



# DENNIS-YARMOUTH SCHOOL PROJECT

SCHOOL BUILDING COMMITTEE

February 28, 2018



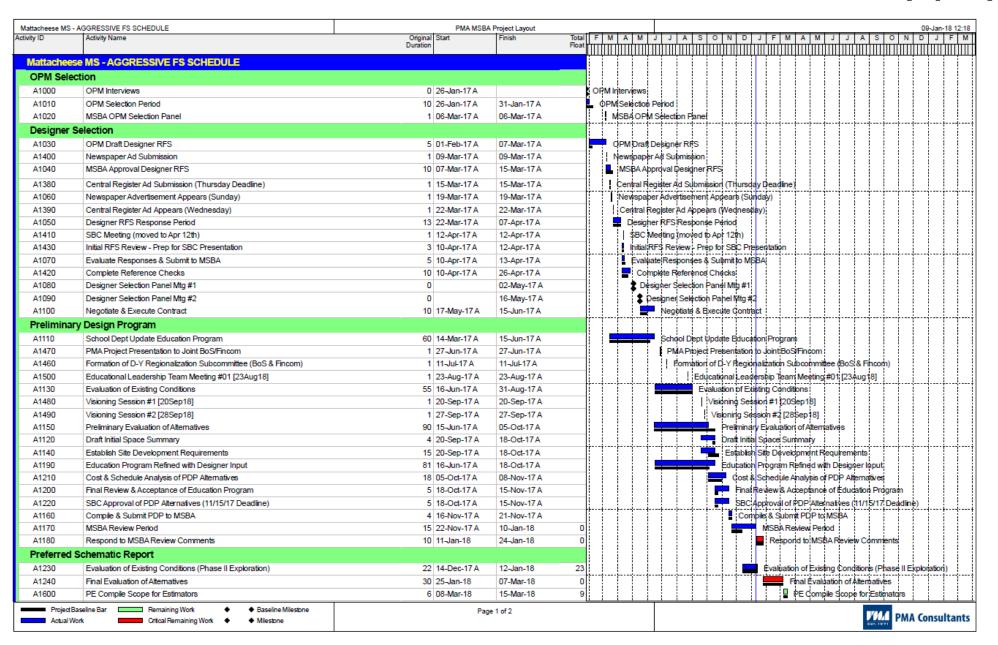




### **SCHEDULE AND DECISIONS**

- Wednesday, Jan. 10 SBC (review options preferred site)
- Wednesday, Jan. 31 Abutters Meeting #1
- Wednesday Jan. 31 SBC (options refinements, massing & shadow studies)
- Thursday, Feb. 15 SBC (options refinements + systems & energy modeling)
- Wednesday, Feb. 28 SBC (options refinements + re-evaluation of sites and plans)
- Wednesday, Feb. 28 Abutters Meeting #2
- Wednesday, Mar. 7 SBC Selection of Preferred Solution
- Wednesday, Mar. 7 Local Actions & Approvals of Solution (BoS/FinCom/SC)
- Wednesday, Apr. 11 SBC (cost discussion following estimate reconciliation)
- Monday, Apr. 23 Joint BoS, Finance, School Committee
- Wednesday, Apr. 25 SBC (vote to submit Preferred Schematic Report)
- Wednesday, May 9 Compile & Submit PSR
- Wednesday, May 23 MSBA Facilities Assessment Subcommittee Meeting
- Wednesday, Jun. 27 MSBA Board of Directors (for PSR approval)

### PROJECT SCHEDULE (1/2)



# PROJECT SCHEDULE (2/2)

Activity Name	Original Start	Finish	Total	F 1 M					SO	N M			8.4	1 (	M			1	<b>1</b>   3	S	0	) N	M I			
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Identification and Development of Preferred Solution	20 08-Mar-18	04-Apr-18	0	щш	щш	ш	щш	щш		ЩШ	Щ	1111111		IIIII	LLIII Lentif	catio	ШШ n a		IIII Dev						ЩŲ	dS
Finalize Conceptual Estimates	10 22-Mar-18	04-Apr-18	5													: :	•	•					•			
Reconcile Conceptual Estimates	8 05-Apr-18	16-Apr-18	5					İ		į					Rec	oncil	e Cr	anc	ept	ual	Esf	stima	ates		į	
PMA Draft Local Actions and Approvals Document	4 26-Apr-18	01-May-18	o			!!		+	<u> </u>					<b>!</b>	PI	ИAD	raft	Lo	cal/	Activ	ons	sar	ıd.Aı	ppro	oval	s D
Compile and Submit PSR [Due 09May18]	5 03-May-18	09-May-18*	0											7												
	1 23-May-18	23-May-18*	0											'			•									
MSBA PSR Review Period	15 10-May-18	30-May-18	10				į			į				1					RR	Revi	iew	w Pe	eriod		j	
MSBA Facilities Assessment Subcommittee Option #2 [06Jun18]	1 06-Jun-18	06-Jun-18*	0					-						! !	$\Box$	M	ISB/	ΑFε	aciliti	ties.	Ass	sses	sme	entiS	Sub	con
Response to MSBA PSR Review Comments Due	10 31-May-18	13-Jun-18	10			† <u>†</u>		·- <del> </del>	¦				<del>-</del> †	†!	}†	<u> </u>	Res	por	nse f	to N	MSI	BAI	P\$R	(Re	vier	N O
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Design														1	ļ İ	. 1	ĺ				ĺ					
Deadline for Submission of State Ballot Question to AG	1 02-Aug-18	02-Aug-18*	0											<u> </u>				1	Dea	ıdlir	ne f	for S	Subi	miss	sion	of S
Schematic Design Period (Begin after FAS)	100 24-May-18	10-Oct-18	0							-			-	[				#	#	#		Sch	nem	atic	De	ign
Compile and Submit SD to MSBA [Due 17Oct18]	5 11-Oct-18	17-Oct-18*	0											1		. !					ı	Co	omp	ile ia	nd	Sub
Project Funding Vote	1 06-Nov-18	06-Nov-18*	0											1	1	ıİ	ĺ	İ	i	- 1	i	- 11	Pro	ject	Fur	ıdin
MSBA Review Period	15 18-Oct-18	07-Nov-18	10											1									MS	BAI	Rev	iew
Respond to MSBA Review Comments	10 08-Nov-18	21-Nov-18	15											1		. !					l	F	R	tesp	one	l to
Establish Project Funding Agreement	15 08-Nov-18	28-Nov-18	10										1	1	[ ]				7		í			Esta	ablis	hΡ
MSBA Board Approval of Project Scope and Budget [12Dec18]	0	12-Dec-18*	0							-				1		, ;		-			i	-	1	¢ M	SB	\ Bc
Authorization														1		. !		İ			!		'		į	
	1 13-Apr-18*	13-Apr-18	0											113	Town	ı Me	etin	d -	Tow	vn ċ	bfΥ	i /am	nout	h-iF	Proi	ect
Town Meeting - Town of Dennis - Project Update	1 08-May-18*	08-May-18	0											'	:- :	: :	: '	7		- :	:		•			
July Board of Selectmen [DATES TO BE CONFIRMED] - Ballot Vote Authorization	22 02-Jul-18*	31-Jul-18	0	<del>†</del>	·	†i	<del>-</del> †	†	††	†		<del>  </del>	†	j	[]	, <del>i</del>				<del>'</del> -	<u>.</u>					
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aseline Bar Remaining Work ♦ Baseline Milestone	F	age 2 of 2					1													40	А			_		
	Finalize Conceptual Estimates Reconcile Conceptual Estimates PMA Draft Local Actions and Approvals Document Compile and Submit PSR [Due 09May18] MSBA Facilities Assessment Subcommittee Option #1 [23May18] MSBA PSR Review Period MSBA Facilities Assessment Subcommittee Option #2 [06Jun18] Response to MSBA PSR Review Comments Due MSBA Board of Directors Approval of PSR [27Jun18] Ing Schedule Athletic Field Review Meeting SBC Meeting - Narrow List of Options SBC Meeting - Narrow List of Options SBC Meeting - Updated Site & Floor Plans & Further Narrow Options Faculty Focus Group Meetings SBC Meeting - Massing/Shadow Studies, Traffic, Field & Abutters Update Abutters Meeting SBC Meeting - Prelim Energy Models & MEP Systems SBC Meeting - Prelim Energy Models & MEP Systems SBC Meeting - Final Scope Review Prior to Estimating SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Certify Minutes (Local Actions & Approvals)  SBC Meeting - Vote to Certify Minutes (Local Actions & Approvals)  SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote to Select Preferred Design & Submit PSR SBC Meeting - Vote t	Finalize Conceptual Estimates   10   22-Mar-18     Reconcile Conceptual Estimates   8   55-Apr-18     Reconcile Conceptual Estimates   8   55-Apr-18     PMA Draft Local Actions and Approvals Document   4   26-Apr-18     Compile and Submit PSR [Due 09May18]   5   33-May-18     MSBA Facilities Assessment Subcommittiee Option #1 [23May18]   1   23-May-18     MSBA Facilities Assessment Subcommittiee Option #2 [06Jun18]   1   06-Jun-18     MSBA PSR Review Period   15   10-May-18     MSBA PSR Review Comments Due   10   31-May-18     MSBA PSR Review Comments Due   10   31-May-18     MSBA PSR Review Meeting   1   11-Dec-17 A     MSBA Board of Directors Approval of PSR [27Jun18]   0     Image: Schedule   2   2   2   2     Athletic Field Review Meeting   1   11-Dec-17 A     SBC Meeting - Narrow List of Options   1   13-Dec-17 A     SBC Meeting - Narrow List of Options   1   13-Dec-17 A     SBC Meeting - Narrow List of Options   1   13-Dec-17 A     SBC Meeting - Updated Site & Floor Plans & Further Narrow Options   1   13-Jan-18*     SBC Meeting - Massing/Shadow Studies, Traffic, Field & Abutters Update   1   31-Jan-18*     SBC Meeting - Massing/Shadow Studies, Traffic, Field & Abutters Update   1   31-Jan-18*     SBC Meeting - Prelim Energy Models & MEP Systems   1   15-Feb-18*     SBC Meeting - Final Scope Review Prot Destinating   1   07-Mar-18*     SBC Meeting - Voite to Select Preferred Design & Submit PSR   1   25-Apr-18*     SBC Meeting - Voite to Select Preferred Design & Submit PSR   1   25-Apr-18*     SBC Meeting - Voite to Certify Minutes (Local Actions & Approvals)   1   02-May-18*     Design	Finalize Conceptual Estimates   10   22-Mar-18   04-Apr-18   Reconcile Conceptual Estimates   8   05-Apr-16   16-Apr-18   16	Finalize Conceptual Estimates	Finalize Conceptual Estimates	Finalize Conceptual Estimates	Finatize Conceptual Estimates	Finiship Conceptual Estimates	Finalize Conceptual Estimates	Finiship Conceptual Estimates	Finalize Conceptual Estimates	Finalize Conceptual Estimates   10   22-Mart 18	Finalize Conceptual Estimates	Finalize Conceptual Estimates	Finalize Conceptual Estimates	Finalize Conceptual Estimates  10 22-Mars 18	Finalize Conceptual Elementes    10 22 Abs 18   0.4 Apr 18   5	Finalize Conceptual Estimates	Finalize Conceptual Estimates	Finale Conceptual Estimates	Finales Conceptual Estimates	Finalize Conceptual Estimates	Finistro Conceptual Estimates	Finisher Conceptual Estimates	Finalty Conceptual Estimates	Finisher Connectable Estimates    10   22-Mai-18   0.44-y-18   0.5

# SPACE SUMMARY UPDATE (1/2)

MSBA Guidelines

#### Proposed Space Summary v9 (draft for PSR)

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Dennis-Yarmouth	WIXO	ON INTERN							
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	cc	MBINED to	otals
CORE ACADEMIC SPACES			24,275		- 1	24,260	1 8	2	48,535
CARRIED STATE OF THE PARTY OF T	-	-	24,275			24,260	- 2		48,333
(List classrooms of different sizes separately)  Classroom - General	848	24	20.363	857	17	14,561	852	41	34.924
Health	717		717	852	1	852	785	10.0	
	777	1	717				853	2	1,569
World Language		25	0	853	3 21	2,560	853	3 46	2,560
		23			21	-		4.0	
Sm. Grp/Resource (1 EL/gr. w/ 5-10 stu)	889	1	889	691	1	691	790	2	1,580
Science Classroom / Lab	1,153	2	2,306	1.298	3	3.894	1,240	5	6,200
Science Classicotti / Lab	1,100	- 4	2,500	851	2	1,702	851	2	1.702
	$\vdash$	2		1001	5	1,702	-031	7	1,702
Prep Room	-	4	. 0		9			100	- 1
Trepricon						0			,
SPECIAL EDUCATION	Wiyon has	19% IEPs	9,840	MMS be	21% IEP	11,613	District =	56% FRI	21,453
(List classrooms of different sizes separately)	Templi lida	TO YOU IELS	3,040	mino na	2 1 70 ILF	11,013	artistitist =	OWN THE	E11400
Self-Contained (2 ASD/STAR, 2 Dev.	-						-		
Delay/SAILS, Crit Care, NECC + Behav)	849	3	2,546	1.110	3	3,356	984	6	5.900
Self-Contained SPED Toilet	048	- 30	2,345	1,119	.21	3,330	304	6.	0,90,
Resource Room (Rdg/ELA, Math + Wirk)	679	5	3.395	818	9	7.359	768	14	10.754
Small Group Room (Lg+Sm IEP Conf)	205	3	616	268	1	268	11.5050	4	The Aller
	1,797	1		265		200	1,797	4	854
OT (incl. Visual Impaired Services)  PT/Adaptive PE (MP/colocate w/ Gym)	1,797	- 3	1,797		_	U	1,797	(1)	1,797
Office/Mtg (2 Psy, 2 Soc, 2 Tm & 2 Spch)	297	3	892	210	3	630	254	6	1.523
CoTeaching Space within Classrooms	201		082	210	3	030	1204	.0.	1,044
Storage (2 Soc Work, 2 Rdg, OT & Psy)	198	3	594			0	198	3	594
Storage (2 Soc Work, 2 Rdg, OT & Psy)	190	- 2	394			· ·	130	(9)	394
ART & MUSIC	-		5,812			4,563			10,375
Art Classroom	1,258	2	2,515	1,439	-1	1,439	1,318	3	3,954
Art Workroom w/ Storage & kiln	181	1	181	327	1	327	254	2	508
Band / Chorus - 100 seats	1,417	2	2.834	1.107	2	2,213	1,262	4	5.047
Music Practice / Ensemble	1,940	-	2,004	329	1	329	329	1	329
Music Storage	141	2	282	128	2	255	134	4	537
mass otolage	173	-	202	12.0	-	200	104		
VOCATIONS & TECHNOLOGY			1,677			3,331			5,008
Tech Cirm (computer labs)	839	2	1,677	658	4	2.631	718	6	4.308
Tech Shop - (incl. Maker Space / Stor.)			0	700	1	700	700	1	700
				- 1.00		100			
HEALTH & PHYSICAL EDUCATION			13,155			13,733			26,888
Gymnasium	4,750	2	9,500	7,059	- 1	7,059	5,520	-3	16,559
Fitness Room			.0	1.591	2	3,182	1,591	2	3,182
Gym Storeroom	193	6	1,158	183	5	916	189	11	2,074
Hith Instructor Office w/ Shower & Toilet	142	2	284	152	2	304	147	4	588
Locker Rooms - Boys / Girls w/ Toilets	1,107	2	2,213	1,136	2	2,272	1,121	4	4.485
						1313333			
MEDIA CENTER			3,534			3,064			6,598
Media Center / Reading Room	3,534	1	3,534	3,064	1	3,064	3,299	2	6,598
							3		
DINING & FOOD SERVICE			8,650			11,172			19,822
Cafetorium / Dining (incl. Dolphin Diner)	4,746	- 11	4,746	5,937	11	5,937	5,342	2	10,683
Stage	1,018	1	1,018	1,140	1.	1,140	1,079	2	2,158
		1	176	227	1	227	202	2	400
Chair / Table / Equipment Storage	176		1.750						
Chair / Table / Equipment Storage Kitchen	2,488	1	2,488	3.620	1	3,620	3.054	2	6,108
		100				3,620 248	3,054 235	2 2	6,108 470

		PROP	OSED		
	RATE GR.	6-7 (455)		BINED GR.	4-7 (940)
ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals
		04.700			44.050
		21,730			44,850
050	40	44.050	050	0.5	00.750
850	13	11,050	850	35	29,750
850	1	850	850	2	1,700
850	17	2,550	850	41	3,400
	1/			41	
500	4	2,000	500	4	2,000
1,200	4	4,800	1,200	6	7,200
		2/022			
80	6	480	80	10	800
		12,460			20,400
		-0.00			
900	4	3,600	900	7	6,300
60	4	240	60	7	420
450	5	2,250	450	9	4,050
300	1	300	200	2	400
450	1	450	450	1	450
3,000	1	3,000	3,000	1	3,000
150	4	600	150	8	1,200
100	17	1,700	100	41	4,100
80	4	320	80	6	480
		4,750	100000		8,000
1,200	1	1,200	1,200	2	2,400
150	1	150	150	2	300
1,500	2	3,000	1,500	3	4,500
300	1	300	300	2	600
100	1	100	200	1	200
Stage als	oas1 m.	for Music	Stage als	oas 1 m.	for Music
		1,700			3,400
1,200	0	0	1,200	0	0
1,700	1	1,700	1,700	2	3,400
Sub	divide/Disp		Sub	divide/Disp	
		8,550			11,650
3,000	2	6,000	3,000	3	9,000
450	0	0	450	0	0
150	1	150	150	1	150
1,000	2	400 2,000	1,000	2	500 2,000
1,000	2	111700000	1,000	- 2	
		2,996			5,785
2,996	1	2,996	5,785	1	5,785
		7,334			11,738
3,413	1	3,413	7,050	. 1	7,050
1,600	1	1,600	1,600	1	1,600
352	1	352	513	1	513
1,755	1	1,755	2,240	1	2,240
214	1	214	335	1	335
1,755		1,755 214	2,240 335		

	4-7 (940)	INED GR.	COME	6-7 (455)	RATE GR.	SEPA
Comments	area totals	# OF RMS	ROOM NFA <sup>1</sup>	ROOM NFA <sup>1</sup> # OF RMS area totals		
	9	8	3	1		
	44,820			21,770		
			-			
850 SF min - 950 SF max	32,300	34	950	16,150	17	950
		0		-	0	
	-	34		-	17	
				-	- 11	
	1,000	2	500	500	1	500
				J		
1 period / day / student	10,800	9	1,200	4,800	4	1,200
					(	
	720	9	80	320	4	80
	10,570			5,540		
	10,570			3,340		
				1		
assumed 8% of pop. in self-contained SPED	6,650	7	950	3,800	4	950
	420	7	60	240	4	60
1/2 sze Genl. Ckm.	2,500	5	500	1,000	2	500
1/2 size Gent. Chm.	1,000	2	500	500	1	500
	-					
-						
	5,000	0		3,250		
assumed use - 50% population 2 times / week	2,400	2	1,200	1,200	1	1,200
120	300	2	150	150	1	150
assumed use - 50% population 2 times / week	1,500	1	1,500	1,500	1	1,500
	600	3	200	200	1	200
	200	1	200	200	1	200
	6,400			2 200		
Assumed use 25% Desidation Etimostusel	2,400	2	1,200	3,200 1,200	1	1,200
Assumed use - 25% Population - 5 times/week Assumed use - 25% Population - 5 times/week	4,000	2	2.000	2,000	1	2,000
ASSUMED USE - 2010 P Optional Oil - 3 Cities Week	4,000	-	2,000	2,000		2,000
	8,400			8,400		
	6,000	-1	6.000	6,000	1	6,000
	150	1	150	150	1	150
	250	1	250	250	1	250
	2,000	2	1,000	2,000	2	1,000
	5 705			2.000		-
	5,785 5,785	1	5,785	2,996 2,996	1	2,996
	5,705	2	0,700	2,550	1//	2,000
	11,738			7,333		
2 seatings - 15SF per seat	7,050	-1	7,050	3,413	1	3,413
<u></u>	1,600	1	1.600	1,600	1	1,600
	513	1	513	352	1	352
1600 SF for first 300 + 1 SF/student Add1	2,240	1	2.240	1,755	1	1.755
20 SF/Occupant	335	4	335	214	1	214

## SPACE SUMMARY UPDATE (2/2)

#### Proposed Space Summary v9 (draft for PSR)

																					Guidelines	
				EXISTING	SCHOOL	SCOMBINED						PROP	OSED		8			(refer to MSE	e Standard Guidelines)			
Dennis-Yarmouth	WIXO	N INTERN	MEDIATE	MAT	TACHEESE	MIDDLE		SEPARATE GR.6-7 (455) COMBINED GR.4-7 (940)					176-770-101	RATE GR	ATE GR.6-7 (455)		BINED GR	.4-7 (940)				
ROOM TYPE	ROOM NFA <sup>1</sup>	#OFRMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	C	OMBINED	totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
MEDICAL		//	744			209			953			570	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		770			510			710	
Medical Suite Toilet	65	2	129			8	65	2	129	60	2	120	60	2	120	60	1	60	60	1	60	
Nurses' Office / Waiting Room	241	2	482	209	1	209	230	3	691	250	1	250	250	1	250	250	1	250	250	1	250	
Examination Room / Resting	133	1	133			0	133	1	133	100	2	200	100	4	400	100	2	200	100	4	400	
ADMINISTRATION & GUIDANCE			3,094			4,314			7,408			2,806			4,190			2,955			3,890	
General Office / Waiting Room / Toilet	314	1	314	1.788	1	1,788	1.051	2	2,102	328	1	328	250	2	500	328	1	328	570	1	570	
Teachers' Mail and Time Room		n General (	Office		n General (	Office	100000000000000000000000000000000000000	General (	Office	100	1	100	50	2	100	100	1	100	100	1	100	
Duplicating Room	134	1	134	232	1	232	183	2	366	200	1	200	150	2	300	200	1	200	200	1	200	
Records Room	134	1	134	70	1	70	102	2	204	200	1	200	150	2	300	200	1	200	200	1	200	3
Principal's Office w/ Conference Area	253	1	253	390	1	390	322	2	643	375	1	375	200	2	400	375	1	375	375	1	375	79
Principal's Secretary / Waiting	1000000	n General (			n General	Office	100000000	General (	Office	125	1	125	100	2	200	125	1	125	125	1	125	
Assistant Principal's Office - AP1	253	1	253	98	1	98	176	2	351	150	1	150	150	1	150	150	1	150	150	1	150	
Assistant Principal's Office - AP2		U	0			0			0			0	150	1	150	150	0	-	150	1	150	
Supervisory / Spare Office	77	1	77			0	77	1	7.7	150	(1)	150	150	1	150	150	1	150	150	1	150	
Conference Room	929	1	929	252	2	504	478	3	1,433	350	1	350	350	2	700	350	1	350	350	1	350	
Guidance Office	55	2	129	140	2	280	102	- 4	409	150	2	300	150	4	600	150	3	450	150	5	750	
Guidance Waiting Room	186	1	186			0	186	1	186	100	1	100	75	2	150	100	1	100	100	1	100	
Guidance Storeroom		8	0			0		1	0	50	1	50	45	2	90	50	1	50	50	1	50	
Teachers' Work Room	685	1	685	476	2	952	548	3	1,637	378	1	378	200	2	400	378	1	378	620	1	620	
									l.			l.										
CUSTODIAL & MAINTENANCE			2,465			3,494			5,959			1,930			2,850			1,930			2,415	
Custodian's Office	110	1	110	68	1	68	89	2	178	150	1	150	150	1	150	150	1	150	150	1	150	
Custodian's Workshop	251	1	251			0	251	1	251	250	1	250	250	1	250	250	1	250	250	1	250	
Custodian's Storage / Closets	59	9	534	76	5	382	65	14	916	375	1	375	750	1	750	375	1	375	375	1	375	
Recycling Room / Trash			- 0			0			0	400	1	400	400	1	400	400	1	400	400	1	400	3
Receiving and General Supply	110	- 1	110	239	1	239	175	2	349	252	1	252	500	1	500	252	1	252	413	1	413	
Storeroom (incl. Books + Mezz)	237	5	1,184	370	5	1,848	303	10	3,032	303	1	303	600	1	600	303	1	303	627	1	627	
Network / Telecom Room	276	. 1	276	957	1	957	617	2	1,233	200	11	200	200	1	200	200	1	200	200	1	200	
OTHER			5,092			7,909			13,001			8,800			8,850			0			0	
Auditorium+Stage (463 WIS/734 MMS)	5,092	1	5,092	7,269	1	7,269	6,181	-2	12,361	8,500	1	8,500	8,500	1	8,500							
Dressing Rooms			0	225	2	450						0			0							
SRO Office			0	95	2	190	95	2	190	150	1	150	200	1	200							9
Gosnolt Office		5	0			3	-	1		150	1	150	150	1	150				9			
School Store		-								W	ithin net/gro	oss	Wil	thin net/gro	oss					-		2
																						<u> </u>
Total Building Net Floor Area (NFA)			78,338			87,662			166,000	+16k (	/k spd/9k aud)	73,626	+22k (10 sp	od/3 pe/9 aud)	122,483			57,884			99,728	
Proposed Student Capacity / Enrollment	(90	total staff)	545	(80	total staff)	455	(170	total staff)	1,000			455			940			455			940	
10 00 100		T .				1																
Total Building Gross Floor Area (GFA) <sup>2</sup>			116,090			115,880			231,970			110,439			183,725			84,305			150,400	
			4500																		6,40,40	
Grossing factor (GFA/NFA)			1.48			1.32						1.50			1.50			1.46			1.51	

<sup>1</sup> Individual Room Net Floor Area (NFA) Includes the net square footage in includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

<sup>&</sup>lt;sup>2</sup> Total Building Gross Floor Area (GFA) Includes the entire building gross Includes the entire building gross square footage measured from the outside face of exterior walls



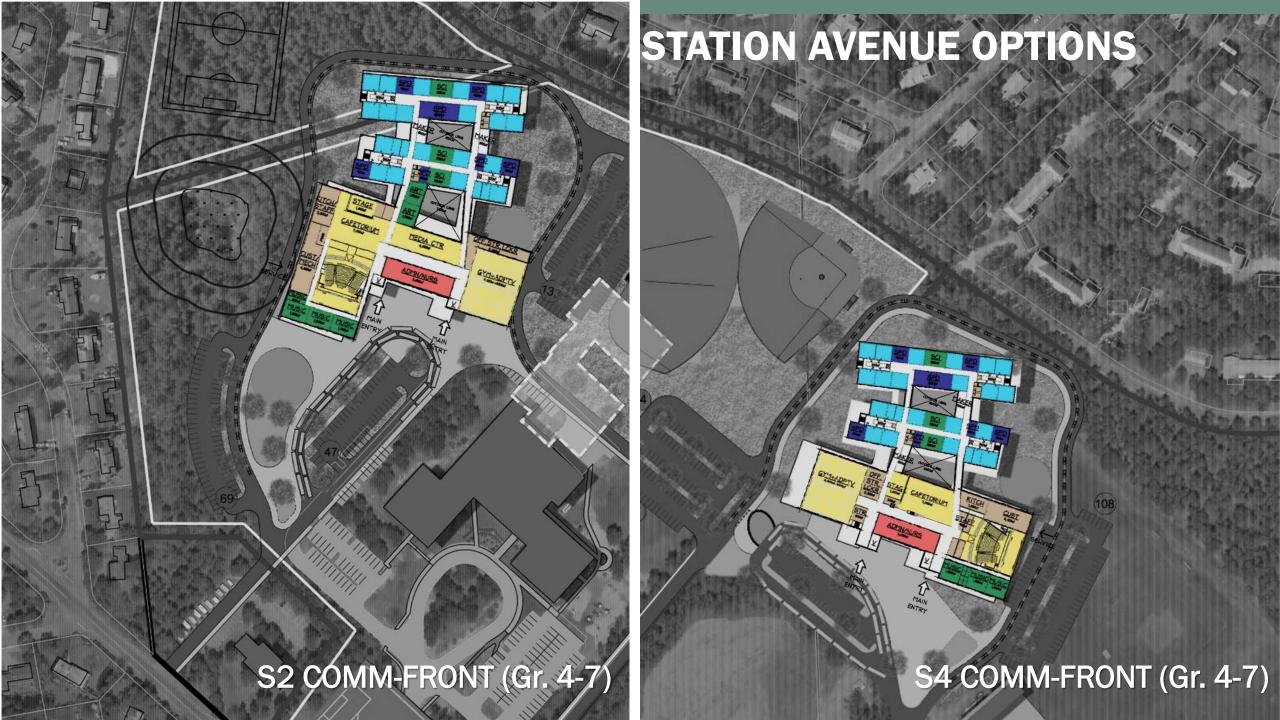




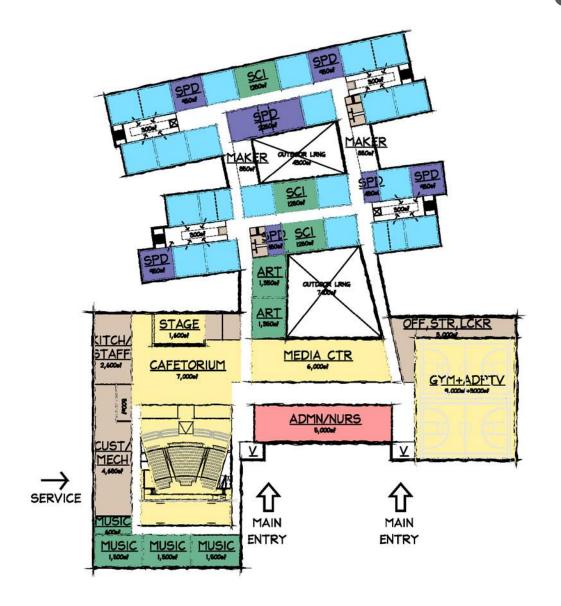


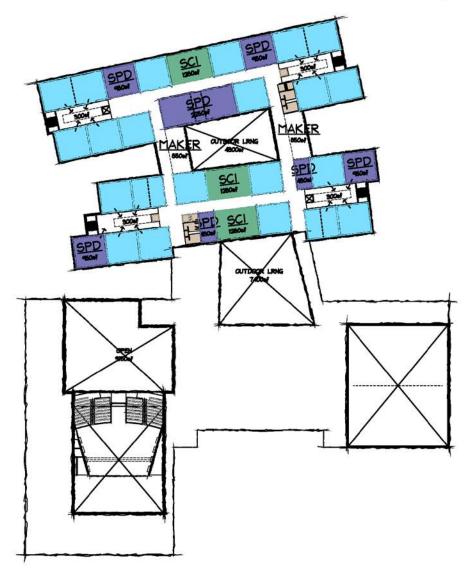




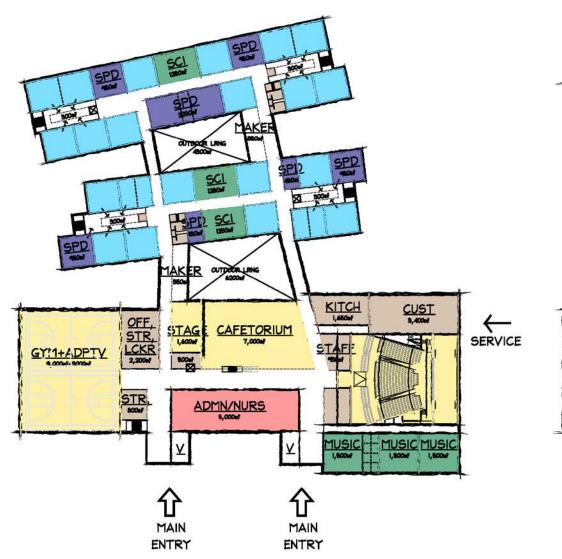


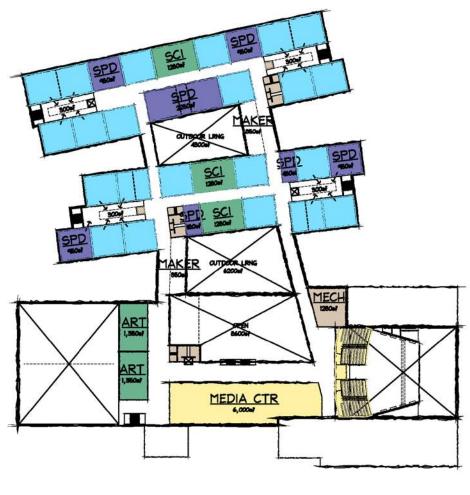
# **S2 COMMUNITY FRONT (GR. 4-7)**





# **S4 COMMUNITY FRONT (GR. 4-7)**





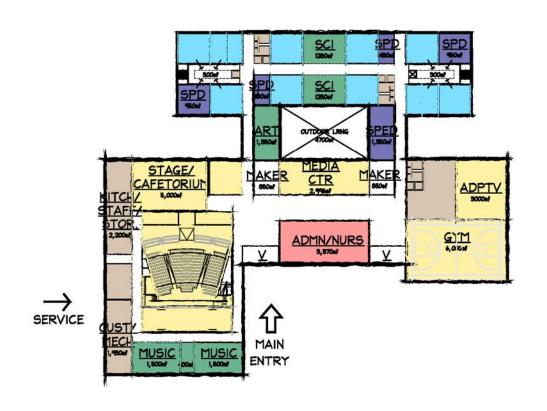
## **OPTIONS ON EXISTING SITES**

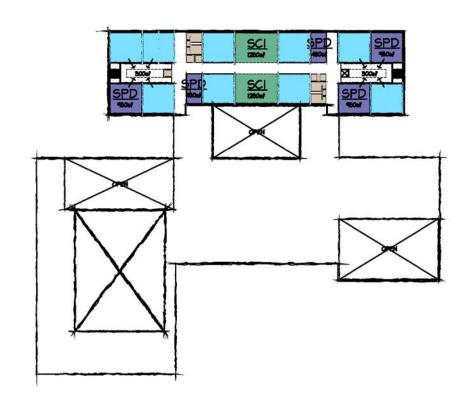


M1 (Mattacheese Gr. 6-7)

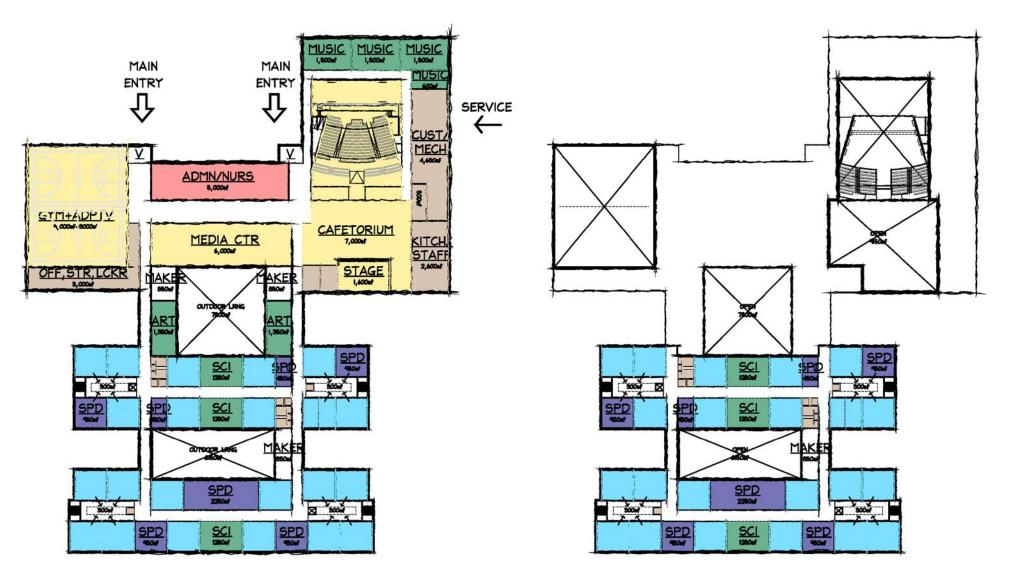
W2 (Wixon Gr. 4-7)

# M1 COMMUNITY FRONT (GR. 6-7)





# W2 COMMUNITY FRONT (GR. 4-7)



### **OPTIONS UNDER STUDY**



### MRX MATTACHEESE SITE CODE + REPAIRS ONLY

Relatively Flat Site, 70 Acre (40 useable, 21 developed) Aquafer-protect + Wetland

Repair Costs Trigger 30% Threshold Requiring Full Accessibility Compliance & Renovation

Waffle Slab Construction Difficult To Renovate – Limited Room For Modern Mechanical Systems

Will Not Meet Educational Program – MSBA Core Program Will Not Support

Occupied Phased Reno Cost Prohibitive & Disruptive



### M1 MATTACHEESE SITE ALL NEW (GR. 6-7)

Relatively Flat Site, 70 Acre (40 useable, 21 developed) Aquafer-protect + Wetland

Site/Traffic Considerations: Remains Similar To Existing Separate Bus & Car Loops

<u>Construction/Phasing:</u> Limited Impact To School (Mostly Parking & Access)

Educational & Community: Keeps Existing Transitions Does Not Address Existing Deficiencies At Wixon As Outlined In SOI

Cost Considerations:
Less Cost Immediately
Much Higher Cost Overall
w/ Wixon Addressed Later



#### W2 WIXON SITE ALL NEW (GR. 4-7)

Partial Sloped Site, 34 Acre (30 useable, 23 developed) Wellhd, Historic + Wetland

Site/Traffic Considerations: Increased Traffic Shorter Que For More Cars Car Loop Not Near Entry

Construction/Phasing: Limited Impact To School (Mostly Parking & Access) Temp. Loss Of Track/Field

Educational & Community:
Not Centrally Located,
Creates Inequitable Travel,
Rooms Close To Main Road
Keeps Existing Playground

Cost Considerations: Less Cost Over Time With 2 Schools Addressed Now Slightly More Than S2 & S4



S2 STATION AVE SITE ALL GRASS FIELDS



S2 STATION AVE SITE SYNTHETIC FIELDS

Same S2's Pro's/Con's

Except No Field Reg'd

Less Homes Impacted,

**But Slightly More Cost** 

In The N/W Corner

Less Tree Clearing,



S4 STATION AVE SITE ALL GRASS FIELDS



S4 STATION AVE SITE SYNTHETIC FIELDS

Relatively Flat Site, 70 acre (40 useable, approximately 25 developed), Aquafer Protection Distr. and Wetland)

Site/Traffic Considerations: Utilizes Existing Curb Cuts Long Car Que (Off-street) Most Fields Central to All Major Tree Clearing Req'd

Construction/Phasing: Minimal Impact To Schools Limited Field Disturbance

Educational & Community: Centrally Located, Travel Equity For Both Towns Bldg Proximity To Homes

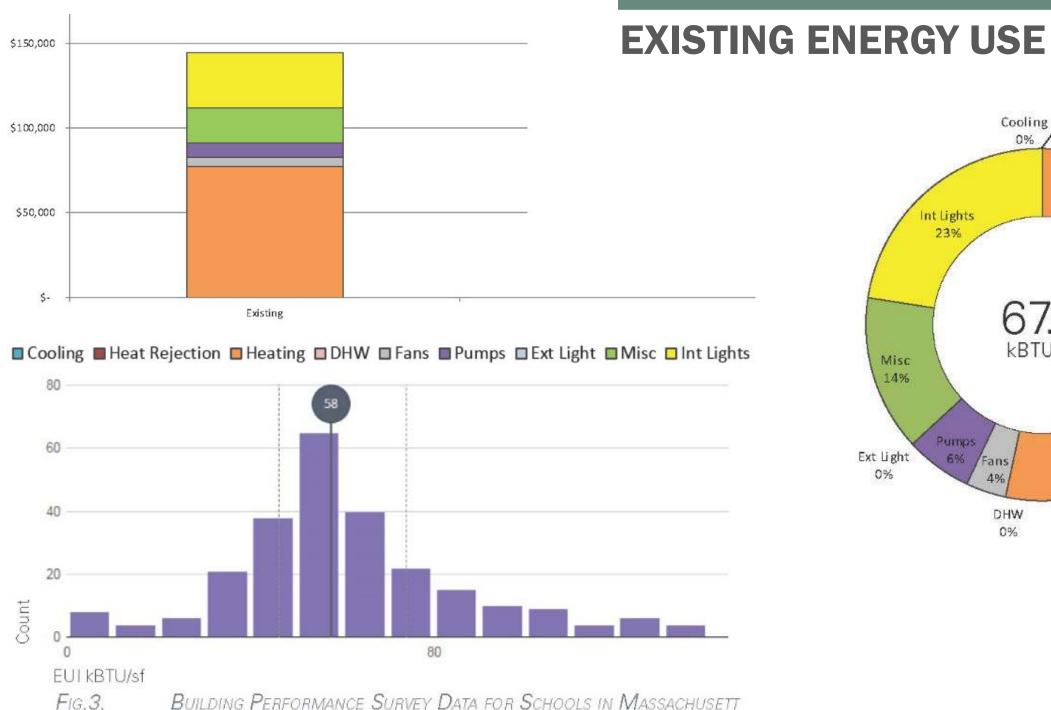
<u>Cost Considerations</u>: Least Cost Over Time With 2 Schools Addressed Now Site/Traffic Considerations: Utilizes Existing Curb Cuts Long Car Que (Off-street) Many Fields Away From HS and Majority of Parking Major Tree Clearing Req'd

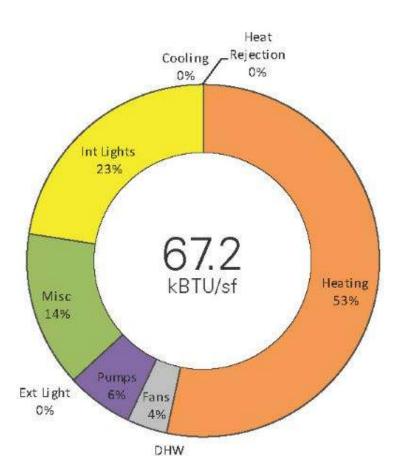
Construction/Phasing: Minimal Impact To Schools Limited Field Disturbance (with new fields built first)

Educational & Community: Centrally Located, Travel Equity For Both Towns Field Proximity To Homes

<u>Cost Considerations</u>: Less Cost Over Time With 2 Schools Addressed Now Same S4's Pro's/Con's Except No Fields Req'd In The N/W Corner

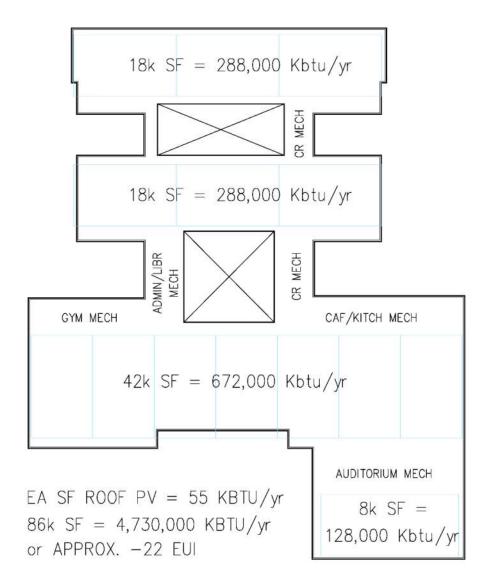
Less Tree Clearing, Less Homes Impacted, But Slightly More Cost





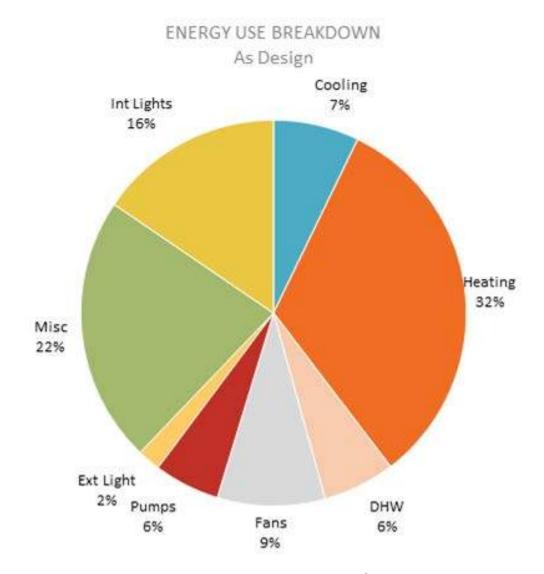
0%

BUILDING PERFORMANCE SURVEY DATA FOR SCHOOLS IN MASSACHUSETT



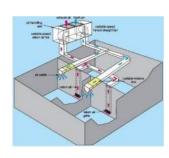
NZE POTENTIAL w/ 36k SF MORE PV or -8 to 10 EUI

### PRELIMINARY ENERGY MODEL



Current Plans = 31 EUI given shape/solar orientation, assuming certain systems, envelope & window ratio

### **OPTIONS UNDER STUDY - MECH**



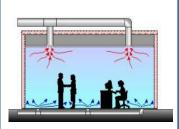
#### VAV – VARIABLE AIR VOLUME / \$\$

System that supplies air at a constant temperature, varying the air flow to modulate/ control temperature

#### **Cost Effective**

Need more floor space for ductwork and equipment and more ceiling space due to increased air requirements

Generally only meets baseline energy requiremenst



### DISPLACEMENT VENTILATION / \$\$\$

Relatively Flat Site, 70 Acre (40 useable, 21 developed) Aquafer-protect + Wetland

<u>Quiet – low maintenance</u>

**Superior Air Quality** 

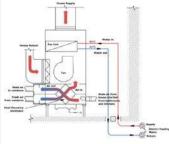
<u>Less velocity equals lower</u> power requirements

Higher Ventilation Effectiveness

Cannot be applied as widely as mixed air systems

<u>Ceiling Heights at a</u> minimum 9 foot

Can add complexity to Duct Work – diffusers more expensive



#### FAN COIL / \$\$

Hot/ cold water come from central plant – air from RTU – units provide heating and cooling to individual spaces or zones

Lower cost option, common and generally understood by trades

Need multiple units to heat and cool areas

<u>Higher Maintenance –</u> <u>more parts, filters, fans</u>



#### CHILLED BEAM / \$\$\$

Hot / Cold water are produced at central plant – pass thru the beams, air from Central Air Handlers falls or is forced over the beam providing heating and cooling

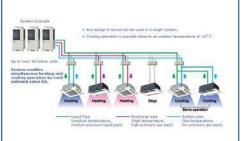
#### Quiet

Easy Commissioning requirements

Low maintenance – no moving parts and no filters or pans at beam

Improper temp and high humidity may cause condensation

May limit flexibility – a single beam can onely serve individual spaces



### VRF - VARIABLE REFRIGERANT FLOW / \$\$\$\$

Uses only refrigerant as the transfer medium and an inverter compressor – can provide simultaneous heating and cooling

Efficient – energy savings – save up to 34% in overall energy \$

Highly adjustable – can heat and cool simultaneously, provides high occupant satisfaction

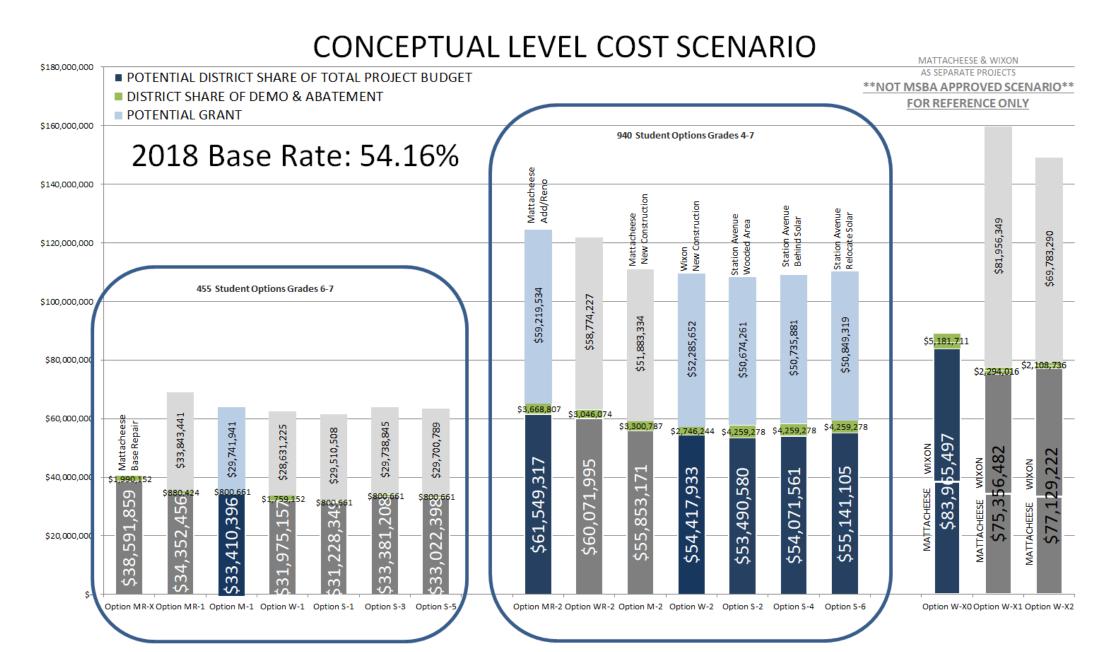
Relative high cost

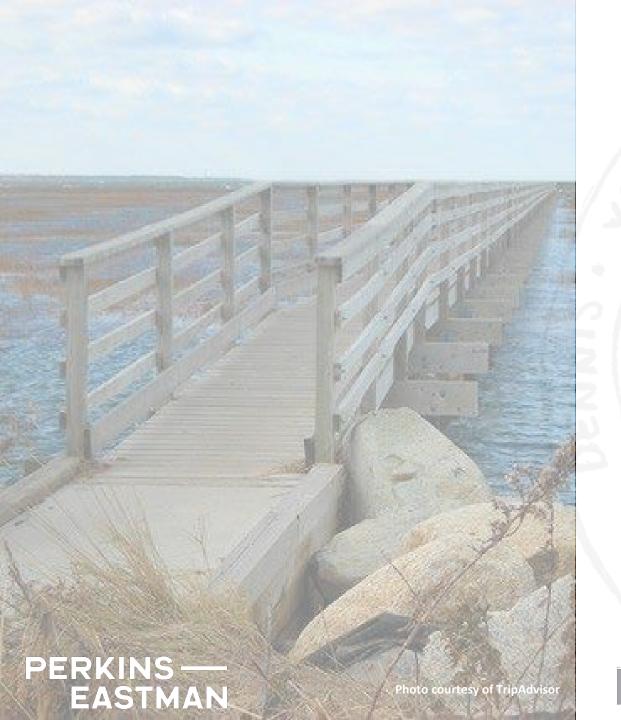
Not ideal for situations that require high outside air

<u>Potential obsolescence of components</u>

<u>Potential issues with installation</u> and repairs

### **OVERALL COST COMPARISONS (HIGH LEVEL ESTIMATE)**







# **DENNIS-YARMOUTH** SCHOOL PROJECT

**ABUTTERS MEETING** 

February 28, 2018











# **MASSING STUDIES - EXISTING**



# **MASSING STUDIES - S2**



# **MASSING STUDIES - S4**





