





Scarborough Public Schools

Facilities Master Plan

Scarborough, ME November 16, 2017 School Board Presentation

Why are we here today?

- Population projections are showing an increase in student population that will greatly impact the educational environment of our students if nothing is done.
- In order to make sure our buildings are energy efficient and cost effective we need to start the conversation today. From the time a decision is made the planning and construction process will take approximately 4 years.
- The plan going forward will impact decisions regarding current and future Capital Improvement Projects.
- We pride our selves on being good stewards of tax payer dollars





SCARBOROUGH ΜΑΙΝΕ



STUDY GOALS

- Analyze impact on permanent facilities with population growth.
- Right-size the educational spaces to DOE standards where feasible
- Eliminate modular classrooms
- Study feasibility and impact of using ${\color{black}\bullet}$ portables on site
- Analyze Operations and Maintenance costs in the expanded facilities

- Add PreK Program for 150 students
- Studied if the existing Primary • expansions required
- School would be more cost
- Plan for future growth beyond 2025-26

Scarborough Public Schools Facilities Master Plan

School sites can accommodate the

Studied if a Consolidated Primary effective than three small schools



STUDY METHOD

- Analyzed Population Projections from **Planning Decisions**
- Held Meetings with Administrators to determine needs for the existing and expanded population (existing space is inadequate)
- Created lists of rooms and staff needed
- Generated seven options for solving the requirements

- analysis and comparison
- with preliminary cost estimates
- dollars.

Selected Options B & F for detailed

Developed site plans and floor plans

Compared the cost of building and operating options B & F in 2017



ENROLLMENT PROJECTIONS

Scarborough Public Schools **Facilities Master Plan**

		TODAY	2025	PK	D
Yet 174 230 45 + 594 746* 150 + SMS 673 755 + SMS 714 736 + SMS 989 884 -	BPS	193	242	45	+
594 746* 150 + Image: Constraint of the state of t	ECS	227	274	60	+
594 746* 150 + Image: Constraint of the state of t	PHS	174	230	45	+
SMS 714 736 + SMS 989 884 -		594	746 *	150	+
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	SINIS	714	736		+
2,970 3,121* 150 +	SHS	989	884		-
		2,970	3,121*	150	+

*Scarborough is currently outpacing these projections.

ELTA



107

101

PK-2 TOTALS +302

82

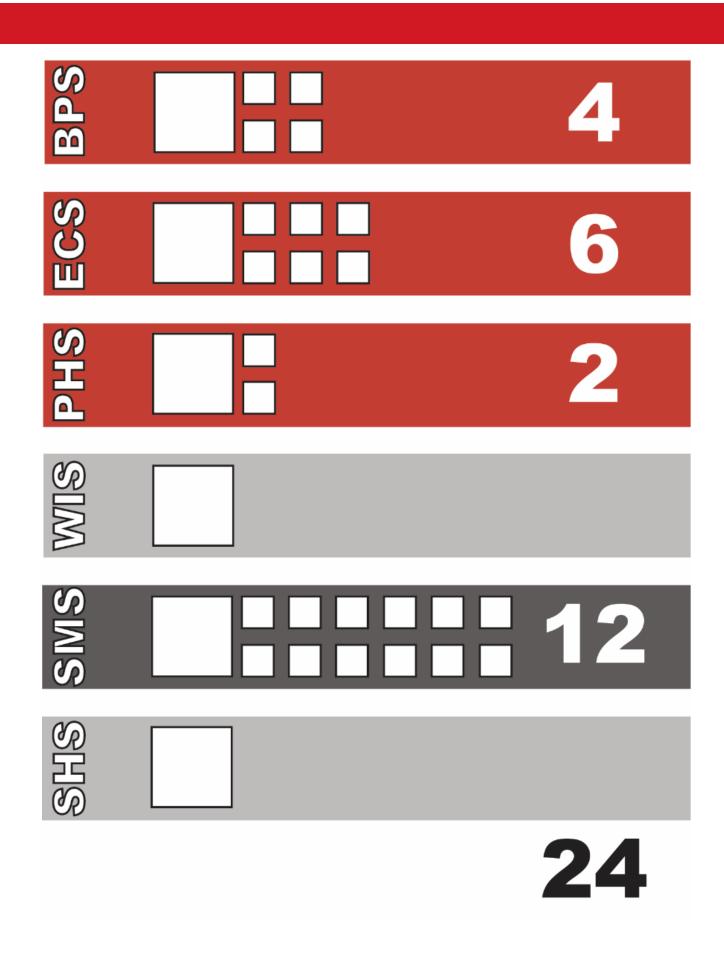
22

105

PK-12 TOTALS 301



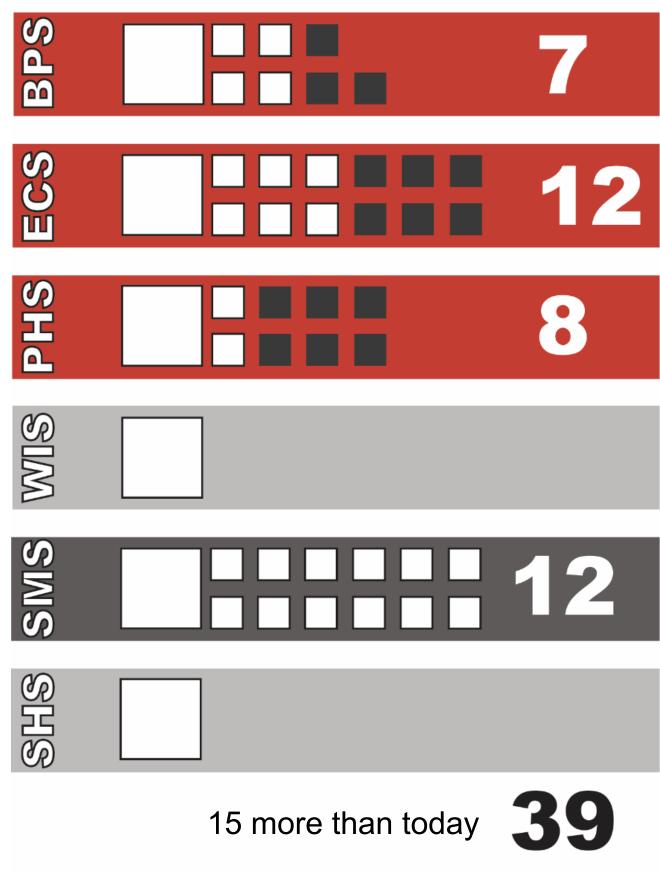
If, we do nothing to right-size the current Scarborough Schools and **only** add portables to accommodate Pre-K and the projected student population in 2025, not only will the core spaces within each school be undersized and the number of classrooms in portables will be as follows:







- By 2025, 45% of the PK-2 classrooms will be in portables.
- Currently 18% of 6th through 8th grade classrooms are in portables.
- By 2025 19% of the PK-12th grade classrooms will be in portables. 69% of those portables are primary (PK-2) grade classrooms.





ECONOMICS OF INVESTING IN EARLY CHILDHOOD:

In total, the existing research suggests expanding early learning initiatives would provide benefits to society of roughly \$8.60 for every \$1 spent, about half of which comes from increased earnings for children when they grow up.







THE IMPACTS OF DOING NOTHING:

- Massive overcrowding
- Inadequate program spaces
- Safety and security issues (i.e. parking)
- Energy inefficiency
- Food Service inefficiency
- Undersized building systems
- Fiscally irresponsible

Undersized Core Spaces

- Gym / Cafeteria will be fully utilized by 1 or 2 gym classes
- Kids will not have access to cafeteria for eating lunch or will have reduced physical education. Kids will be eating in classrooms.





MAKING SCARBOROUGH SCHOOLS FUTURE READY

Day 1

 Over \$4 million in savings due to reduced personnel offsets \$4 million in debt service

Overall

- Total savings based on 2017 dollars
 - Saves \$1,998,894 in Total Project Costs
 - Saves \$3,331,912 in Bonding Costs over 30 years.
 - Saves \$4,201,030 in Personnel Costs



POTENTIAL SCARBOROUGH PROJECT SCHEDULE (EARLIEST DATES)

Scarborough Public Schools (SPS) Facilities Master Plan (FMP):

- SPS have worked with Harriman since 2013 to develop a Facilities Master Plan.
- A recommendation of the FMP was first to pursue DOE funding for the building \bullet projects.

Pursue DOE Funding:

- Met with Scott Brown, DOE January 2017
- Applied for DOE Funding
- DOE Site Visits to SPS
- Final DOE Funding List

April 2017

November 2017

Summer/Fall 2018





POTENTIAL SCARBOROUGH PROJECT SCHEDULE (EARLIEST DATES)

Once a decision to move forward is made with either DOE or Local-Only funding:

- Referendum Date
- Bid Date
- Construction Period
- **Building occupancy**

1 year +/- once design studies begin 10 months +/- after referendum 2 years +/- to construct 4 years +/- after decision to move forward

Please note that If DOE funded the process could take another year.



Energy cost comparison for each Existing School

- Primary Schools are most costly to operate due to age and small size
- WIS and SMS both air conditioned but WIS costs substantially less per sf
- In its first year, WIS cost about \$35,000/year less to operate than predicted
- Primary Schools cost nearly as much to operate as the SMS but have no air conditioning
- Never able to make renovations to existing as energy efficient as a new building

Т	Table 1.06D: Combined Heating and Electrical Cost Comparisons 2016-2017											
	School	Combined Heating and Electrical Cost 2016- 2017	Square Feet	Cost/SF	Multiples of Scarb. HS in \$/SF	Notes						
1	Blue Point	\$39,582	29,870	<mark>\$1.33/sf</mark>	1.29X							
2	Eight Corners	\$38,332	25,891	<mark>\$1.48/sf</mark>	1.44X							
3	Pleasant Hill	\$33,180	23,294	<mark>\$1.42/sf</mark>	1.38X							
4	New Wentworth	\$185,202	168,313	<mark>\$1.10/sf</mark>	1.07X							
5	Middle School	\$193,679	128,856	<mark>\$1.50/sf</mark>	1.46X							
6	High School	\$308,893	300,097	\$1.03/sf	1.0X							
	Harriman Architects and Engineers											



	Current		Option A			Option E	3		Option	C	C	Option D		
	Grades,	Student	Do nothing but add modulars.			Renovate Existing K-2 Primary			Create new Consolidated <u>K-2</u>			Create new Consolidated PreK-		
	Populat	ion &	Primary sch	ools to be Prel	K-2 on exist'g	Schools in	place on Existin	ng Sites	Primary S	chool	P	Primary School Right size the SMS, keep Gr. 6-		
	Capacity	y in Fall	sites. SMS v	vould also do r	nothing but	Right size	the SMS, keep C	Gr. 6-8	Right size	the SMS, keep Gr.	.6-8 R			
	2017		keep addin	g modulars to	the site.	Includes 5	% growth contin	ngency.						
			All exitsing	space and site	problems									
			intensify gr	<u>eatly.</u>										
Scarborough Middle	Gr 6-8	731 St.	Gr 6-8	772 St. in 2025	5-26	Gr 7-8	488 St. in 2025	-26	Gr 6-8	736 St. in 2025-2	26 G	r 6-8	736 St. in 2025-2	
School	(Capacit	ty +/- 700				Move 6th §	grade to WIS, re	duces work	Right size	the SMS, expand a	nd R	ight size th	ne SMS, expand ar	
SMS	to 750, s	see notes)				at SMS sub	ostantially		address s	nortcomings	a	address shortcomings		
Wentworth Intermed.	Gr 3-5	647 St.	Gr 3-5	792 St. in 2025	5-26	Gr 4-6	814 St. in 2025	-26	Gr 3-5	755 St. in 2025-2	26 (Gr 3-5	755 St. in 2025-2	
School	(Capacit	ty 800 St.)				Remains 3	grades but now	4-6	Remains a	as is with 3 grades.	R	emains as	is with 3 grades.	
WIS														
Blue Point Primary	Gr K-2	194 St.	Gr PreK-2	305 St. in 2025	5-26, (+111)	Gr PreK-3	392 St. in 2025	-26, (+198)	Closes		С	loses		
BPP	(Capacit	ty 241 St.)	Would have	e 10 modulars.		Right size E	BPP, expand and							
						address sh	ortcomings							
Eight Corner Primary	Gr K-2	227 St.	Gr PreK-2	349 St. in 2025	5-26, (+122)	Gr PreK-3	447 St. in 2025	-26, (+220)	Closes		C	loses		
ECP	(Capacit	ty 236 St.)	Would hav	e 13 modulars.		Right size E	ECP, expand and							
						address sh	ortcomings							
Pleasant Hill Primary	Gr K-2	175 St.	Gr PreK-2	288 St. in 2025	5-26, (+113)	Gr PreK-3	365 St. in 2025	-26, (+190)	Closes		C	loses		
PHP	(Capacit	ty 178 St.)	Would have	e 8 modulars.		Right size F	PHP, expand and							
						address sh	ortcomings							
New Consolidated	N/A		N/A			N/A			Gr K-2	746 St. in 2025-2	26 (Gr. PreK-2	896 St. in 2025-2	
Primary School									New Con	solidated K-2 schoo	ol N	ew Consol	lidated PreK-2 sch	
New CPS														



		Option	E		Option F			Option (G		Option I	H	
		Create ne	w Consolidated	PreK-2	Create new	Consolidated	PreK-3	Create new	v Consolidated	<u>K-3</u>	Create nev	w Consolidate	ed <u>Gr. 1-3</u>
				Primary Sch	ool		Primary Sc	hool		Primary Sc	chool, Reuse E	ight Corners	
		Move 6th	grade to WIS &	expand WIS	Move 6th g	rade to WIS, n	o expansion	Reuse Plea	asant Hill as a P	PreK Center	as a PreK-	K Center	
					Includes 5%	growth contin	ngency.	Move 6th	grade to WIS, I	no expansior	Move 6th	grade to WIS	, no expansio
1	Scarborough Middle	Gr 7-8	465 St. in 2025	5-26	Gr 7-8	488 St. in 202.	5-26	Gr 7-8	465 St. in 2025	-26	Gr 7-8	465 St. in 202	25-26
	School	Move 6th	grade to WIS, re			duces work				Move 6th	grade to WIS,	reduces work	
	SMS	at SMS su	bstantially		at SMS subs	tantially		at SMS sub			at SMS sub	-	
2	Wentworth Intermed.	Gr 3-6	1,026 St. in 20	25-26	Gr 4-6	814 St. in 202	5-26	Gr 4-6	775 St. in 2025	-26	Gr 4-6	775 St. in 202	25-26
	School	Adds a gra	ade to WIS, requi	res add'l	Remains 3 grades but now 4-6			Remains 3 grades but now 4-6			Remains as is with 3 grades.		
	WIS	classroom	ns but no new co	re spaces									
3	Blue Point Primary	Closes			Closes			Closes			Closes		
	ВРР												
4	Eight Corner Primary	Closes			Closes			Closes			Gr. PreK-K	394 St. in 202	25-26
	ECP										Convert EC	CP to PreK-K, r	equires
											add'l class		
5	Pleasant Hill Primary	Closes			Closes			Gr. PreK	150 St. in 2025	-26	Closes		
	РНР							Convert PHP to PreK only. No					
								additions r	equired.				
6	New Consolidated	Gr. PreK-	2 896 St. in 2025	5-26	Gr. PreK-3	1,204 St. in 20	25-26	Gr K-3	997 St. in 2025	-26	Gr 1-3	753 St. in 202	25-26
	Primary School	New Cons	olidated PreK-2	school	New Conso	lidated PreK-3	school	New Consolidated school with K-3			New Cons	olidated schoo	ol with
	New CPS										Gr. 1-3		



		Current		Option E	3		Option I	F	
		Grades,	Student	Renovate	Existing K-2 Pri	imary	Create ne	w Consolidated	<u>PreK-3</u>
		Populati	ion &	Schools in	place on Existi	ng Sites	Primary So	chool	
		Capacity	in Fall	Convert ed	ach to PreK - 3.		Move 6th	grade to WIS, n	по ехра
		2017		Right size	the SMS, keep	Gr. 6-8	Includes 5	% growth conti	ngency.
				Includes 5	% growth cont	ingency.	MOST COI	NSOLIDATED OP	ΤΙΟΝ
				LEAST CON	SOLIDATED OI	PTION			
1	Scarborough Middle	Gr 6-8	731 St.	Gr 7-8	488 St. in 202	5-26 (-243)	Gr 7-8	488 St. in 2025	-26 (-24
	School		y +/- 700		grade to WIS, re	• •	-	grade to WIS, re	•
	SMS		see notes)		at SMS substantially		at SMS substantially		
	Wentworth Intermed.	-	<i>.</i>	Gr 4-6	814 St. in 2025	5-26 (+167)	Gr 4-6	814 St. in 2025	-26 (+16
	School	(Capacity 800 St.)			grades but now		Remains 3 grades but now 4-6		
	WIS	(Capacit	9 000 01.9						
3	Blue Point Primary	Gr K-2	194 St.	Gr PreK-3	392 St. in 202	5-26, (+198)	Closes		
	BPP	(Capacity 241 St.)		Right size E	3PP, expand and	d			
					ortcomings, no				
4	Eight Corner Primary	Gr K-2	227 St.		447 St. in 202		Closes		
	ECP	(Capacit	y 236 St.)	Right size E	ECP, expand and				
					ortcomings, no				
5	Pleasant Hill Primary	Gr K-2	175 St.	Gr PreK-3	365 St. in 202	5-26, (+190)	Closes		
	PHP	(Capacit	y 178 St.)	Right size F	PHP, expand and	d			
				address sh	address shortcomings, now PreK-3				
6	New Consolidated	N/A		N/A			Gr. PreK-	3 1,204 St. in 202	25-26
	Primary School							olidated PreK-3	
	New CPS								









- Minimizes scope of work at SMS by moving 6th grade to WIS.
- WIS would retain three grades, 4-6, and requires no new classrooms.
- Grade 3 moves to the Primary Schools.
- PreK is provided. Assumes 150 PreK students in 2025.
- Closes no schools.
- Buildings would be right-sized to accommodate the increase in population and existing space shortages.
- However, the facilities can't expand to accommodate the 2025 Primary School population and programs because the sites are too small.

- ${}^{\bullet}$ grade to WIS.
- WIS would retain three grades, 4-6, and requires no new classrooms.
- Grade 3 moves to the Consolidated Primary School.
- in 2025.
- **Closes three schools.**
- Building would accommodate the increase in population and all program spaces.

Scarborough Public Schools Facilities Master Plan

Minimizes scope of work at SMS by moving 6th

PreK is provided. Assumes 150 PreK students



Summary of Comparison:

8 options explored

- Several components can be explored
- Consolidation will save money and resources.



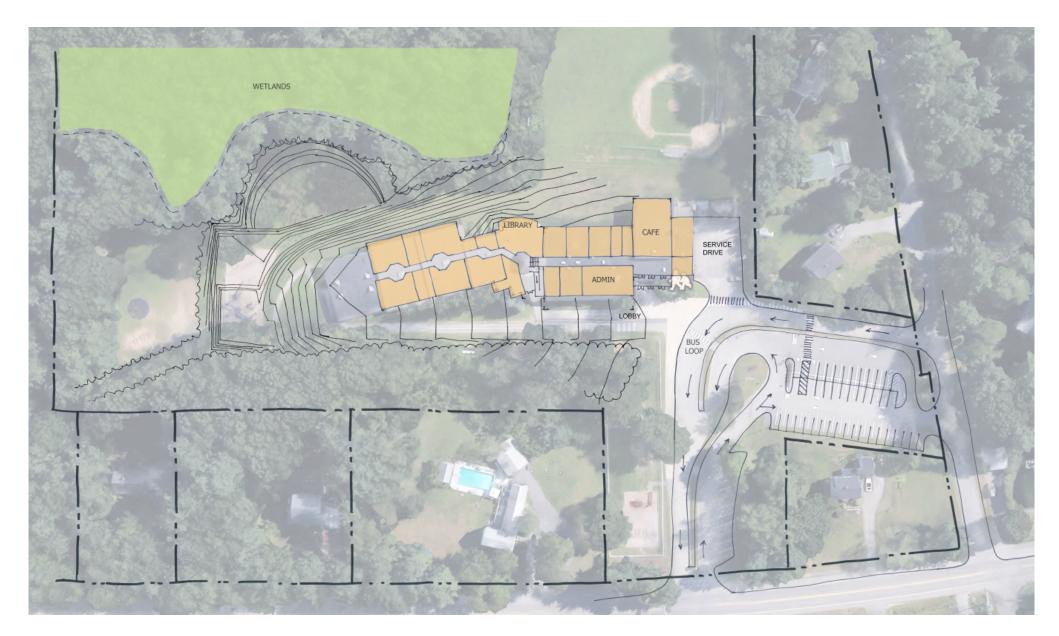
OPTION B: RENOVATION SCOPE OF WORK

- Renovate the existing buildings and sites to modern technical and educational standards
- Remove existing modular classrooms and replace with permanent space
- Upgrade existing mechanical, electrical, plumbing and life safety systems to be substantially more energy efficient
- Upgrades to meet all current building codes and ADA
- Improve the building envelope
- Right size the existing spaces to DOE standards where feasible
- Plan for future growth



BLUE POINT PRIMARY SCHOOL







OPTION B: BLUE POINT PRIMARY SCHOOL

New wing and parking obliterates needed play areas. Severely inadequate

2

- Steep slopes to east and north severely constrain site
- No parent drop-off unless playground is taken
- Extensive fill needed under new wing
- Replace modulars with permanent space





EIGHT CORNERS PRIMARY SCHOOL





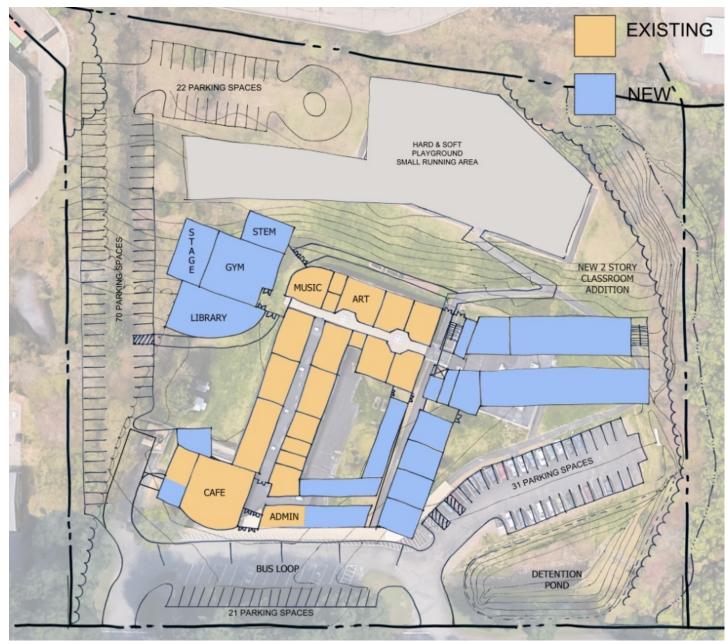


OPTION B: EIGHT CORNERS PRIMARY SCHOOL

- Site is severely constrained
- Required parking overtakes play area or extends off site
- Building site constrained by slopes in rear
- No parent drop-off

2

- Bus loop too small
- Replace modulars with permanent space
- Storm water treatment would have to be underground
- Play areas inadequate





PLEASANT HILL PRIMARY SCHOOL







OPTION B: PLEASANT HILL PRIMARY SCHOOL

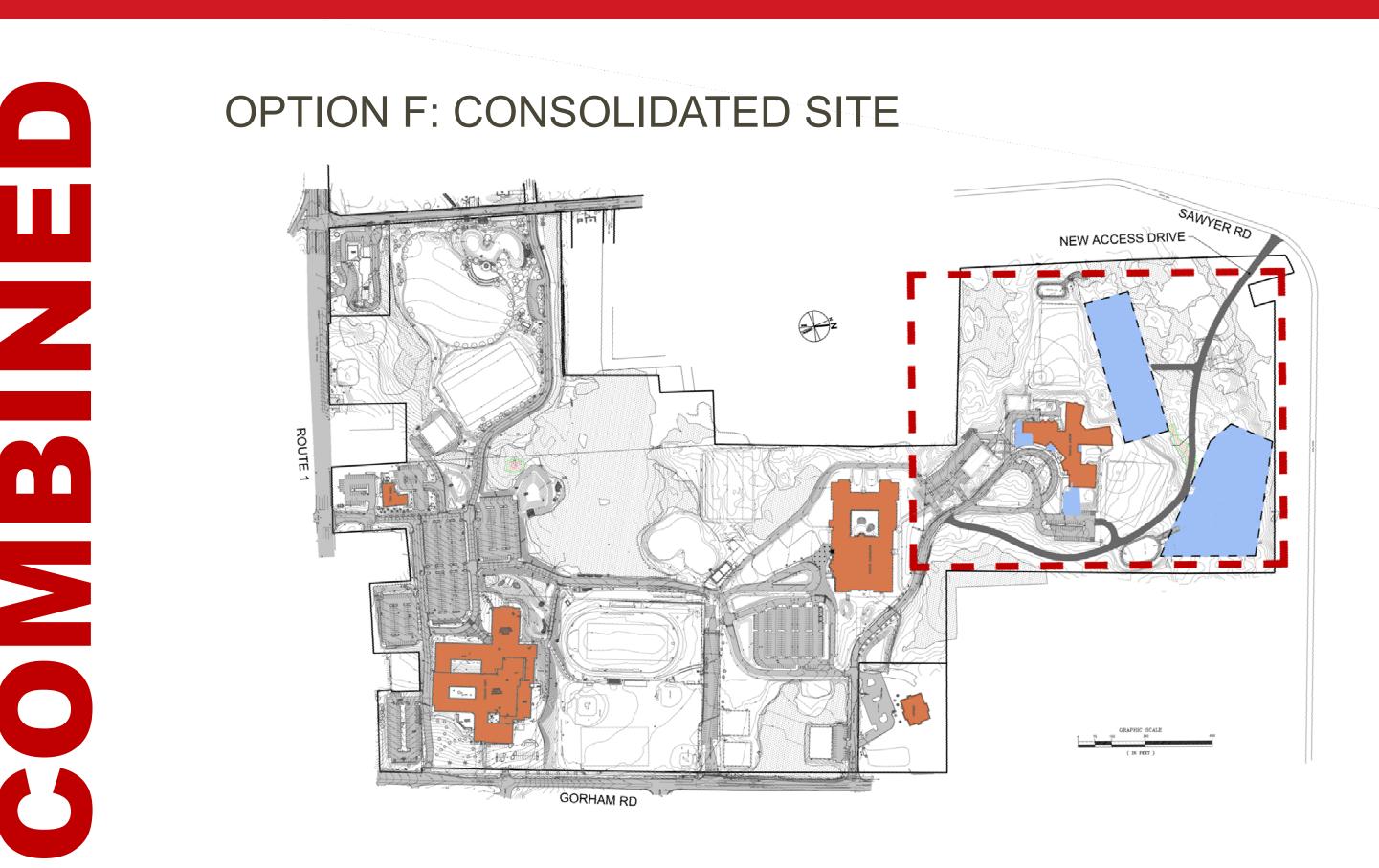
- Site would have to be clear-cut
- Required parking overtakes play area
- Site slopes to rear

2

- No parent drop-off
- Storm water treatment would have to be underground
- Play areas severely inadequate
- No parent drop-off
- Bus loop too small







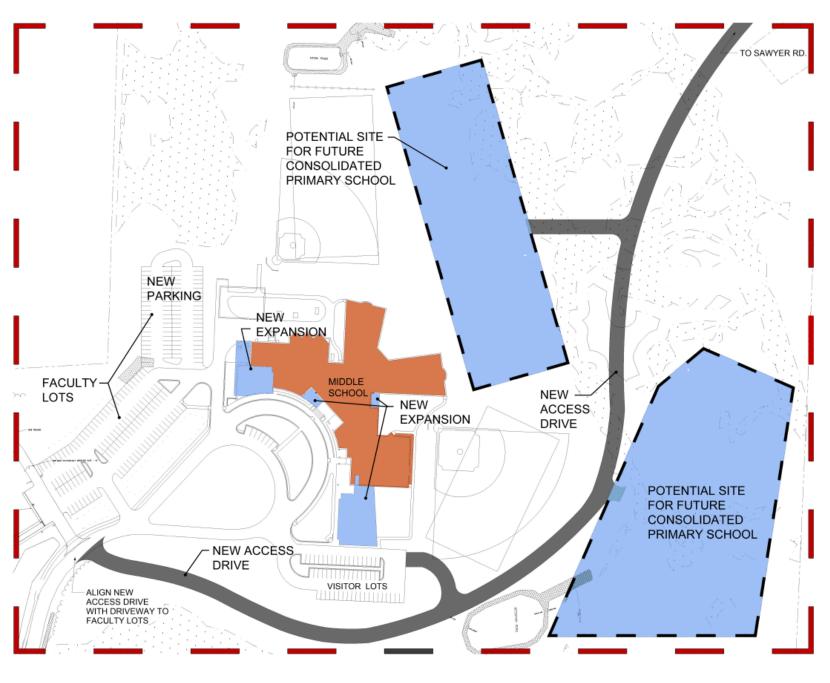


OPTION F: CONSOLIDATED SITE PLAN

- Extends Campus Drive to Sawyer Road.
- Whole campus benefits because SMS is no longer isolated.

2

Two areas may be feasible for development. Environmental testing and Topographic Survey are required to verify.





	B	E
Blue Point	69,895 SF	
Eight Corners	72,792 SF	
Pleasant Hill	62,218 SF	
Consolidated Primary		171,568 SF

Total SF 204,905 SF 171,568 SF

Option F Saves 33,337 square feet compared to option B





	B	E
Blue Point	\$20,228,986	
Eight Corners	\$21,461,329	
Pleasant Hill	\$18,514,519	
Consolidated Primary		\$58,205,940
Total SF	\$60,204,834	\$58,205,940

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Option F Saves \$1,998,894 in **Total Project Costs** compared to option B



Saves \$3,331,912 in Bonding Costs over 30 years. Based on Maine **Municipal Bond Bank** projections.





- Existing Primary Schools - the **Building Envelopes** (roofs and exterior walls) do not meet current energy codes
- Option B the Building Envelopes will only meet current energy code in the new construction

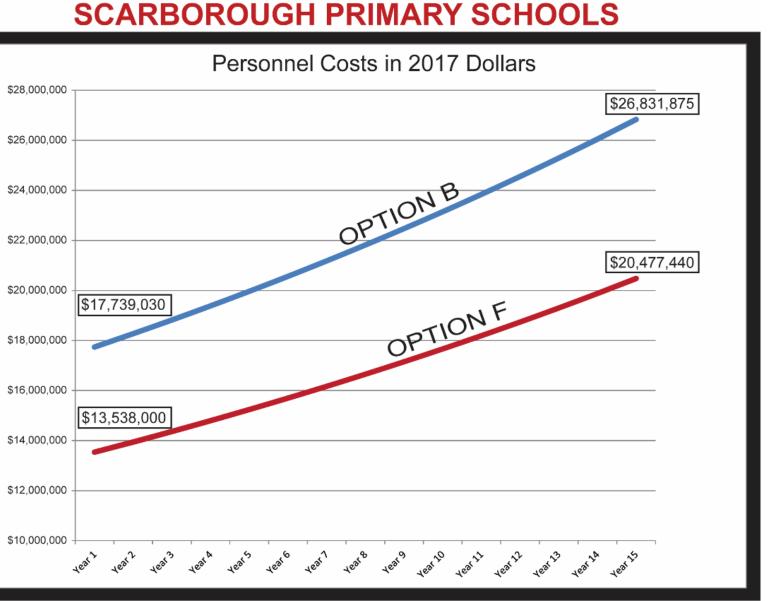
• **Option F** – 100% of the building will meet current energy codes

Comparative EnergyEfficiencyExisting Buildings Fall 2017-18				Option B Fall 201	7-18		Option F Fall 2017-18			
			Floor			Floor			Floor	
			Area			Area			Area	
	System	R-Value	Enclosed	System	R-Value	Enclosed	System	R-Value	Enclosed	
Blue Point	Exter. Walls	R-3	12,651	Exter. Walls	R-3	12,651				
	Exter. Walls	R-12.8	13,549	Exter. Walls	R-12.8	13,549				
	Exter. Walls	Modulars	3,670	New Exter. Walls	R-20.5	43,695				
	Roof	R-10-30	29,870	New Roof	R-38	28,355				
Eight Corners	Exter. Walls	R-3.5	9,538	Exter. Walls	R-3.5	9 <i>,</i> 538				
	Exter. Walls	R-15.9	10,675	Exter. Walls	R-15.9	10,675				
	Exter. Walls	Modulars	5 <i>,</i> 678	New Exter. Walls	R-20.5	52,579				
	Roof	R-10-30	25,891	New Roof	R-38	37,305				
Pleasant Hill	Exter. Walls	R-3.5	8,322	Exter. Walls	R-3.5	8,322				
	Exter. Walls	R-12.8	12,924	Exter. Walls	R-12.8	12,924				
	Exter. Walls	Modulars	2,048	New Exter. Walls	R-20.5	40,972				
	Roof	R-10-30	23,294	New Roof	R-38	26,129				
Consolidated Primary							New Exter. Walls	R-20.5	171,568	
							New Roof	R-38	114,950	



COMPARATIVE PERSONNEL COST

- If the Option B and Option F schools were in operation today with the increased student population, these would be the projected savings of Option F over Option B
- About 92% of the cost of operating an existing Primary School is Personnel Costs.
- Consolidating schools can produce savings and increased efficiencies in personnel costs
- Option F savings in year one is \$3,331,912 vs. Option B.
- Assume 3% per year inflation.





OVERALL ADVANTAGE OF OPTION 'F'

- Less square feet to operate and maintain in the future
- Higher R-values of the building envelope
- 100% of building **meets** current **energy** ${\color{black}\bullet}$ codes
- New highly energy efficient MEPS building systems
- **Less cost** to build the better facility
- Equity of services

Fully ADA accessible

- Meets current Town Ordinances and Building Codes
- the school.
- Reduction in CIP projects and related costs
- **All portables removed**

Scarborough Public Schools Facilities Master Plan

Fewer staff needed to operate the school. Personnel costs are about 92% of the overall O&M costs of

SCARBOROUGH MAINE



