

New Suffield Middle School (6-8) - OGA/Allowable Area



School District:

11/11/2022

Updated Enrollment Projections

Grade*													5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2022	99	(est.)	2028-29	41	145	155	171	162	145	153	165	162	167	170	155	163	156	0	2069	2110			
2023	101	(est.)	2029-30	42	148	152	158	173	162	149	158	169	166	182	167	153	157	0	2094	2136			
2024	103	(est.)	2030-31	43	150	155	155	159	173	167	153	162	173	181	179	165	147	0	2119	2161			
2025	103	(est.)	2031-32	43	150	157	158	156	159	178	172	156	166	188	178	177	159	0	2154	2197			
2026	102	(est.)	2032-33	44	148	157	161	159	156	164	183	176	159	181	185	176	170	0	2175	2218			
2027	102	(est.)			148	155	161	162	159	160	169	187	180	173	178	183	169	0	2184	2228			

Note: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-12, etc.

Based on an estimate of births

Based on children already born

Based on students already enrolled

*Birth data provided by Public Health Vital Records Departments in each state.

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	PK-2	K-2	3-5	6-8	PK-8	K-8	9-12
2022-23	904	865	478	439	426	445	1349	1310	676
2023-24	919	880	474	435	445	442	1361	1322	662
2024-25	938	898	479	439	459	445	1383	1343	631
2025-26	959	919	501	461	458	456	1415	1375	635
2026-27	971	930	517	476	454	477	1448	1407	634
2027-28	972	931	512	471	460	494	1466	1425	644
2028-29	984	942	500	458	484	493	1477	1435	659
2029-30	1001	959	502	460	499	488	1489	1447	672
2030-31	1001	958	508	465	493	494	1495	1452	702
2031-32	988	945	509	466	479	518	1506	1463	712
2032-33	989	945	508	464	481	536	1525	1481	703

Projected Percentage Changes			
Year	K-12	Diff.	%
2022-23	1986	0	0.0%
2023-24	1984	-2	-0.1%
2024-25	1974	-10	-0.5%
2025-26	2010	36	1.8%
2026-27	2041	31	1.5%
2027-28	2069	28	1.4%
2028-29	2094	25	1.2%
2029-30	2119	25	1.2%
2030-31	2154	35	1.7%
2031-32	2175	21	1.0%
2032-33	2184	9	0.4%
Change		198	10.0%

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, births, and similar factors.

Year	6-8
2022-23	445
2023-24	442
2024-25	445
2025-26	456
2026-27	477
2027-28	494
2028-29	493
2029-30	488
2030-31	494
2031-32	518
2032-33	536

New Suffield Middle School (6-8)- OGA/Allowable Area



NESDEC

Projected Enrollment

School District: Suffield, CT

Birth Year	Births*		School Year	PK	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	Total	
2017	89		2022-23	39	135	142	150	157	160	167	161	149	141	136	127	119	0	2082	
2018	93		2023-24	39	135	142	150	157	160	167	161	149	141	136	127	119	0	2069	
2019	103		2024-25	40	150	157	160	167	161	149	141	136	127	119	110	0	2094		
2020	110		2025-26	40	160	167	161	149	141	136	127	119	110	102	0	0	2119		
2021	102	(proj.)	2026-27	41	148	152	158	173	162	149	158	169	166	182	157	0	2094		
2022	99	(est.)	2027-28	41	145	155	171	162	145	136	127	119	110	102	0	0	2119		
2023	101	(est.)	2028-29	42	148	152	158	173	162	149	158	169	166	182	157	0	2094		
2024	103	(est.)	2029-30	42	150	155	155	159	173	167	153	162	173	181	177	159	0	2119	
2025	103	(est.)	2030-31	43	150	157	158	156	159	178	172	156	166	188	177	159	0	2154	
2026	102	(est.)	2031-32	43	148	157	161	159	156	164	183	176	159	181	185	176	170	0	2175
2027	102	(est.)	2032-33	44	148	155	161	162	159	160	169	187	180	173	178	183	169	0	2184

For state reimbursement...you take the highest enrollment in an 8-year window

518 Students

Note: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-12, etc.

*Birth data provided by Public Health Vital Records Departments in each state.

Based on an estimate of births

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2031-32	2175	21	1.0%
2032-33	2184	9	0.4%
Change	198		10.0%

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, births, and similar factors.

To calculate the allowable area eligible for state reimbursement...you take the highest enrollment in an 8-year window

518 Students

Year	6-8
2022-23	445
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New Suffield Middle School (6-8) - OGA/Allowable Area



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Project Number: TBD
School Name: New Suffield Middle School
LEA Name: Suffield Public Schools
LEA CODE: 904470

SPACE STANDARDS WORKSHEET

This worksheet should be completed and submitted with the application for any N (new), E (extension), A (alteration), or RNV (renovation) project, or combination.

State Standard Specifications

Project Enrollment	Pre-K & K	1	2	3	4	5	6	7	8	9	10	11	12
0 - 350	124	124	124	124	124	124	156	180	180	180	194		
351 - 750	120	120	120	120	120	120	152	176	176	176	190		
751 - 1500	116	116	116	116	116	116	148	170	170	170	184		
Over 1500	112	112	112	112	112	112	142	164	164	164	178		

- Steps for completing Section 1:
1. In the field labeled "Projected Enrollment," enter your school's highest projected 8 year enrollment.
 2. Select "Yes" for each grade served or to be served in your school.
 3. Answer whether there is 1% additional space claimed for HVAC.
 4. Enter the existing square footage of your school constructed before 1959 remaining in completed project.
 5. Enter the square footage of the school built 1959 or later, as of the completion of construction.
 6. Note that all square foot calculations are measured to inside face of exterior walls.

Section 1.

Highest Proj 8-year enrollment: 518

6 Yes

Pre-K and/or K	1	2	3	4	5	6	7	8	9	10	11	12
						Yes						
						Yes						
						Yes						

Section 2.

(a) Total (grades Pre-K through 12)

(b) Number of grades housed

(c) Average $[(a)/(b)]$

(d) Extra 1% for HVAC (CGS10-286(c)(2))?

(e) Maximum allowable square footage per space standard $[(c) \times (d)]$

168

87,894

State Allowable Area

Multiply the highest projected number of students **(518)** by the square foot area per student **(168 SF per Student) + 1%** for mechanical equipment

Allowable Area ~ 87,894 SF

X 7.5%
Building Gross Up Factor
(wall thickness, stairs, openings)

Total Building Area ~ 94,486 SF

Chapter 173, Sec. 10-285a. Percentage determination for school building project grants.

for grants approved pursuant to section 10-283 for which application is made on and after June 1, 2022, (i) each town shall be ranked in descending order from one to one hundred sixty-nine according to the adjusted equalized net grand list per capita, as defined in section 10-261, of the town two, three and four years prior to the fiscal year in which application is made, and (ii) based upon such ranking, (I) a percentage of not less than ten nor more than seventy shall be determined for new construction or replacement of a school building for each town on a continuous scale, and **(II) a percentage of not less than twenty nor more than eighty shall be determined for renovations, extensions, code violations, roof replacements and major alterations of an existing school building and the new construction or replacement of a school building when a town or regional school district can demonstrate that a new construction or replacement is less expensive than a renovation, extension or major alteration of an existing school building for each town on a continuous scale.**

If costs between New and RNV are similar....consider requesting higher reimbursement rate for New (51%)

New Suffield Middle School (6-8) - Project Cost Summary



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New Suffield Middle School (6-8)				Updated: 3/20/24	
Grade Levels	Proj. Enr.		Highest 8 Yr . (Projected Enrollment)		
6-8	518		2031-32		
Max. Area Allowed	87,894		with 1% mechanical factor		
New Building GSF	94,486	7.50%	Typical gross up factor		
Existing Building	128,489				
Proposed Building (New Construction)		94,486			
Project Cost Summary					
Site Improvements	14.00	Acre	\$425,000	\$5,950,000	
Paving Lot & Vehicular Circulation	200	SF	\$9,250	\$1,850,000	
Building Environmental Remediation	128,489	SF	\$25	\$3,212,225	
Whole Building Demolition	128,489	SF	\$20	\$2,569,780	
New Construction	94,486	SF	\$550	\$51,967,328	
Geothermal Bore Field & Systems Premium	94,486	SF	\$22.50	\$2,125,936	
Carbon Neutral & Netzero Premium	94,486	0	\$25.00	\$2,362,151	
Construction Cost Subtotal			Avg/sf	\$741.25	\$70,037,420
Soft Costs	19.50%				\$13,657,297
Phasing & Logistics Costs (Contemplates occupied Site)	1.25%				\$875,468
Project Cost + Construction Cost Subtotal			Avg/sf	\$895.05	\$84,570,184
Cost Escalation		9.2%	Mid 2026	4.5%/year	\$7,782,571
Total Project Cost (With Escalation)				\$977.42	\$92,352,756
Total Project Costs				\$977.42	\$92,352,756
State Reimbursement (Assumes higher %, most econ. sol. CGS 10-285a)					
Ineligible Allowance (Offsite, Auditorium, etc.)					
Estimate					
Total Project Cost					

Note: The intent of the opinion of probable costs is for budgeting purposes. Final costs will be refined and costs will be adjusted as scope is further refined.

Key Statistics

- Based upon June 2024 Grant Submission & Schedule contained herein
- Based upon historical averages & requires refinement once preferred option selected
- Sustainable strategies require commitment early (carbon neutral/net zero)
- 2024 New vs. Renovate as New (RNV) **41% vs. 51% ~**
This dropped from 2022 rates of 43.93% & 53.93% respectively
- Renovated portion of existing M.S. may require space waiver and/or special legislation**

Renovation Portion of Existing Middle School				
RNV for BOE Offices	5,957	SF	\$225	\$1,340,325
Alternative Education HS (Gym.)	21,684	SF	\$225	\$4,878,900
Specialized Education Program (Aud.)	13,599	SF	\$225	\$3,059,775
Site Improvements	5	Acre	\$325,000	\$1,625,000
Construction Cost Subtotal				\$10,904,000
Soft Costs	14.50%			\$1,581,080
Project Cost + Construction Cost Subtotal				\$12,485,080
Cost Escalation	9.2%	Mid 2026	4.5%/year	\$1,148,939
Total Project Cost (With Escalation)				\$330.60
				\$13,634,019
Total Project Costs				\$13,634,019
State Reimbursement (Assumes higher %, most econ. sol. CGS 10-285a)			51.00%	(\$6,953,350)
Ineligible Allowance (Offsite, Auditorium, etc.)			3.50%	\$477,191
Estimated Total Cost to Suffield				\$7,157,860

Total Project Cost ~ 92+14 = 106M
**Cost to Suffield (47+7)
54 Million Dollars**

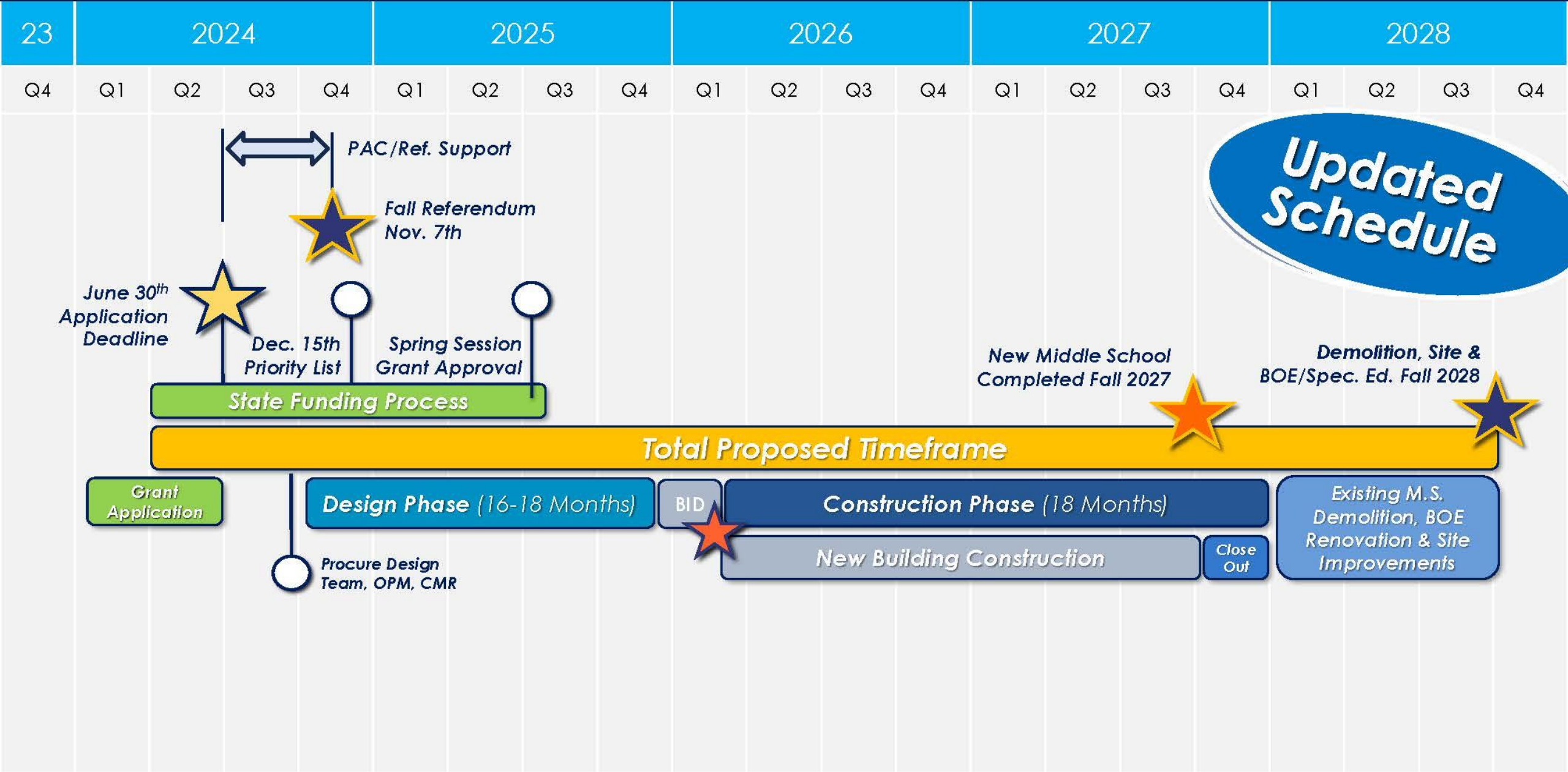
NEW SUFFIELD MIDDLE SCHOOL (6-8)- CONCEPTUAL SITE PLAN



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MILESTONE SCHEDULE - NEW BUILDING



Other possible sources of Funding/Grants



Inflation Reduction Act (IRC Section 48)

- Currently navigating for public & private clients – Madison, Cheshire, Trumpf, Inc.
- Early phases of development
 - Electronic portal application
 - Work together & identify possibilities



Dynamic Glass – 30% Rebate
Saves \$\$ on energy, window treatments

ELIGIBILITY	FEDERAL TAX CREDIT
Property Owners/Developers	Transferable, One Time
Government Buildings Owners	Paid Directly by the IRS
Tax Exempt Building Owners	

ENERGY %	QUALIFICATION
6%	Base Credit
+24%	Bonus - for projects started before 01/29/23, or meeting prevailing wage req
+10%	Domestic Content Bonus - 100% US steel/iron & 40% US manufactured products
+10%	Energy Community Bonus - located in brownfield, coal, oil, or natural gas sites
+10 or 20%	Low-Income Bonus - located in low-income or tribal lands, low-income housing

Federal tax credit for:

- Solar
- Geothermal
- Combined heat & power system
- Waste Energy Recovery Properties

- Dynamic glass
- Fiber-optic Solar
- Fuel cells
- Small wind energy
- Standalone energy storage
- Qualified biogas property
- Microgrid controllers

Other possible sources of Funding/Grants



ENERGY GOAL	SIZE OF PV ARRAY	# OF PANELS	COST
Average K-12 EUI 48	80,000 SF	3,555	\$4.35M
EUI 35	58,350 SF	2,592	\$3.20M
EUI 30	50,000 SF	2,222	\$2.72M
Net-Zero EUI 25	41,700 SF	1,852	\$2.27M

**BASED ON SMS ~ 94,486 GROSS SF
(570W PV Panels)**



Path 1 vs Path 2

Project Eligibility Requirements*

1. Commit to a ZNE, ZNE ready or Passive House (as a path to zero) project
2. Target a goal of 25 EUI or less **
3. Building must be a minimum of 20,000 square feet (sf) of heated and cooled space
4. Must anticipate year-round occupancy
5. Engage us before 50% schematic design
6. Include ZNE or ZNE ready goal and EUI target in project documents
7. Commit to building commissioning

* Please refer to MOU document for full eligibility requirements

** If 25 EUI is not possible due to project type or hours of operation, contact your Sponsor to discuss an alternative EUI target

Table 1: EUI Targets & Incentives

Site Specific	Site EUI	Incentives				
		Payable at end of construction		Payable at end of 1 year post-occupancy		
		Construction Incentive \$/sf	Heat Pump Adder*	Post-Occupancy Incentive \$/sf	Adder for getting under Net Zero EUI target	Certification Incentive
Net Zero level	25 or less (or site-specific target)	\$2.50	Air Source Heat Pumps: \$640/ton capped at \$100,000 Variable Refrigerant Flow (VRF): \$1000/ton capped at \$150,000 Ground Source Heat Pumps: \$4,000/ton capped at \$200,000	\$ 1.50	\$0.05/ EUI point reduction/sf	\$3,000

EVERSOURCE



Possible Incentive Cap

\$4.25 per SF plus Heat Pump adder
Suffield MS ~ \$501K