



Massachusetts School  
Building Authority



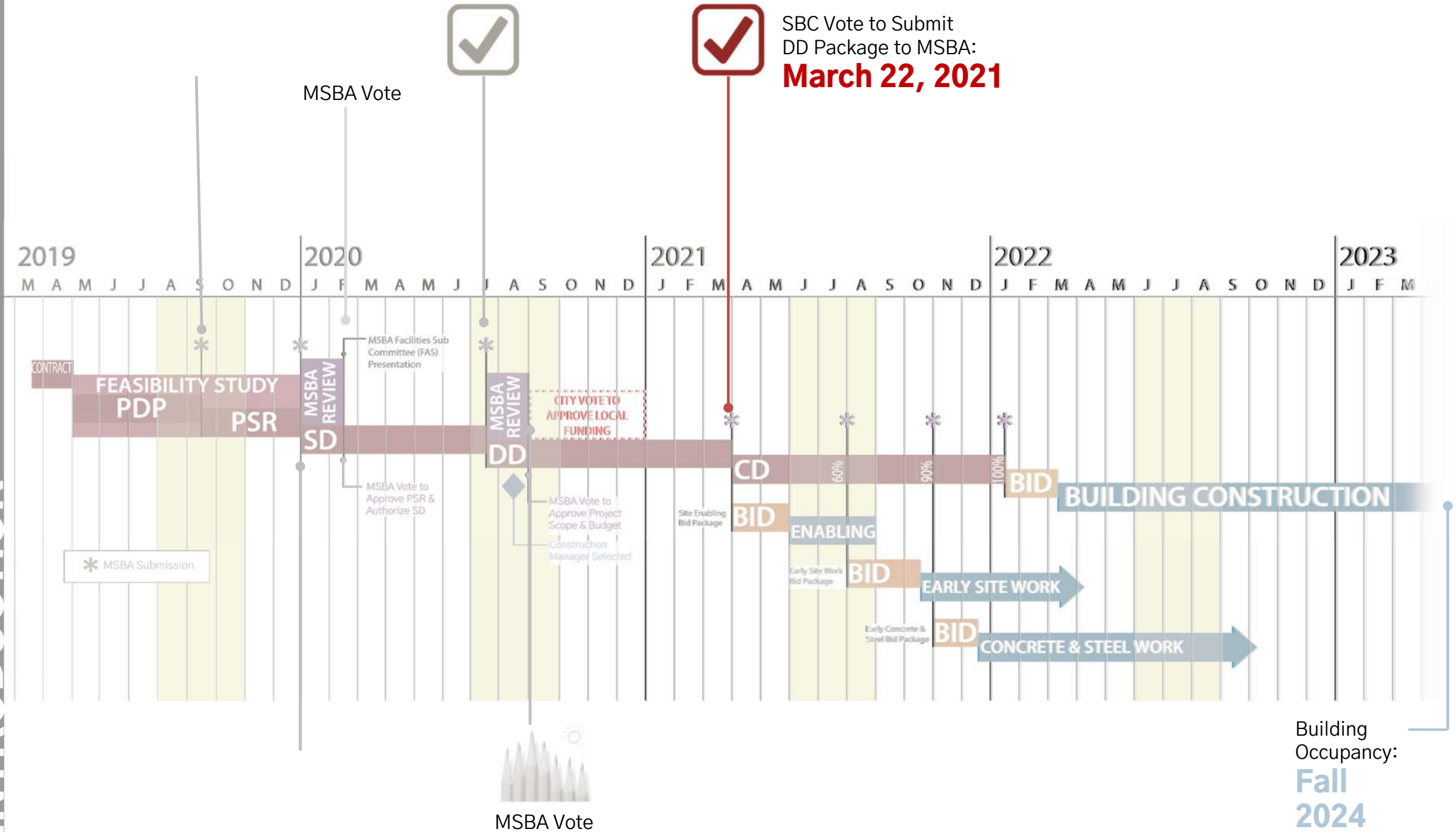
**FONTAINE**  
**+ DIMEO**

**AECOM TISHMAN**



**LPA | A**

# INTRODUCTION





CONSTRUCTION | **\$238,910,676**

\*TOTAL PROJECT BUDGET | **\$293,384,178**

MSBA REIMBURSEMENT | **80% (OF ELIGIBLE COSTS)**

ESTIMATED MSBA GRANT | **47% (EFFECTIVE RATE OF REIMBURSEMENT)**

\*INCLUDES SOFT COSTS, FEES, TESTING, FURNITURE FIXTURES AND EQUIPMENT,  
ESCALATION AND CONTINGENCIES

# FONTAINE + DIMEO



**David Fontaine, Sr.**  
President of Fontaine



**Bradford Dimeo**  
President of Dimeo



**David Fontaine, Jr.**  
Project Executive



**Jamie Blume**  
Senior Project Manager



**Andy Schiff**  
Project Manager



**Danielle Judge**  
Site Project Manager



**Mark Hogan**  
Lead Superintendent



**Patrick Markwarth**  
Superintendent



**Julia Hall**  
Compliance Coordinator



**Mark Abdella**  
VP of CM Services

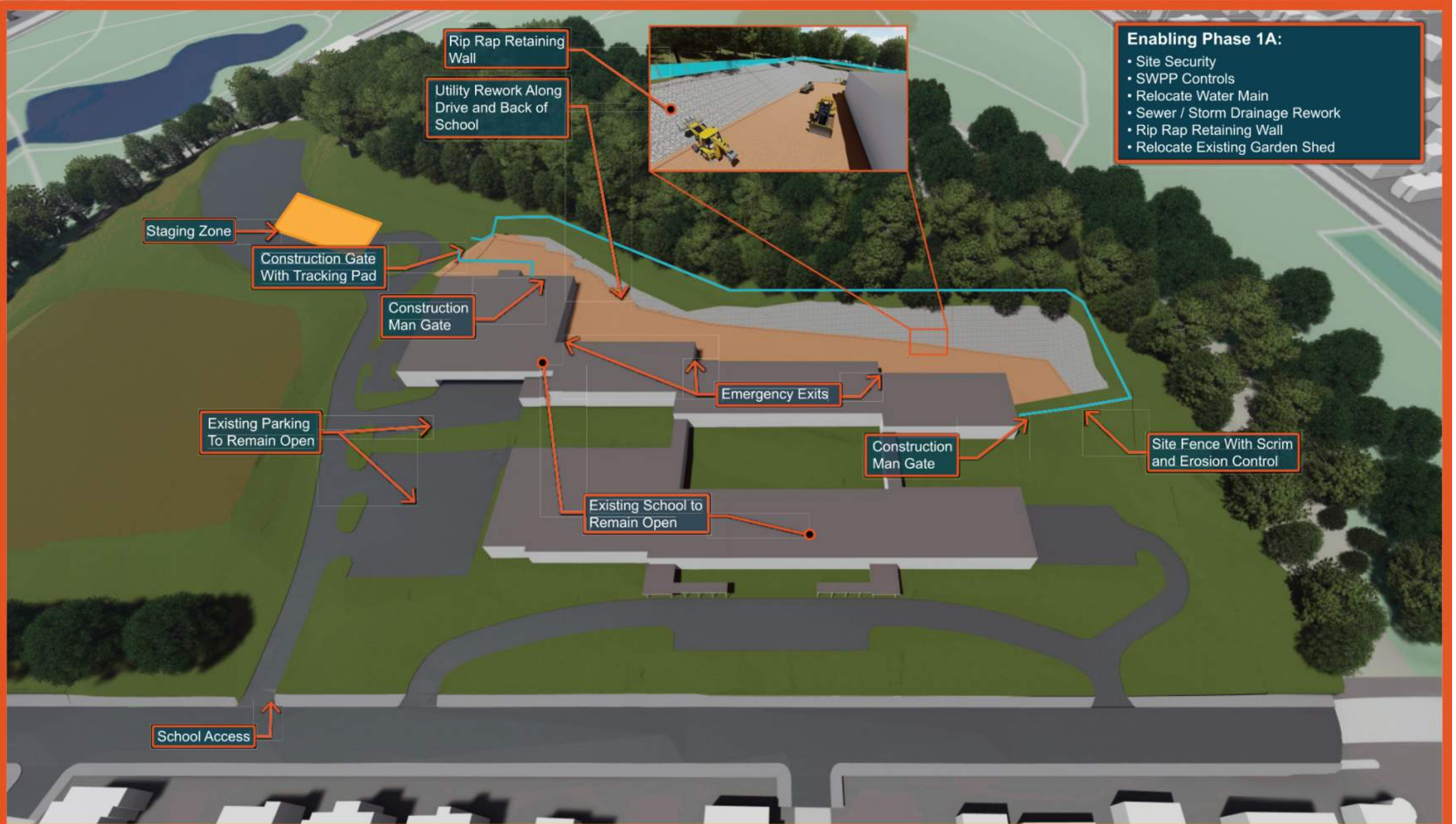


**Erik Sanford**  
VDC/BIM



**Curtis Ruotulo**  
Civil Engineer





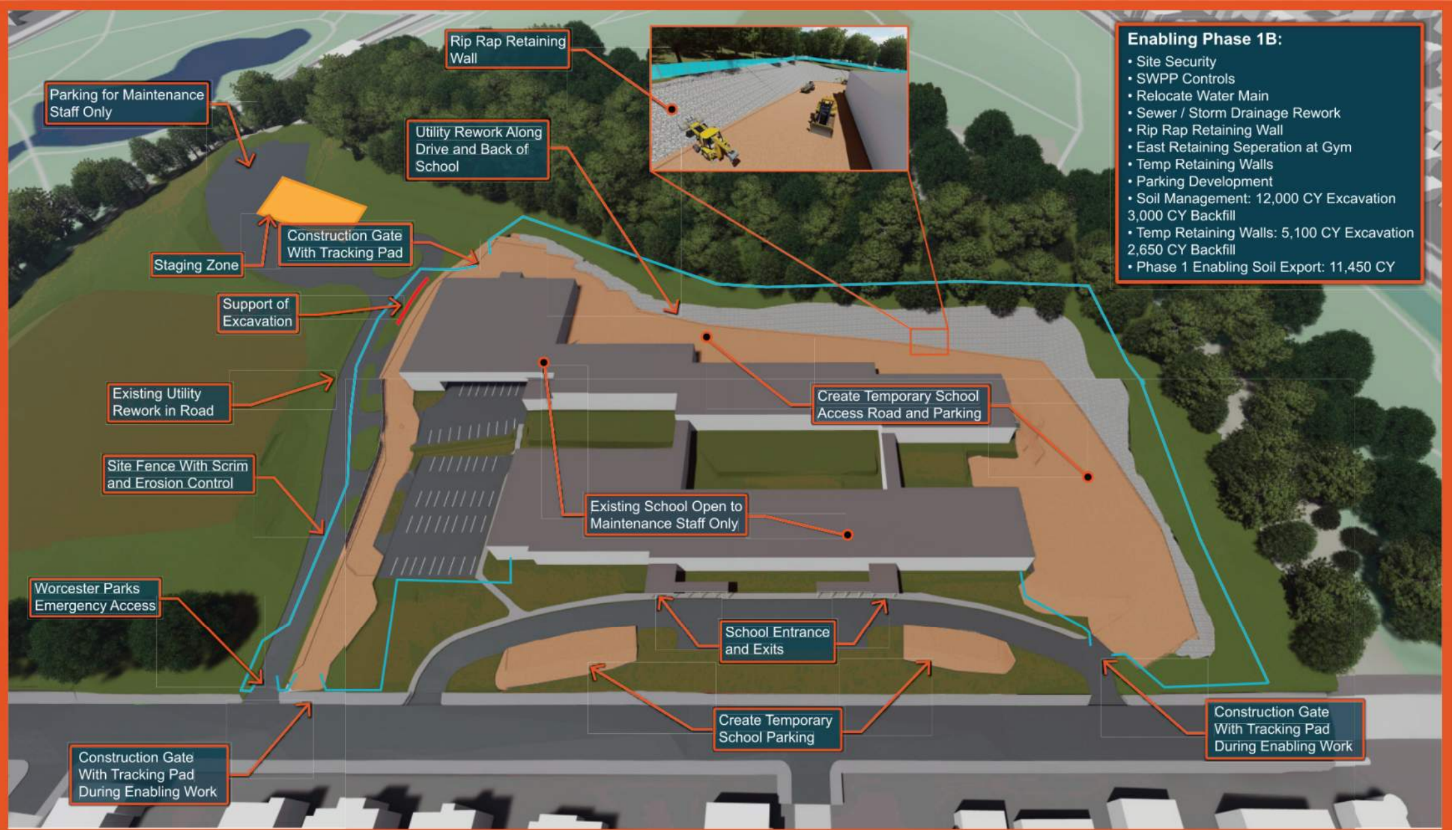
## Doherty Memorial High School

Phase 1A - Existing Site Enabling - May 1, 2021 - May 31, 2021

School Site







## Doherty Memorial High School

Phase 1B - Site Setup - June 1, 2021 - August 20, 2021

School Site







## Doherty Memorial High School

Phase 1C - Main Site Setup - August 1, 2021 - August 30, 2021

School Site







## Doherty Memorial High School

Phase 1D - Enabling Complete - August 13

School Site





# EARLY SITE PACKAGE

- EROSION CONTROL/STORMWATER PROTECTION
- TEMPORARY UTILITY INSTALLATION
- TEMPORARY DRIVEWAY/VEHICLE CIRCULATION & PARKING
- EARTH RETENTION/RETAINING WALLS TO SUPPORT SITE CIRCULATION
- HIGH VISIBILITY SIGNAGE AND WAYFINDING
- CONSTRUCTION SAFETY BARRIERS





# DESIGN DEVELOPMENT REFINEMENT

- CM@RISK AWARD AND INTEGRATION
- REFINED PHASING / EARLY BID PACKAGE APPROACH
- SUSTAINABILITY WORKSHOPS 10/5 & 3/8
  - STUDY OF OPTIONS TO REDUCE FOSSIL FUELS
- REGULATORY MEETINGS
  - CONSERVATION COMMISSION
  - HISTORICAL COMMISSION
  - MEPA
  - BUILDING DEPARTMENT AND FIRE DEPARTMENT REVIEW
- DETAILED PROGRAM REFINEMENT
- ADVANCEMENT OF DESIGN

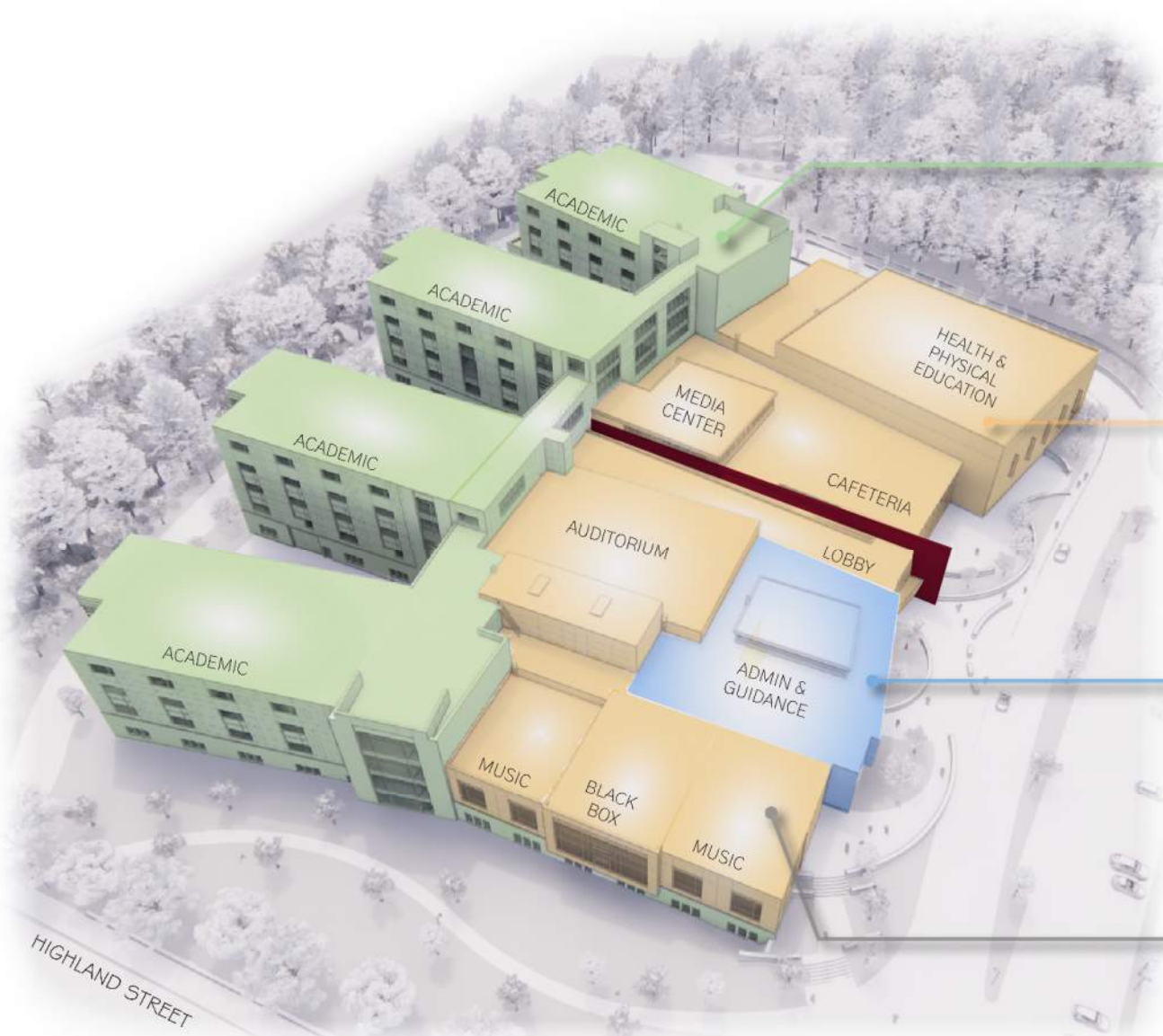
## BASELINE SUSTAINABLE ENVELOPE / SYSTEMS

- +** HEAT RECOVERY CHILLER
- +** VRF HEAT PUMPS
- +** AIR SOURCE HEAT PUMP RTU'S

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**85% REDUCTION**  
**IN PROJECTED FOSSIL FUEL USE**





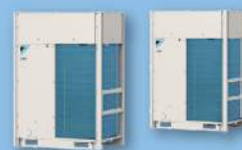
**DISPLACEMENT CHILLED BEAMS  
WITH HYDRONIC HEAT & DEDICATED  
OUTDOOR AIR HEAT PUMP SYSTEM**

SUPERIOR VENTILATION EFFECTIVENESS  
& INDOOR AIR QUALITY



**AIR SOURCE HEAT PUMP  
ROOF TOP UNITS**

HYDRONIC HEAT BACK-UP



**VARIABLE REFRIGERANT FLOW  
(VRF) HEAT PUMPS WITH DEDICATED  
OUTDOOR AIR HEAT PUMP SYSTEM**

IMPROVED INDIVIDUAL ZONE CONTROL



**AIR COOLED HEAT RECOVERY  
CHILLER / HEATER**

SIMULTANEOUS HOT AND COLD WATER FOR  
ALL BUILDING SYSTEMS



## HIGH PERFORMANCE ENVELOPE

Super-insulation & high performance glazing allows for a reduction in HVAC equipment sizes

## ENHANCED ACOUSTIC PERFORMANCE

Reduced background noise for optimized learning environment with acoustic separation between classrooms

## FLEXIBLE TECHNOLOGY

Robust technology infrastructure to adapt to remote learning / changing teaching methods

## HEALTHY MATERIALS

Low-emitting, durable materials with high recycled content

## DISPLACEMENT CHILLED BEAM SYSTEM

Improved efficiency, indoor air quality and comfort with reduced ambient noise and airborne contaminants

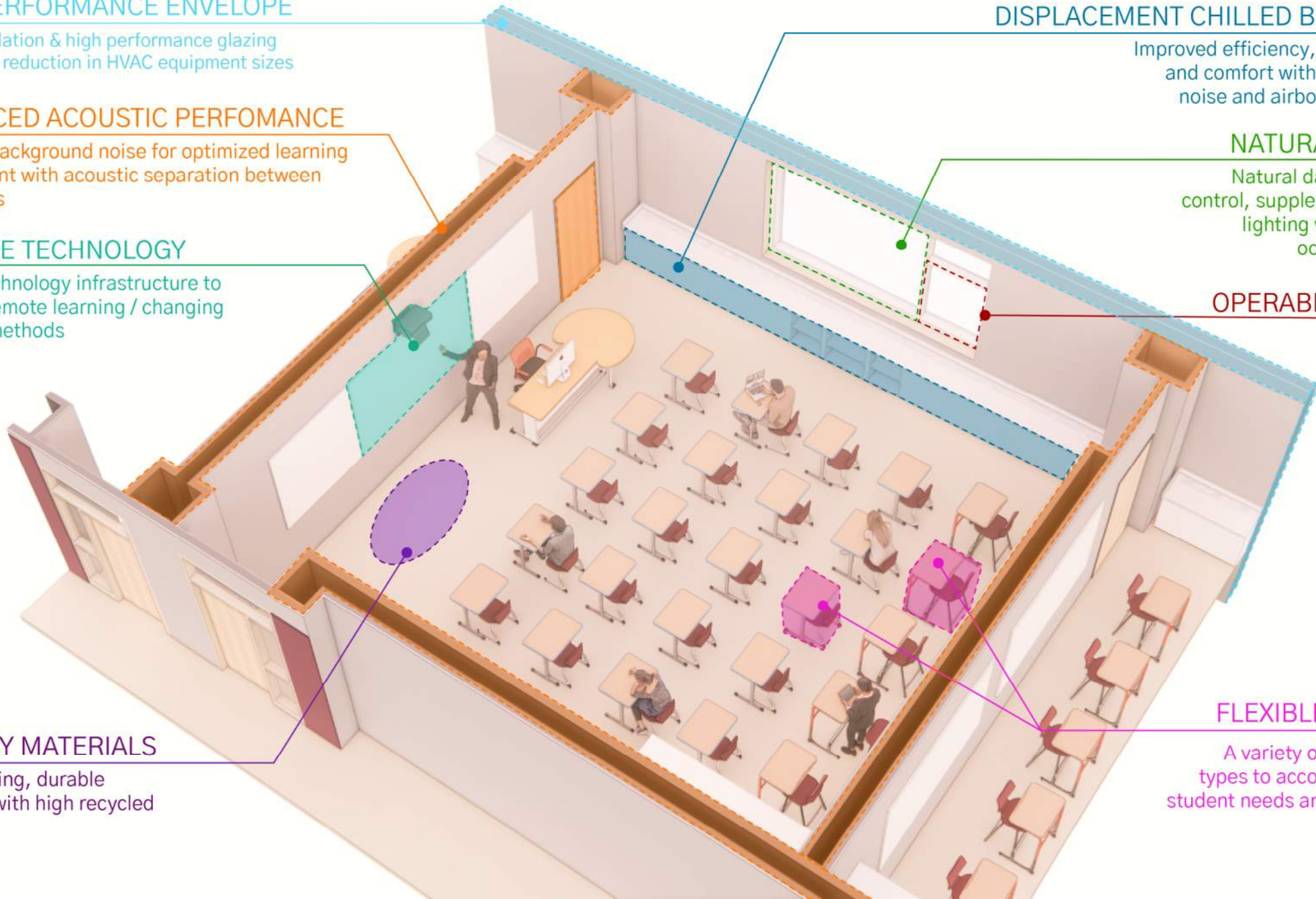
## NATURAL DAYLIGHT

Natural daylight with glare control, supplemented with LED lighting with daylight and occupancy sensors

## OPERABLE WINDOWS

## FLEXIBLE FURNITURE

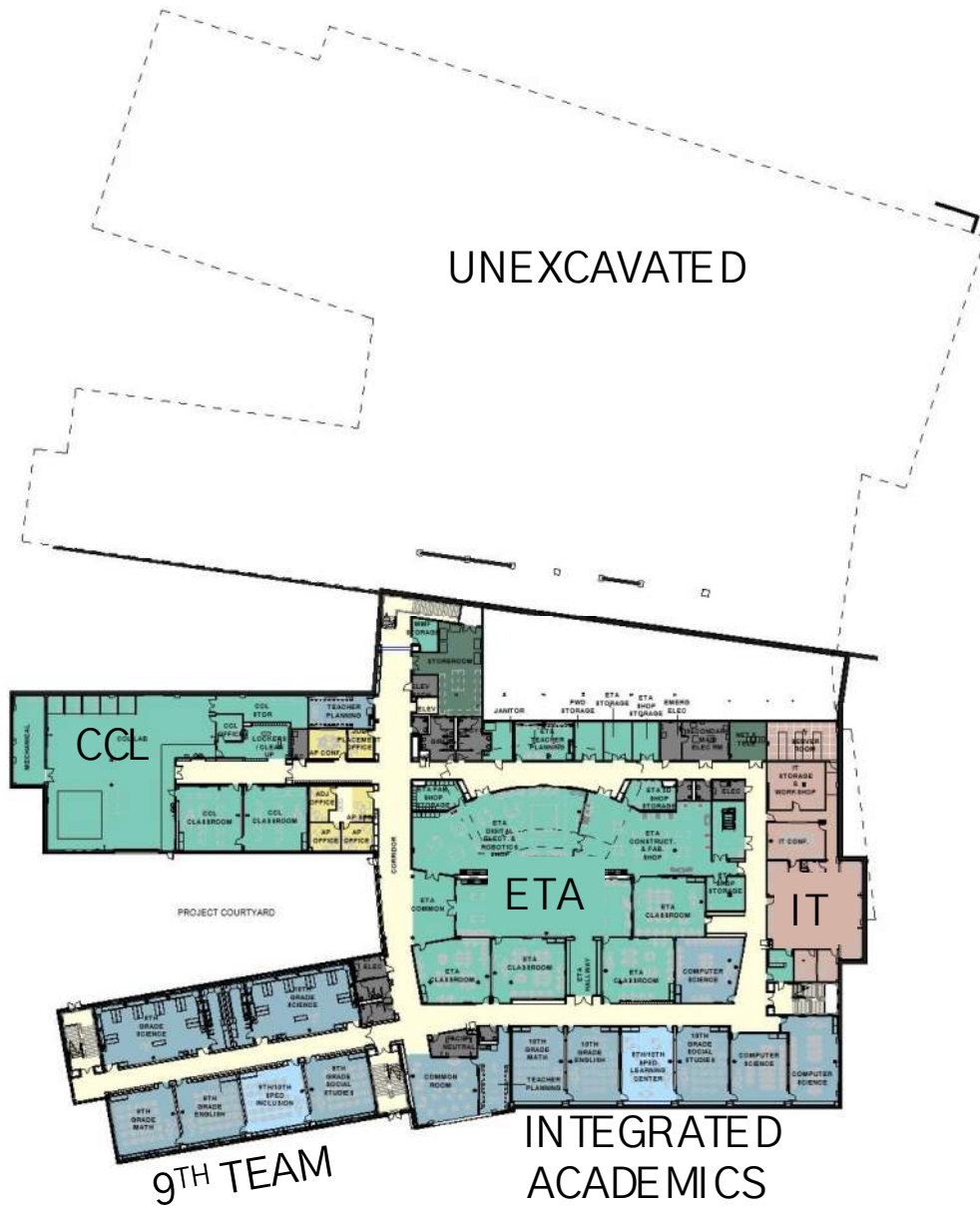
A variety of mobile furniture types to accommodate diverse student needs and teaching styles



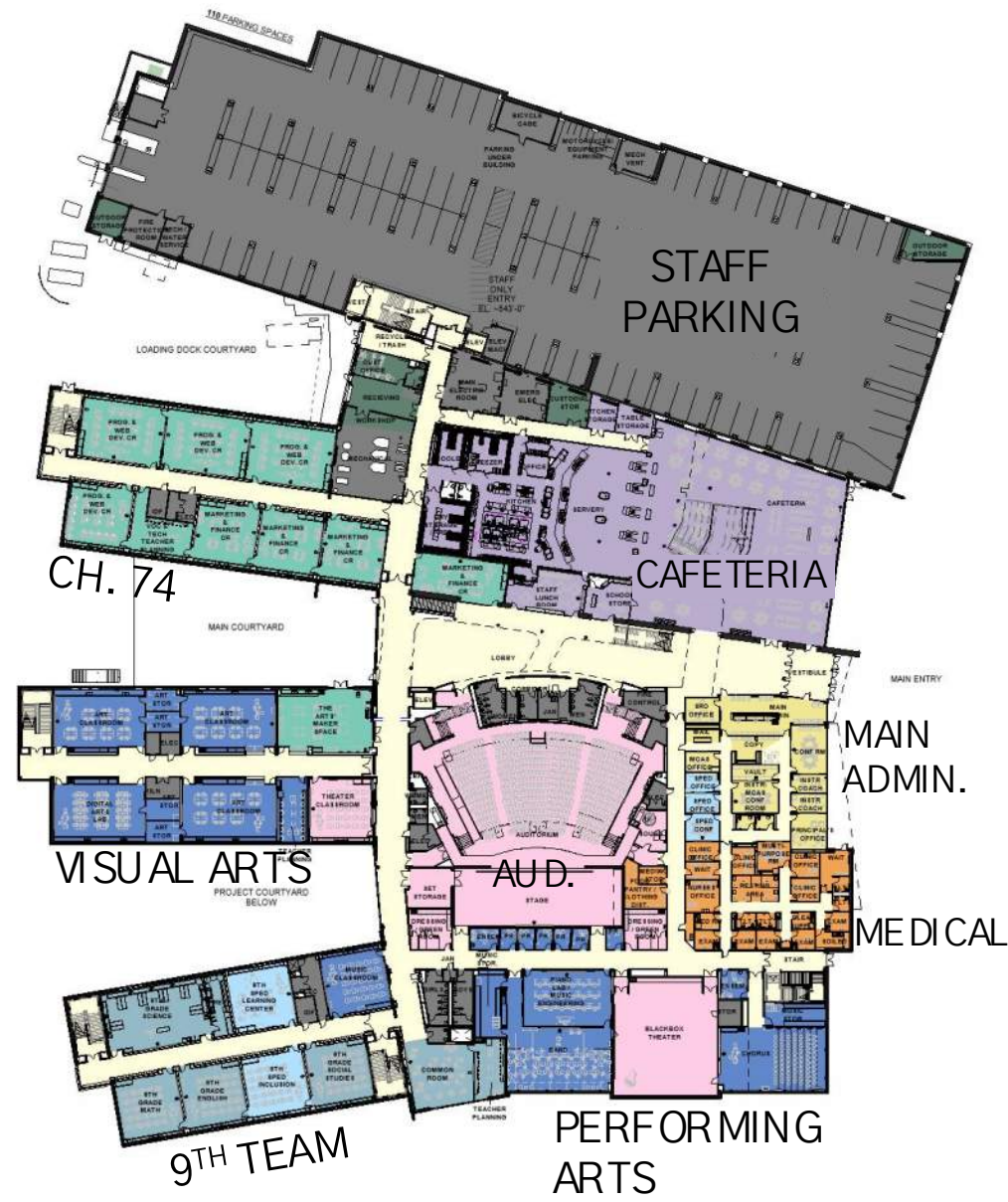


		Baseline	REDESIGN - DD
Project Area (ft <sup>2</sup> )		421,858	421,858
Discount Rate		2.50%	2.50%
Expected Service Life (n) - HVAC		20.0	19
Initial Costs	Install Cost HVAC (\$) 3	\$ 21,012,747	\$ 21,856,463
	Additional Costs Electrical (\$) 3	\$ 0	\$ 1,500,000
	<b>Total Initial Costs (\$)</b>	<b>\$ 21,012,747</b>	<b>\$ 23,356,463</b>
Operating Costs	Annual Maintenance Costs (\$)	\$97,027	\$ 126,557
	Natural Gas Cost (\$)2	\$49,054	\$ 7,358
	Electricity Cost (\$)1	\$513,451	\$ 589,182
	<b>Total Annual Operating Cost (\$)</b>	<b>\$659,532</b>	<b>\$ 723,097</b>
TEAC Calcs	Annual Operating Cost (\$)	\$ 659,532	\$ 723,097
	Amortized Cost - HVAC + Electrical	\$ 1,347,907	\$ 1,540,565
<b>Total Equivalent Annual Cost (\$)</b>		<b>\$ 2,007,439</b>	<b>\$ 2,263,662</b>
<b>TEAC (Incremental Cost/SF)</b>		<b>\$ 4.76</b>	<b>\$ 5.37</b>
<b>Electricity Consumption (kWh)</b>		<b>3,111,823</b>	<b>3,570,798</b>
<b>Gas Consumption (therms)</b>		<b>54,504</b>	<b>8,176</b>
<b>GHG Emissions (MTCO<sub>2</sub>e) - Energy Star Carbon Factors</b>		<b>1031</b>	<b>895</b>
<b>GHG Emissions (MTCO<sub>2</sub>e) - 40% Green Power</b>		<b>586</b>	<b>384</b>
<b>GHG Emissions (MTCO<sub>2</sub>e) - 100% Green Power</b>		<b>289</b>	<b>43</b>
<b>Source Energy Use Intensity (kBtu/SF)</b>		<b>83.8</b>	<b>82.6</b>
<b>Site Energy Use Intensity (kBtu/SF) 4</b>		<b>38.0</b>	<b>30.7</b>

G



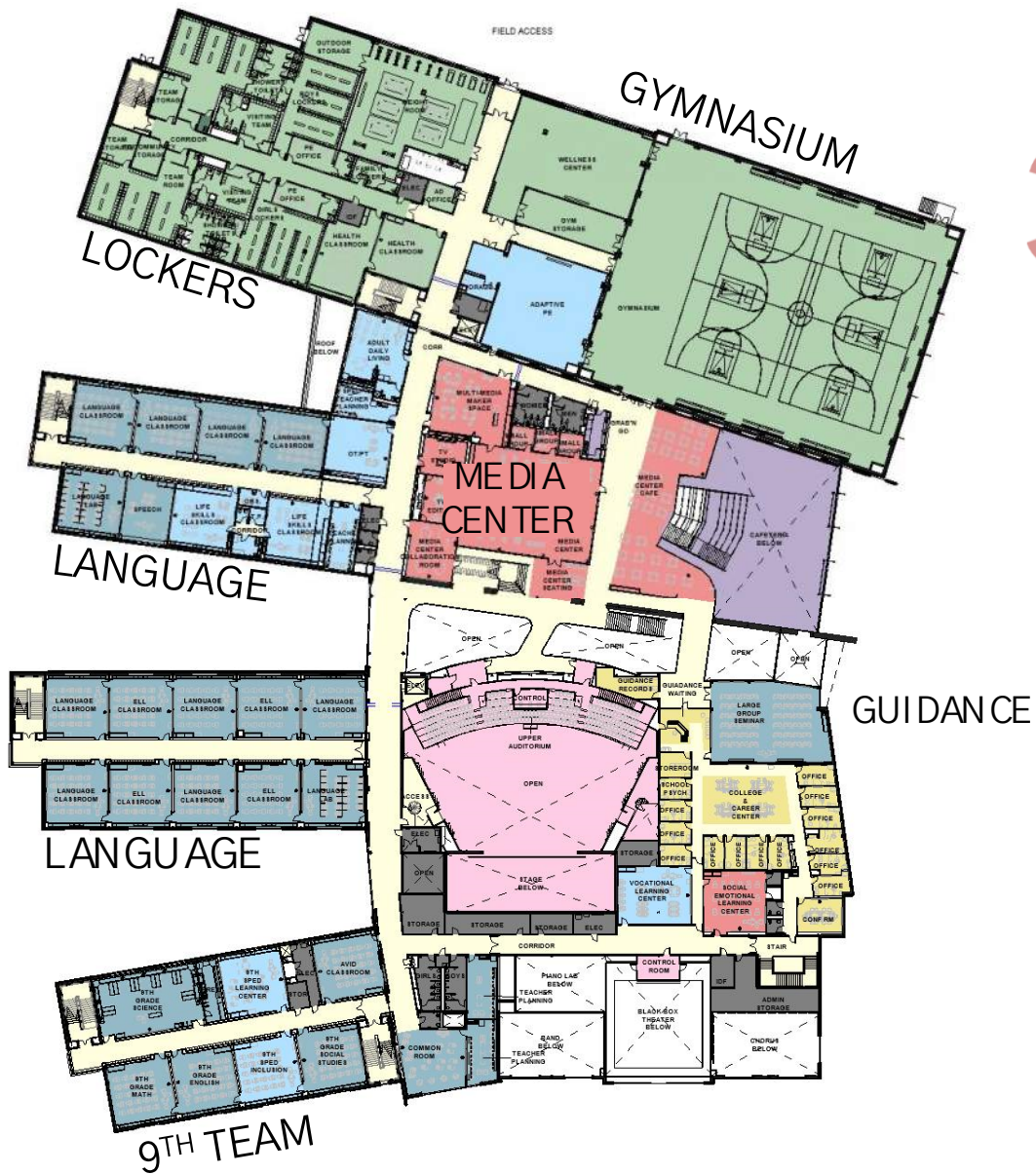
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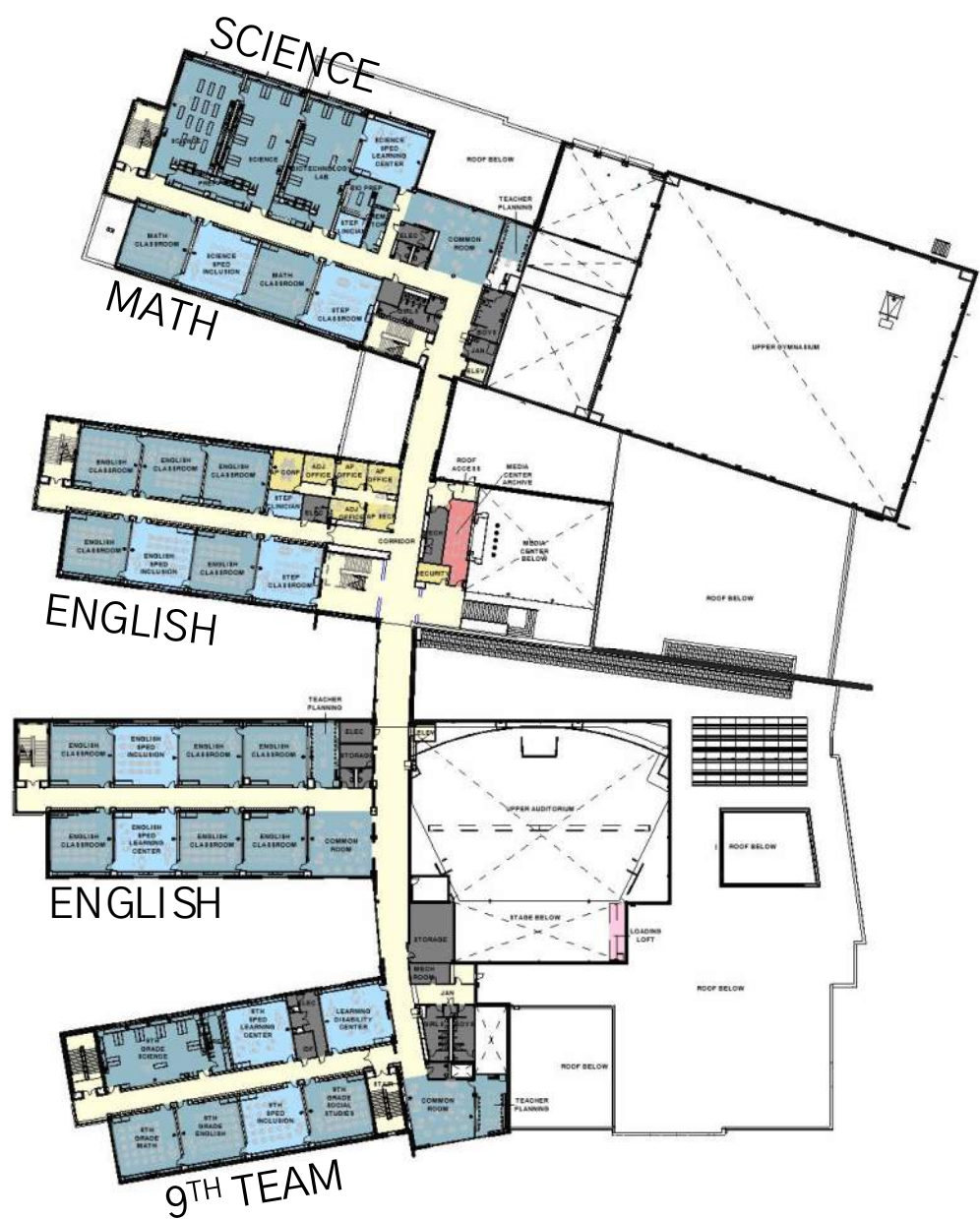
Exterior Access  
EL. ~000'-0"



2



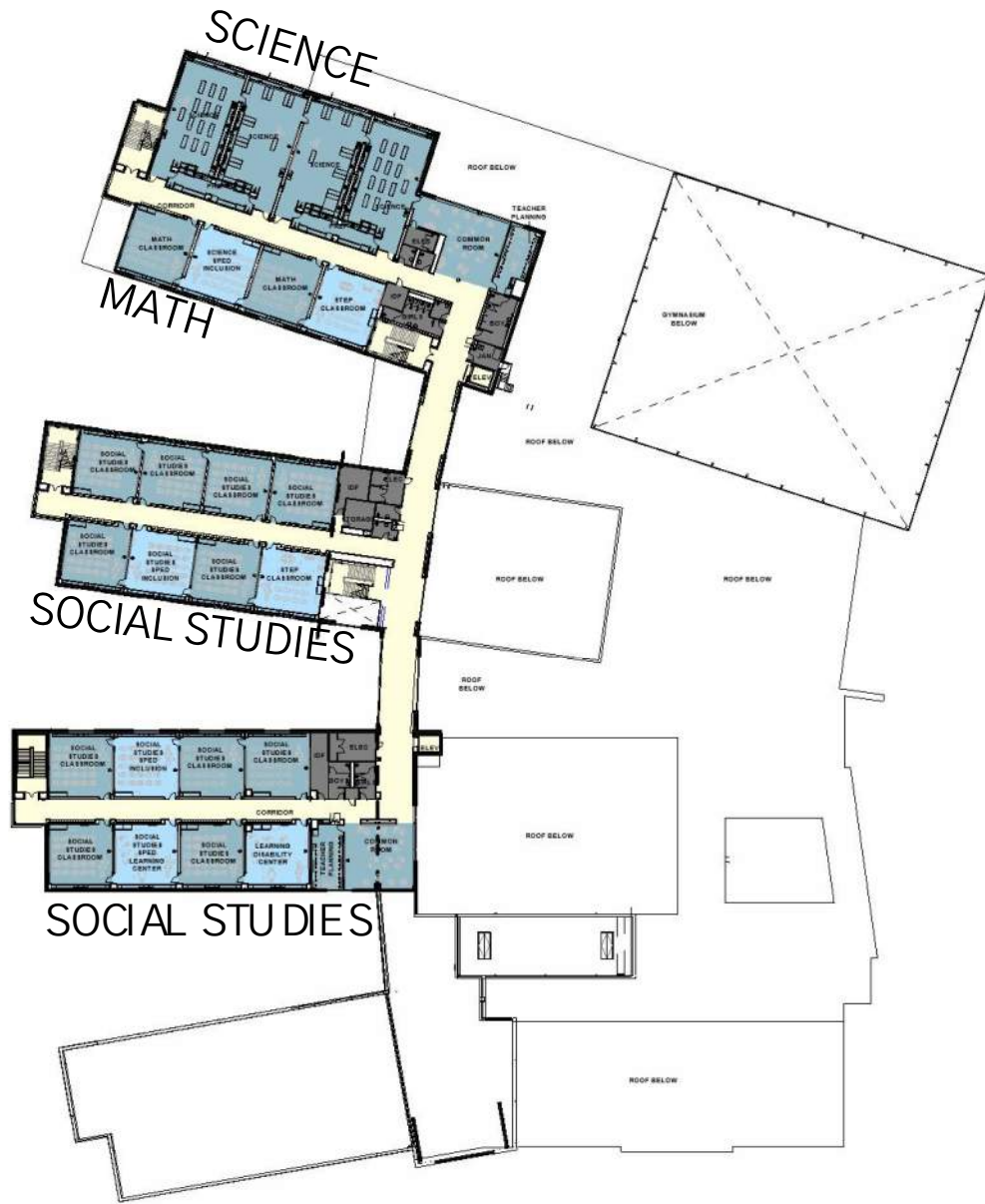
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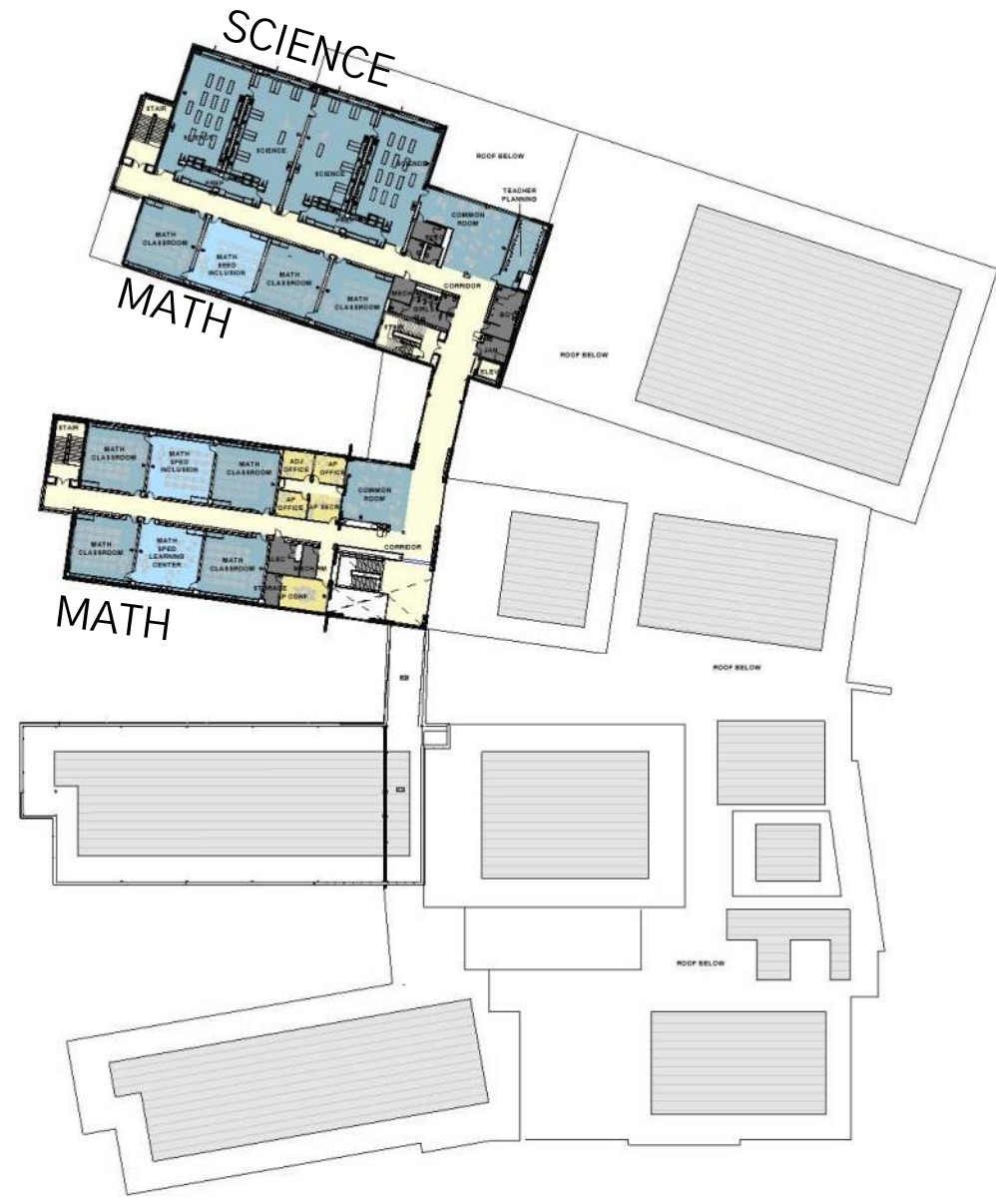
## LEGEND

Academic / Education	Special Education	Art & Music	Vocational / Technical	Health & PE	Media Center	Auditorium / Drama	Exterior Access EL. ~000'-0"
Dining & Food Service	Medical	Admin. & Guidance	Custodial & Maintenance	Other	Circulation	Non-Programmed Spaces	

4



5



LEGEND

Academic / Education	Special Education	Art & Music	Vocational / Technical	Health & PE	Media Center	Auditorium / Drama	Exterior Access EL. ~000'-0"
Dining & Food Service	Medical	Admin. & Guidance	Custodial & Maintenance	Other	Circulation	Non-Programmed Spaces	



# CAFETERIA



"So live this life so that you leave this world  
a little better than you found it."

Dr. Leo T. Doherty



# GYMNASIUM





# LOBBY





# AUDITORIUM





# BLACK BOX THEATER





# MEDIA CENTER





# LARGE GROUP SEMINAR ROOM





# COMMON ROOM



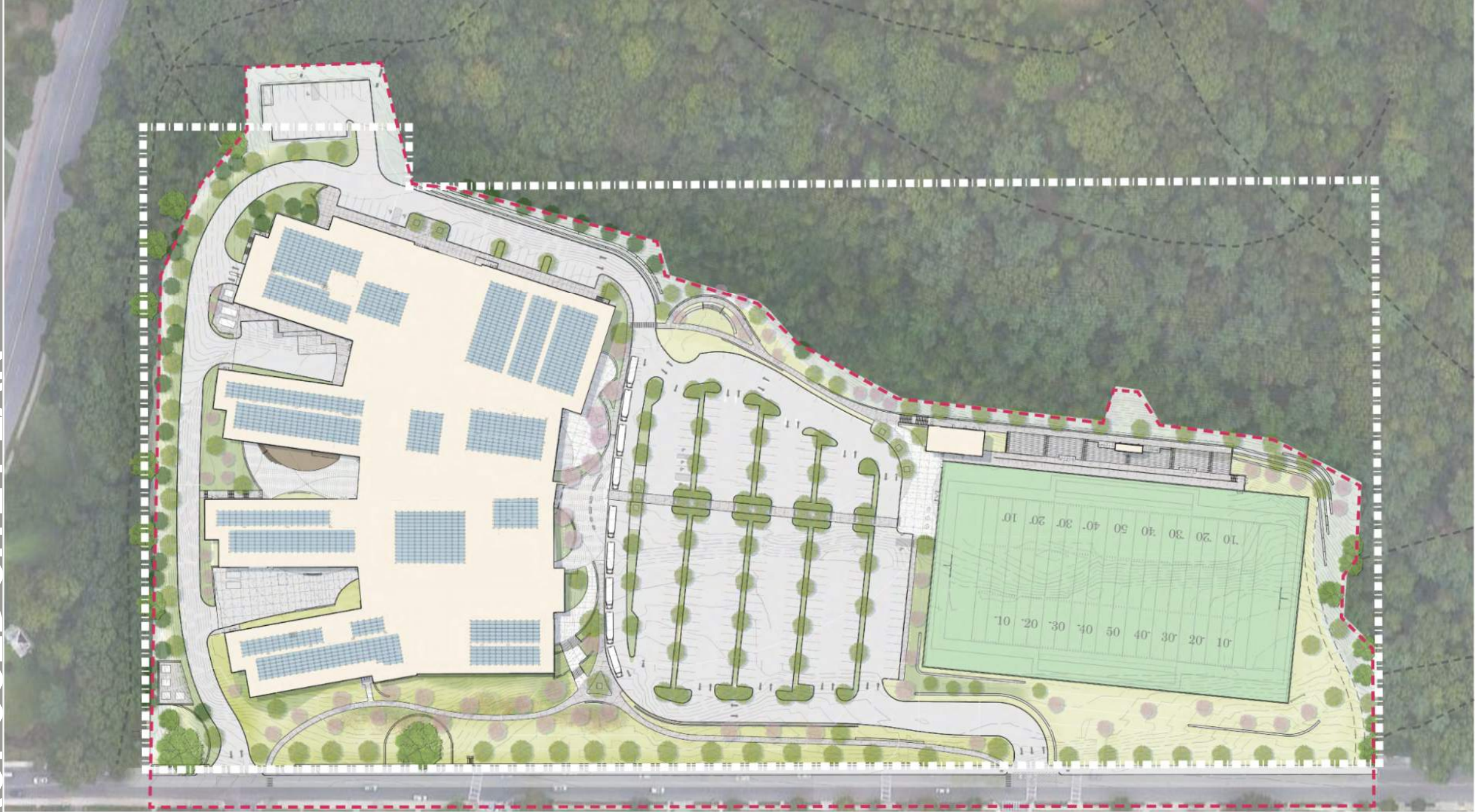


# CLASSROOM





PROPOSED SITE PLAN



PROPOSED SITE PLAN













# SCHOOL BUILDING COMMITTEE & PUBLIC QUESTIONS / COMMENTS

TO ASK QUESTIONS :

- PLEASE RAISE YOUR HAND IN THE PARTICIPANTS OR REACTION PANEL
- IF JOINING BY PHONE:
  - \*3 – RAISE HAND
  - \*6 – TOGGLE MUTE/UNMUTE
- PLEASE ANNOUNCE YOUR NAME BEFORE YOUR QUESTION/COMMENT
- PLEASE RE-MUTE YOURSELF AFTER YOUR TURN

Raise Hand





# SCHOOL BUILDING COMMITTEE VOTE







Massachusetts School  
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**ADDITIONAL QUESTIONS / COMMENTS?**

**[DMHSBuildingProject.com](http://DMHSBuildingProject.com)**

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