



# Transforming Challenges into Opportunities: The Patrick Henry K-8 School and Recreation Center Story

A4LE Southeast Region Conference

Educational Environments Empowering Learners

Wednesday, April 9, 2025

10:00 am – 11:00 am



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**Examine** a variety of sustainable and energy-efficient building systems and design strategies specifically tailored to K-8 educational facilities

1

**Identify** critical design strategies that prioritize occupant safety in a temporary school campus setting

2

**Learn the value** of conducting post-occupancy satisfaction surveys to gather feedback and analyze findings to inform future design

3

**Evaluate** the year-one energy performance by comparing operational data with the design phase energy model

4

# Speakers



**Molly Merlo, AIA, LEED Green Associate**  
Vice President

**MOSELEY**ARCHITECTS



**David Tremblay, CCM, Associate AIA, LEED AP**  
Director of Business Development

**KELLER**



**Bryna Dunn, AICP, LEED Fellow,**  
Vice President

**MOSELEY**ARCHITECTS

# Project Team

**Alexandria City Public Schools (ACPS)**

**City of Alexandria (Recreation, Parks & Cultural Activities)**

## **Moseley Architects**

Architecture, Interior Design, Sustainability, Structural, Mechanical, Electrical, Plumbing and Security

## **ADTEK Engineering**

Civil Engineering

## **Polysonics**

Acoustical, AV, Theater Consulting

## **KellerCM**

Construction Manager at Risk and  
GC on Swing Space and Project Completion

## **Brailsford & Dunlavey**

Program Manager (Design through to Pivot)



# Project Goals

## Learning Environment

- Create a safe, friendly, and welcoming environment
- Provide students with access to educational resources
- Ensure students are engaged in classroom instruction

## Community Use

- Operate a community recreation center at the school
- Provide the Cafetorium, gymnasium, Black Box theater and playing fields for shared community use
- Maximize the program utilization of the site

## Engage the Public Throughout the Design Process

- Contextual Appropriateness
- Neighborhood Connectivity

## Environmental Goals

- LEED for Schools Silver Certification (v2009)

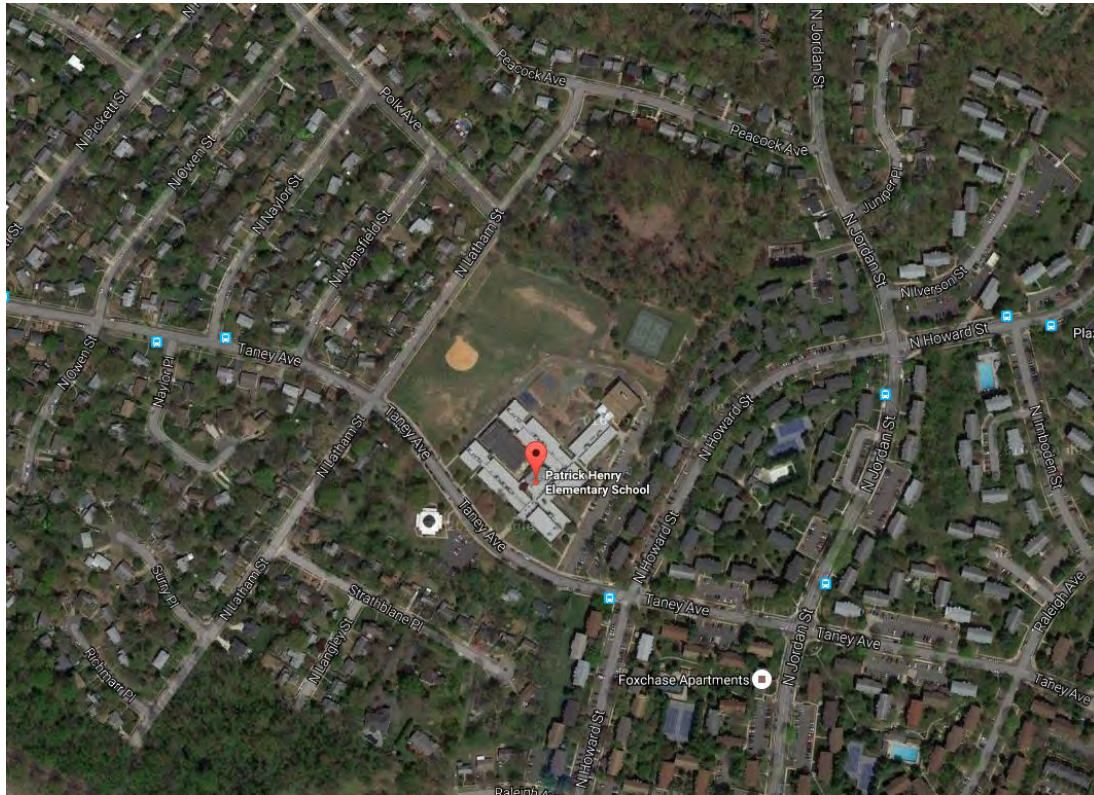


# Project Vicinity

Alexandria City Public Schools (ACPS)

Patrick Henry School and Rec Center

4643 Taney Ave, Alexandria, VA 22304



# Site Considerations

## Existing Building

## Scale and Context

- Single family & apartments

## Topography

- 70' grade change across site

## P&Z Regulations

## Setbacks

- 35' off Taney
- 50' off east and north side
- 25' off west side

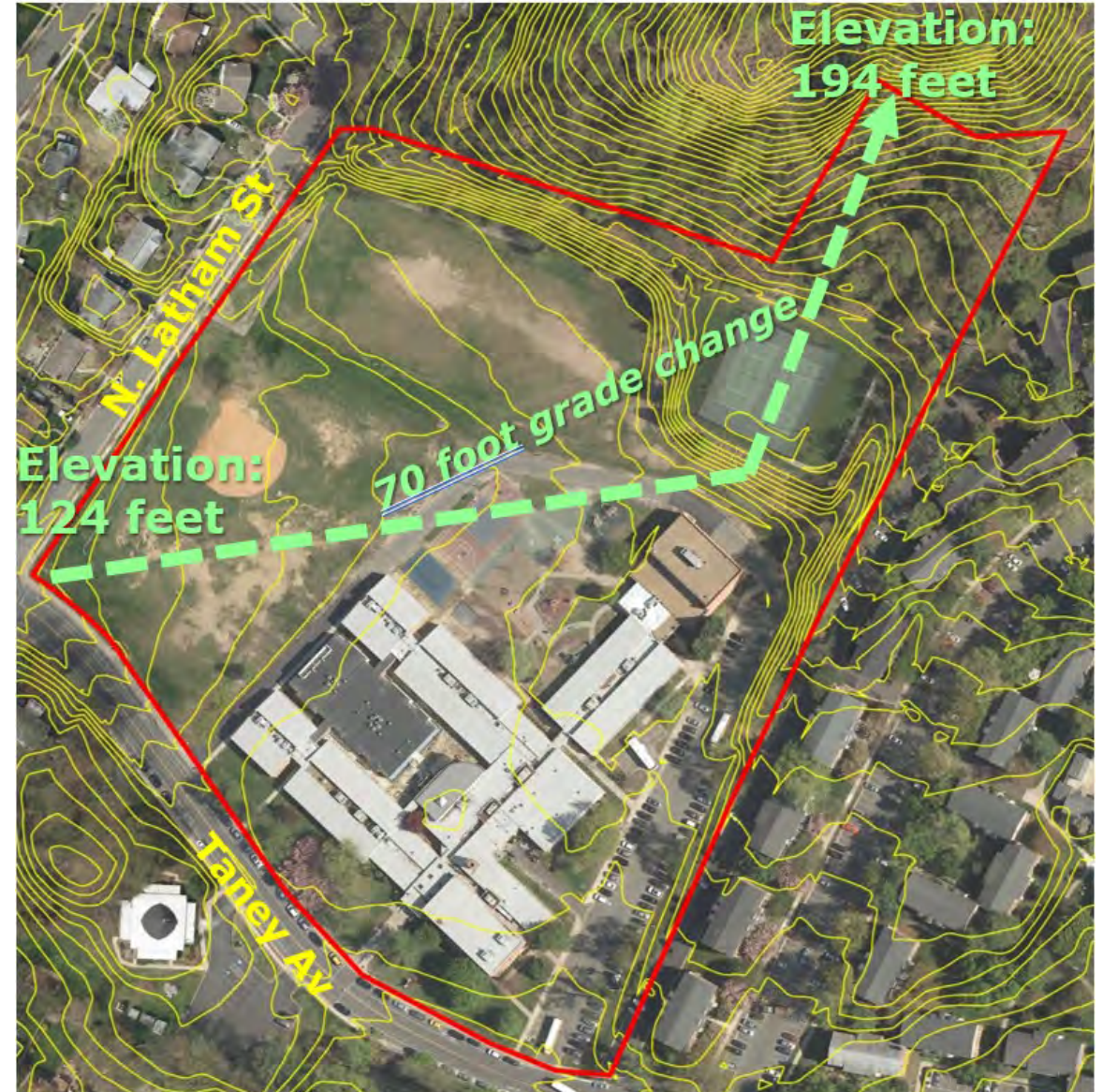
## Pedestrian Access

## Vehicular Access

- Separation of buses & cars
- Emergency vehicle easement

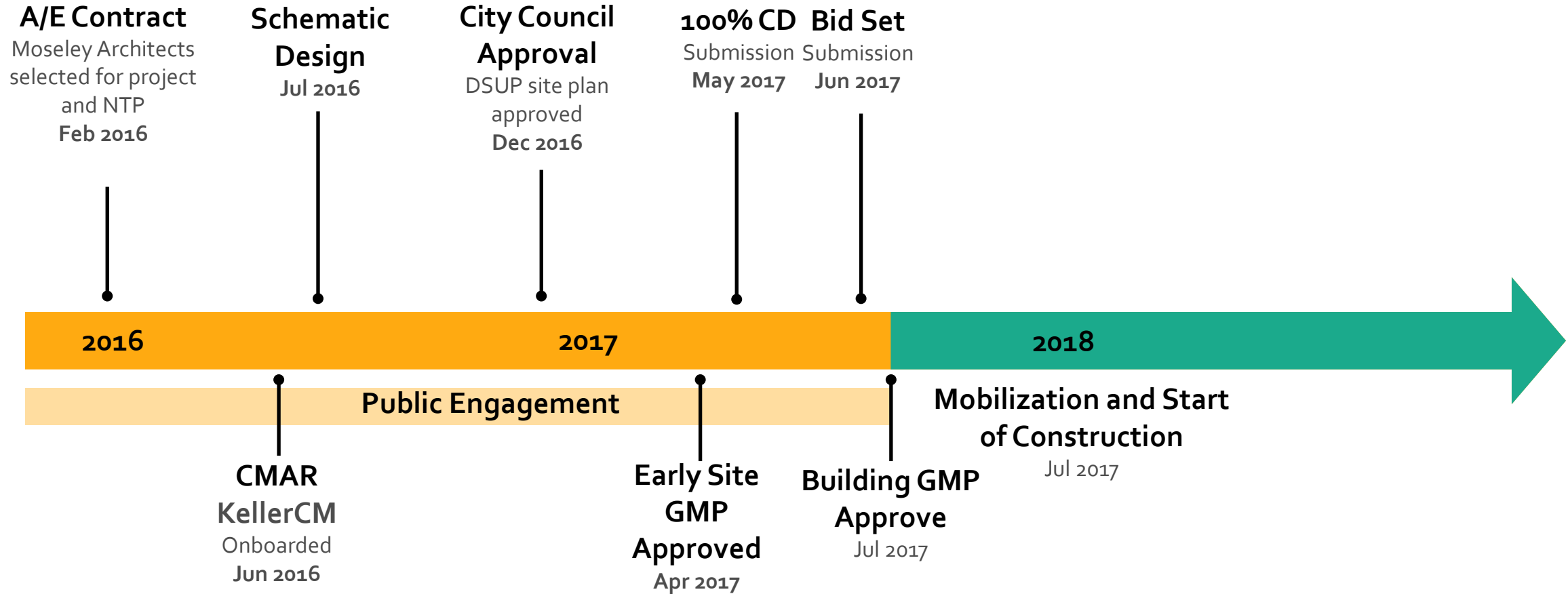
## Phasing

## Safety & Security



# Project Timeline

## Design and Jurisdictional Approval Phases to Start of Construction



# PATRICK HENRY PROJECT PUBLIC ENGAGEMENT PROCESS

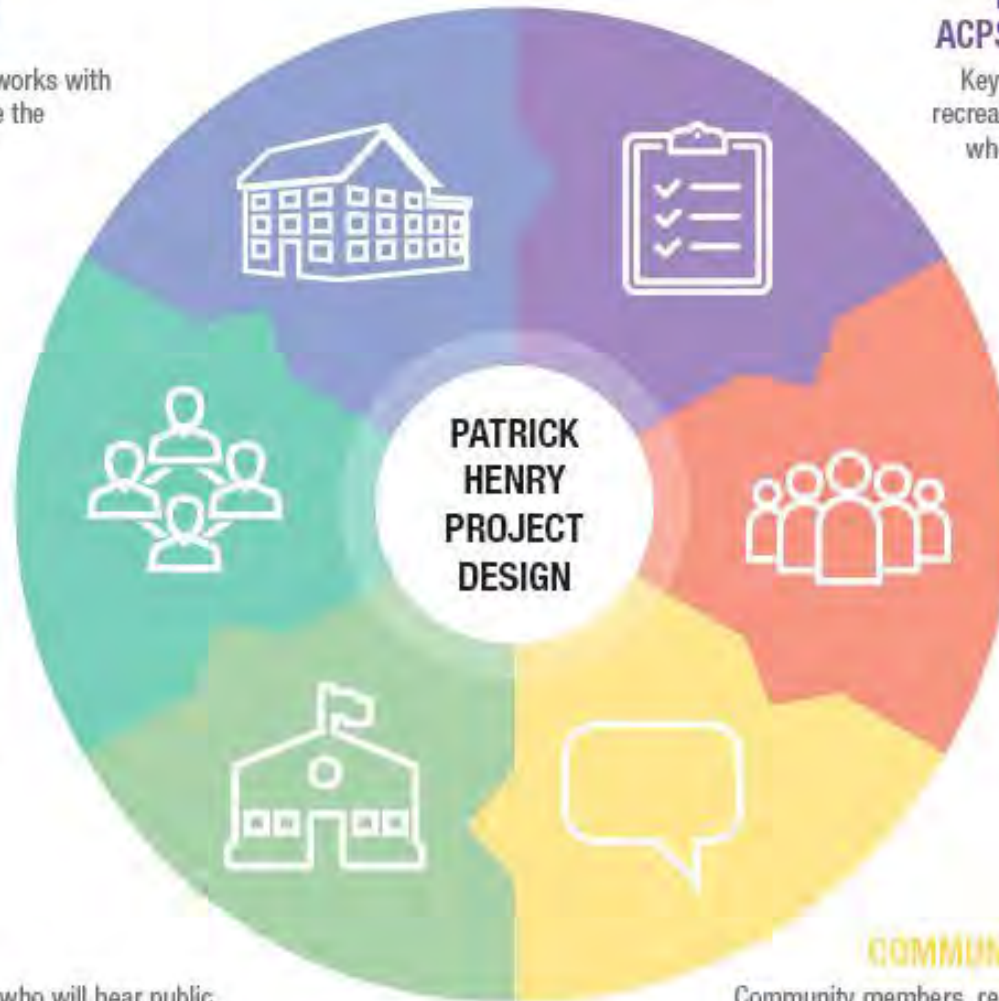


## ARCHITECTURAL & ENGINEERING FIRM

The Project Designer, who works with the stakeholders to produce the final design

## DESIGN REVIEW TEAM ACPS & ALEXANDRIA CITY

Key planning, facilities, education, recreation and communications staff who will steer the design process



## CITY COUNCIL

The Mayor and six Council members who will hear public comments about the project and make the final decision on the recreation center design

## COMMUNITY

Residents of the City of Alexandria who have a vested interest in the construction of the new school, recreation center and associated site improvements

## SCHOOL BOARD

Nine member elected body who will hear public comments about the project and make the final decision on the school design

## COMMUNITY ADVISORY GROUP

Community members, representatives from community associations, groups, boards and one member each from the Alexandria City School Board and City Council

Date	Meeting
December 9, 2015	Community Advisory Group Meeting + Community Meeting
January 13, 2016	Community Advisory Group Meeting
February 3, 2016	Community Advisory Group Meeting
February 10, 2016	Community Meeting
February 17, 2016	Community Advisory Group Meeting
March 2, 2016	Community Advisory Group Meeting
March 16, 2016	Community Meeting
April 6, 2016	Community Meeting
April 13, 2016	Community Advisory Group Meeting
April 27, 2016	Community Advisory Group Meeting
May 4, 2016	Community Meeting
June 15, 2016	Community Advisory Group Meeting
June 15, 2016	Park and Recreation Commission
July 7, 2016	Community Advisory Group Meeting
July 27, 2016	Playground Technical Advisory Taskforce
August 10, 2016	Community Advisory Group Meeting
September 13, 2016	Commission for the Arts
September 28, 2016	Community Advisory Group Meeting + Community Meeting
November 30, 2016	Community Advisory Group Meeting + Community Meeting

# PATRICK HENRY PROJECT PUBLIC ENGAGEMENT PROCESS

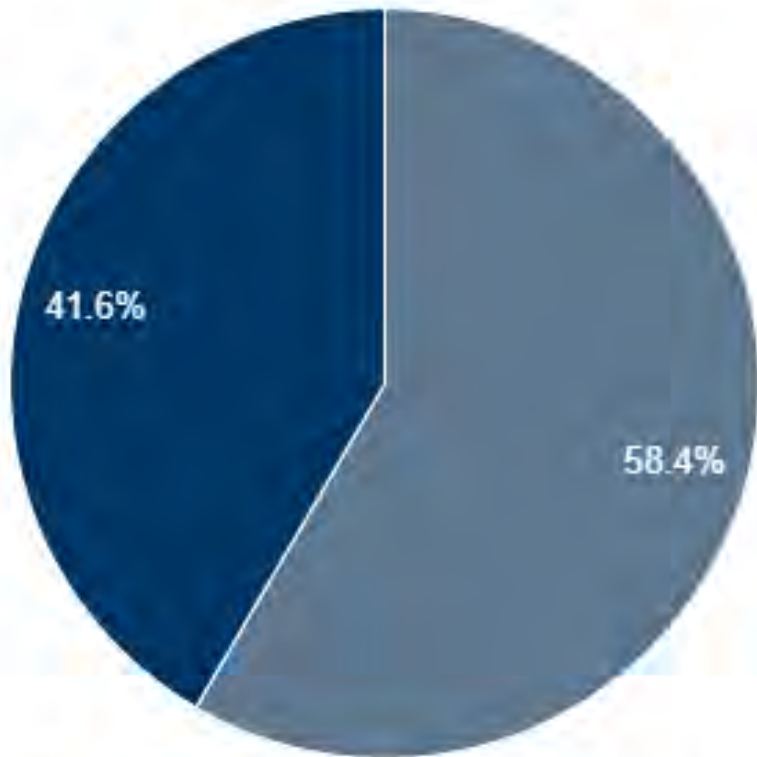


School Board Member  
City Council Member  
Patrick Henry PTA  
Planning Commission  
Park and Recreation Commission  
the Patrick Henry Advisory Council  
Resident of Foxchase  
Seminary Hill Association  
Brookville-Seminary Valley Civic Association  
Wakefield-Tarleton Civic Association  
at-large citizens within a mile



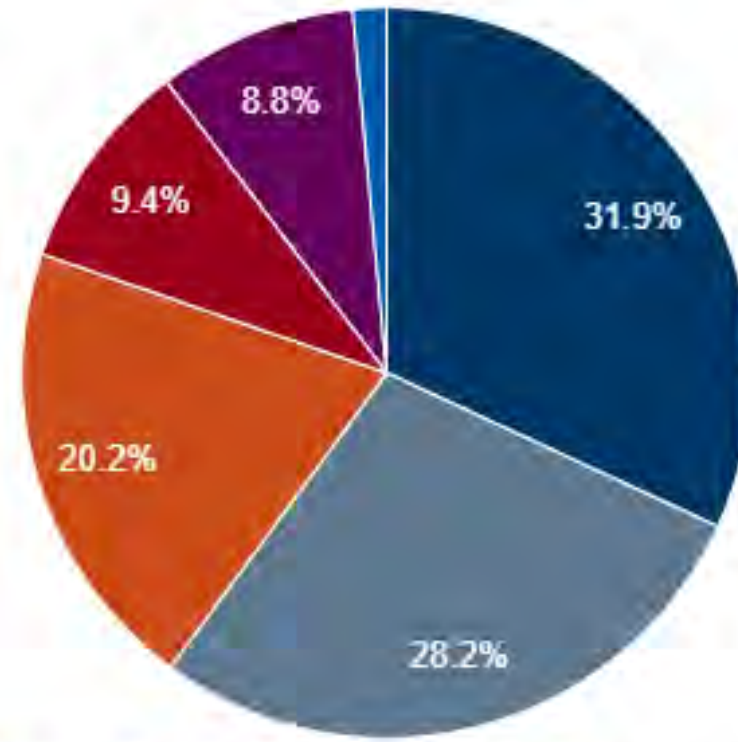
# 2024 Fall Membership by Subgroups

## English Learners



■ English Learners ■ All Other Students

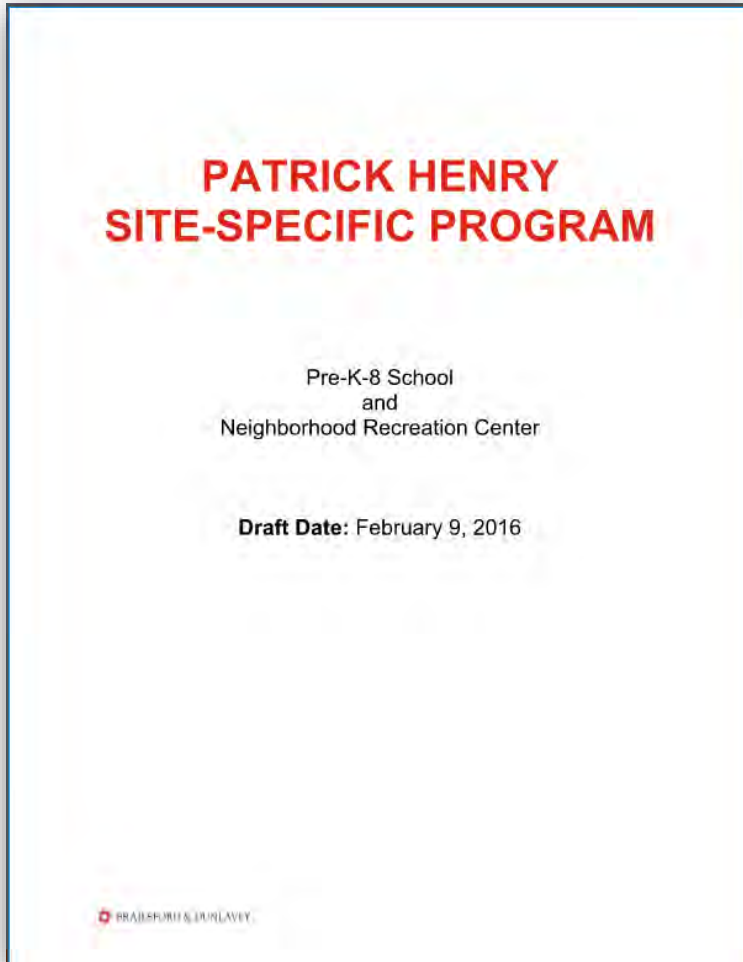
## Racial and Ethnic Groups



■ Black ■ Hispanic ■ White ■ Asian ■ Multiple Races ■ American Indian ■ Native Hawaiian

Current Enrollment  
2024-2025 1,075

# Site Specific Program



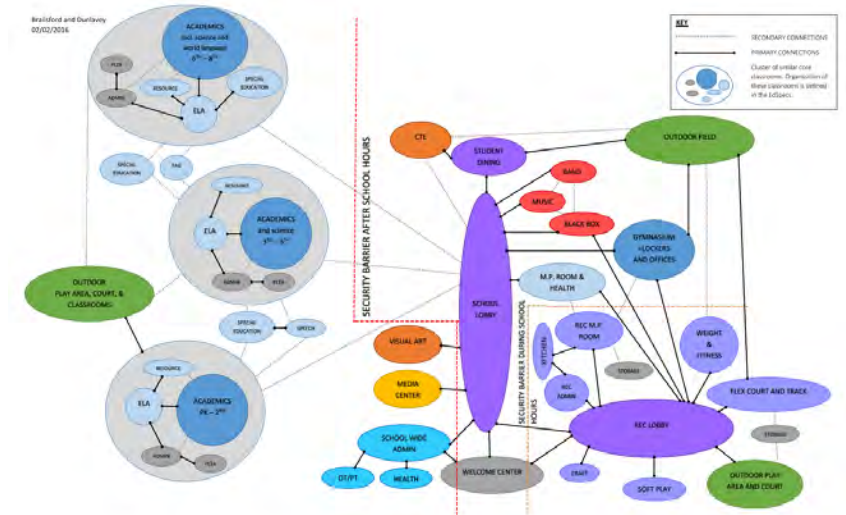
Brailsford & Dunlavy

Transition from an Elementary Program to a PK-8 program

Student Design Capacity  
Total 942

Current Enrollment  
2024-2025 1,075

## Adjacencies Diagram

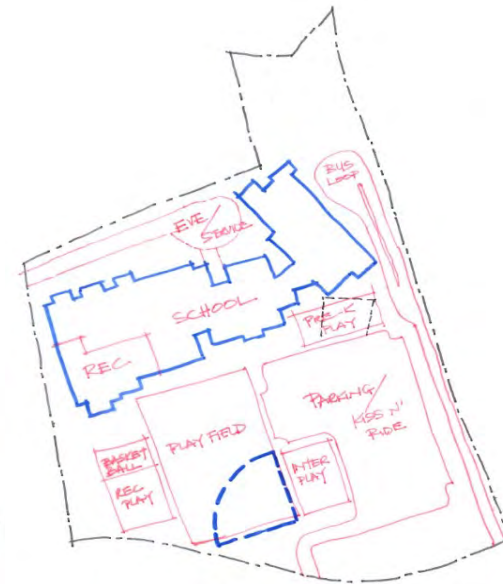
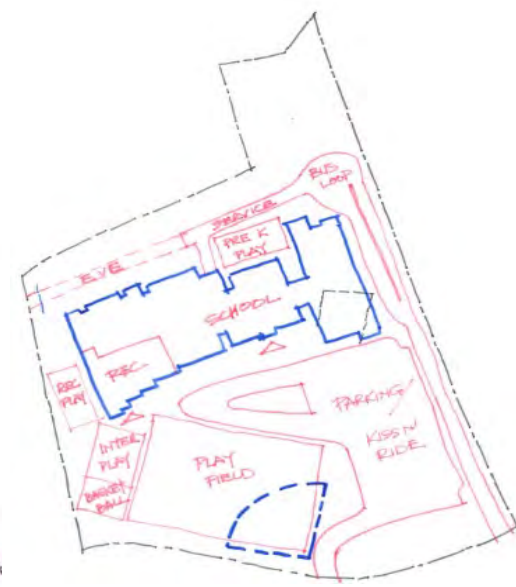
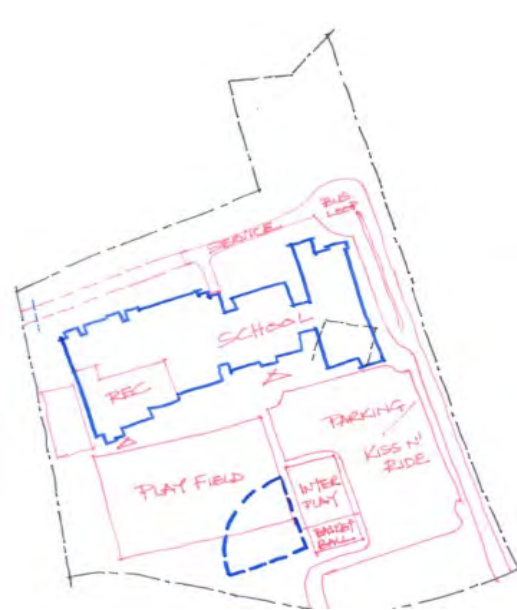
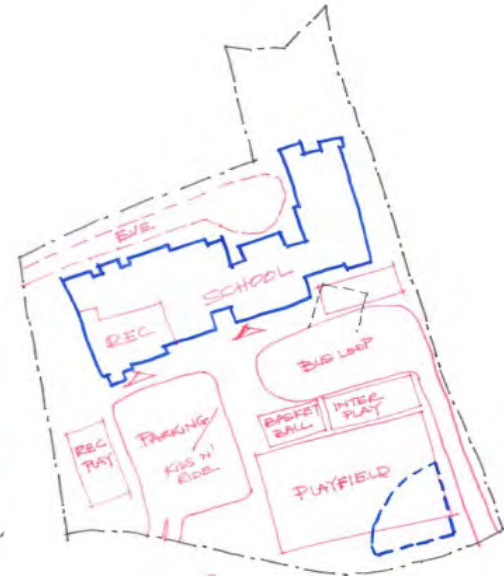
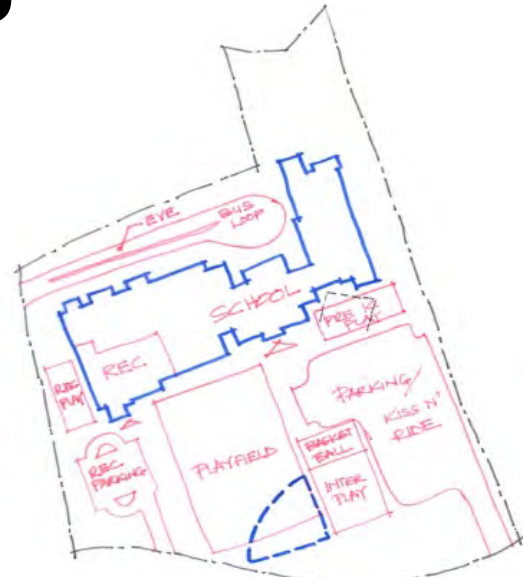
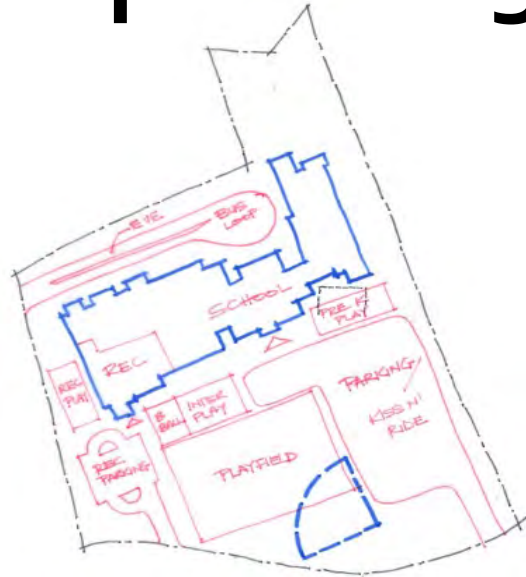


## Shared Space Schedule

	Morning	Afternoon	Afterschool	Evening	Weekends
<b>School</b>					
Gymnasium	ACPS	ACPS	Shared	RPCA	RPCA
Multipurpose Room	ACPS	ACPS	RPCA	RPCA	RPCA
Black Box Theater	ACPS	ACPS	Shared	Shared	Shared
<b>Recreation Center</b>					
Running / Walking Lanes	RPCA	RPCA	RPCA	RPCA	RPCA
Flex Court	RPCA	RPCA	RPCA	RPCA	RPCA
Multipurpose Room	RPCA	RPCA	RPCA	RPCA	RPCA
Crafts Room	RPCA	RPCA	RPCA	RPCA	RPCA
Weight/Fitness Room	RPCA	RPCA	RPCA	RPCA	RPCA
Soft Play Room	RPCA	RPCA	RPCA	RPCA	RPCA
<b>Site Amenities</b>					
Fitness/Nature Trail	Shared	Shared	Shared	RPCA	RPCA
Athletic Fields	ACPS	ACPS	Shared	RPCA	RPCA
Natural Outdoor Space	ACPS	ACPS	Shared	RPCA	RPCA
School Playgrounds	ACPS	ACPS	RPCA	RPCA	RPCA
RPCA Toddler Playground	RPCA	RPCA	RPCA	RPCA	RPCA

Use of shared spaces will be scheduled by appropriate staff from ACPS/RPCA as detailed in an updated MOU for the Patrick Henry School and Neighborhood Recreation Center.

# Multiple Design Scenarios



### OPTION A



- 3 STORY BUILDING
- BUILDING HEIGHT 50'
- OPEN SPACE 61%
- PROPOSED IMPERVIOUS 39%
- TOTAL PARKING PROVIDED MEETS MIN. REQ.

- BUS LOOP OFF TANEY
- EVE OFF LATHAM PER FIRE MARSHAL
- LONG "KISS & RIDE DRIVE AISLE OFF TANEY
- NEW BUILDING DOES IMPACT EXISTING
- FIELDS DISTRIBUTED ON SITE ADJACENT TO USERS
- NO CROSSING OF DRIVE AISLES TO GO TO FIELDS
- 3 CURB CUTS OFF TANEY, EVE OFF LATHAM

### OPTION B



- 2 STORY BUILDING
- BUILDING HEIGHT 36'
- OPEN SPACE 62%
- PROPOSED IMPERVIOUS 38%
- TOTAL PARKING PROVIDED MEETS MIN. REQ.

- ONE WAY BUS LOOP OFF TANEY
- EVE OFF LATHAM PER FIRE MARSHAL
- LONG "KISS & RIDE DRIVE AISLE OFF TANEY
- NEW BUILDING IMPACTS EXISTING BUILDING
- FIELDS DISTRIBUTED ON SITE ADJACENT TO USERS
- NO CROSSING OF DRIVE AISLES TO GO TO FIELDS (EXCEPT BASKET BALL COURT)
- 3 CURB CUTS OFF TANEY, 1 OFF LATHAM

### OPTION C

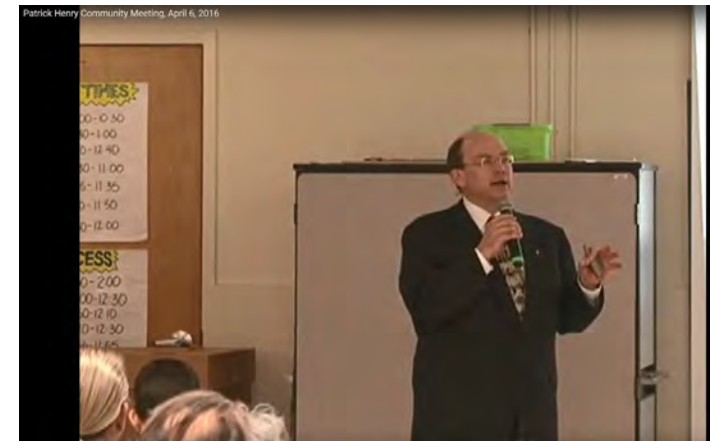
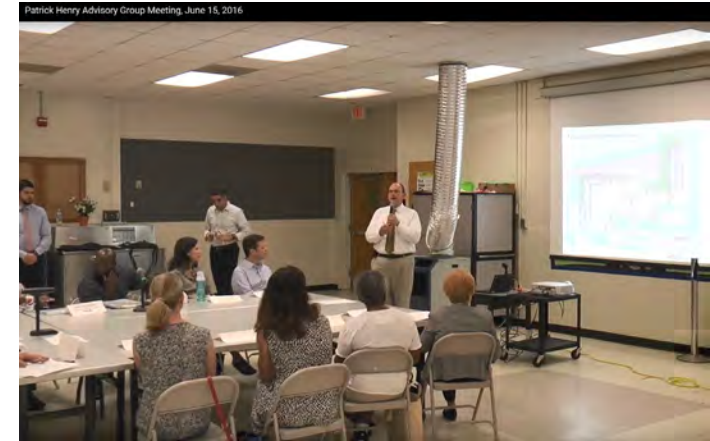


- 2 STORY BUILDING
- BUILDING HEIGHT 36'
- OPEN SPACE 67%
- PROPOSED IMPERVIOUS 33%
- TOTAL PARKING PROVIDED MEETS MIN. REQ.

- CONTROLLED ACCESS BUS LOOP OFF LATHAM
- EVE OFF LATHAM PER FIRE MARSHAL
- LONG "KISS & RIDE DRIVE AISLE OFF TANEY
- NEW BUILDING DOES NOT IMPACT EXISTING BUILDING
- FIELDS DISTRIBUTED ON SITE ADJACENT TO USERS
- NO CROSSING OF DRIVE AISLES TO GO TO FIELDS
- 1 CURB CUT OFF EACH STREET


**MOSELEY**ARCHITECTS

PATRICK HENRY PRE-K-8 SCHOOL & REC CENTER 03-02-2016



MOSELEYARCHITECTS

# Design Priorities/Differentiators

 Indicates origin of priority	Adv. Group Community	ACPS	RPCA	City (DSUP) Reviewers
Promoting Biking and Walking / Safe Site Access	✓	✓	✓	✓
Distinguishing Physical Presence for School and Rec	✓	✓	✓	✓
Neighborhood Scale	✓	✓	✓	✓
Amount and Usability of Outdoor Green Space	✓	✓	✓	✓
Traffic Flow on Site / Impact on Neighborhood Traffic	✓	✓	✓	✓
Impact on N. Latham St.	✓			
Impact on Taney Ave. (and Bike Lane)	✓			✓
Construction Phasing / Impact to Daily Operations	✓	✓	✓	
Access from Building to Outdoor Amenities		✓	✓	
Separating Entries/Parking for School and Rec			✓	

# Community Meeting – Polling Results

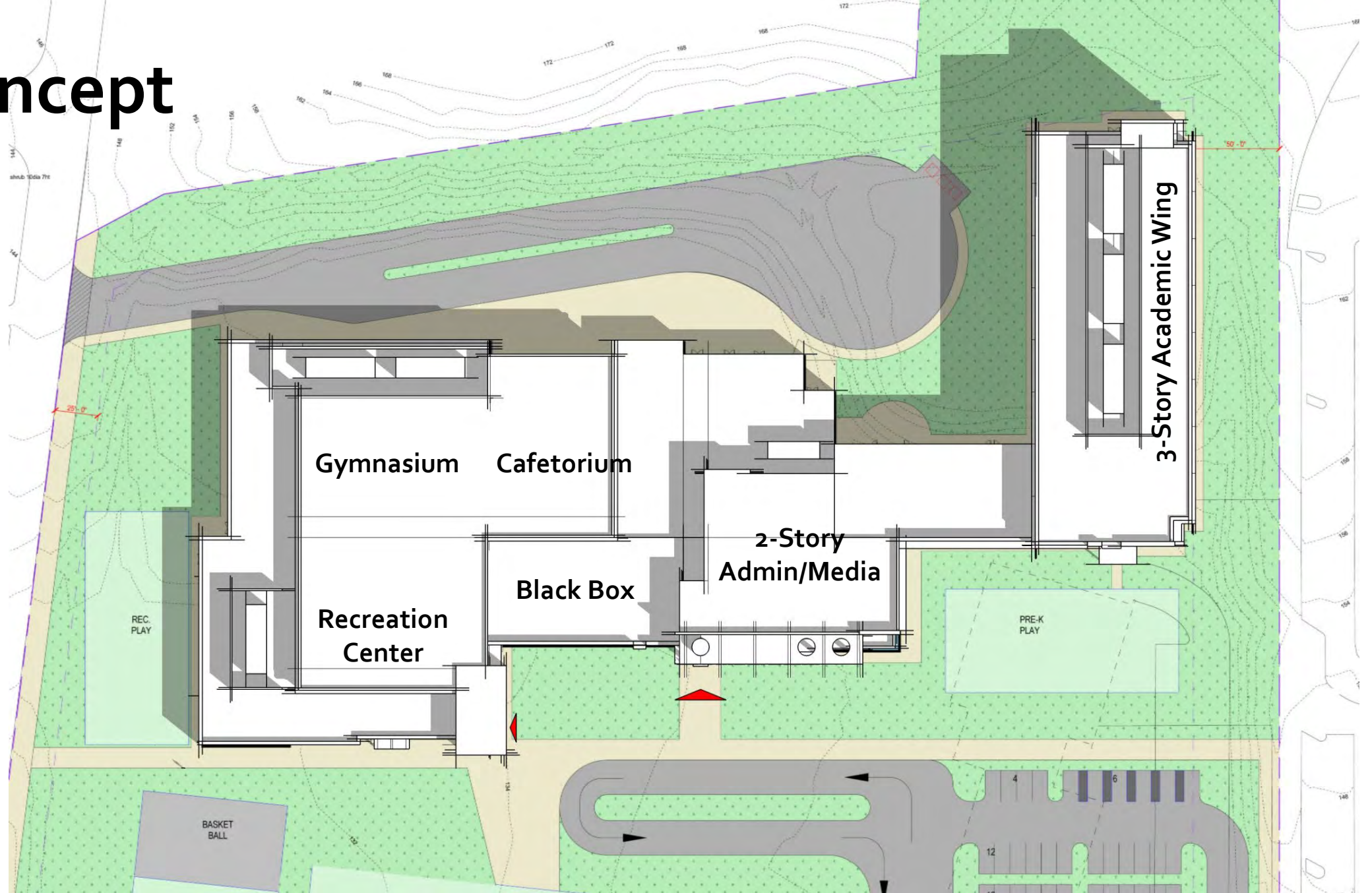
Rank	Polling Topic	Meeting*	Online**	Total
1	Amount and Usability of Outdoor Green Space	245	136	<b>381</b>
2	Accommodating Neighborhood Scale	221	151	<b>372</b>
3	Promoting Biking and Walking Through Safe Site Access	234	124	<b>358</b>
4	Optimum Access from Building to Exterior Amenities	213	122	<b>335</b>
5	Distinguishing Physical Presence for School and Rec Center	236	97	<b>333</b>
6	Minimizing Traffic on N Latham St.	172	149	<b>321</b>
7	Minimizing Traffic on Taney Ave.	190	100	<b>290</b>
8	Separating Vehicle Entrances for School and Rec Center	189	91	<b>280</b>

*\*60 Attendees at March 16 Community Meeting \*\*34 Respondents to Online Poll*

*SCALE: 1 = Not Important 2 = Slightly Important*

*3 = Somewhat Important 4 = Very Important 5 = Extremely Important*

# Site Concept



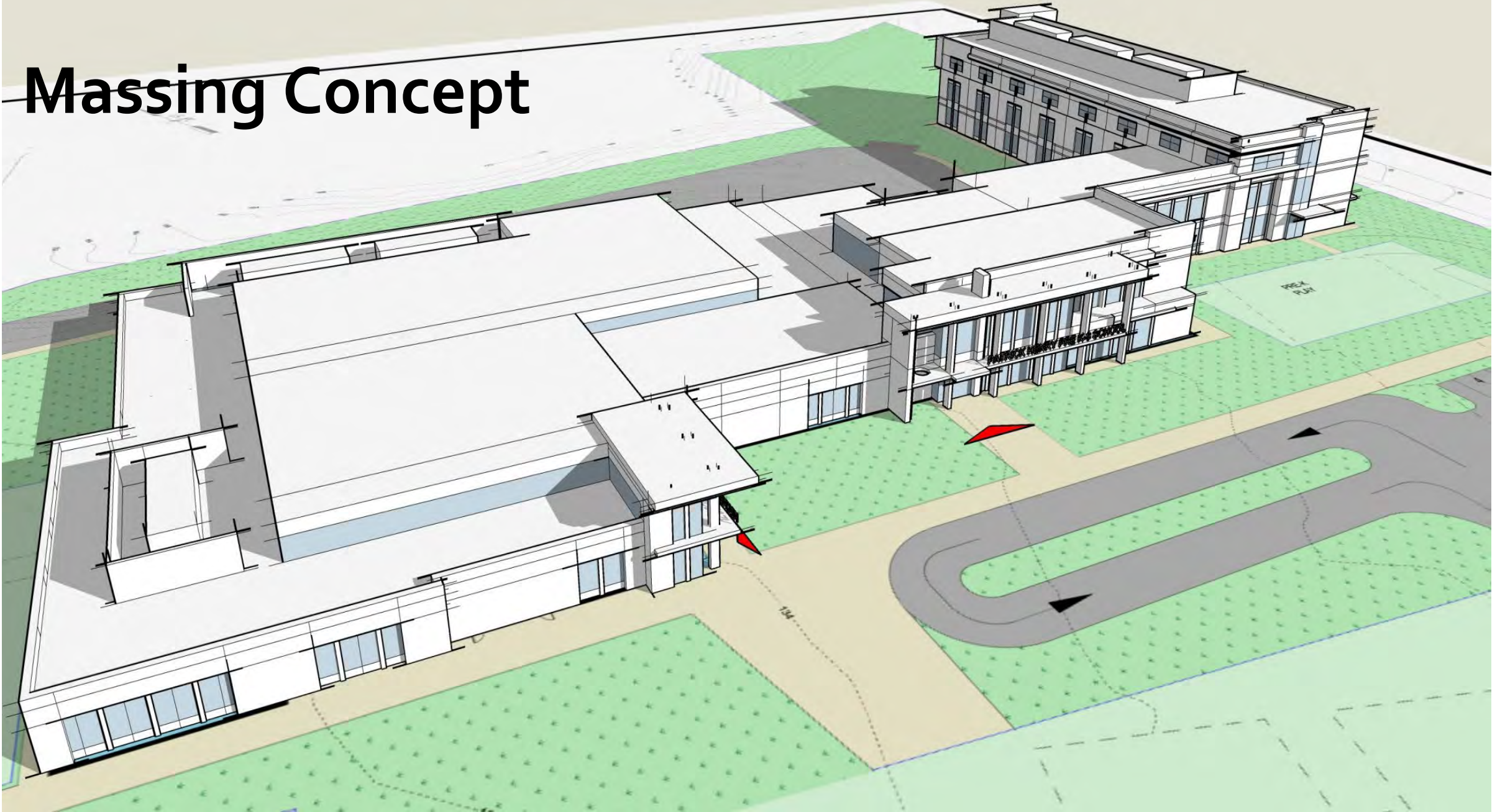
Plan View

# Massing Concept



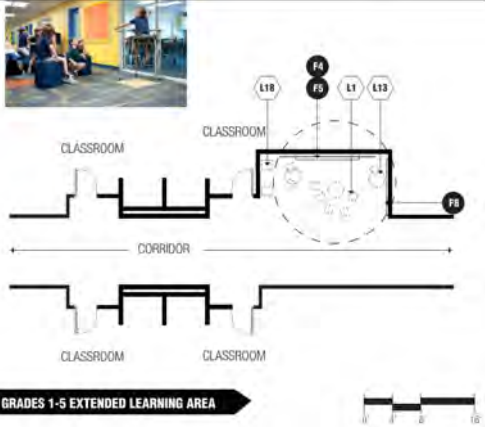
Aerial View from Southeast

# Massing Concept



Aerial View from Southwest

# Collaboration Areas



ACPS Ed Spec

# Differentiation of Entry

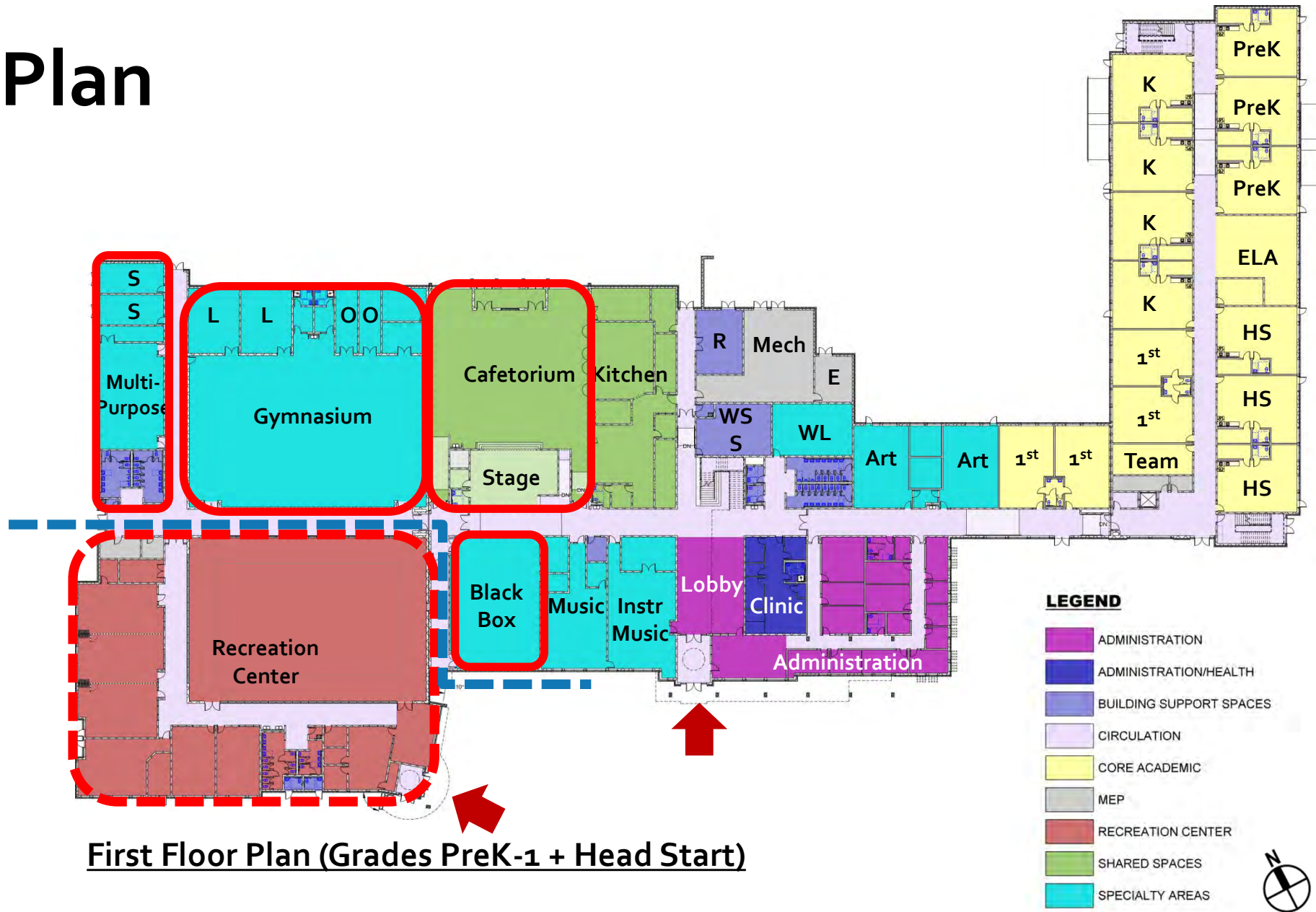


RECREATION CENTER ENTRY



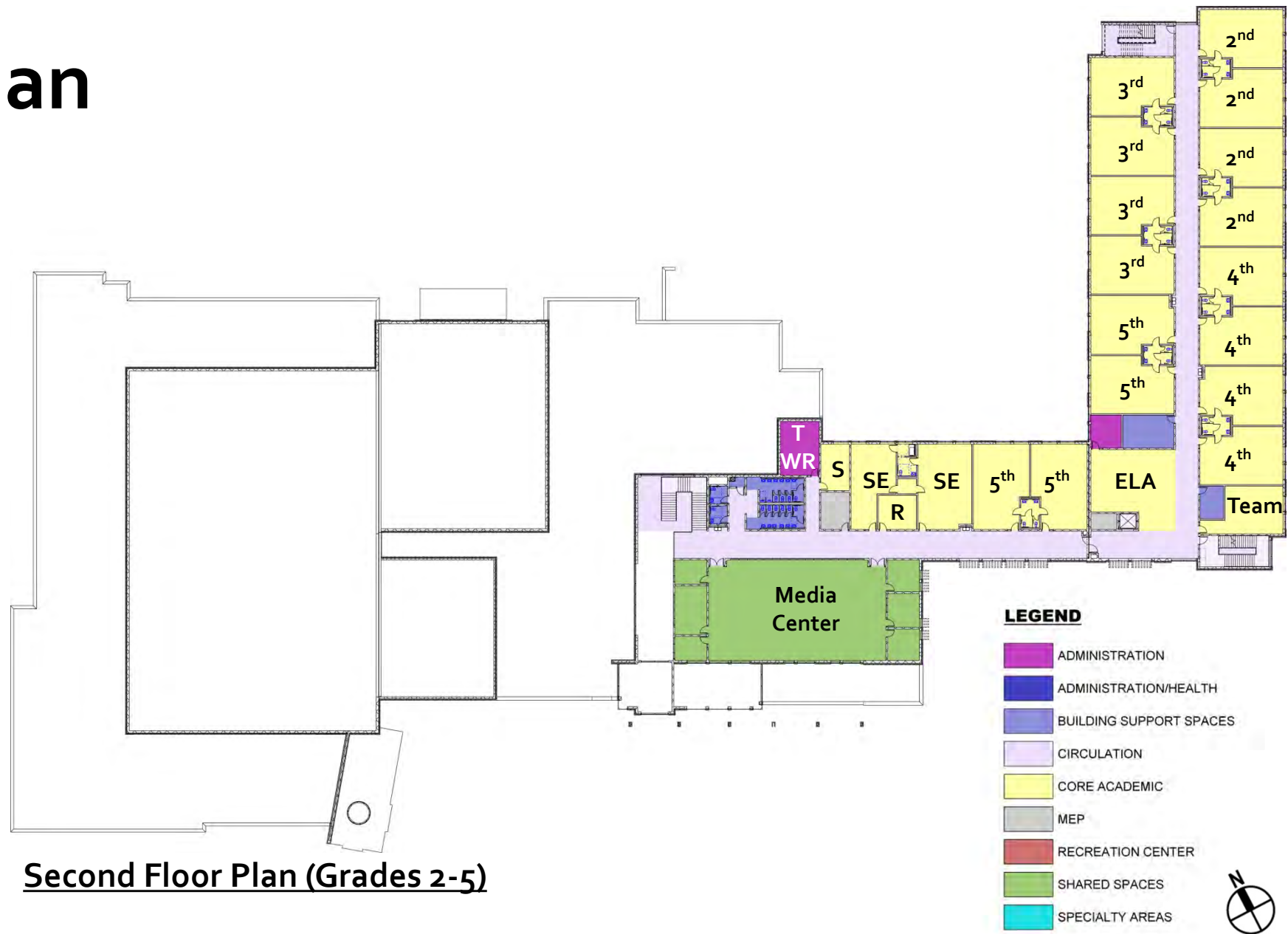
SCHOOL ENTRY

# Floor Plan



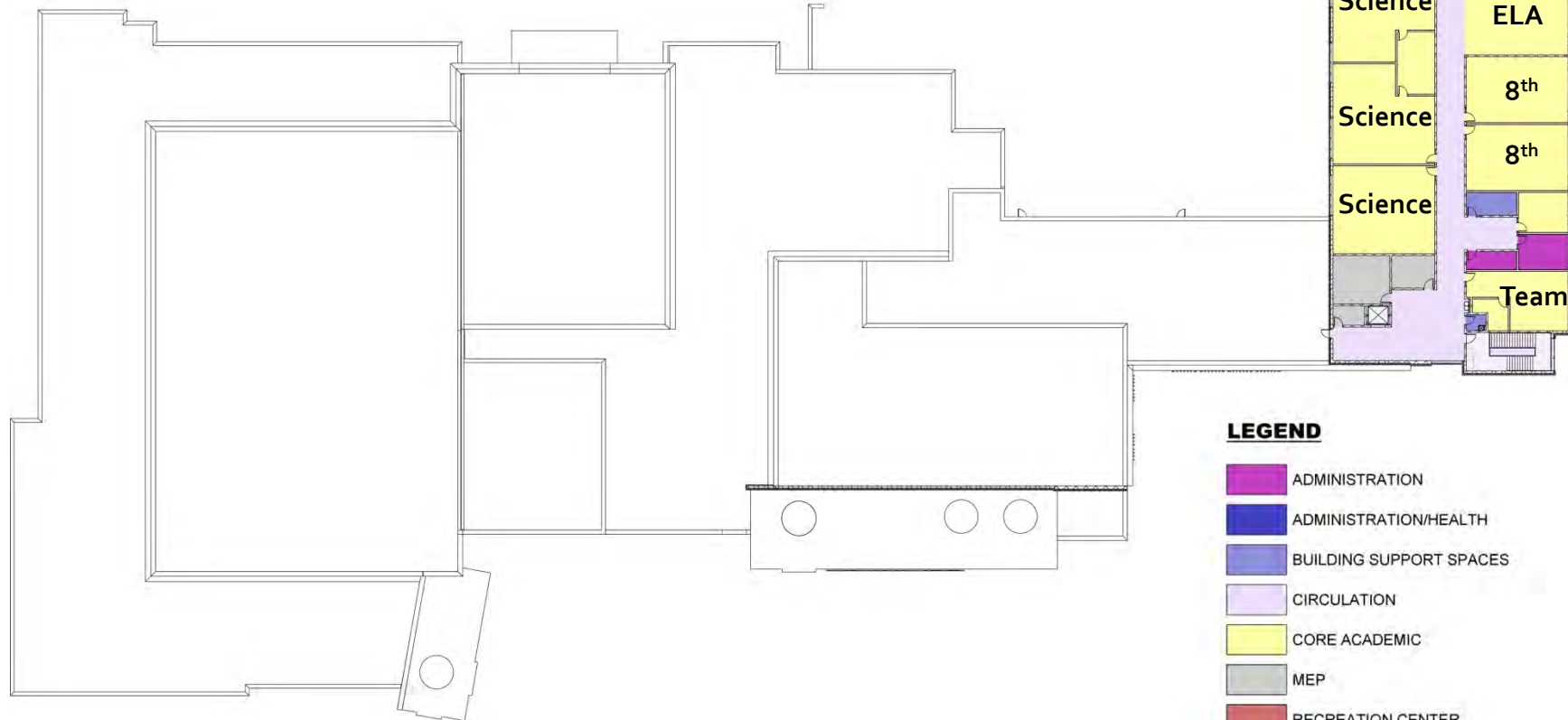
First Floor Plan (Grades PreK-1 + Head Start)

# Floor Plan



Second Floor Plan (Grades 2-5)

# Floor Plan



Third Floor Plan (Grades 6-8)

## LEGEND

- ADMINISTRATION
- ADMINISTRATION/HEALTH
- BUILDING SUPPORT SPACES
- CIRCULATION
- CORE ACADEMIC
- MEP
- RECREATION CENTER
- SHARED SPACES
- SPECIALTY AREAS







**Bus Loop**

**Drop Off Loop**

**Bus Access Gate**





**Pre-K playground**

**Tot-lot**

**Basketball**

**Playground**

**Multi-use Turf Field**

**Fitness Path**

**N. Latham St**

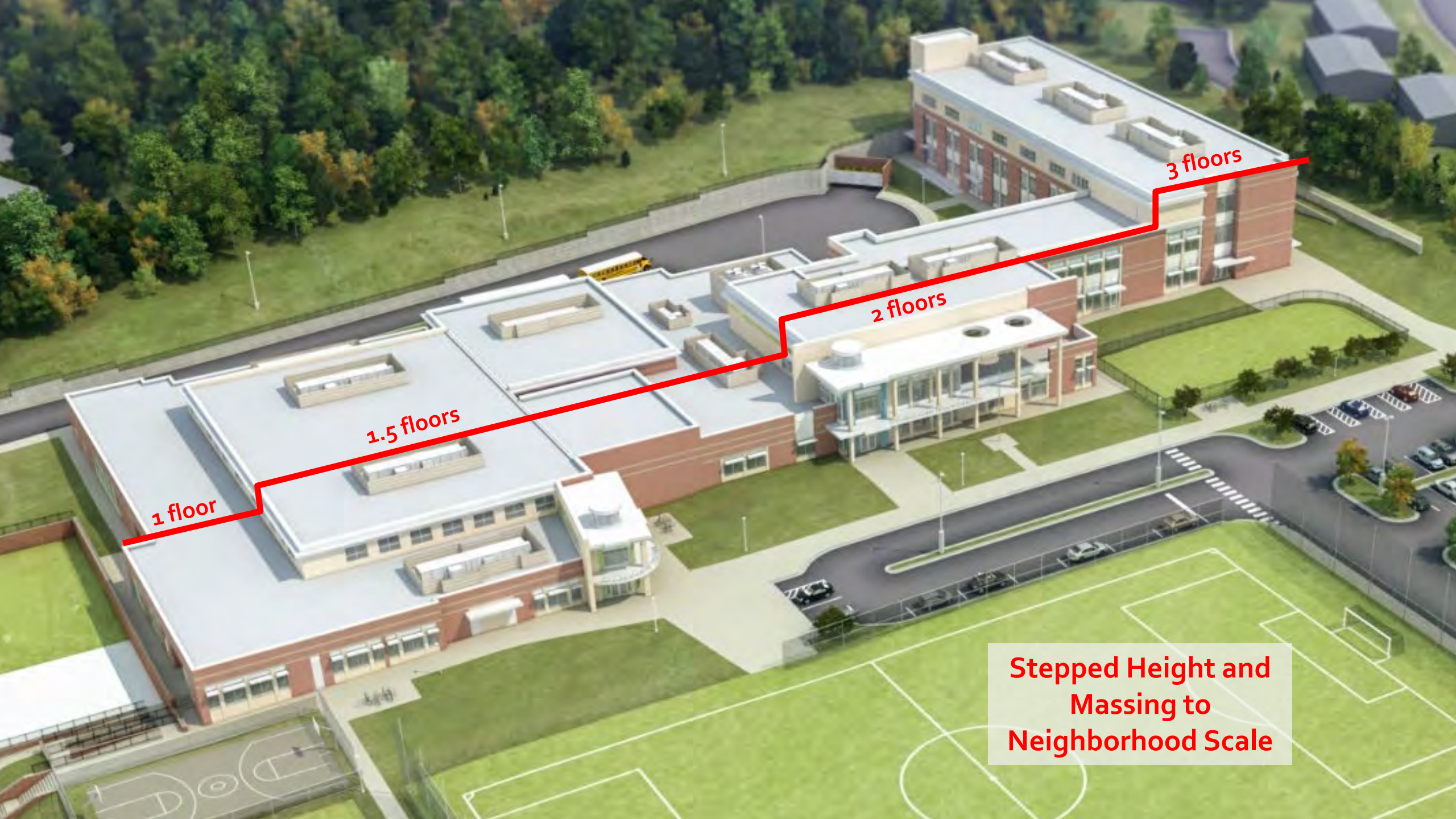
**Taney Av**



N. Latham St

**Wide Sidewalks and  
Pedestrian / Bike  
Connectivity to  
Neighborhood**

Taney Av



1 floor

1.5 floors

2 floors

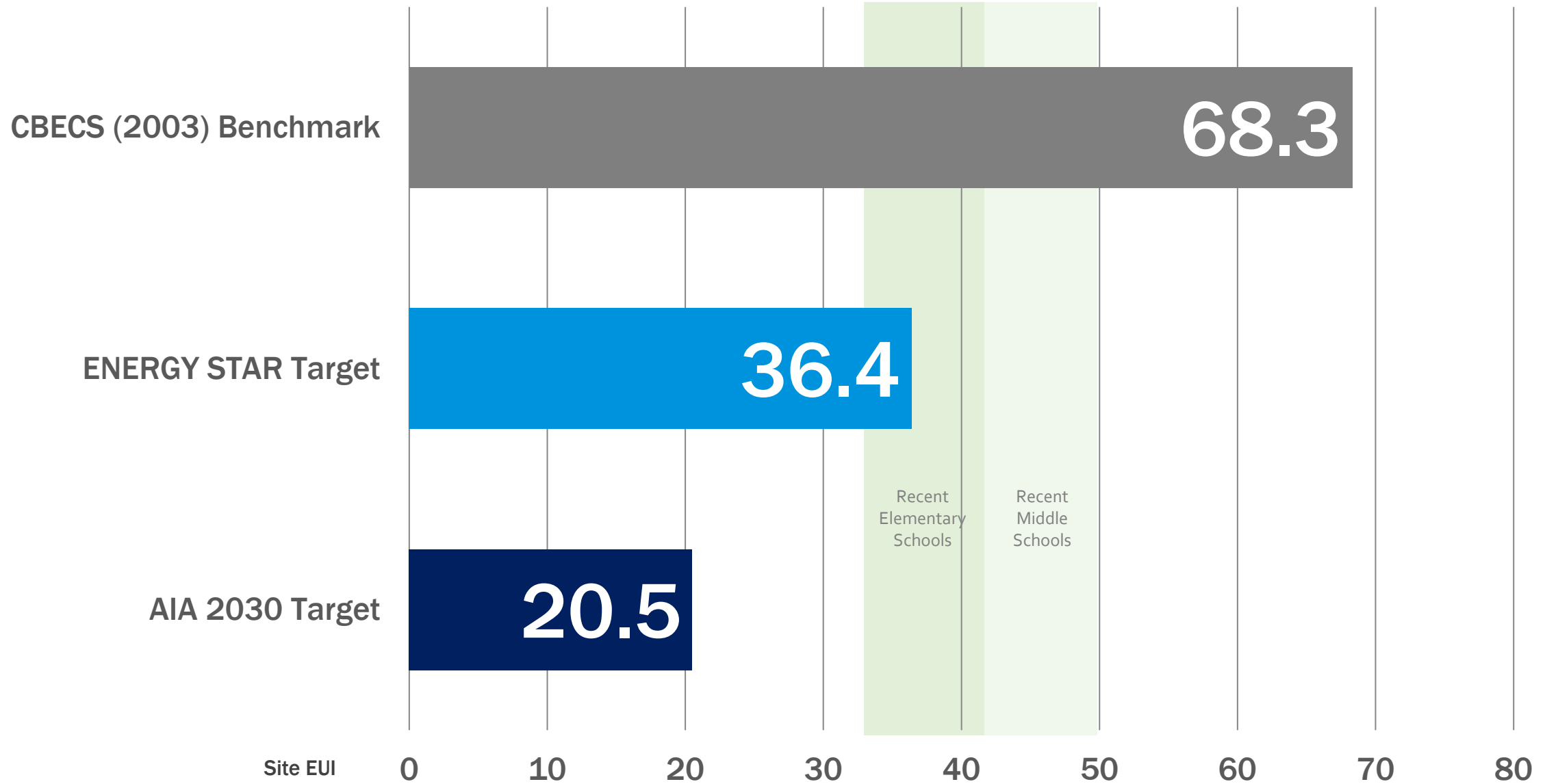
3 floors

Stepped Height and  
Massing to  
Neighborhood Scale

# Sustainability Goals

- **LEED Silver**
  - Registered under LEED for Schools v2009 (aka v3)
- **Prioritize credits that enhance student performance**
  - Indoor Environmental Quality credits
- **Prioritize credits that provide financial return on investment**
  - Water Efficiency credits
  - Energy & Atmosphere credits

# Energy Benchmarking

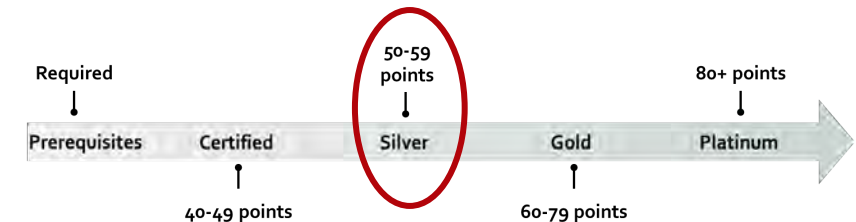


# Preliminary LEED Assessment

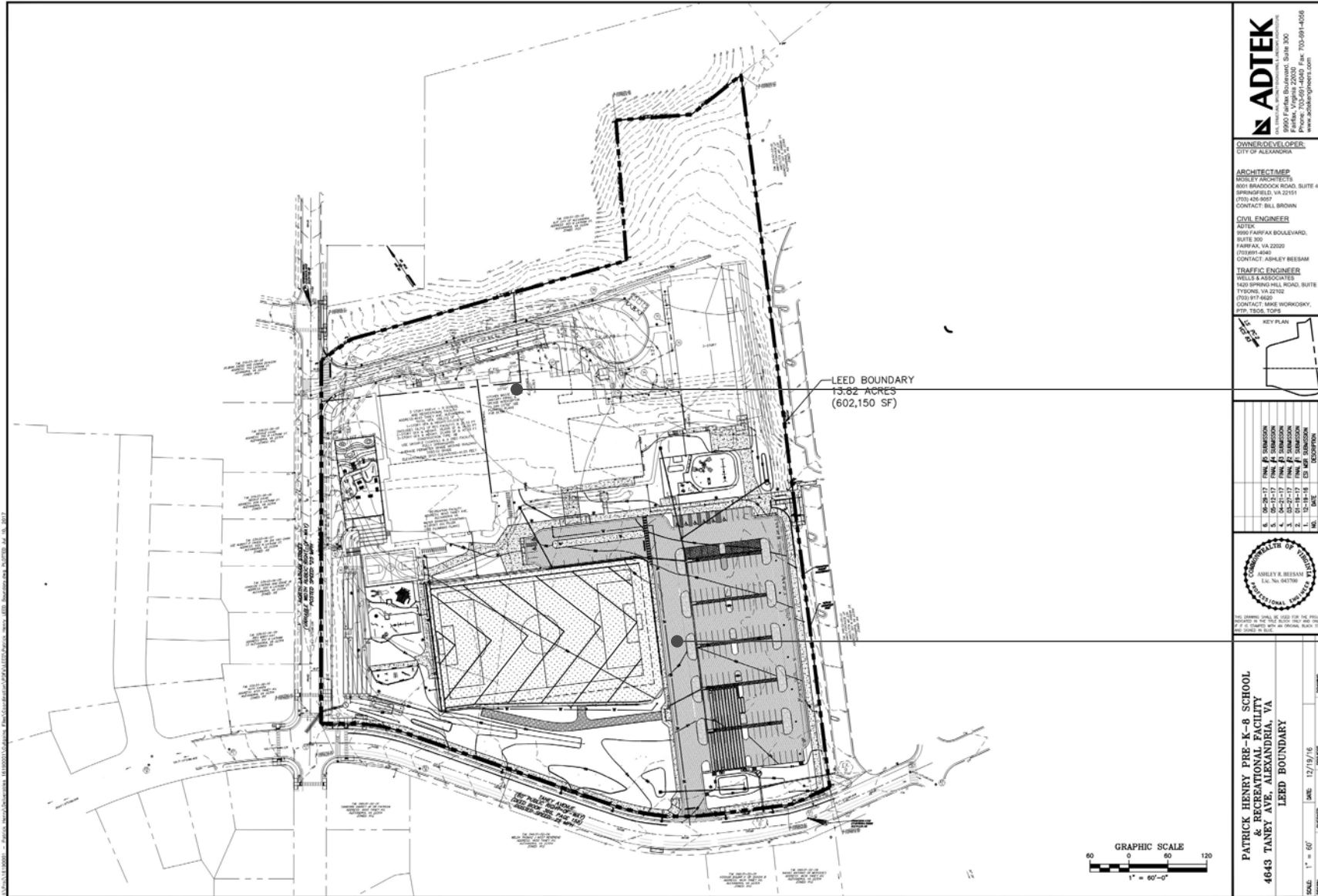
Yes Maybe No



TOTAL = 55 points



# LEED Boundary



**ADTEK**  
1800 Fairfax Boulevard, Suite 300  
Springfield, VA 22151  
Phone: 703-691-4400 Fax: 703-691-4506  
www.adtekengineers.com

**OWNER/DEVELOPER:**  
CITY OF ALEXANDRIA

**ARCHITECT/MEP:**  
MOSELEY ARCHITECTS  
801 BRADDOCK ROAD, SUITE 400  
SPRINGFIELD, VA 22151  
(703) 426-9057  
CONTACT: BILL BROWIN

**CIVIL ENGINEER:**  
ADTEK  
1800 FAIRFAX BOULEVARD,  
SUITE 300  
FAIRFAX, VA 22030  
(703) 691-4400  
CONTACT: ASHLEY BEESAM

**TRAFFIC ENGINEER:**  
WELLS & ASSOCIATES  
1420 SPRING HILL ROAD, SUITE 510  
TYSONS, VA 22102  
(703) 917-6620  
CONTACT: MIKE BORKHOFF,  
RTP, TS&E, TOPS

**KEY PLAN**

NO.	DATE	BY	DESCRIPTION	SCALE
1.	06-26-17	FINN, J.	REVISION	
2.	06-27-17	FINN, J.	REVISION	
3.	06-27-17	FINN, J.	REVISION	
4.	06-27-17	FINN, J.	REVISION	
5.	06-27-17	FINN, J.	REVISION	
6.	06-27-17	FINN, J.	REVISION	

**PROFESSIONAL SEAL OF ASHLEY K. BEESAM**  
E.C. No. 64570  
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

**PATRICK HENRY PRE-K-8 SCHOOL**  
REDEVELOPMENT PROJECT  
4643 TANEY AVE., ALEXANDRIA, VA  
LEED BOUNDARY

SCALE: 1" = 60' (AS SHOWN) CHG. DATE: 12/19/16  
DRAWN BY: EC. CHECKED BY: CHG. INCHES: 1516.0001

● New Building

● Existing Building  
(to be demolished and replaced with sports field and parking lot)

# Design Phase Review – CREDITS ACHIEVED

## Sustainable Sites

- Site Selection
- Development Density/Community Connectivity
- Public Transportation Access
- Maximize Open Space
- Heat Island Effect (Roof)
- Joint Use of Facilities

## Water Efficiency

- Water Use Reduction (prerequisite)
- Water Efficient Landscaping

## Energy & Atmosphere

- Minimum Energy Performance (prerequisite)
- Fundamental Refrigerant Management (prerequisite)
- Optimize Energy Performance

## Materials & Resources

- Storage and Collection of Recyclables (prerequisite)

## IEQ

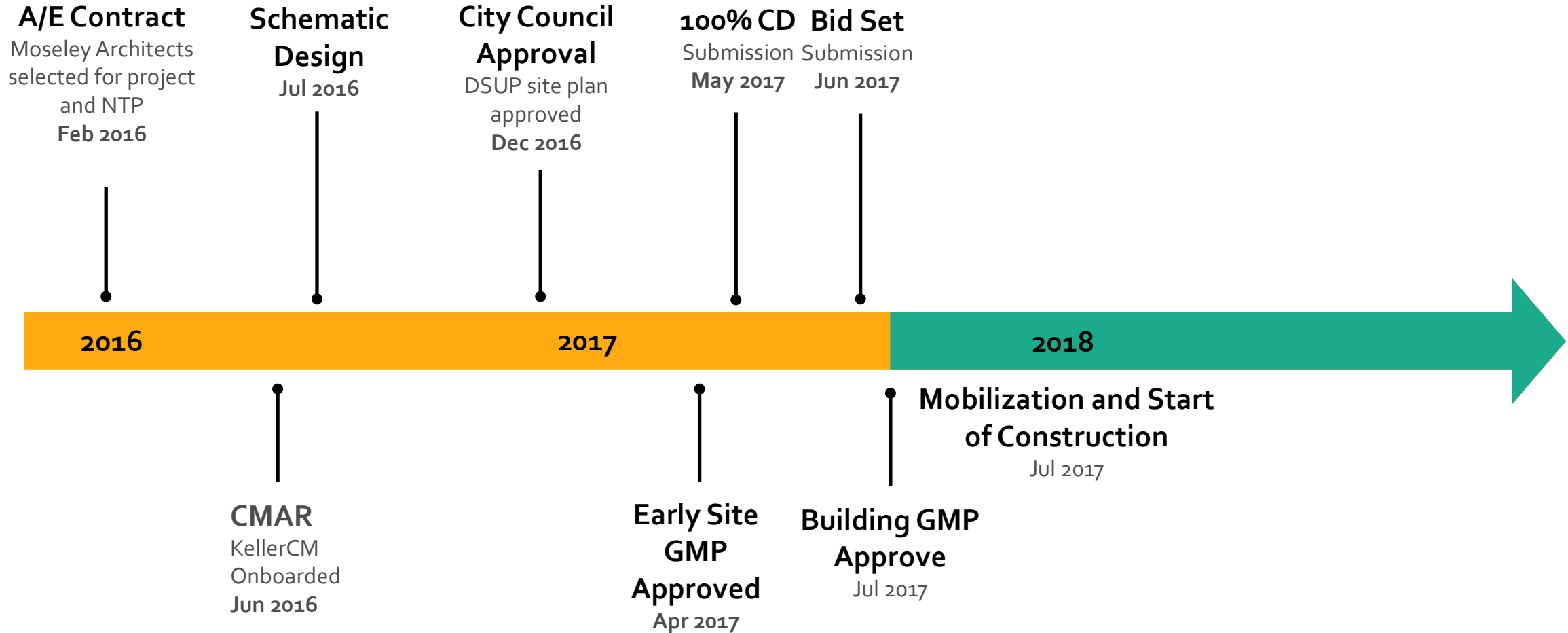
- Minimum IAQ Performance (p)
- ETS Control (p)
- Minimum Acoustical Performance (p)
- Indoor Chemical & Pollutant Source Control
- Controllability of Systems (lighting + thermal)
- Thermal Comfort (design + verification)

## Innovation/ RPCs

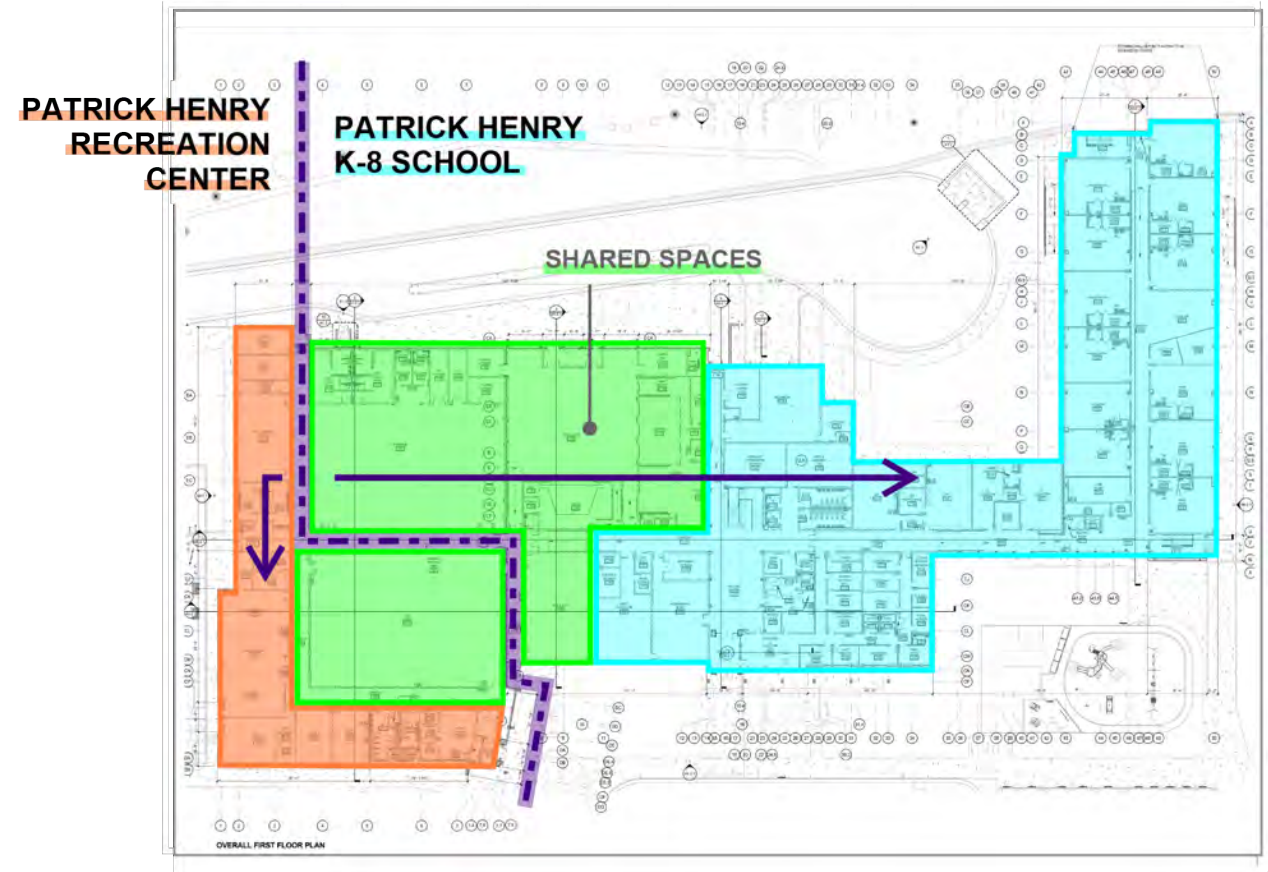
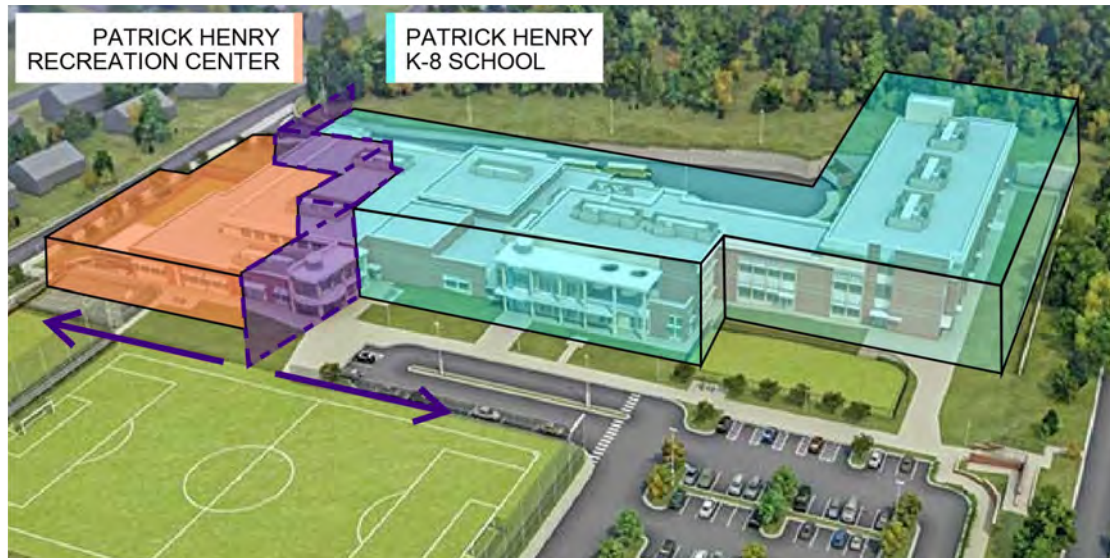
- Optimize Energy Performance (RPC)

# Project Timeline

## Design and Jurisdictional Approval Phases to Start of Construction



# PATRICK HENRY SCHOOL & RECREATION CENTER



OWNER: Alexandria City Public Schools/City of Alexandria

COMPLETED: 2019

SQUARE FOOTAGE: 1,155,000 SF

CONTRACT AMOUNT: \$51,000,000

**MIDDLETOWN PARALLEL: Occupied site, tight adjacencies of new/existing**

**MIDDLETOWN PARALLEL: Two co-located functions, one new facility**

# Patrick Henry Elementary School & Recreational Center

Site Logistics Plan: Existing Conditions



## Legend:

- ① Existing School
- ② Existing Portables
- ③ Existing Rec Center
- ④ Existing Parking Lot
- ⑤ Existing Bus Loop



# Patrick Henry Elementary School & Recreational Center

Site Logistics Phasing Plan: Phase 1, Mobilization, Site Work and Temporary Bus Loop



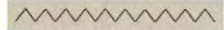




## Activities:

- Survey and stakeout
- Install safety barrier fence between existing school and construction site
- Install construction safety fence around job site
- Install Stone Construction Entrance (SCE), washout structure, and contractor staging area
- Mobilization of early site package subcontractors
- Install E&SC measures
- Install sequenced portions Permanent and Temporary Storm piping
- Selective demolition, clearing and tree removal
- Install sheeting and shoring at tennis courts ridge and begin cut-to-fill
- Install 50' of electric line identified in sequence of construction
- Strip topsoil and Rough Grading
- Install retaining walls along north and east sides of site
- Install new, temporary bus loop and associated curb cuts and storm pipe and structures
- Close existing bus loop
- Fine grading and construct building pad
- Run Water and Sanitary Utilities up through existing parking lot (First Summer)



## Legend:

- ① Existing School
- ② Existing Portables
- ③ Existing Rec Center
- ④ Existing Parking Lot to remain in use
- ⑤ Safety Barrier Fence  

- ⑥ Existing Play Areas to remain for School & Rec use with Emergency Egress  

- ⑦ Temporary Bus Loop
- ⑧ Stone Construction Entrance & Tire Wash. Jobsite trailer Offices (7) and Sea Cans (10)
- ⑨ Stormwater Management Facility
- ⑩ Building Pad for New School and Rec Center
- ⑪ Construction Safety Fence  

- ⑫ Retaining Walls  

- ⑬ Crosswalk Locations  

- ⑭ Top Soil Stock Pile



# Patrick Henry Elementary School & Recreational Center

Site Logistics Phasing Plan: Phase 2, Construct New School and Rec Center



## Activities:

- Install remaining E&SC devices
- Construct New School and Rec Center including Foundations, Structure, Building Envelope and Roofing, HVAC, Plumbing, Electrical and Interiors.
- Continue installation of Site Utilities including Stormwater Management Facility at Southwest corner of site and the Sand Filter under the Bus Loop.
- Install new, permanent Bus Loop
- Final grading around new building
- Coordinate with modifications to offsite overhead electrical line and poles and install associated road crossings.
- Perform Final Inspections.
- Achieve Certificate of Use and Occupancy
- Move ACPS and RPCA into New Facility.



## Legend:

- ① Existing School
- ② Existing Portables
- ③ Existing Rec Center
- ④ Existing Parking Lot to remain in use
- ⑤ Safety Barrier Fence
- ⑥ Existing Play Areas to remain for School & Rec use with Emergency Egress
- ⑦ Temporary Bus Loop
- ⑧ Stone Construction Entrance & Tire Wash. Jobsite trailer Offices (7) and Sea Cans (10)
- ⑨ Stormwater Management Facility
- ⑩ Construction Footprint of new Building
- ⑪ Construction Safety Fence
- ⑫ Retaining Walls
- ⑬ Crosswalk Locations
- ⑭ New Bus Loop
- ⑮ Top Soil Stock Pile



# Patrick Henry Elementary School & Recreational Center

Site Logistics Phasing Plan: Phase 3 Sequence 1, Demolition of Existing Buildings



## Activities:

- Reconfigure safety barrier fence between existing school and construction site
- Reconfigure construction safety fence around Phase 3 portion of job site
- Install remaining E&SC devices
- Install sequenced portions Permanent and Temporary Storm piping
- Cut, cap, and make safe existing utilities serving the old building
- Site and Selective Demolition including closing sidewalk along Taney Ave. in front of old building
- Abatement of Hazardous Materials throughout old school building
- Demolish old buildings and haul off debris
- Install first half of new parking area



## Legend:

- ① Existing School, Rec Center and Portables to be Removed
- ② Existing Parking Lot to remain in use
- ③ Partial New Parking Lot
- ④ Safety Barrier Fence  

- ⑤ Stone Construction Entrance & Tire Wash. Jobsite trailer Offices (7) and Sea Cans (10)
- ⑥ Stormwater Management Facility  

- ⑦ Construction of New School and Rec Center  

- ⑧ Construction Safety Fence  

- ⑨ Retaining Walls  

- ⑩ New Bus Loop  

- ⑪ Top Soil Stock Pile  




# Patrick Henry Elementary School & Recreational Center

Site Logistics Phasing Plan: Phase 3 Sequence 2, Restore Site and Final Completion



## Activities:

- Install final portions of Permanent Storm piping
- Construct remaining half of new parking area and install site lighting
- Install synthetic turf athletic field, basketball court, and fitness circuit
- Install Intermediate Play Area and PreK Play Area
- Remove temp bus loop
- Remove construction entrance and contractor staging area
- Install landscaping
- Obtain Final Certifications and Project Closeout

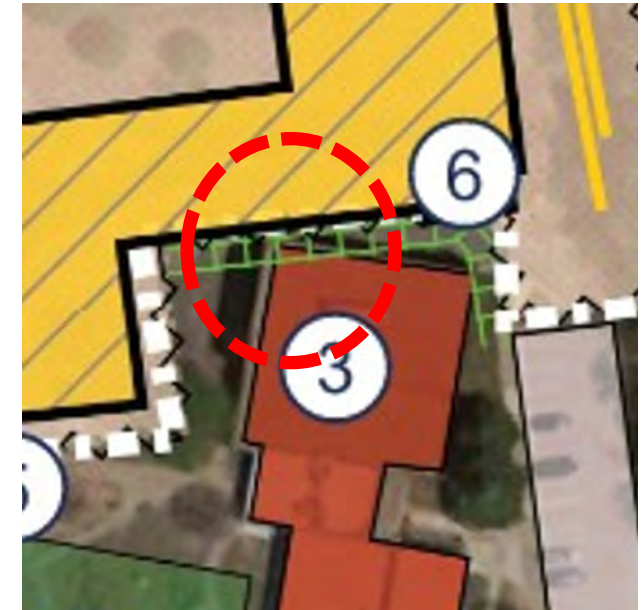


## Legend:

- ① New School Building
- ② New Rec Center
- ③ New Bus Loop
- ④ New Parking Lot
- ⑤ New Pre-K Playground Area
- ⑥ New Intermediate Playground Area
- ⑦ New Recreational Playground Area
- ⑧ New Ball Field
- ⑨ New Basketball Court



# Pinch Point







# Patrick Henry K8 School





Classroom



Science Lab



Classroom



Art Lab



c d e f g h i j k l m n o p q r s t u v w x



I notice...  
@EdFish3  
y z  
WORK  
HARD



Be respectful  
Be responsible  
Be safe  
Be kind  
Be honest  
Be brave  
Be a good friend  
Be a good citizen  
Be a good student  
Be a good worker

1. Get all requests  
2. Measure things with care  
3. Be safe  
4. Be kind  
5. Be honest  
6. Be brave  
7. Be a good friend  
8. Be a good citizen  
9. Be a good student  
10. Be a good worker

Welcome

3 yellow  
4 blue  
5 pink  
6-7 red











# Patrick Henry Recreation Center





**Children Soft Play**



**Flex Court**



**Fitness**



**Community Multi-Purpose**





PATRICK HENRY SCHOOL

1



# Ribbon Cutting Feb 7, 2019



# Project Pivot

ACPS Superintendent of Schools Dr. Gregory C. Hutchings, Jr. and City Manager Mark Jinks have discussed the potential that using the old school would be a fiscally responsible option that could also speed up the modernization of Alexandria's elementary schools while saving taxpayers up to \$60 million. If deemed feasible, the \$60 million saved in this project could be reinvested in other school projects sooner and help mitigate rising costs.

School News

## Old Patrick Henry School Might Accommodate Students While Douglas MacArthur Elementary Gets Renovated

Zebra · April 1, 2019

1 minute read



At this point, demolition of the old Patrick Henry school facility has been suspended until early April while all considerations are being explored. The old recreation center will still be demolished to provide a proper flow between the old and new school buildings. (Courtesy photo)

By Mary Wadland

ALEXANDRIA, VA—**Alexandria City Public Schools** is assessing the feasibility of using of the old **Patrick Henry School** facility as temporary swing space to accelerate the modernization of **Douglas MacArthur Elementary School**.

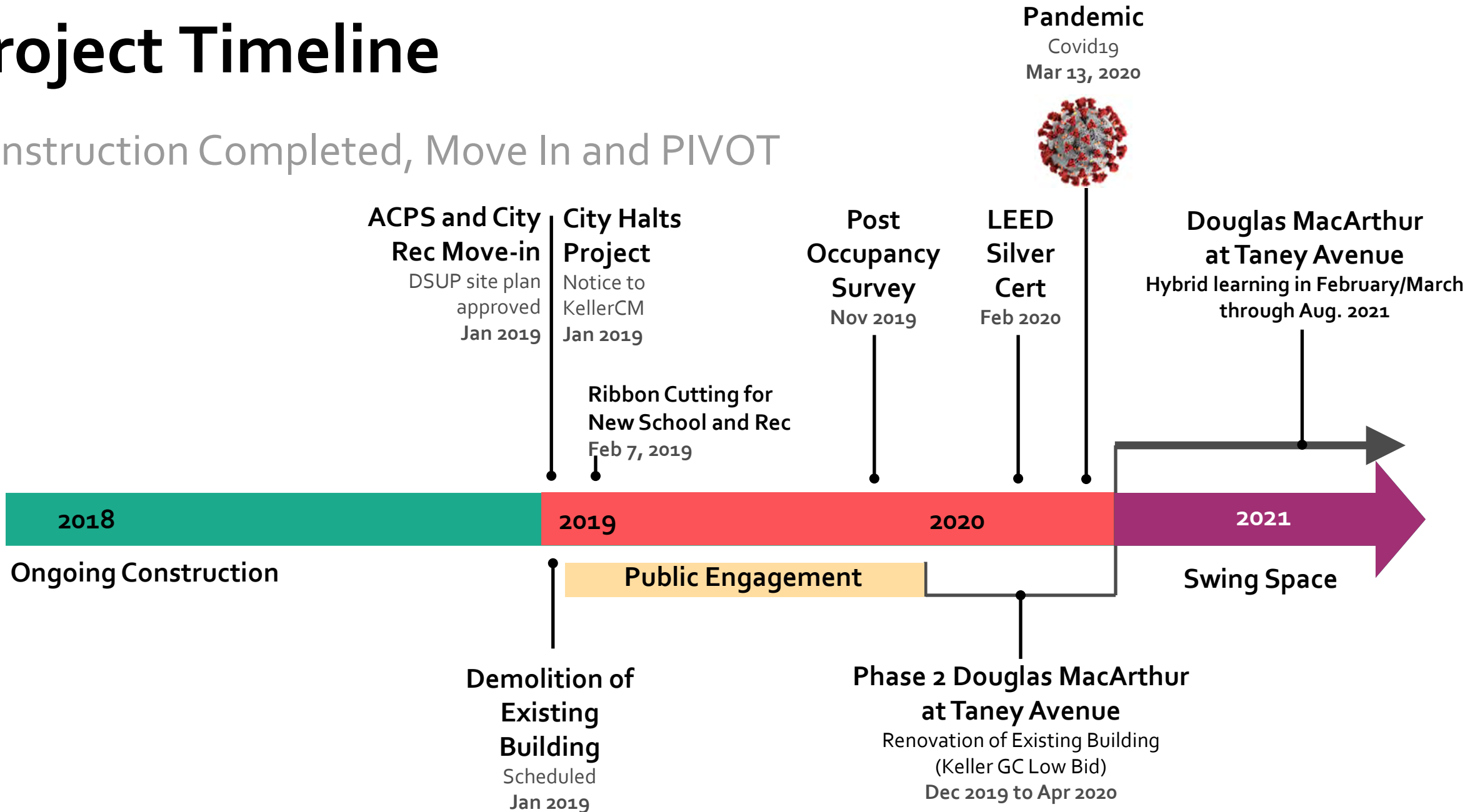
ACPS Superintendent of Schools Dr. Gregory C. Hutchings, Jr. and City Manager Mark Jinks have discussed the potential that using the old school would be a fiscally responsible option that could also speed up the modernization of Alexandria's elementary schools while saving taxpayers up to \$60 million. If deemed feasible, the \$60 million saved in this project could be reinvested in other school projects sooner and help mitigate rising costs.

The former Patrick Henry school building would be refurbished and used as the temporary location for Douglas MacArthur Elementary School. This plan would allow an approximate two year acceleration of Douglas MacArthur, with design work beginning this year and construction starting as early as 2021.

The modernization of the school — built in the 1940s and with eight windowless classrooms and insufficient space for its 700 students — had been pushed back in the absence of suitable temporary swing space for the students and staff during any rebuild. If the option moves ahead, Douglas MacArthur students and staff would relocate to the old Patrick Henry building beginning September 2020 for up to two years while their own new school is built.

# Project Timeline

Construction Completed, Move In and PIVOT





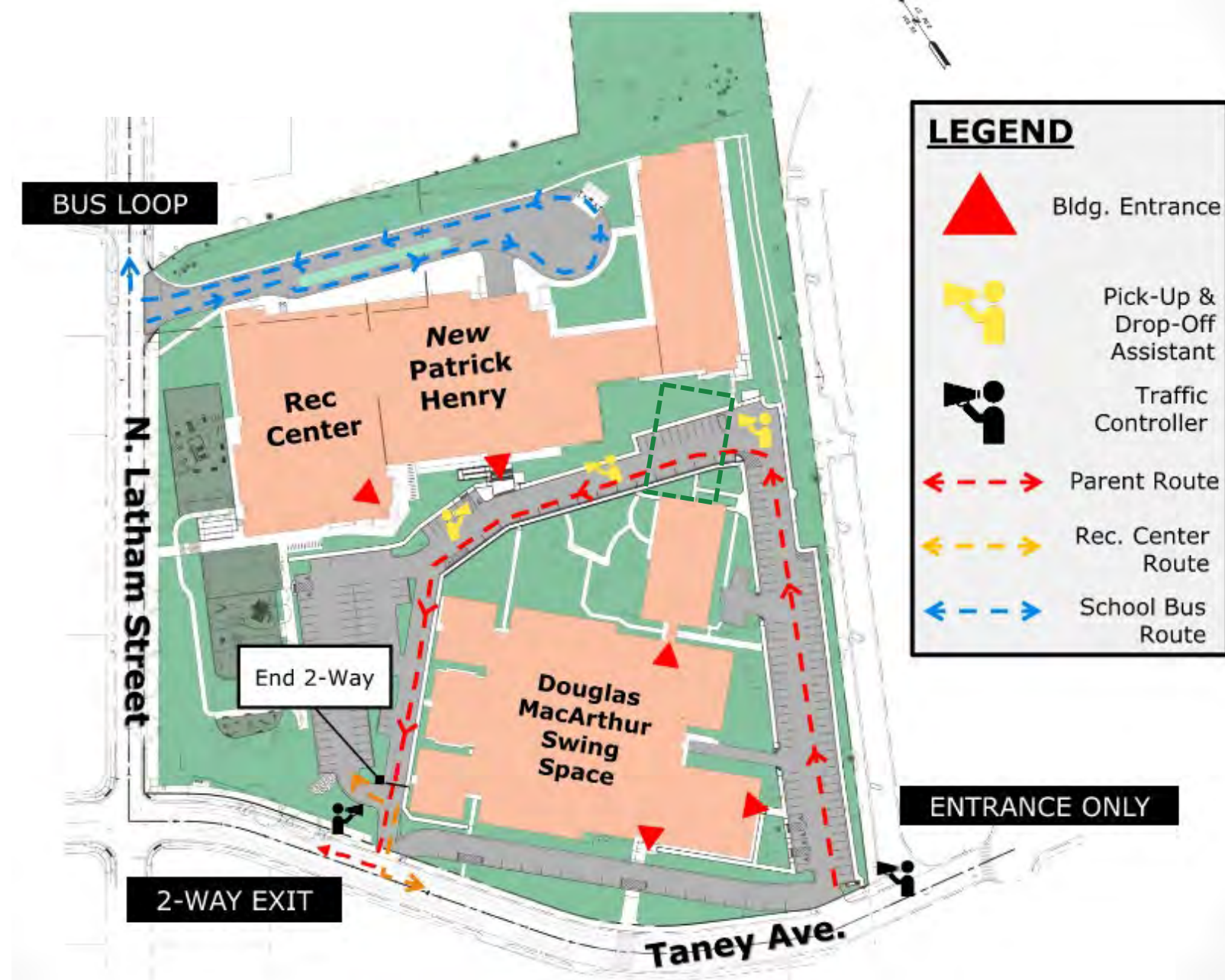
# Patrick Henry K8 School and Rec Center

Multiple Meetings to Update the Patrick Henry, Douglas MacArthur Communities and Rec Center patrons and staff

Patrick Henry            942  
 Douglas MacArthur    650  
 Total on Site        1,592

Phased construction for parking and vehicular impacts

Traffic timing and Parking assignments to accommodate each stakeholder



# Patrick Henry K8 School and Rec Center

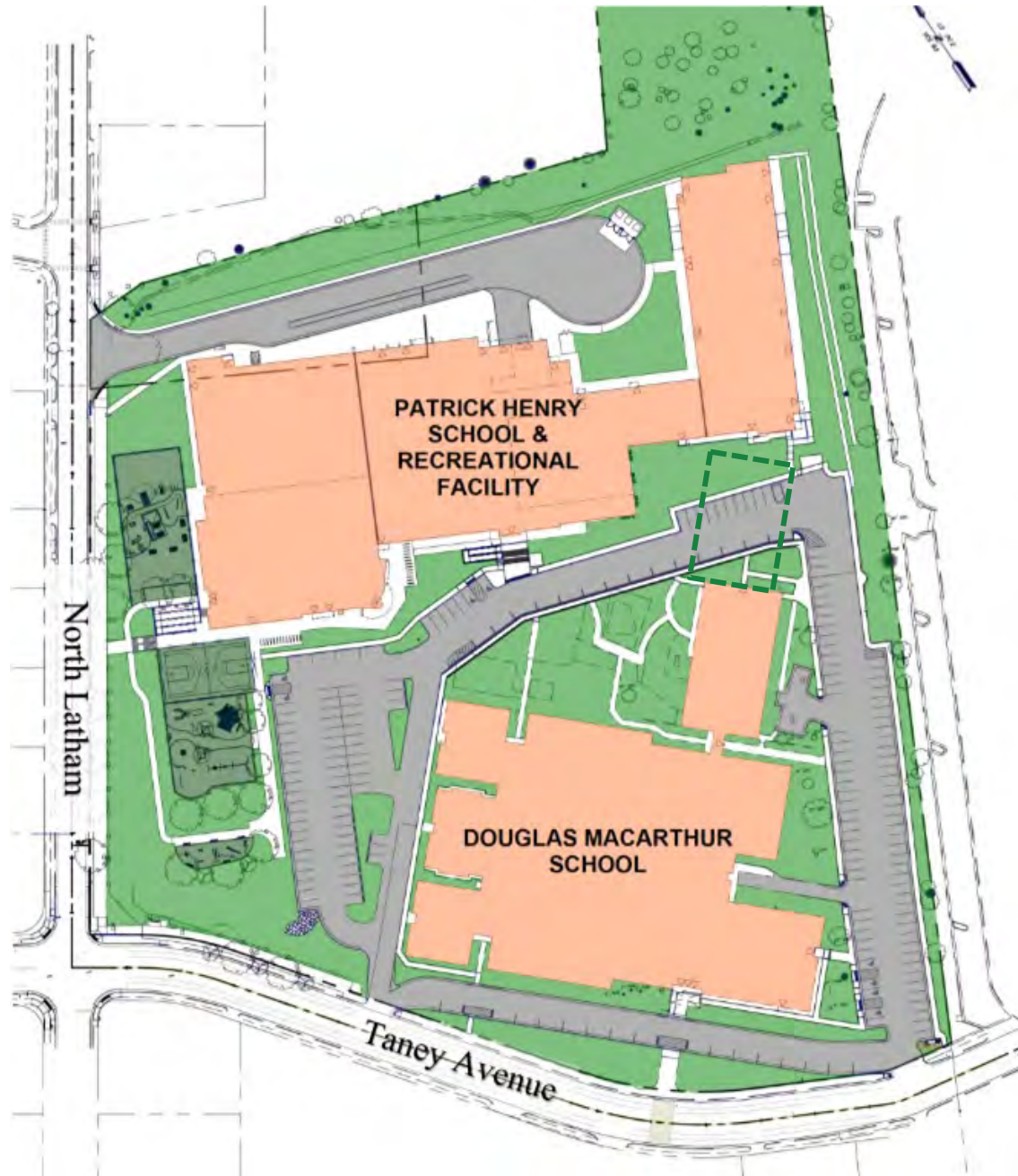
Amend DSUP Site Plan through  
City Plan Review

Submitted under the Existing  
Building Code

Life Safety agreements with  
AHJ to reclassify Occupancy of  
new renovated gymnasium/  
multipurpose space

Upgrade the swing space  
building that sat with differed  
maintenance due to anticipated  
demo

Provide security upgrades



# Life Safety Agreement with AHJ

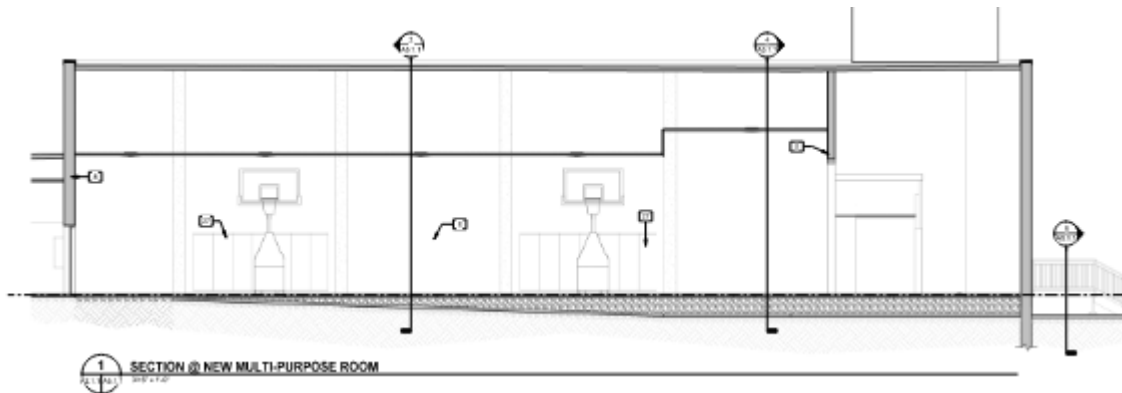
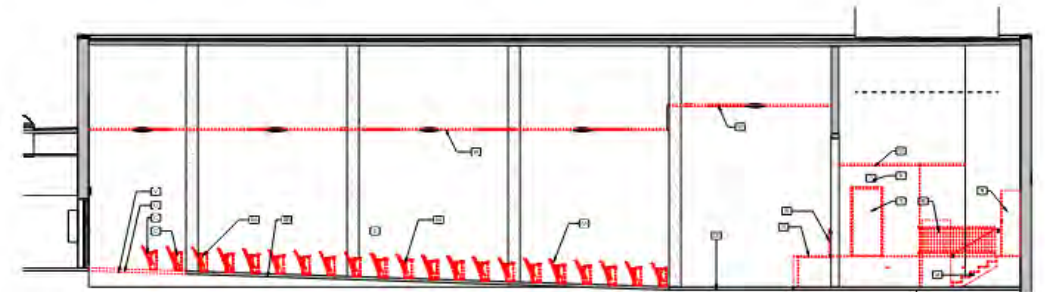
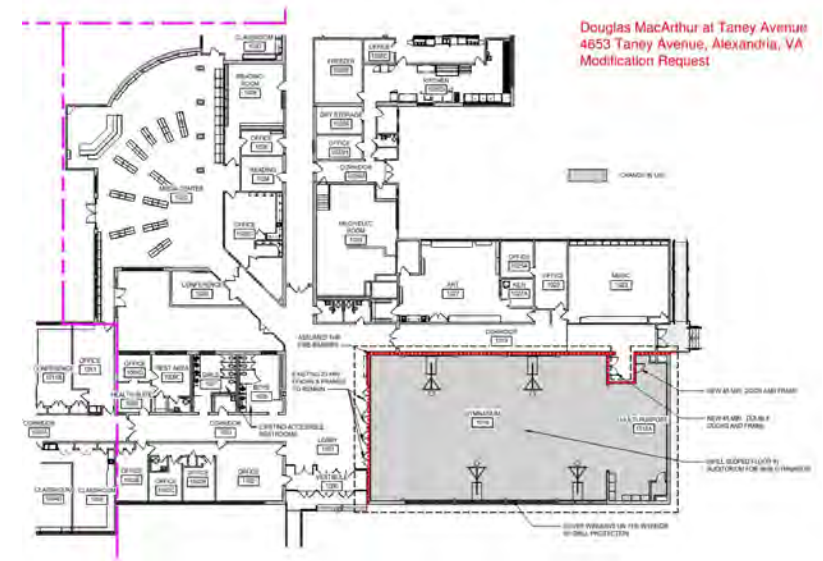
Temporary occupancy has been limited to 30 months by agreement with the City or requirement to sprinkle the Building

Existing fire alarm system will be replaced and will provide an added level of safety to the existing condition.

The existing Gym has been demolished to alleviate issue with fire separation distance between the new facility and the existing. This will reduce the overall square footage of the existing building.

A new loop road will be provided for fire access around the building. This will provide an added level of safety.

Change of Use of Auditorium/Stage (A1) to Gymnasium/Multi-Purpose (A3) will provide a lower level of hazard.

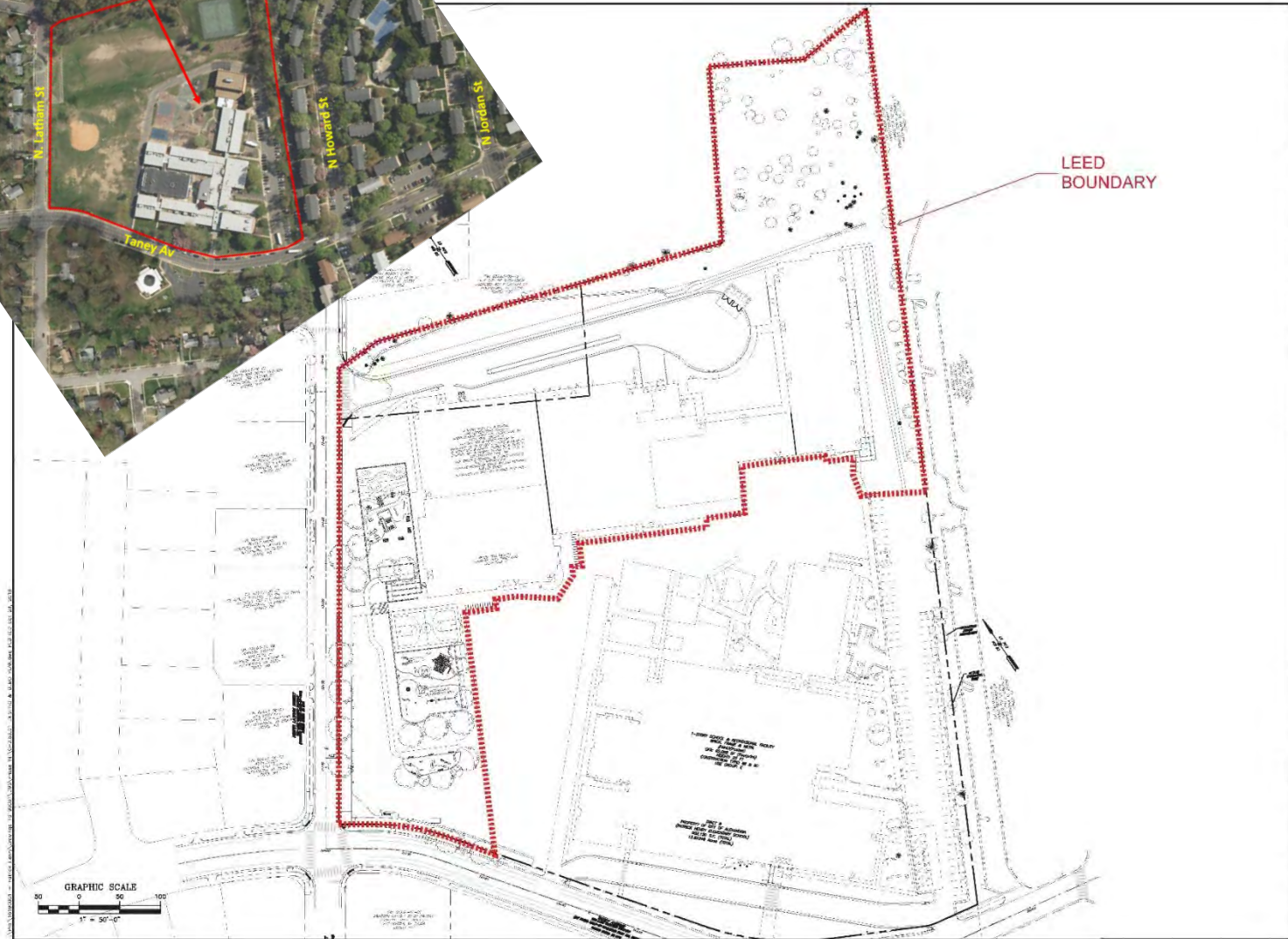


# Patrick Henry K8 School and Rec Center

Revise the Project LEED Boundary



REVISED  
LEED BOUNDARY



**ADTEK**  
ARCHITECTURAL DESIGN & ENGINEERING  
5900 Park Meadows, Suite 300  
Falls Church, VA 22041  
Phone: 703-691-4400 Fax: 703-691-4206  
www.adtekva.com

**OWNER/DEVELOPER:**  
City of Alexandria

**ARCHITECT/TEAM:**  
ADTEK ARCHITECTS  
601 DRIVING ROAD, SUITE 300  
FALLS CHURCH, VA 22041  
(703) 691-4400

**CIVIL ENGINEER:**  
ADTEK ENGINEERING  
601 DRIVING ROAD, SUITE 300  
FALLS CHURCH, VA 22041  
(703) 691-4400

**TRAFFIC ENGINEER:**  
ADTEK ENGINEERING  
601 DRIVING ROAD, SUITE 300  
FALLS CHURCH, VA 22041  
(703) 691-4400



**PATRICK HENRY PRE-K-8 SCHOOL  
& RECREATIONAL FACILITY  
4655 TANNEY AVE, ALEXANDRIA, VA**

DATE: 11-20-18  
SCALE: AS SHOWN  
DRAWN BY: CC  
CHECKED BY: CH  
DATE: 07/20/2018  
SCALE: 1/8"=1'-0"  
PROJECT NO.: 1519J001  
SHEET NO.: C-23/22

# Design Phase Review – CREDITS ACHIEVED

Sustainable Sites	Water Efficiency	Energy & Atmosphere	Materials & Resources	IEQ	Innovation/ RPCs
<ul style="list-style-type: none"><li>▸ Site Selection</li><li>▸ Development Density/Community Connectivity</li><li>▸ Public Transportation Access</li><li>▸ Maximize Open Space</li><li>▸ Heat Island Effect (Roof)</li><li>▸ Joint Use of Facilities</li></ul>	<ul style="list-style-type: none"><li>▸ Water Use Reduction</li></ul>	<ul style="list-style-type: none"><li>▸ Minimum Energy Performance</li></ul>	<ul style="list-style-type: none"><li>▸ Storage and Collection of</li></ul>	<ul style="list-style-type: none"><li>▸ Minimum IAQ Performance (p)</li></ul>	<ul style="list-style-type: none"><li>▸ Optimize Energy Performance (RPC)</li></ul>
<p><b>PLUS we also had to update:</b></p> <p>PIf2 Project Summary Details</p> <p>SSp2 Environmental Site Assessment (submitted for first review at the design final submission stage)</p>					

# Patrick Henry K8 School and Rec Center

## Update LEED Credit Documentation

### Plf2 Project Summary Details

#### SPECIAL CIRCUMSTANCES NARRATIVE

CONSTRUCTION UPDATE: During construction, Alexandria City Public Schools decided it was not going to demolish the existing Patrick Henry K8 school as part of this project scope, but rather keep it for a period of time to use as swing space while other construction projects are underway. Therefore, the originally proposed LEED boundary that included the demolition of the existing Patrick Henry K8 and the construction of parking and play fields has been modified to exclude the existing Patrick Henry K8.

Parking for faculty, staff, and visitors will be provided at the swing space outside the newly established LEED boundary during the transition years until a permanent plan for the existing Patrick Henry PK8 is finalized. This temporary use of the existing building as swing space has been limited to a defined duration at such time the building will be demolished and project site components will be completed, including final configuration of parking and play fields. The future demolition of the existing Patrick Henry PK8 and future site work is outside this project scope of work and outside this LEED project boundary.

	Original LEED boundary	Revised LEED boundary
Total site area within the LEED project boundary	602,150 sf	323,500 sf
% of building area to site area	25.86%	48.13%
Area outside of building footprint, within LEED project boundary, that is comprised of hardscape	209,551 sf	75,980 sf
Area of all parking within the LEED project boundary	26,154 sf	0 sf
Total number of parking spaces provided for building users	155	0

APPROVED in design phase  
UPDATED in construction phase

# Patrick Henry K8 School and Rec Center

## Update LEED Credit Documentation

SUBMITTED in design phase  
AWARDED in construction phase

## SSp2 Environmental Site Assessment

The response narrative indicates that contamination occurred, and the revised LEED Form indicates that the site has been remediated to residential (unrestricted) use. Additionally, the Conclusions Section of the Phase II Environmental Site Assessment states that, “if the site is redeveloped in the future, petroleum-impacted soils that are excavated as part of site development will need to be disposed of appropriately at a landfill or treatment/disposal facility permitted to accept such wastes.” However, confirmation of remediation has not been provided.

**Provide documentation from an environmental consultant or the applicable regulatory authority showing that remediation of the project was successfully completed to meet local, state, or federal EPA region residential (unrestricted) standards.**

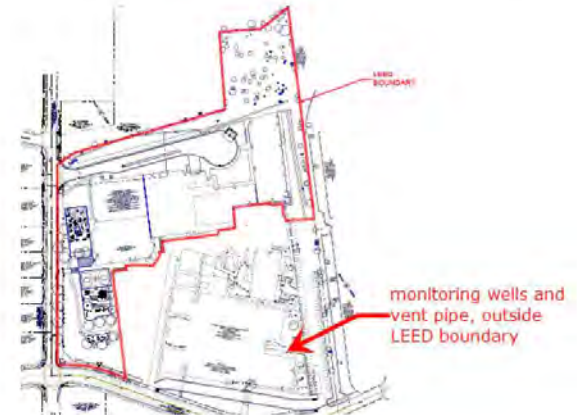
### RESPONSE:

Thank you for your inquiry. During the construction phase of this project, the LEED boundary changed, and we thought we had identified all affected prerequisites and credits. However, we inadvertently missed this one.

As identified on page 39 of the Phase I Environmental Site Assessment, the monitoring wells in question are located adjacent to the existing Patrick Henry Elementary School, which has not been impacted by construction activities. This location is outside the LEED project boundary for the LEED applicant Patrick Henry K8 and Recreation Center project that is the subject of this certification application.



As noted in the special circumstances section of the revised PI form 2, the future demolition of the existing Patrick Henry PK8 and associated future site work (which would address the potentially contaminated soil) is outside this project scope of work and outside this LEED project boundary:

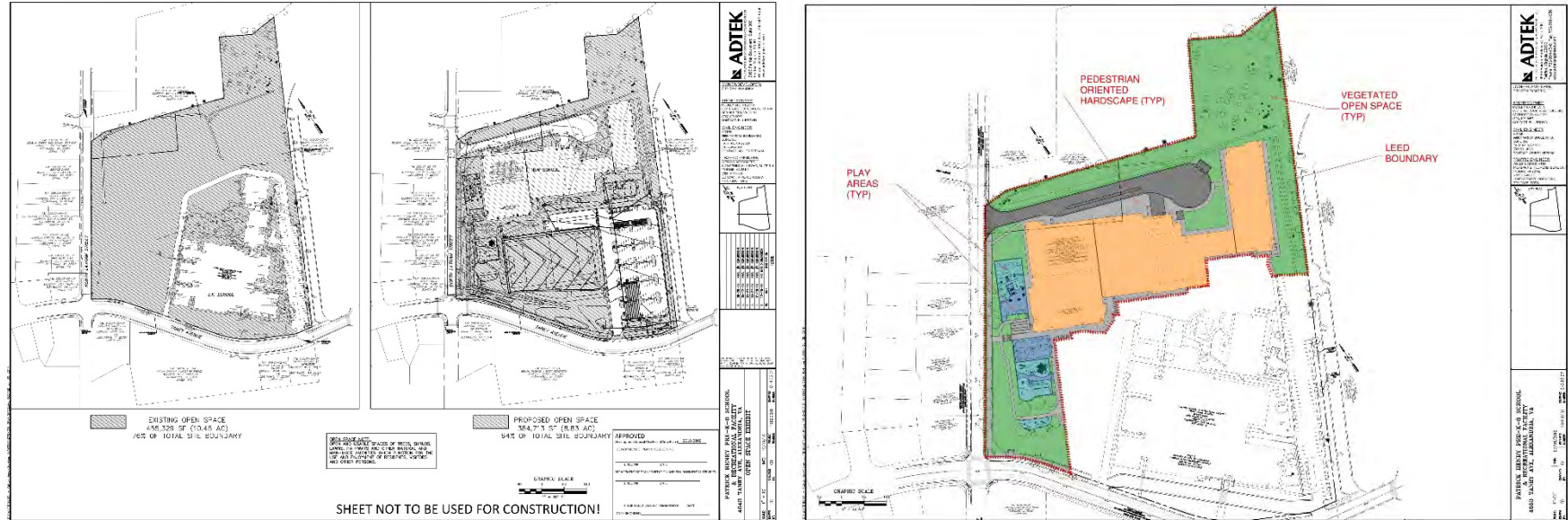


Thank you for allowing us the opportunity to clarify this misunderstanding.

# Patrick Henry K8 School and Rec Center

Update LEED Credit Documentation

## SSc5.2 Site Development: Maximize Open Space



	Original LEED boundary	Revised LEED boundary
Total site area within the LEED project boundary	602,150 sf	323,500 sf
Vegetated open space within LEED project boundary	216,018 sf	136,857 sf
Pedestrian oriented hardscape	168,695 sf	60,141 sf
% open space that is vegetated	56.15 %	69.47 %
Total open space area	384,713 sf	196,998 sf
% of site area within the LEED project boundary that is open space	63.89%	60.90 %

APPROVED in design phase  
 UPDATED in construction phase

# Patrick Henry K8 School and Rec Center

Update LEED Credit Documentation

APPROVED in design phase  
UPDATED in construction phase

## SSc10 Joint Use of Facilities

During construction, Alexandria City Public Schools decided it was not going to demolish the existing Patrick Henry K8 school as part of this project scope, but rather keep it for a period of time to use as swing space while other construction projects are underway. This means **that the play fields and parking that were originally part of this project's LEED boundary are no longer going to be built as part of this project.** However, **this project still qualifies for Joint Use of Facilities because it contains a cafeteria (check box now checked), a stage in the cafeteria and a black box theater (claiming equivalence to an auditorium, check box now checked), and a recreation center (claiming equivalence to playing fields, check box remains checked).** We have unchecked the box for shared parking, which will eventually be built but not within the current LEED boundary. The items we are identifying for credit achievement are all visible on the original documentation we submitted, and the same shared use agreement would apply

### Option 1. Spaces Available for Use by General Public

Select three or more. Indicate the types of spaces that will be accessible to and available for shared use by the general public:

- Auditorium
- Gymnasium
- Cafeteria/cafeterium
- One or more classrooms
- Playing fields
- Joint parking

ORIGINAL FORM

### Option 1. Spaces Available for Use by General Public

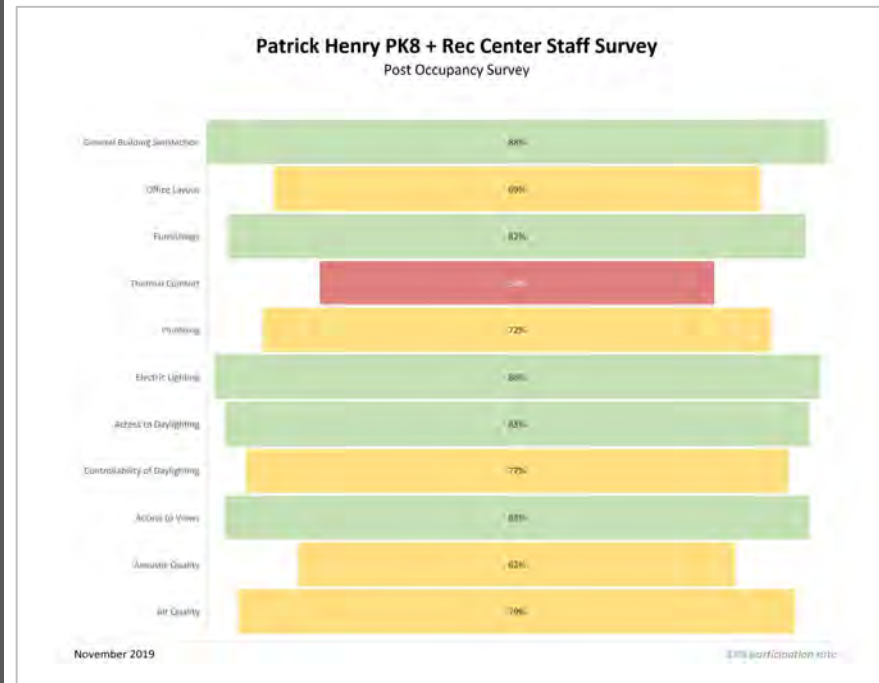
Select three or more. Indicate the types of spaces that will be accessible to and available for shared use by the general public:

- Auditorium
- Gymnasium
- Cafeteria/cafeterium
- One or more classrooms
- Playing fields
- Joint parking

REVISED FORM  
(same supporting documentation applied)

# Patrick Henry K8 School and Rec Center

## Update LEED Credit Documentation



I like the amount of wall space, although, I wish I could reach it all. I like having two teacher desks and chairs. I also like the kidney table. At first, I didn't want bathrooms in the classroom, but I now see the ease and convenience of them.

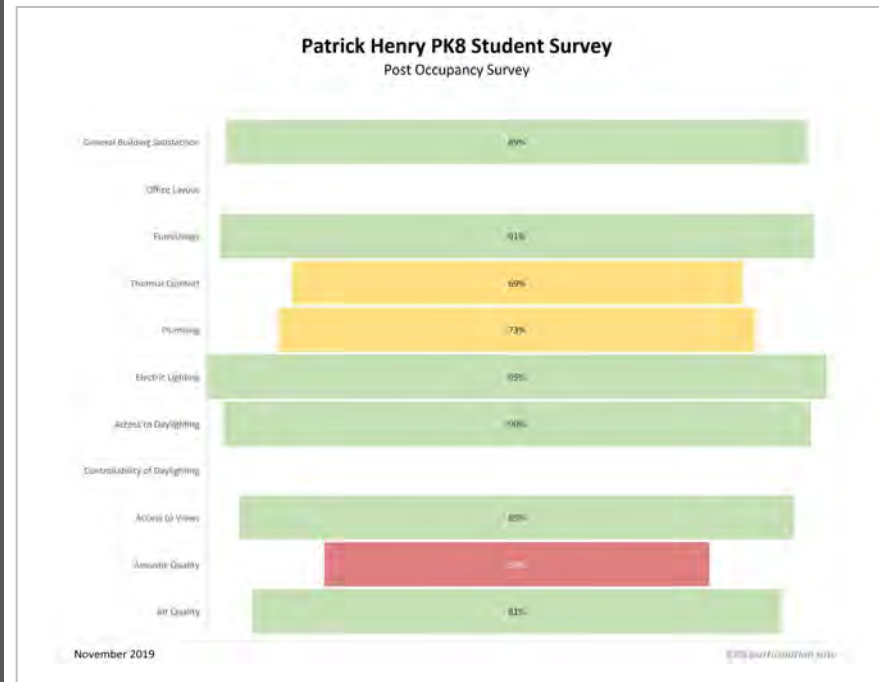
Beautiful, new, open, airy, welcoming.

It is very cheerful and state-of-the-art overall.

[Dislike] the heating and cooling of the building and the sound carries through the floor and walls.

[Dislike] the grade of materials used. Some flooring is beginning to buckle. Some floor trim already looks old and worn.

Areas of the walls that are below eye level should have tile rather than painted walls. There are already scuff marks on the wall and we've only been in school for 44 days.



I like it, but the amount of times you need to go up and down the steps just tires me.

I just don't like how the stairs are so much for middle school because I have to start the day by walking 4 or 5 flights of stairs!!! Other than that I love this school!!

I enjoy walking around our giant school and having this amazing environment to learn.

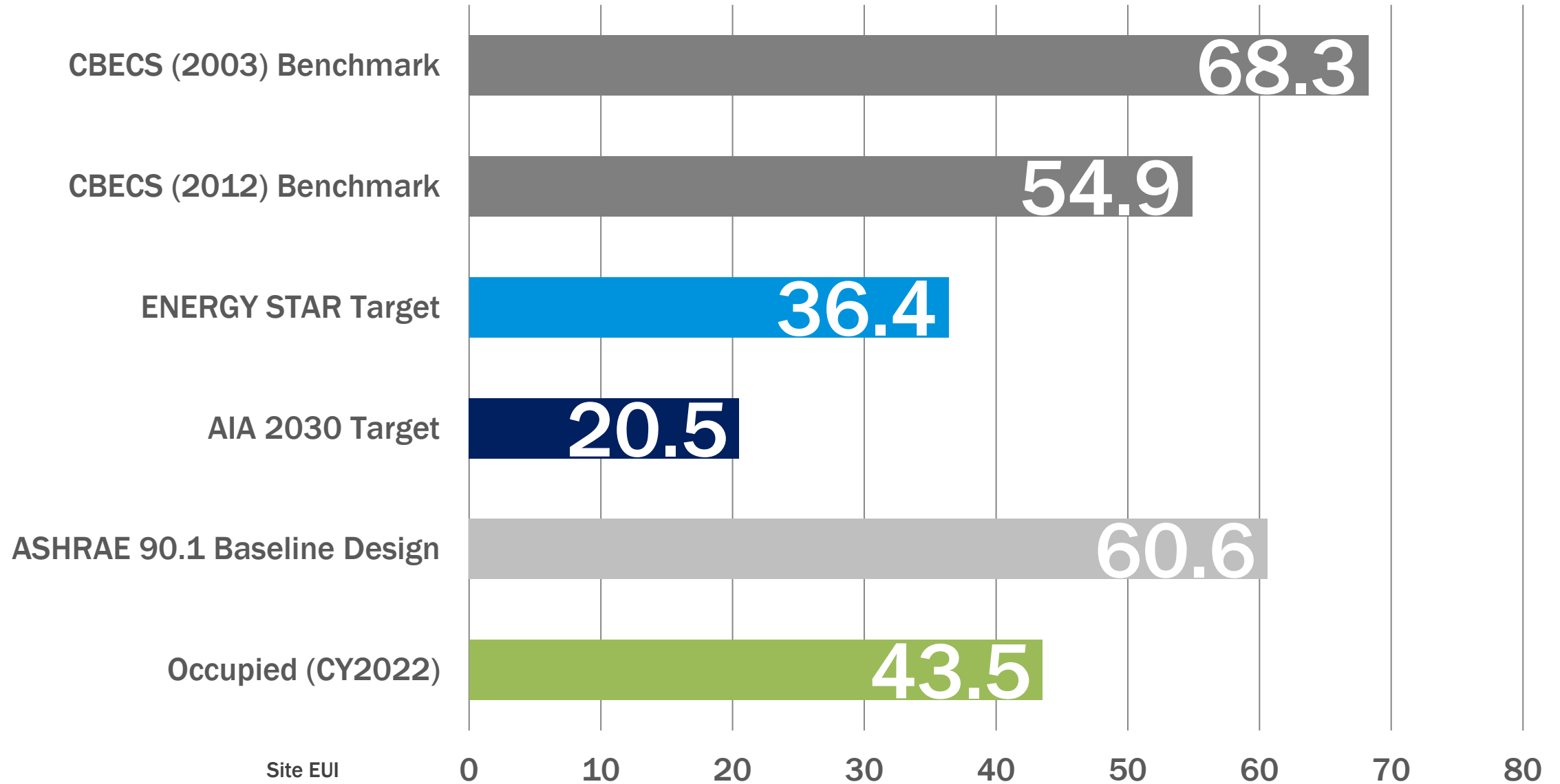
This building is so great, there is a bigger cafeteria, a bigger gym, I don't know what else this school would have.

I wish the stage was not in the lunch room. It just does not look good to my eyes.

The school is good and it gets the job done.

I hate the stairs.

# Energy Performance - School Only



# Patrick Henry K8 School and Rec Center

Update LEED Credit Documentation



SUSTAINABLE SITES



WATER EFFICIENCY



ENERGY & ATMOSPHERE



MATERIALS & RESOURCES



INDOOR ENVIRONMENTAL QUALITY



INNOVATION & DESIGN



REGIONAL PRIORITY



TOTAL = 57 points

Yes Maybe No

# Construction Phase Review – CREDITS ACHIEVED

## Sustainable Sites

- Construction Activity Pollution Prevention (p)
- Environmental Site Assessment (p)
- Site Selection
- Development Density/Community Connectivity
- Public Transportation Access
- Maximize Open Space
- Heat Island Effect (Roof + Nonroof)
- Joint Use of Facilities

## Water Efficiency

- Water Use Reduction (prerequisite)
- Water Efficient Landscaping

## Energy & Atmosphere

- Fundamental Commissioning (p)
- Minimum Energy Performance (prerequisite)
- Fundamental Refrigerant Management (prerequisite)
- Optimize Energy Performance
- Enhanced Commissioning

## Materials & Resources

- Storage and Collection of Recyclables (prerequisite)
- Construction Waste Management
- Recycled Content
- Regional Materials

## IEQ

- Minimum IAQ Performance (p)
- ETS Control (p)
- Minimum Acoustical Performance (p)
- IAQ Mgmt Plan during construction
- Low emitting materials
- Indoor Chemical & Pollutant Source Control
- Controllability of Systems (lighting + thermal)
- Thermal Comfort (design + verification)
- Views
- Mold Prevention

## Innovation/ RPCs

- Maximize Open Space (EP)
- Design for Active Occupants (IN)
- Regional Materials (EP)
- LEED Accredited Professional
- Optimize Energy Performance (RPC)

# Strategy Highlights



## LEED CREDIT AND ENERGY SAVINGS STRATEGIES

Patrick Henry K-8 School and Recreation Center

Updated on 2/14/2020

### ENERGY PERFORMANCE



- R-25 Continuous Roof Insulation
- Enhanced Thermal Envelope
- Low-e Glazing with U-factor of 0.37 and SHGC of 0.261
- Lighting Power Density of 0.94 W/sf
- High Efficiency Magnetic Bearing Water Cooled Chillers
- High Efficiency Natural Gas Boilers
- Enthalpy Energy Recovery Wheels
- VAV Static Pressure and Temperature Reset
- Efficient Site Lighting
- Enhanced Commissioning

### WATER CONSERVATION



- Low Flow (1.28 gpf) Toilets
- Pint-flush Urinals
- Metering Lavatories (0.25 gpc)

### SITE IMPROVEMENTS



- Public Transportation Access
- Open Space Maximized on Site (60%)
- Reduced Heat Island Effect (Roof and Non-Roof Surfaces)
- Share Auditorium, Gymnasium, Cafeteria, and Playing Fields with Community

### MATERIAL USE



- Construction Waste Recycling 93%
- Recycled Building Materials 26%
- Regional Sourcing of Materials 31%
- Infrastructure so Building Occupants can Easily Recycle

### INDOOR ENVIRONMENT



- Construction Indoor Air Quality Management Plan
- Low VOC Paints, Adhesives, Sealants, Composite Wood, and Flooring
- Views to Outdoors from 92.93% of All Regularly Occupied Spaces

### INNOVATION IN DESIGN



- Design for Active Occupants
- Exemplary Performance for Open Space
- Exemplary Performance for Regional Sourcing of Materials



low VOC



active occupants



view to outdoors



energy efficient lighting



gymnasium



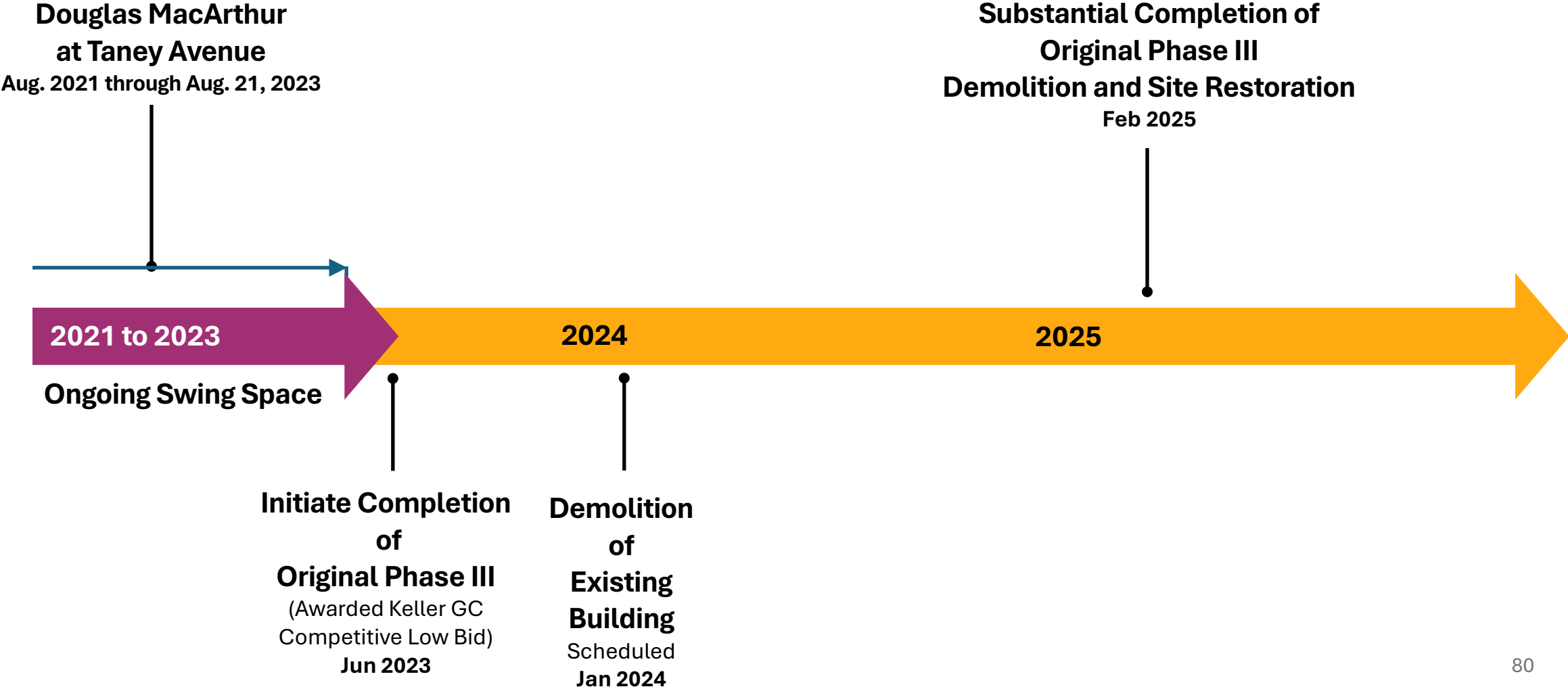
cafetorium  
(shared spaces)



black box theater

# Project Timeline

Conclusion of Swing Space use and Completion of Original Phase III





# RECREATION CENTER

6

5

3

2

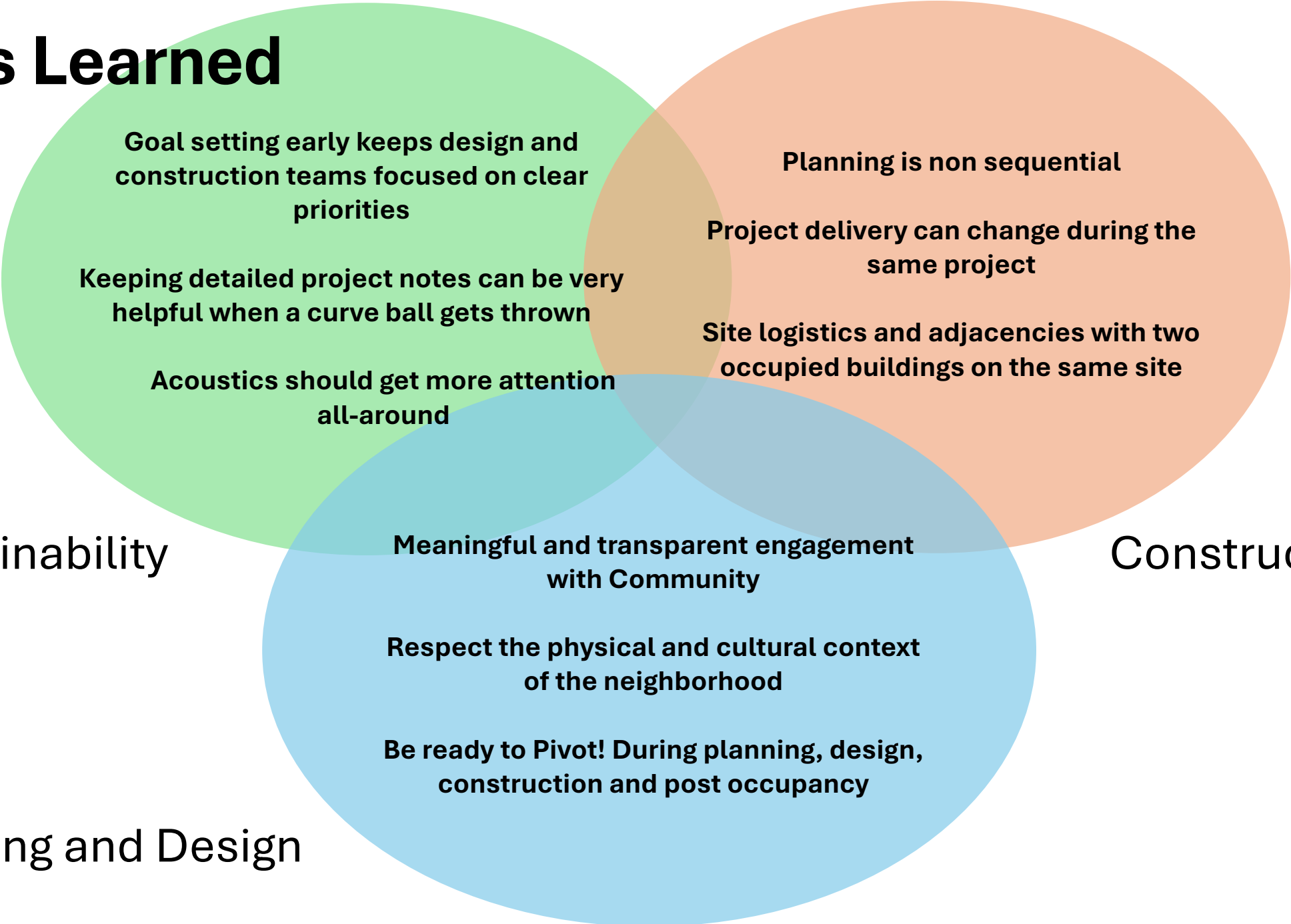
PARKING FOR SCHOOL & RECREATION FACILITY ONLY

PARKING FOR SCHOOL & RECREATION FACILITY ONLY

SAFE PLACE

SAFE PLACE

# Lessons Learned



Sustainability

Construction

Planning and Design

**THANK YOU!**



# MOSELEYARCHITECTS

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