

# Lexington High School

## Educational Planning & Equity Focus Group

03/12/2025

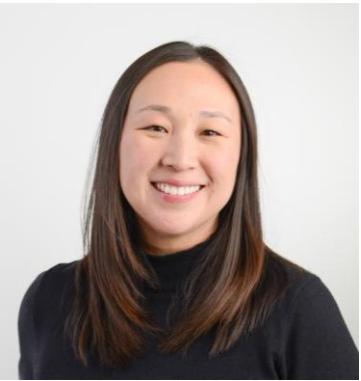


**smma** dw **Turner**  
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# Agenda

- 1      Intro
- 2      Project Update
- 3      Topics Needing Further Discussion
- 4      Schematic Design Recommendations

## Introduction / Design Team



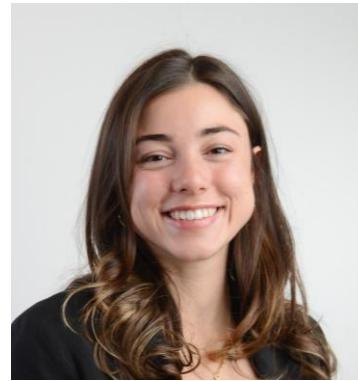
**Rosemary Park**  
Educational Planner



**Phil Poinelli**  
Educational Planner



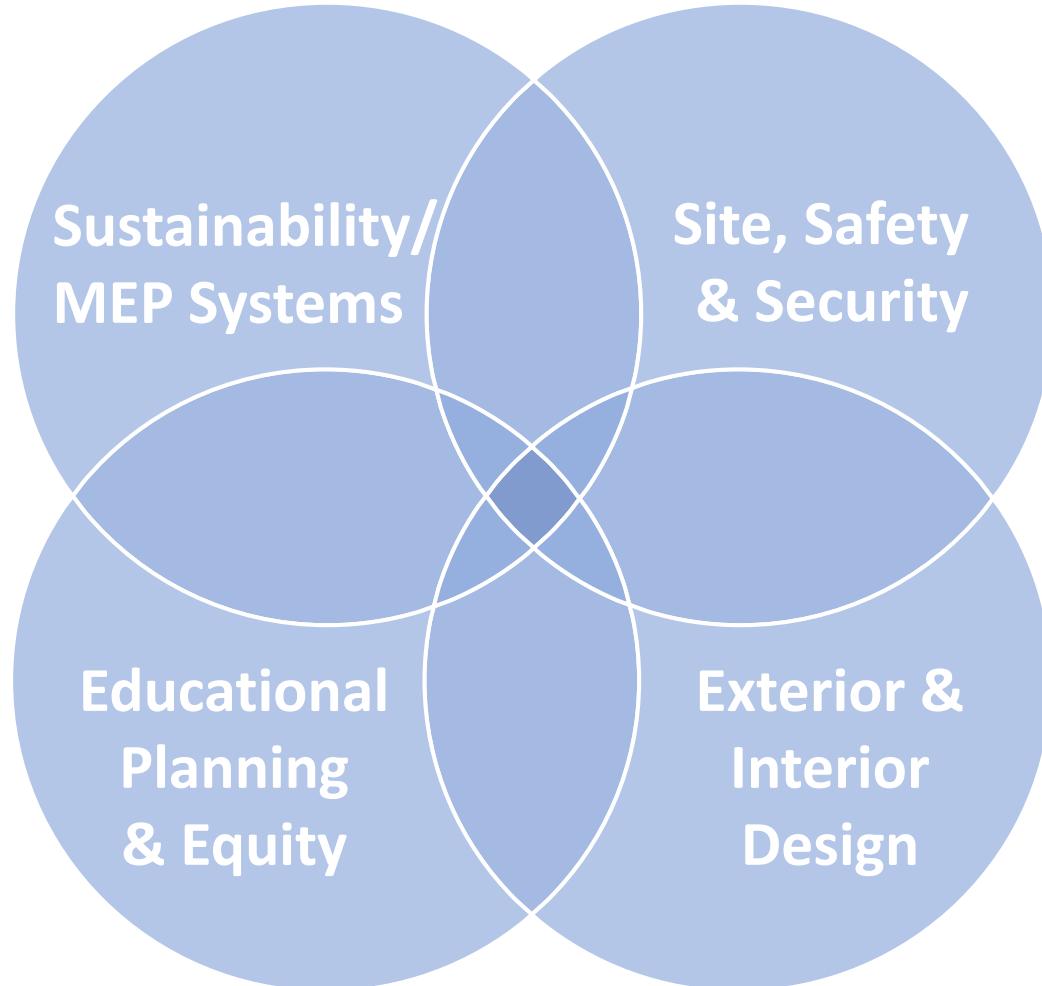
**Brian Black**  
Project Designer



**Anoush Krafian**  
Assistant Project  
Manager

## **Introduction / Group Definitions**

Reviews preferred MEP systems, Integrated Design Policy and sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with Town Departments.

Reviews exterior design concepts including composition of form and material selections such as brick, precast, metal panels etc. Review of the products and materials selected for finishes such as flooring, tile, ceilings, wood paneling, paint colors etc.

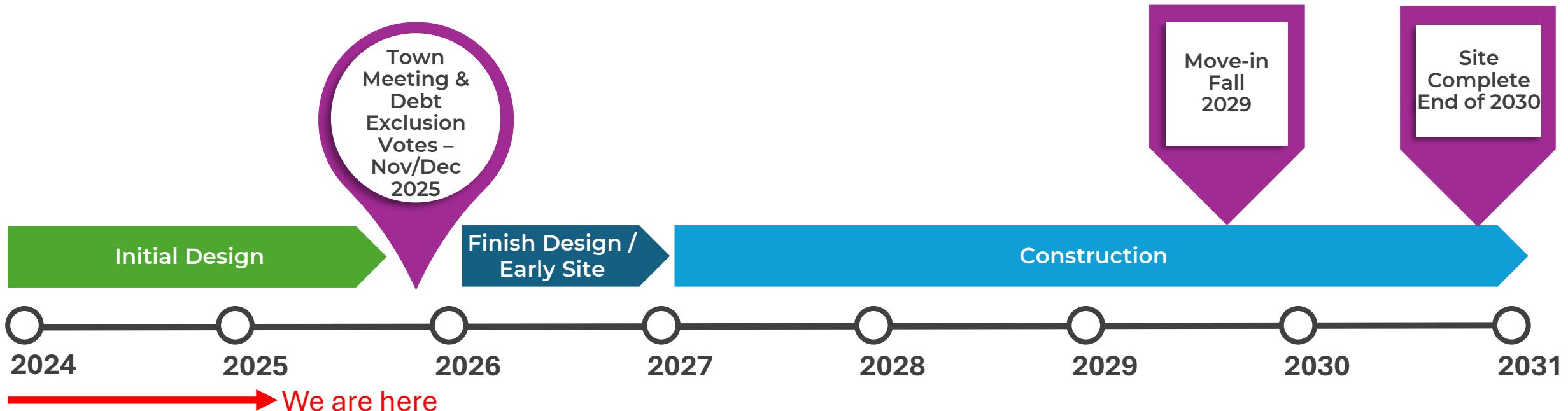
## **Introduction / General Topics of Discussion**

1. Community Building & Connection
2. Dining
3. Academic Space Needs
4. Circulation & Transition Periods
5. Flexible Spaces
6. Pool & Field House
7. All-Gender Restrooms
8. Lockers
9. Inclusive Design
10. Student Resources Outside of School Hours
11. Technology and Innovation Labs
12. Environmental Graphics

# Project Update

smma

## Anticipated Overall 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 fall of 2029.



## Preferred Option / Bloom

	B. Renovation & Addition		C. New Construction – On Fields			D. New Construction – Phased in Place
Alternative	B.1 Quad	B.4 Figure Eight	C.1d Branch	C.2b Braid	C.5b Bloom	D.2 Weave
<b>Project Cost</b> School + Add/Reno FH	\$690,000,000	\$692,000,000	\$637,000,000	\$636,000,000	\$639,000,000	\$711,000,000
<b>Project Cost</b> School + Add/Reno FH + Central Office	\$713,000,000	\$715,000,000	\$660,000,000	\$659,000,000	\$662,000,000	\$734,000,000
Construction Duration	6 Years	6.25 Years	4.5 Years	4.5 Years	4.5 Years	6.5 Years
# of Phases	4 + 1	5 + 1	1 + 1	1 + 1	1 + 1	4 + 1
Building Location	Existing Footprint	Existing Footprint	Fields	Fields	Fields	Existing Footprint
Modular Max Required	32	42	0	0	0	48
						



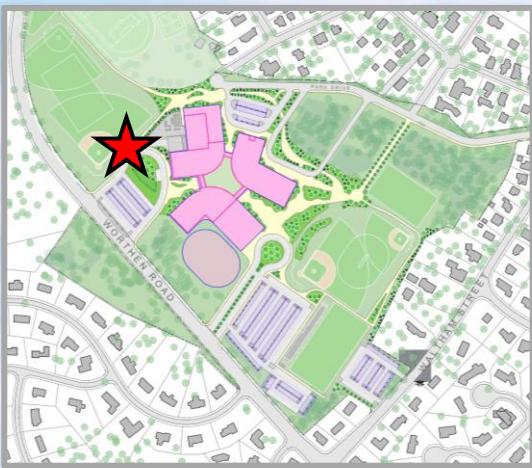
## Preferred Option / Bloom



## Eye-Level View from Worthen Road Entrance Drive



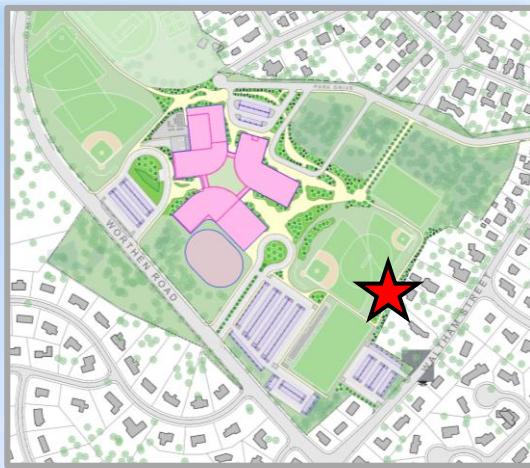
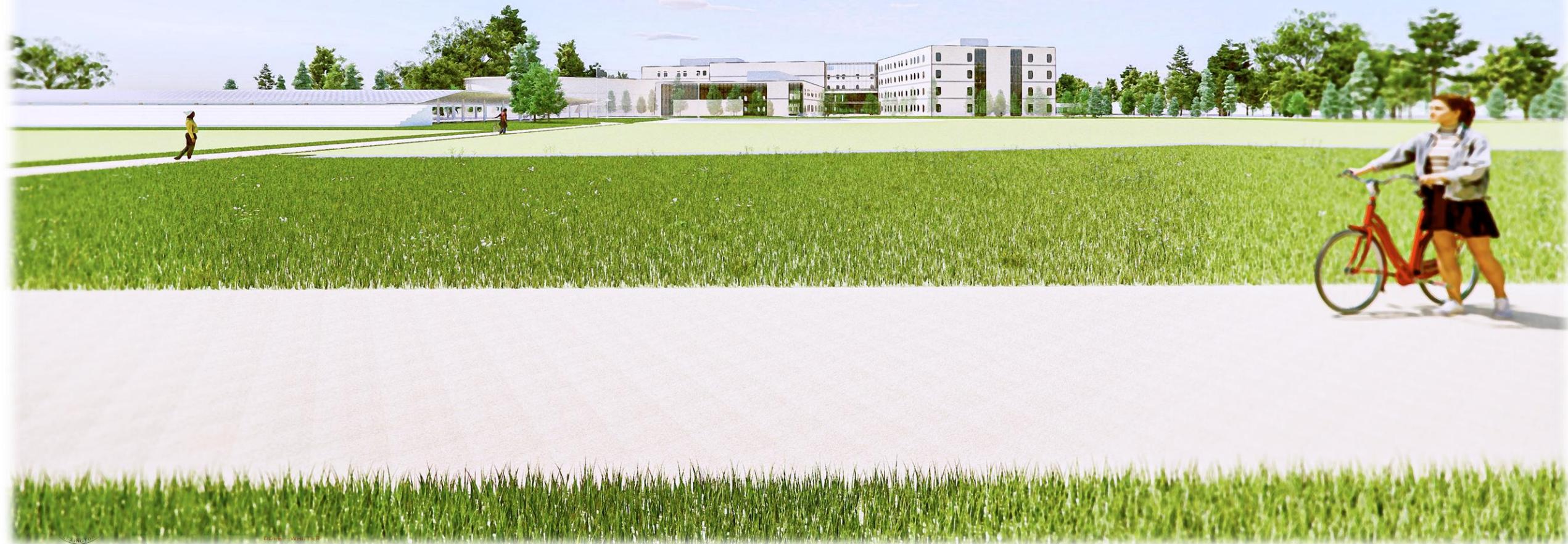
## Eye-Level View from West



## Eye-Level View from Clarke Street / Park Drive



## Eye-Level View from East Across New Fields



# Topics Needing Further Discussion

### EPE 4: Spaces for students and teachers to collaborate/lounge/converse outside of the classroom/academic setting

- Some teacher planning areas may be open to student / teacher interaction - this needs further discussion. Small group rooms and breakout areas will be available throughout the school. The library will have a variety of seating types and areas. There will be informal gathering areas and "pull-over" spaces throughout the school.

The program includes enclosed meeting spaces like Small Group Rooms and Breakout Rooms, as well as informal breakout areas. The design team will continue discussions with the school to explore creating in-between meeting spaces are a part of Teacher Planning rooms.



## Topics Needing Further Discussion

### **EPE 13:** Think about how eating spaces are set up to reduce waste

- Dining areas are to be reviewed to address wasted reduction at subsequent, more detailed stages of the design process.

### **EPE 14:** Food waste happens in more than just the cafeteria

- Areas throughout the proposed school design are to be reviewed to address waste reduction at subsequent, more detailed stages of the design process.

Ongoing discussions with administration, Custodial and Facilities, and Food Service on location and types of seating areas. Want to offer differentiated seating options to address different levels of social comfort of students.

Discussions continue to include the the location and types of waste receptacles required throughout the building.



### EPE 16: Every Science class should have sinks, lab spaces, natural gas.

- All science labs are to be outfitted with sinks and will have flexible layouts that allow for appropriate lab and lecture activities and align with MSBA standards for lab design. There will be no natural gas provided to the building, so alternative heating options for lab use are to be proposed and reviewed in more detailed stages of the design process.

Science labs will have sinks and mobile benches, with fixed casework along the classroom perimeter to accommodate both labs and lectures.

SMMA has discussed with the Science Department Head, teachers, and LHS Leadership a layered approach that targets different equipment for specific uses:

- » Open-flame, mixed fuel portable gas burners for general use.
- » Electric bunsen burners for heating crucibles
- » Electric hot plates for boiling water

This equipment would be adequate for two classes to access from a shared prep room (scheduling coordination by the educators is needed). Initial assumption for scoping purposes is to have 6 electric bunsen burners and 6 hot plates in each prep room.



## Options for Heating/Burning without Natural Gas

1 of 3 Portable Gas Burners for general use

### A. Mixed Gas – Safety Bunsen Burner

- Designed for laboratory use
- Available with built-in safety features including gas cutoff and hot surface indicator
- High instant temperature
- Low maintenance
- Not efficient for heating crucibles
- Expensive: ~\$1,200



### B. Propane

- Bare bones – no sensors or safety features
- Cost: \$30 / \$8 standard propane tank

### C. Butane

- Portable and relatively safe
- Produces a very hot but almost invisible flame
- Burns through refills fast
- Cost: \$70, with \$10 cartridges



# All Electric Science Lab Equipment

## **Options for Heating/Burning without Natural Gas**

2 of 3 Electric Bunsen Burners for heating crucibles, test tubes and igniting magnesium

Pros:

- No gas, eliminates risk of leaks
- No maintenance
- Carbon free operation

Cons:

- Expensive: ~\$1,200
- Flame tests are harder
- Top stays hot for awhile



## ***Options for Heating/Burning without Natural Gas***

3 of 3 Electric Hot Plates for boiling water

Pros:

- Can boil large quantities
- No precarious ring stands
- No gas / Carbon free operation

Cons:

- Stays hot for awhile



## Topics Needing Further Discussion

### **EPE 22:** Need to address space constraints to avoid barrier to upper-level class enrollment because of limitations to entry level classes.

- The school department and school administration are to review this concern to determine if there are curriculum adjustments that can be made to address this.

Curriculum concerns are to be reviewed by the Superintendent. The design team did an analysis of the Master Schedule to project the quantity of spaces required to accommodate curriculum needs and populated the Program Summary of Spaces as required.



## Topics Needing Further Discussion

**EPE 33:** Transition time is not sufficient to get from class to class

**EPE 34:** New building has to factor in traffic and transition time

- Student travel times are considered throughout the design process. Potential outcomes of this study may include both spatial as well as schedule accommodations.

Design team has studied travel times of both the existing school and the proposed design.

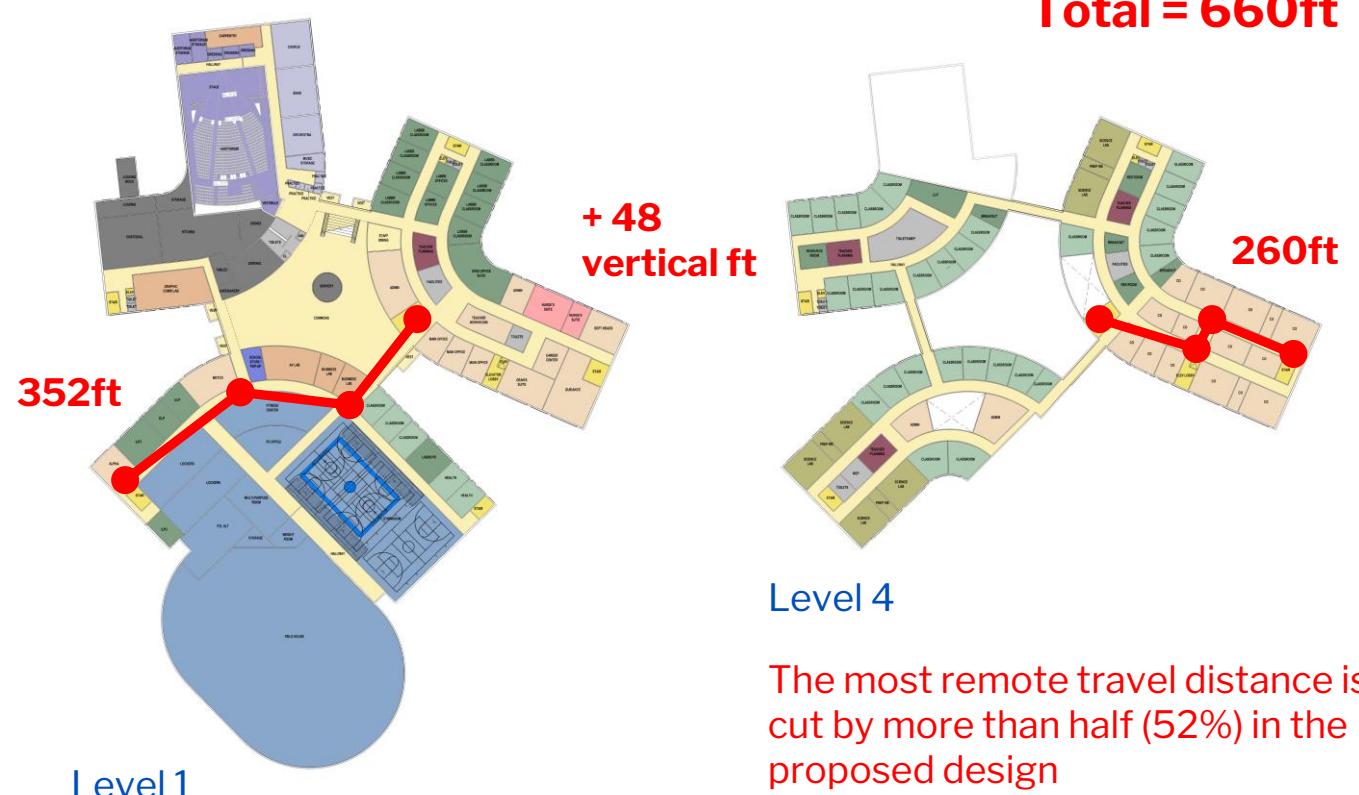
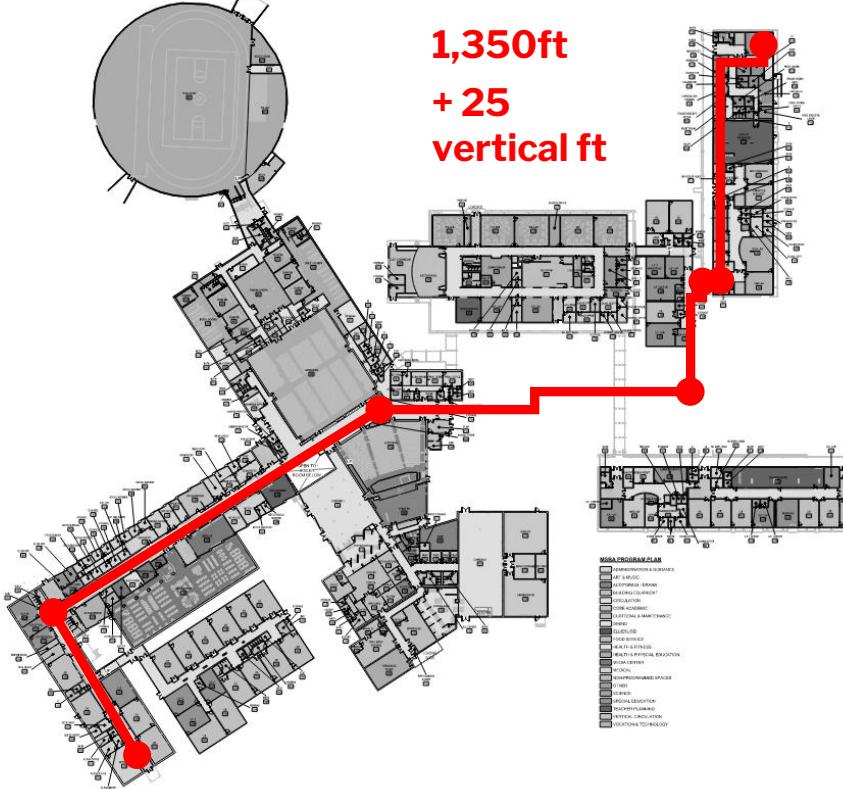


## Travel Times

### Existing Travel Time (Level 2 Building A to Level 2 Building J)

= **5.5 minutes** at an average adult walking speed

= **7 minutes** at a slower pace simulating an overcrowded condition between classes



### Proposed Building Travel Time (Level 1 C Wing to Level 4 B Wing)

= **3.5 minutes** at an average adult walking speed

Level 4

The most remote travel distance is cut by more than half (52%) in the proposed design



### EPE 39: At least 4 elevators

- The final number of elevators is to be determined during the development of the selected design option. Redundancy regarding the capacity of elevators within the new school is a positive attribute.

The selected design option ("Bloom") includes three (3) elevators: two (2) for the high school and one (1) for Central Office



### EPE 45: Movable walls are a good way to make spaces flexible

- Operable walls will be considered as part of the new school design in select/strategic areas to increase flexibility of space. In public-facing areas, the movable walls may be glazed. Between classrooms, movable, hard-paneled walls are preferable. In all cases, the acoustic quality of operable walls is substantially better than what was available years ago.

Operable walls were discussed in SD Programming meetings with educators, particularly surrounding 9th grade co-teaching models, and potentially in one of the Large Group Instruction spaces. The design team will continue to assess the quantity of operable walls as the design progresses.



## Topics Needing Further Discussion

**EPE 54:** LABBB students must go to Belmont to use pool

**EPE 55:** A pool would be a great asset for the town. It's logically important to have a pool so we don't have to travel to access one.

- The inclusion of an indoor pool (Natatorium) should be part of a wider-community discussion, as it will not be reimbursed at all by the MSBA, it must be a separate project, and will require a separate town meeting approval vote.

A pool will not be a part of the project.



### EPE 56: Needs to be a larger conversation surrounding both the Pool and Field House

- Since the MSBA will not participate in the funding of a pool or new Field House, this should be a part of a wider-community discussion and decision.

A pool will not be a part of the project. The SBC voted to do a renovation and addition to the existing Field House. The design team has been having discussions with educators, Athletics, and the Recreation Department to refine the programmatic elements and layouts.



### EPE 59: Need more gender-neutral bathrooms, conveniently located

- Recommendation is to provide a mix of all-gender and traditional binary gendered multi-user toilet rooms throughout the new school – the extent and locations of different types of restrooms will be studied at a later stage of design.

### EPE 60: Have to be careful/plan for people of different cultural backgrounds

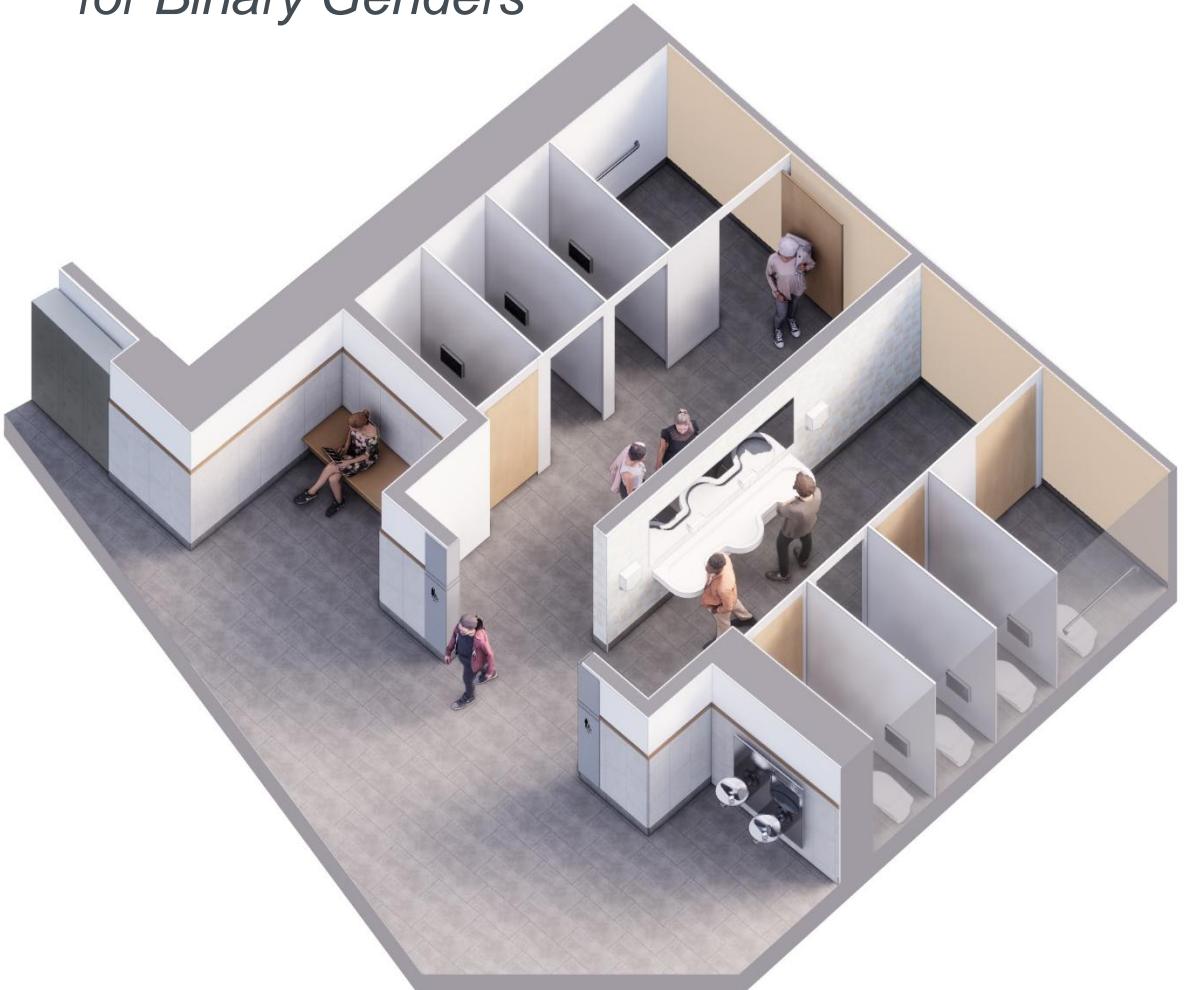
- Recommendation is to provide some gendered toilet rooms throughout the building for those who would feel uncomfortable using all-gender restrooms. Further discussion with students and educators is needed.

Design team is examining the distribution of all-gender/non-gendered multi-user restrooms, gendered single-user restrooms, and the potential inclusion of gendered multi-user restrooms near public-facing program (e.g.: gymnasium, Auditorium)

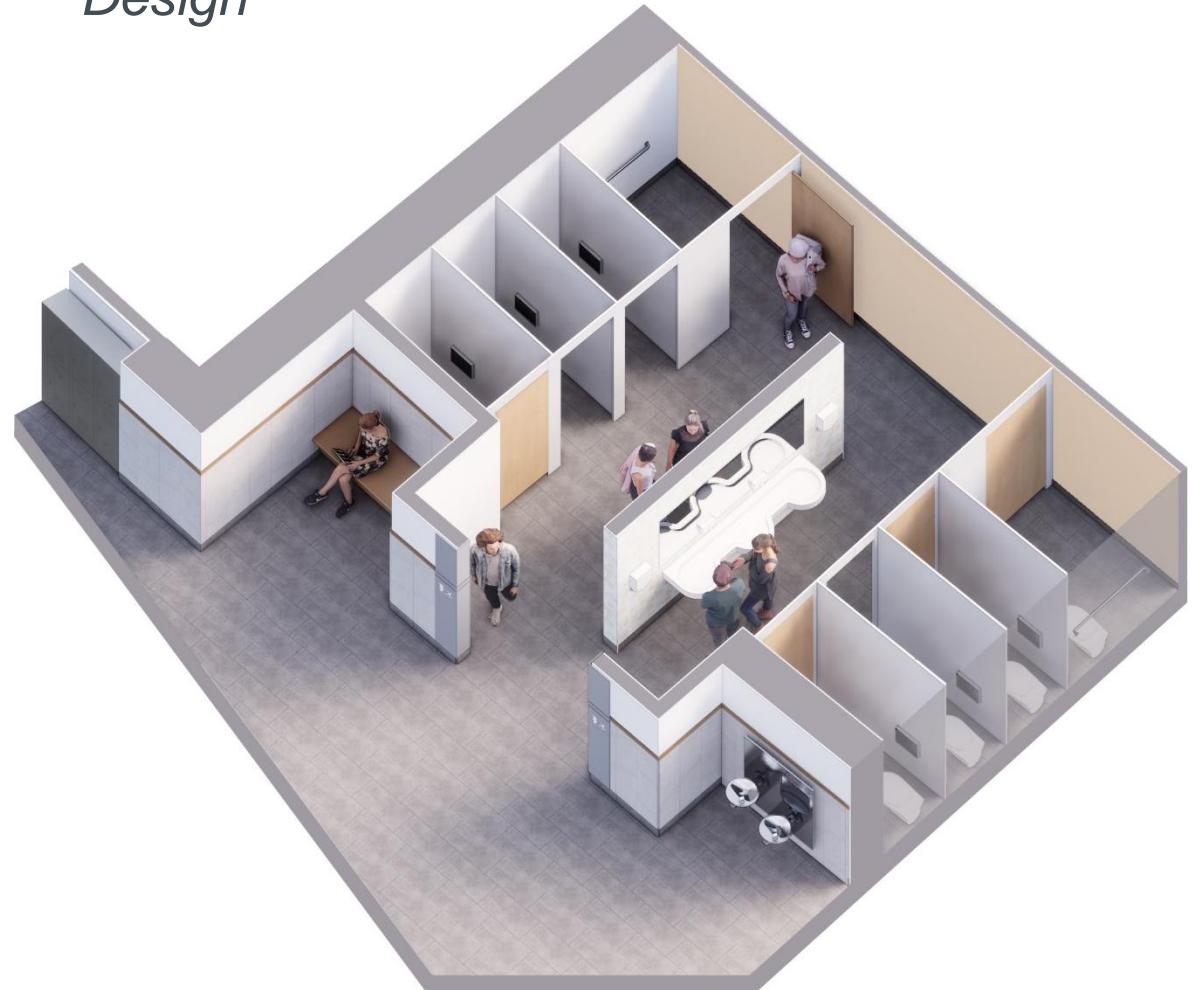


## Topics Needing Further Discussion/ Multi-User Toilet Room Designs

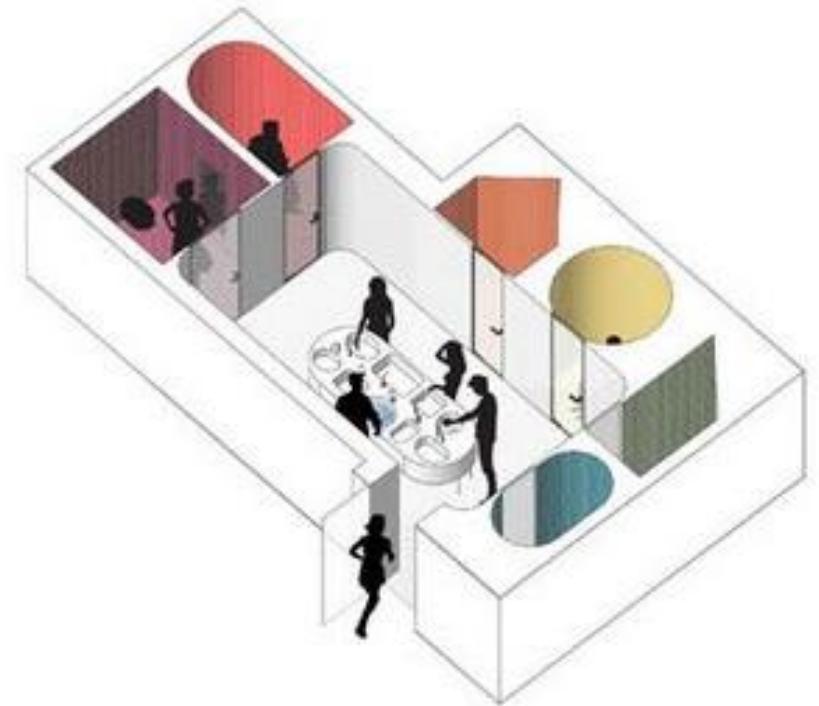
*Traditional Design  
for Binary Genders*



*Converted All-Gender  
Design*



## Topics Needing Further Discussion/ All-Gender Toilet Room Precedents



• graphic credit: WorkAC

RISD Student Success Center, Providence, RI



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## Topics Needing Further Discussion/ Full Height Stall Options

- Panelized partition systems offer greater flexibility and lower first costs.
- Doors can have a small bottom gap to allow some acoustic access to facilitate assistance.
- All Full-Height Stall options require dedicated systems per stall—lighting, fire protection, exhaust, smoke detection, vape detection.



### EPE 71: Lockers are underutilized

- This will be part of further discussion with students and administration. Typically, lockers are provided for some percentage of the student enrollment. Any lockers provided will be sized appropriately to maximize usefulness.

### EPE 72: Shared-use lockers are great for optimizing space

- This will be considered. SMMA has implemented a shared-use locker system in other schools, where lockers are used on an “as-need” basis.

Design team is carrying 650 lockers for general use (Music and Athletic locker quantities are separate).

Shared short-term locker use is being considered. Locker sizes are to be determined, but team and administration are considering various sizes.



## Lockers

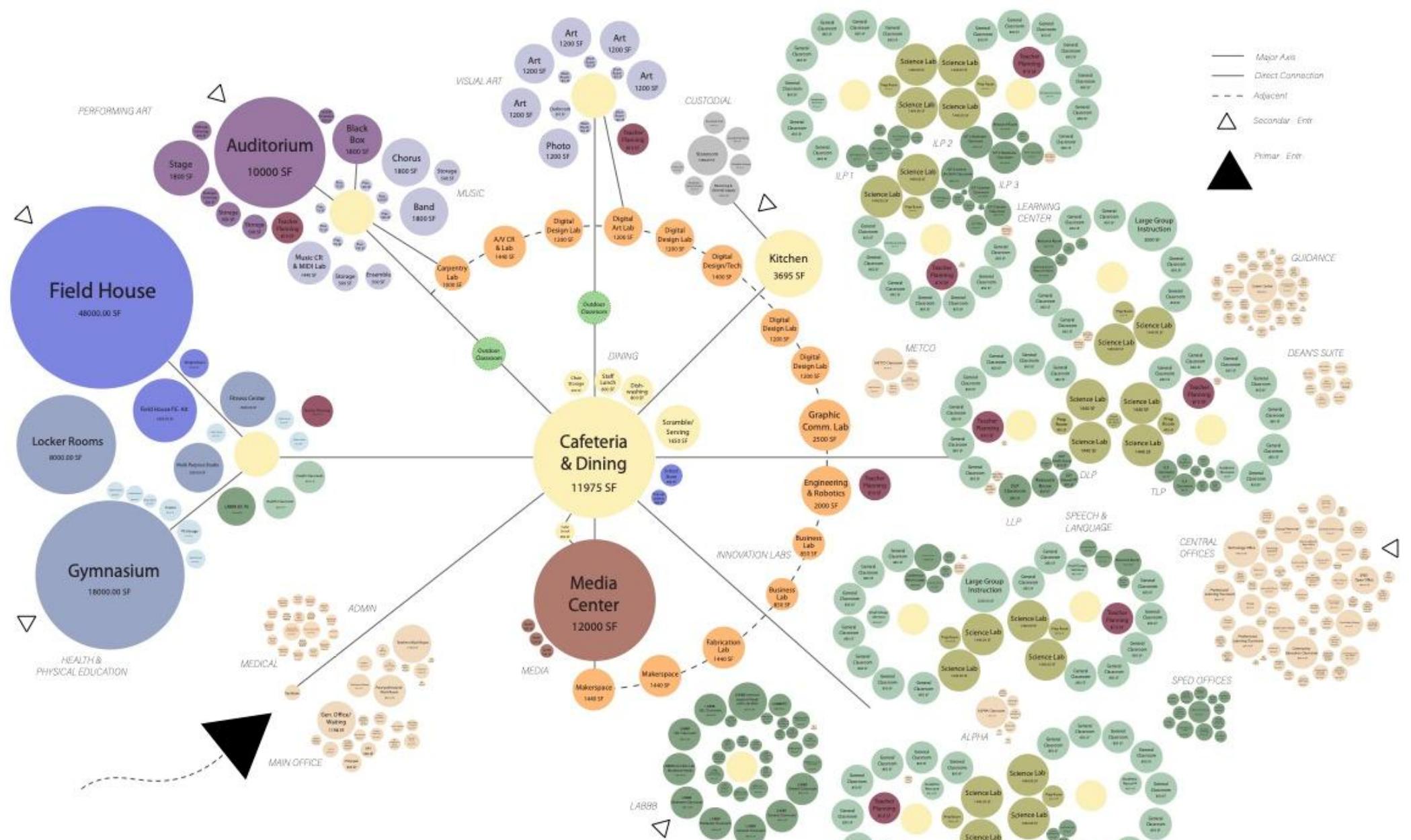
650 Lockers for general population

(Music and Athletic locker quantities are additional)



# Schematic Design Progress Plans

## Whole Building Adjacency Diagram

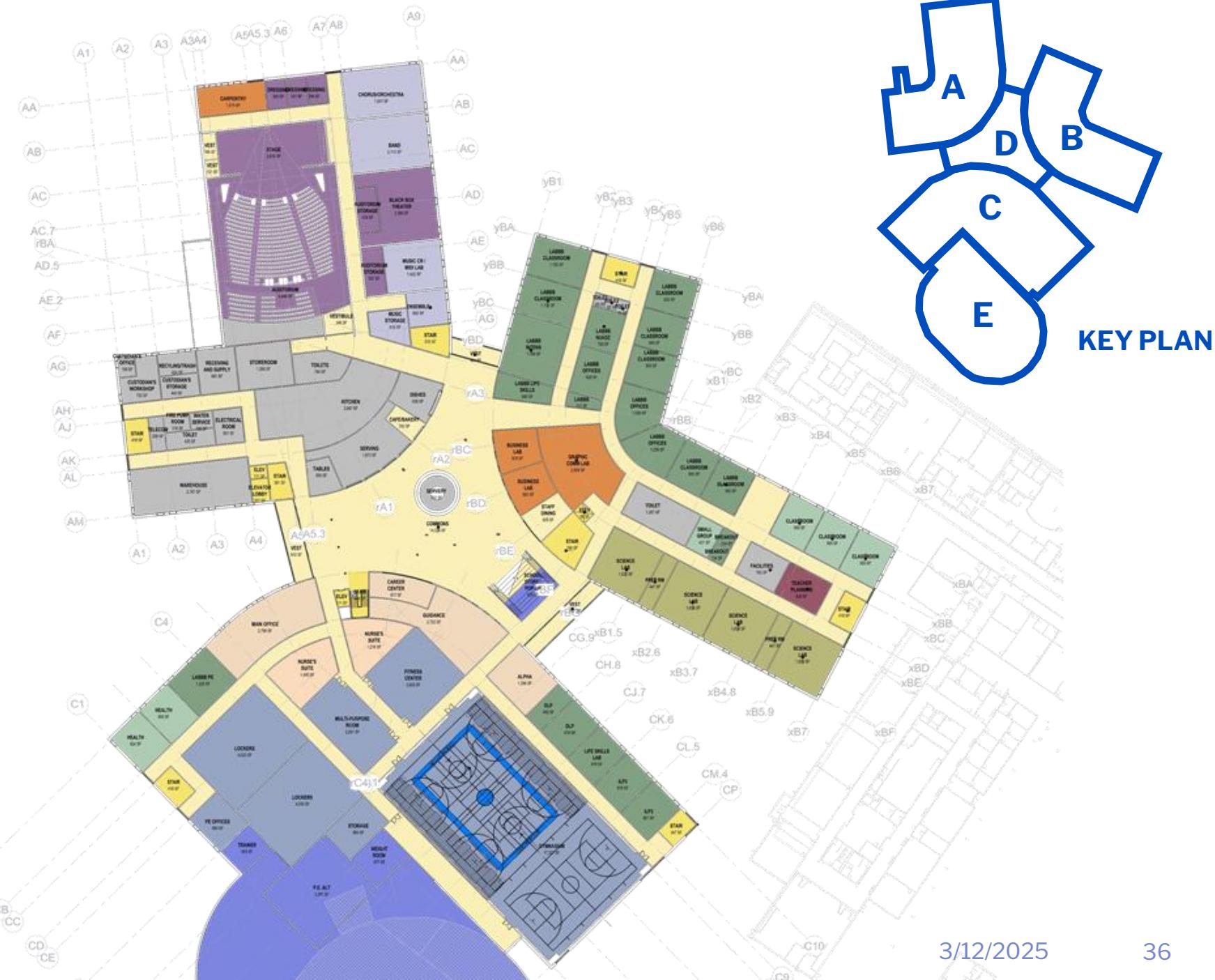


# Building Floor Plan



- Core Academic
- Science
- Teacher Planning & Small Group
- Admin, Guidance, ALPHA, METCO, Central Offices
- Auditorium / Drama
- Art & Music
- Media Center
- Vocation & Technology
- Physical Education
- Special Education
- Medical
- Kitchen, Restrooms, Custodial
- Commons
- Circulation
- Vertical Circulation
- Rooftop Open Space
- Other
- Expansion

LEVEL 1



## Building Floor Plan



## LEVEL 2

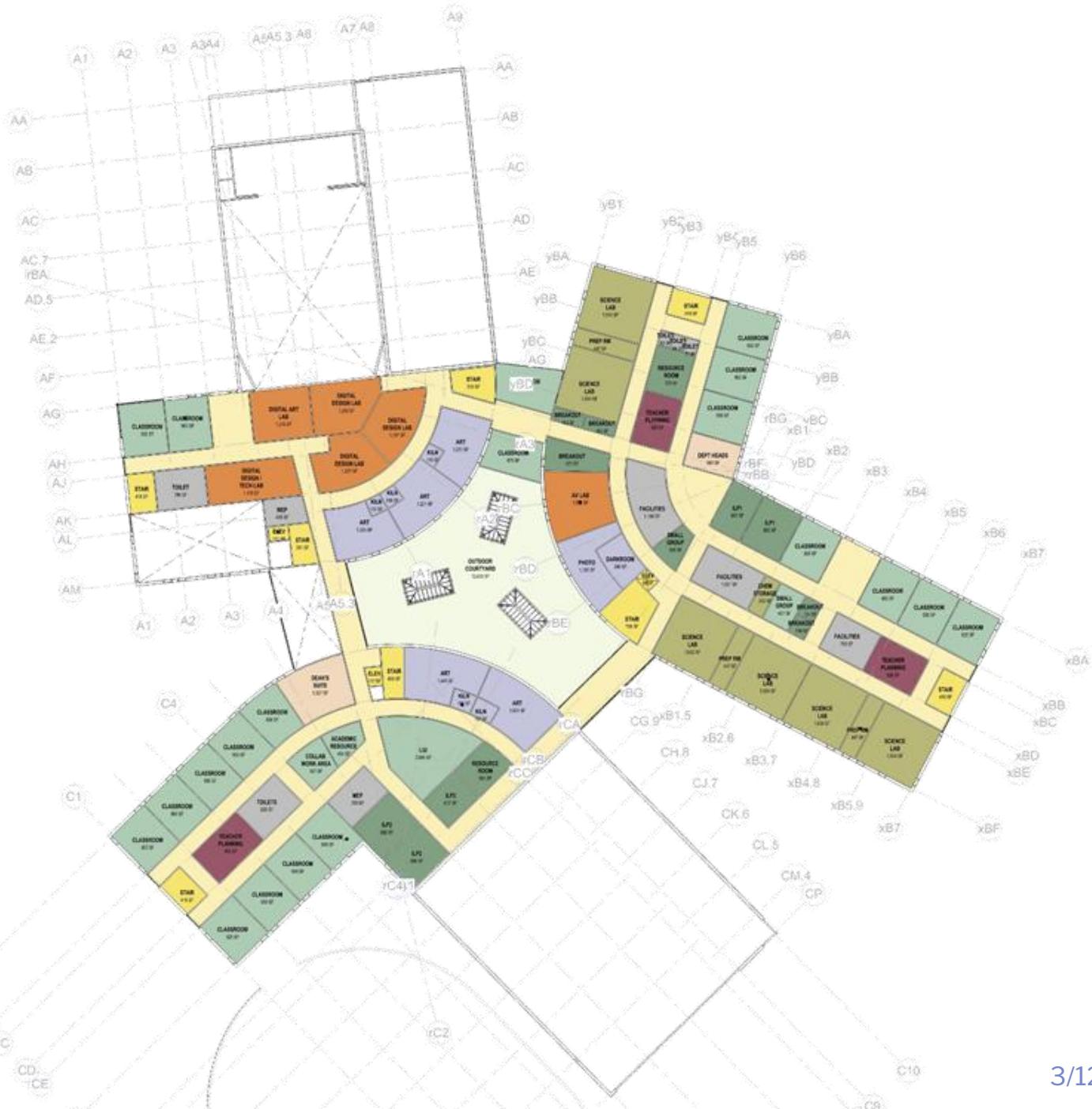


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LEVEL 3

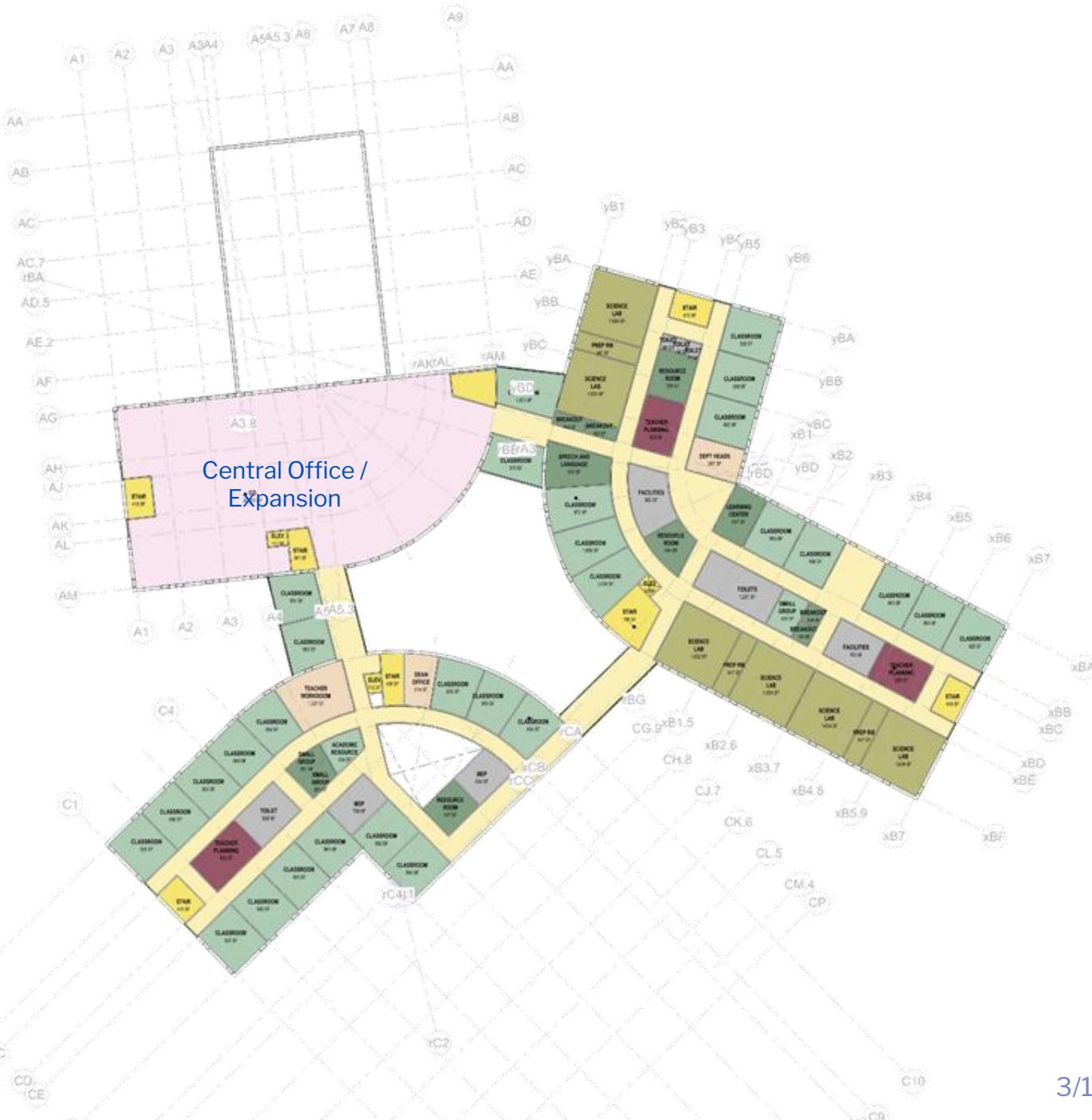


# Building Floor Plan

- Core Academic
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  - Physical Education
  - Special Education
  - Medical
  - Kitchen, Restrooms, Custodial
  - Commons
  - Circulation
  - Vertical Circulation
  - Rooftop Open Space
  - Other
  - Expansion



## LEVEL 4



# Field House Scope & Constructability / Option Summary

As voted on by the SBC on Nov. 12<sup>th</sup>

	Option A	Option B	Option C	Option D
Project Cost	\$26,625,000	\$42,625,000	\$57,191,000	\$54,338,000
PSR Cost Δ	-\$14,375,000	\$1,625,000	\$16,191,000	\$13,338,000
Footprint	34,400 GSF	48,000 GSF	48,000 GSF	48,000 GSF
Approach	Renovation	Reno + Addition	Reno + Addition	Reno + Addition



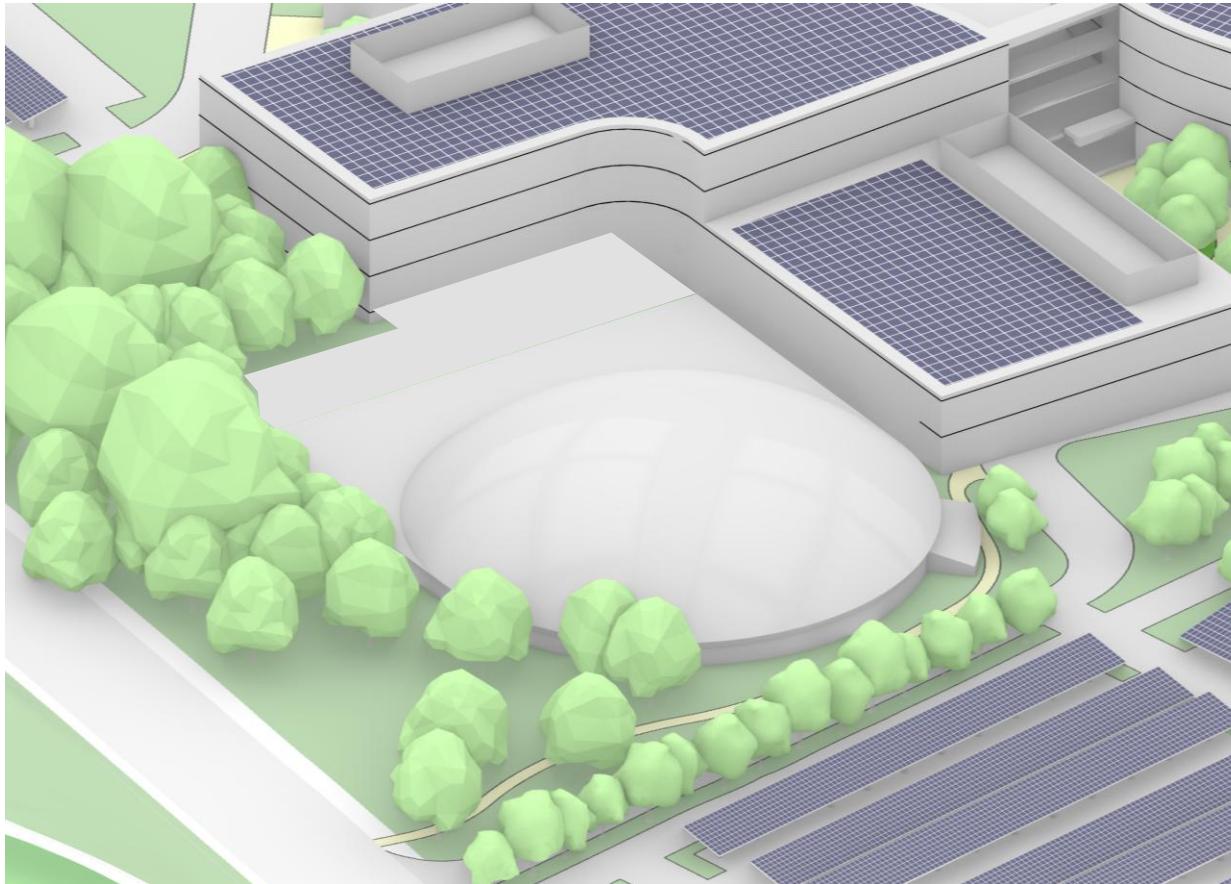
## SMMA recommends Option B

- Cost in range of PSR estimate
- Expands programmatic uses
- Increases safety
- Able to be constructed in phases
- Some PV capacity

PSR Field House Cost: \$41,000,000

# Field House Scope & Constructability

- **Option B: Renovation + Addition (48,000 GFA)**
  - Renovate existing 34,400 GFA Field House
  - Add 13,600 GFA New Construction Addition on Grade with Flat Roof



## Renovation + Addition Scope:

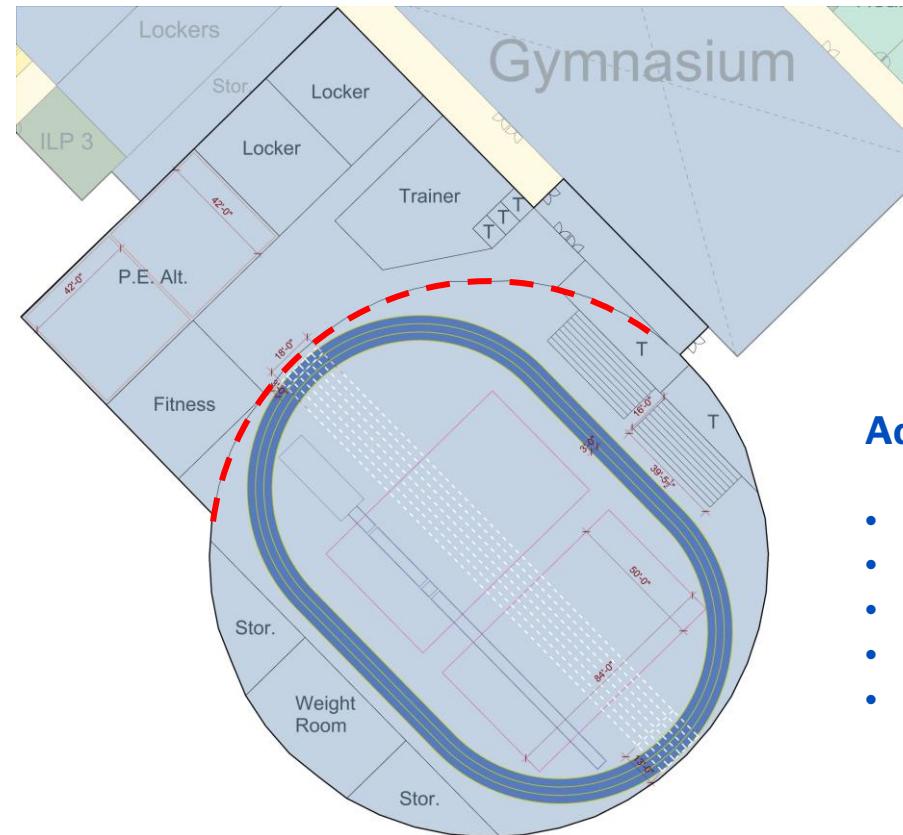
- New slab on grade
- New exterior enclosure on existing Field House same as Option A.
- Addition to be steel framing with same exterior enclosure on 6" metal studs and sheathing.
- Expansion joint between Field House and Addition
- New MEP systems
- New lighting and PA systems
- (2) new scoreboards
- Retractable bleachers for 400 seats
- Interior finishes: Resilient athletic flooring, rubber flooring at PE Alt and Weight Room, wall paint and wall pads



## Option B / Renovation + Addition

- Renovate existing 34,400 GFA Field House
- Add 13,600 GFA New Construction Addition on Grade with Flat Roof

	Option B
Project Cost	\$42,625,000
Footprint	48,000 GSF
Track Size	146m
Lane Count	3
Straightaway Length	55m
Multipurpose Courts	2-3
Bleacher Count	400
Weight Room	1,600 sf
PE Alternative	3,500 sf



### Additional Program:

- Fitness Room – 1,600 sf
- Locker Rooms - (2) 1,500 sf
- Trainer's Room – 1,900 sf
- Toilets – 1,000 sf
- Storage – 1,700 sf

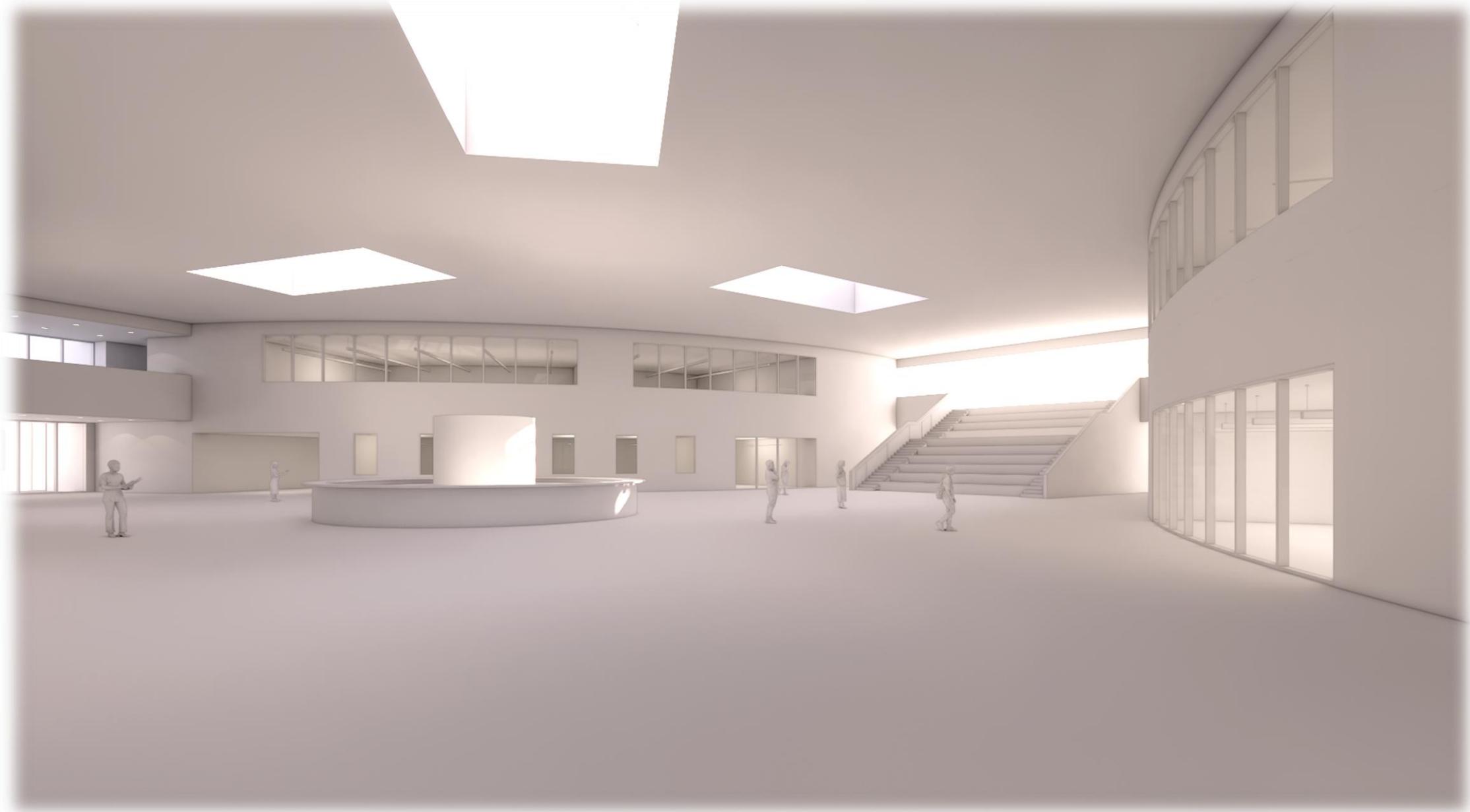
1. Minimum safe run-out length to be determined. Drawing shows only 13' with 55m straight track\*
2. 3 courts possible if overlapping track and portable long jump pit
3. Increased PE Alt. size from 3,300 sf existing
4. Increased Weight room size from 679 sf existing
5. Existing roof structure does not allow for goals, wrestling mats, batting cage, etc. to be hung from rafters



# Thank you

smma

## Feature Space Model Images/ Dining Commons



## Feature Space Model Images/ Dining Commons



## Feature Space Model Images/ Media Center



## Feature Space Precedent Images/ Dining Commons



## Feature Space Precedent Images/ Auditorium



## Feature Space Precedent Images/ Gymnasium



## Feature Space Precedent Images/ Media Center



## Feature Space Precedent Images/ Large Group Instruction (LGI)

