

# W. EDWARD BALMER SCHOOL

FEASIBILITY STUDY

NORTHBRIDGE, MA

School Building  
Committee Meeting

SEPTEMBER 13, 2017



Massachusetts School Building Authority  
*Funding. Affordable. Sustainable. and Efficient Schools in Partnership with Local Communities*



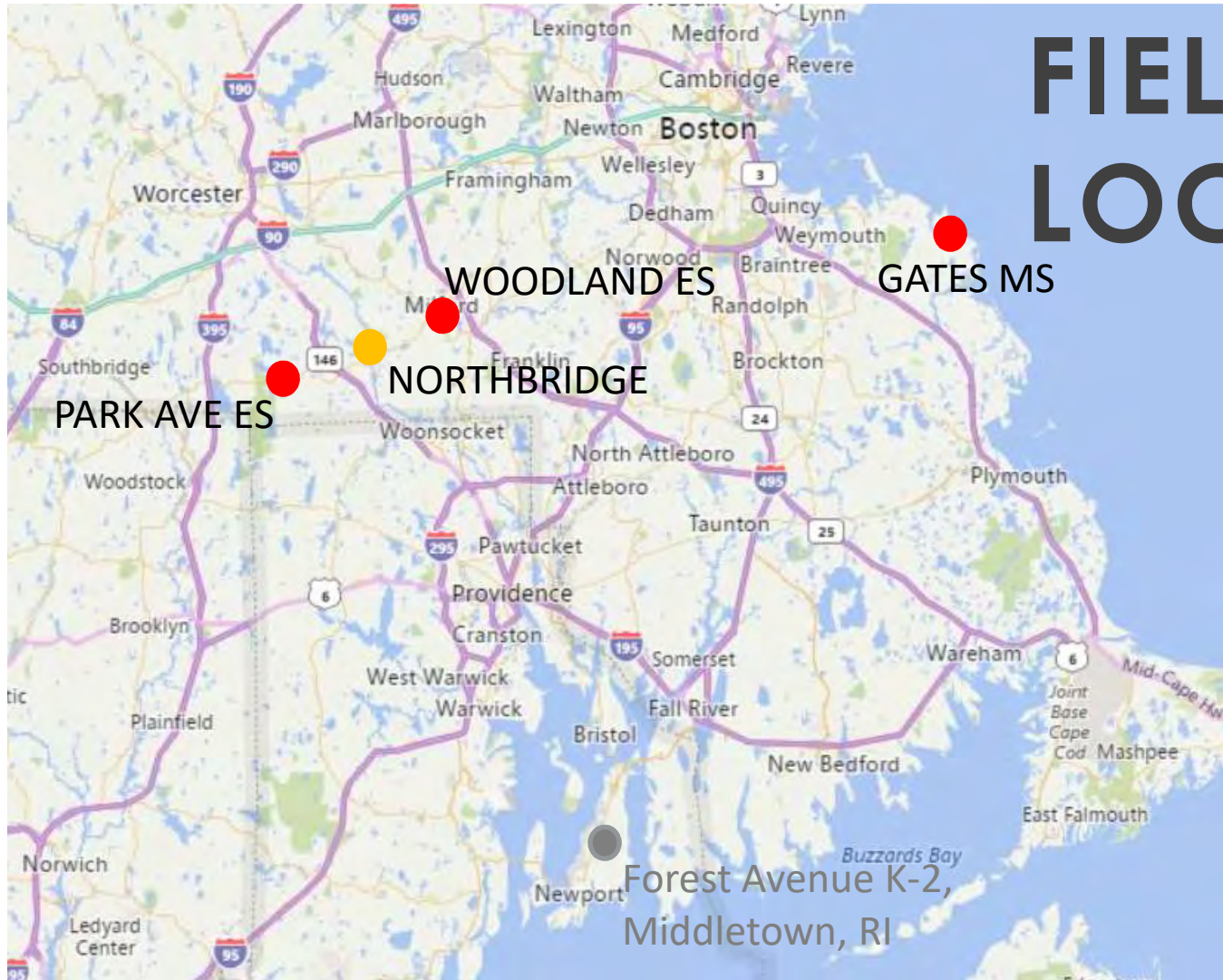


- 
- 1. School Building Tours Report**
  - 2. Green Building & Sustainability Strategy**
  - 3. Space Summary (Program) Update**
  - 4. Design Alternatives Update**
  - 5. Review Preliminary Cost Models**
  - 6. Questions, Comments, Feedback**









# FIELD TRIP LOCATIONS

**FRIDAY  
SEPT 8  
FULL DAY**



## PARK AVENUE ELEMENTARY SCHOOL, WEBSTER, MA

### Grade PK-4 (700 enrollment)

Building Area	109,000 GSF
Total Project Cost	\$43.3M
Project Unit Cost	\$397.25/SF

Dore & Whittier Architects  
Opened 2015

field trip report





## PARK AVENUE ELEMENTARY SCHOOL, WEBSTER, MA



### Reactions:

- Liked use of large areas for presentation
- Liked classroom furniture
- Liked outdoor learning area
- Traditional plan – “silos”
- Sterile, not colorful enough
- Needs more student work displayed
- No teacher collaboration space
- No color navigation



## PARK AVENUE ELEMENTARY SCHOOL, WEBSTER, MA



- Liked corridor wood panels
- Liked displacement ventilation
- Liked “airport-style” toilet rooms
- In-classroom cubbies interesting



- Playgrounds seemed small
- No accessible playground modules
- Play fields too distant from school
- Liked resilient rubber gym floor



## GATES MIDDLE SCHOOL, SCITUATE, MA

### Grade 6-8 (710 enrollment)

Building Area	130,000 GSF
Total Project Cost	\$73.0M (estim.)
Project Unit Cost	\$561.54/SF

Dore & Whittier Architects  
Opened 2017 - Day 4 of operation!

field trip report





## GATES MIDDLE SCHOOL, SCITUATE, MA



- Flexible plan
- Hallerup stair
- Railing concerns
- Liked color palette

field trip report





## GATES MIDDLE SCHOOL, SCITUATE, MA



- Liked teacher collaboration spaces
- Liked sliding glass doors on classrooms
- 1:1 technology BYOD works well
- 2-story “holes” seem wasted – would rather have the floor space
- Principal wants closers off classroom doors

field trip report







GATES MIDDLE SCHOOL,

maker space



SCITUATE, MA

cave space and presentation area



operable write-on partitions



2<sup>nd</sup> level extended learning space



## WOODLAND ELEMENTARY SCHOOL, MILFORD, MA



HMFH Architects  
Opened 2016



### Grade 3-5 (985 enrollment)

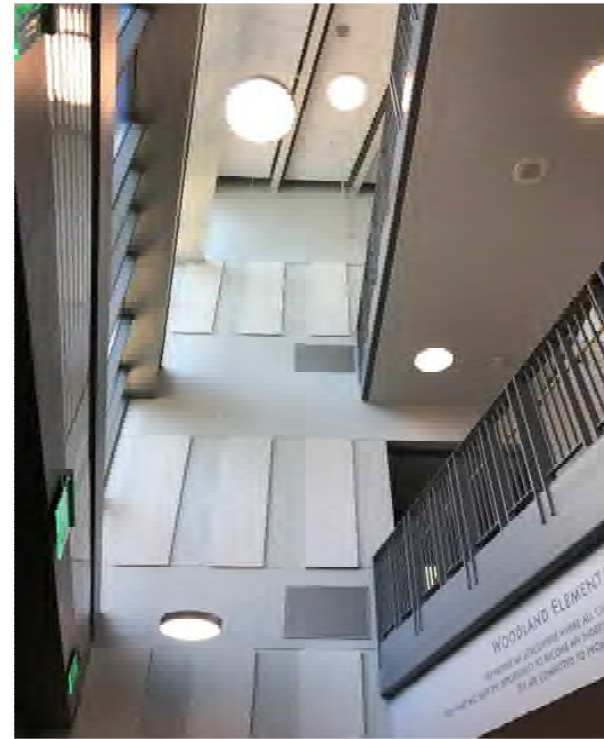
Building Area	132,500 GSF
Total Project Cost	\$60.9M
Project Unit Cost	\$459.49/SF

field trip report





## WOODLAND ELEMENTARY SCHOOL, MILFORD, MA



- Flooded with light
- Liked many interior materials
- Liked vibrant colors
- Welcoming
- Lots of sound control
- Well thought-out and intentional

field trip report





## WOODLAND ELEMENTARY SCHOOL, MILFORD, MA



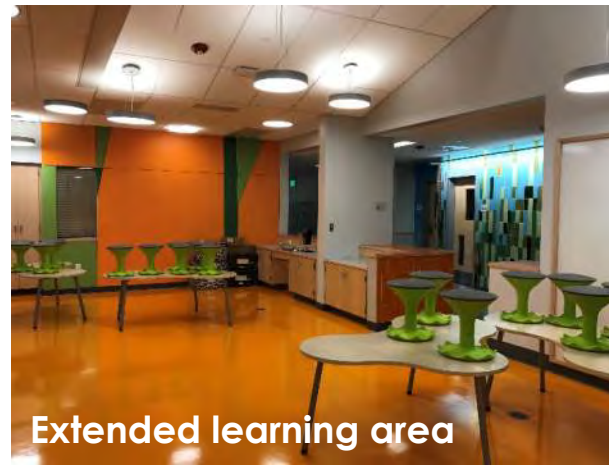
- Liked triangular desks
- Hokki stools as option in classrooms
- Liked built-in features, bay window
- Vibrant colors!
- Sloped ceilings to capture daylight
- Airport-style toilet rooms work well



## WOODLAND ELEMENTARY SCHOOL, MILFORD, MA



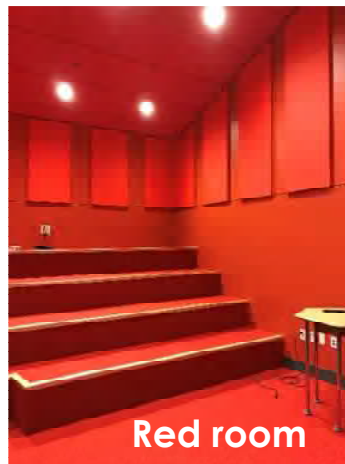
Glass partition



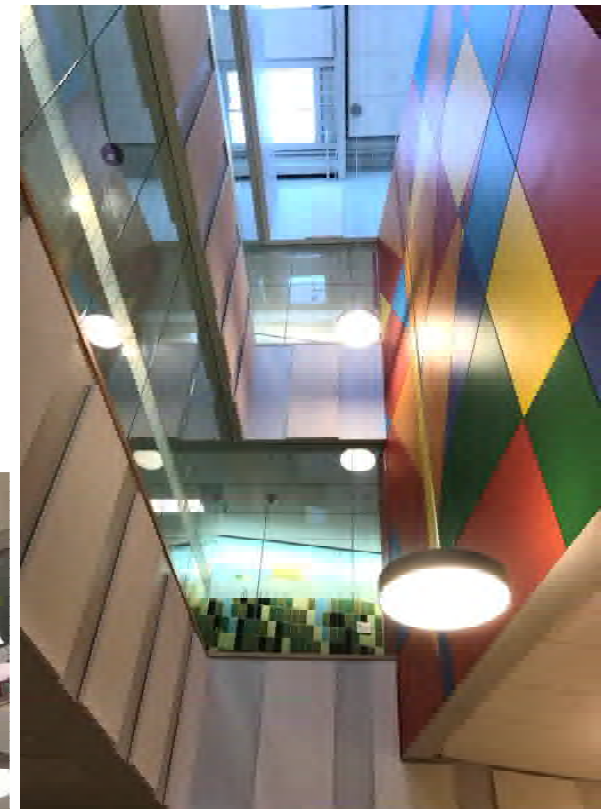
Extended learning area



Locker/counter partition



Red room



Use of vertical dimension/ natural light deep into plan







# **GREEN & SUSTAINABLE STRATEGIES**



# PROPOSED GREEN BUILDING RATING SYSTEM: LEED BD+C for Schools



## Credits or Points in Six Key Categories + *Enhancements*

- Location and Transportation
- Sustainable Site Planning
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- *Innovation*
- *Regional Priority*

Four Levels:

*Certified, Silver, Gold, Platinum*

green strategies





# LEED v4 - Preliminary Credit Checklist



LEED v4 for BD+C: Schools  
Preliminary Project Checklist

Project Name: W. Edward Balmer Elementary School  
Date: 9.8.17

## MSBA Requirements

- Minimum LEED “Certified” level
- Exceed MA Energy Code by 10%
- Bonus reimbursement points (+2%) : exceed energy code by 20%

green strategies

Y	7	N	Credit	Integrative Process	1
1	3	11	Location and Transportation		15
			LEED for Neighborhood Development Location		16
1			Resilient Land Protection		1
	2		High Priority Site		2
	5		Surrounding Density and Diversity Loss		2
		4	Access to Quality Transit		4
	1		Bicycle Facilities		1
	1		Reduced Parking Footprint		1
	1		Green Vehicles		1
4	7	1	Sustainable Sites		12
Y			Construction Activity Pollution Prevention	Required	
Y			Environmental Site Assessment	Required	
			Site Assessment		1
	2		Site Development - Protect or Restore Habitat		2
			Open Space		1
	3		Rainwater Management		2
	2		Heat Island Reduction		2
			Light Pollution Reduction		1
		1	Site Master Plan		1
	1		Joint Use of Facilities		1
8	1	6	Water Efficiency		12
Y			Outdoor Water Use Reduction	Required	
Y			Indoor Water Use Reduction	Required	
Y			Building-Level Water Metering	Required	
	2		Outdoor Water Use Reduction		2
	2	1	Indoor Water Use Reduction		7
		5	Cooling Tower Water Use		2
			Water Metering		1
14	12	5	Energy and Atmosphere		31
Y			Fundamental Commissioning and Verification	Required	
Y			Minimum Energy Performance	Required	
Y			Building-Level Energy Metering	Required	
Y			Fundamental Refrigerant Management	Required	
	5	1	Enhanced Commissioning		6
	2	3	Optimize Energy Performance		16
			Advanced Energy Metering		1
		2	Demand Response		2
			Renewable Energy Production		2
	1		Enhanced Refrigerant Management		1
	2		Green Power and Carbon Climate		2

4	8	4	Materials and Resources		13
Y			Storage and Collection of Recyclables	Required	
Y			Construction and Demolition Waste Management Planning	Required	
	3		Building Life-Cycle Impact Reduction		5
	1	1	Building Product Disclosure and Optimization - Environmental Product Declarations		3
			Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
			Building Product Disclosure and Optimization - Material Ingredients		2
			Construction and Demolition Waste Management		2
8	7	1	Indoor Environmental Quality		16
Y			Minimum Indoor Air Quality Performance	Required	
Y			Environmental Tobacco Smoke Control	Required	
Y			Minimum Acoustic Performance	Required	
	2		Enhanced Indoor Air Quality Strategies		2
	1	2	Low-Emitting Materials		3
			Construction Indoor Air Quality Management Plan		1
	2		Indoor Air Quality Assessment		2
		1	Thermal Comfort		1
	1	1	Interior Lighting		2
		3	Daylight		3
	1		Quality Views		1
			Acoustic Performance		1
3	3	6	Innovation		6
	1		Innovation: TBD		1
			Innovation: TBD		1
			Innovation: TBD		1
			Innovation: TBD		1
			Innovation: TBD		1
			LEED Accredited Professional		1
3	1	0	Regional Priority		4
	1		Regional Priority: LT3, LT4, WE01, EA05, EA06, MR01		1
			Regional Priority: LT3, LT4, WE01, EA05, EA06, MR01		1
			Regional Priority: LT3, LT4, WE01, EA05, EA06, MR01		1
			Regional Priority: LT3, LT4, WE01, EA05, EA06, MR01		1

43 39 28 TOTALS

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

Possible Points: 110





# US EPA- Preliminary Energy Target



Building Characteristics Assumptions				
City: Northbridge			State: MA	
Space Type	Gross Floor Area	Number of Students	Number of Workers	Months in use
K-12 School	173,000 *	1030	165	12 (assumed)
	Wkend Operation	Cooking Facilities	% Heated	% Cooled
	No	Yes	100	50

ENERGY TARGETS (1)				
Energy Performance Rating	50 (Median)	90	95	100
Energy Use Reduction (%)	0%	38.0%	45.9%	61.8%
Source Energy Use Intensity (kBtu/sf/yr)	107.1	66.5	57.9	40.9
Site Energy Use Intensity (kBtu/sf/yr)	67.3	41.7	36.4	25.7
Total Annual Source Energy (MBtu)	18,534	11,497	10,019	7,075
Total Annual Site Energy (MBtu)	11,641	7,221	6,293	4,444
Energy Cost Reduction (%)	0%	38.0%	45.9%	61.8%
Total Annual Energy Cost (\$)	\$ 216,577	\$ 134,350	\$ 117,078	\$ 82,675
Δ (change in energy cost)	n/a	\$ (82,227)	\$ (99,499)	\$ (133,902)
co2 Emissions (Metric Tons CO2e /yr)	689.5	427.7	372.7	263.2
Δ (change in CO2 emission)	n/a	(262)	(317)	(426)
CO2 Emissions Reduction (%)	0%	38.0%	45.9%	61.8%

\* Assumes [26]% electricity and [74]% natural gas. Baseline Energy Star Median / CBECS data.

\*Larger PK-5 building option shown; smaller option similar

## MSBA Requirements

- Minimum Energy Performance Rating = 95
- Translates to Energy Use Intensity (EUI) of mid-30's
- Recent D&W project: EUI 37.7

green strategies









# DESIGN ALTERNATIVES

Grade 2-4  
Option

MSBA-  
Reimbursed  
Project

Future  
Projects

## EXISTING SITE

2<sup>nd</sup> -4<sup>th</sup>  
(510)

Balmer ES

- NEW
- ADD/  
RENO

PK-1<sup>st</sup>

NES

5<sup>th</sup>-8<sup>th</sup>

NMS

9<sup>th</sup>-12<sup>th</sup>

NHS

District  
Offices

Admin Bldg.

feasibility study



# DESIGN ALTERNATIVES

## Grade PK-5 Option

MSBA-  
Reimbursed  
Project

Future  
Projects

### EXISTING SITE

PK-5  
(1030)

Balmer ES

- NEW
- ADD/  
RENO

RE-  
PURPOSED

NES

6<sup>th</sup>-8<sup>th</sup>  
Internal  
Reorg.

NMS

9<sup>th</sup>-12<sup>th</sup>

NHS

District  
Offices

Admin Bldg.

feasibility study



## PROPOSED SPACE SUMMARY (*UPDATED DRAFT*)

### Grade 2-4 Option (510 enrollment):

- Existing (Balmer): 71,871 GSF
- Proposed (meets MSBA standard): 83,163 GSF
- **Existing Balmer School is 13.5% undersized**

### Grade PK-5 Option (1030 enrollment):

- Existing (Balmer + NES) 128,431 GSF
- Proposed (meets MSBA standard): 172,845 GSF
- **Existing Balmer + NES space is 25.7% undersized**





# PROPOSED SPACE SUMMARY HIGHLIGHTS

## Grade PK-5 Option (1030 enrollment):

- 4 PK, 9 K, and 8 per grade 1-5 classrooms
- Extended Learning Spaces
- Teacher Planning Spaces
- Maker Spaces (3)
- Special Education:
  - Classrooms
  - Small group support spaces
  - Resource Rooms
  - OT/PT, Adaptive PE
  - Teacher spaces
- Art Rooms (2)
- Music Rooms (2)
- (1) 6,000 SF Gym w/ 3-row bleacher
- Media Center – central and distributed
- Cafeteria with differentiated sections
- Nurse's office
- School Administration Offices including mail, copy, conference room, etc.
- Counseling Offices
- Custodial/ Maintenance/ Mechanical
- Parents/Community Room





# PROPOSED SPACE SUMMARY HIGHLIGHTS

## Grade 2-4 Option (510 enrollment): “Generally the same, but less/smaller”

- 8 per grade 2-4 classrooms
- Extended Learning Spaces
- Teacher Planning Spaces
- Maker Space (1)
- Special Education:
  - Classrooms
  - Small group support spaces
  - Resource Rooms
  - OT/PT
  - Teacher spaces
- Art Room (1)
- Music Room (1)
- (1) 6,000 SF Gym w/ 3-row bleacher
- Media Center – central and distributed(?)
- Cafeteria with differentiated sections
- Nurse's office
- School Administration Offices including mail, copy, conference room, etc.
- Counseling Offices
- Custodial/ Maintenance/ Mechanical
- Parents/Community Room

space planning





# DISTRICT ADMINISTRATION SPACE ANALYSIS

## ASSESSMENT AND PROGRAM HIGHLIGHTS

- Stately Residential Building, but ill-equipped for Office use
- Serious Issues: Client Privacy, Handicapped Accessibility, meeting space, file space, safe storage space for vital records, indoor environment (hot/cold), no sprinkler, possible structural concerns...

## RESULTS:

- |                                      |                |
|--------------------------------------|----------------|
| • Existing space, totals             | 4,718 Net SF   |
| • Recommended proposed space, totals | 5,485 Net SF   |
| • Proposed total required space      | 8,228 Gross SF |



space planning





# MIDDLE SCHOOL CAPACITY ANALYSIS (UPDATED)

## EXISTING MS SPACE UTILIZATION

Existing Overall Building area: 176,340 GSF

District Maintenance/Storage - 11,476 GSF

Effective Middle School use: 164,864 GSF

Existing MS Educational Program area: 96,979 NSF

*1.70 Grossing Factor (ratio of gross to net SF) – indicates an older, less-space-efficient building.*

*MSBA benchmark is (1.5) .*

space planning





# MIDDLE SCHOOL CAPACITY ANALYSIS (UPDATED)

**CASE 1 - Existing Grades 5-8 (735 enrollment);**

**Proposed Grades 6-8 (~551 enrollment):**

Existing Educational Program:	96,979 NSF
<u>← 5<sup>th</sup> Grade moves to Balmer</u>	<u>- 7,536 NSF</u>
Subtotal	89,443 NSF
<u>→ Add Central Admin Offices</u>	<u>+ 5,485 NSF</u>
<u>Existing District Maintenance/Storage</u>	<u>+ 7,651 NSF</u>
Total Net Area Occupied	102,579 NSF
<u>Grossing Factor</u>	<u>X 1.5</u>
Total Gross Area Occupied	153,869 GSF
Existing MS Area:	176,340 GSF
Delta (underutilized or additional capacity)	22,471 GSF

space planning





# MIDDLE SCHOOL CAPACITY ANALYSIS (UPDATED)

Option discussed:

- move 5<sup>th</sup> grade to Balmer
- relocate all classes in 1905 wing to the rest of the Middle School
- “mothball” 1905 wing, due to its poor condition.

Taking 1905 building offline	42,079 GSF
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Delta (additional capacity) from previous slide	<b>22,471 GSF</b>
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***Therefore, there is not enough space in the building to accommodate a Grade 6-8 program, AND add Central Administration, AND keep District Maintenance, AND mothball the 1905 wing.***





# MIDDLE SCHOOL CAPACITY ANALYSIS (UPDATED)

## CASE 2 - TRY TO TAKE 1905 WING OFFLINE:

Existing Educational Program:	96,979 NSF
→ Renovate Maint/Stor. to Educational Space	+ 7,651 NSF
← 5 <sup>th</sup> Grade moves to Balmer	- 7,536 NSF
Subtotal	97,094 NSF
← Keep Central Admin Offices in 87 Linwood Ave	0
Total Net Area Occupied	97,094 NSF
Grossing Factor	X 1.5
Total Gross Area Occupied	145,641 GSF
Existing MS Area:	176,340 GSF
Delta (underutilized or additional capacity)	30,699 GSF
Taking 1905 building offline	42,079 GSF – still not enough space

space planning





# MIDDLE SCHOOL CAPACITY ANALYSIS (UPDATED)

## CONCLUSIONS:

- This space analysis is high-level, base purely on gross and net area (SF) and does not address detail-level realities in the building.
- There is often program mismatch in Middle School educational spaces; e.g. small-sized class meeting in a large room.
- The District should do a room-by-room study of the Case 2 scenario:
  - Move out 5<sup>th</sup> grade to new/renovated Balmer ES
  - Renovate storage/underutilized space on ground level C wing to educational space (keep District Maintenance shops)
  - Relocate all classes in 1905 wing to the rest of the Middle School on a room by room basis, with intent to mothball 1905 wing.

Maybe it can work?







# DESIGN ALTERNATIVES UPDATE



## A SERIES (RENO ONLY)

- A1**  
2 - 4  
Balmer ES
- RENOVATIONS TO EXISTING BUILDINGS
- CODE AND DEFERRED MAINTENANCE UPGRADES
- A2**  
PK-1<sup>st</sup>  
NES
- NO EDUCATIONAL IMPROVEMENTS

**NON- MSBA-  
Reimbursed  
Projects**

## B SERIES (GRADE 2-4)

- B1**  
RENO/  
ADD  
Balmer ES
- B2**  
NEW/  
REAR
- B3**  
NEW/  
FRONT

**MSBA-  
Reimbursed  
Projects**

## C SERIES (GRADE PK-5)

- C1**  
RENO/ADD  
DEMO CR  
Balmer ES
- C2**  
RENO/ADD  
KEEP CR  
Balmer ES
- C3**  
NEW/  
REAR
- C4**  
NEW/  
EAST-REAR
- C5**  
NEW/  
FRONT

**MSBA-  
Reimbursed  
Projects**

# DESIGN ALTERNATIVES

preliminary design





# OPTION A – CODE AND DEFERRED MAINTENANCE UPGRADES

To extend the life of the building, this option addresses:

- deferred maintenance
- code deficiencies
- life safety issues
- basic functional deficiencies
- Assumes projects will be undertaken over time, with like items grouped together, but still not as cost-efficient as wholesale renovation.
- Does not address any educational program issues
- **This work is not MSBA-reimbursable**





# OPTION B1 2-4 (510)

## LEGEND

1. VAIL FIELD
2. BUS ENTRANCE
3. CAR ENTRANCE
4. RAIN GARDEN
5. VISITOR PARKING
6. BUS DROP-OFF
7. PLAYGROUND
8. CAR DROP-OFF
9. EXISTING BLDG.
10. ADDITION
11. OUTDOOR LEARNING
12. ONE-WAY EXIT
13. PLAY FIELDS
14. NATURE TRAIL
15. WETLAND

**ADD/RENO – ONE STORY ADDITION**



preliminary design





# OPTION B1 – 2-4 RENO/ADD

## PRELIMINARY PHASING PLAN:

1. Y1 Q2-4, Y2 Q1: Build new addition – one grade, one story – as swing space.
2. Y2 Q2-3: Move one grade to addition, renovate vacant existing space
3. Y2 Q4: Small reno projects on vacations
4. Y3 Q2-3: Move another grade to addition, renovate vacant existing space
5. Y3 Q4: Small reno projects on vacations
6. Y4 Q2-3: Renovate all remaining core spaces; all site work; turn over

preliminary design





# OPTION B2

## 2-4 (510)

### LEGEND

1. VAIL FIELD
2. BUS ENTRANCE
3. CAR ENTRANCE
4. RAIN GARDEN
5. GRADE 2 (1 ST.)
6. CORE SPACES
7. GRADE 3-4 (2 ST)
8. DRY SWALE
9. CAR DROP OFF
10. BUS DROP OFF
11. PLAY FIELD
12. PLAYGROUND
13. WETLAND
14. NATURE TRAIL
15. OUTDOOR LEARNING
16. BIKE-PED PATH

**NEW CONSTRUCTION – TWO STORIES**



preliminary design





# OPTION B3 2-4 (510)

## LEGEND

1. PLAY FIELDS
2. BUS ENTRANCE
3. CAR ENTRANCE
4. LEARNING GARDEN
5. PLAYGROUND
6. GRADE 2 (1 ST.)
7. CORE SPACES
8. GRADE 3-4 (2 ST.)
9. CAR DROP OFF
10. BUS DROP OFF
11. RAIN GARDEN
12. NEW VAIL FIELD
13. WETLAND
14. NATURE TRAIL
15. BIKE-PED PATH

**NEW CONSTRUCTION – TWO STORIES**



preliminary design





# OPTION C1

## PK-5 (1030)

### LEGEND

1. VAIL FIELD
2. BUS ENTRANCE
3. CAR ENTRANCE
4. RAIN GARDEN
5. VISITOR PARKING
6. BUS DROP OFF
7. PLAYGROUND
8. CAR DROP OFF
9. EXISTING BUILDING
10. ADDITIONS
11. OUTDOOR LEARNING
12. ONE-WAY EXIT
13. PLAYFIELDS
14. NATURE TRAIL
15. WETLAND

**ADD/ RENO – TWO and THREE STORIES**



preliminary design





# OPTION C1 – PK-5 RENO/ADD

## PRELIMINARY PHASING PLAN:

1. Y1 Q2-4, Y2 Q1: Enabling site work; Build new addition for grades 2-5; Includes new mechanical room for all.
2. Y2 Q2-3: Move grades 2-4 to addition, use Grade 5 addition space for specials temporarily; demolish existing 2-story classroom wing
3. Y2 Q4, Y3 Q1-2: Build new addition for grades PK-1 plus new gym addition; small reno/enabling projects over vacations
4. Y3 Q3-4, Y4 Q1: use lower school addition as temp swing space for specials and admin; renovate existing core space
5. Y4 Q2-3: Summer to complete core reno, move PK-1 from NES, and tie together; all remaining site work; turn over.

preliminary design





**OPTION C2**  
**PK-5 (1030)**

## LEGEND

1. VAIL FIELD
2. BUS ENTRANCE
3. CAR ENTRANCE
4. RAIN GARDEN
5. VISITOR PARKING
6. BUS DROP OFF
7. PLAYGROUND
8. CAR DROP OFF
9. EXISTING BLDG.
10. ADDITIONS
11. OUTDOOR LEARNING
12. EXIT (ONE-WAY)
13. PLAY FIELDS
14. NATURE TRAIL
15. WETLAND

# ADD/RENO – THREE STORIES



# preliminary design





# OPTION C3 PK-5 (1030)

## LEGEND

1. VAIL FIELD
2. ENTRY/EXIT
3. RAIN GARDEN
4. DRY SWALE
5. PLAY FIELDS
6. NEW SCHOOL
7. CAR DROP OFF
8. PK-K DROP-OFF
9. PLAYGROUND
10. BUS DROP OFF
11. OUTDOOR LEARNING
12. NATURE TRAIL
13. WETLAND
14. BIKE-PED PATH

**NEW CONSTRUCTION – THREE STORIES**



preliminary design





# OPTION C4 PK-5 (1030)

## LEGEND

1. VAIL FIELD
2. CAR ENTRANCE
3. BUS ENTRANCE
4. RAIN GARDEN
5. DRY SWALE
6. PLAY FIELD
7. CAR DROP OFF
8. PLAYGROUND
9. PK-K DROP OFF
10. NEW BUILDING
11. BUS DROP OFF
12. OUTDOOR LEARNING
13. WETLAND
14. NATURE TRAIL
15. ONE-WAY EXIT

**NEW CONSTRUCTION – TWO STORIES**



preliminary design





# OPTION C5 PK-5 (1030)

## LEGEND

1. PLAY FIELDS
2. PLAYGROUND
3. OUTDOOR LEARNING
4. UPPER SCHOOL
5. CORE SPACES
6. LOWER SCHOOL
7. BUS DROP OFF
8. CAR DROP OFF
9. RAIN GARDEN
10. NEW VAIL FIELD
11. WETLAND
12. NATURE TRAIL
13. PATHWAY

NEW CONSTRUCTION – THREE STORIES



preliminary design







# CONCEPTUAL COST ESTIMATES





## A SERIES (RENO ONLY)

<b>A1</b> 2 - 4 Balmer ES <b>\$32.7M</b>	<ul style="list-style-type: none"> <li>• RENOVATIONS TO EXISTING BUILDINGS</li> <li>• CODE AND DEFERRED MAINTENANCE UPGRADES</li> </ul>
<b>A2</b> PK-1 <sup>st</sup> NES <b>\$20.3M</b>	<ul style="list-style-type: none"> <li>• NO EDUCATIONAL IMPROVEMENTS</li> </ul>

**\$ 53.0M total**

**NON-MSBA-  
Reimbursed  
Project(s)**

## B SERIES (GRADE 2-4)

<b>B1</b> RENO/ ADD <b>\$53.6M</b>	
<b>B2</b> NEW/ REAR <b>\$58.3M</b>	<b>B3</b> NEW/ FRONT <b>\$57.5M</b>

**MSBA-  
Reimbursed  
Project**

## C SERIES (GRADE PK-5)

<b>C1</b> RENO/ADD DEMO CR <b>\$107.9M</b>	<b>C2</b> RENO/ADD KEEP CR <b>\$102.4M</b>	
<b>C3</b> NEW/ REAR <b>\$104.7M</b>	<b>C4</b> NEW/ EAST-REAR <b>\$113.1M</b>	<b>C5</b> NEW/ FRONT <b>\$104.1M</b>

**MSBA-  
Reimbursed  
Project**

**CONCEPTUAL TOTAL PROJECT COST ESTIMATES**





**THANK YOU**



**DORE & WHITTIER  
ARCHITECTS, INC.**