



Capital Project Planning

BOARD OF EDUCATION MEETING

January 28, 2025





Agenda

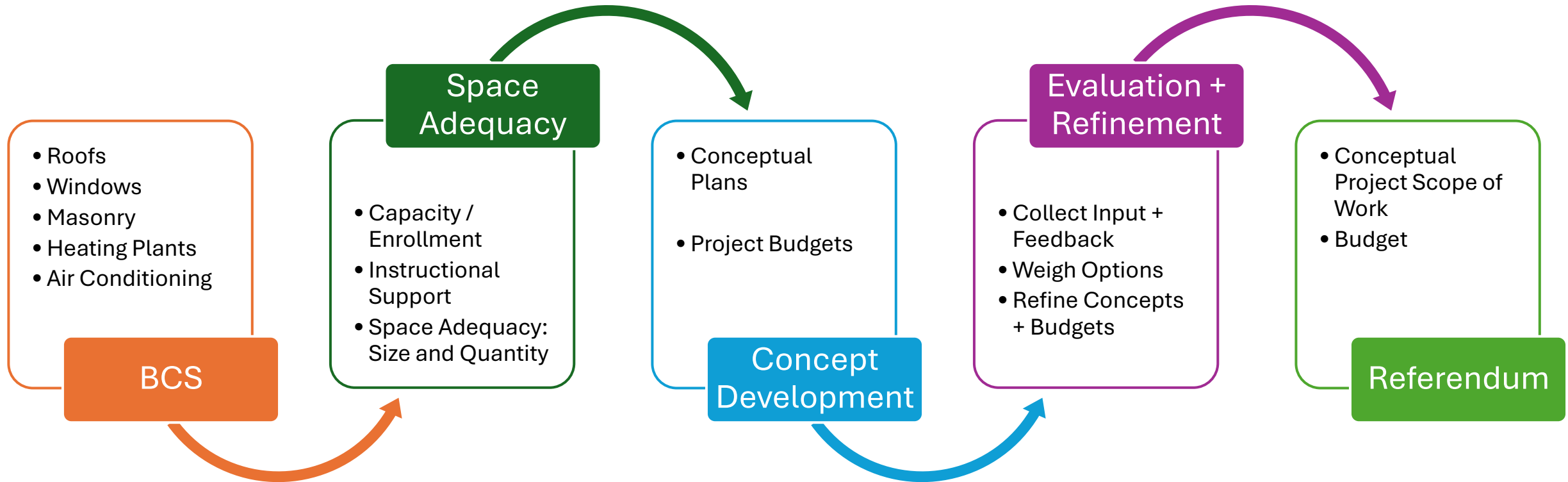
- Process Overview
- Work To-Date
- Stakeholder + Community Feedback
- Concept + Budget Updates
- Next Steps



HUTCHINSON
ELEMENTARY
SCHOOL



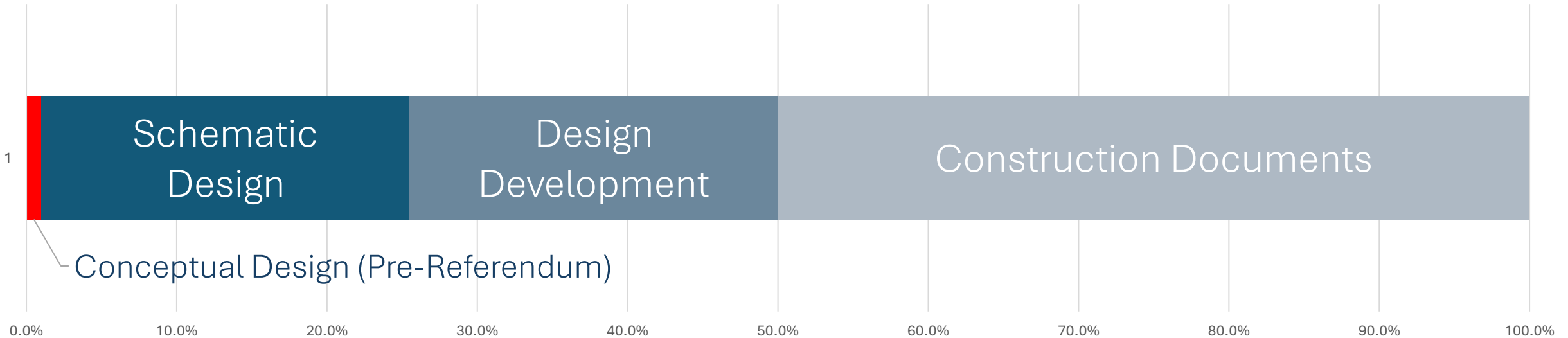
Capital Project Development Process





Design Phases

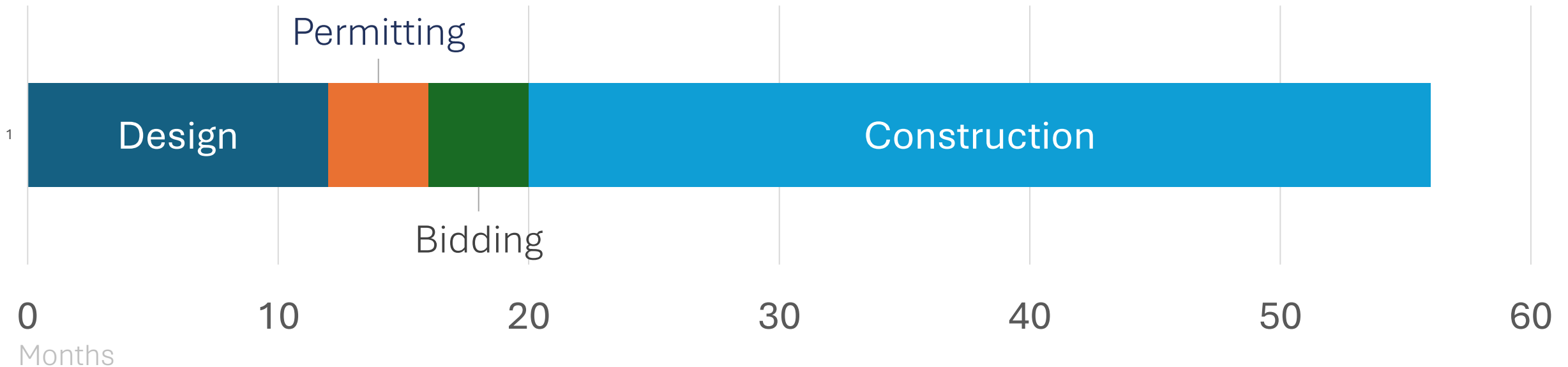
- Pre-Referendum Building Design is less than 1% of the total Design Process
- Significant Owner Engagement during Schematic Design + Design Development





Project Phases

- Design ~12 Months
- Construction ~36+ Months (TBD, pending scope of work)





Progress Since January 8th BOE Meeting

- Facilities Committee Meeting
- Gathered Feedback
- Quantified the Interaction of Various Elements (AC, Heating, Additions)
- Refined the Conceptual Options for Siwanoy Elementary School and Pelham Memorial High School + Middle School
- Refined Conceptual Project Budgets



Infrastructure Feedback

- ❖ Is there a potential **cost savings for overlap** of infrastructure, heating improvements, and air conditioning?
- ❖ Is there a way to provide **PMHS air conditioning for a lower cost**?
- ❖ Is geothermal heating and cooling a viable option for Pelham MS?
- ❖ What is the **estimated payback for geothermal** heating and cooling?
- ❖ What is the value of possible **Investment Tax Credit** incentives for geothermal?



Siwanoy ES Concept Feedback

- ❖ The **outdoor greenway and play space** is a critical feature of the school
- ❖ Parking on the campus is not the highest-best use of the property
- ❖ The **Outdoor Classroom** and **Micro-Forest** must remain
- ❖ The site design must be sensitive to the campus and neighborhood
- ❖ **The architecture of Siwanoy ES is significant to the neighborhood character**
- ❖ **Storm drainage** and management improvements are critical
- ❖ A new Cafeteria should accommodate 3 grades
- ❖ Please identify the location of **all major program spaces**



Pelham Memorial HS+MS Feedback

- ❖ The proposed Cafeteria could be considered as a **High School Commons**
- ❖ A new entry at the Annex is not a priority and displaces the loading dock
- ❖ The conceptual design must consider **MS + HS student flow through the Annex**
- ❖ The Science program is significantly under-served in room count and size
 - ❖ **Add 2-4 net new science labs**
- ❖ Locating the entire Science program (**12 Labs**) in the addition should be considered
- ❖ A **flat floor Physical Education** station is requested in the addition



PELHAM PUBLIC SCHOOLS

Project Budget Anatomy

Construction Costs (Referred to as 'hard' or 'direct')

What is paid to the Contractor(s)

Design Contingency (10%)

To cover additional project scope through the design phases

Construction Contingency (10%)

Additional construction costs incurred during construction

Escalation (4-6% per year)

Projected price increases over time

Project Costs (18%)

All non-brick and mortar expenses to include, design professionals, construction managers, testing services, abatement monitoring, etc.



Prioritized Infrastructure Work

	Roofing	Windows	Masonry	Heating Plant Replacements	Upgrade to Hydronic Heat	Infrastructure Subtotal
Colonial Elementary	\$165,000	\$1,320,000	\$175,000	\$2,920,000	\$2,500,000	\$7,080,000
Siwanoy Elementary	N/A	\$1,905,000	\$345,000	\$2,920,000	\$3,000,000	\$8,170,000
Prospect Hill Elementary	\$2,620,000	\$2,115,000	\$345,000	\$3,175,000	\$3,500,000	\$11,755,000
Hutchinson Elementary	N/A	N/A	N/A	N/A	N/A	N/A
Pelham Middle School	\$2,355,000	N/A	\$390,000	N/A	N/A	\$2,745,000
Pelham High School	\$3,405,000	\$5,725,000	\$605,000	\$4,290,000	\$10,500,000	\$24,525,000
Total	\$8,545,000	\$11,065,000	\$1,860,000	\$13,305,000	\$19,500,000	\$54,275,000



Air Conditioning

Add Air Conditioning to All Spaces, to include ventilation upgrades to support air conditioning. The Air Conditioning estimates assume upgrade to hydronic heating.

Colonial Elementary	\$5,600,000
Siwanoy Elementary	\$4,300,000
Prospect Hill Elementary	\$4,500,000
<u>Pelham Memorial High School</u>	<u>\$15,500,000</u>
Total	\$29,900,000





Ground Source Heat Pump (Geothermal)

Estimated costs per well have been increased based on recent bids

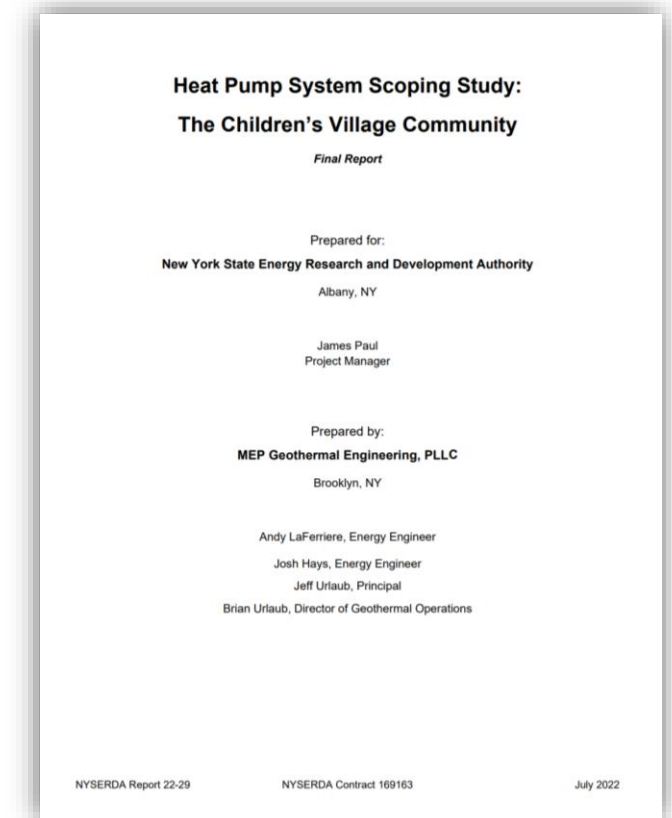
Colonial Elementary	N/A (Site Constraints)
Siwanoy Elementary	\$2,500,000
Prospect Hill Elementary	\$2,000,000
<u>Pelham Memorial High School</u>	<u>\$7,500,000</u>
Total	\$12,000,000





Ground Source Heat Pump **Payback**

- ❖ Institutional systems have longer payback period than residential systems
- ❖ **NYSERDA** has commissioned and published numerous studies, including a recent study for **The Children's Village Community** in Dobbs Ferry
- ❖ Present Value Costs of GSHP is estimated 10% higher than a traditional (baseline) system for the first 25 years. After 25 years, GSHP has significant savings
- ❖ Present Value of GSHP is significantly less if considering Social Cost of Carbon





Children’s Village Case Study

Table 11. 25-Year Life-Cycle Cost Comparison

Option:	25-Year Present Value		Comparison	
	Baseline System	Geothermal System	Dollar Difference	% Difference
Electric Utility Cost	\$11,900,000	\$12,960,000	+\$1,060,000	+9%
Fuel Oil Utility Cost	\$11,800,000	\$0	\$11,800,000	100.0%
Maintenance Costs	\$11,770,000	\$7,870,000	\$3,900,000	33%
Upfront Construction Cost	\$0	\$23,320,370	+\$23,320,370	+100%
25 Years of Replacement Costs of Equipment	\$5,720,000	\$1,430,000	\$4,290,000	75%
25 Year Life-Cycle Cost	\$41,190,000	\$45,580,370	+\$4,390,370	+10.6%

Heat Pump System Scoping Study, The Children’s Village Community, Prepared for NYSERDA, Prepared by MEP Geothermal Engineering, PLLC, July 2022



Children’s Village Case Study

Table 12. 25-year Life-Cycle Cost Comparison, Including Incentives and Cost of Carbon

Option:	25-Year Present Value		Comparison	
	Baseline System	Geothermal System	Amount Difference	% Difference
Electric Utility Cost	\$11,900,000	\$12,960,000	+\$1,060,000	+9%
Fuel Oil Utility Cost	\$11,800,000	\$0	\$11,800,000	100.0%
Maintenance Costs	\$11,770,000	\$7,870,000	\$3,900,000	33%
Upfront Construction After Rebates & Grants	\$0	\$14,420,370	+\$14,420,370	+100%
25 Years of Replacement Costs of Equipment	\$5,720,000	\$1,430,000	\$4,290,000	75%
Social Cost of Carbon	\$6,360,000	\$1,200,000	\$4,800,000	80%
25-Year Life-Cycle Cost	\$47,550,000	\$37,880,370	\$9,670,370	20.3%
25-Year Carbon Emissions	83,200 MTCO_{2e}	12,400 MTCO_{2e}	70,800 MTCO_{2e}	85%

Heat Pump System Scoping Study, The Children’s Village Community, Prepared for NYSERDA, Prepared by MEP Geothermal Engineering, PLLC, July 2022



Siwanoy Elementary

Concept 'B': *Addition + Renovation*

Option B: *ADA Accessibility, Cafeteria and Classroom Addition, Renovation*

Option B(-): *ADA Accessibility, Classroom Addition (**No Cafe**), Renovation*

Concept 'C': *Addition + Remove 'Wings' + Renovation*

Option C: *Remove 'New' Wings. New Addition (**Gym Rear**). Renovation.*

Option C1: *Remove 'New' Wings. New Addition (**Gym Front**). Renovation.*



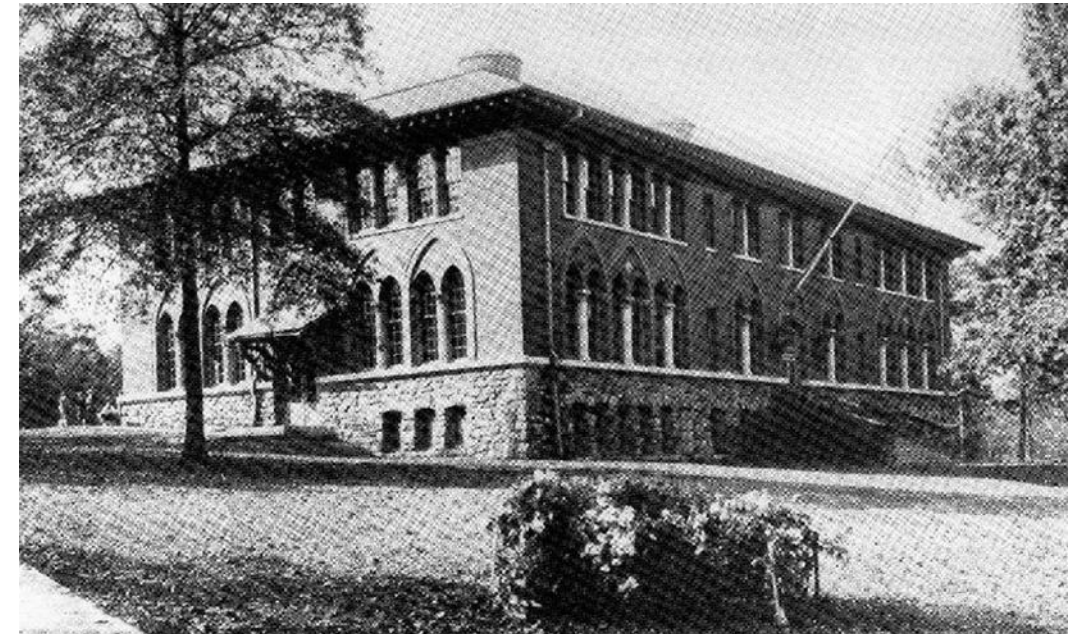
Siwanoy Elementary

An August 11, 1908 BOE Resolution authorized the expenditure of \$70,000 for a new school (\$20,000 for land \$50,000 for the building).

*The architecture firm **York and Sawyer** was commissioned to design the original building (1910) and subsequent additions (wings). York and Sawyers notable work includes:*

- *New York Historical Society*
- *Federal Reserve Bank of New York*
- *US Department of Commerce, Washington DC*
- *American Security & Trust Building, Washington DC*
- *New England Hall, Vassar College*
- *Herbert C. Hoover Building, Washington DC*

Sources: Wikipedia, Historic Pelham, The New York Times



New York Historical Society

New York City Designated Landmark

Construction: 1908

Architect: York and Sawyer



Siwanoy Elementary

Existing Site

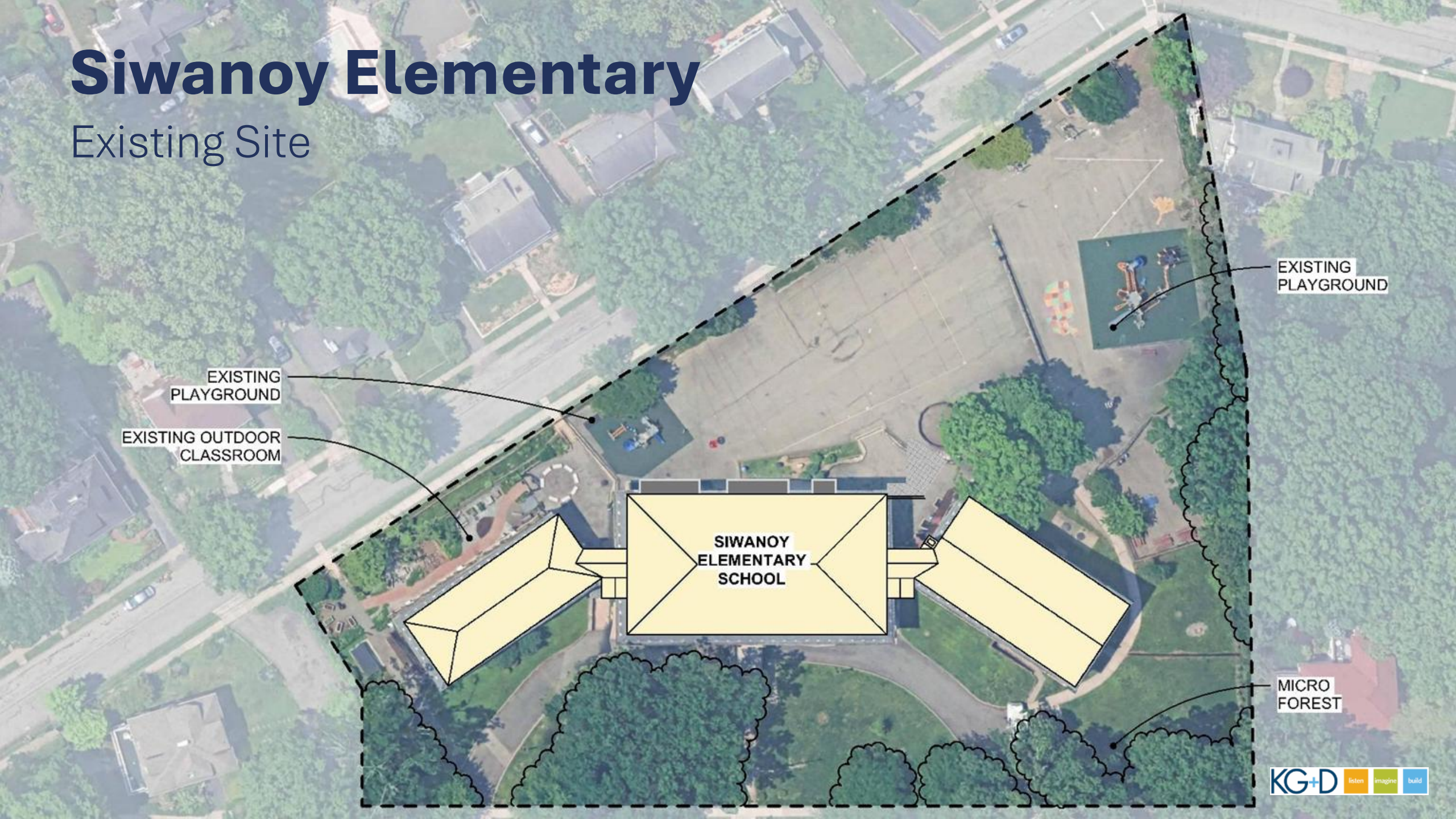
EXISTING
PLAYGROUND

EXISTING
OUTDOOR
CLASSROOM

SIWANoy
ELEMENTARY
SCHOOL

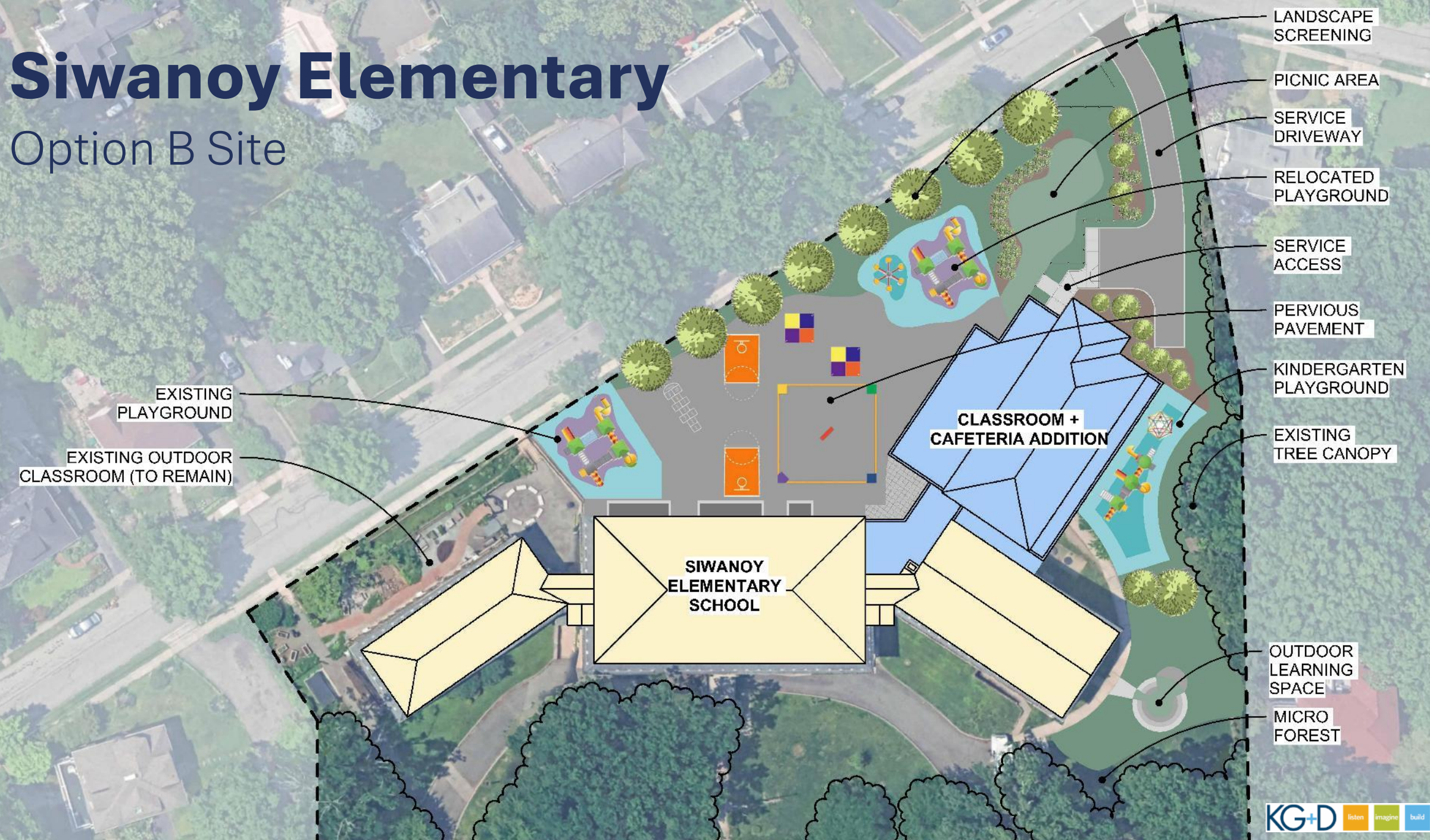
EXISTING
PLAYGROUND

MICRO
FOREST



Siwanoy Elementary

Option B Site



EXISTING PLAYGROUND

EXISTING OUTDOOR CLASSROOM (TO REMAIN)

SIWANoy
ELEMENTARY
SCHOOL

CLASSROOM +
CAFETERIA ADDITION

LANDSCAPE
SCREENING

PICNIC AREA

SERVICE
DRIVEWAY

RELOCATED
PLAYGROUND

SERVICE
ACCESS

PERVIOUS
PAVEMENT

KINDERGARTEN
PLAYGROUND

EXISTING
TREE CANOPY

OUTDOOR
LEARNING
SPACE

MICRO
FOREST

LEGEND

- CIRCULATION
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



B



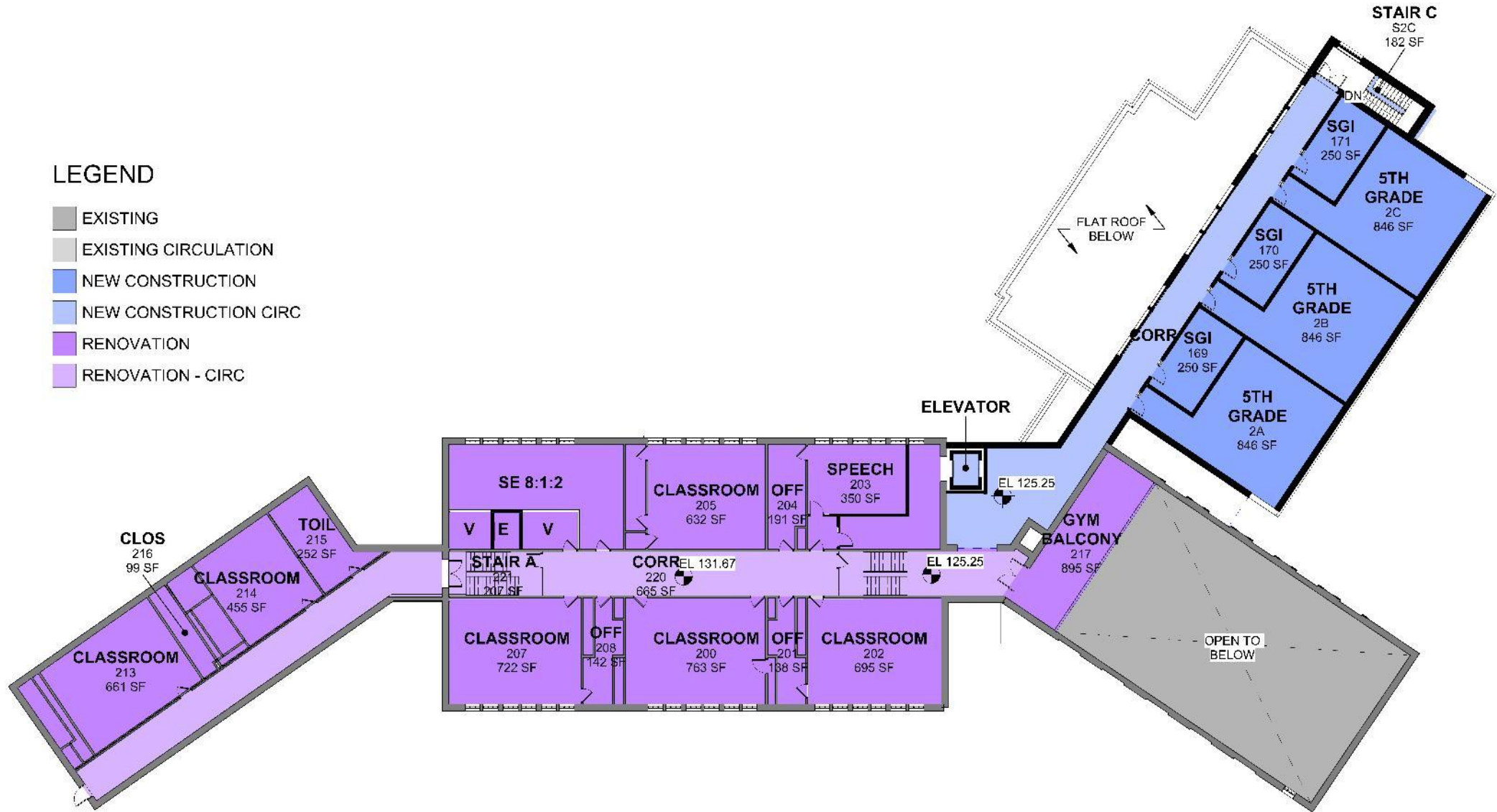
Kaeyer, Garment + Davidson Architects, PC
 285 Main Street, Mount Kisco, New York 10549
 914.666.5900 kgdarchitects.com

SIWANOY ADDITION & ALTERATION PELHAM UFSD

FIRST FLOOR PLAN

LEGEND

- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



B



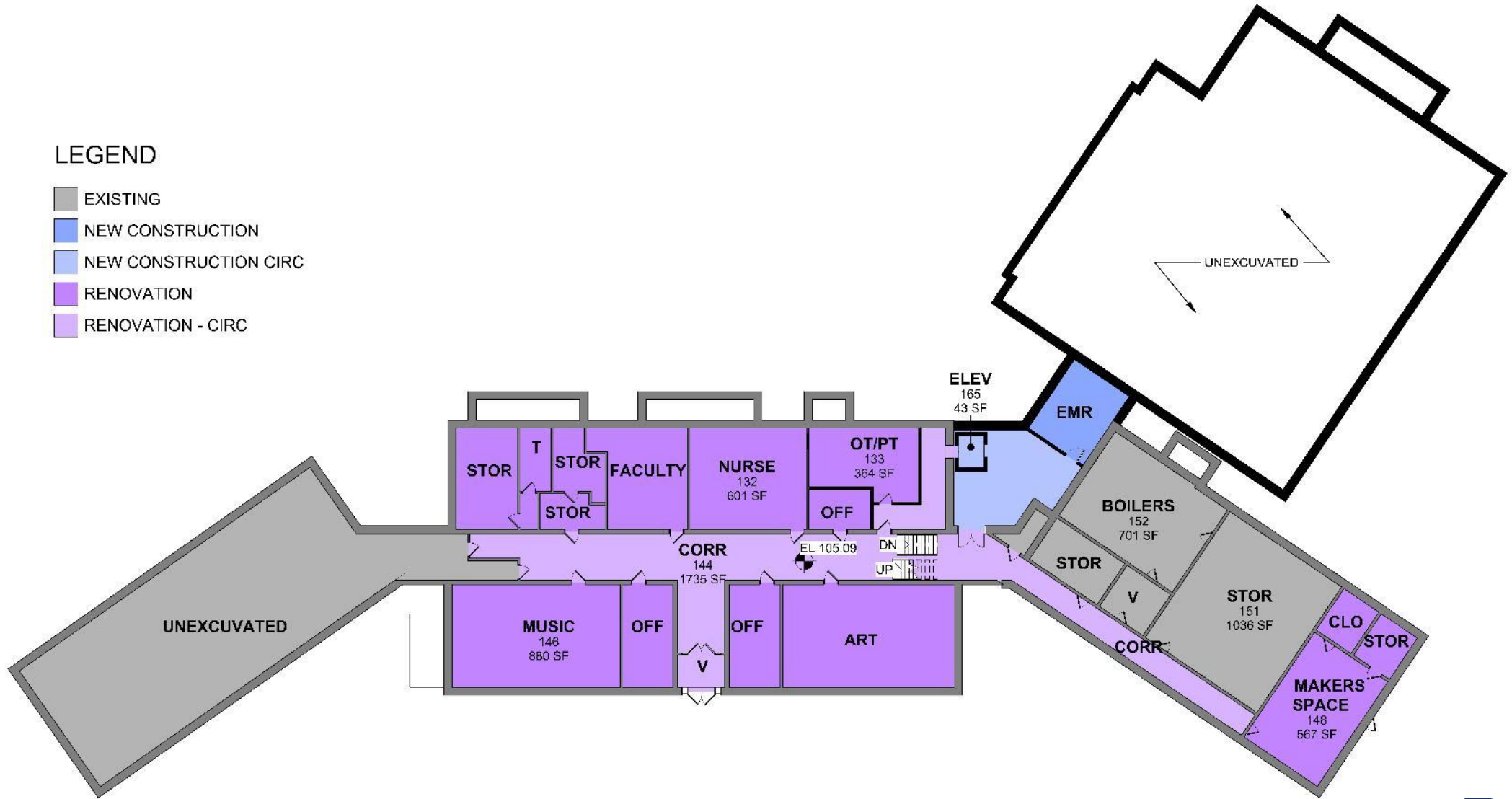
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 914.666.5900 kgdarchitects.com

**SIWANOID ADDITION & ALTERATION
 PELHAM UFSD**

SECOND FLOOR PLAN

LEGEND

- EXISTING
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



Kaeyer, Garment + Davidson Architects, PC
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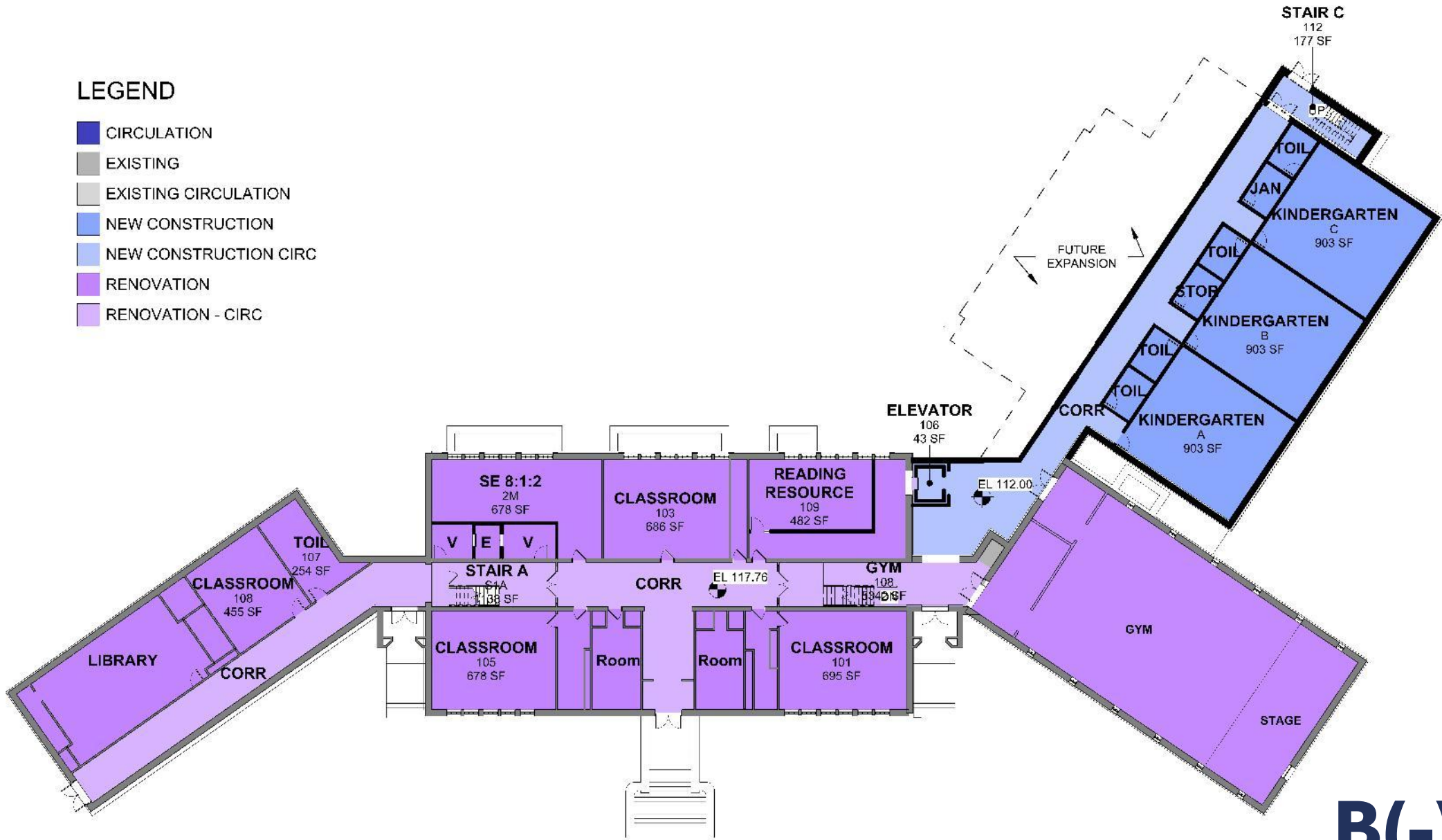
SIWANOID ADDITION & ALTERATION PELHAM UFSD

B

BASEMENT PLAN

LEGEND

- CIRCULATION
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



B(-)



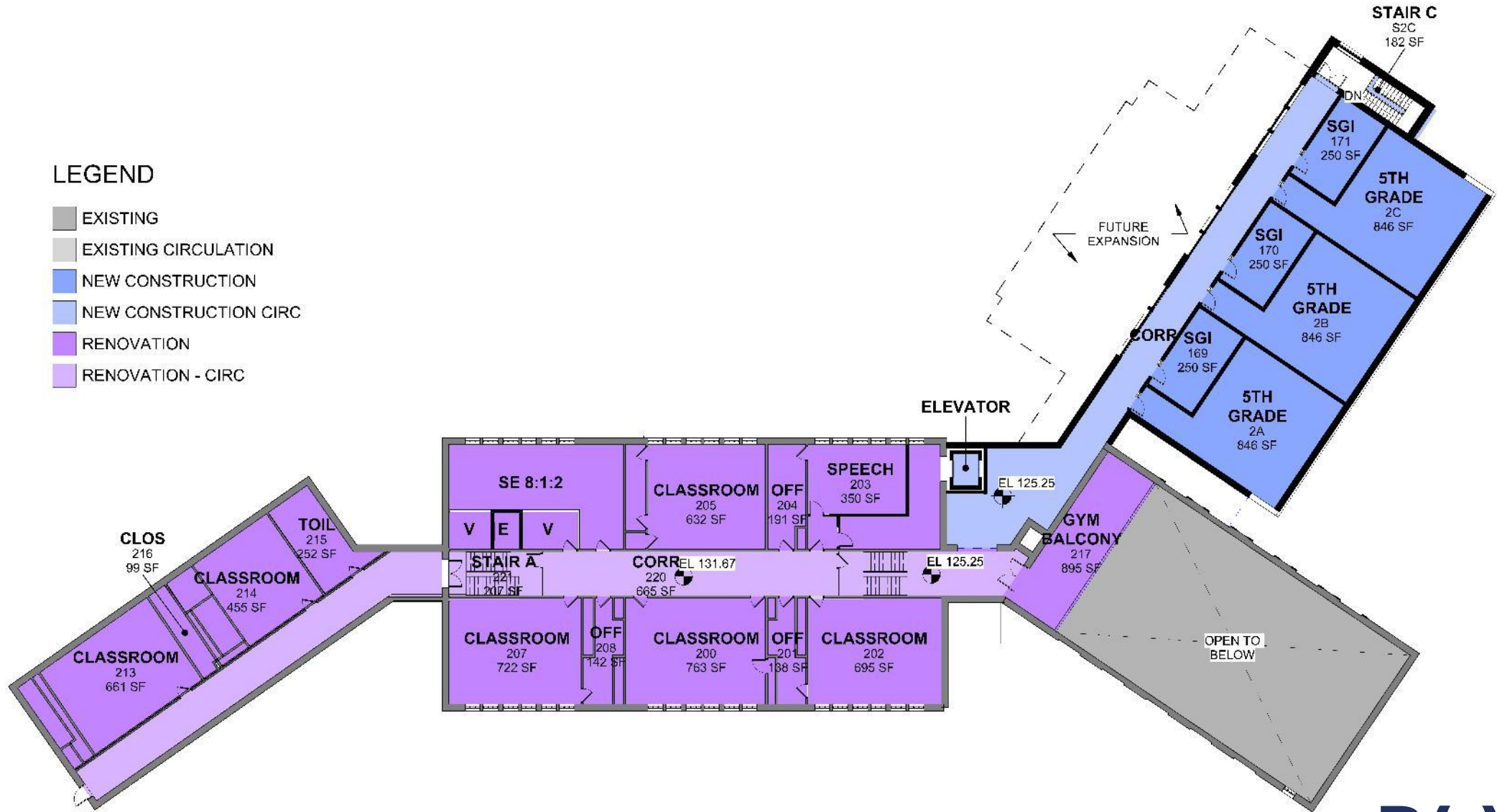
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**SIWANOY ADDITION & ALTERATION
 PELHAM UFSD**

FIRST FLOOR PLAN

LEGEND

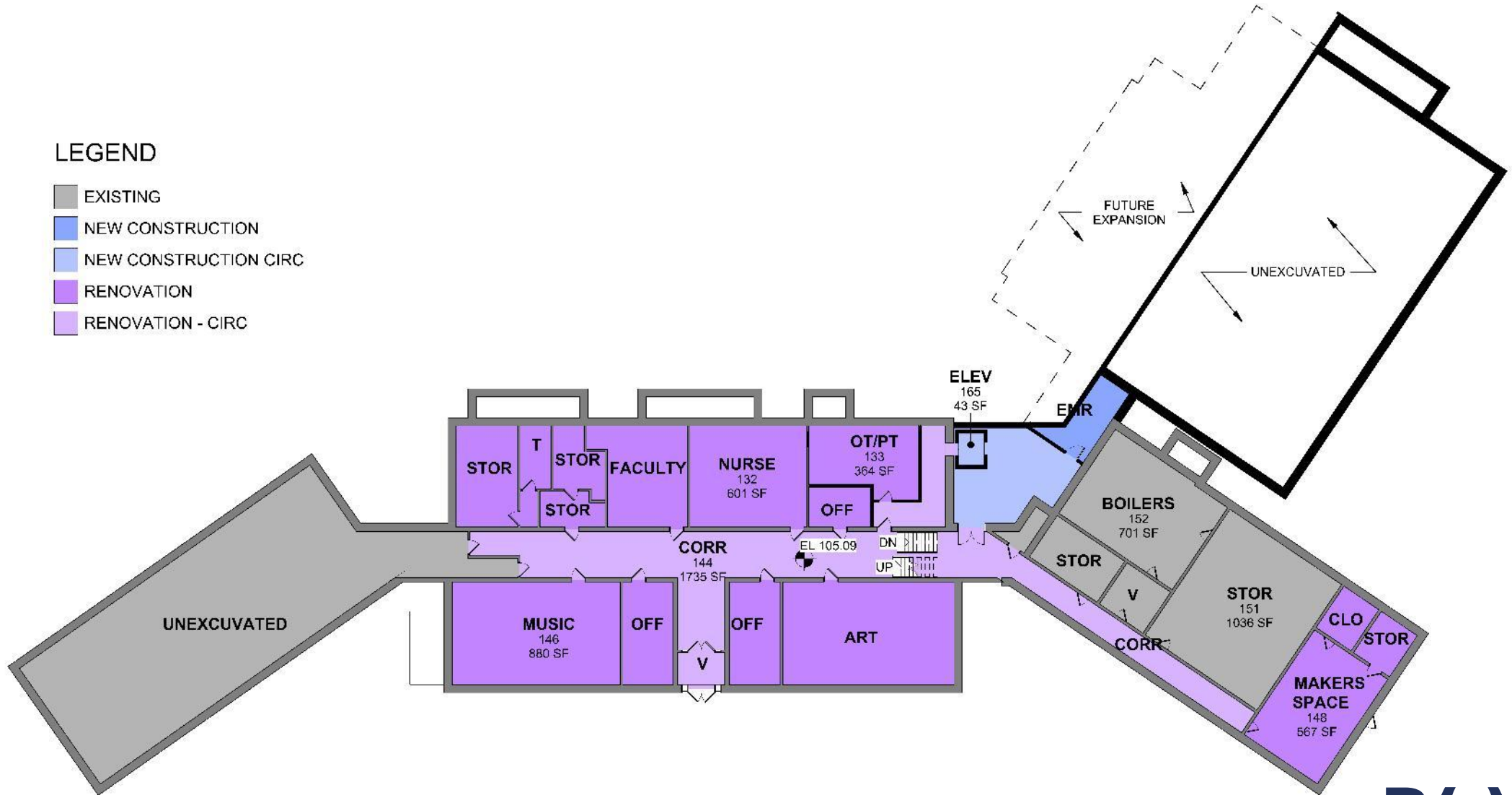
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



B(-)

LEGEND

- EXISTING
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



B(-)



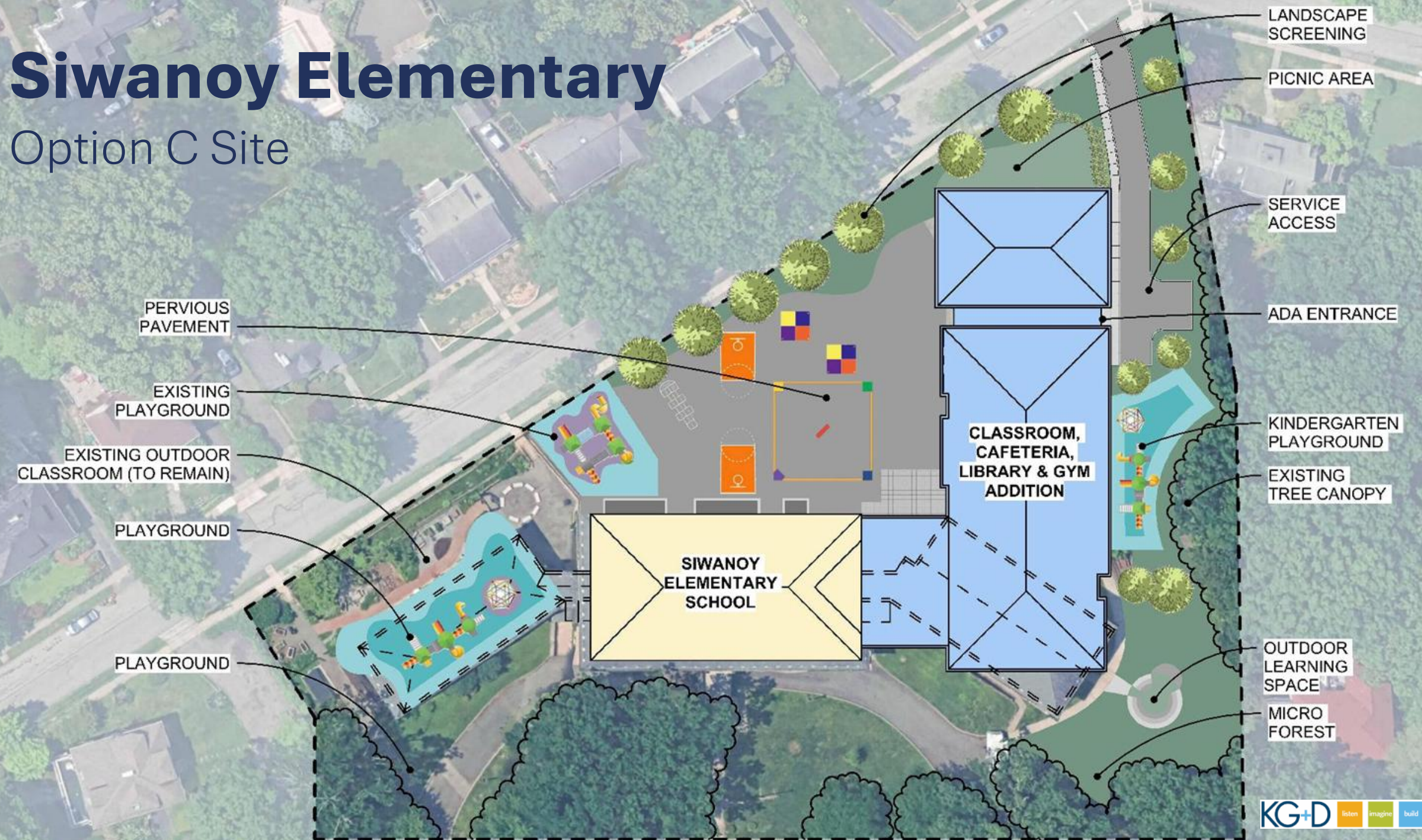
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SIWANoy ADDITION & ALTERATION
PELHAM UFSD

BASEMENT PLAN

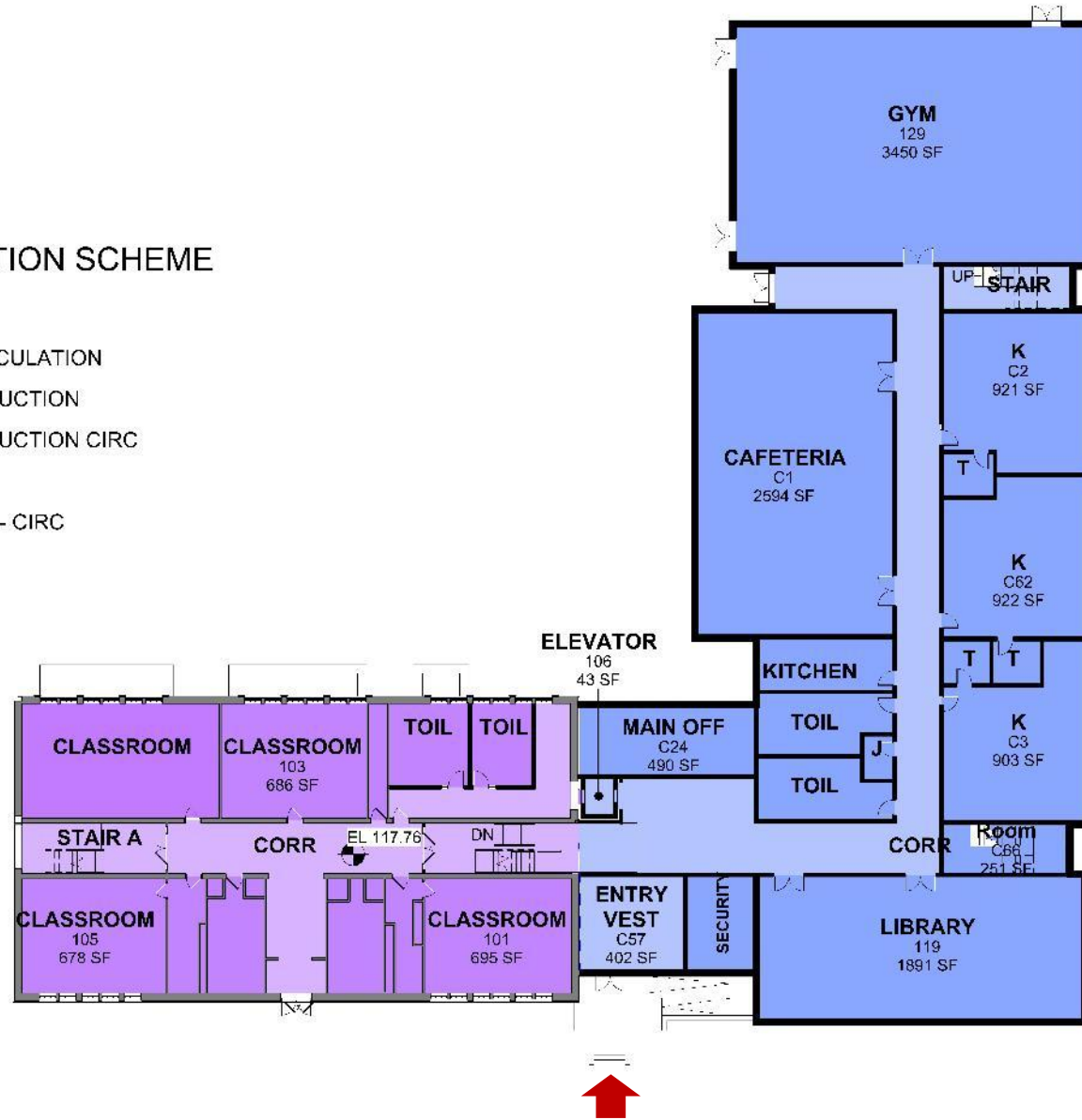
Siwanoy Elementary

Option C Site



PRESENTATION SCHEME

- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



C



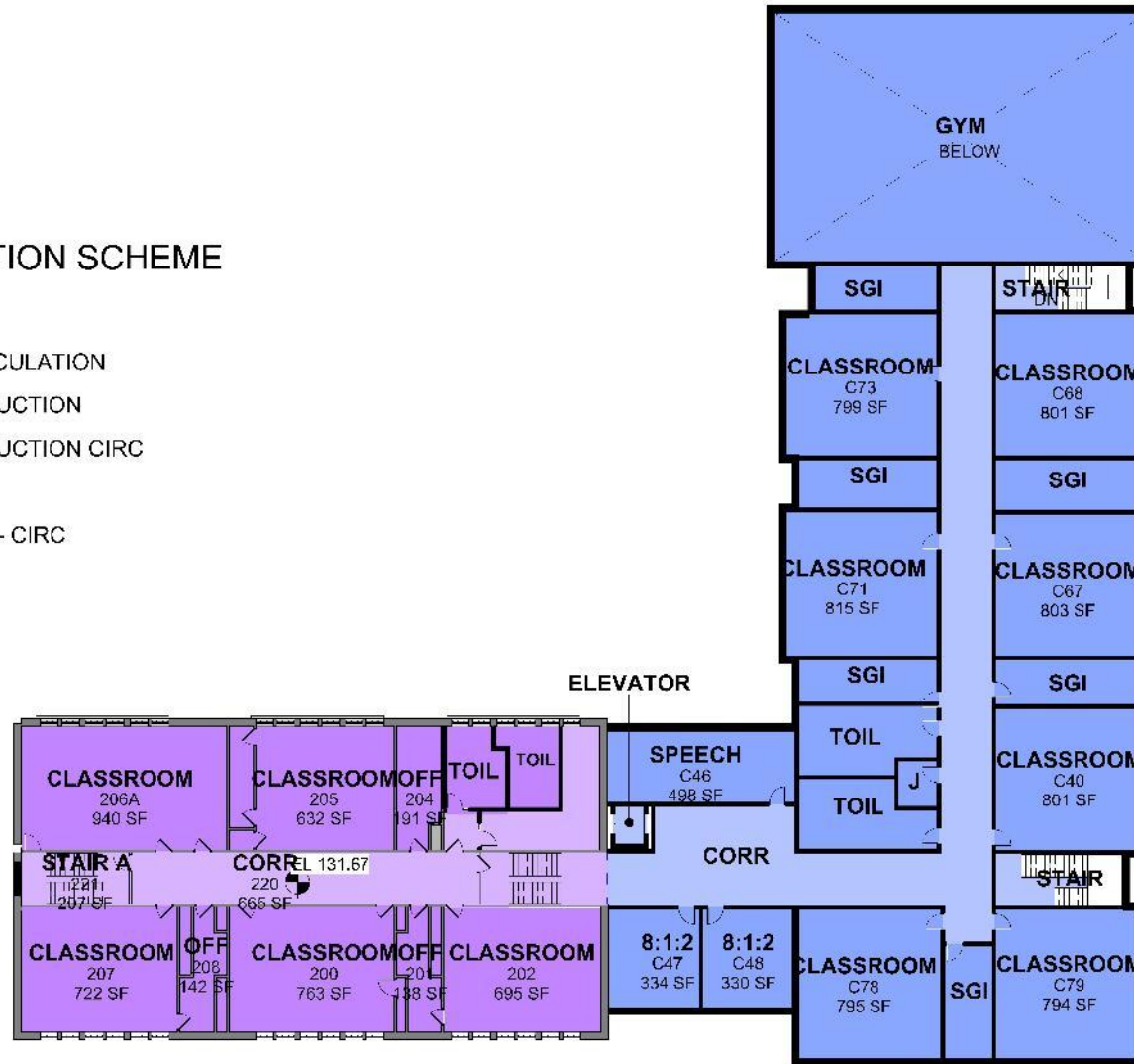
Kaeyer, Garment + Davidson Architects, PC
 285 Main Street, Mount Kisco, New York 10549
 914.666.5900 kgdarchitects.com

SIWANOY ADDITION & ALTERATION
 PELHAM UFSD

OPTION C - FIRST FLOOR PLAN

PRESENTATION SCHEME

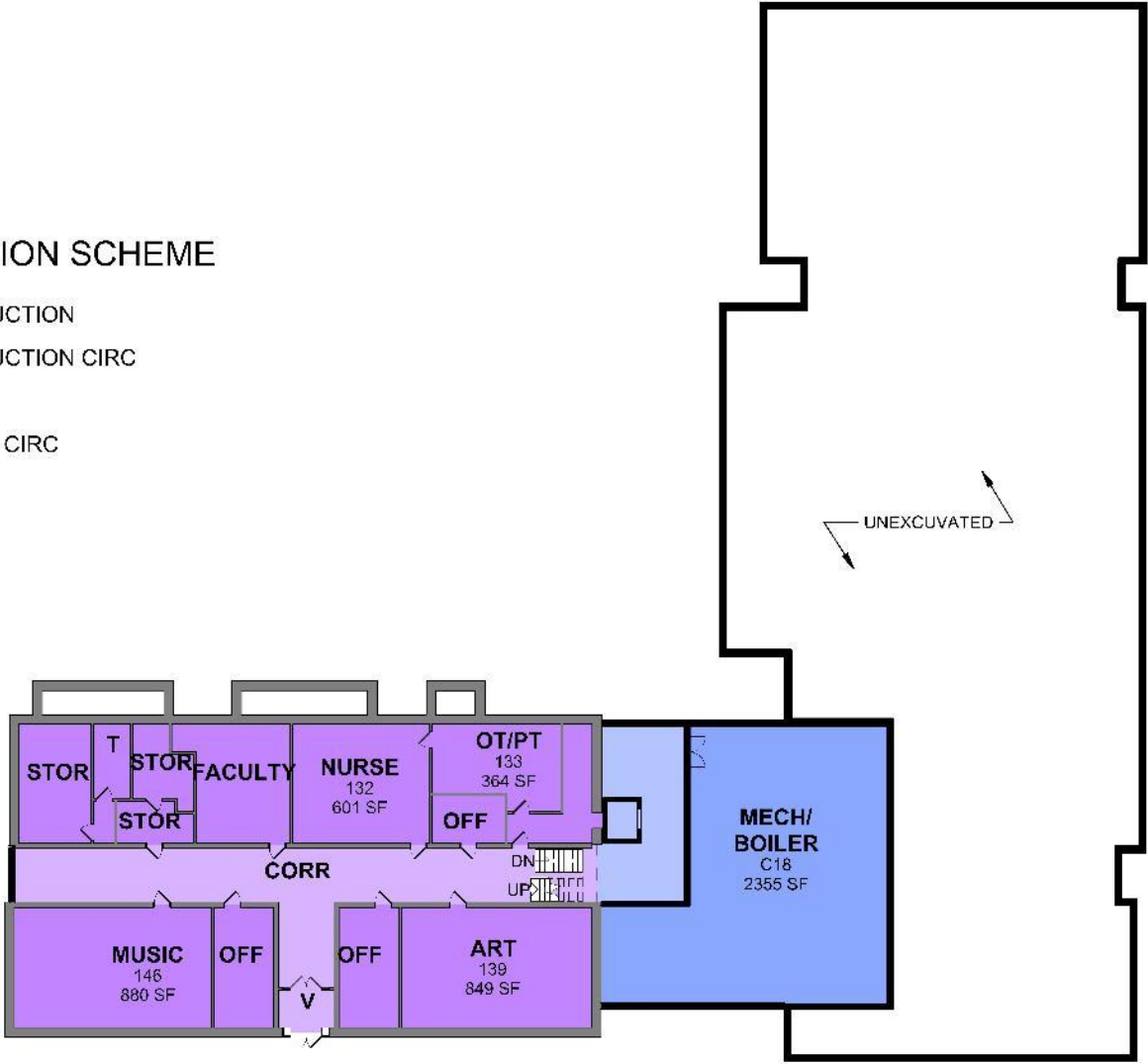
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



C

PRESENTATION SCHEME

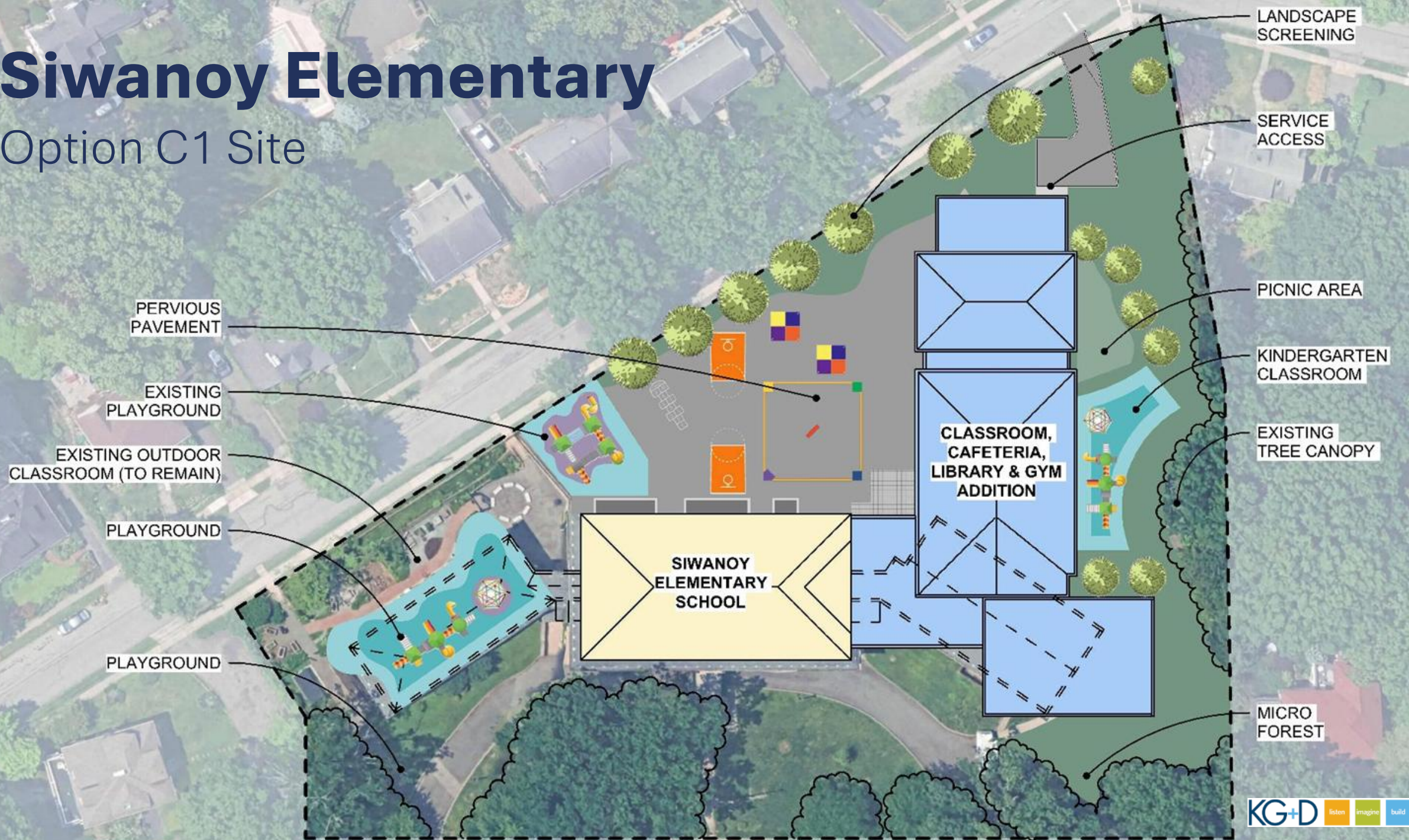
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



C

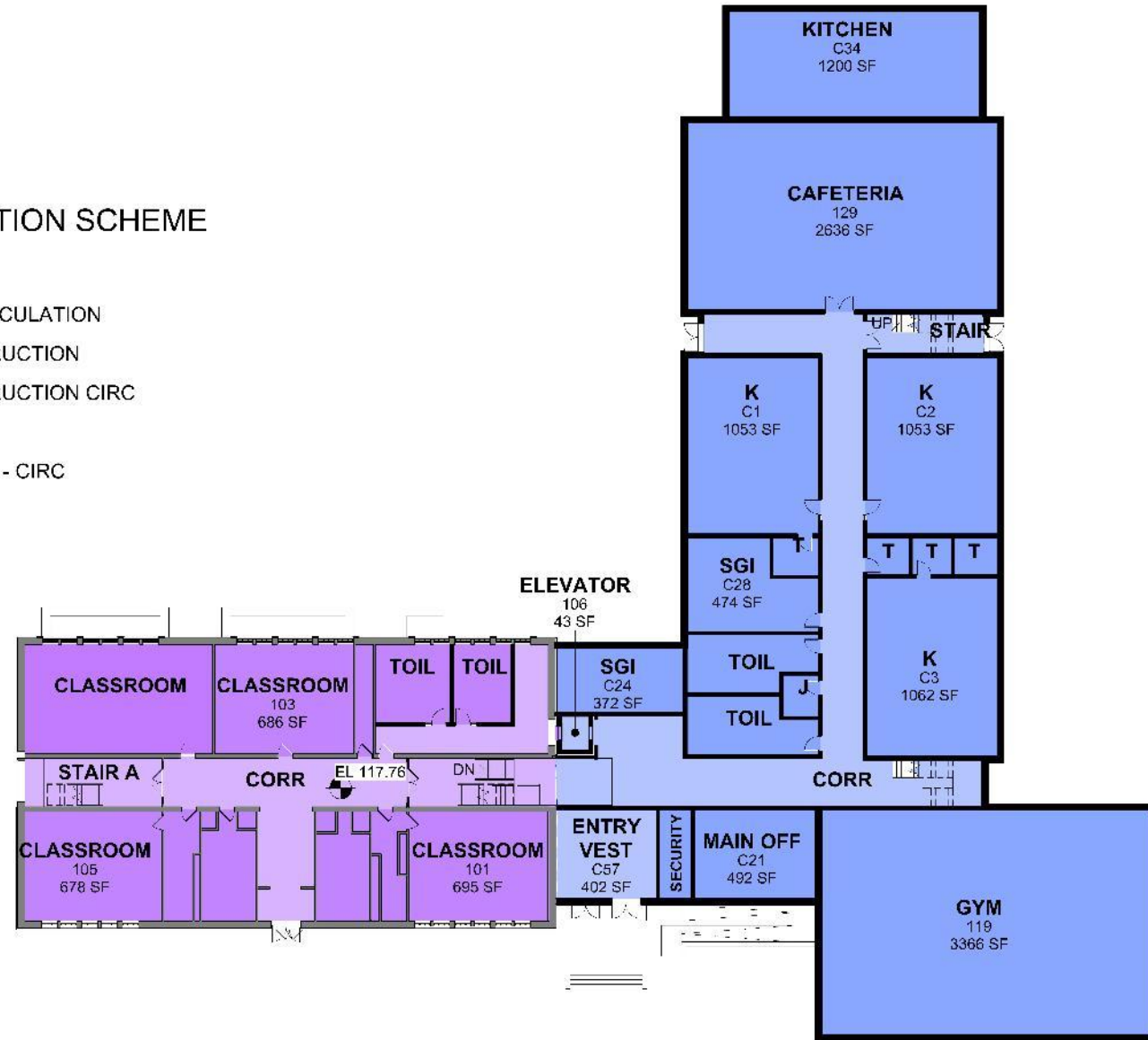
Siwanoy Elementary

Option C1 Site



PRESENTATION SCHEME

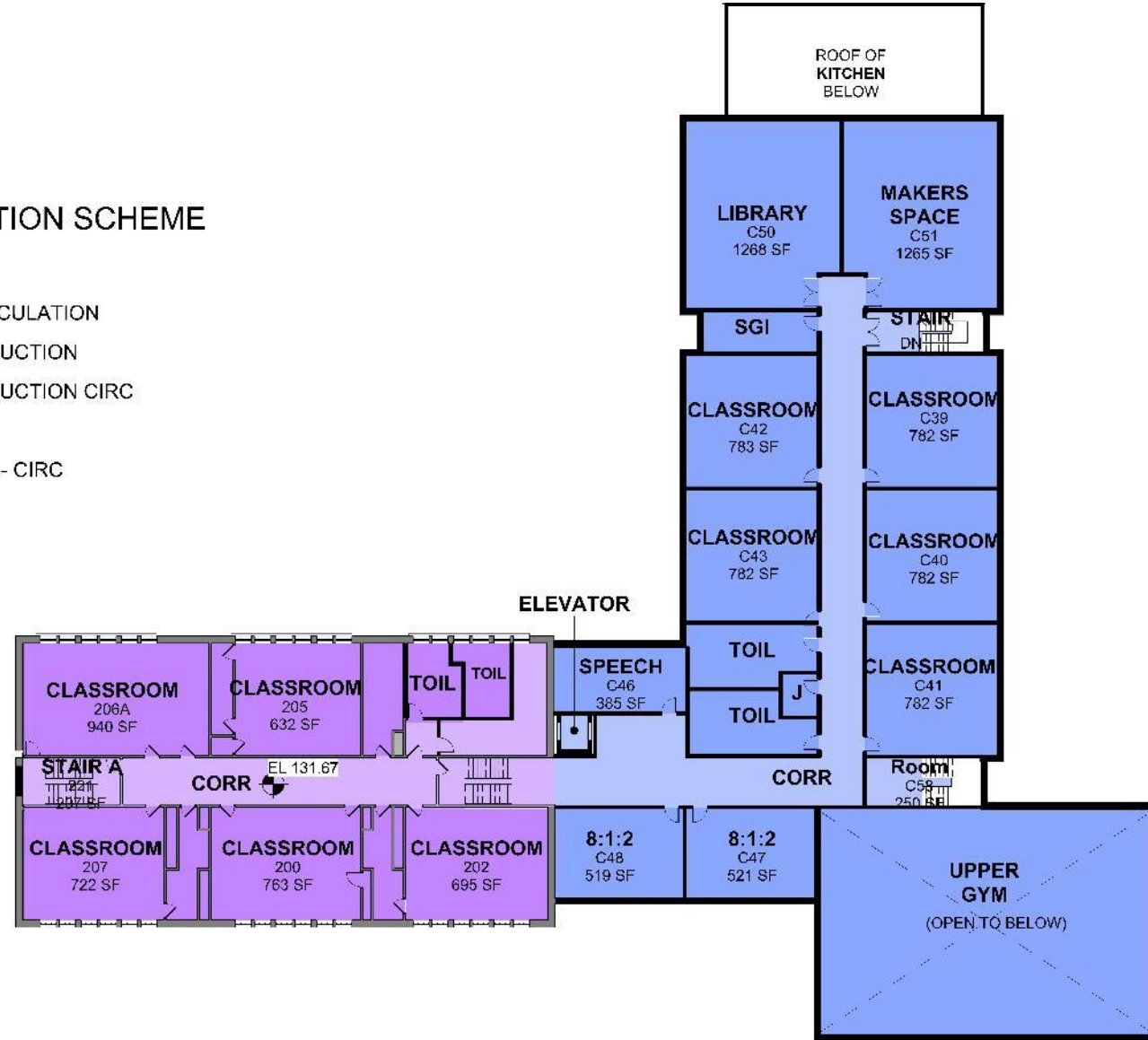
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



C1

PRESENTATION SCHEME

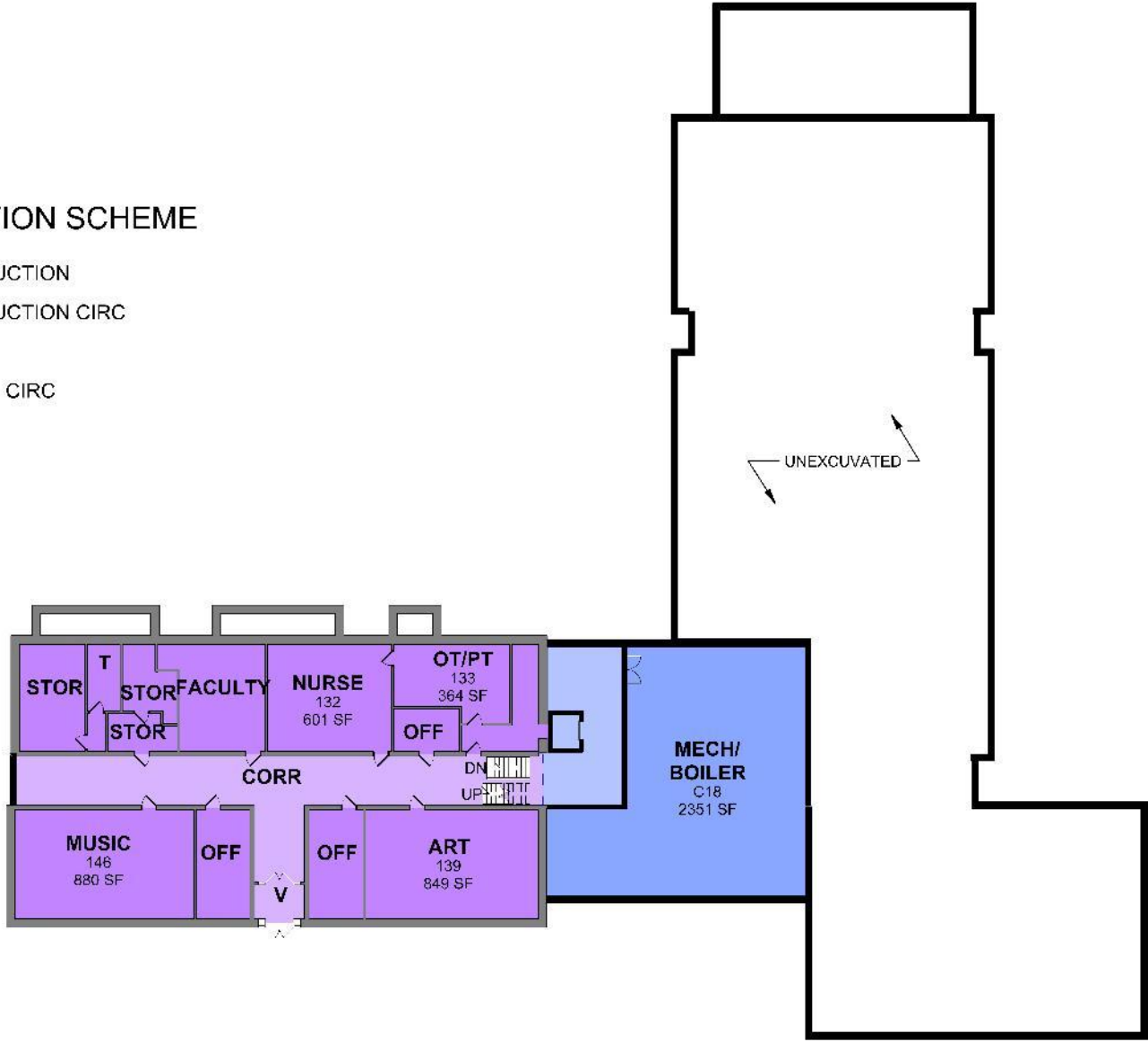
- EXISTING
- EXISTING CIRCULATION
- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC



C1

PRESENTATION SCHEME

- NEW CONSTRUCTION
- NEW CONSTRUCTION CIRC
- RENOVATION
- RENOVATION - CIRC

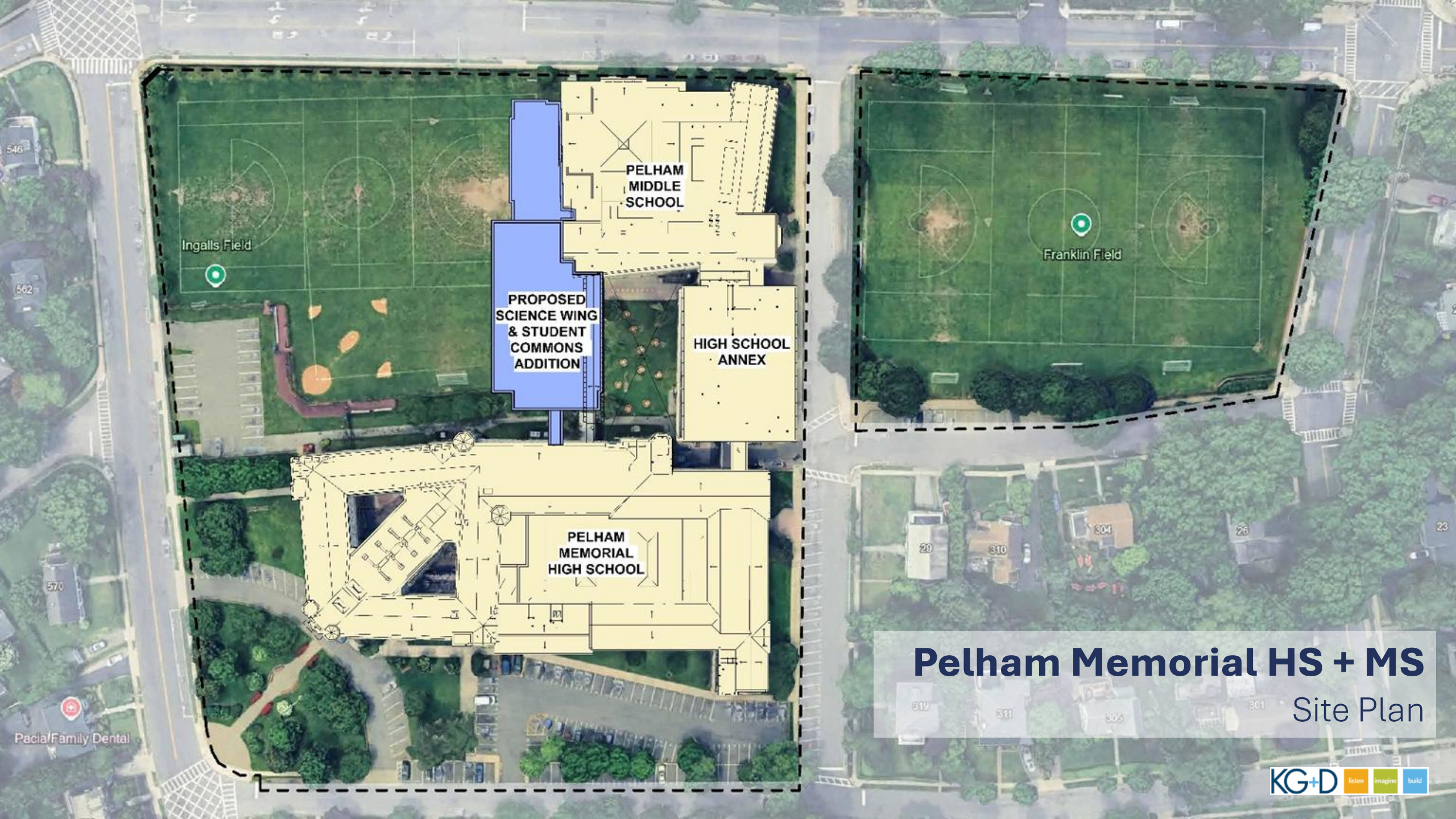


C1



Siwanoy Elementary

Option B:	<i>ADA Accessibility, Cafeteria and Classroom Addition, Renovation</i>	\$29,900,000
Option B(-):	<i>ADA Accessibility, Classroom Addition (No Cafe), Renovation</i>	\$28,250,000
Option C:	<i>Remove 'New' Wings. New Addition (Gym Rear). Renovation.</i>	\$39,950,000
Option C1:	<i>Remove 'New' Wings. New Addition (Gym Front). Renovation.</i>	\$40,300,000



Ingalls Field

PELHAM
MIDDLE
SCHOOL

PROPOSED
SCIENCE WING
& STUDENT
COMMONS
ADDITION

HIGH SCHOOL
ANNEX

PELHAM
MEMORIAL
HIGH SCHOOL

Franklin Field

Pelham Memorial HS + MS

Site Plan

Pacia/Family Dental



Pelham Memorial High School

Option A: *HS Commons + 8 Science Labs + 4 Classrooms*

Option B: *HS Commons + 6 Science Labs + 2 Classrooms*

Option C: *HS Commons + 10 Science Labs*

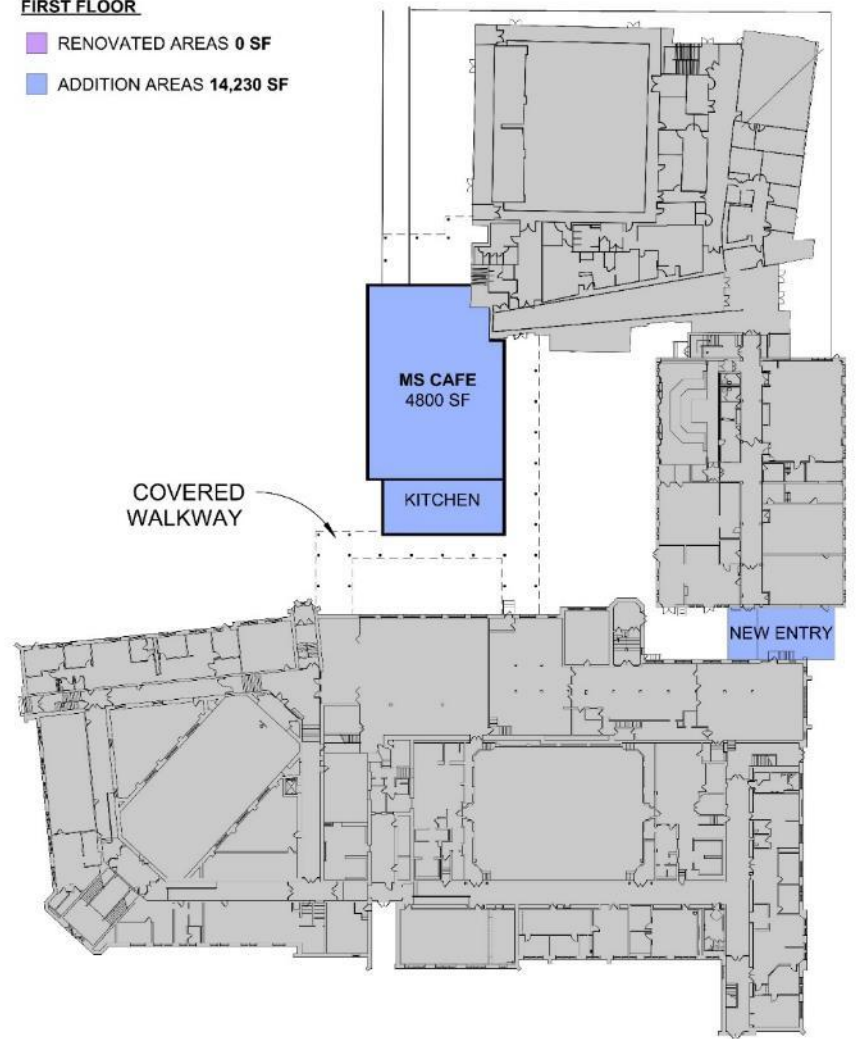
Option C1: *HS Commons + 10 Science Labs + 3 Classrooms+ PE Space + STEM Lab*

Option D: *HS Commons + 12 Science Labs*

Option D1: *HS Commons + 12 Science Labs + 1 Classrooms+ PE Space + STEM Lab*

FIRST FLOOR

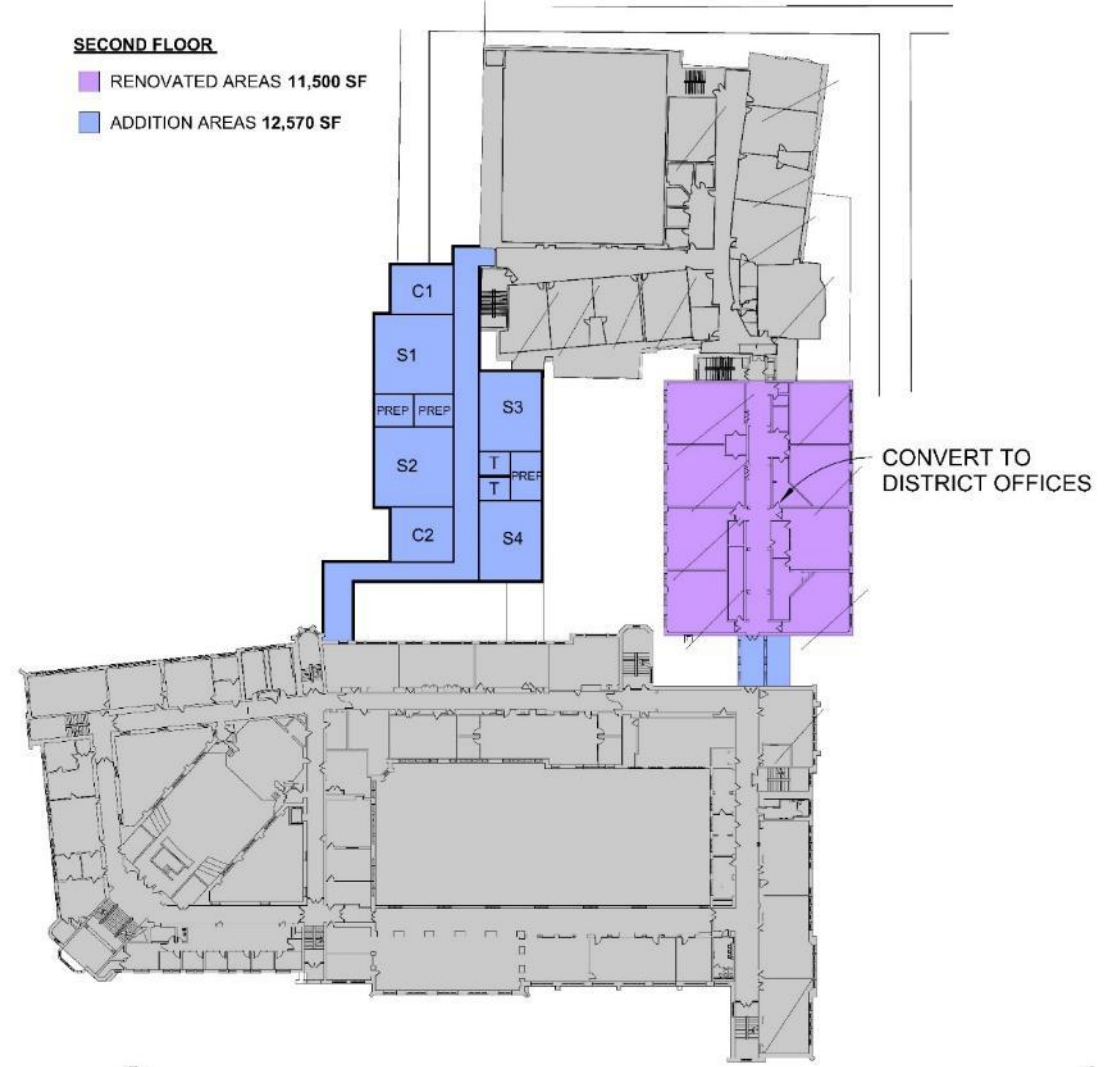
- RENOVATED AREAS 0 SF
- ADDITION AREAS 14,230 SF



FIRST FLOOR PLAN
SCALE 1/64"= 1'

SECOND FLOOR

- RENOVATED AREAS 11,500 SF
- ADDITION AREAS 12,570 SF



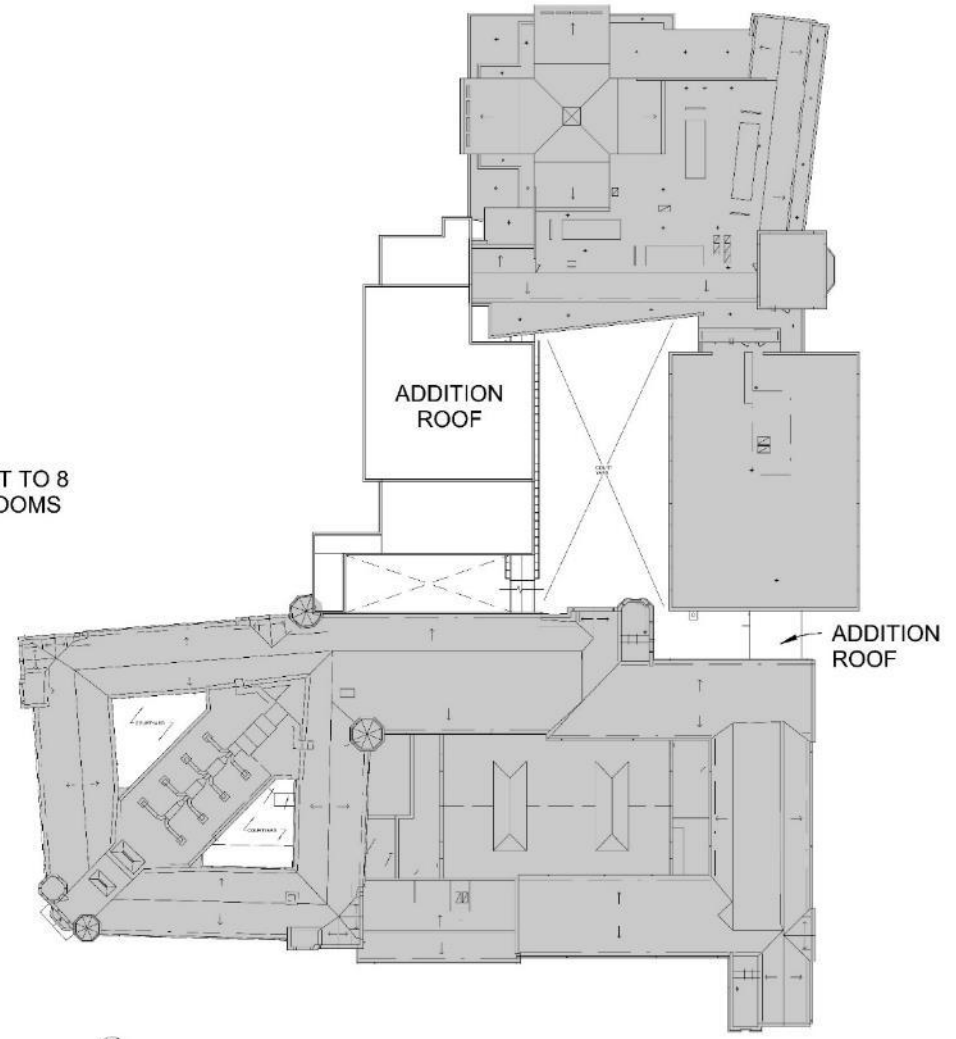
SECOND FLOOR PLAN
SCALE 1/64"= 1'

SECOND FLOOR

- RENOVATED AREAS 11,500 SF
- ADDITION AREAS 12,570 SF



THIRD FLOOR PLAN
SCALE 1/64"= 1'

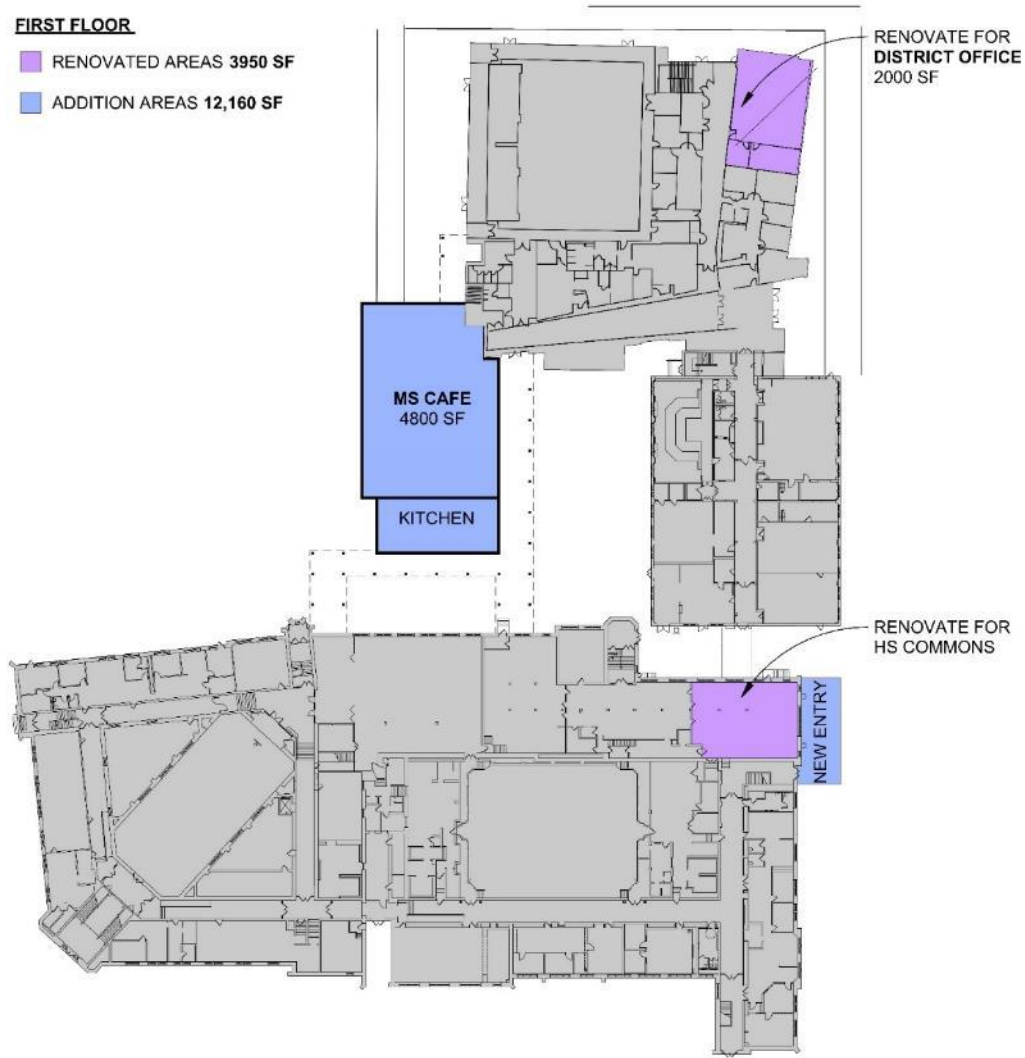


ROOF PLAN
SCALE 1/64"= 1'

A

FIRST FLOOR

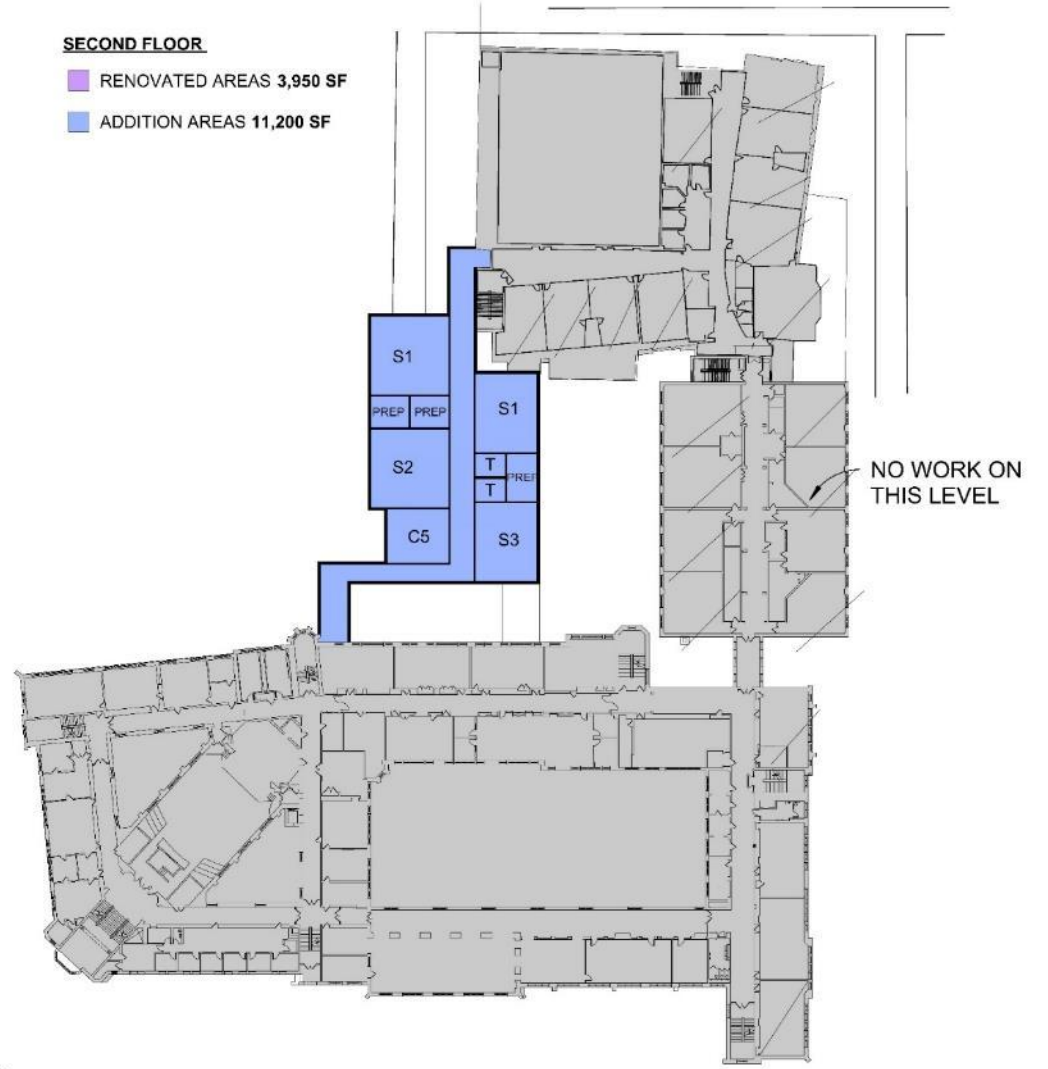
- RENOVATED AREAS 3,950 SF
- ADDITION AREAS 12,160 SF



FIRST FLOOR PLAN
SCALE 1/64"= 1'

SECOND FLOOR

- RENOVATED AREAS 3,950 SF
- ADDITION AREAS 11,200 SF

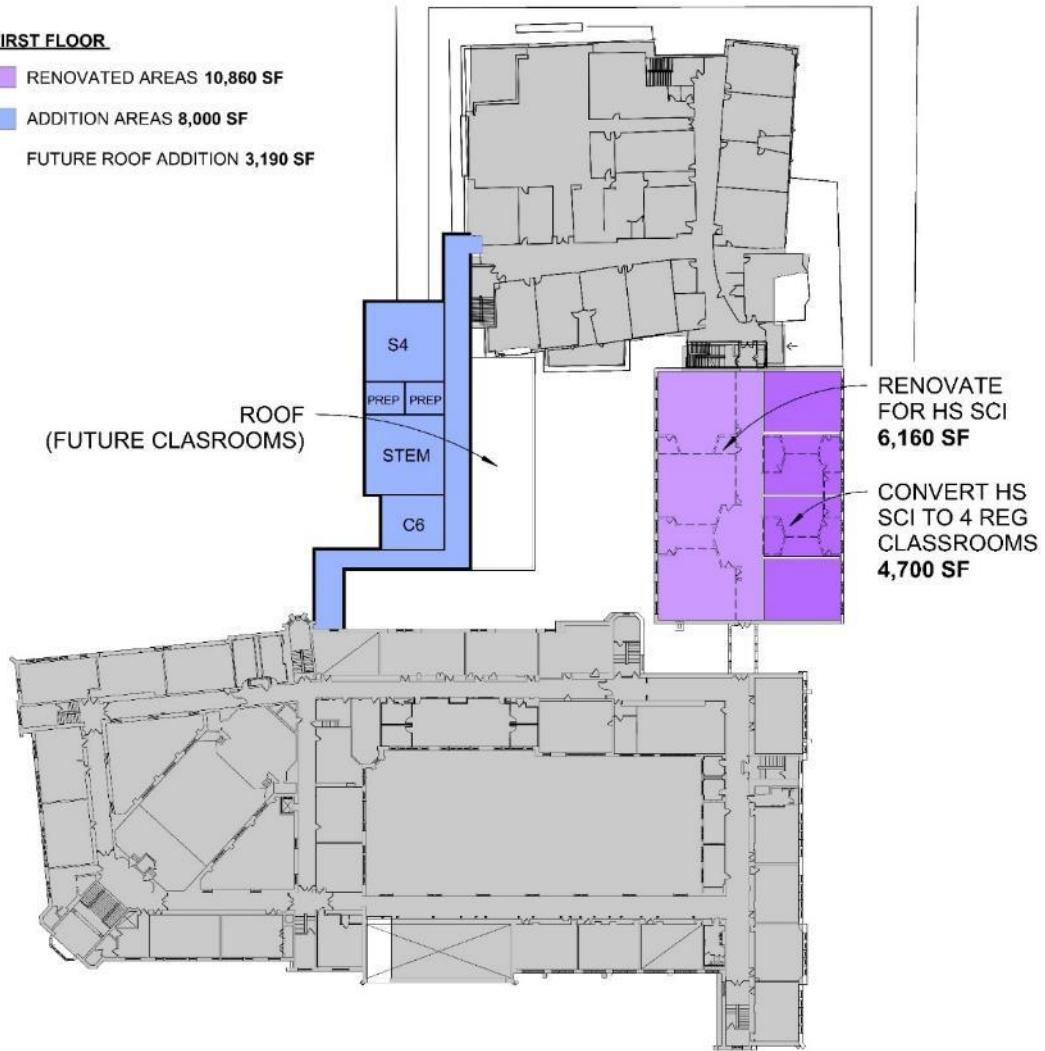


SECOND FLOOR PLAN
SCALE 1/64"= 1'

B

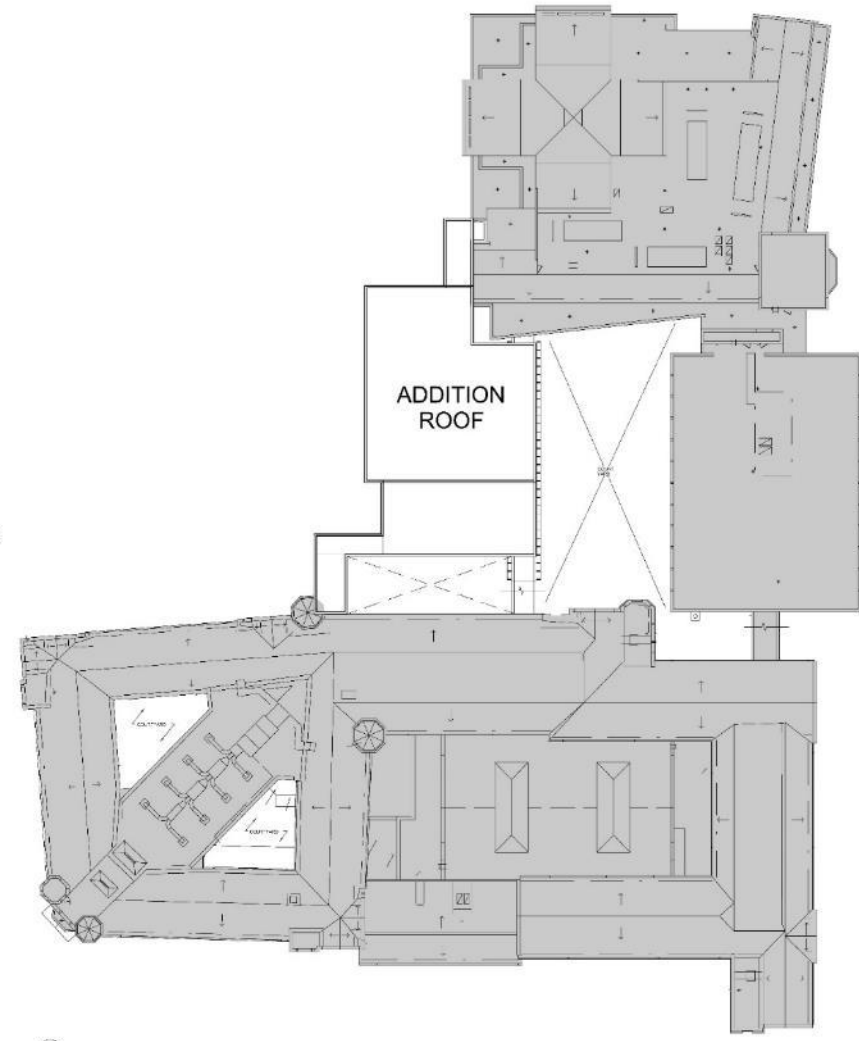
FIRST FLOOR

- RENOVATED AREAS 10,860 SF
- ADDITION AREAS 8,000 SF
- FUTURE ROOF ADDITION 3,190 SF



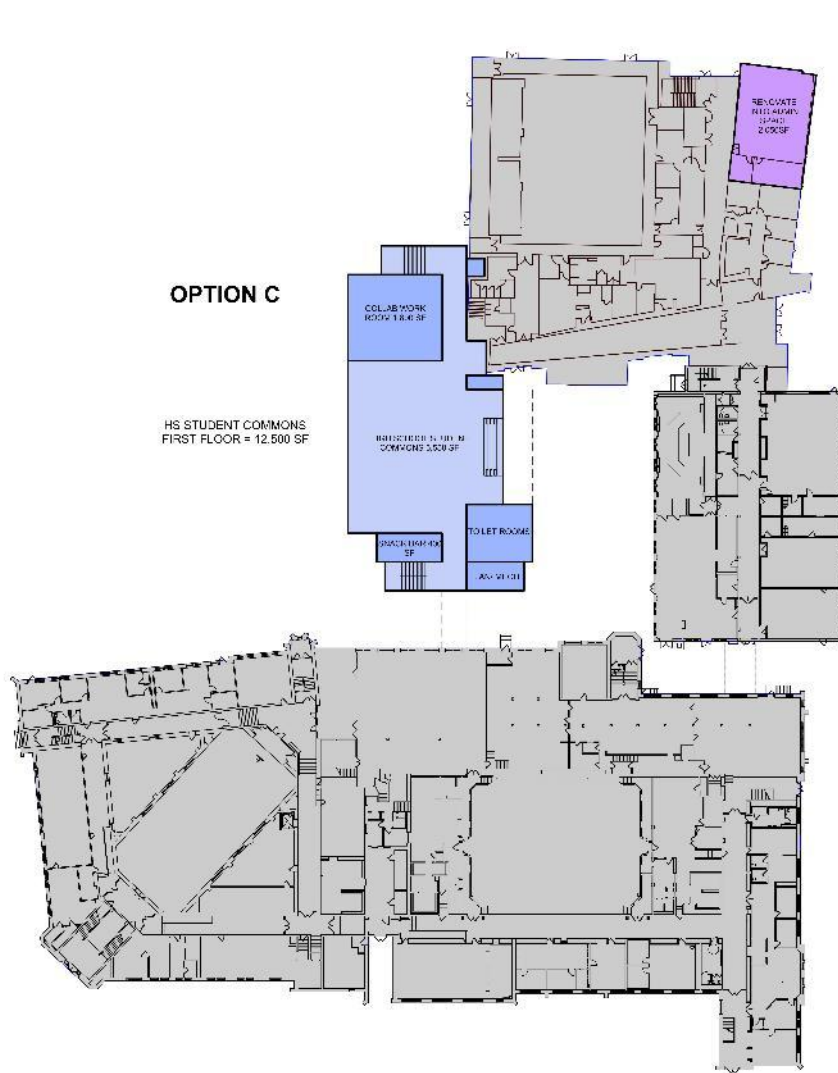
RENOVATE FOR HS SCI
6,160 SF

CONVERT HS
SCI TO 4 REG
CLASSROOMS
4,700 SF



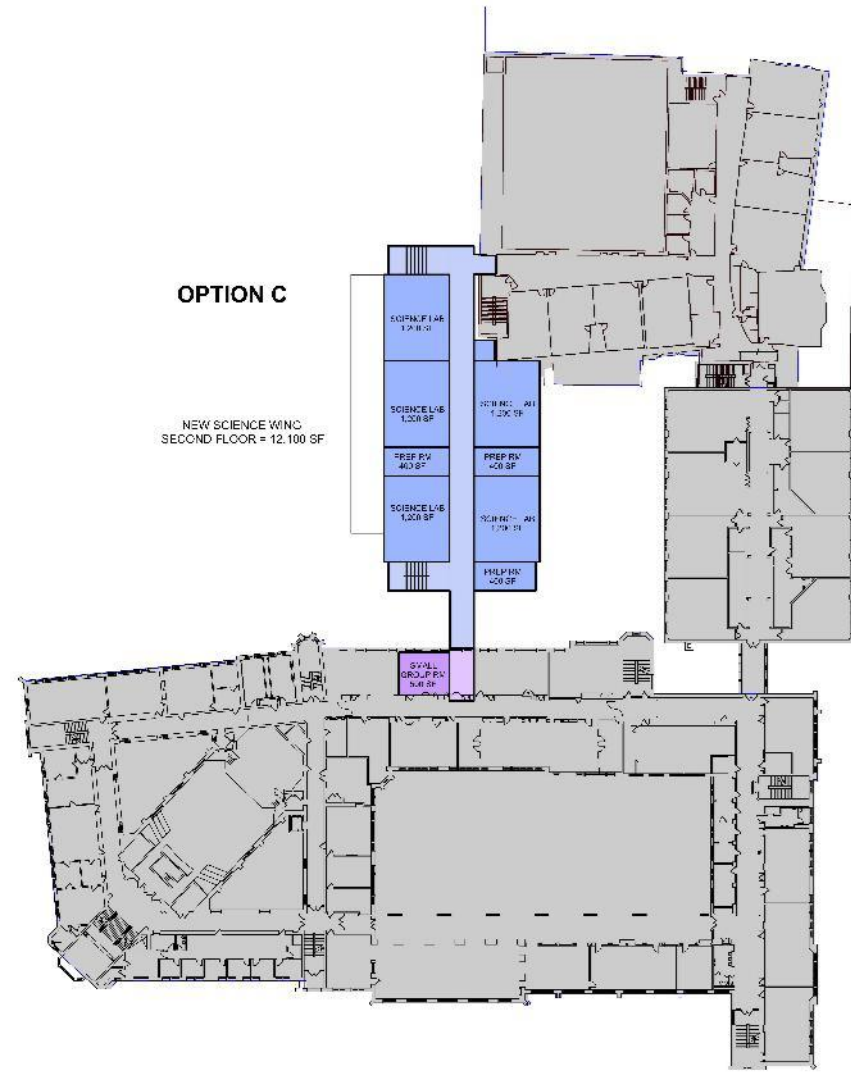
ROOF PLAN
SCALE 1/64"= 1'

B



OPTION C

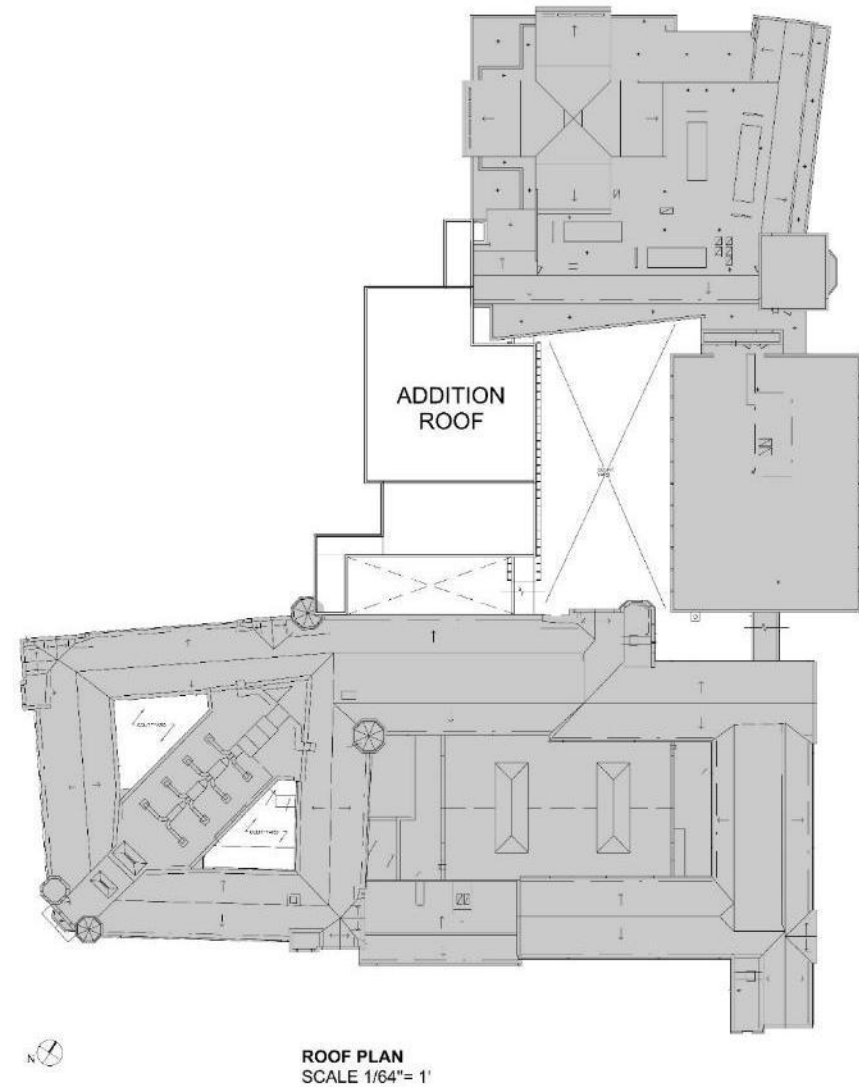
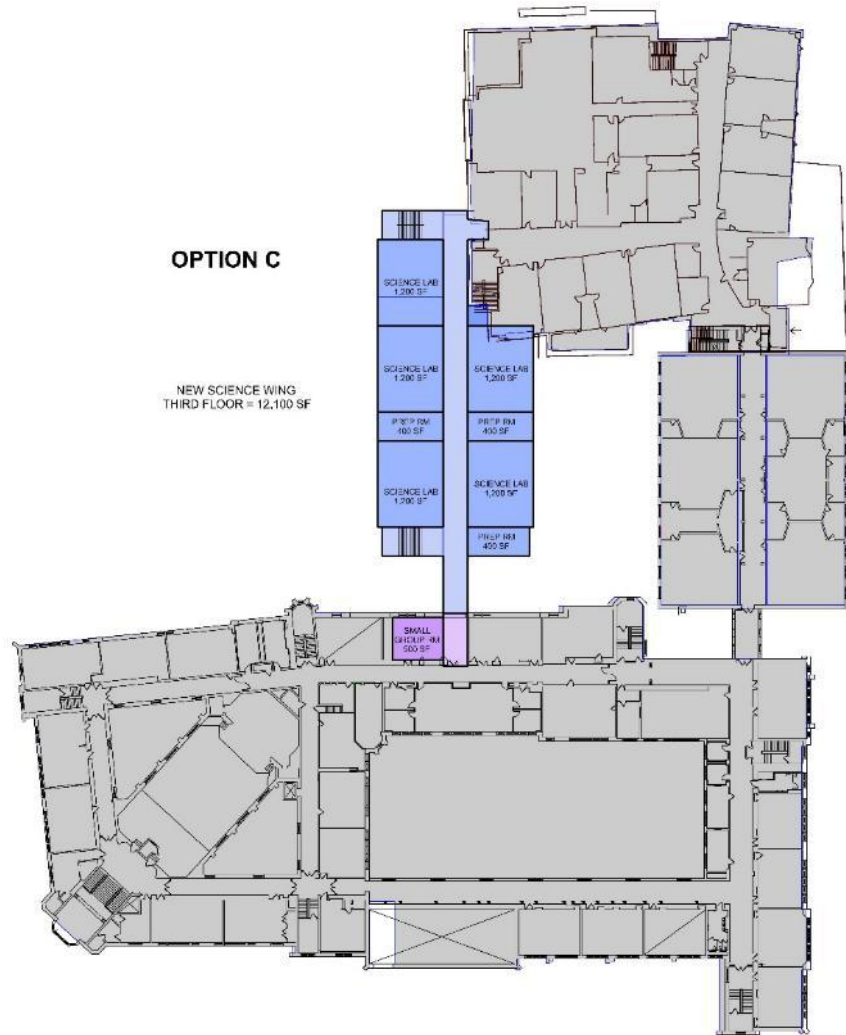
HS STUDENT COMMONS
FIRST FLOOR = 12,500 SF



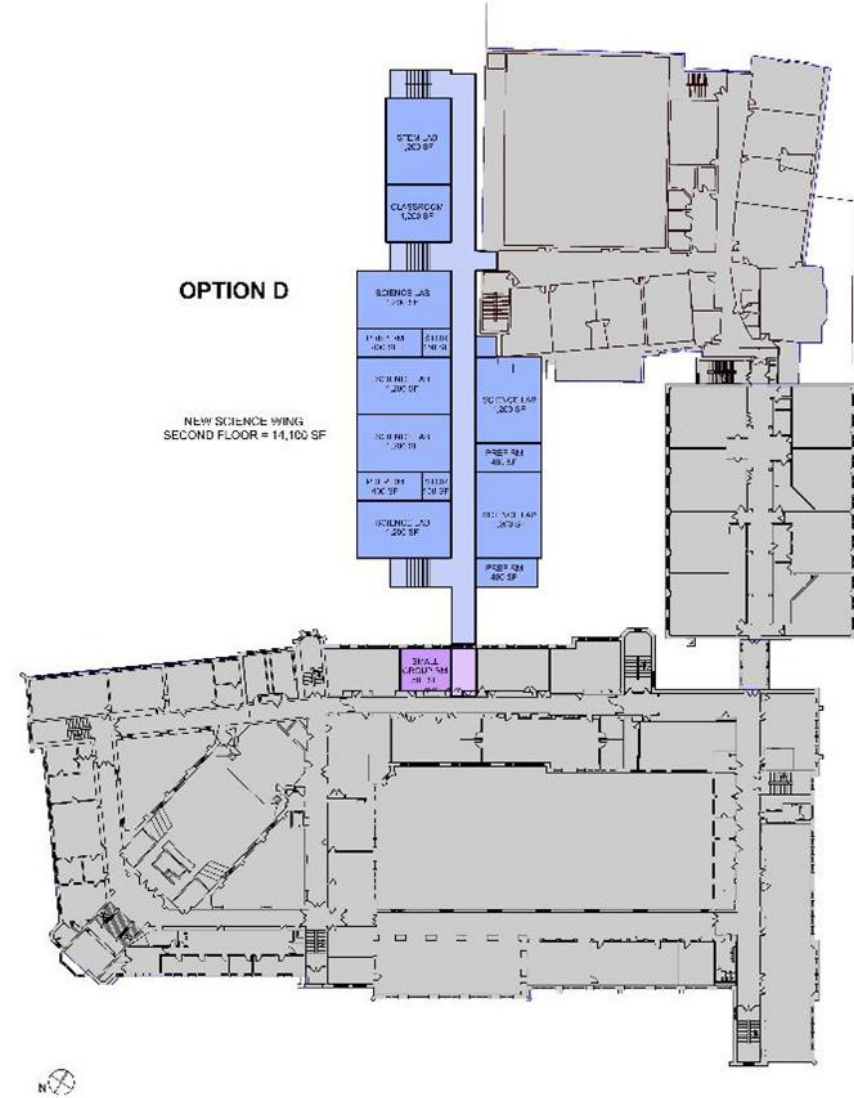
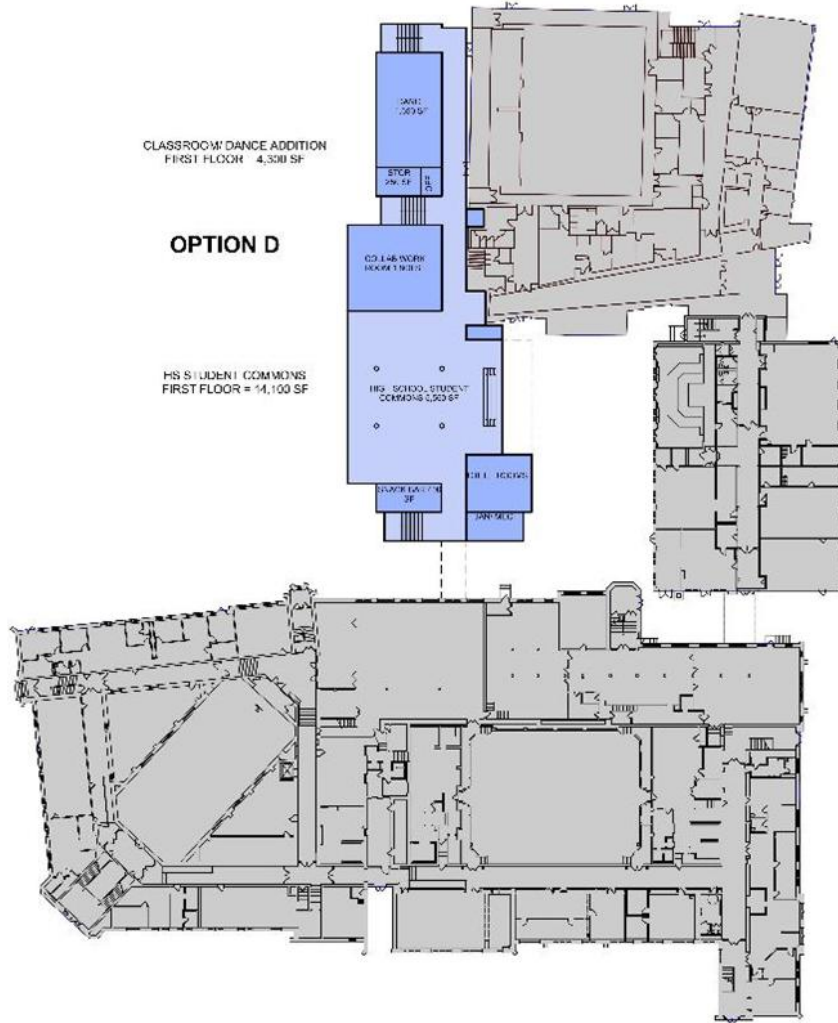
OPTION C

NEW SCIENCE WING
SECOND FLOOR = 12,100 SF

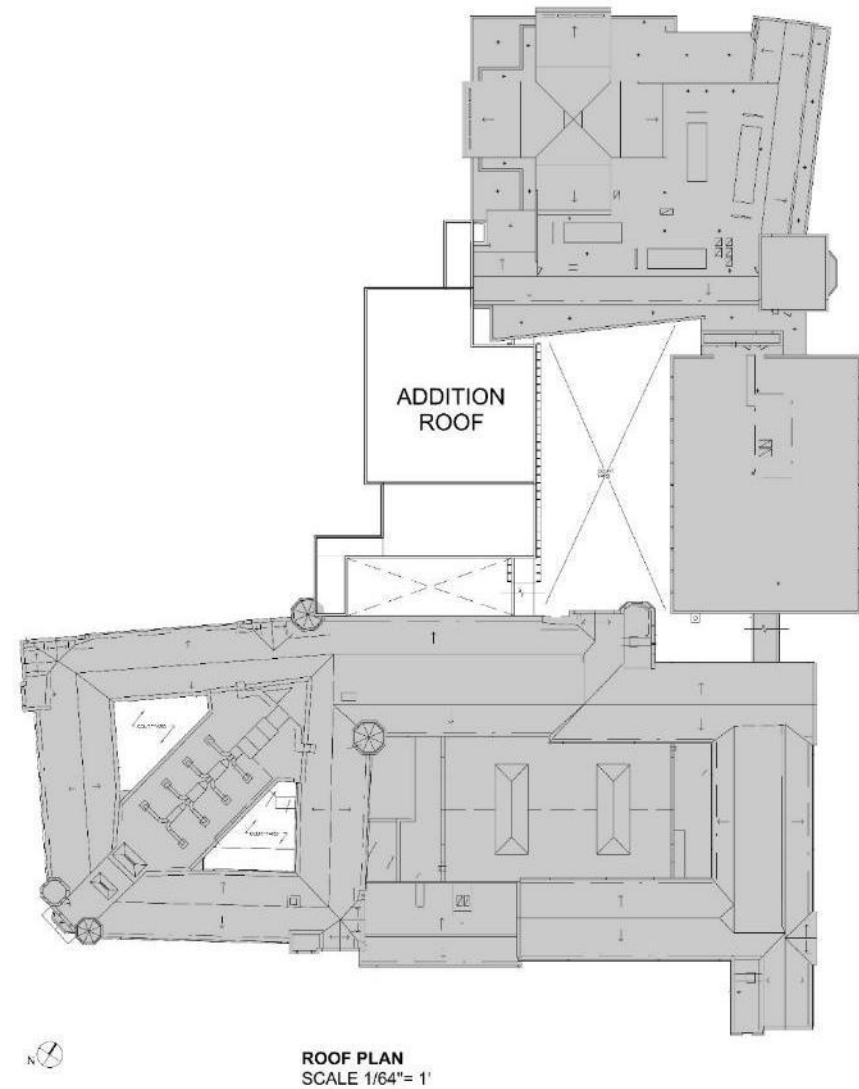
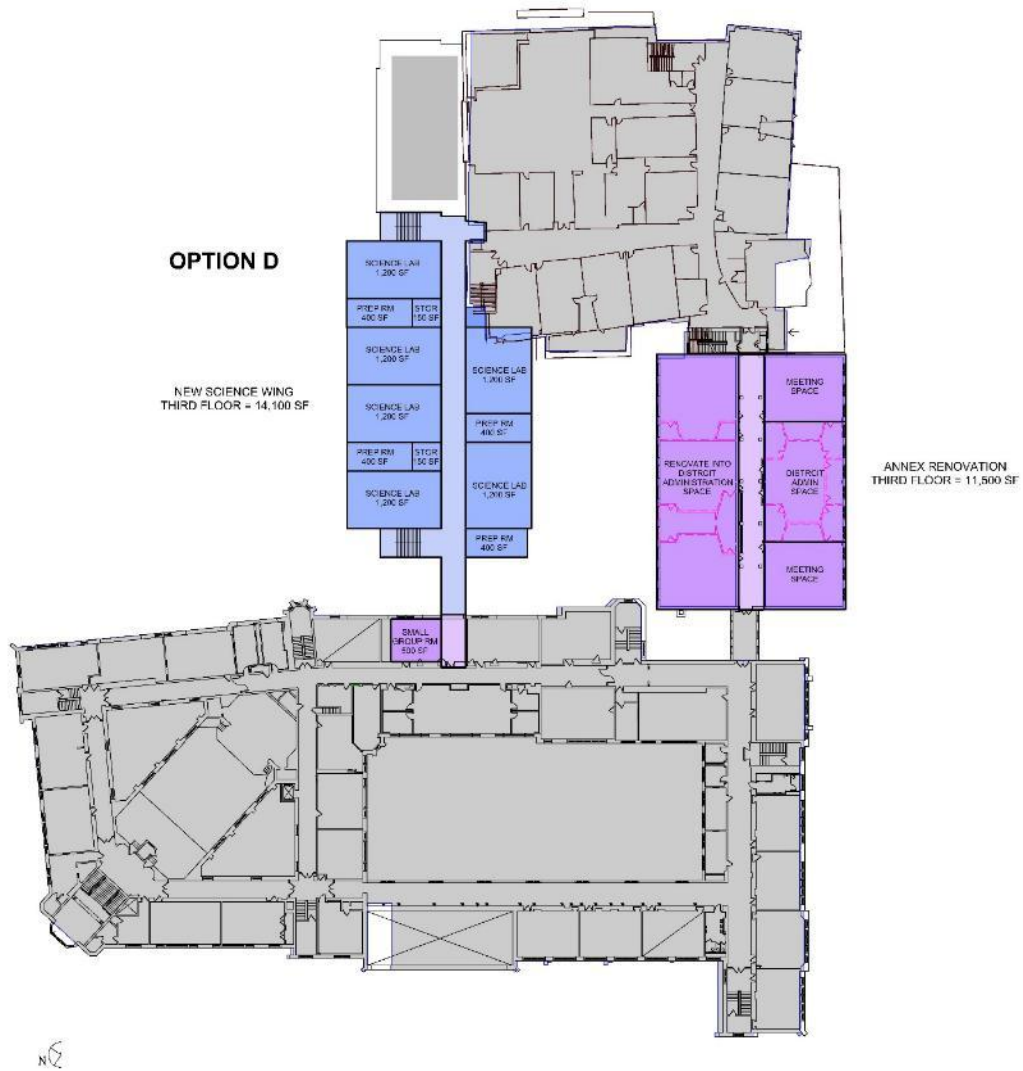
C



C



D



D



Pelham Memorial High School

Option A: *HS Commons + 8 Labs + 4 Classrms*

\$44,000,000

Option B: *HS Commons + 6 Labs + 2 Classrms*

\$34,500,000

Option C: *HS Commons + 10 Labs*

\$44,000,000

Option C1: *HS Commons + 10 Labs + 3 Classrms+ PE + STEM*

\$52,250,000

Option D: *HS Commons + 12 Labs*

\$51,750,000

Option D1: *HS Commons + 12 Labs + 1 Classrms+ PE + STEM*

\$60,000,000



District Administration at PMHS

Option DA 1: *Renovate the MS Technology Classroom to District Administration (Presumes additional off-site space for District Administration – NOT INCLUDED)*

\$1,200,000

Option DA 2: *Convert one floor of the Annex to District Administration.*

\$4,500,000

	<i>Scenario 1</i>	<i>Scenario 2</i>	<i>Scenario 3</i>	<i>Scenario 4</i>	<i>Scenario 5</i>	<i>Scenario 6</i>	<i>Scenario 7</i>
Infrastructure:							
Roofing	\$ 8,545,000	\$ 8,545,000	\$ 8,545,000	\$ 8,545,000	\$ 8,545,000	\$ 8,545,000	\$ 8,545,000
ES's Windows	\$ 5,340,000	\$ 5,340,000	\$ 5,340,000	\$ 5,340,000	\$ 5,340,000	\$ 5,340,000	\$ 5,340,000
Masonry	\$ 1,860,000	\$ 1,860,000	\$ 1,860,000	\$ 1,860,000	\$ 1,860,000	\$ 1,860,000	\$ 1,860,000
Heating	\$ 32,805,000	\$ 32,805,000	\$ 32,805,000	\$ 32,805,000	\$ 32,805,000	\$ 32,805,000	\$ 32,805,000
ES Air Conditioning		\$ 14,400,000	\$ 14,400,000	\$ 14,400,000	\$ 14,400,000	\$ 14,400,000	\$ 14,400,000
Siwanoy ES Opt B			\$ 29,900,000	\$ 29,900,000	\$ 29,900,000	\$ 29,900,000	\$ 29,900,000
Pelham MHS Opt B				\$ 34,500,000	\$ 34,500,000	\$ 34,500,000	\$ 34,500,000
District Office Opt DO 1					\$ 1,200,000	\$ 1,200,000	\$ 1,200,000
PMHS Windows	\$ 5,725,000					\$ 5,725,000	\$ 5,725,000
PMHS Air Conditioning						\$ 15,500,000	\$ 15,500,000
Geothermal							\$ 12,000,000
Total	\$ 54,275,000	\$ 62,950,000	\$ 92,850,000	\$ 127,350,000	\$ 128,550,000	\$ 149,775,000	\$ 161,775,000

Potential Federal Incentive (30% of Geothermal + AC):

\$ (9,500,000)

CAPITAL PROJECT PLANNING MILESTONE SCHEDULE

1/28/2024

Action	Start	Finish	Comments
Board of Education Meeting	January 8, 2025		
Capital Project Planning Update			KG+D, BAC Representatives
Bond Advisory Committee (BAC) Meeting	Jan-25		
Review Capital Project Studies - Scope & Budget			KG+D
Board of Education Meeting	January 28, 2025		
Review Capital Project Studies - Scope & Budget			KG+D
SEQRA - BOE declares intent to act as Lead Agency			Commence Required SEQRA Study
Capital Improvement Information Session	February 3, 2025		Pelham Memorial HS
Capital Improvement Information Session	February 5, 2025		Siwanoy Gym
Capital Improvement Information Session	February 6, 2025		Siwanoy Gym
Board of Education Meeting	February 12, 2025		
Capital Project Planning Update			KG+D
Bond Advisory Committee (BAC) Meeting	Feb-25		Finalize Recommendation to Board of Education
Board of Education Meeting	March 12, 2025		
Capital Project Planning Update			KG+D
SEQRA - BOE Determine Lead Agency Status and SEQRA Determination			30 days minimum after commencement of coordinated review, if required
Board of Education Meeting	March 26, 2025		
Capital Project Planning Update			KG+D
BOE Resolution to conduct bond referendum			45 days, min. prior to date of referendum.
Public Information Process	Mar-25	May-25	
Referendum	May 20, 2025		





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