



SOMERSET MIDDLE SCHOOL

DRAFT

SMS Building Committee
Ai3 Architects, LLC
CGA Project Management
November 8, 2021



100% Design Development: Cost Estimate Comparison

Somerset Middle School



Approved Construction Budget

(Including Add Alt #1: Re-use of existing 285kW PV System)

\$69,956,365

PM&C

100% DD
Cost Estimate

\$72,097,649

CHA

100% DD
Cost Estimate

\$74,526,046

Difference

\$2,428,397

Percentage

-3.3%

Total Estimated Construction Cost

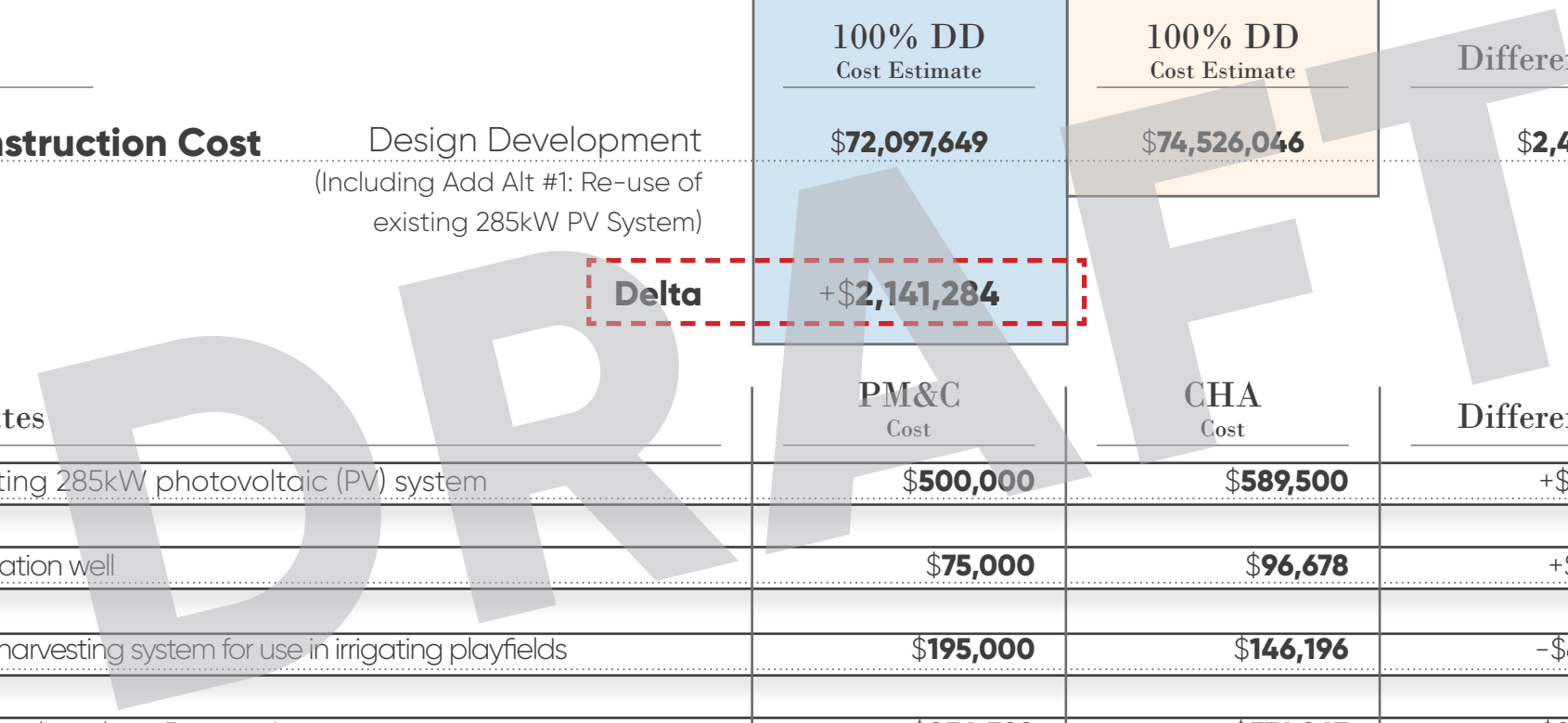
Design Development
(Including Add Alt #1: Re-use of
existing 285kW PV System)

Delta

+\$2,141,284

Add Alternates

	PM&C Cost	CHA Cost	Difference
#1 Cost to reinstall existing 285kW photovoltaic (PV) system	\$500,000	\$589,500	+\$89,500
#2A Cost to include an irrigation well	\$75,000	\$96,678	+\$21,678
#2B Cost to install a water harvesting system for use in irrigating playfields	\$195,000	\$146,196	-\$48,804
#3 Cost to reconfigure waterline along Brayton Avenue	\$854,329	\$571,847	-\$282,482
#4 Cost to include roof screens	\$189,250	\$288,543	+\$99,293



100% Design Development Cost Estimate Comparison (PM&C: SD vs. DD)

Somerset Middle School

	SD	DD	Difference		SD	DD	Difference
A10 FOUNDATIONS	\$3,449,176	\$4,363,293	+\$914 K	D10 CONVEYING SYSTEMS	\$224,000	\$224,000	\$0
Standard Foundations	\$2,201,638	\$2,309,819	+\$108 K	D20 PLUMBING	\$2,127,624	\$2,238,425	+\$111 K
Lowest Floor Construction	\$1,247,538	\$2,053,474	+\$806 K	D30 HVAC	\$5,891,348	\$6,215,010	+\$324 K
B10 SUPERSTRUCTURE	\$5,158,266	\$5,803,430	+\$645 K	D40 FIRE PROTECTION	\$778,071	\$743,160	-\$35 K
Upper Floor Construction	\$1,726,956	\$2,005,907	+\$279 K	D50 ELECTRICAL	\$5,032,423	\$5,745,187	+\$713 K
Roof Construction	\$3,431,310	\$3,797,523	+\$366 K	Service & Distribution	\$1,063,917	\$1,673,985	+\$610 K
B20 EXTERIOR CLOSURE	\$7,747,920	\$7,434,723	-\$313 K	Lighting & Power	\$1,625,975	\$1,470,147	-\$156 K
Exterior Walls	\$5,336,029	\$5,096,739	-\$239 K	Communication & Security Systems	\$2,234,263	\$2,381,505	+\$147 K
Windows	\$2,068,560	\$2,019,055	-\$50 K	Other Electrical Systems	\$108,268	\$220,000	+\$112 K
Exterior Doors	\$343,331	\$318,929	-\$24 K	E10 EQUIPMENT	\$1,310,165	\$1,459,505	+\$150 K
B30 ROOFING	\$2,072,805	\$2,088,220	+\$15 K	E20 FURNISHINGS	\$1,360,665	\$1,350,324	-\$11 K
C10 INTERIOR CONSTRUCTION	\$5,869,196	\$6,639,535	+\$771 K	ESCALATION (start date August 2022)	\$1,506,692	\$1,373,170	-\$134 K
Partitions	\$3,670,631	\$4,178,806	+\$509 K	DESIGN & PRICING CONTINGENCY	\$4,514,433	\$2,441,190	-\$2.1 million
Interior Doors	\$934,835	\$1,066,144	+\$131 K	BUILDING DEMOLITION	\$749,400	\$749,400	\$0
Specialties/Millwork	\$1,263,730	\$1,394,585	+\$131 K	F20 HAZMAT REMOVALS	\$818,000	\$818,000	\$0
C20 STAIRCASES	\$406,450	\$411,042	+\$5 K	G SITE	\$9,907,840	\$11,250,125	+\$1.3 million
C30 INTERIOR FINISHES	\$3,527,062	\$3,496,393	-\$31 K	GENERAL CONDITIONS & GENERAL REQUIREMENTS (bonds, insurance, OHP)	\$6,504,327	\$6,753,516	+\$249 K
Wall Finishes	\$1,167,903	\$1,006,403	-\$161 K	TOTAL CONSTRUCTION COST	\$68,955,863	\$72,097,649	
Floor Finishes	\$1,009,453	\$1,058,384	+\$49 K	APPROVED CONSTRUCTION BUDGET		*\$69,956,365	+\$2.1 million
Ceiling Finishes	\$1,349,706	\$1,431,006	+\$81 K				

*Includes costs for existing 285kW PV relocation to the new building

100% Design Development Cost Estimate Comparison (PM&C: SD vs. DD)

Somerset Middle School

	SD	DD	Difference
A10 FOUNDATIONS	\$3,449,176	\$4,363,293	+\$914 K
Standard Foundations	\$2,201,638	\$2,309,819	+\$108 K
Lowest Floor Construction	\$1,247,538	\$2,053,474	+\$806 K
B10 SUPERSTRUCTURE	\$5,158,266	\$5,803,430	+\$645 K
Upper Floor Construction	\$1,726,956	\$2,005,907	+\$279 K
Roof Construction	\$3,431,310	\$3,797,523	+\$366 K
B20 EXTERIOR CLOSURE	\$7,747,920	\$7,434,723	-\$313 K
Exterior Walls	\$5,336,029	\$5,096,739	-\$239 K
Windows	\$2,068,560	\$2,019,055	-\$50 K
Exterior Doors	\$343,331	\$318,929	-\$24 K
B30 ROOFING	\$2,072,805	\$2,088,220	+\$15 K
C10 INTERIOR CONSTRUCTION	\$5,869,196	\$6,639,535	+\$771 K
Partitions	\$3,670,631	\$4,178,806	+\$509 K
Interior Doors	\$934,835	\$1,066,144	+\$131 K
Specialties/Millwork	\$1,263,730	\$1,394,585	+\$131 K
C20 STAIRCASES	\$406,450	\$411,042	+\$5 K
C30 INTERIOR FINISHES	\$3,527,062	\$3,496,393	-\$31 K
Wall Finishes	\$1,167,903	\$1,006,403	-\$161 K
Floor Finishes	\$1,009,453	\$1,058,384	+\$49 K
Ceiling Finishes	\$1,349,706	\$1,431,006	+\$81 K

GENERAL

- Remove Art Classroom outdoor balcony/Technology Engineering canopy in its entirety
- Reduction of roof level at Adaptive PE
- Reorganization of Stair 1 (at end of academic wing)
- Outdoor Performance Area: Reduce GFRP, replace with fiber cement, and remove 18' x 12' vertical door and curtain wall, replace with GFRP and two double doors

B20 EXTERIOR CLOSURE

- Reduction of window, storefront, and curtain wall area throughout building perimeter
- Guidance Offices: Remove vertical sunshades, replace with integral exterior shade system

C10 INTERIOR CONSTRUCTION

- Auditorium: Replace vertically folding partition with horizontal folding partition
- Project Labs: Reduce portion of operable glass wall area, replace with GWB wall
- Project Labs: Remove bench at window sills
- Replace corner butt glazing in sidelights with hollow metal frame
- Classrooms: Reduce sidelights, replace with GWB wall
- Small Group Support: Remove transom at door and sidelights, replace with GWB wall
- Adaptive PE: Reduce 16'-0" tall operable partition to 12'-0"
- Reduction of window and storefront area throughout interior
- Gym Corridor: Remove exposed cable braces
- Remove two display cases outside Guidance offices and Art classrooms

Value Engineered

GENERAL

-\$427,000

B20 EXTERIOR CLOSURE

-\$91,500

C10 INTERIOR CONSTRUCTION

-\$372,100

100% Design Development Cost Estimate Comparison (PM&C: SD vs. DD)

Somerset Middle School

	SD	DD	Difference
A10 FOUNDATIONS	\$3,449,176	\$4,363,293	+\$914 K
Standard Foundations	\$2,201,638	\$2,309,819	+\$108 K
Lowest Floor Construction	\$1,247,538	\$2,053,474	+\$806 K
B10 SUPERSTRUCTURE	\$5,158,266	\$5,803,430	+\$645 K
Upper Floor Construction	\$1,726,956	\$2,005,907	+\$279 K
Roof Construction	\$3,431,310	\$3,797,523	+\$366 K
B20 EXTERIOR CLOSURE	\$7,747,920	\$7,434,723	-\$313 K
Exterior Walls	\$5,336,029	\$5,096,739	-\$239 K
Windows	\$2,068,560	\$2,019,055	-\$50 K
Exterior Doors	\$343,331	\$318,929	-\$24 K
B30 ROOFING	\$2,072,805	\$2,088,220	+\$15 K
C10 INTERIOR CONSTRUCTION	\$5,869,196	\$6,639,535	+\$771 K
Partitions	\$3,670,631	\$4,178,806	+\$509 K
Interior Doors	\$934,835	\$1,066,144	+\$131 K
Specialties/Millwork	\$1,263,730	\$1,394,585	+\$131 K
C20 STAIRCASES	\$406,450	\$411,042	+\$5 K
C30 INTERIOR FINISHES	\$3,527,062	\$3,496,393	-\$31 K
Wall Finishes	\$1,167,903	\$1,006,403	-\$161 K
Floor Finishes	\$1,009,453	\$1,058,384	+\$49 K
Ceiling Finishes	\$1,349,706	\$1,431,006	+\$81 K

Value Engineered

C30 INTERIOR FINISHES
-\$240,300

C30 INTERIOR FINISHES

- Student Dining: Replace AcousticBuild clouds with 4x4 ACT
- Assembly Stair: Remove decorative perforated metal panel
- Toilet Rooms: Replace wall tile with rigid vinyl cladding (wet wall)
- Kitchen: Replace quarry tile with poured epoxy flooring
- Academic Wing Toilet Room Entries: Replace GWB ceiling with 2x4 ACT
- Science Classrooms: Replace painted GWB soffit and ceiling with 2x4 ACT
- Gym/Aud. Teacher Collaboration: Remove plastic laminate, replace with painted GWB
- Academic Wing: Remove axiom trim from ceiling

100% Design Development Cost Estimate Comparison (PM&C: SD vs. DD)

	SD	DD	Difference		Value Engineered
D10 CONVEYING SYSTEMS	\$224,000	\$224,000	\$0		
D20 PLUMBING	\$2,127,624	\$2,238,425	+\$111 K	D20 PLUMBING <ul style="list-style-type: none"> Exterior Toilet Rooms: Remove one toilet fixture, one sink, and two urinals, resulting in three individual, single use toilet rooms 	D20 PLUMBING -\$6,100
D30 HVAC	\$5,891,348	\$6,215,010	+\$324 K		
D40 FIRE PROTECTION	\$778,071	\$743,160	-\$35 K		
D50 ELECTRICAL	\$5,032,423	\$5,745,187	+\$713 K	D50 ELECTRICAL/TECHNOLOGY <ul style="list-style-type: none"> Reduce electric vehicle charging stations from 3 to 2 Remove security cameras at field coverage Reduce 86" interactive displays to 75" in Science Classrooms, Project Labs, Art, and Technology Engineering Provide aluminum power distribution feeders (only sizes over 100 amps) in lieu of copper feeders 	D50 ELECTRICAL/TECHNOLOGY -\$219,000
Service & Distribution	\$1,063,917	\$1,673,985	+\$610 K		
Lighting & Power	\$1,625,975	\$1,470,147	-\$156 K		
Communication & Security Systems	\$2,234,263	\$2,381,505	+\$147 K		
Other Electrical Systems	\$108,268	\$220,000	+\$112 K		
E10 EQUIPMENT	\$1,310,165	\$1,459,505	+\$150 K	G20 SITE IMPROVEMENTS <ul style="list-style-type: none"> Reduce entrance signs from 3 to 2 Remove chalkboard from wall outside Project Labs Remove green trellis screen at loading dock Reduce landscaping boulders throughout site by 50% Reduce deciduous trees throughout site by 25% Move the ornamental litter/recycling containers to FF&E Move the outdoor dining tables to FF&E Replace the ornamental vehicular double gates with standard pipe gates at West access road Reduce granite seat blocks throughout site by 60% Replace decorative concrete with broom finish concrete Replace colored concrete with broom finish concrete Remove all portable bleachers (quantity of 5) from multi-use playfields Reduce gravel fill beneath concrete/bituminous walkways from 12" to 8" 	G20 SITE IMPROVEMENTS -\$415,940
E20 FURNISHINGS	\$1,360,665	\$1,350,324	-\$11 K		
BUILDING DEMOLITION	\$749,400	\$749,400	\$0		
F20 HAZMAT REMOVALS	\$818,000	\$818,000	\$0		
G SITE	\$9,907,840	\$11,250,125	+\$1.3 million		

100% Design Development Cost Estimate Comparison (PM&C: SD vs. DD)

Somerset Middle School

	SD	DD	Difference	VE		SD	DD	Difference	VE
A10 FOUNDATIONS	\$3,449,176	\$4,363,293	+\$914 K		D10 CONVEYING SYSTEMS	\$224,000	\$224,000	\$0	
Standard Foundations	\$2,201,638	\$2,309,819	+\$108 K		D20 PLUMBING	\$2,127,624	\$2,238,425	+\$111 K	-\$6,100
Lowest Floor Construction	\$1,247,538	\$2,053,474	+\$806 K		D30 HVAC	\$5,891,348	\$6,215,010	+\$324 K	
B10 SUPERSTRUCTURE	\$5,158,266	\$5,803,430	+\$645 K		D40 FIRE PROTECTION	\$778,071	\$743,160	-\$35 K	
Upper Floor Construction	\$1,726,956	\$2,005,907	+\$279 K		D50 ELECTRICAL	\$5,032,423	\$5,745,187	+\$713 K	-\$219,000
Roof Construction	\$3,431,310	\$3,797,523	+\$366 K		Service & Distribution	\$1,063,917	\$1,673,985	+\$610 K	
B20 EXTERIOR CLOSURE	\$7,747,920	\$7,434,723	-\$313 K	-\$91,500	Lighting & Power	\$1,625,975	\$1,470,147	-\$156 K	
Exterior Walls	\$5,336,029	\$5,096,739	-\$239 K		Communication & Security Systems	\$2,234,263	\$2,381,505	+\$147 K	
Windows	\$2,068,560	\$2,019,055	-\$50 K		Other Electrical Systems	\$108,268	\$220,000	+\$112 K	
Exterior Doors	\$343,331	\$318,929	-\$24 K		E10 EQUIPMENT	\$1,310,165	\$1,459,505	+\$150 K	
B30 ROOFING	\$2,072,805	\$2,088,220	+\$15 K		E20 FURNISHINGS	\$1,360,665	\$1,350,324	-\$11 K	
C10 INTERIOR CONSTRUCTION	\$5,869,196	\$6,639,535	+\$771 K	-\$372,100	ESCALATION (start date August 2022)	\$1,506,692	\$1,373,170	-\$134 K	-\$47,311
Partitions	\$3,670,631	\$4,178,806	+\$509 K		DESIGN & PRICING CONTINGENCY	\$4,514,433	\$2,441,190	-\$2.1 million	-\$141,755
Interior Doors	\$934,835	\$1,066,144	+\$131 K		BUILDING DEMOLITION	\$749,400	\$749,400	\$0	
Specialties/Millwork	\$1,263,730	\$1,394,585	+\$131 K		F20 HAZMAT REMOVALS	\$818,000	\$818,000	\$0	
C20 STAIRCASES	\$406,450	\$411,042	+\$5 K		G SITE	\$9,907,840	\$11,250,125	+\$1.3 million	-\$415,940
C30 INTERIOR FINISHES	\$3,527,062	\$3,496,393	-\$31 K	-\$240,300	GENERAL CONDITIONS & GENERAL REQUIREMENTS (bonds, insurance, OHP)	\$6,504,327	\$6,753,516	+\$249 K	-\$181,624
Wall Finishes	\$1,167,903	\$1,006,403	-\$161 K		TOTAL CONSTRUCTION COST	\$68,955,863	\$72,097,649		-\$2,142,630
Floor Finishes	\$1,009,453	\$1,058,384	+\$49 K		APPROVED CONSTRUCTION BUDGET		*\$69,956,365	+\$2.1 million	
Ceiling Finishes	\$1,349,706	\$1,431,006	+\$81 K		*Includes costs for existing 285kW PV relocation to the new building				
TOTAL ESTIMATED CONSTRUCTION COST AFTER VE							\$69,955,019	-\$1,346	

Proprietary Specification Approval

▶ **What are Proprietary Specifications?**

- Descriptions of materials that cite a specific brand name such that only one vendor or manufacturer can supply the desired items.

▶ **What are the disadvantages of Proprietary specifications?**

- Can limit competition which can lead to increased prices.

▶ **What does the Office of Inspector General (OIG) require of Owners to allow the use of Proprietary Specifications?**

- The Owner to perform and document the reasonable investigation process and state why it is in the Public's interest to make the product proprietary.
- The Owner is required to provide the investigative document to anyone making a written request for the information.



Proprietary Specification Approval

What are some of the reasons an Owner would decide to write Proprietary Specifications?

- The product is currently used throughout the District and deviating from that standard would create a hardship in the maintenance, training, or use of spare parts inventory currently stored by the District.
- Extensive time and effort and training has been invested by the District in the education of staff and personnel on the use of a specific product.
- A product has been deployed as a standard throughout the District and other Town offices and is required for the seamless integration of other components.
- The product offers unique and unmatched advantages for the District in the deployment of technology or educational delivery.
- It is determined that no other equal products exist after the investigation, research, and testing of the selected product was conducted.

DRAFT

Proprietary Products

Approved Proprietary Items at Schematic Design:

- ✓ Door Hardware SCHLAGE
- ✓ Automatic Temperature Controls Johnson Controls
- ✓ Boilers Lochinvar
- ✓ Access Controls S2 - Access Control

Additional Proprietary Items to Review:

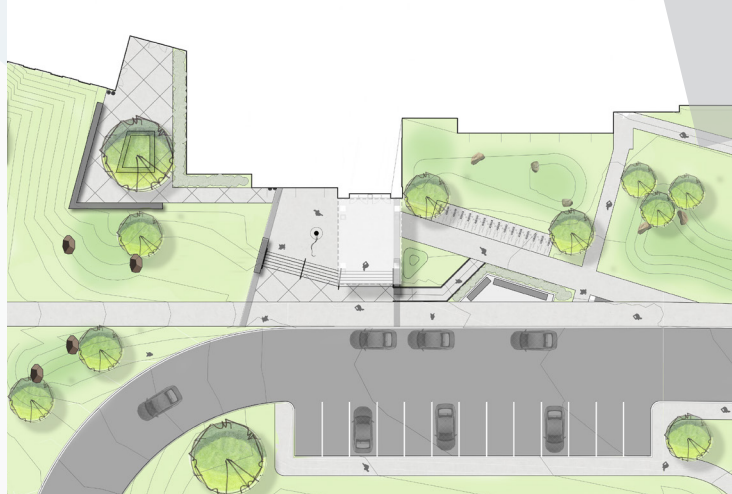
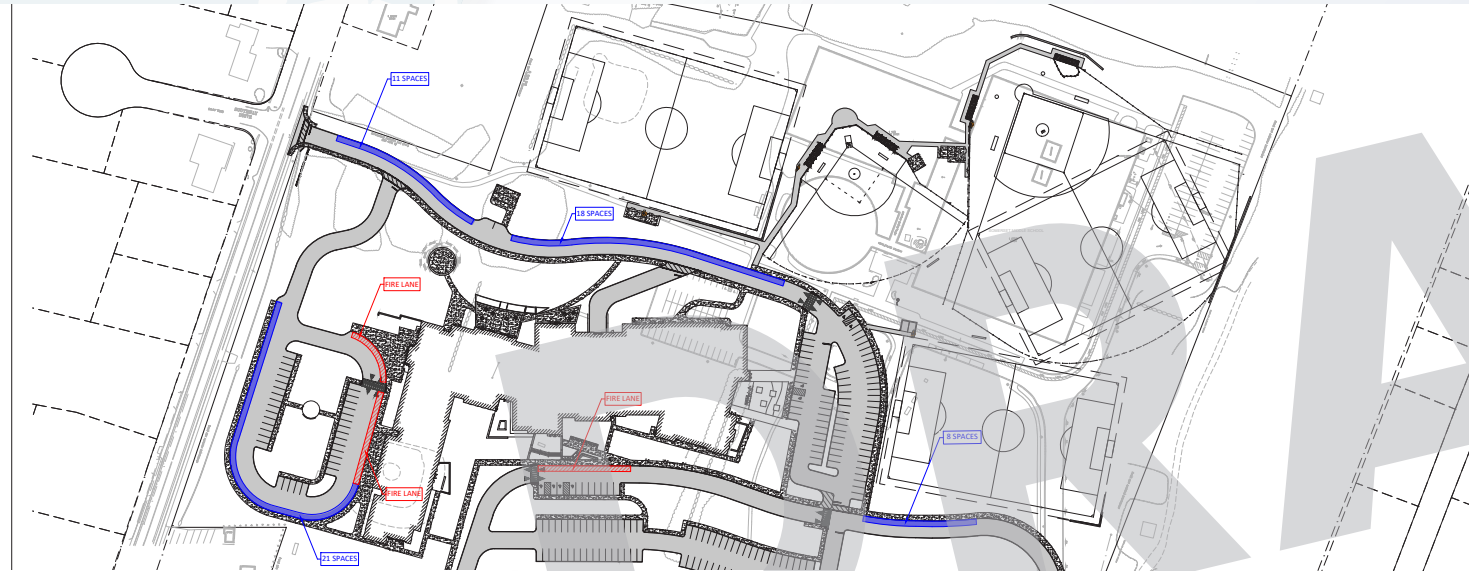
- Scoreboards Daktronics

The items listed above have been identified as proprietary because they are already installed in other school buildings in the District, and will be leveraged to provide the Somerset Middle School with the same system. It is the School Building Committee's belief, for the reason outlined above, it is in the Town of Somerset's best interest to require above items listed to be written as a proprietary specification.

SOMERSET MIDDLE SCHOOL

100% Design Development

Further review of site circulation, utilities, and outdoor educational areas



PM&C

Somerset Middle School
Somerset, MA

27-Oct-21

Design Development Estimate

GFA 124,200

CONSTRUCTION COST SUMMARY

BUILDING SYSTEM	SubTotal	TOTAL	\$/SF	%
A10 FOUNDATIONS				
A101 Standard Foundations	\$2,309,819			
A102 Special Foundations				
A103 Lowest Floor Construction	\$2,053,474	\$4,363,293	\$35.13	9.1%
B10 SUPERSTRUCTURE				
B101 Upper Floor Construction	\$2,005,907			
B102 Roof Construction	\$3,797,523	\$5,803,430	\$46.73	12.0%
B20 EXTERIOR CLOSURE				
B201 Exterior Walls	\$5,096,739			
B202 Windows	\$2,019,055			
B203 Exterior Doors	\$318,929	\$7,434,723	\$59.86	15.4%
B30 ROOFING				
B301 Roof Coverings	\$1,953,970			
B302 Roof Openings	\$134,250	\$2,088,220	\$16.81	4.3%
C10 INTERIOR CONSTRUCTION				
C101 Partitions	\$4,178,806			
C102 Interior Doors	\$1,066,144			
C103 Specialties/Millwork	\$1,394,585	\$6,639,535	\$53.46	13.8%
C20 STAIRCASES				
C201 Stair Construction	\$373,000			
C202 Stair Finishes	\$38,042	\$411,042	\$3.31	0.9%
C30 INTERIOR FINISHES				
C301 Wall Finishes	\$1,006,403			
C302 Floor Finishes	\$1,058,984			
C303 Ceiling Finishes	\$1,431,006	\$3,496,393	\$28.15	7.3%
D10 CONVEYING SYSTEMS				
D101 Elevator	\$224,000	\$224,000	\$1.80	0.5%
D20 PLUMBING				
D20 Plumbing	\$2,238,425	\$2,238,425	\$18.02	4.6%
D30 HVAC				
D30 HVAC	\$6,215,010	\$6,215,010	\$50.04	12.9%
D40 FIRE PROTECTION				
D40 Fire Protection	\$743,160	\$743,160	\$5.98	1.5%
D50 ELECTRICAL				
D501 Service & Distribution	\$1,673,985			

Somerset Middle School DD Estimate Recon 10.27.21 FINAL

Page 4

PM&C - Project Management Cost

More detailed cost estimate

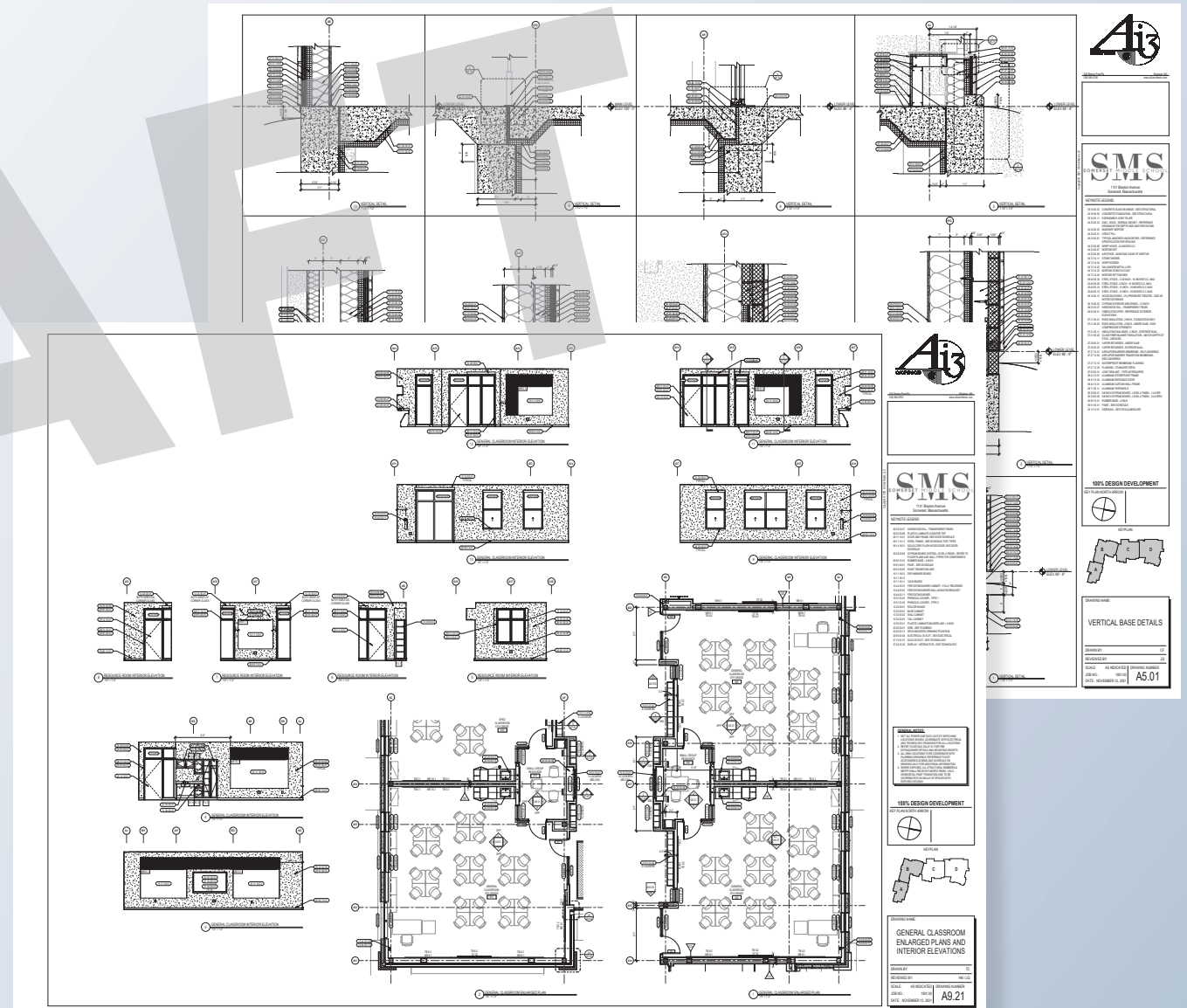
SubTotal	TOTAL	\$/SF	%
\$1,470,147			
\$2,381,055			
\$220,000	\$5,745,187	\$46.26	11.9%
\$1,459,505	\$1,459,505	\$11.75	3.0%
\$1,350,324	\$1,350,324	\$10.87	2.8%
NIC			
\$0			
\$0	\$0	\$0.00	0.0%
	\$48,212,247	\$388.18	100.0%

SOMERSET MIDDLE SCHOOL

100% Design Development

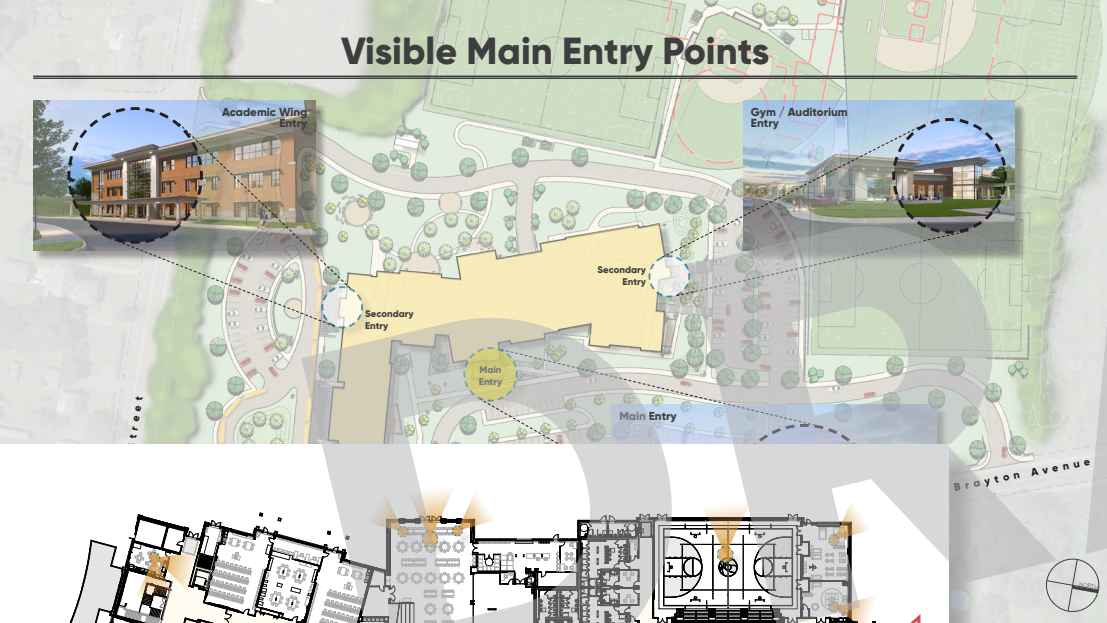
Further developed construction documents

Over 500 pages of documentation

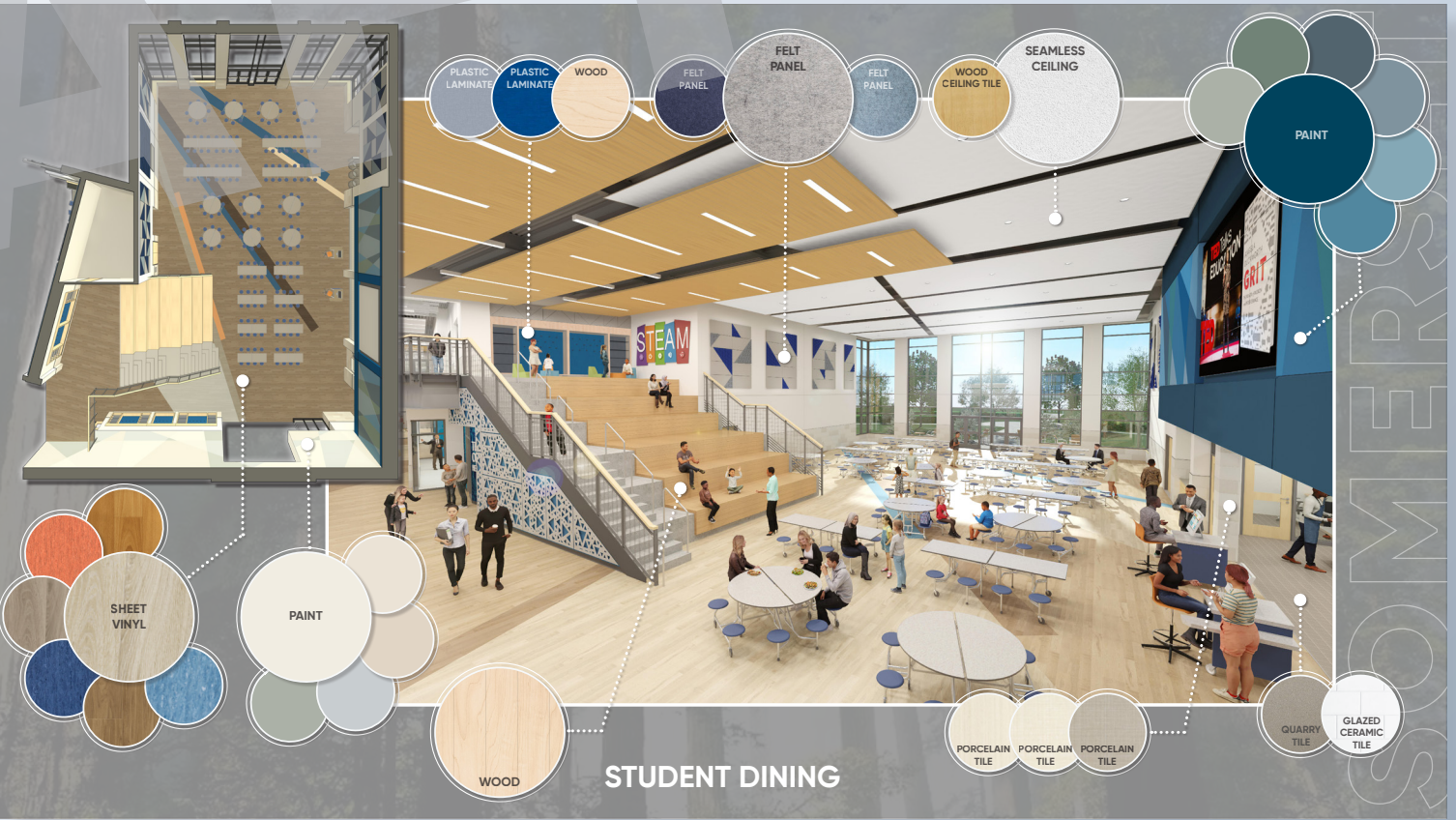


SOMERSET MIDDLE SCHOOL 100% Design Development

Further review of safety and security features



Passive Observation
Main Floor Level



100% Design Development Submission

What is the School Building Committee, School Committee, and Board of Selectmen Being Asked to Approve?

1. Vote to approve 100% Design Development and to authorize the Owner's Project Manager to submit the 100% Design Development documentation and submittal to the MSBA for its consideration.
2. Vote to approve the Value Engineering list.
3. Vote to approve the Proprietary Items list.