



Lexington High School

Community Design Workshop

06.06.2024



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DORE + WHITTIER

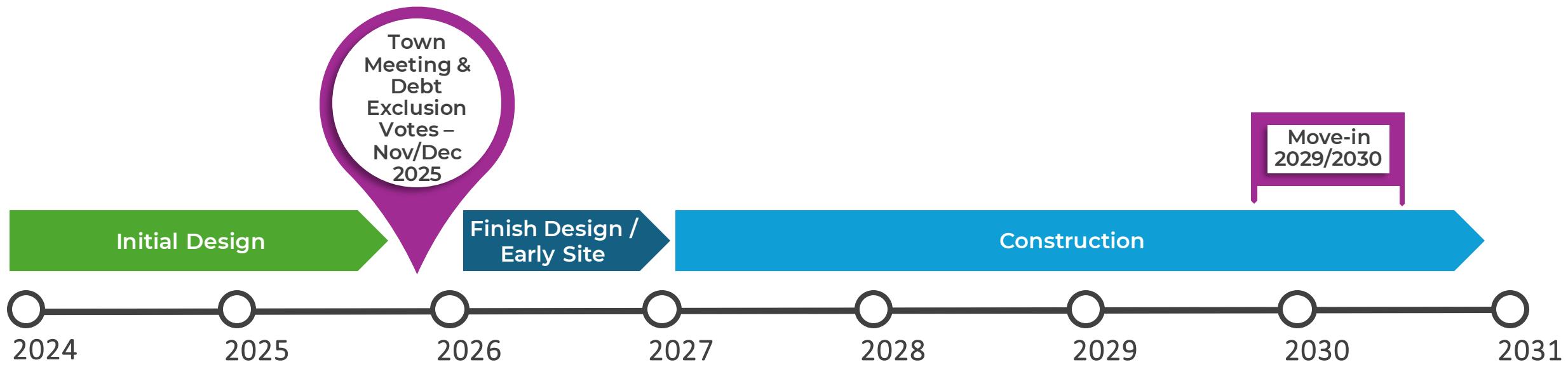
SMMA

AGENDA

1. 06:30 – 06:35 p.m. Overview and Design Team Introductions (5 min)
2. 06:35 - 06:45 p.m. Lexington High School Existing Conditions (10 min)
3. 06:45 - 06:55 p.m. Participant Questionnaire Part I (10 minutes)
4. 06:55 - 07:10 p.m. Presentation of Construction Alternatives (15 min)
5. 07:10 - 07:40 p.m. Exploration & Small Group Discussion of Alternatives (30 min)
6. 07:40 - 08:15 p.m. Small Group Reporting (35 minutes)
7. 08:15 - 08:25 p.m. Participant Questionnaire Part II (10 minutes)
8. 08:25 - 08:30 p.m. Closing Reflections (5 minutes)

**1. 06:30 – 06:35 p.m. Overview and Design Team Introductions
(5 minutes)**

LHS Anticipated Project Timeline

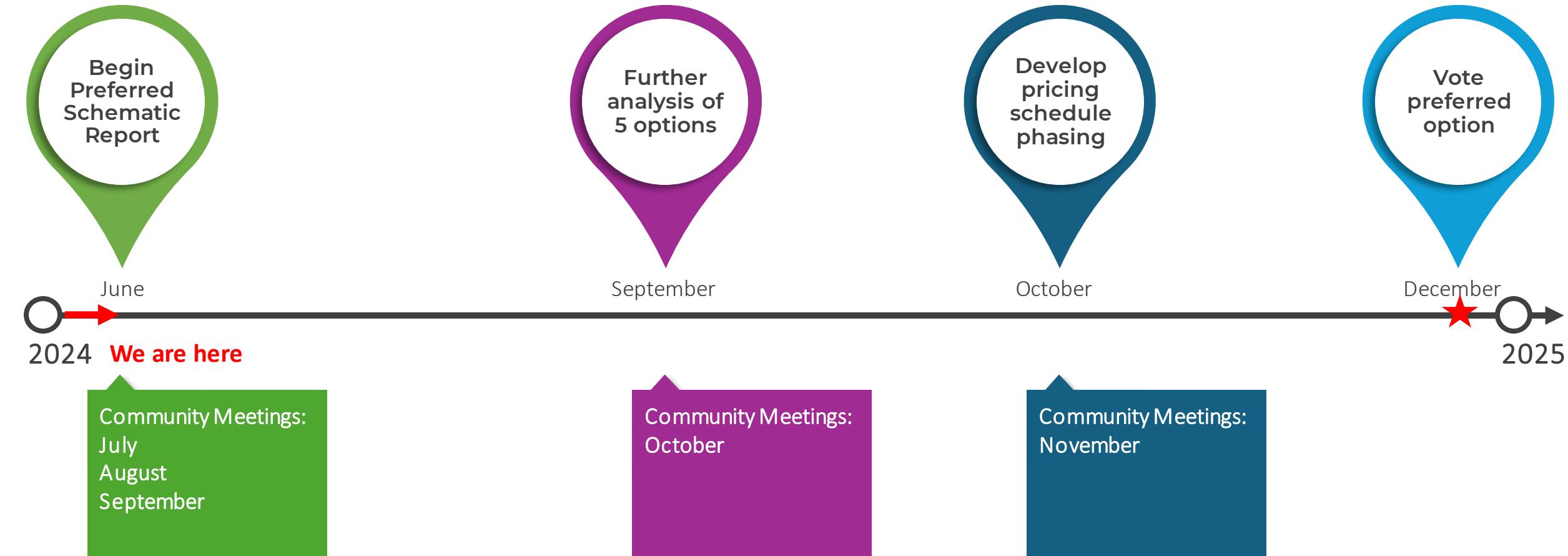


All dates after local vote in November / December 2025 are subject to change based upon the selected option.

Construction duration is shown to provide a potential range. Final duration will be determined toward the end of initial design.

Move-in date will be determined after an option is selected. Anticipated move-in currently shown in the range of 2029 to 2030

LHS Projected Timeline – Preferred Schematic Report



2. 06:35 - 06:45 p.m. Lexington High School Existing Conditions (10 minutes)

- Superintendent Julie Hackett, Principal Andrew Baker and a group of students from the SSBC will present LHS existing conditions, with a focus on top concerns about the existing facility.

The Why?

- 1. PRIORITY NEEDS**—*When the MSBA voted to invite Lexington into the capital pipeline, what did LPS identify as priority needs, and what do we gain from our partnership with the MSBA?*
- 2. SEVERE OVERCROWDING**—*What are the enrollment trends and impacts of overcrowding at Lexington High School?*
- 3. LHS EXISTING CONDITIONS**—*My child is in elementary school, and I haven't stepped foot in the high school yet. What do I need to know about the existing conditions at LHS?*
- 4. “CODE-ONLY” UPGRADE**—*What is a “code-only” upgrade, and what are the unintended consequences of a “code only” solution?*
- 5. CONCESSIONS**—*Do the five (5) selected design alternatives have all the bells and whistles, or have we already made concessions?*
- 6. RESOURCES**—*Where can I learn more about the existing conditions of Lexington High School?*

Needs and Overcrowding

- Priority 2: Elimination of existing severe overcrowding.
- Priority 3: Prevention of the loss of accreditation.
- Priority 4: Prevention of severe overcrowding expected to result from increased enrollments.
- Priority 5: Replacement, renovation, or modernization of school facility systems, such as roofs, windows, boilers, heating, and ventilation systems, to increase energy conservation and decrease energy-related costs in a school facility.
- Priority 7: Replacement of or addition to obsolete buildings to provide a full range of programs consistent with state and approved local requirements.

The greatest and most critical need facing the school system in the next five years is the severe overcrowding at Lexington High School. If current projections hold, LHS enrollment is expected to reach its peak with over 2,500 students (or 650 students over the planned operating capacity) in core spaces and classrooms.

Existing Conditions

- Virtually every space type is substantially impacted by overcrowding.
- Existing structural bays in Buildings A, B, H, and J are not conducive to appropriately-sized general classrooms, which should be 850 net square feet in area to maximize utilization. This requires the equivalent of a 30'x30' (900sf) structural grid. Existing bay sizes in A and B are 30'x25' (750sf). Bays in H and J are 25'x25' (625 sf)
- Science Classrooms are undersized by ~350 net sf compared with MSBA and National Safety standards.
- Many occupied spaces have no access to natural light and would need to be relocated.
- New exterior wall enclosures could allow for expansion beyond the grid but would require extensive rework and underpinning of existing foundations. This could also result in freestanding columns in the classrooms which is not preferable educationally.



Bldg. F - Edge fascia has degraded due to failed coatings and has been infiltrated by adjacent vegetation.

Existing Conditions

- Building envelope systems, both walls and roofs, are outdated and in need of replacement to meet Lexington's energy efficiency goals (and to reduce heating losses and continual maintenance/repair costs). If walls are not expanded out, increased insulation would encroach on interior space further reducing classroom sizes.
- Existing structural frames are not able to accommodate additional floor levels - this limits efficient planning on the constrained available site and could create disconnected floor levels within the school - not good for interdisciplinary teaching and learning.
- Many stairs require new handrails, guardrails and tread/nosing systems.
- Flooring throughout requires constant maintenance, is at the end of its useful life and needs replacement.



Bldg. D – Insulated glass units have broken seals in non-thermally broken frames.

Options, Concessions and Resources

- Construction prices have been soaring for the past several years, and cost escalation is a reality. A high school project today compared to just two or three years ago is significantly more expensive. Moreover, a “code-only” upgrade does not address the severe overcrowding problem at LHS, nor does it meet the 21st century educational needs for today’s high school.
- ***Some people think that the five (5) new design alternatives include all of the “bells and whistles,” but actually they do not.***

Where can I learn more about the existing conditions of Lexington High School?

- Read our [LHS Educational Plan](#).
- Read our [LHS Master Planning Compendium](#) and [LPS Capital Plan](#).
- Read our [Approved Statement of Interest Submitted to the MSBA in June 2021](#).
- Read the [LHS Existing Conditions Report](#) (see pages 67 - 131).

3. 06:45 - 06:55 p.m. Participant Questionnaire Part I (10 minutes)

- Take 10 minutes to log into Thought Exchange and answer a few questions about your interest in and priorities for the Lexington High School Building Project. Scan the QR code below to access the survey or ask a member of the design team for a paper copy.

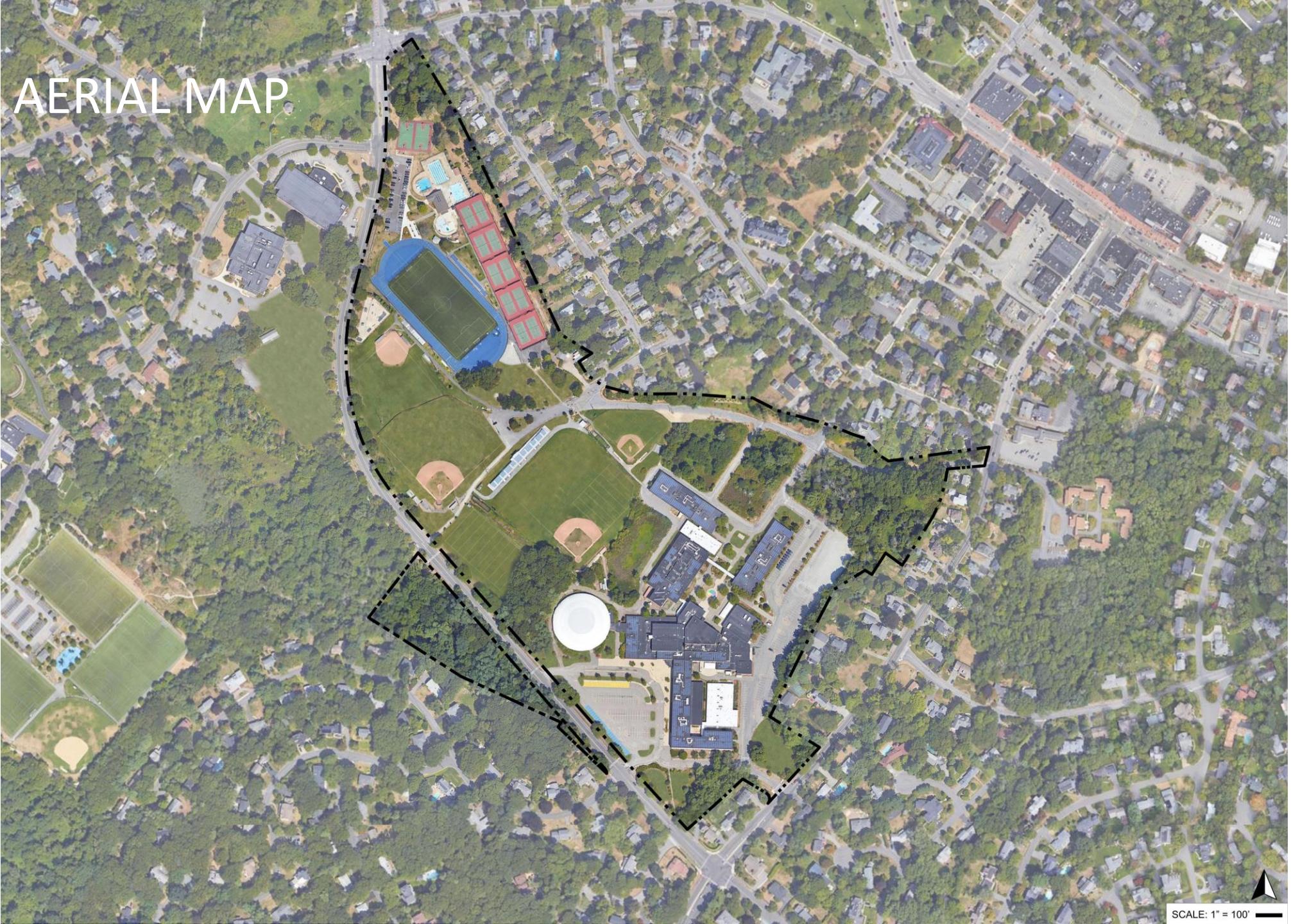


4. 06:55 - 07:10 p.m. Presentation of Construction Alternatives (15 minutes)

- SMMA will begin by highlighting the opportunities and constraints of the project site, providing context for the five Alternatives being advanced to the Preliminary Schematic Report (PSR) stage of the Feasibility Study.
- Each of the five Alternatives will be presented.
- Pros and Cons of the Alternatives, and of the general approaches to siting and construction will be highlighted.

AERIAL MAP

SMMA



SCALE: 1" = 100'

Massing Studies

WHAT ARE MASSING STUDIES?

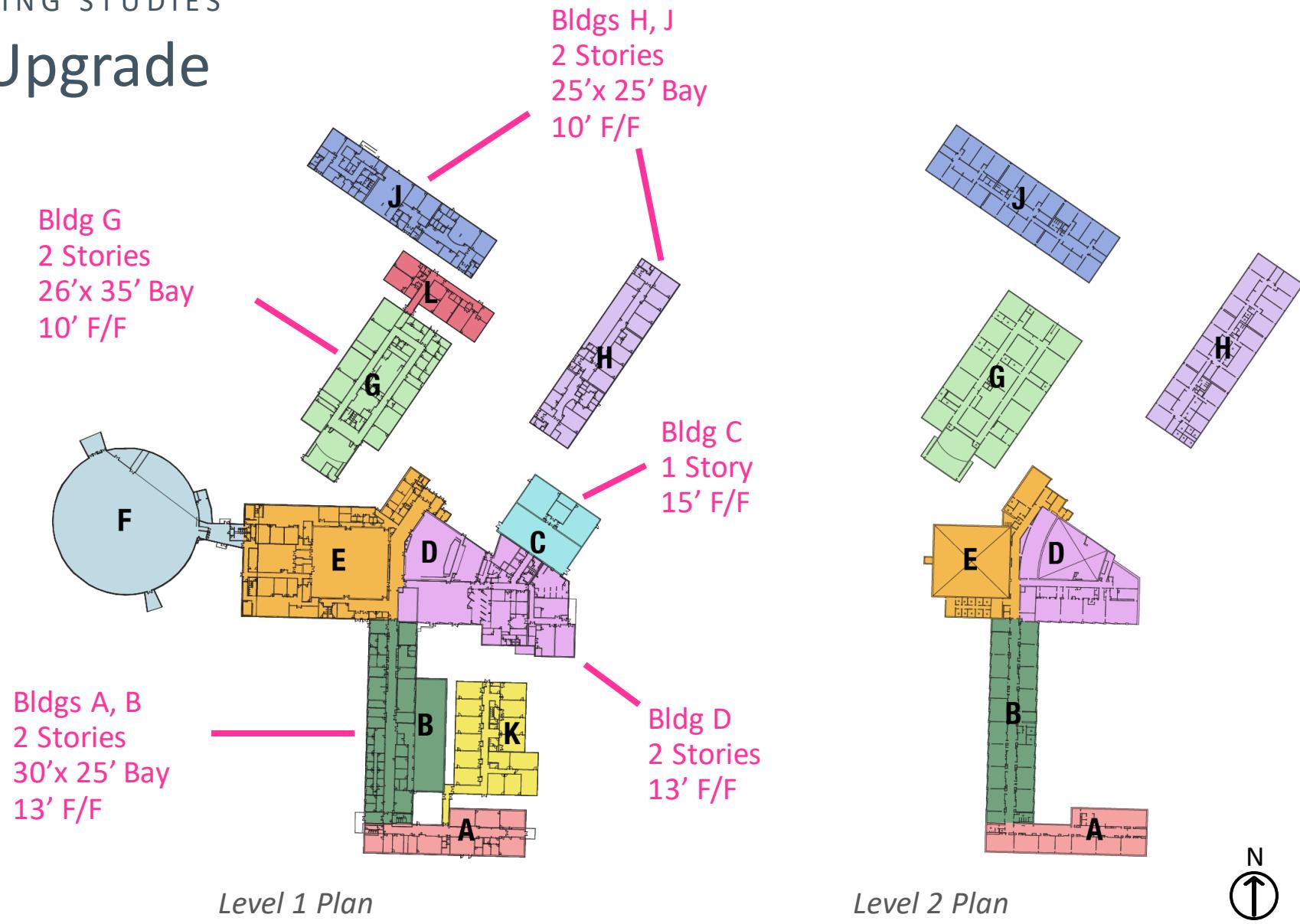
- Conceptual planning diagrams
- Conceptual geometry that indicate required size and heights
- Conceptual siting locations
- Conceptual site circulation

WHAT THEY ARE NOT!

- Designs
- Material selections
- Final siting locations
- Final traffic patterns
- Final costs

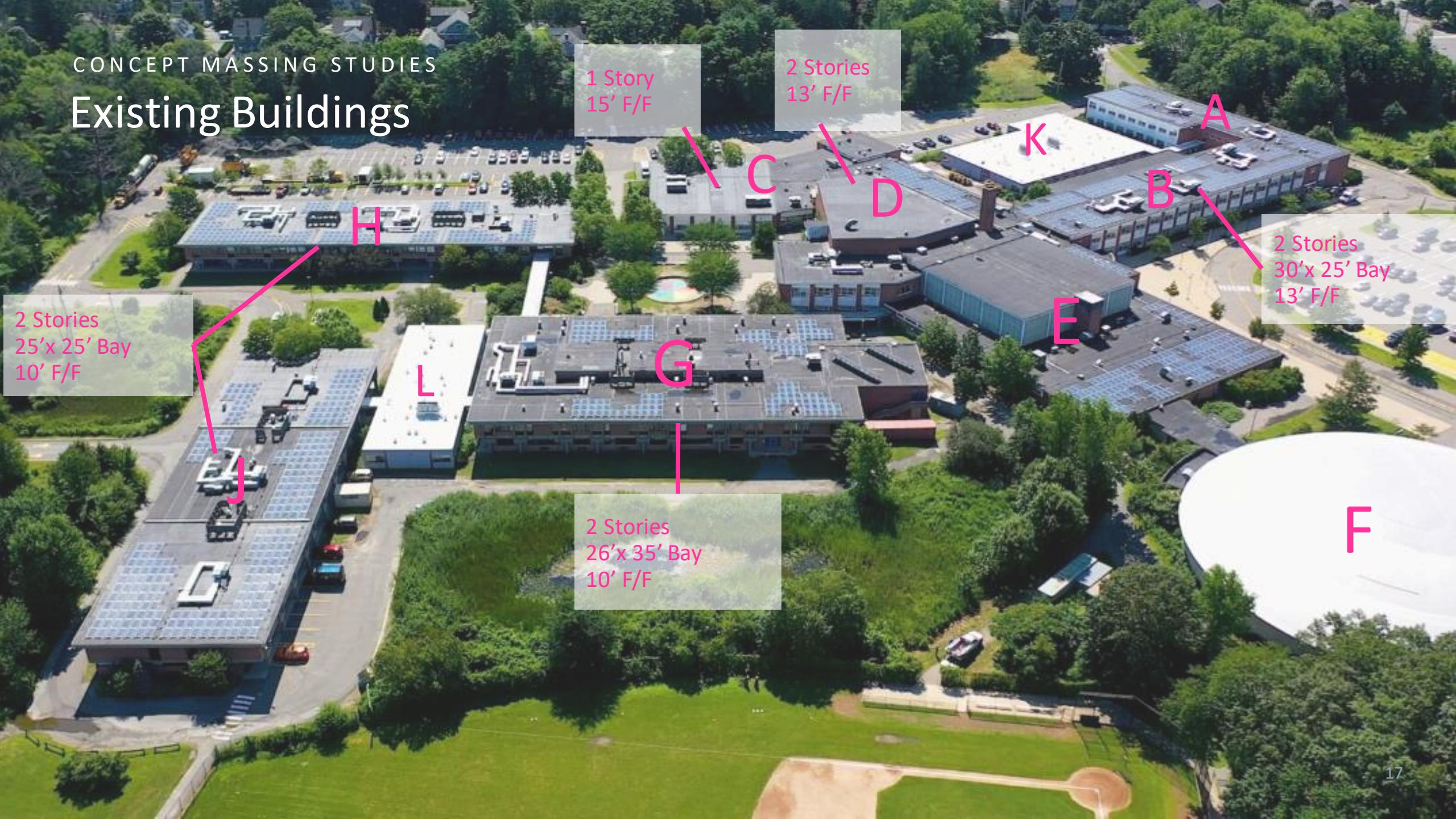
The costs for the various PDP Options indicated below are **intended to be an analysis of the relative costs between options and NOT a prediction of the actual final cost of any individual option**. Major variables such as geotechnical, site grading, wetland determination, structural system and final MEP systems have yet to be designed and **costs will vary significantly from the benchmark cost estimating included as part of this PDP cost analysis**. The costs outlined in this report should not be represented as the FINAL construction budget and have a +/- 10% degree of accuracy.

A.1 Code Upgrade



CONCEPT MASSING STUDIES

Existing Buildings



B.1 Renovation and Addition – Phased in Place



Base Educational Program

Building Footprint: 197,130 sf

Floors: 2-4

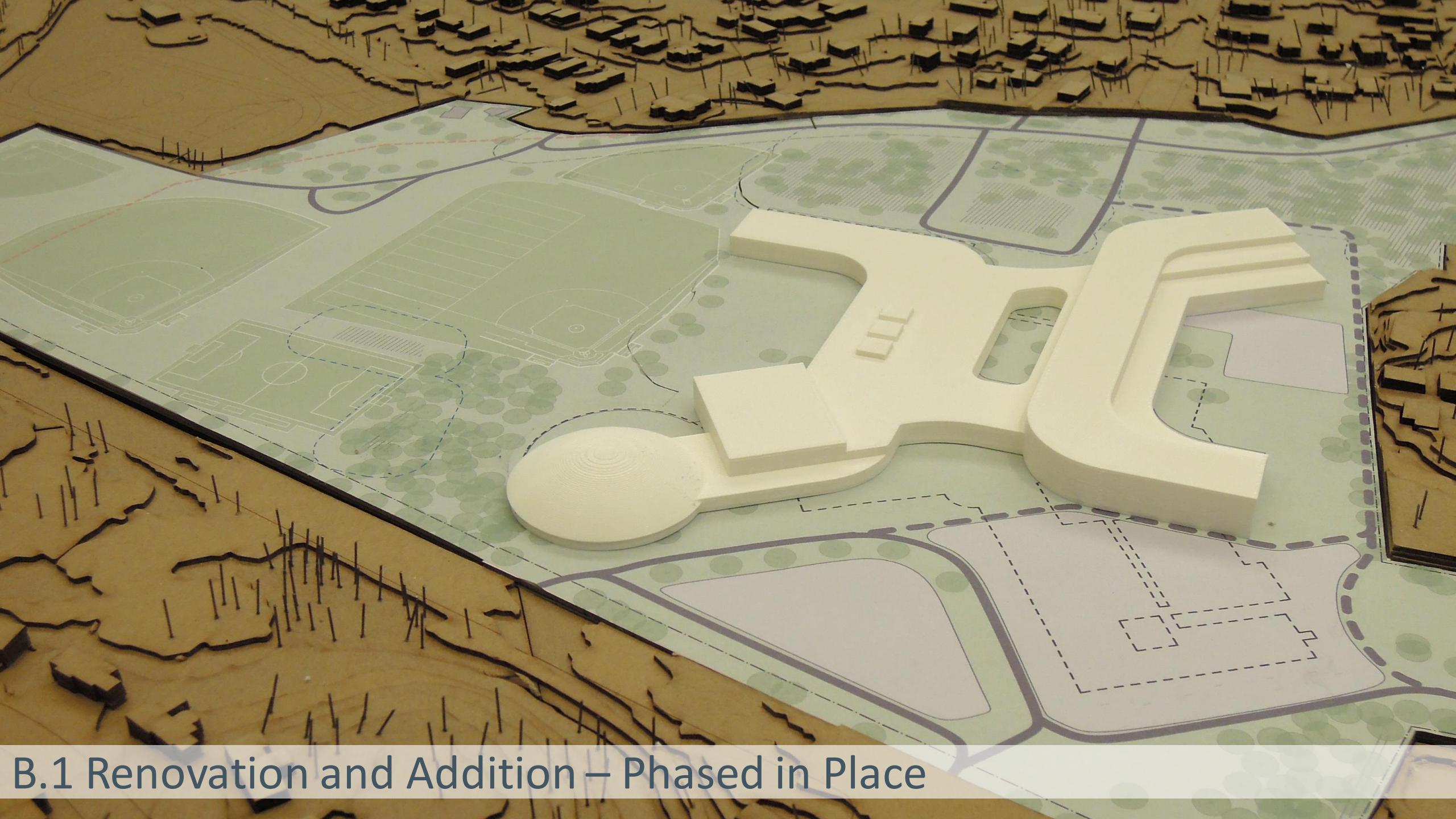
Project Cost: \$635,000,000

Pros:

- Fields remain in current location after construction
- Preserves Existing Building G and J Concrete Structures
- Recreates Quad and Maintains Muzzey St. Connection

Cons:

- Multi-Phase Construction
- Renovations Down to Structure
- Low Headroom in Existing
- Extensive Need for Modular Classrooms During Construction
- Cannot add floors on existing
- Less Room for Additional Program



B.1 Renovation and Addition – Phased in Place

C.1d New Construction – Two Bars



Base Educational Program
Renovated Field House
Building Footprint: 170,000 sf
Floors: 4
Project Cost: \$625,000,000

Pros:

- Current Building Remains in Use Throughout Construction
- Efficient construction of building in one phase
- Enclosed Courtyard
- Good Solar Orientation
- Generous Entry at East

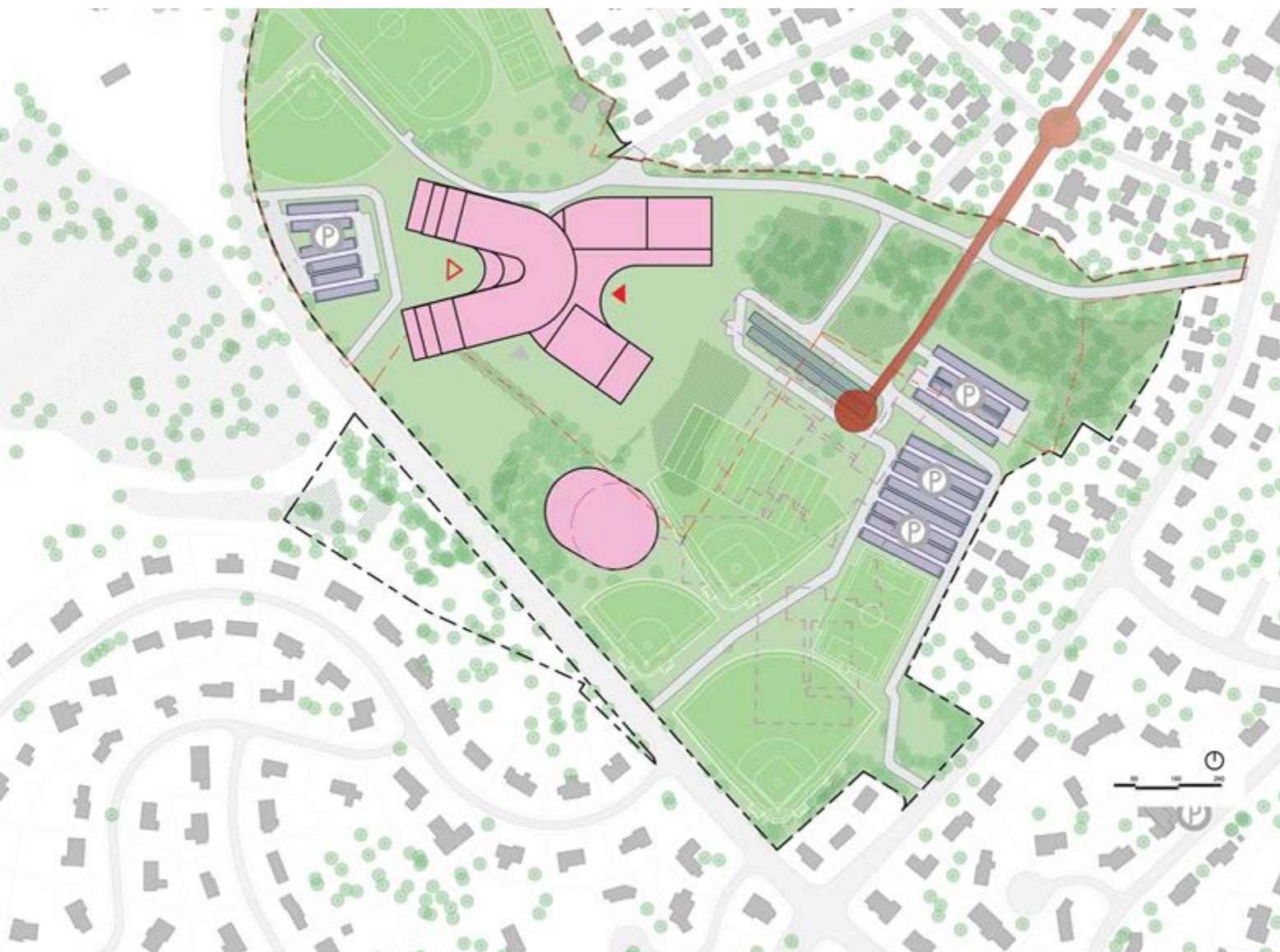
Cons:

- Fields Separate from Center Rec Complex
- Requires Article 97 Legislation
- Takes athletic fields offline for duration of construction (4+ years) then relocates them



C.1d New Construction – Two Bars – 4 Stories

C.2b New Construction - Wide Academic Bars West



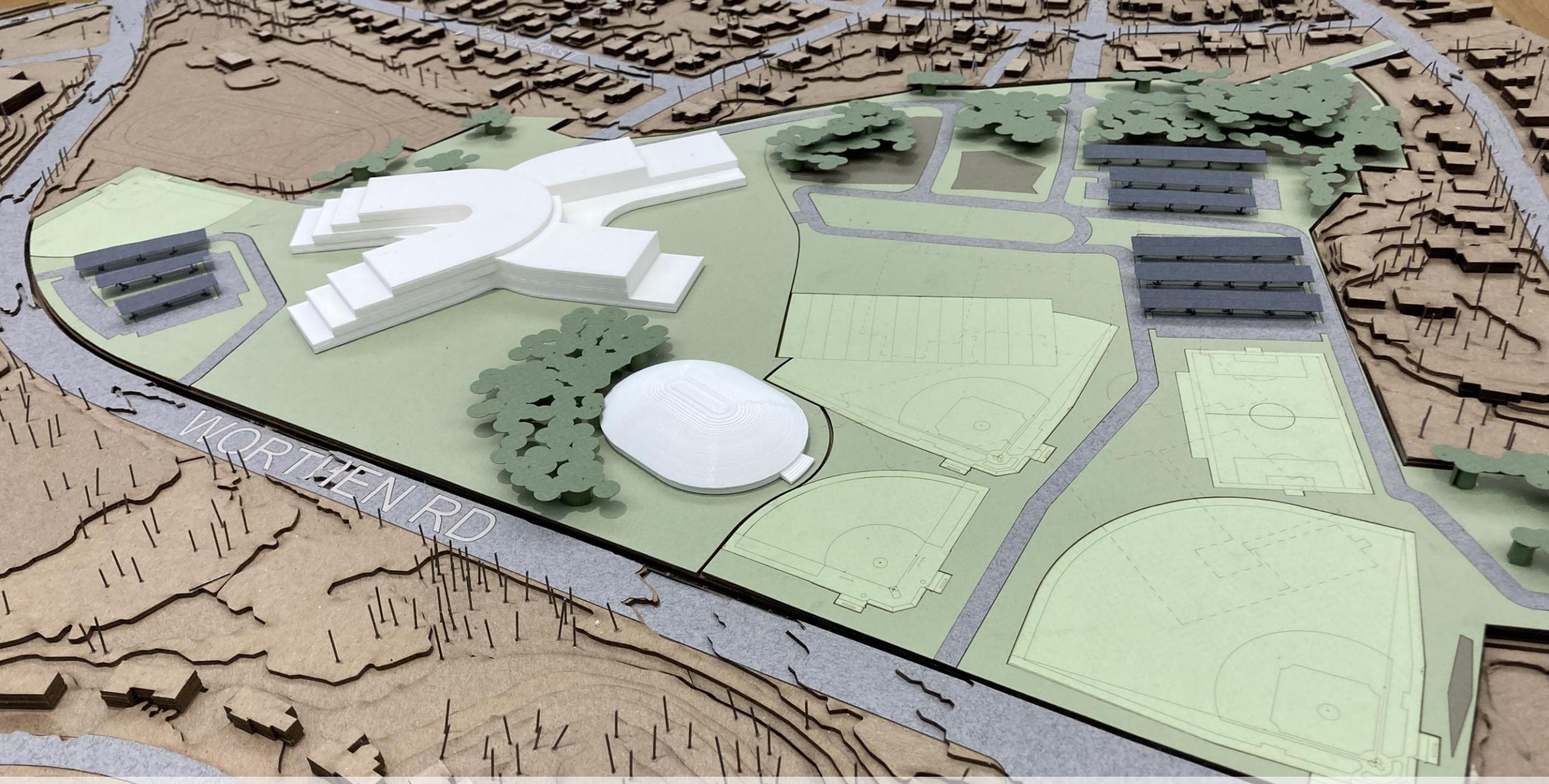
Base Educational Program
Renovated Field House (Enlarged)
Building Footprint: 229,000 sf
Floors: 4
Project Cost: \$600,000,000

Pros:

- Current Building Remains in Use Throughout Construction
- Efficient construction of building in one phase
- Generous Entry at East
- 200m Indoor Track

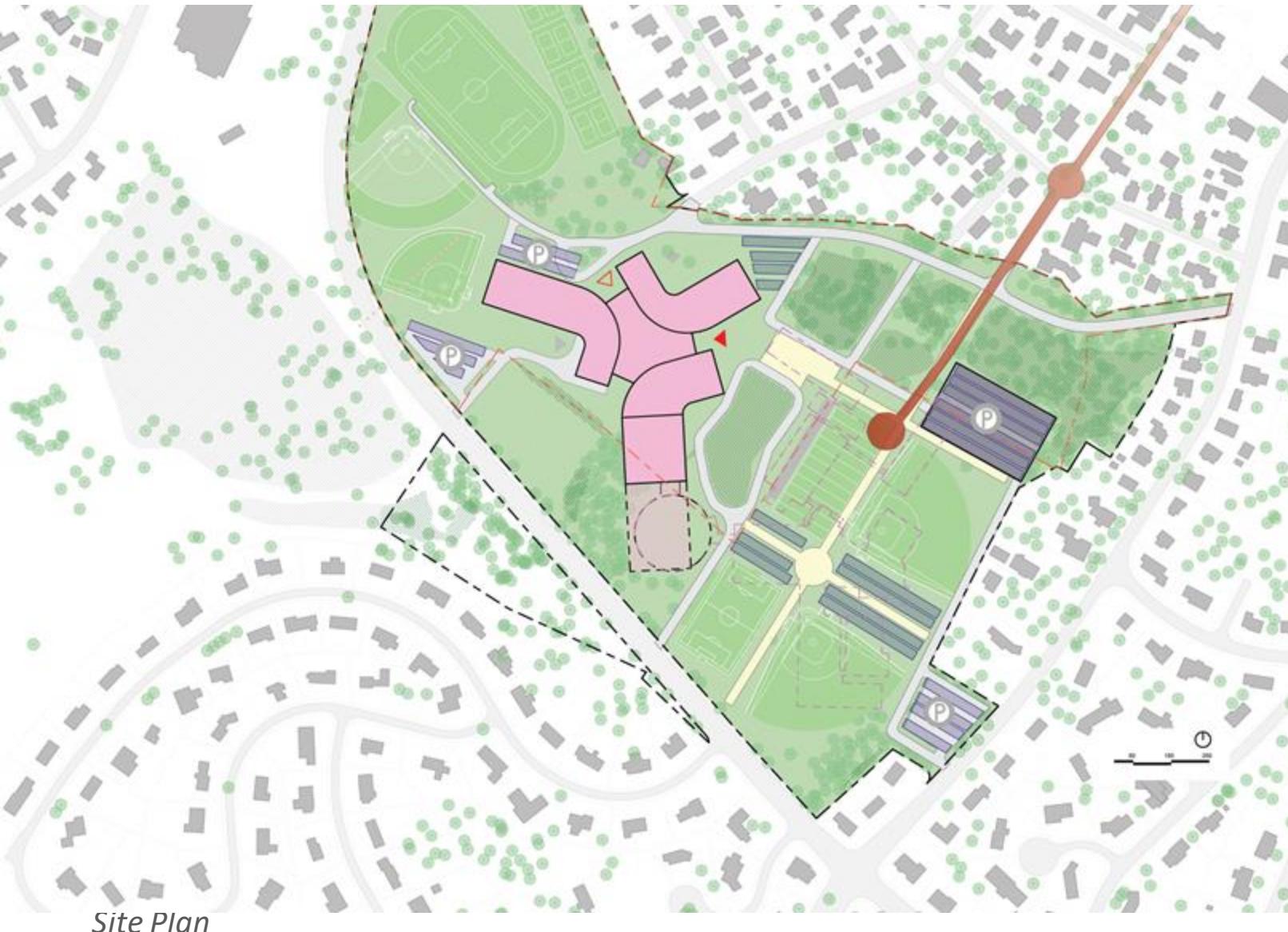
Cons:

- Fields Separate from Center Rec Complex
- Requires Article 97 Legislation
- Takes athletic fields offline for duration of construction (4+ years) then relocates them
- Monumental appearance of massing
- Mix of Façade Orientations
- No Direct Field House Connection



C.2b New Construction - Wide Academic Bars West – 4 Stories

C.5b New Construction



Base Educational Program
New 36,000 sf Field House
Building Footprint: 168,800 sf
Floors: 4
Project Cost: \$620,000,000

Pros:

- Current Building Remains in Use Throughout Construction
- Efficient construction of building in one phase
- Highly Differentiated Educational Clusters
- Enclosed Courtyard
- Direct Connection to Field House
- 146m Track

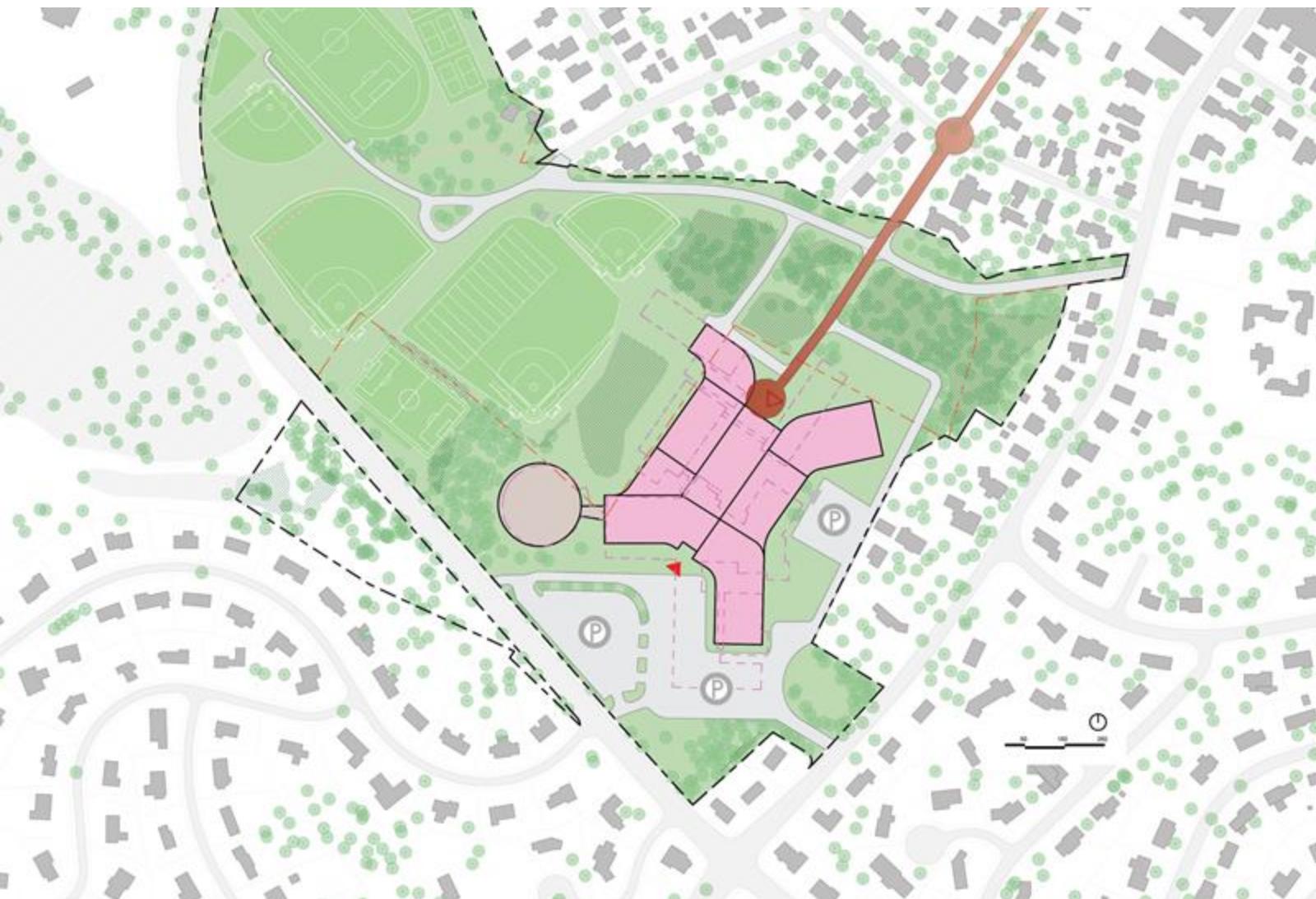
Cons:

- Fields Separate from Center Rec Complex
- Requires Article 97 Legislation
- Takes athletic fields offline for duration of construction (4+ years) then relocates them
- Mix of Façade Orientations



C.5b New Construction - 4 Stories

D.2 New Construction - Phased



Site Plan

Building Footprint: 179,000 sf

Floors: 4

Renovated Field House

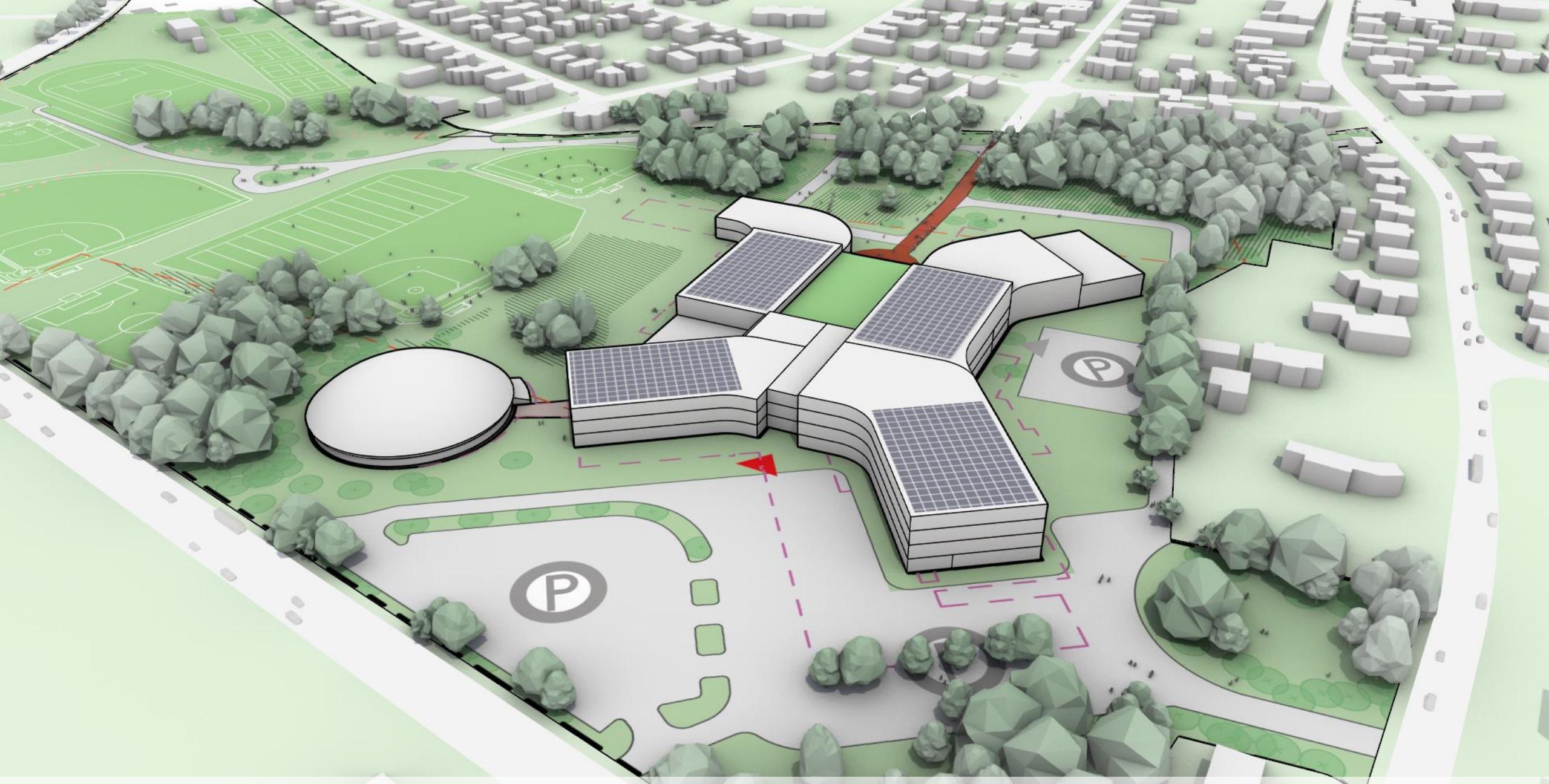
Project Cost: \$621,300,000

Pros:

- No direct impact to wetlands
- No direct impact to Open Space
- No permanent changes to existing field locations
- Nice pedestrian connection to Muzzey Street

Cons:

- Fields needed for construction activities are reconstructed in place.
- Major disruption to ongoing LHS building uses
- Multiple phases of construction extend schedule by ~2 years
- Increased cost vs new construction on fields
- Extremely constrained site may not accommodate all desired uses and adjacencies



D.2 New Construction – Phased

5. 07:10 - 07:40 p.m. Exploration and Small Group Discussion of Alternatives (30 minutes)

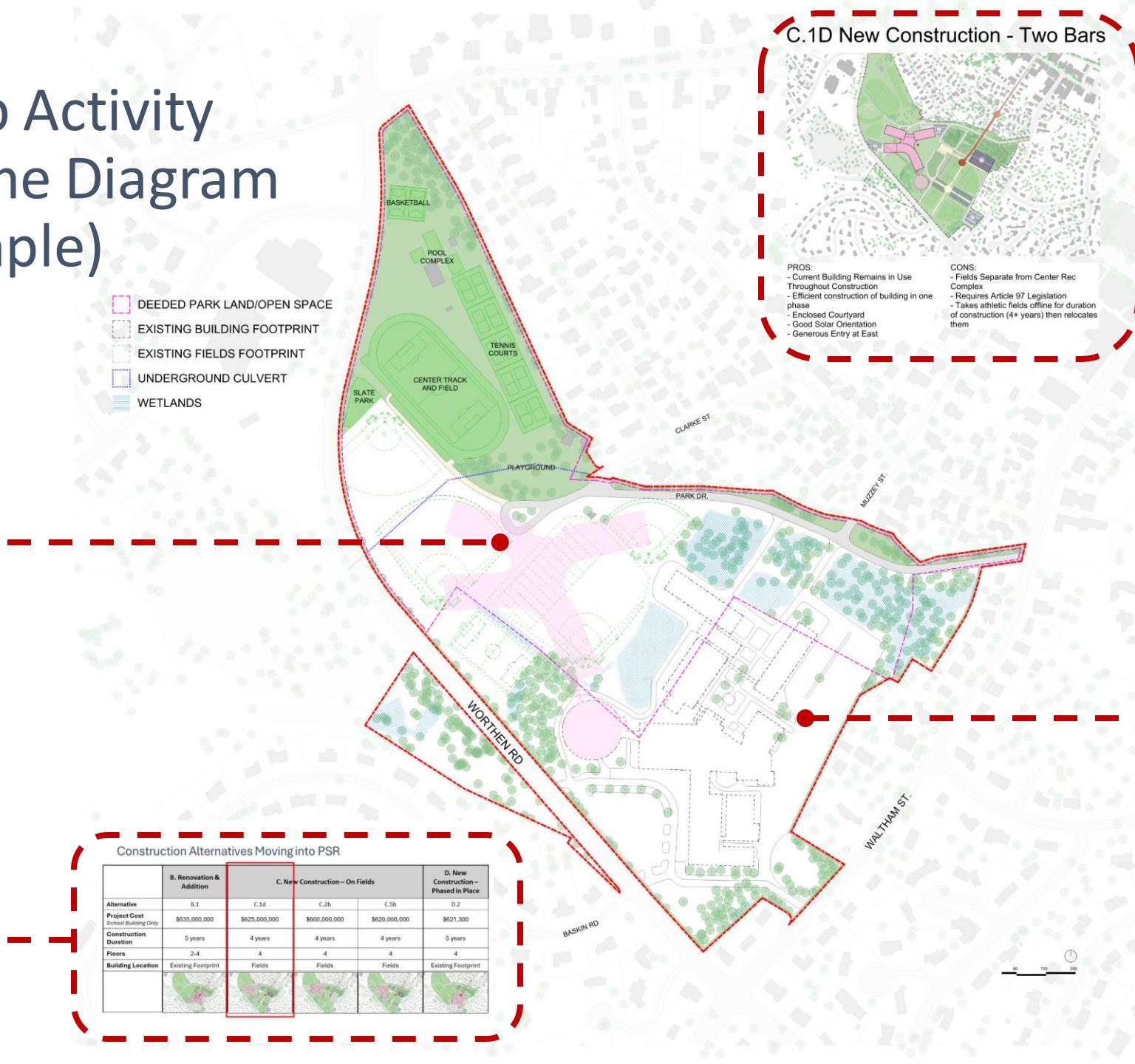
- After SMMA provides an overview of the options being considered, there will be design team members at each table to answer questions and guide the process.
- Review the Pros and Cons of your Alternative with the other participants at the table. As a group, record which of the evaluation criteria are most important to you and why.
- Working within the constraints of the site and program, collaborate with your group to create a list of improvements you think are possible for the Alternative. Test out proposed changes using the given model pieces. Sketch drawings may also be created to test out and communicate ideas.
- SMMA table group leader will facilitate providing a summary of the group's findings to the other workshop attendees.

Group Activity Scheme Diagram (example)

Construction
Alternative
Footprint

Construction
Alternatives
Overview

Construction Alternatives Moving into PSR										
Alternative	B. Renovation & Addition		C. New Construction – On Fields		D. New Construction – Phased In Place					
	Project Cost School Building Only	\$635,000,000	C.1d	\$625,000,000	C.2b	\$600,000,000	C.5b	\$620,000,000	D.2	\$621,300
Construction Duration	5 years		4 years		4 years		4 years		5 years	
Floors	2-4		4		4		4		4	
Building Location	Existing Footprint		Fields		Fields		Fields		Existing Footprint	



Scheme
Description &
Pros/Cons for
Discussion

Work
Area
(White Space)

Group Activity

Kit of Parts

- Building Massing, divided into movable “wings”
- Field program pieces to match existing
- Parking program pieces of various sizes (use to locate 450 on-grade spaces)
- Field House pieces are also available for test-fit:
 - Existing, Renovated (146m track)
 - 48,000 sf Expanded (200m track)
 - 36,000 sf New (146m track)
 - 72,000 sf New (200m track)
- Natatorium (pool) building
- Central Office

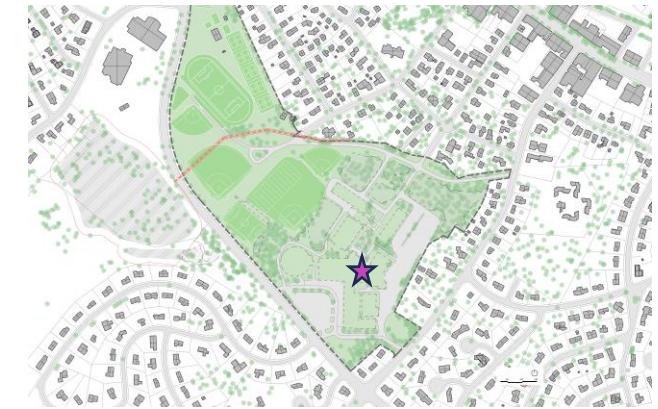
Renovation and Addition – Phased in Place – (Alt B.1)

PROS

- Reduced site scope and cost (depending on location of addition)
- Options being explored to avert Article 97 process
- Reuses some building elements
- Retained concrete structure reduces carbon footprint

CONS

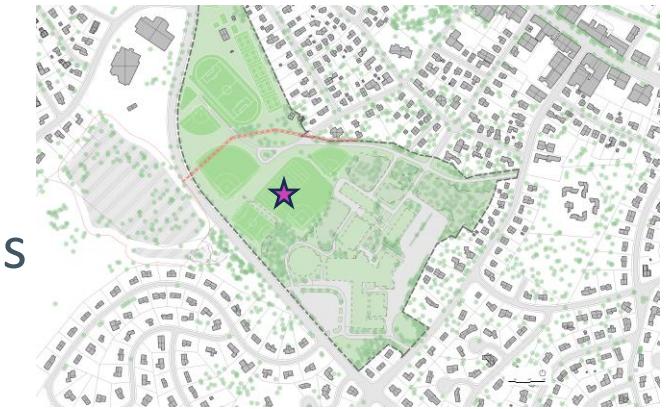
- Major disruption to ongoing LHS building uses
- Multiple phases of construction extend schedule by ~1 to 2 years
- Extremely constrained site may not accommodate all desired uses and adjacencies
- Existing structural bays in Buildings A, B, H, and J not conducive to appropriately-sized classrooms
- New wall enclosures require extensive rework and underpinning of existing foundations - not economical
- Existing structural frame not able to accommodate additional floor levels - limits efficient planning on available site
- Existing floor-to-floor heights of 1960's concrete buildings result in low headroom in classrooms
- Large number of modulars required (cost not reimbursable)



New Construction on Fields – (Alts C.1d, C.2b, C.5b)

PROS

- No disruption to ongoing LHS building uses
- Best site access and lay-down space for construction
- Best opportunity to efficiently consolidate desired site uses
- Most freedom of educational planning/adjacencies
- Single, economical construction phase for building
- No modulars required



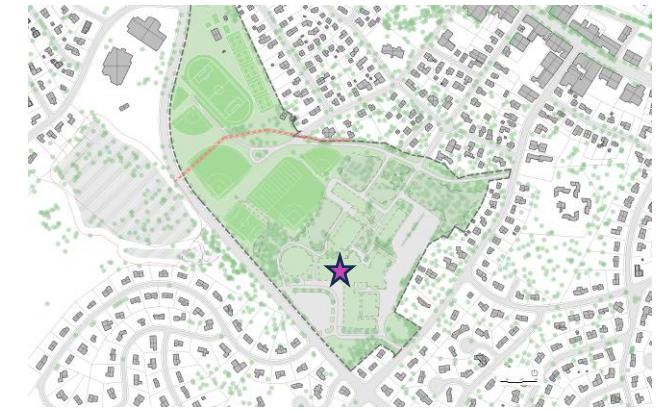
CONS

- Requires Article 97 Legislation
- Takes athletic fields offline for duration of construction (4+ years) then relocates them

New Construction – Phased in Place – (Alt D.2)

PROS

- Reduced site scope
- Some freedom of educational planning/adjacencies
- More efficient layout and construction than Add/Reno options
- Options being explored to avert Article 97 process



CONS

- Fields needed for construction activities are reconstructed in place.
- Major disruption to ongoing LHS building uses
- Multiple phases of construction extend schedule by ~2 years
- Increased cost vs new construction on fields
- Extremely constrained site may not accommodate all desired uses and adjacencies

6. 07:40 - 08:15 p.m. Group Reporting (35 minutes)

- Each group will have up to 2 minutes to report out the findings of their table
 - What did you discover through these activities?
- What improvements would you suggest for your table's Alternative?

7. 08:15 - 08:25 p.m. Participant Questionnaire Part II (10 minutes)

- Take 10 minutes to log into Thought Exchange and answer a few more questions about how you currently view the Lexington High School Building Project. Scan the QR code below to access the survey or ask a member of the design team for a paper copy.



8. 08:25 - 08:30 p.m. Closing Reflections (5 minutes)



Thank
You!



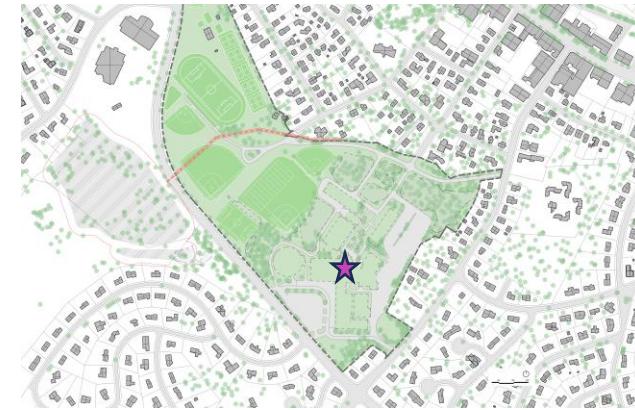
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SMMA

Code Upgrade

PROS

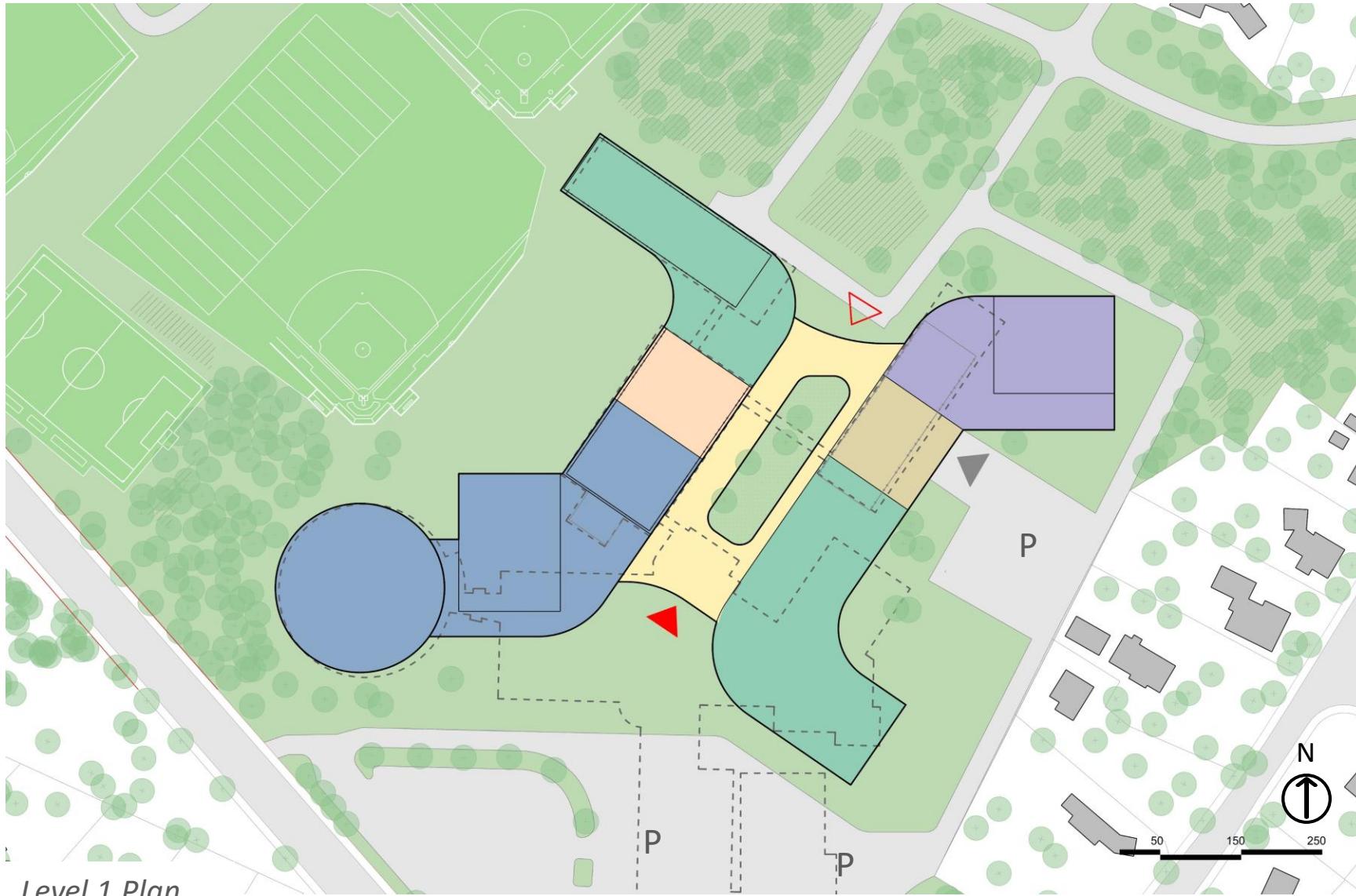
- Lowest cost alternative
- Addresses needed repairs
- Increases accessibility
- Does not impact the fields or Article 97 Land



CONS

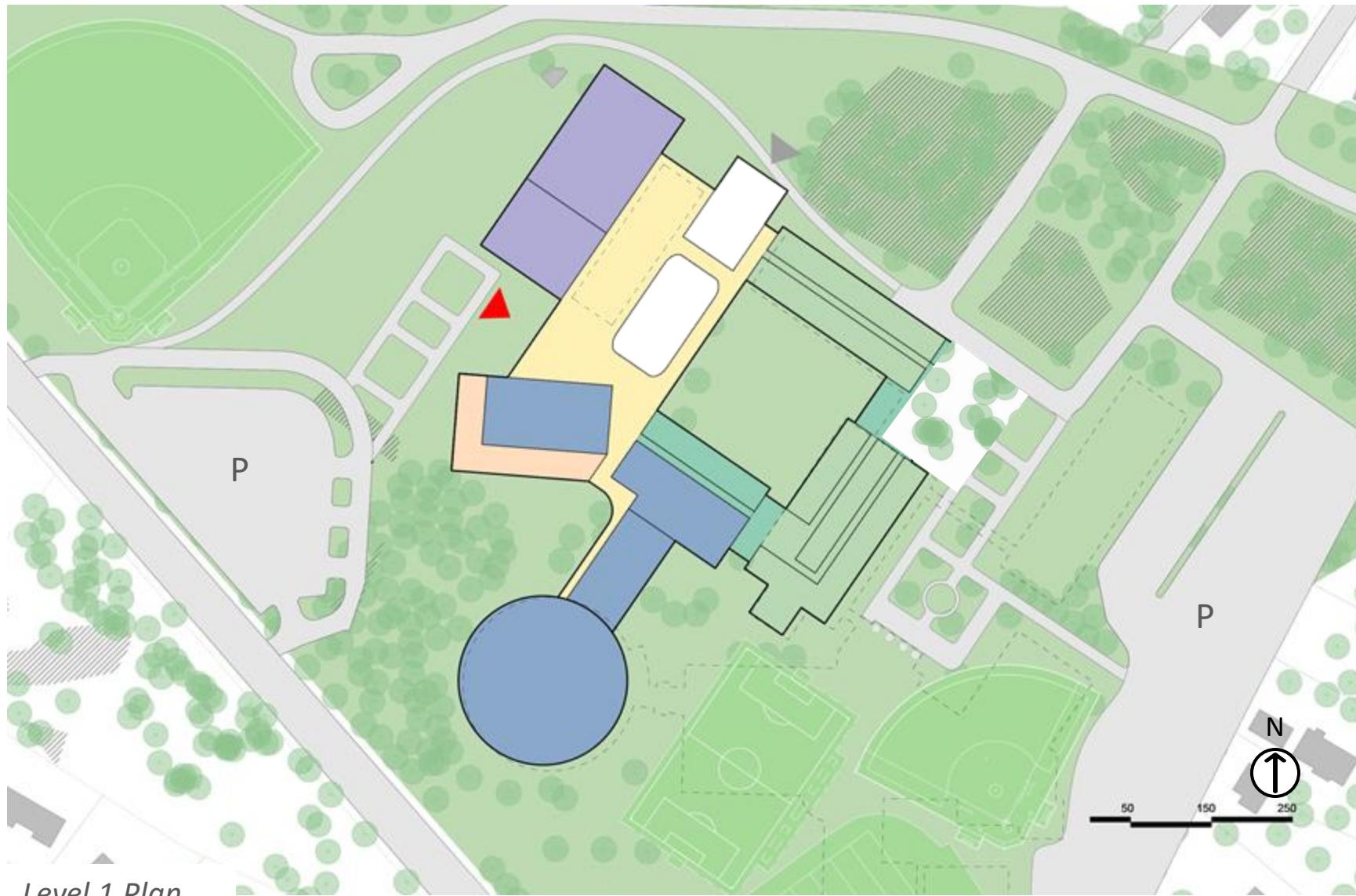
- Doesn't address overcrowding problem
- Doesn't address disconnected buildings, outdoor circulation
- No change to educational environments to meet Ed Plan goals
- Potential disruption to ongoing LHS building uses
- Multiple phases of construction
- Large number of modulars required (cost not reimbursable)
- Significant cost for modest upgrade of facility
- Does not move one wall within the building

B.1 Renovation and Addition – Phased in Place



- Legend**
- Academics
 - Health, Wellness + Athletics
 - Fine + Performing Arts
 - Media Center
 - Dining Commons
 - Kitchen + Custodial
 - Admin
 - Primary Entrance
 - ▷ After-Hours Entrance
 - ▶ Loading Entrance

B.2 Renovation and Addition – Center Shift



Legend

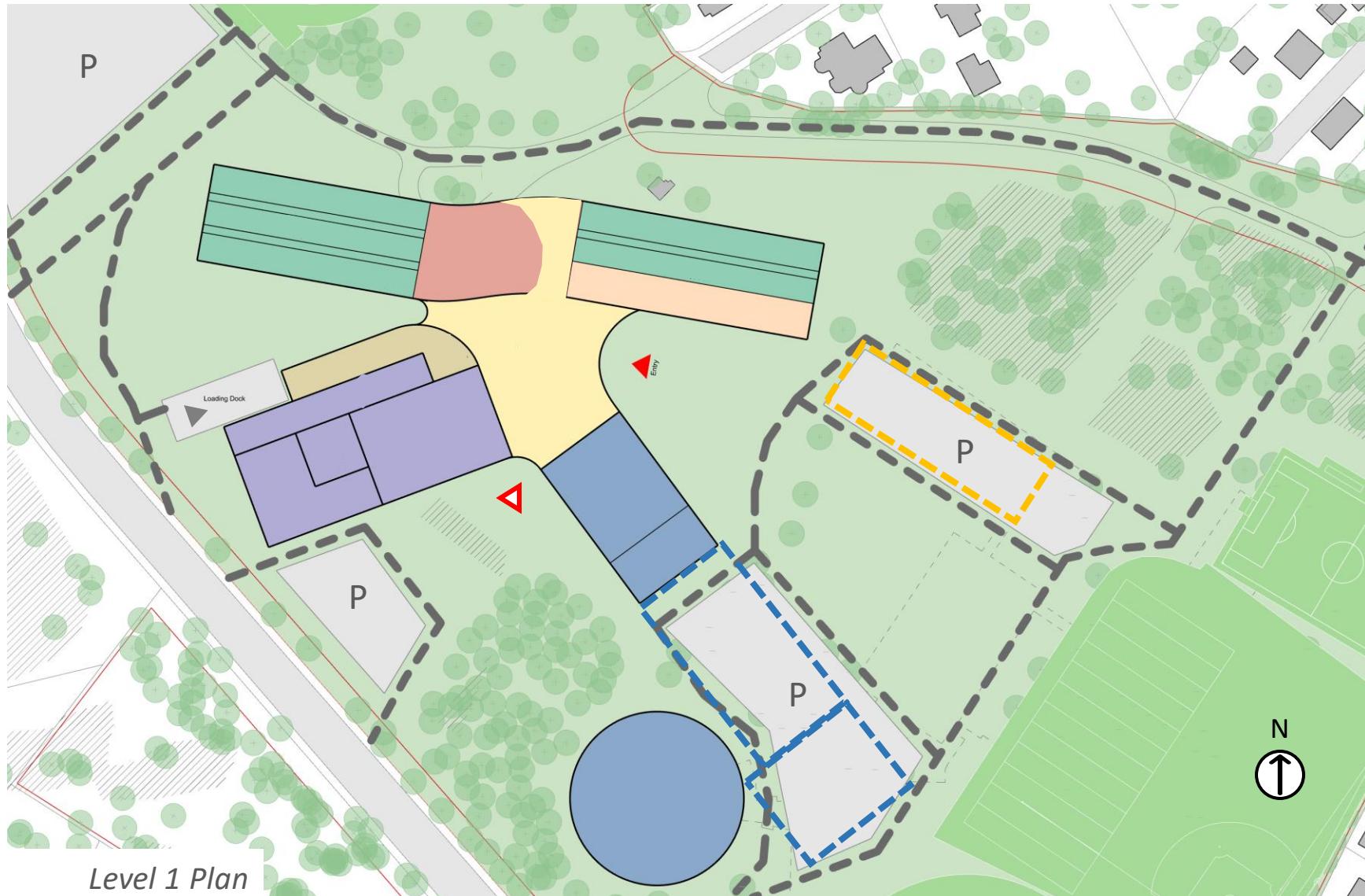
- Academics
- Health, Wellness + Athletics
- Fine + Performing Arts
- Media Center
- Dining Commons
- Kitchen + Custodial
- Admin
- Primary Entrance
- ▷ After-Hours Entrance
- ▶ Loading Entrance

B.3 Renovation and Addition - Phased



Level 1 Plan

C.1a New Construction - Wide Academic Bar North – 3 Stories



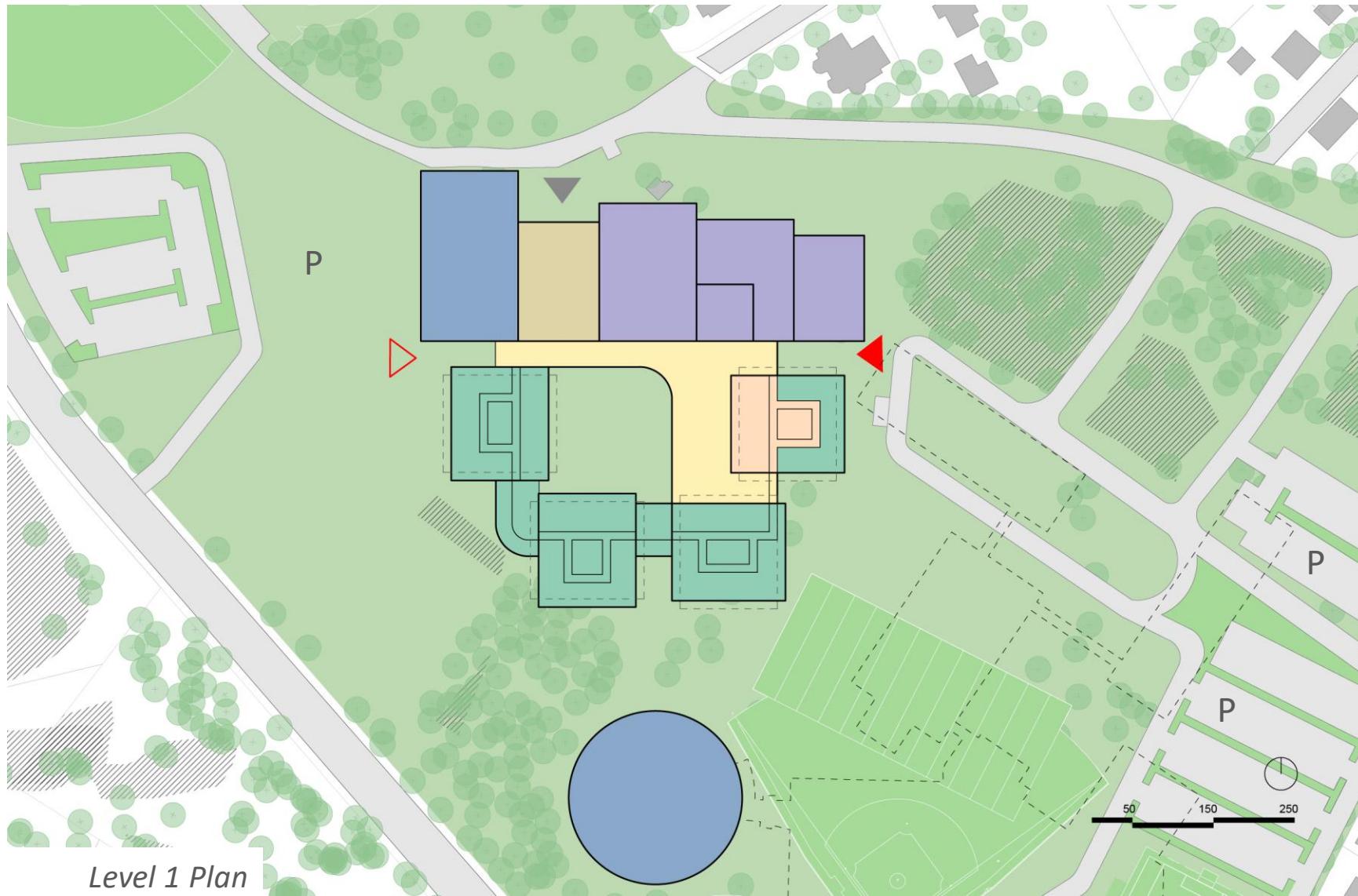
Legend

- Academics
- Health, Wellness + Athletics
- Fine + Performing Arts
- Media Center
- Dining Commons
- Kitchen + Custodial
- Admin
- Primary Entrance
- After-Hours Entrance
- Loading Entrance

Additional Program:

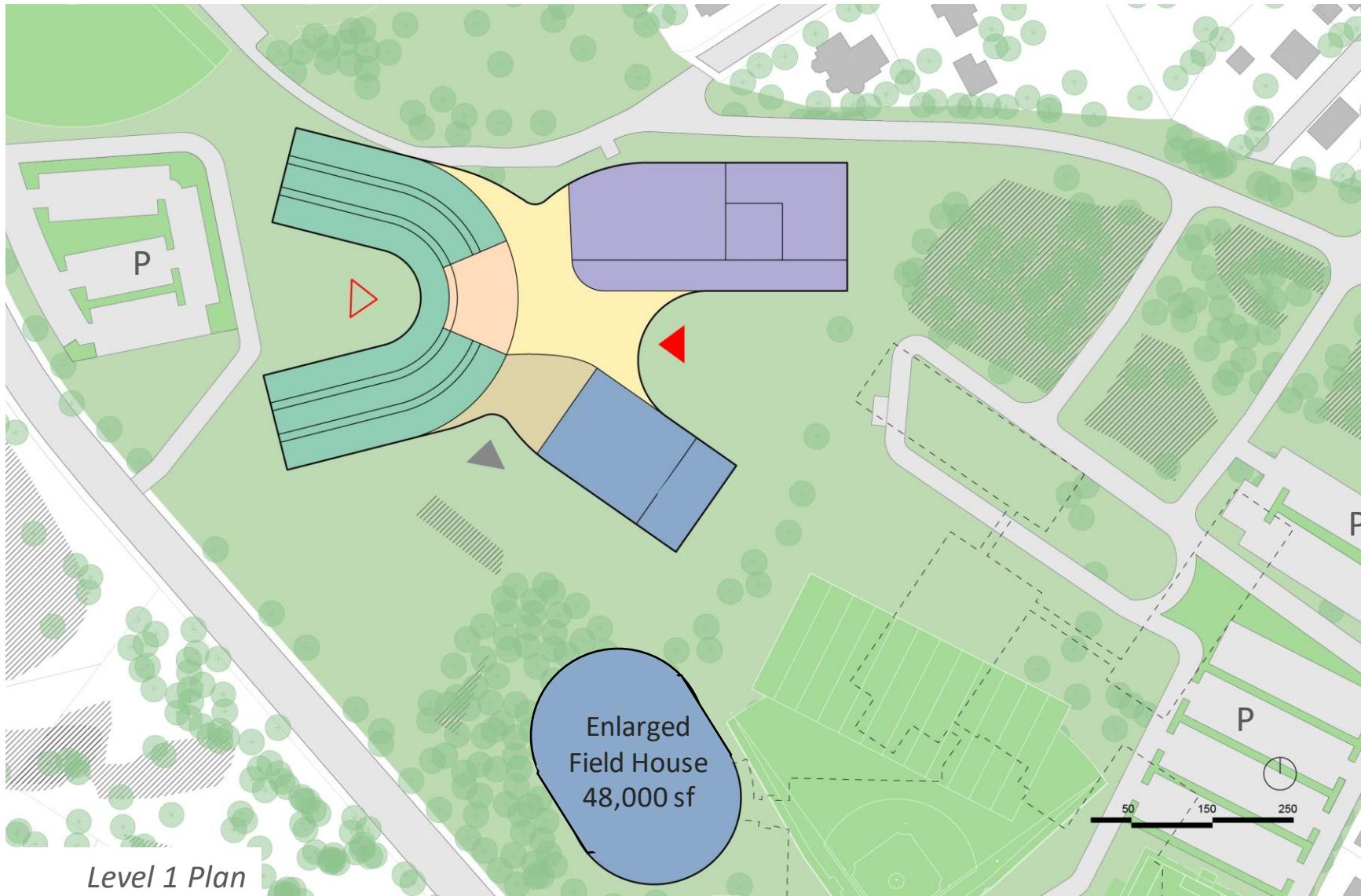
- Central Office
- Field House and Pool

C.4b New Construction – Academic Village



Legend	
Academics	Green
Health, Wellness + Athletics	Blue
Fine + Performing Arts	Purple
Media Center	Red
Dining Commons	Yellow
Kitchen + Custodial	Khaki
Admin	Orange
► Primary Entrance	
► After-Hours Entrance	
► Loading Entrance	

C.2b New Construction - Wide Academic Bars West



Legend	
Academics	
Health, Wellness + Athletics	
Fine + Performing Arts	
Media Center	
Dining Commons	
Kitchen + Custodial	
Admin	
► Primary Entrance	
► After-Hours Entrance	
► Loading Entrance	

C.5a New Construction



Legend	
Academics	
Health, Wellness + Athletics	
Fine + Performing Arts	
Media Center	
Dining Commons	
Kitchen + Custodial	
Admin	
► Primary Entrance	
► After-Hours Entrance	
► Loading Entrance	

D.1 New Construction – Phased with New Field House



- Legend
- Academics
 - Health, Wellness + Athletics
 - Fine + Performing Arts
 - Media Center
 - Dining Commons
 - Kitchen + Custodial
 - Admin
 - Primary Entrance
 - ▷ After-Hours Entrance
 - ▶ Loading Entrance

C.1d New Construction – Two Bars – 4 Stories



Building Footprint:
246,000 sf

- Legend
- Academics
 - Health, Wellness + Athletics
 - Fine + Performing Arts
 - Media Center
 - Dining Commons
 - Kitchen + Custodial
 - Admin
 - Primary Entrance
 - After-Hours Entrance
 - Loading Entrance

C.4c New Construction – Academic Village



Level 1 Plan

C.5b New Construction – 4 Stories



C.6 New Construction - Phased



Level 1 Plan