

Madison New Elementary School Project

Board of Education Update
on Budget, Education Specifications,
and Value Engineering

12/13/2022 Meeting

Informational Update and Feedback
No Formal Vote or Approvals
Needed at This Meeting

Town of Madison

New PreK-5 Elementary School

Schematic Design (\$000's)

12/01/2022		A1	B1	C1	A	B	C	D	
	A/E Control Budget 5/24/2022	Estimate for Review			Revised Post Recon Meeting			Reconciled Estimate Date	
		PACS	Gilbane	Difference (A1 - B1)	PACS	Gilbane	Difference (A - B)		
		11/15/2022	11/15/2022		11/28/2022	11/22/2022			
k. Offsite Gas		172.9	0.0	172.9	0.0	0.0	0.0	0.0	
l. Other (Phasing and Utilities Premiums)		125.0	0.0	125.0	125.0	0.0	125.0	62.5	
C. Building Demolition									
a. Selective Building Demolition		\$ -	\$ -	0.0	\$ -	\$ -	0.0	\$ -	
b. Entire Building Demolition / Raising		\$ -	\$ -	0.0	\$ -	\$ -	0.0	\$ -	
D. Hazardous Materials									
a. Selective Site Remediation - Soils		\$ -	\$ -	0.0	\$ -	\$ -	0.0	\$ -	
b. Facility Remediation		\$ -	\$ -	0.0	\$ -	\$ -	0.0	\$ -	
- Asbestos Abatement		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Lead Abatement		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- PCB Abatement		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Mold Abatement		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
E. Sustainable Elements									
a. Solar Panels (NOT USED, SEE ABOVE DIV 26)		\$ -	\$ -	0.0	\$ -	\$ -	0.0	\$ -	
b. Geothermal Wells	500.0	\$ 1,437.59	\$ 1,785.68	-348.1	\$ 1,563.59	\$ 1,785.68	-222.1	\$ 1,674.60	
Total Related Construction	\$ 9,523.8	\$ 10,305.4	\$ 8,479.4	1,826.0	\$ 9,180.8	\$ 8,751.4	429.4	\$ 8,966.0	
Total Construction before Markups	\$ 40,844.1	\$ 48,735.5	\$ 42,274.0	6,461.6	\$ 42,169.6	\$ 41,530.8	638.8	\$ 41,850.3	
F. Design and Pricing Contingency	included	3,741.9	3,150.7	591.3	7.25%	3,269.7	3,081.8	187.9	3,175.7
G. Performance Bond	included	381.9	342.7	39.2	0.60%	334.1	335.4	(1.3)	334.8
H. Insurance	included	1,740.5	1,662.0	78.6	2.91%	1,520.8	1,626.9	(106.1)	1,573.9
I. Permits (If by GC or CM)	included	0.0	0.0	0.0	0.00%	0.0	0.0	0.0	0.0
J. CM Contingency (CM Only)	included	1,247.3	1,125.2	122.1	2.50%	1,089.9	1,100.6	(10.8)	1,095.3
K. General Conditions	included	1,891.2	1,891.2	0.0		1,891.2	1,891.2	0.0	1,891.2
L. General Requirements	included	1,156.8	1,425.9	(269.1)		1,425.8	1,213.8	212.0	1,425.8
M. Overhead and Profit / Fee (CM Fee)	included	1,088.5	970.9	117.6	1.70%	952.4	970.9	(18.5)	961.7
N. State Education Fund	included	16.5	11.4	5.1	0.03%	14.5	11.2	3.3	12.8
Total Markups	Included	\$ 11,264.7	\$ 10,580.0	684.7		\$ 10,498.4	\$ 10,231.9	266.5	\$ 10,471.2
Construction w/Mark-ups before Escalation	\$ 40,844.1	\$ 60,000.2	\$ 52,854.0	7,146.2		\$ 52,668.0	\$ 51,762.8	905.3	\$ 52,321.5
III. Escalation	\$ 5,765.8	\$ 4,929.6	\$ 4,257.9	671.7	5.5%	\$ 4,307.8	\$ 4,164.8	142.9	4,236.3
Total Estimated Construction	\$ 46,609.9	\$ 64,929.8	\$ 57,111.9	7,817.9	18.8%	\$ 56,975.8	\$ 55,927.6	1,048.2	\$ 56,557.8
Variance to Budget (Over)/Under		(18,319.9)	(10,502.0)			(10,365.9)	(9,317.7)		(9,947.9)
<i>Markups % (excl GCs, GRs)</i>		<i>23.1%</i>	<i>25.0%</i>			<i>17.0%</i>	<i>17.2%</i>		<i>17.1%</i>
Building Construction - Current (\$/GSF)	357.9	409.7	361.8	47.9		351.7	350.9	0.8	351.3
Building Construction - Current (\$/GSF) - incl Markups, excl Escalation	357.9	504.4	452.3	52.1		439.2	437.4	1.9	438.3
Total Construction - Current (\$/GSF)	532.6	692.2	611.4	80.8		607.4	598.7	8.7	603.1
Proposed Alternates		New Construction			Alternates Total				
Alternate No 1 - Ryerson Demolition		\$ -	\$ -	0.0	\$ 1,537.60	\$ -	1,537.6	1,537.6	
Alternate No 2 - Fire Pump (incl Feeder and ATS)		\$ -	\$ -	0.0	\$ 148.80	\$ -	148.8	148.8	
Alternate No 3 - Natural Gas		\$ -	\$ -	0.0	\$ 225.50	\$ -	225.5	225.5	
Alternate No 4 - PV system on Roof		\$ -	\$ -	0.0	\$ 2,760.12	\$ -	2,760.1	2,760.1	
Alternate No 5 -		\$ -	\$ -	0.0	\$ -	\$ -	0.0	0.0	
Alternate No 6 -		\$ -	\$ -	0.0	\$ -	\$ -	0.0	0.0	
Alternates Total		\$ -	\$ -	0.0	\$ 4,672.0	\$ -	0.0	\$ 4,672.0	

Budget vs Schematic Design Estimate - Update for BOE

-Estimates were conducted and reconciled by two professional construction cost estimators based on the current Schematic Design of the building

-The project is trending over budget by approximately \$9.9M (\$56.5M reconciled estimate vs \$46.6 budget)

-The reasons for the overwhelming majority of the overage are fairly clear:

- The budget was developed and referendum passed prior to the rapid recent increases in construction prices

- The budget was developed and referendum passed prior to the increased projected enrollment that added 4 classrooms to the project

-The project does not need to "cut" \$9.9M at this point. However, value engineering items need to be vetted and accepted to ensure that the resulting projected costs, the remaining design contingencies and similar budgeting tools, and scope/design are acceptable to the town and the budget prior to proceeding with the rest of the design phases.

Budget vs Schematic Design Estimate - Update for BOE

-Much of the Value Engineering (VE) effort has evolved around materiality changes or other building components not dictated by the Education Specifications. It is anticipated that these items will comprise the bulk of the VE savings

- e.g., changing bluestone pavers to stamped concrete
- e.g., reducing the amount of site seat walls

-Some of the VE effort has also explored some items within the education specifications that might be altered to capture cost savings without wholesale elimination of programming

-e.g., the elimination of the 'additional' 4 classrooms resulting from the population increase is not currently being contemplated for value engineering

-e.g., however, to help make room for those 4 classrooms, the sizes of some of the other classrooms and similar spaces, along with corridors and other non-programmatic spaces have been preliminarily reviewed to identify potential cost reductions

-Some of the makeup of existing spaces has also been reviewed for potential cost savings

-e.g., radiant flooring in PreK / K

-e.g., the makeup of kitchen equipment in the Education Specifications that is larger than at other schools of similar population and does not physically fit well within the square footage allotted

-e.g., in-classroom restrooms within Grades 1 and 2

-In all, over \$750k - \$1M in savings could be captured by modifying some of the elements within the Education Specifications

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Client/ Contractor
MADISON PUBLIC SCHOOLS
 10 Campus Drive
 Madison, CT, 06443

Project
NEW PK-5 ELEMENTARY SCHOOL
 Mungertown Road
 Madison, CT, 06443
STATE PROJECT NO. 076-TBD

Seals
ISSUED FOR SCHEMATIC DESIGN PHASE 1 OF TBD

Issues / Revisions	No.	Date	Description

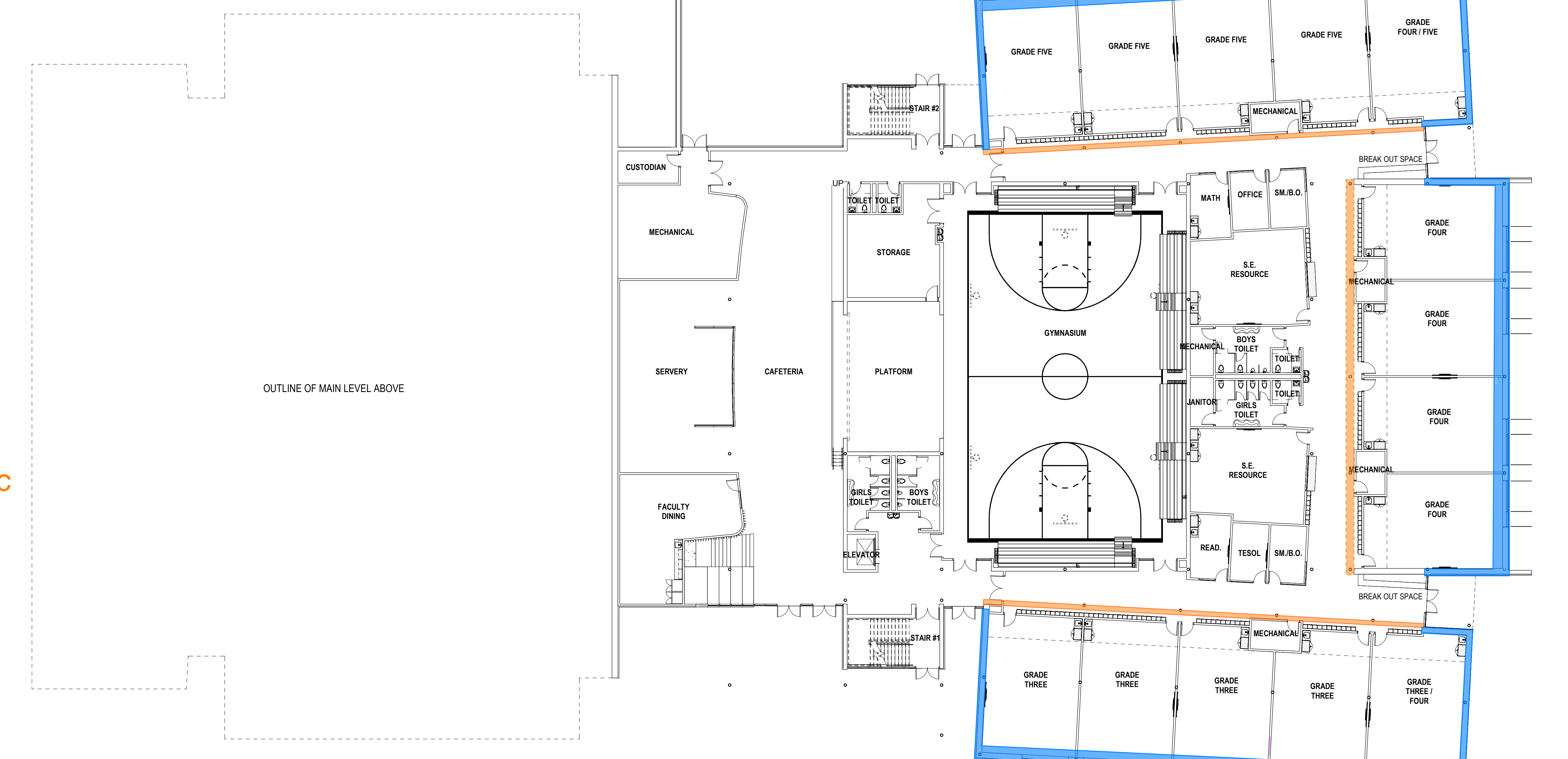
Drawing Title
OVERALL FLOOR PLANS

Project Manager:	PM	Project No.:	MAD02AR
Project Architect:	PA	Production Leader:	PL
Project Designer:	ID	Peer Reviewer:	PR

Drawing Number
A2.00



F10 MAIN LEVEL FLOOR PLAN
 1/16" = 1'-0"



K10 LOWER LEVEL FLOOR PLAN
 1/16" = 1'-0"

Tighten exterior walls across perimeter of building, adjusting classroom square footages

Reduce hallway & circulation areas - no reduction to programmatic spaces

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Excerpts from Current Ed Specs follow



Madison Public Schools
Madison, Connecticut

ELEMENTARY EDUCATIONAL SPECIFICATIONS

for

New Elementary School

Approved by the Madison Board of Education November 9, 2021

Modified May 11, 2022 due to Enrollment Projections Update

BOARD OF EDUCATION

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Gail Dahling-Hench, Assistant Superintendent
William H. McMinn, Director of Facilities
Stacy Nobitz, Finance Director

Red areas classroom areas that might be reduced in square footage. This would also help align the size of these areas with other spaces in the building to permit increased flexibility for school operations

NEW ELEMENTARY ED SPECS SPACE SUMMARY				
Room Description	# of Students Per Room	Required # of Rooms	Square Feet Per Room	Total Area (Sq. Feet)
GENERAL EDUCATION PROGRAMS				
Early Childhood: Full-Day Kindergarten	16-20	5	1,100	5,500
Early Elementary: Grade 1 and 2	16-20	10	940	9,400
Intermediate: Grades 3-5	19-24	14	890	12,460
Visual Arts – Classroom	16-24	1	1,100	1,100
Visual Arts - Kiln Room and Storage		1	350	350
Music - Choral Room/General Music	16-24	1	1,000	1,000
Physical Education - Gymnasium		1	6,000	6,000
Physical Education - Office and Storage		1	600	600
Platform (Stage) Instrumental Music		1	900	900
STEAM Classroom	16-24	1	1,100	1,100
World Language Classroom	16-24	1	890	890
Media Center		1	2,600	2,600
Reading/Math Coach Office		2	175	350
Small group breakout rooms	1-5	2	125	250
General Ed. Intervention Services (Math)	6-8	1	500	500
General Ed. Intervention Services (Reading)	6-8	1	500	500
TESOL Office		1	100	100
Total				43,600
SPECIAL EDUCATION PROGRAMS				
PreK Classroom	16-18	4	1,000	4,000
Pre-K ABA Classroom		1	400	400
PreK OT/PT		1	500	500
PreK Speech		1	250	250
PreK Psychologist Office		1	300	300
FASE Classroom	4-8	1	890	890
Special Education Resource Room	4-8	4	700	2,800
OT/PT Resource Room		1	500	500
Related Services (Social Worker/Psychologist/Speech)		1	600	600
Elementary SPED Coordinator/BCBA		1	150	150
Total				10,390
ADMINISTRATION AND SUPPORT FACILITIES				
Principal's Office		1	200	200
Assistant Principal's Office		1	175	175
Main Office Secretarial Area		1	700	700
Guidance Counselor's Office		1	200	200
Conference Room		2	200	400
Health Services		1	650	650
Teacher Workroom		1	440	440
Food Services – Cafeteria		1	2,400	2,400
Food Services – Kitchen and Manager's Office		1	1,200	1,200
Faculty Lounge		1	600	600
Custodial Office Area		1	150	150

Potential target

900-1000sf

890-900sf


800-840sf

900-950sf

Blue areas are adjacent to classrooms and would be adjusted in size to match adjacent classroom sizes (e.g., if Music is next to PreK on same exterior wall, target 900-950sf)

EARLY CHILDHOOD: FULL-DAY KINDERGARTEN	
Teacher Storage	<ul style="list-style-type: none"> • Lockable teacher storage wardrobe for 3 adults • One (1) lockable four-drawer filing cabinet • Additional instructional storage closet in corridor to be shared by Grades K-2
Student Storage	<ul style="list-style-type: none"> • Coat and personal storage area for twenty-four (24) located within the classroom
Lighting	<ul style="list-style-type: none"> • Soft color, dimmable lighting
Flooring	<ul style="list-style-type: none"> • Vinyl enhanced tile and area rugs
Display	<ul style="list-style-type: none"> • Magnetic whiteboards • Bulletin Boards
Student Furniture	<ul style="list-style-type: none"> • Two (2) tables • Flexible seating/tables to accommodate up to twenty-four (24) students (flexible/adaptable workstations)
Teacher Furniture	<ul style="list-style-type: none"> • One (1) Teacher desk/chair (possibly built into counter area to save space)
Other Furniture	<ul style="list-style-type: none"> • Desk and chair for classroom para
Classroom Technology	<ul style="list-style-type: none"> • Large screen interactive projection system
Computers (each)	<ul style="list-style-type: none"> • 1-to-1 laptops for each student with charging station • One (1) teacher computer

EARLY ELEMENTARY – GRADES ONE and TWO	
<p>SPACE: 890 square feet (each classroom) 50 square feet (in-class toilet room)</p> <p>NUMBER: Ten (10) classrooms</p> <p style="color: red; text-align: right;">As part of potential reconfiguration, may be able to capture plumbing savings by consolidating Gr 1 and 2 restrooms</p>	
Toilet	<ul style="list-style-type: none"> • Toilet room with sink within classroom at a level appropriate for children ages 6-8
Sinks	<ul style="list-style-type: none"> • Stainless steel sink with laminate counters • Soap and towel dispenser
Classroom Storage	<ul style="list-style-type: none"> • Built-in bookcases • Storage areas for anchor charts, large bins/kits • Classroom library storage • Counters under windows where possible
Teacher Storage	<ul style="list-style-type: none"> • Lockable teacher storage wardrobe for three (3) adults • One (1) lockable four-drawer filing cabinet • Additional instructional storage closet in corridor to be shared by Grades K-2
Student Storage	<ul style="list-style-type: none"> • Coat and personal (non-locking) lockers for twenty-four (24)/classroom located in the corridor (2 students/locker)
Lighting	<ul style="list-style-type: none"> • Soft color, dimmable lighting
Flooring	<ul style="list-style-type: none"> • Vinyl enhanced tile and area rugs
Display	<ul style="list-style-type: none"> • Magnetic whiteboard • Bulletin Boards
Student Furniture	<ul style="list-style-type: none"> • Two (2) tables • Flexible seating/desks/tables to accommodate up to twenty-four (24) students
Teacher Furniture	<ul style="list-style-type: none"> • Teacher desk/chair, possibly built into counter area to save space
Other Furniture	<ul style="list-style-type: none"> • Desk and chair for classroom para
Special Needs/Equipment	<ul style="list-style-type: none"> • Common space outside classroom desirable
Classroom Technology	<ul style="list-style-type: none"> • Large screen interactive projection system
Computers (each)	<ul style="list-style-type: none"> • 1-to-1 Chromebook device for each student with charging station • One (1) teacher computer

FOOD SERVICES – KITCHEN	
Flooring	<ul style="list-style-type: none"> • Epoxy flooring – stable non-slip surface, must be easy to sweep and mop • Appropriately pitched floor with multiple floor drains and water source for custodial purposes.
Storage	<ul style="list-style-type: none"> • Safe • Four (4) stainless steel utility carts, three shelves, #300/#400 capacity • Two (2) stainless steel cart for tray storage, ADA accessible • Adequate space for annual supplies
Furniture	<ul style="list-style-type: none"> • Teacher desk/chair • Visitor’s chair
Space Considerations (required)	<ul style="list-style-type: none"> • Large walk-in storeroom with heavy-duty wire mesh chrome-mate shelving on casters • Dishwasher room with necessary utilities (racks and tray carts) • High capacity appropriate commercial grade dishwasher • Separate area for the cashier to count money with a safe • Two (2) serving lines with built-in hot and cold units • Can washing area (outside, near dock – custodial)
<p>Food Services Equipment</p> <p>Project team has initially indicated that the equipment listed here won't physically fit well within the listed square footage. The estimated cost for this equipment is also substantially higher than on other similar projects</p> 	<ul style="list-style-type: none"> • One (1) slicer on stand • One (1) 30-gallon mixer • One (1) combi-oven (steam/convection) example Alto-shaam • One (1) commercial microwave oven • One (1) double-stack convection ovens with stand: single one-over-one unit (equals 2 ovens) • One (1) small double kettles • One (1) food processor (Robo Coupe) • Two (2) food warmers • Walk-in freezer, minimum 144 square ft. with shelving • Walk-in refrigerator, minimum 144 square ft. with shelving • Two (2) pass-thru refrigerator near serving line • Steam table with five (5) wells • Cold well in serving line for fruits, vegetables and salads • Three (3) preparation tables (stainless steel) • Milk cooler • Ice cream freezer • Exhaust fans (ventilation) for ovens, skillet, stove, etc. • Exhaust fans (ventilation) in washroom and pantry areas
Technology	<ul style="list-style-type: none"> • Three (3) cash registers and stands (point of sale system – including data drops) • One (1) computer (Food Services Office - requires data drop) • One (1) multi-function printer (Food Services Office – requires data drop) • Two (2) telephones (one in Manager’s Office and one in Kitchen Prep Area (amplified ringers))

FACULTY LOUNGE	
SPACE:	600 square feet
Toilet	<ul style="list-style-type: none"> • Faculty toilets adjacent to faculty lounge
Sink	<ul style="list-style-type: none"> • Stainless steel sink with laminate counter • Soap and towel dispenser
Access/Location	<ul style="list-style-type: none"> • Close proximity to the major instructional section of the school and literacy Lab
Lighting	<ul style="list-style-type: none"> • Provide windows and maximize natural light
Flooring	<ul style="list-style-type: none"> • Vinyl enhanced tile and carpeting
Storage	<ul style="list-style-type: none"> • Built-in upper and lower cabinets

SYSTEM	SPECIFICATIONS
	<ul style="list-style-type: none"> • All spaces are to receive air conditioning, but only those areas with summertime use will have the systems running year-round; all other areas will have systems set to dehumidification only during summer months. • Use in-slab hydronic heat delivery at the lower levels for PreK and Kindergarten classrooms.
Climate Controls/ Ventilation System	<ul style="list-style-type: none"> • The building will be designed with Direct Digital Control (DDC) systems (Alerton or Automate logic) centrally tied into the School Facilities Department via Graphical User Interface. • Spaces should have independent, on demand heating, cooling and ventilation control for operational efficiency. • Each classroom will be provided with a temperature sensor and carbon dioxide sensor. The carbon dioxide sensor is an energy saving device. By sensing the carbon dioxide within the room, the outside air intake is adjusted, reducing the amount of outside air being heated or cooled, resulting in less energy used. • Climate controls/ventilation systems need to meet current codes and standards. • MDF and IDFs must be climate controlled (A/C)
Lighting System	<ul style="list-style-type: none"> • Efficient and appropriate natural lighting will be maximized within the facility as appropriate for the programmatic use of the spaces. • Motion sensors and dual switching will be installed in classrooms. • The use of LEDs throughout, with exceptions in specialty areas. • Attention should be given to security lighting for both interior and exterior of the building. • Emergency back-up will be via local battery ballasts. • The use of light shelves and light sensors for natural light to reduce electrical load shall be considered in locations where possible.
Electrical (Power) System	<ul style="list-style-type: none"> • Power to be provided by local utility company. • Consider solar roof mounted. • Distribution will include customer metering. • Emergency (whole building) generator to accommodate Life Safety needs. • Generator must be sufficient to support critical IT equipment in MDF and all IDFs as well as administrative offices and Nurse's office. • Generator must support critical kitchen equipment with the intention being to cook, serve, and store food. (Hoods, ovens, serving line, freezer, refrigeration, etc.)

Preliminary Schedule Moving Forward:

12/13 - BOE - Overall budget update and introduction of potential value savings from modifications to the Education Specifications

- No motion or vote from BOE needed
- Intent is to inform and get any initial reactions to potential Ed Spec changes before proceeding with implementation of scope and value capture

12/19 - School Building Committee reviews Value Engineering log and determines which items are appropriate within their charge

- BOE approval would be needed for any items that would change the Ed Specs

January 2023 - BOE reviews and votes on any formal modifications to Ed Specs