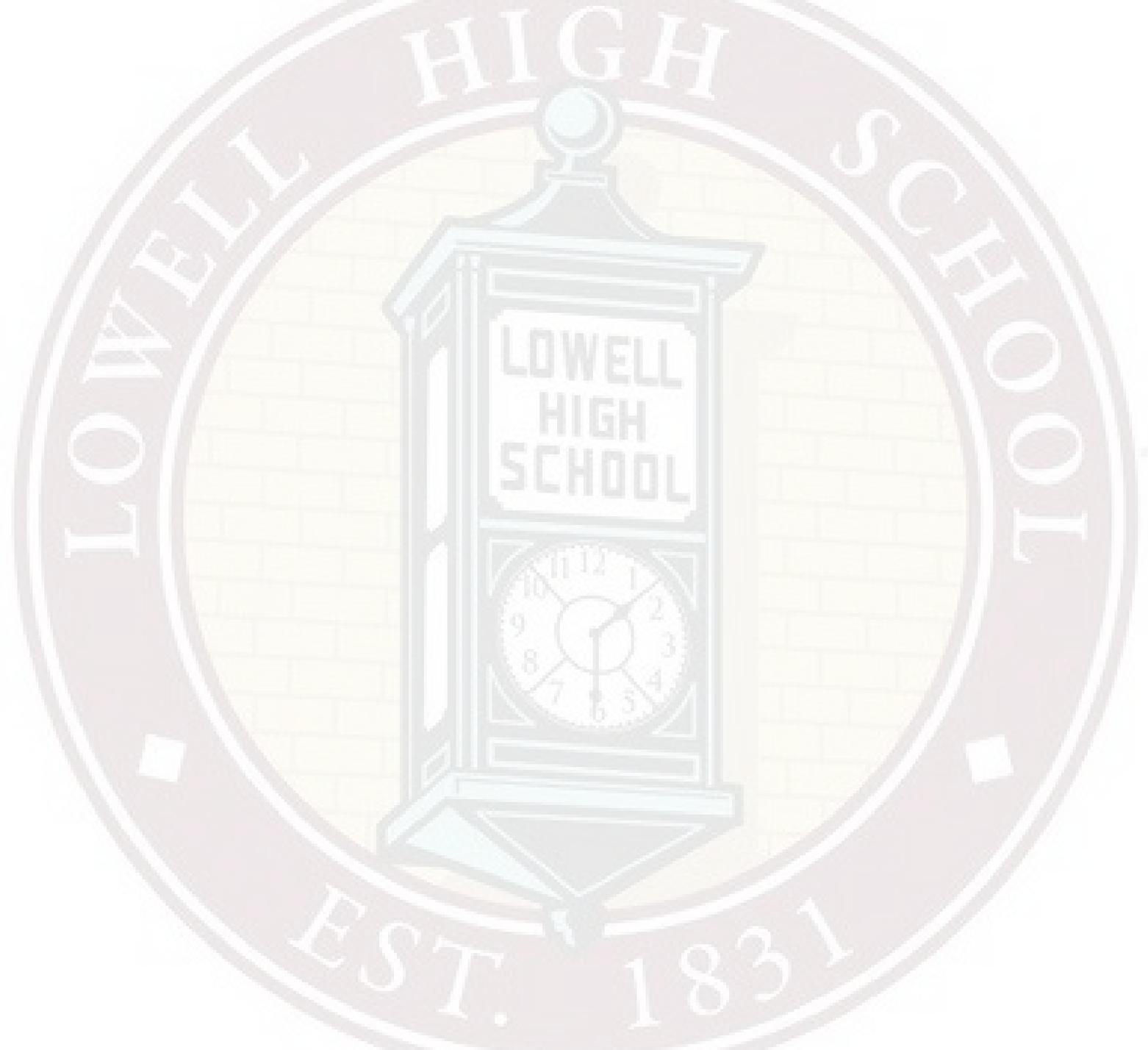
22 JANUARY 2019

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# LOWELL HIGH SCHOOL

## SCHEMATIC DESIGN UPDATE- AGENDA

- PROCESS
- PROGRAM & PLAN
- SITE DESIGN
- BUILDING DESIGN
- NEXT STEPS



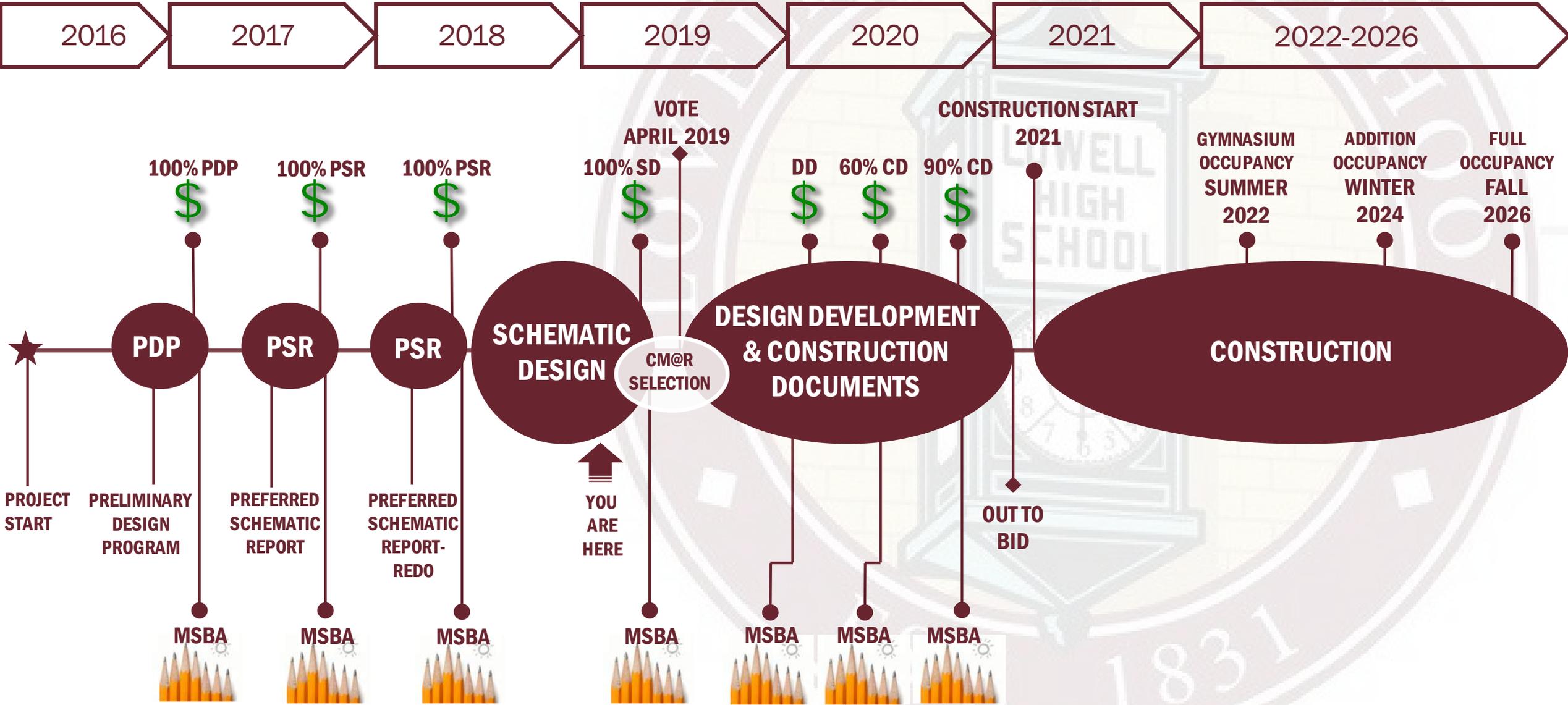
# LOWELL HIGH SCHOOL

## SCHEMATIC DESIGN RECAP

	AUGUST '18	SEPTEMBER '18	OCTOBER '18	NOVEMBER '18	DECEMBER '18	JANUARY '19
SBC MEETINGS	●	●	●	●		
ELT/WORKING GROUP MEETINGS						
FOCUS GROUP MEETINGS						
LOWELL HISTORIC/NATIONAL PARKS						
ISD/FIRE/POLICE						
PLANNING & DEVELOPMENT						
EX. CONDITIONS (75 ARCAND)						
STUDENT FORUM						
SECURITY MTG						

# LOWELL HIGH SCHOOL

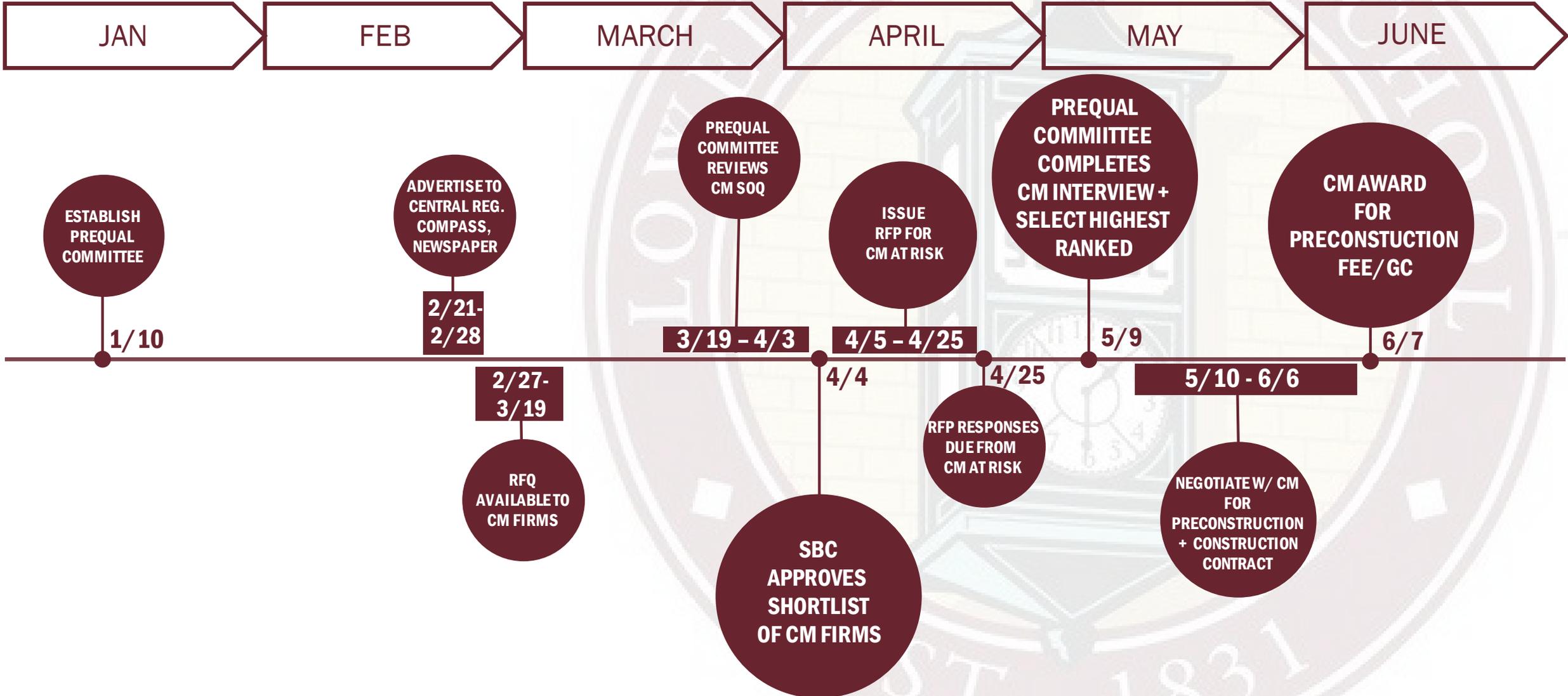
## OVERALL SCHEDULE



# LOWELL HIGH SCHOOL

CONSTRUCTION MANAGER AT RISK

## 2019



# LOWELL HIGH SCHOOL

AERIAL VIEW OF EXISTING CAMPUS



# LOWELL HIGH SCHOOL

AERIAL VIEW OF PROPOSED CAMPUS



# SPACE SUMMARY

MSBA Reviewed with Few Exceptions:

Core Academics - unchanged

Special Educ. - subject to DESE

Art & Music - unchanged

Voc. & Tech. - unchanged

Health & PE - unchanged

Media Center - unchanged

Aud. & Drama - unchanged

Food Service - unchanged

Medical - unchanged

Admin & Guid - unchanged

Cust. & Maint. - unchanged

Other - unchanged, few ineligible

Ineligible = 4k of 388k net sf (1%)

Gross Sf - updated per Bldg. Scan

- Existing Updated (628k to 614k)
- Proposed Updated (622k to 623k)

LOWELL HIGH SCHOOL				Proposed Space Summary v20 (SD)							
Existing Condition				Proposed Total							
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals		
<b>CORE ACADEMIC SPACES</b>				<b>CORE ACADEMIC SPACES</b>				<b>CORE ACADEMIC SPACES</b>			
Classroom - Freshman (incl Health)	748	4	2,903								
	800	4	4,800								
	800	12	10,131								
	940	3	2,544								
	1,624	2	2,543								
Average	836	37	Average								
	1,184	2	1,184								
	724	33	23,903								
	808	15	12,114								
	800	18	15,201								
	868	10	8,873								
	964	7	8,748								
	962	8	7,838								
	1,617	1	1,617								
Average	1,184	1	1,184								
Classroom - Gr 10-12 (incl Health & EL)	325	50	Average								
Classroom - General	122										
Teacher Planning - Freshman	493	1	493								
Adv. Prep (Tech/Art, Ling, 4th Comp, Cogn)	604	8	6,040								
Open Office (ing, 20' lab, 20' lab, 40' lab)	112	8	874								
Teacher Demos/Training (Libr, The + Creat)	3,598	1	3,598								
Teacher Planning	18										
Small Group Seminar (20-30 seats)											
Science Classroom / Lab - Freshman	378	7	6,843								
Science Classroom / Lab - Gr 10-12	900	18	17,100								
Science Classroom / Lab (incl 3 EL, Sci)	26										
Prep Room	156	7	1,091								
Central Chemical Storage Rm											
Unassigned Green House/Storage Room	198	1	198								
Clean Room (incl Micro/Bio Tech Lab)											
<b>SPECIAL EDUCATION</b>			<b>21,900</b>			<b>21,900</b>			<b>21,900</b>		
<b>LIFE SKILLS (88 slots +78 pre-asses)</b>				<b>LIFE SKILLS (88 slots +78 pre-asses)</b>				<b>LIFE SKILLS (88 slots +78 pre-asses)</b>			
Life Skills CR 1-2 (incl 100's/Laurel/Mat)	368	4	3,823								
Life Skills Hopes/Wash/Changing Rooms											
Life Skills Intensive CR +18 (2 age group)	872	2	1,744								
Life Skills Sensory Room	344	1	344								
Life Skills (Cogn, Autism CR - 18 S, Dist)	818	2	1,637								
Life Skills - Adaptive / Sensory-Mat											
<b>ADJUSTMENTS (80 slots +48 pre-asses)</b>				<b>ADJUSTMENTS (80 slots +48 pre-asses)</b>				<b>ADJUSTMENTS (80 slots +48 pre-asses)</b>			
Adjustments CR	738	7	5,103								
Adjust Social Worker	180	1	180								
Classroom Room											
Storage											
<b>FUNDAMENTAL 1180 slots +214 pre-asses</b>				<b>FUNDAMENTAL 1180 slots +214 pre-asses</b>				<b>FUNDAMENTAL 1180 slots +214 pre-asses</b>			
Fundamentals - Freshman	510	2	1,818								
Fundamentals - Gr 10-12	545	7	3,812								
Fundamentals Intensive (Support CR (for 28+)											
<b>OTHER SPECIAL NEEDS</b>				<b>OTHER SPECIAL NEEDS</b>				<b>OTHER SPECIAL NEEDS</b>			
<b>OFFICE</b>				<b>OFFICE</b>				<b>OFFICE</b>			
Class/Meeting/Inquiry Suite	1,686	1	1,686								
Speech & OT/PT (Office for 3 + mgt for 8)	178	3	534								
Physn - Emotions/Training	280	2	560								
Social Worker	180	1	180								
SKILLS Mentoring Office/Coord	181	2	362								
SPEO Dept Chair	241	1	241								
SPEO Sup. Team Chair (for 2)	227	1	227								
SPEO Office (Clerk/Meeting/Exec)	204	1	204								
Conference (1 for 12, 1 for 20)											

MSBA Guidelines			
(refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
850	120	102,000	85 SF per min. 1000 sq feet
150	120	12,000	
500	8	4,000	
1,440	31	44,640	1476 sq ft/36 seats 1 per 100 student
200	31	6,200	
200	1	200	

Class Building Net Floor Area (NFA)	314,212	228,537	154,533	388,876	364,867
Proposed Student Capacity / Enrollment	3,320			3,320	3,320
Total Building Gross Floor Area (GFA)	622,000	544,741	238,573	623,320	552,840
Grossing factor (GFA/NFA)	1.73	1.88	1.58	1.61	1.51

1 Individual Room Net Floor Area (NFA)  
2 Total Building Gross Floor Area (GFA)

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A false statement, made under the penalties of perjury.

Name of Architect Firm: Perkins Eastman / OPC  
Name of Principal Architect: Robert Bell  
Signature of Principal Architect: [Signature]  
Date: 30 November 2017

# EDUCATIONAL PROGRAM

- Connected Freshmen Academy
- Zone for Community Use / Lock-Off
  - Access to Media Center & Food Service
  - Daytime Public Access
- Create Hub/Heart to the School
- Organize for Interdisciplinary Collaboration
  - 9<sup>th</sup> Grade Core Academic Teams
  - STEM & Humanities Planning Clusters
  - Integrated SPED, ELL, Health & Flexible Learning Spaces
  - Clustered Fine Arts, Digital Media, ROTC & World Language
- Accessible House Model for Admin/Support
- Provide Good Daylight/Orientation
- Minimize Educational Disruption

## Educational Program (v12 for the revised PSR)

Lowell High School, established in 1831 with a principal and 47 students, was the first public co-educational high school in the United States and one of the first integrated high schools in the nation. In 1896 Coburn Hall was erected and an adjacent building was added in 1922. The school was expanded across the canal in 1980 with the construction of a new building and field house. Expansion and renovation of both buildings occurred in 1997. In 2005, the district repurposed a nearby middle school to serve as additional space for the Lowell High School Freshman Academy.

Throughout its long life, the high school buildings have been repurposed to the extent possible to meet educational needs, but the structure only allows for minimum flexibility and usage. As the school expands in numbers and evolves into a modern educational approach, a new facility is needed to implement technology seamlessly across the building and to offer flexible spaces that support collaboration and 21st century teaching and learning.

LHS successfully completed the Fall 2015 NEASC Accreditation process and received full reaccreditation. However, the school was placed on warning for standard 7: Community Resources for Learning, which deals with budget, facilities, and the physical plant. The accreditation committee listed the following concerns (noted in the 4/22/16 Accreditation letter):

*The school site and plant do not minimally support the delivery of high quality school programs and services, including but not limited to the following:*

- Leaks in the roof, the tunnel, and from sinks
- Temperature fluctuations where one room is considerably warm while another is considerably colder
- The presence of pests in the building
- Windows in need of repair
- The nurse's office which is small and not easily navigated by wheelchair-bound students
- The lack of full accessibility to individuals with physical handicaps
- The main cafeteria that is at or near capacity
- The lack of capacity of the electrical system resulting in the inability to support upgrades in technology
- The lack of natural light or adequate ventilation in art rooms
- The inability of the science labs in both the 1922 and the 1980 buildings to support modern science curriculum and pedagogy
- The lack of equitable facilities to support students in life skills programs
- The lack of equitable access to up-to-date technology for all students

# LOWELL HIGH SCHOOL

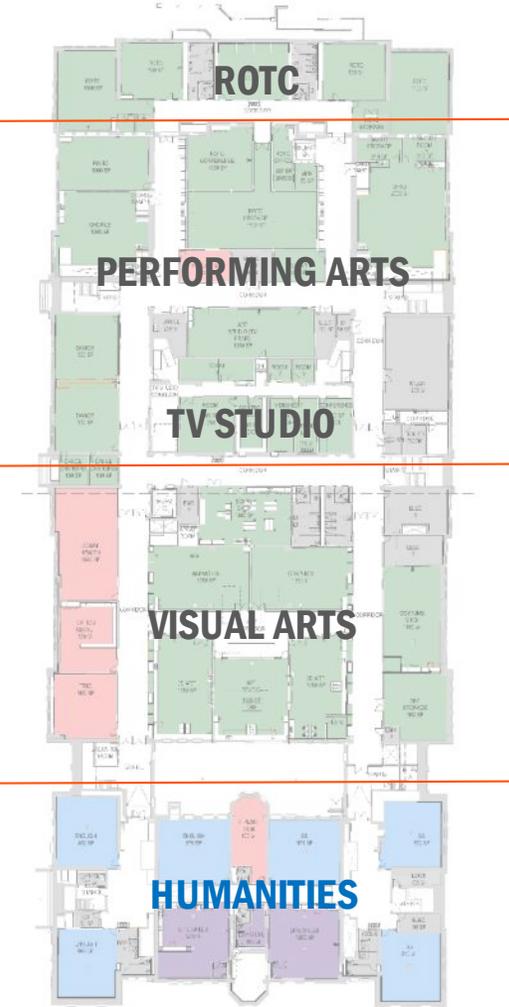
## BASEMENT PLAN - TRANSFORMATION



Ayer-Shirley HS - SMMA



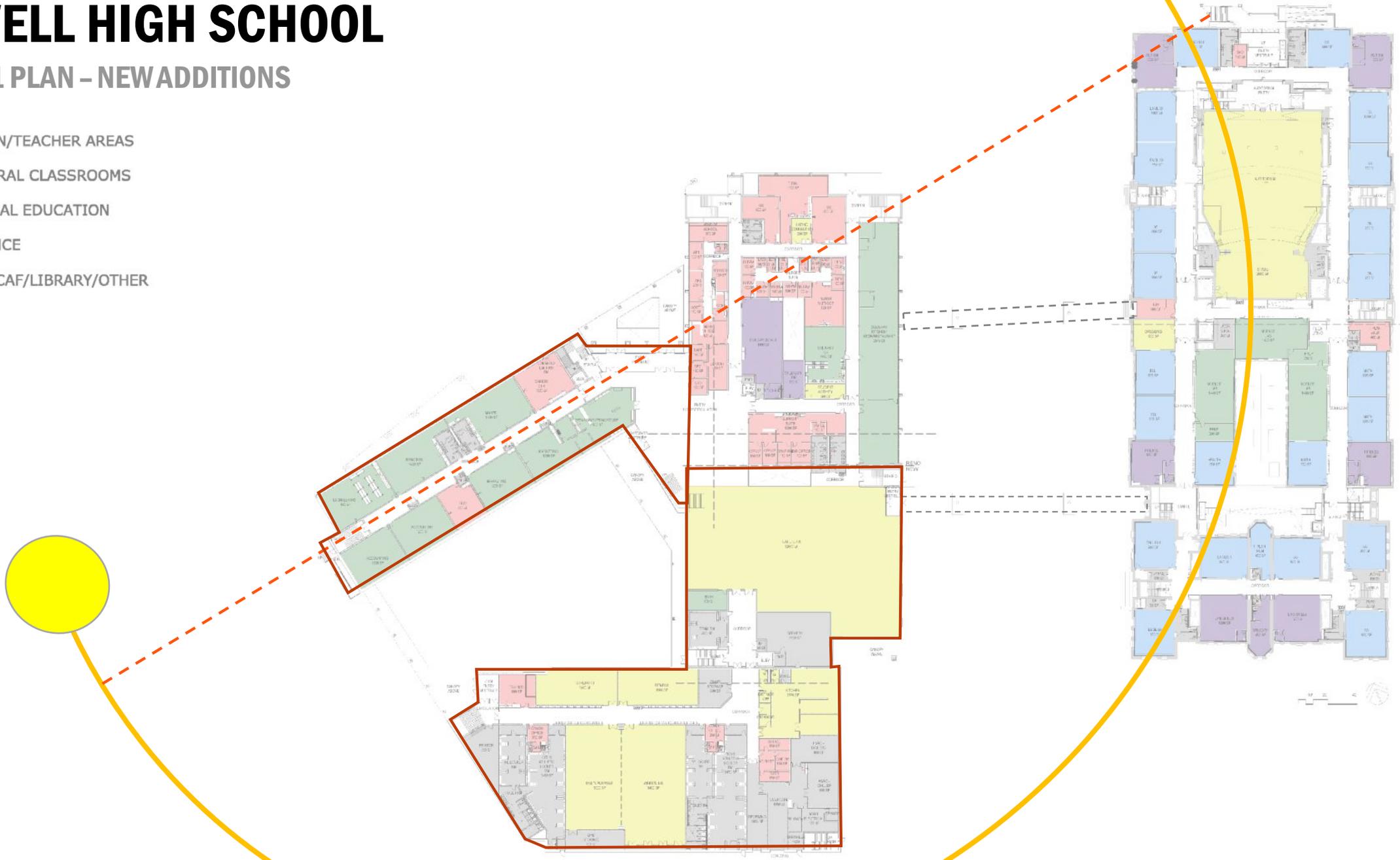
Quaker Meeting Hs & Arts Center – Kieran Timberlake



# LOWELL HIGH SCHOOL

## LEVEL-1 PLAN - NEW ADDITIONS

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER

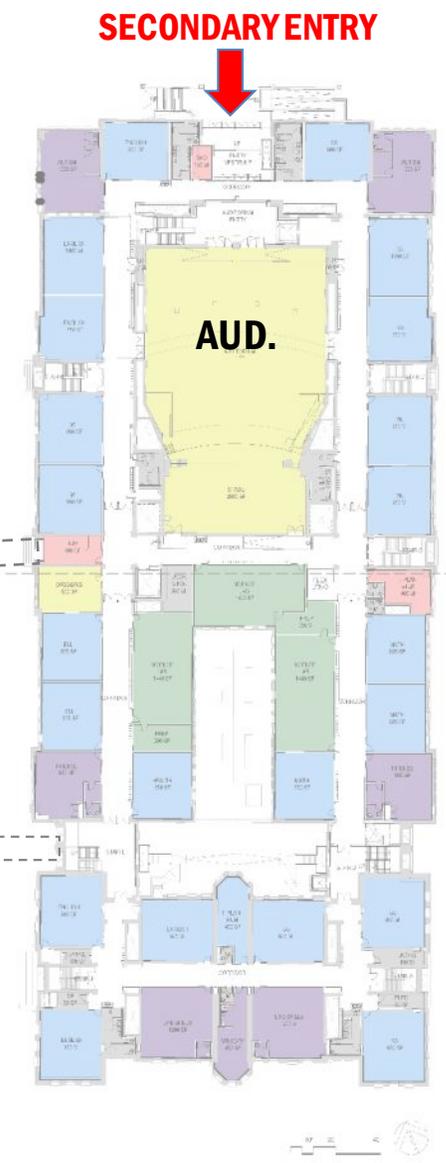
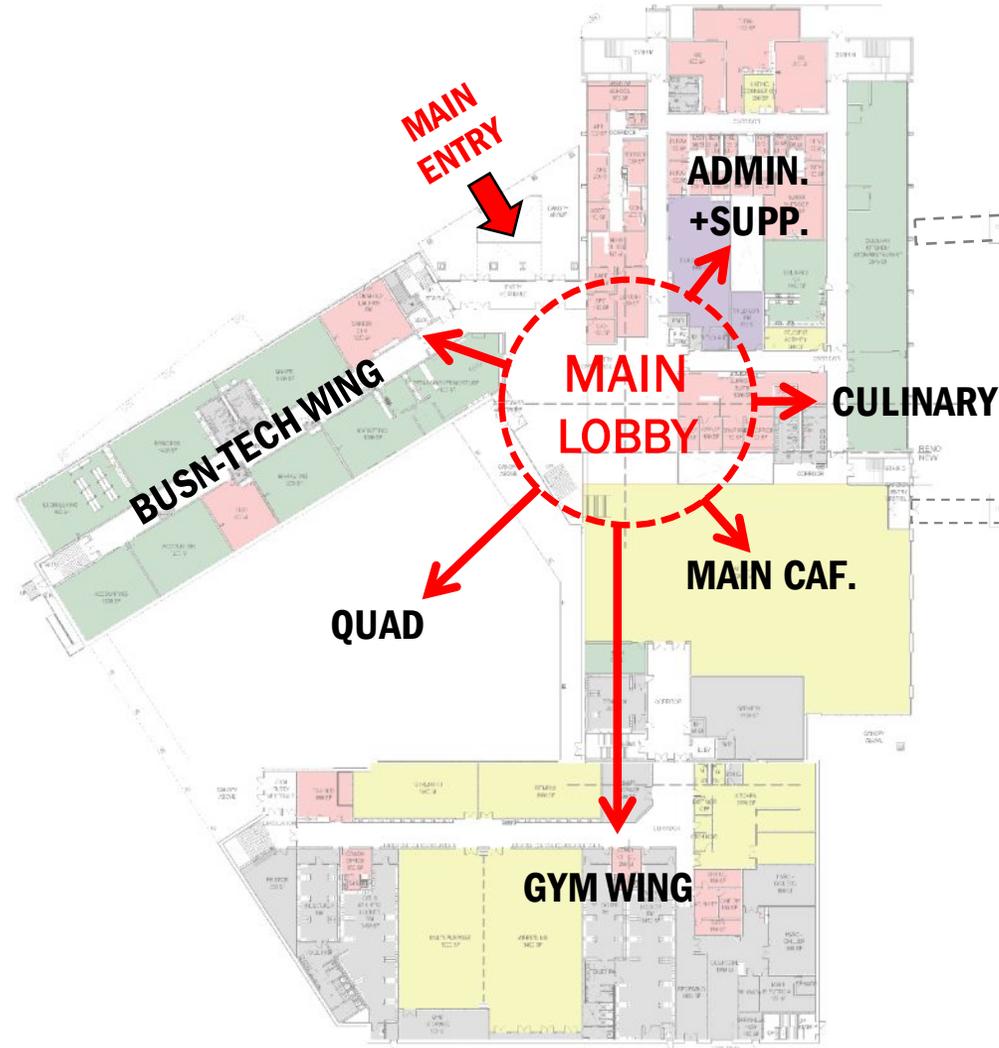




# LOWELL HIGH SCHOOL

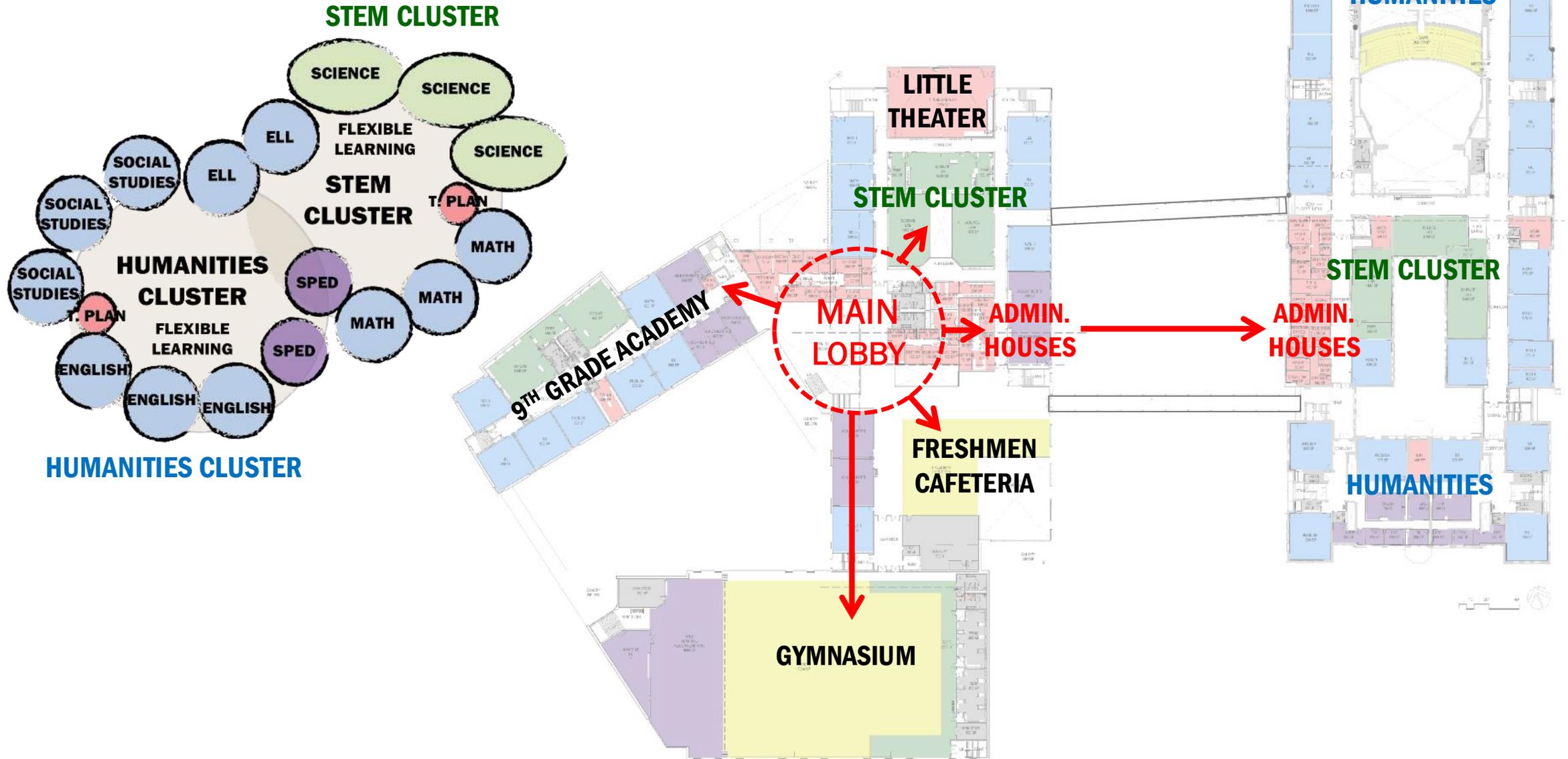
## LEVEL-1 PLAN - HEART OF THE SCHOOL

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER



# LOWELL HIGH SCHOOL

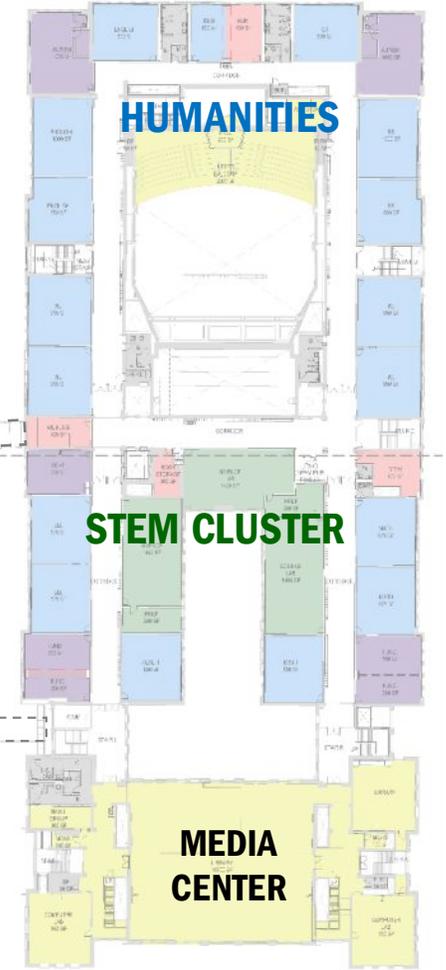
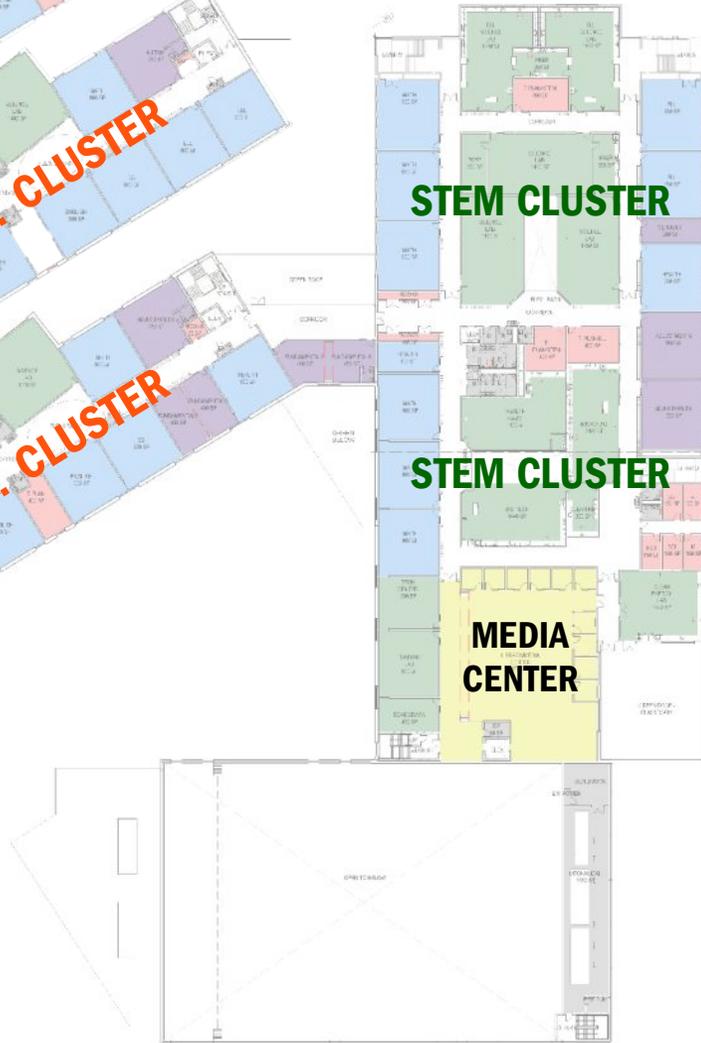
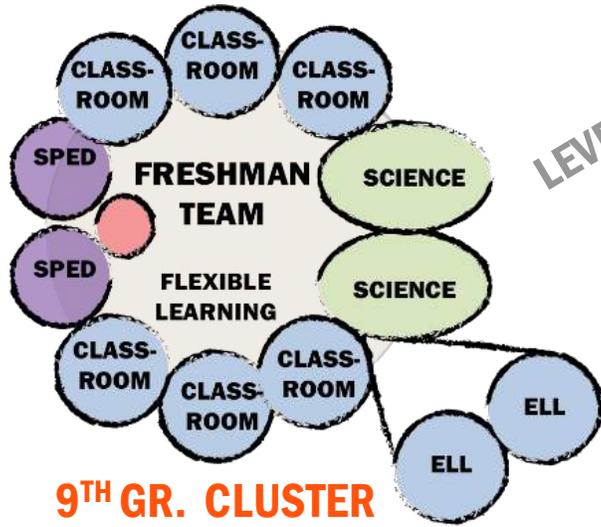
## LEVEL-2 PLAN & ACADEMIC CLUSTERS



# LOWELL HIGH SCHOOL

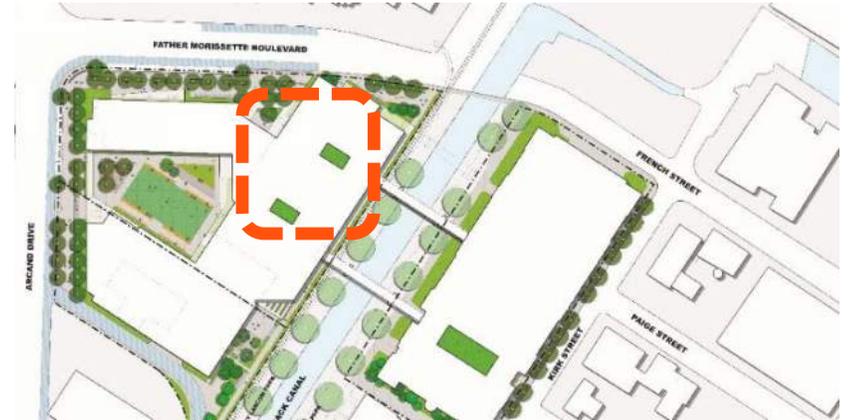
## LEVEL 3 PLAN

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER



# LANDSCAPE OPPORTUNITIES

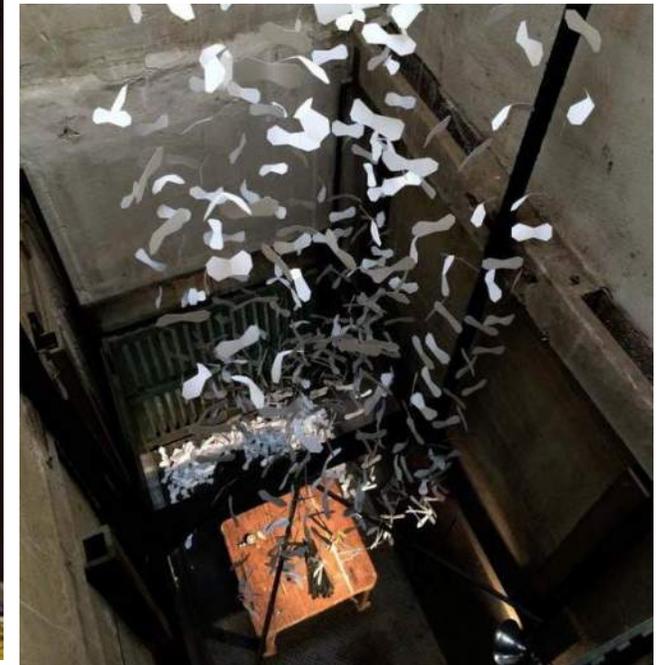
“THE LIGHT WELLS”



Tahari Courtyards,  
Millburn NJ



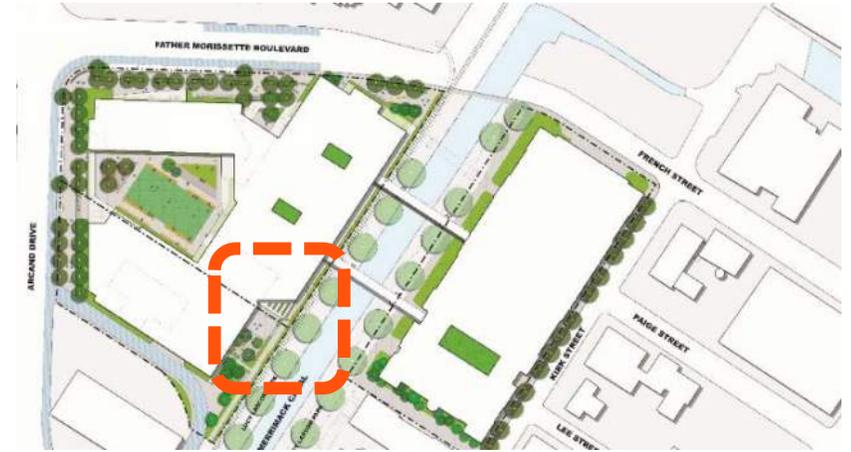
Tahari Courtyards,  
Millburn NJ



Site Specific Installation,  
Velvet Da Vinci San Francisco

# LANDSCAPE OPPORTUNITIES

“THE ROOFTOP”



Adelaide High School Roof Terrace,  
Adelaide, Australia



Alexandria Center for Life Sciences,  
NYC, NY



Fenway Farms,  
Boston, MA

# SITE PLAN



THE QUAD

FRESHMAN ACADEMY

ARCAND DRIVE

GYMNASIUM

THE GREEN ROOFTOP

THE PICNIC TERRACE

1980 BUILDING

MAIN ENTRANCE

THE LIGHT WELLS

1922 BUILDING

1922 COURTYARD

FATHER MORISSETTE BOULEVARD

FRENCH STREET

PAIGE STREET

KIRK STREET

LEE STREET

MERRIMACK CANAL

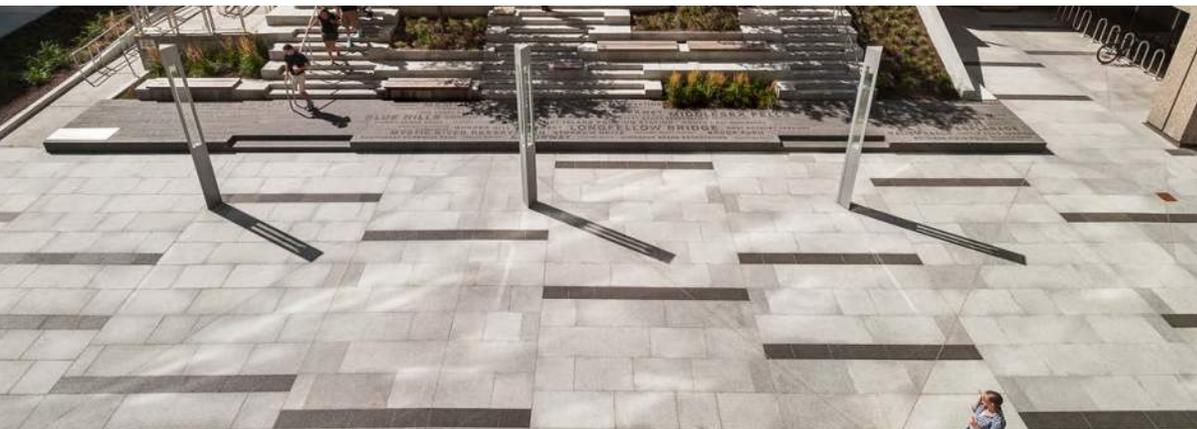
LUCY LARCOM PARK

LUCY LARCOM PARK

MERRIMACK STREET

# LANDSCAPE OPPORTUNITIES

## MAIN ENTRANCE



# LANDSCAPE OPPORTUNITIES

“THE QUAD”



# LOWELL HIGH SCHOOL

AERIAL VIEW OF PROPOSED CAMPUS



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# LOWELL HIGH SCHOOL

FRESHMAN ACADEMY VIEW FROM FATHER MORISSETTE BLVD & ARCAND DRIVE



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# LOWELL HIGH SCHOOL

GYMNASIUM VIEW FROM ARCAND DRIVE



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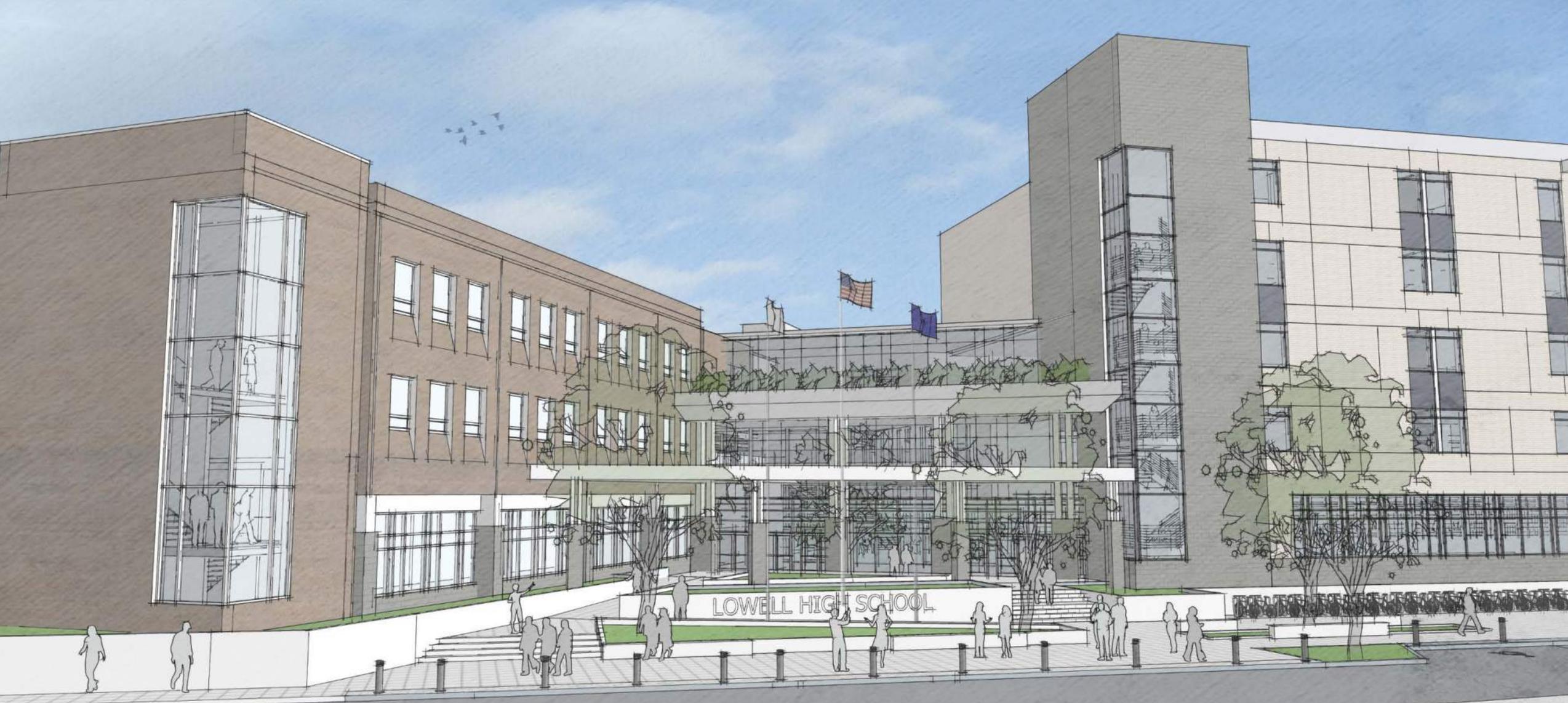
# LOWELL HIGH SCHOOL

VIEW OF GYMNASIUM FROM ARCAND DRIVE



# LOWELL HIGH SCHOOL

VIEW TOWARD NEW FRONT ENTRY



# LOWELL HIGH SCHOOL

BIRDSEYE VIEW FROM SOUTH



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# LOWELL HIGH SCHOOL

1922 BUILDING FROM FATHER MORISSETTE



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# LOWELL HIGH SCHOOL

1922 BUILDING FROM KIRK STREET



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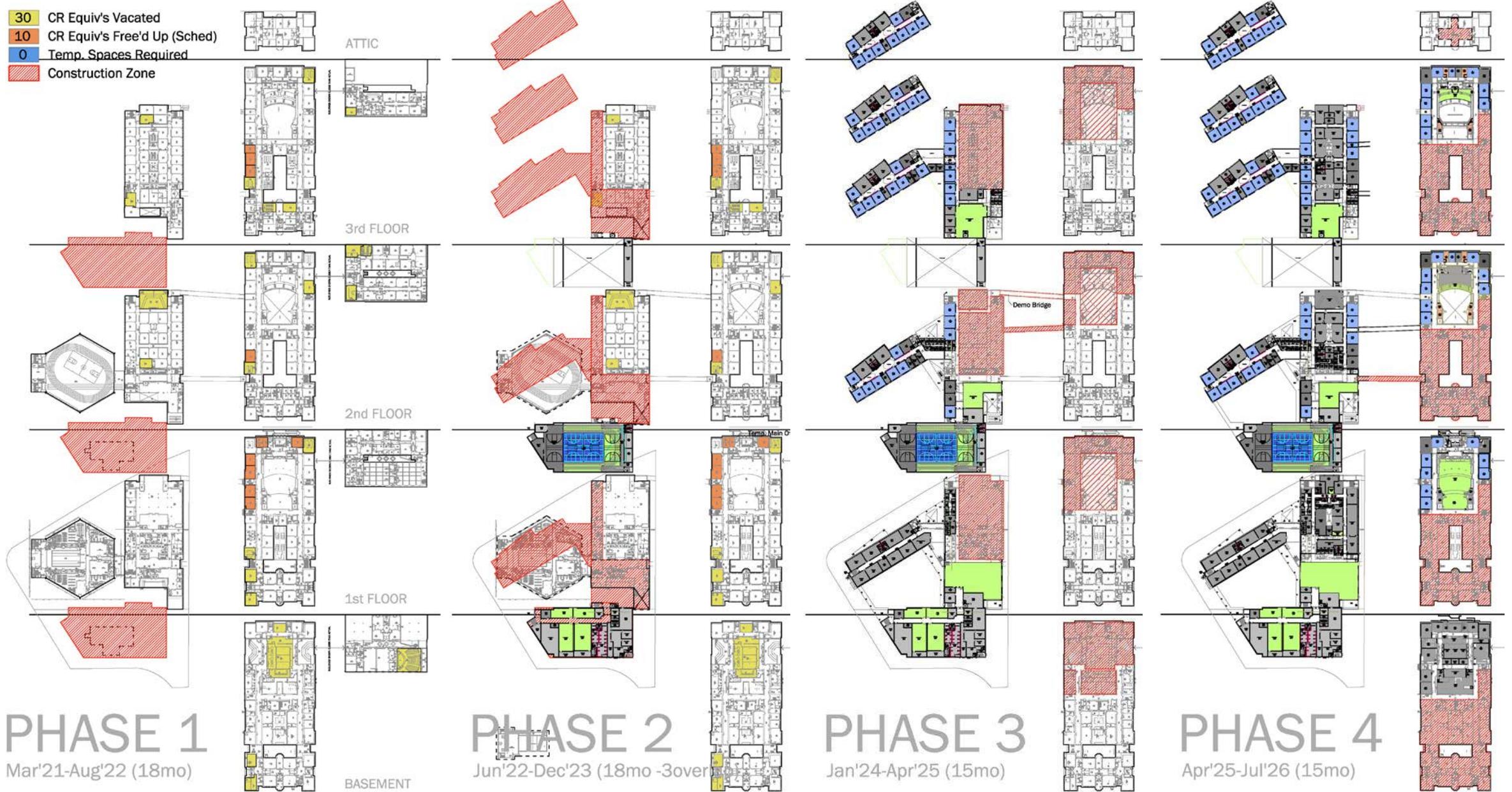
# LOWELL HIGH SCHOOL

## NEXT STEPS

- 1/23 PE & SKANSKA COST REVIEW AND RECONCILIATION
- 1/25 – 2/1 VALUE MANAGEMENT (IF REQUIRED)
- 1/31 SBC VM MEETING (IF REQUIRED)
- 2/7 SBC MEETING (VOTE)
- 2/12 CITY COUNCIL MEETING (VOTE)
- 2/20 SCHEMATIC DESIGN SUBMISSION TO MSBA
- 4/10 MSBA BOARD MEETING

# LOWELL HIGH SCHOOL – CONCEPTUAL CONSTRUCTION PHASING

- 30 CR Equiv's Vacated
- 10 CR Equiv's Free'd Up (Sched)
- 0 Temp. Spaces Required
- Construction Zone



**PHASE 1**  
Mar'21-Aug'22 (18mo)

**PHASE 2**  
Jun'22-Dec'23 (18mo -3over)

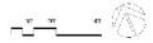
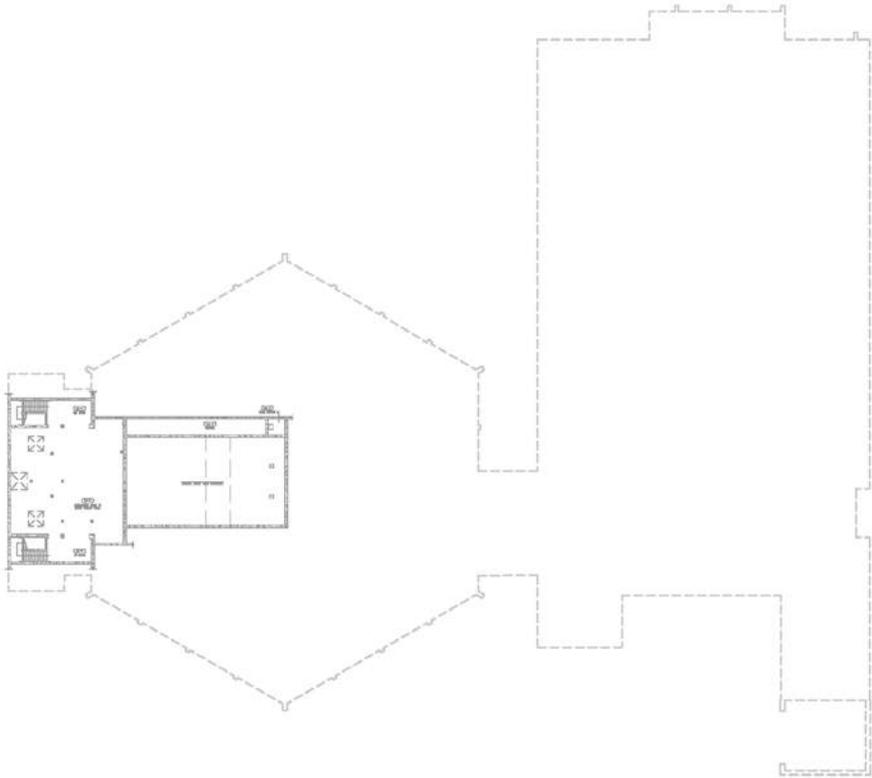
**PHASE 3**  
Jan'24-Apr'25 (15mo)

**PHASE 4**  
Apr'25-Jul'26 (15mo)

# LOWELL HIGH SCHOOL

## BASEMENT PLAN

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER



# LOWELL HIGH SCHOOL

## LEVEL 1 PLAN

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER



# LOWELL HIGH SCHOOL

## LEVEL 2 PLAN

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER



# LOWELL HIGH SCHOOL

## LEVEL 3, 4, 5 PLANS

- ADMIN/TEACHER AREAS
- GENERAL CLASSROOMS
- SPECIAL EDUCATION
- SCIENCE
- GYM/CAF/LIBRARY/OTHER

LEVEL 5

LEVEL 4

