

**Limited Scope Feasibility Study**

# **Buena Vista City Public Schools**

---



# Proposed Agenda

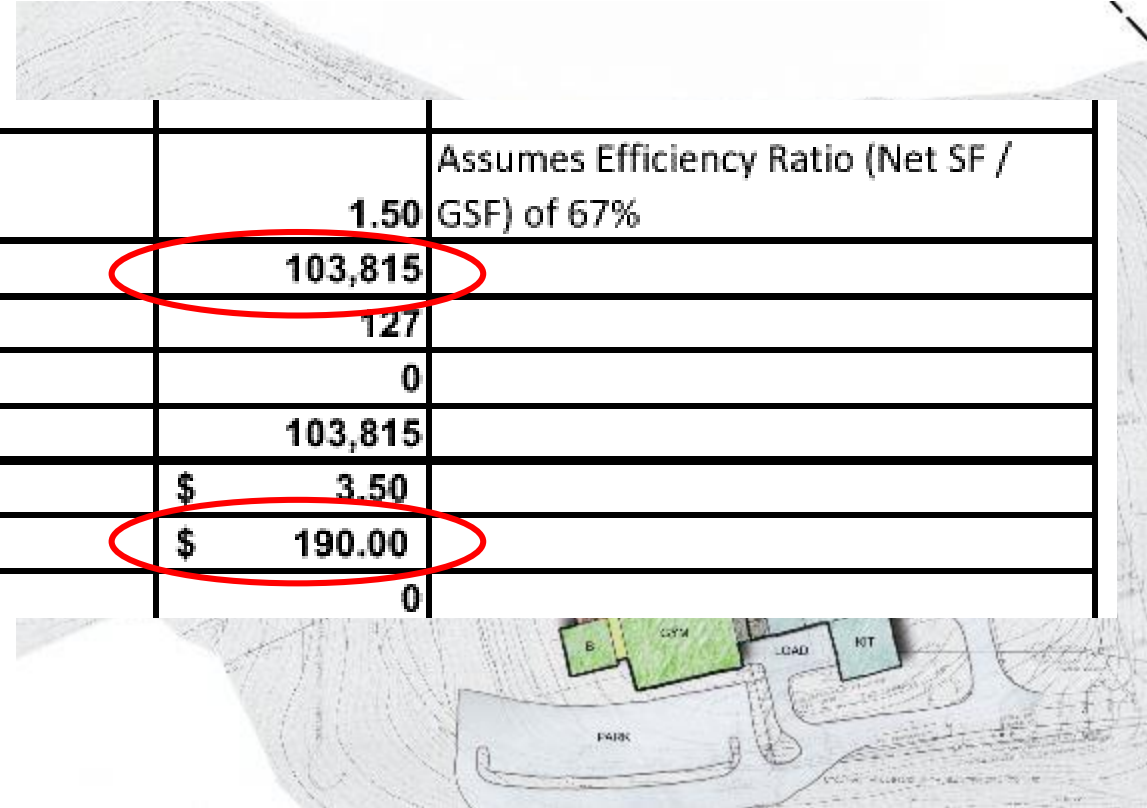
- *Brief History of the Process*
- *Review of Existing Conditions*
- *Project Cost Comparisons*
- *Energy Analysis*

# Brief History

*Study in 2015*

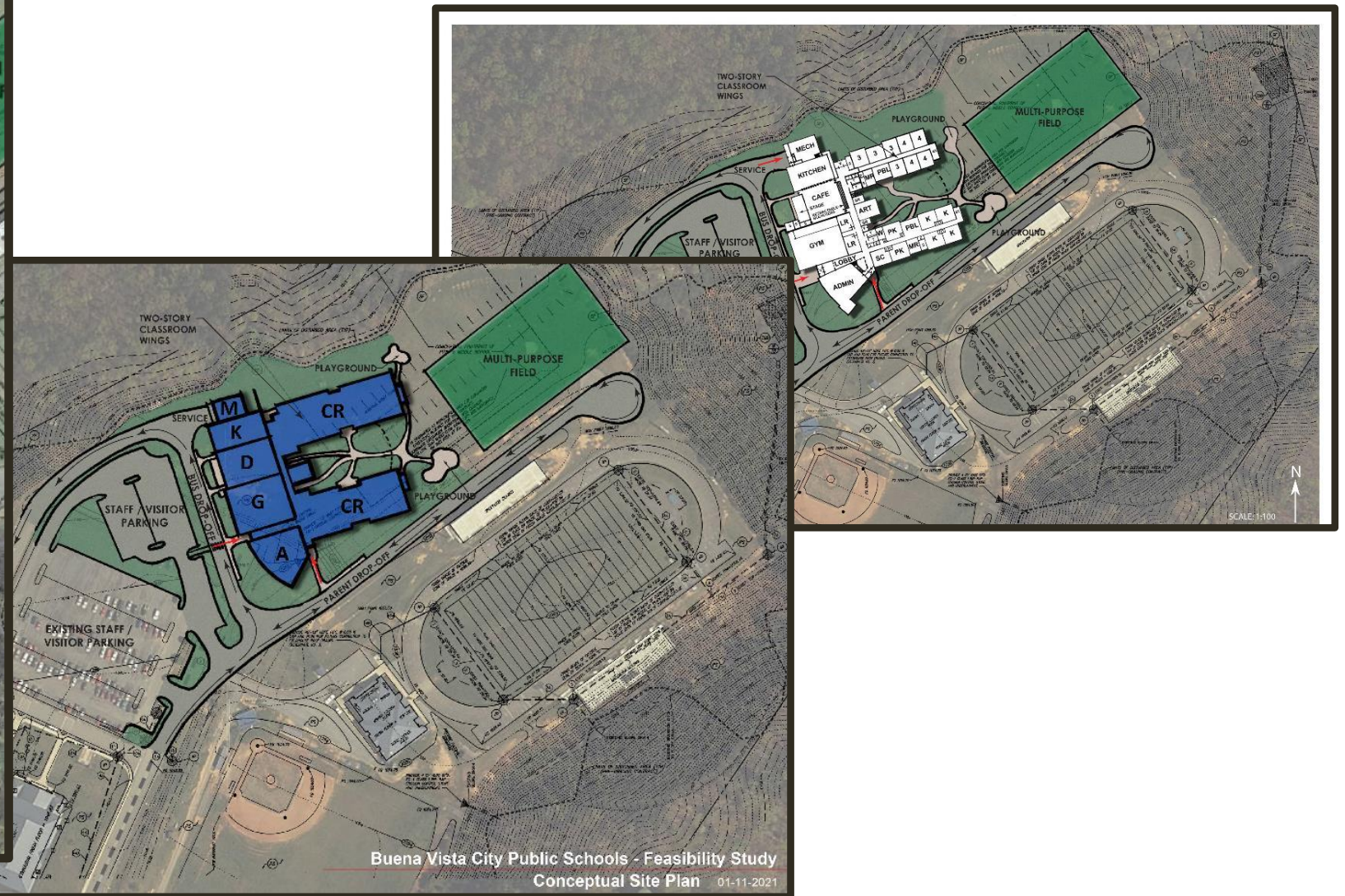
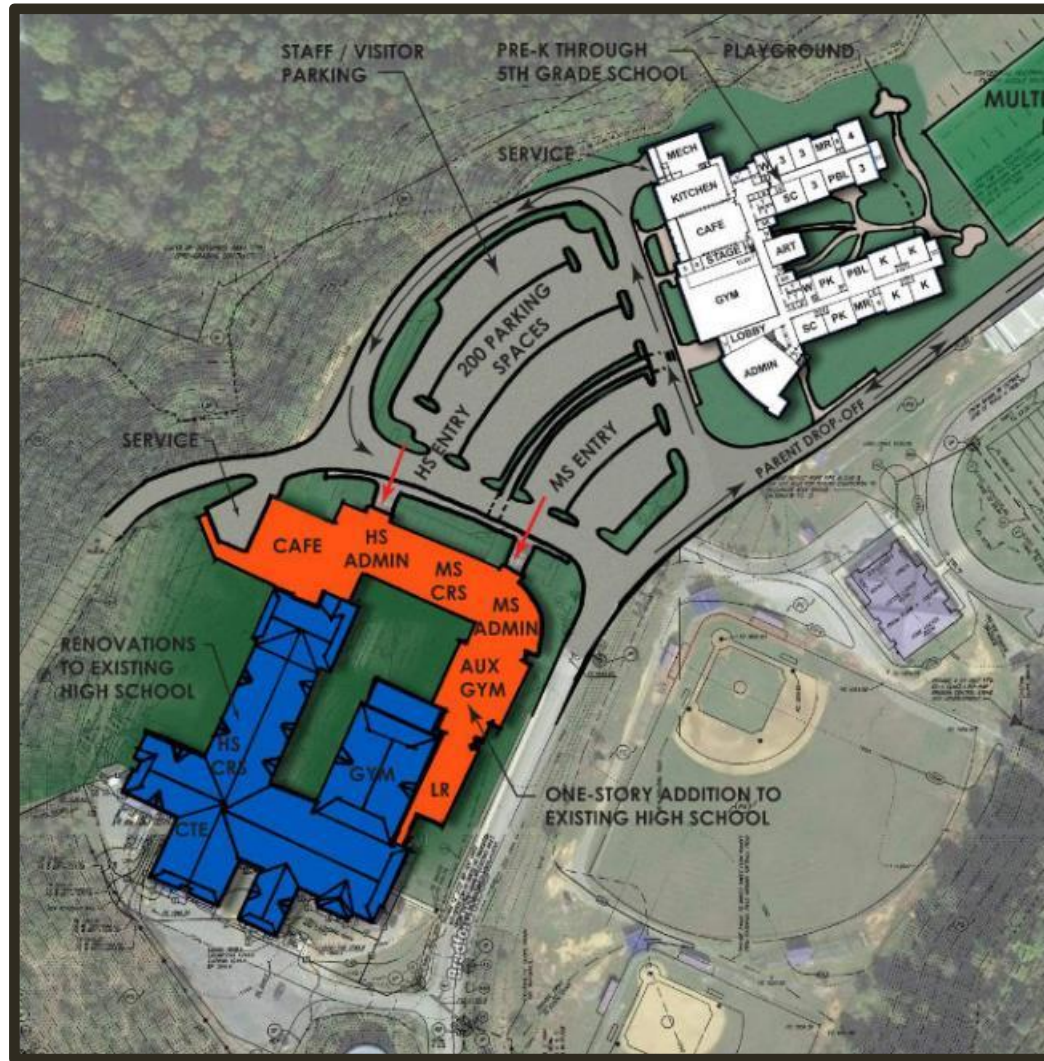
SPACE DESCRIPTION	NUMBER	SF(each)	Subtotal	REMARKS
<b>Conceptual Planning Assumptions</b>				
Net to Gross Multiplier			1.50	Assumes Efficiency Ratio (Net SF / GSF) of 67%
Approximate Total GSF Area Required			103,815	
SF Per Pupil, VDOE Basis			127	
Existing Useable Area			0	
Area of New Addition or New Building			103,815	

<b>Conceptual Planning Assumptions</b>				
Net to Gross Multiplier			1.50	Assumes Efficiency Ratio (Net SF / GSF) of 67%
Approximate Total GSF Area Required			103,815	
SF Per Pupil, VDOE Basis			127	
Existing Useable Area			0	
Area of New Addition or New Building			103,815	
Cost/SF for Renovated Areas			\$ 3.50	
Cost/SF for New Construction (Building Only)			\$ 190.00	
Estimated Cost Renovated Areas			0	
<b>PRELIMINARY BUDGET</b>				
Phase I ESA				
Site Selection Assistance Fees				
Inspections and Testing Fees During Construction	0.40%	LS	79,000	.4% of Construction Cost
Utility Connection Fees	1.00	LS	50,000	Allowance
Construction Phase Mech / Elec Commissioning Fees	0.40%	LS	79,000	.4% of Construction Cost
Furnishings Allowance	103,815	\$ 4.00	415,000.00	Allowance based on \$4.00 / SF
Technology Allowance	103,815	\$ 4.00	415,000.00	Allowance based on \$4.00 / SF
Construction Contingency	3.00%	LS	592,000	3% of Construction Cost
Land Purchase			200,000	Assumption
<b>Soft Cost Subtotal</b>			<b>\$ 3,064,867</b>	
<b>TOTAL PROJECT BUDGET</b>			<b>\$ 22,800,000</b>	ROUNDED



# Brief History

- *RRMM conducted a second study in 2020/21*



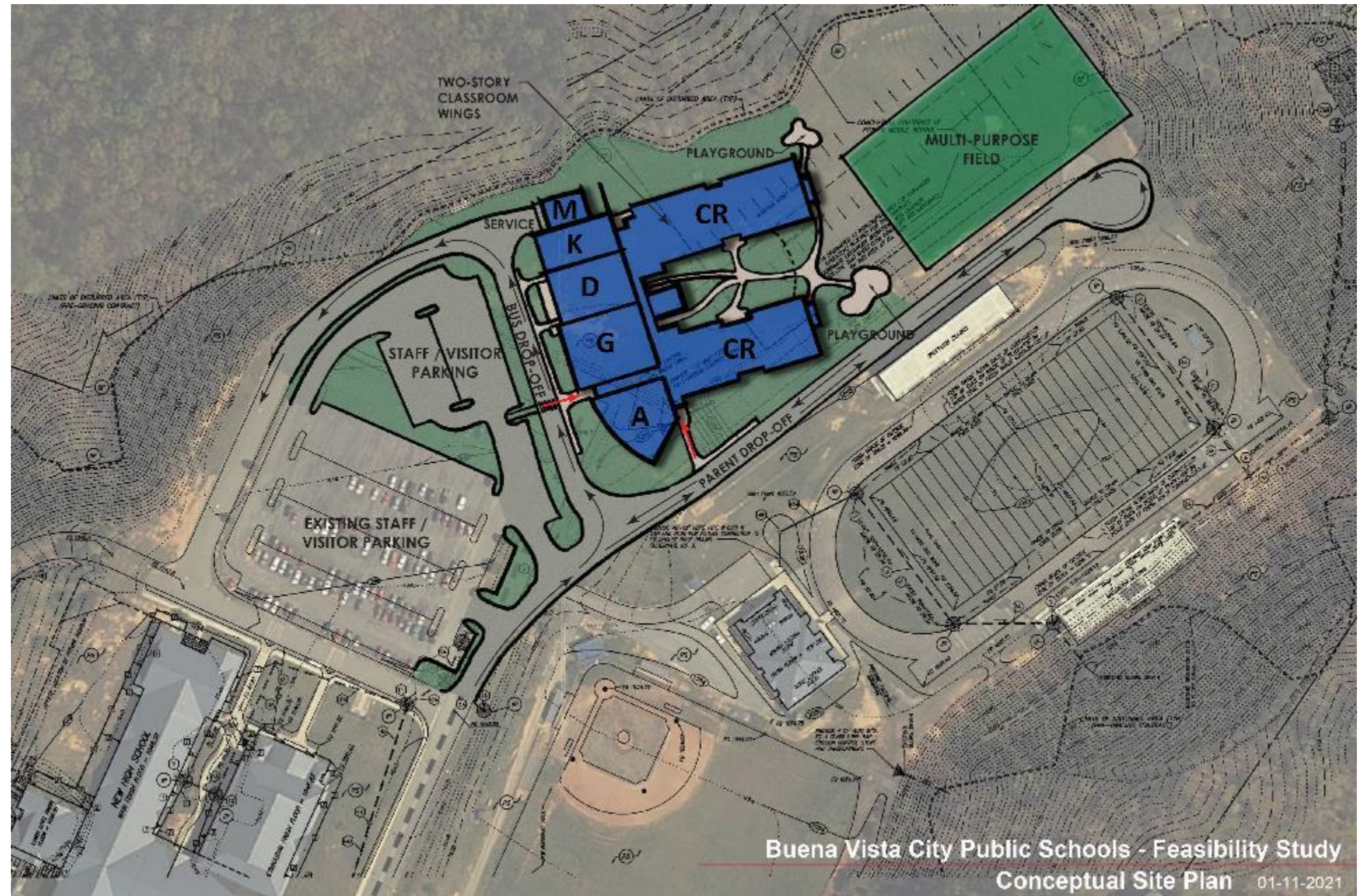
# What if the new school could fit on the HS Site?



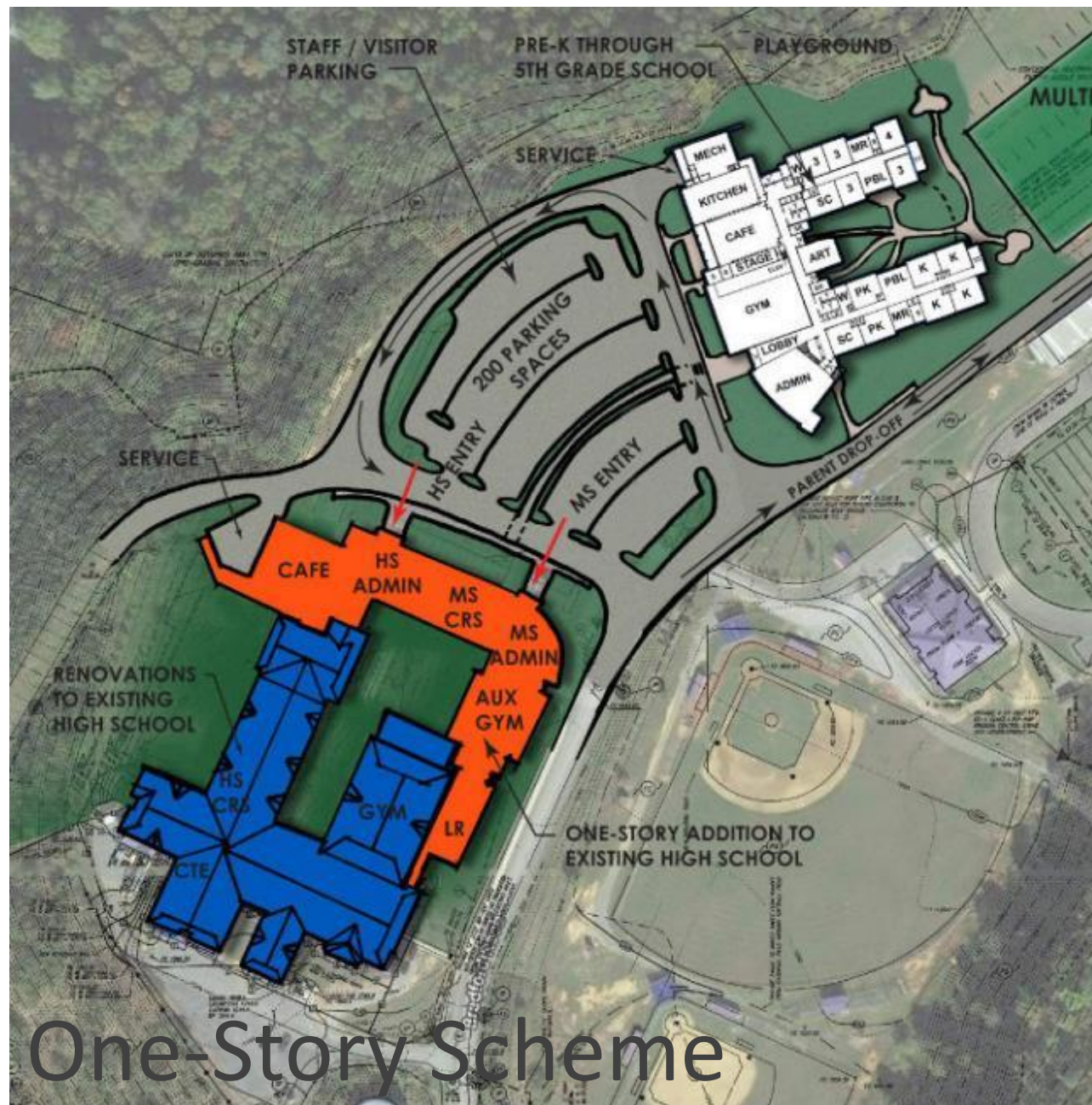
- *\$4.2M Savings in Site Development (minimum)*
- *PMHS has excess capacity*
- *Potential \$4.2M in Program Reduction (Pre-K – 6 / 7-12 HS)*
- *Many educational and community-use advantages and efficiencies*
- *More properties available to help offset capital costs*
- *No land purchase*
- *No phasing complications*
- *Solar orientation and views*

# What if?...an initial idea to show potential

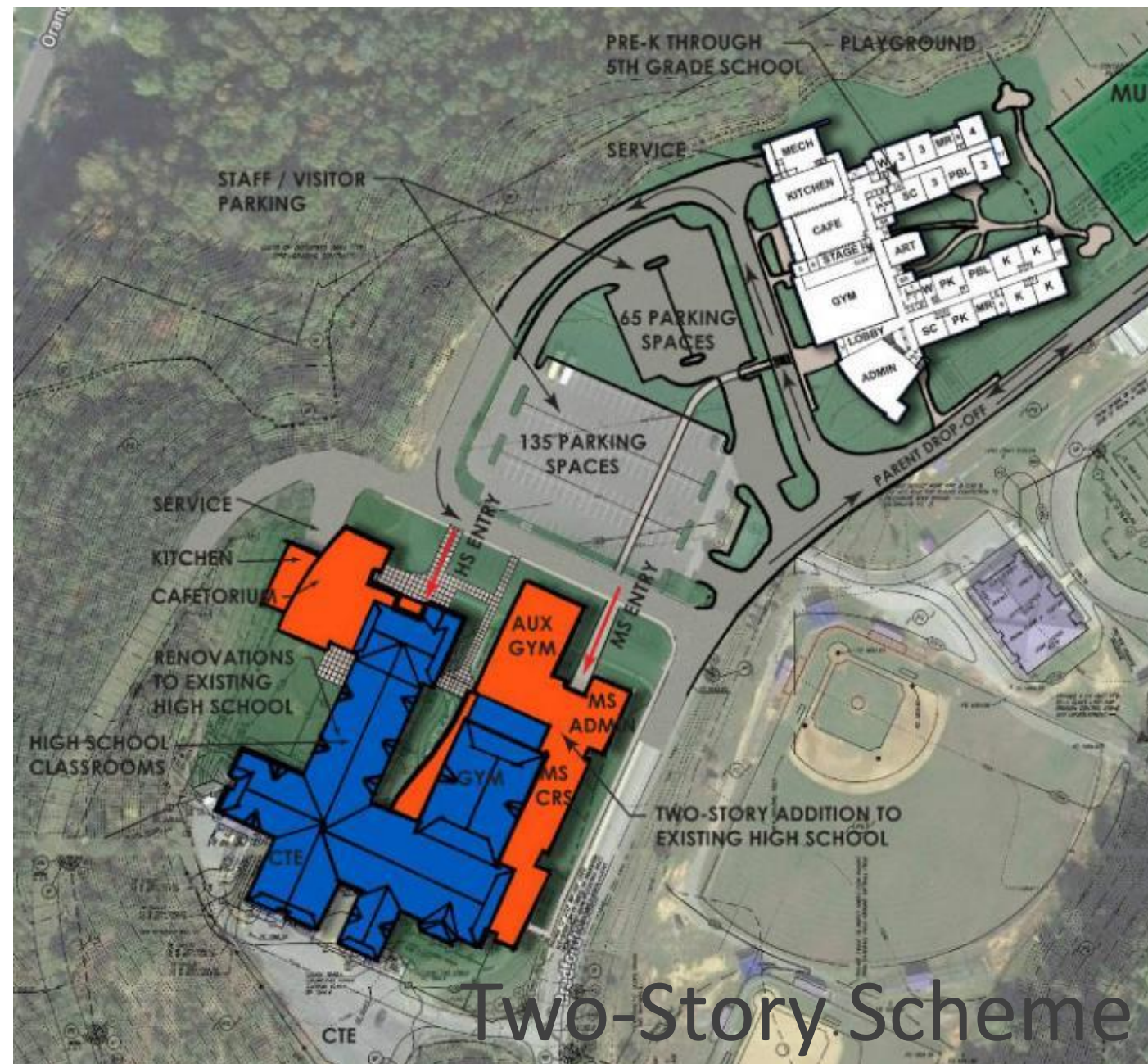
Pre-K – 6 School  
+  
7-12 High School



# Another idea...New PK-5 + MS Addition at the HS



One-Story Scheme



Two-Story Scheme

# Another idea...New PK-5 + MS Addition at the HS



One-Story Scheme



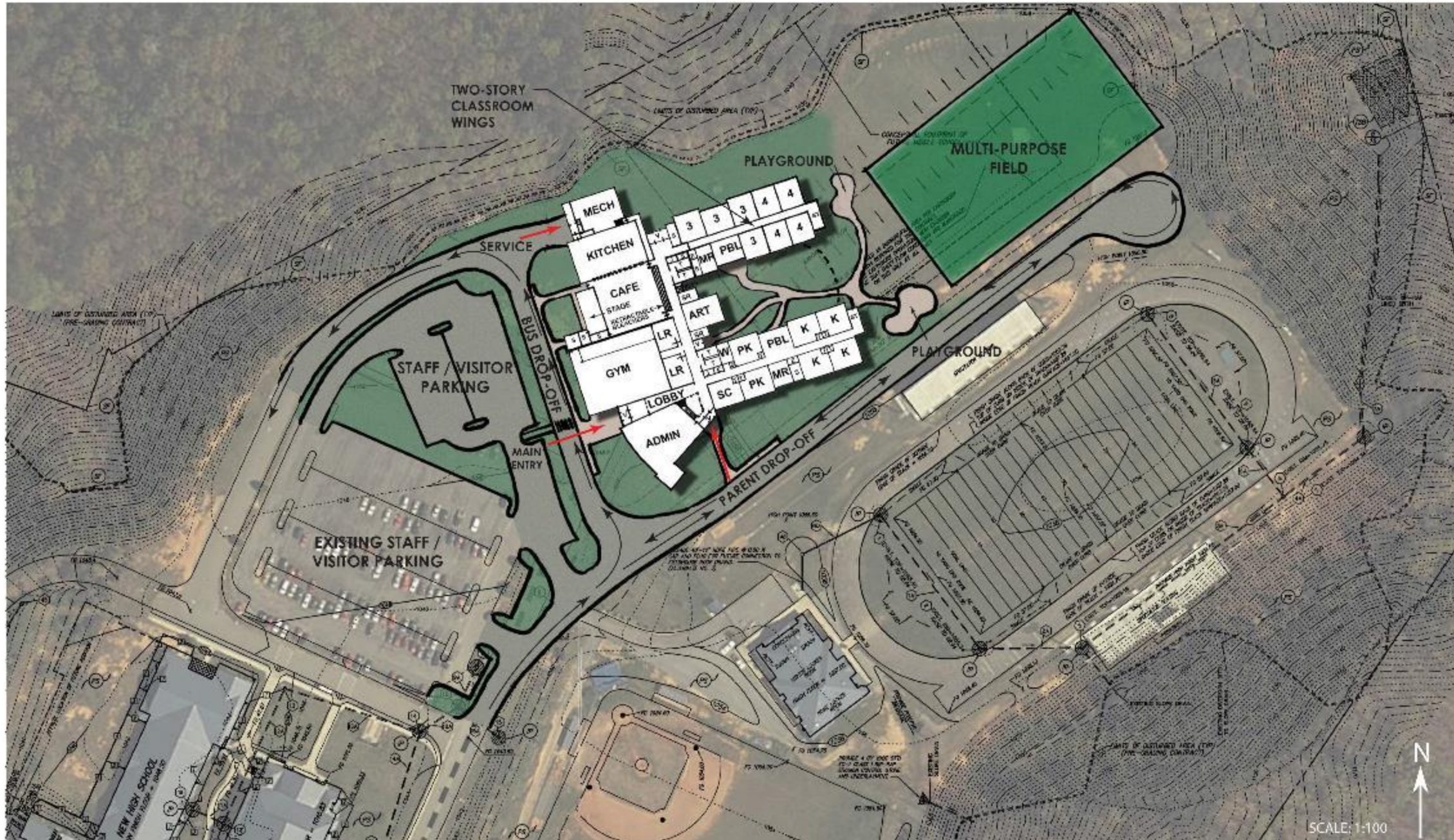
Two-Story Scheme



# More Info on Educational and Community Advantages

- *Safety and Convenience for Parents and Students*
- *Opportunity fo higher-level classes for younger students (7th-language, algebra, etc.)*
- *Cost saving in resources, staff, infrastructure, transportation*
- *Combining of programs for efficiency*
- *Ability to offer better services (academics, arts and athletics)*
- *No more silo effect with individual schools- all working together*
- *Sharing of community resources (gyms, auditorium)*
- *"Draw" for new families "build it and they will come"*
- *"Go Blue" - Vision for future*

# Proposed PK-7 School...725 Student Capacity



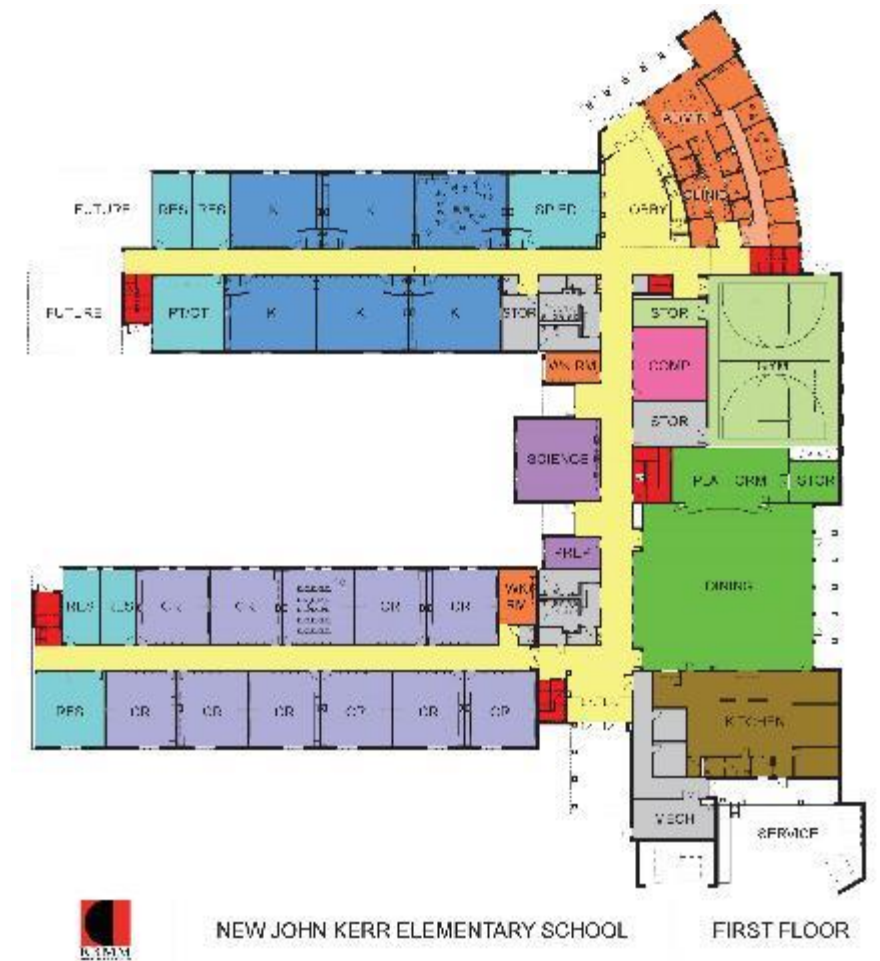
# What are the “givens” for a 21<sup>st</sup> Century School

1. Safety and Security
2. Robust infrastructure
3. Energy efficiency / Indoor Air Quality
4. Accessibility



# Other Key Features...

1. Highly functional floor plan
2. Natural Light / Daylighting Capability (quality of the environment)
3. Adaptability for sloped metal roofs (if desired)



# Brief History

2020 /21

SPACE DESCRIPTION	NUMBER	SF(each)	Subtotal	REMARKS
<b>Conceptual Planning Assumptions</b>				
Net to Gross Multiplier			1.50	Assumes Efficiency Ratio (Net SF / GSF) of 67%
Approximate Total GSF Area Required			99,480	Say 99,500
SF Per Pupil, VDOE Basis			138	
Existing Useable Area			0	
Area of New Addition or New Building			99,480	
Cost/SF for Renovated Areas			\$ 3.50	
Cost/SF for New Construction			\$ 299.00	
Estimated Cost Renovated Areas			0	
Estimated Cost New Building Construction			29,744,520	
Estimated Cost for Sitework				included in cost/sf for building
<b>Construction Cost (Hard Cost) Subtotal</b>			<b>\$ 29,740,000</b>	
Cost/SF for Building and Sitework				\$ 298.95
<b>PRELIMINARY BUDGET FOR SOFT COST</b>				
Soft Cost Factor			0.85	
<b>Soft Cost Allowance</b>			<b>\$ 5,260,000</b>	
<b>TOTAL PROJECT BUDGET</b>			<b>\$ 35,000,000</b>	<b>ROUNDED</b>

# Limited Scope Study

- ***General Scope of Work***
  - ***Part A***
    - *General Evaluation of Existing Conditions at Enderly, Kling, and PMMS*
    - *Conducted walk-thru observations*
    - *Included architectural and mechanical / electrical*
    - *Review of limited existing documentation*
    - *Interview staff*
  - ***Part B***
    - *Reprogram to confirm the PK-7 program requirements*
  - ***Part C***
    - *Using the info from Part A and Part B, compare the cost of new construction to renovation*
    - *Evaluate energy cost*

# Limited Scope Study

*PMMS*

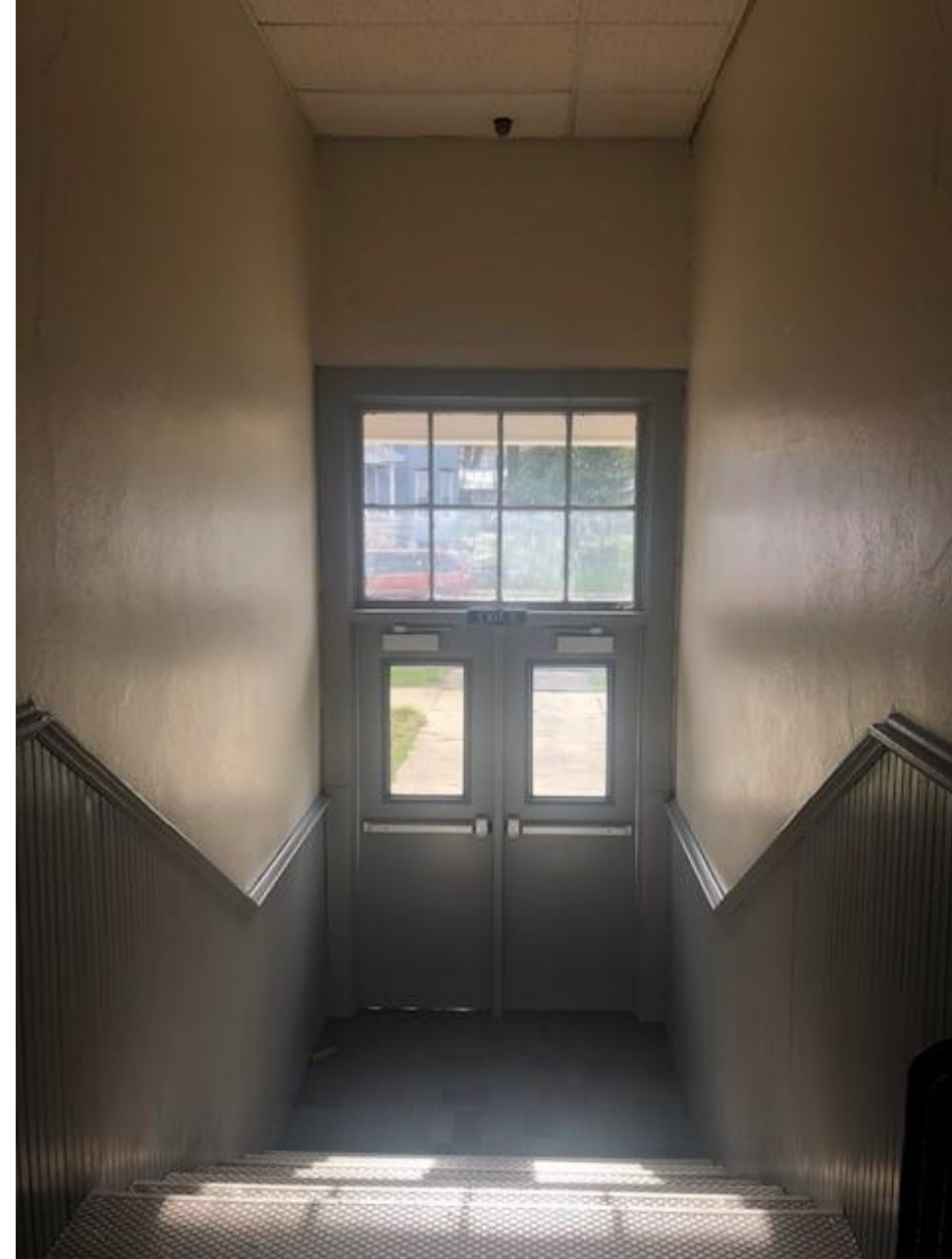


# Limited Scope Study





# Limited Scope Study



# Limited Scope Study



# Limited Scope Study



# Limited Scope Study



# Limited Scope Study

## *Enderly and Kling*



# Limited Scope Study



# Limited Scope Study



# Limited Scope Study





# Limited Scope Study

## Program Update

2020

Conceptual Planning Assumptions			
Net to Gross Multiplier		1.50	A
Approximate Total GSF Area Required		99,480	G
SF Per Pupil, VDOE Basis		138	
Existing Useable Area		0	
Area of New Addition or New Building		99,480	
Cost/SF for Renovated Areas		\$ 3.50	
Cost/SF for New Construction		\$ 299.00	
Estimated Cost Renovated Areas		0	
Estimated Cost New Building Construction		29,744,520	
Estimated Cost for Sitework			in
Construction Cost (Hard Cost) Subtotal		\$ 29,740,000	
Cost/SF for Building and Sitework			\$
PRELIMINARY BUDGET FOR SOFT COST			
Soft Cost Factor		0.85	
Soft Cost Allowance		\$ 5,260,000	
TOTAL PROJECT BUDGET		\$ 35,000,000	R

2022

Conceptual Planning Assumptions			
Net to Gross Multiplier		1.50	As
Approximate Total GSF Area Required		113,093	GS
SF Per Pupil, VDOE Basis		169	Sa
Existing Useable Area		0	
Area of New Addition or New Building		113,093	
Cost/SF for Renovated Areas		\$ 3.50	
Cost/SF for New Construction		\$ 399.00	
Estimated Cost Renovated Areas		0	
Estimated Cost New Building Construction		45,123,908	
Estimated Cost for Sitework			inc
Construction Cost (Hard Cost) Subtotal		\$ 45,120,000	
Cost/SF for Building and Sitework			\$
PRELIMINARY BUDGET FOR SOFT COST			
Soft Cost Factor		0.85	
Soft Cost Allowance		\$ 7,980,000	
TOTAL PROJECT BUDGET		\$ 53,100,000	RC

# Limited Scope Study

## Cost Update

2020

Conceptual Planning Assumptions			
Net to Gross Multiplier		1.50	A
Approximate Total GSF Area Required		99,480	S
SF Per Pupil, VDOE Basis		138	
Existing Useable Area		0	
Area of New Addition or New Building		99,480	
Cost/SF for Renovated Areas		\$ 3.50	
Cost/SF for New Construction		\$ 299.00	
Estimated Cost Renovated Areas		0	
Estimated Cost New Building Construction		29,744,520	
Estimated Cost for Sitework			in
Construction Cost (Hard Cost) Subtotal		\$ 29,740,000	
Cost/SF for Building and Sitework			\$
PRELIMINARY BUDGET FOR SOFT COST			
Soft Cost Factor		0.85	
Soft Cost Allowance		\$ 5,260,000	
TOTAL PROJECT BUDGET		\$ 35,000,000	R

2022

Conceptual Planning Assumptions			
Net to Gross Multiplier		1.50	As
Approximate Total GSF Area Required		113,093	Sa
SF Per Pupil, VDOE Basis		169	
Existing Useable Area		0	
Area of New Addition or New Building		113,093	
Cost/SF for Renovated Areas		\$ 3.50	
Cost/SF for New Construction		\$ 399.00	
Estimated Cost Renovated Areas		0	
Estimated Cost New Building Construction		45,123,908	
Estimated Cost for Sitework			inc
Construction Cost (Hard Cost) Subtotal		\$ 45,120,000	
Cost/SF for Building and Sitework			\$
PRELIMINARY BUDGET FOR SOFT COST			
Soft Cost Factor		0.85	
Soft Cost Allowance		\$ 7,980,000	
TOTAL PROJECT BUDGET		\$ 53,100,000	RC

# Limited Scope Study

## Cost Update

2020

<b>Conceptual Planning Assumptions</b>				
Net to Gross Multiplier			1.50	A
Approximate Total GSF Area Required			99,480	S
SF Per Pupil, VDOE Basis			138	
Existing Useable Area			0	
Area of New Addition or New Building			99,480	
Cost/SF for Renovated Areas			\$ 3.50	
Cost/SF for New Construction			\$ 299.00	
Estimated Cost Renovated Areas			0	
Estimated Cost New Building Construction			29,744,520	
Estimated Cost for Sitework				in
<b>Construction Cost (Hard Cost) Subtotal</b>			<b>\$ 29,740,000</b>	
Cost/SF for Building and Sitework				\$
<b>PRELIMINARY BUDGET FOR SOFT COST</b>				
Soft Cost Factor			0.85	
Soft Cost Allowance			\$ 5,260,000	
<b>TOTAL PROJECT BUDGET</b>			<b>\$ 35,000,000</b>	B

2022

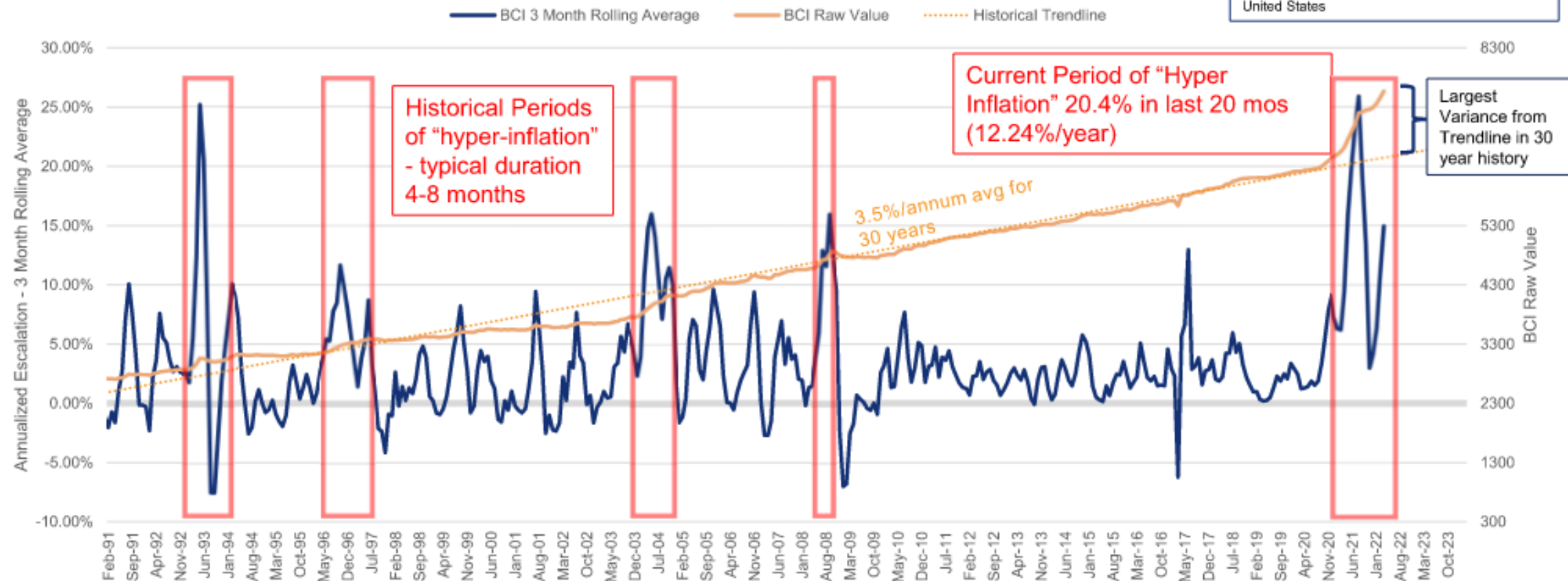
<b>Conceptual Planning Assumptions</b>				
Net to Gross Multiplier			1.50	As
Approximate Total GSF Area Required			113,093	Sa
SF Per Pupil, VDOE Basis			169	
Existing Useable Area			0	
Area of New Addition or New Building			113,093	
Cost/SF for Renovated Areas			\$ 3.50	
Cost/SF for New Construction			\$ 399.00	
Estimated Cost Renovated Areas			0	
Estimated Cost New Building Construction			45,123,908	
Estimated Cost for Sitework				inc
<b>Construction Cost (Hard Cost) Subtotal</b>			<b>\$ 45,120,000</b>	
Cost/SF for Building and Sitework				\$
<b>PRELIMINARY BUDGET FOR SOFT COST</b>				
Soft Cost Factor			0.85	
Soft Cost Allowance			\$ 7,980,000	
<b>TOTAL PROJECT BUDGET</b>			<b>\$ 53,100,000</b>	B

**2020 BUILDING IN TODAY'S DOLLARS = \$46.7M**

# Limited Scope Study

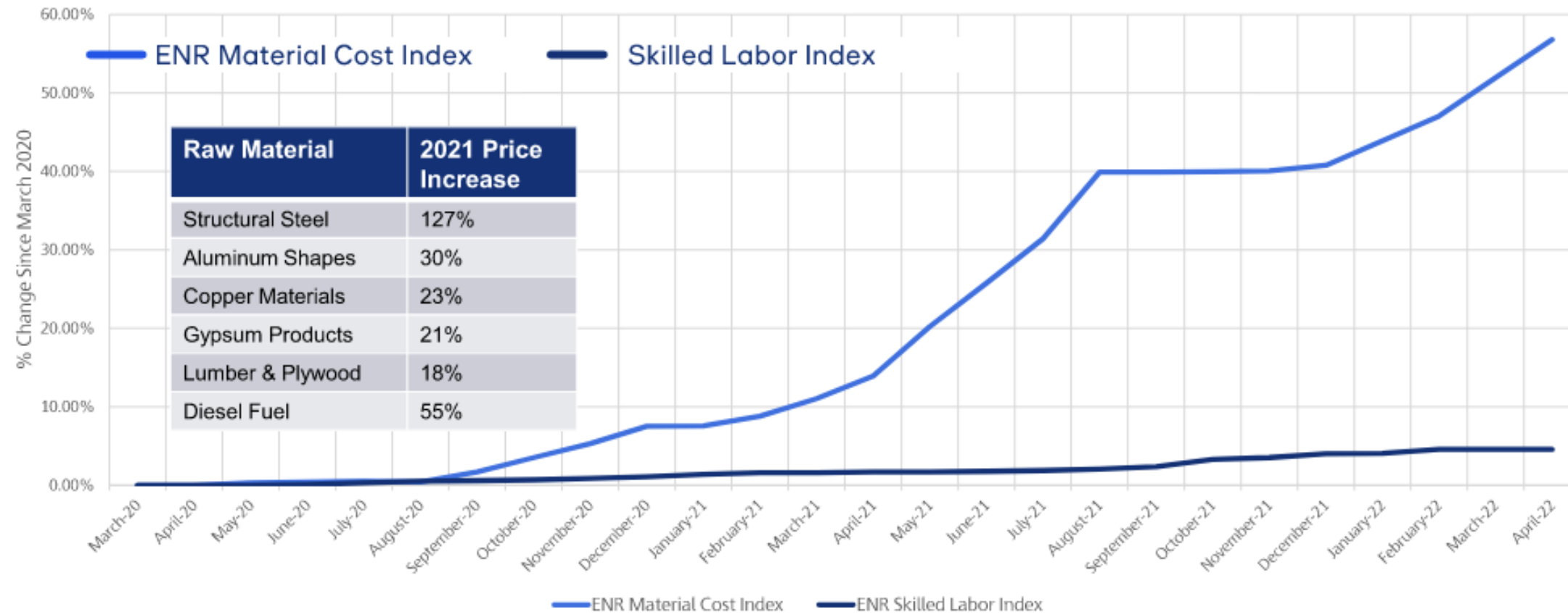
## Building Construction Cost Index and Monthly Escalation – 30 Year History

Note that BCI = Engineering News Record's Building Construction Cost Index which is one of the most widely accepted measures of construction material and labor escalation in the United States



# Limited Scope Study

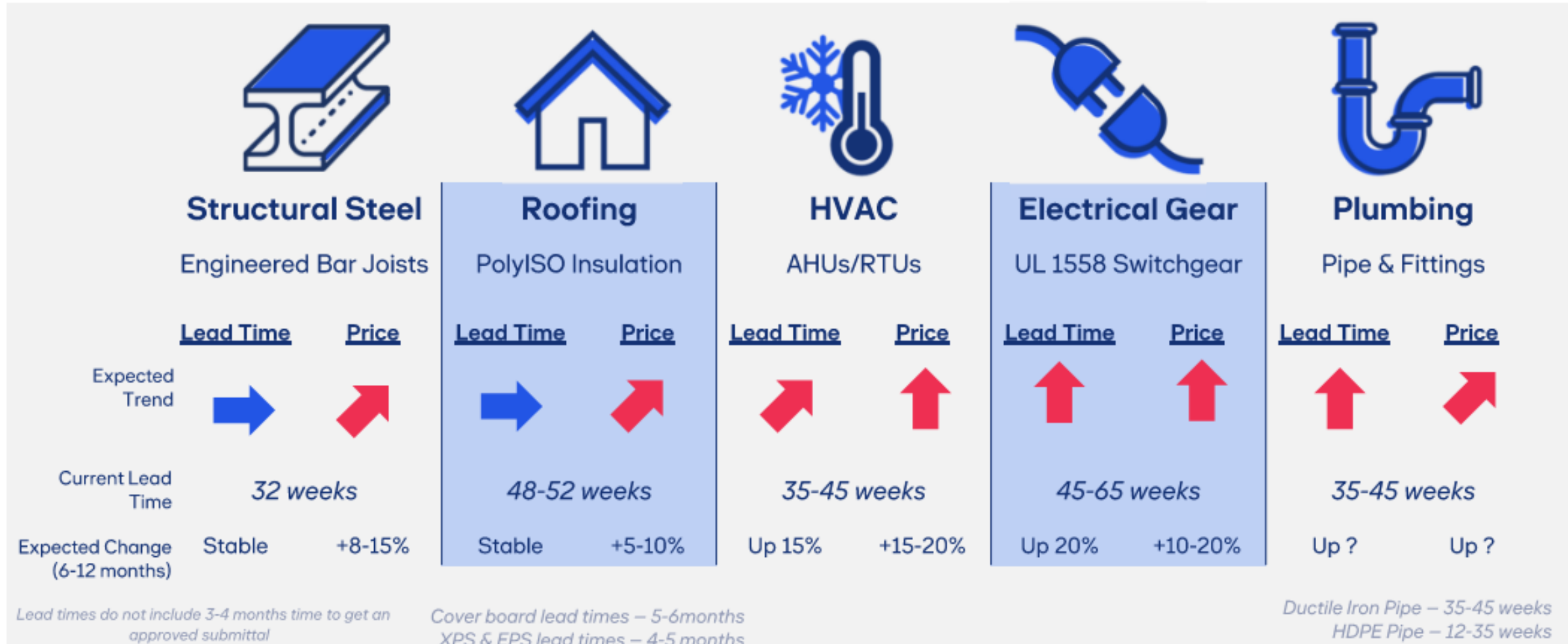
## Construction Input Costs Comparison



# Limited Scope Study

## 2022 Material and Equipment Supply Chain Outlook

*Most Troublesome Categories During 2021 & 2022*



SKANSKA

Updated: 4.21.22

# Limited Scope Study

## *Cost Comparison*

School	Approx. Existing SF	Renovation Cost / SF	\$\$\$
Kling Elementary	32,000	\$200	\$6,400,000
Enderly Elementary	25,000	\$200	\$5,000,000
Parry McCluer Middle	105,000	\$300	\$31,500,000
Total	162,000		\$ 42,900,000
Estimated Soft Costs @ 15%			\$ 6,435,000
Total			\$ 49,335,000

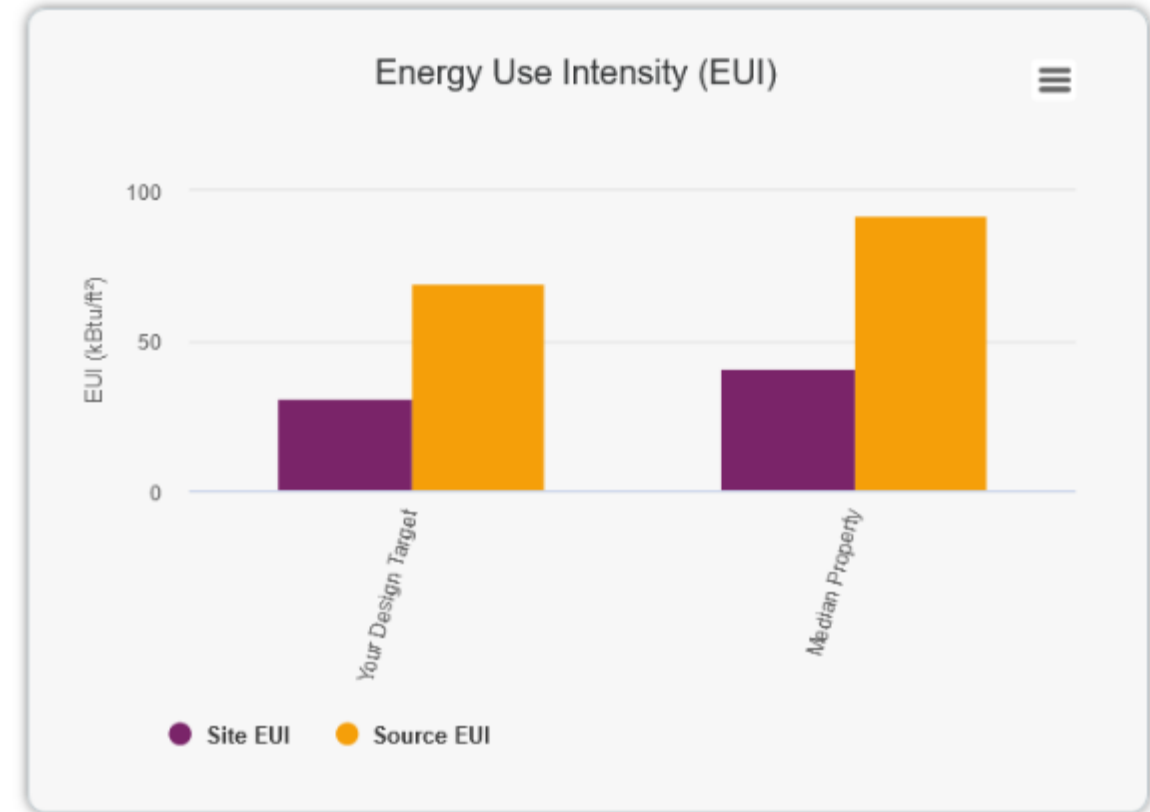
***Programmed Need = 113,000 SF (max) vrs. Total Existing Area = 162,000 SF***  
***Build New PreK-7 = \$53M or Renovate Existing = \$49.5M***

# Limited Scope Study

## *Energy Cost Savings*

Metrics Comparison for Your Design and/or Target

Metric	Design Project	Design Target*	Median Property*
ENERGY STAR score (1-100)	<a href="#">Not Available</a>	75	50
Source EUI (kBtu/ft <sup>2</sup> )	<a href="#">Not Available</a>	69.3	91.6
Site EUI (kBtu/ft <sup>2</sup> )	<a href="#">Not Available</a>	30.7	40.6
Source Energy Use (kBtu)	<a href="#">Not Available</a>	7,829,256.8	10,352,977.3
Site Energy Use (kBtu)	<a href="#">Not Available</a>	3,471,452.0	4,590,457.0
Energy Cost (\$)	<a href="#">Not Available</a>	60,714.28	80,285.22
Total GHG Emissions (Metric Tons CO <sub>2</sub> e)	0.0	273.3	361.3

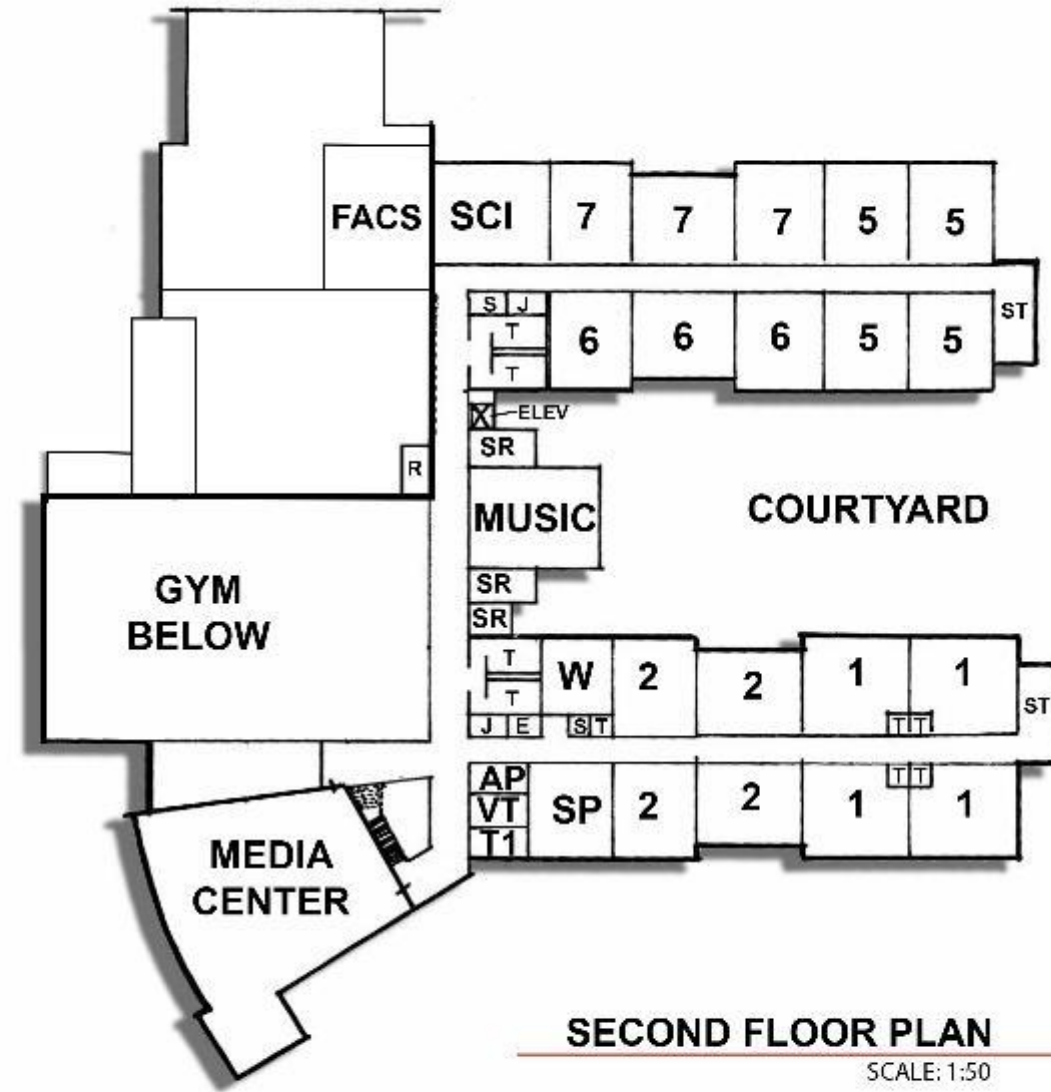
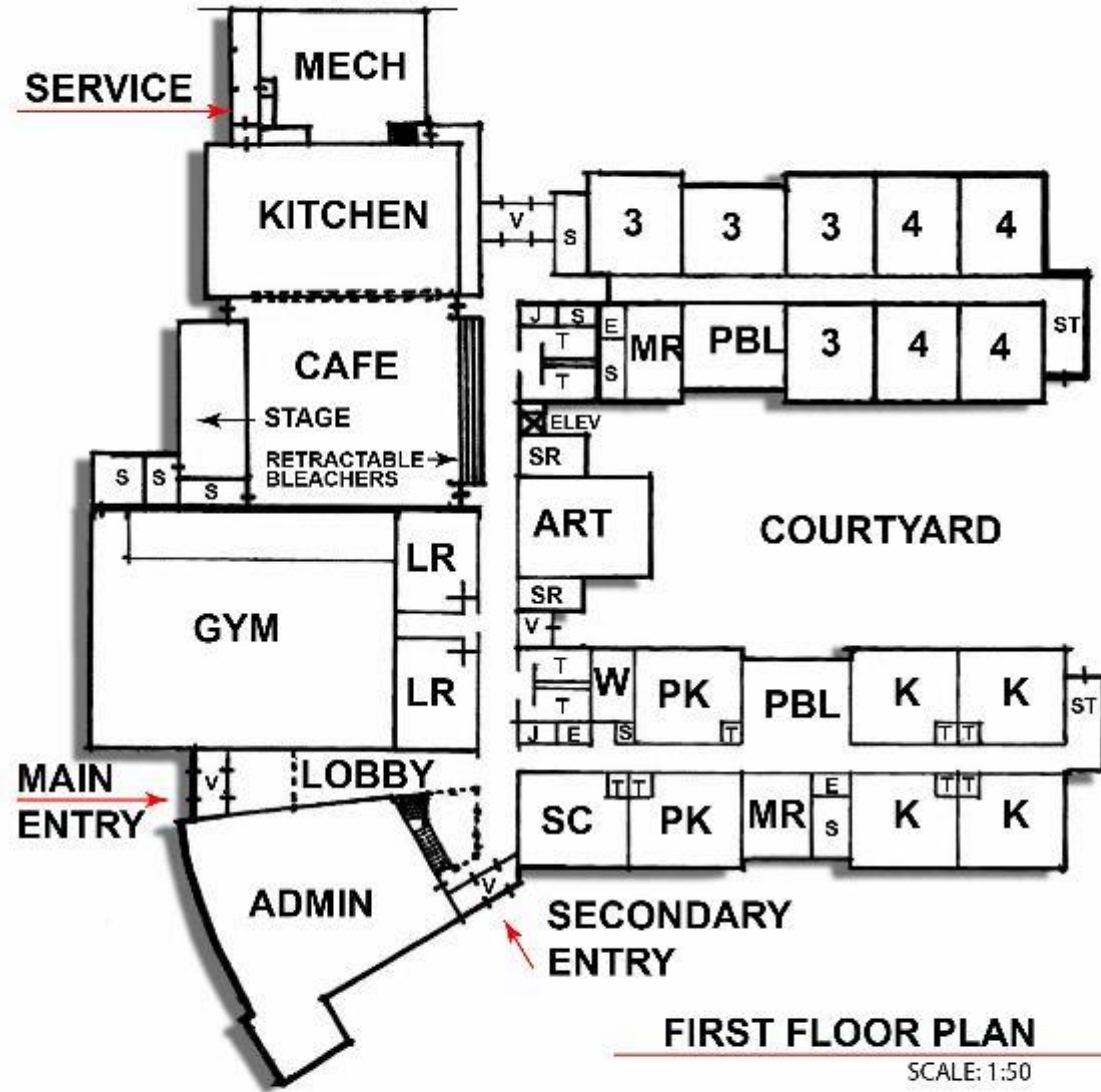


*At Least a 30% Cost Savings in Energy*



# DISCUSSION

# Proposed PK-7 School



TOTAL APPROX. GROSS SF = 99,500

# JOHN KERR ELEMENTARY

Winchester, VA



# John Kerr Elementary



# JOHN KERR ELEMENTARY





# 21<sup>st</sup> Century Learning Environments

