NATICK PUBLIC SCHOOLS
School Committee Meeting
November 18, 2024
6:00 PM
School Committee Room - 3rd flr, Town Hall

Posted Date: Thursday, November 14, 2024 @ 3:10 PM, Repost Friday, November 14, 2024 @ 12:35 PM

Open Meeting 6:00PM, Executive Session 6:05PM, Return to Open Session approximately at 6:35 PM. Virtual Meeting Accessed Via: https://us06web.zoom.us/j/2038566119?pwd=TmtsdXgxenQ0YXRLN1FIcHVpd3hEZz09 Meeting ID: 203 856 6119 Passcode: 987179 One tap mobile +13126266799,,2038566119# US (Chicago) +16465588656,,2038566119# US (New York) Dial by your location +1 312 626 6799 US (Chicago) +1 646 558 8656 US (New York) Meeting ID: 203 856 6119 Find your local number: https://us06web.zoom.us/u/keAEm9sL . If any member of the public, attending the meeting virtually, wishes to take advantage of public speak, they should email the School Committee Chair, Shai Fuxman at (sfuxman@natickps.org), one hour prior to the start of the meeting. Your email should include your name, town and your request to be called upon during the public speak portion of the agenda. The School Committee Chair will then announce your name and you will be unmuted and prompted to turn on your video for your opportunity to share your remarks. Per our public speak policy, each speaker will have up to 3 minutes.

Posted In Accordance with Provisions of M.G.L. Chapter 30A, Sections 18-25

OPEN SESSION

- Roll Call
- Pledge of Allegiance
- Moment of Silence
- Announcements

EXECUTIVE SESSION - this portion of the meeting is not open to the public

1. To discuss strategy with respect to collective bargaining if an open meeting may have a detrimental effect on the bargaining position of the public body and the chair so declares (EAN Units A and B, Administrative Assistants, Food Service, Paraprofessionals, and Custodial and Maintenance)

PUBLIC SPEAK

Public Speak is scheduled for a period of fifteen minutes. Each speaker will be permitted a maximum of three minutes during which time they can speak about topics within the scope of responsibility of the School Committee. All remarks will be addressed through the School Committee Chair. Public Speak is not a time for debate or response to comments by the School Committee.

TEACHER, STUDENT AND METCO REPRESENTATIVE UPDATES/CONCERNS

CONSENT AGENDA

1. Donation Memo
2. Approval of Open Session minutes from 10.7.24
3. Approval of Executive Session minutes from 10.7.24

SUPERINTENDENT'S REPORT

1. School Improvement Plans (Kennedy, NHS, BenHem, Lilja) - Summary
2. 2024-2025 Student Handbooks

SUBCOMMITTEE/LIAISON UPDATES

1. Custodial Union (Local #1116)
2. Food Service Negotiations

CHAIRMAN'S REPORT

1. MASC Conference Update (SC Members)
2. Next Steps to Becoming a Climate Leader - Jillian Wilson Martin
3. Future meetings

ACTION ITEMS

1. Approve SIPs

Agenda items will be addressed in an order determined by the chair. Times are approximate.

ITEM TITLE: To discuss strategy with respect to collective bargaining if an open meeting may have a detrimental effect on the bargaining position of the public body and the chair so declares (EAN Units A and B, Administrative Assistants, Food Service, Paraprofessionals, and Custodial and Maintenance)

DATE:

ITEM TYPE:

ITEM SUMMARY:

BACKGROUND INFORMATION:

RECOMMENDATION:

ITEM TITLE: Donation Memo
DATE:
ITEM TYPE:
ITEM SUMMARY: Donation Memo - LINK
BACKGROUND INFORMATION:
RECOMMENDATION:

ATTACHMENTS:

Description	File Name	Type
donation memo	11.18_FY25_Donation_Memo_.docx_(1).pdf	Cover Memo

Natick Public Schools
BUSINESS OFFICE
13 East Central Street, Natick, MA 01760

Matthew J. Gillis, Assistant Superintendent for Finance & Operations
Melissa Spash, Superintendent of Schools
Susan Balboni, Assistant Superintendent for Teaching, Learning, and Innovation

Date: November 18, 2024

TO: School Committee Members
Melissa Spash, Superintendent

FROM: Matthew J. Gillis

RE: Donations

I recommend the School Committee vote to accept the following donations:

Source/Donation	Amount/Value	Purpose
H & J Rennie	$100	Donation to the High School Choir

ITEM TITLE: Approval of Open Session minutes from 10.7.24
DATE:
ITEM TYPE:
ITEM SUMMARY: Open Session Minutes - LINK
BACKGROUND INFORMATION:
RECOMMENDATION:

ATTACHMENTS:

Description	File Name	Type
open session minutes from 10.7.24	10.7.24_OPEN_Session_School_Committee_Minutes_(1).pdf	Cover Memo

Natick Public Schools
SCHOOL COMMITTEE MEETING ***OPEN SESSION*** *MINUTES*
October 7, 2024

The School Committee held a meeting on Monday October 7, 2024, at 6:03 pm via an in-person and virtual meeting. Chair Fuxman called the meeting to order and took roll call at 6:03 pm.

Members Present:

Chair Fuxman - present
Ms. Gorseth - present
Ms. Brunell - present
Ms. McDonough – present
Ms Collins - present
Mr. Brand – present
Ms. Flathers - present
Ms. Scott - present

Others Present:

Dr. Melissa Spash	Superintendent
Susan Balboni	Assistant Superintendent for Teaching, Learning, Innovation and Equity
Matthew Gillis	Assistant Superintendent of Finance
Linda McGrath	Recording Secretary

Chair Fuxman made a motion to move into Executive Session at 6:04 PM for the following purposes: Mr. Brand second the motion.

1. To discuss strategy with respect to collective bargaining if an open meeting may have a detrimental effect on the bargaining position of the public body and the Chair so declares (EAN Units A and B, Administrative Assistants, Food Service, Paraprofessionals, and Custodial and Maintenance).

Chair Fuxman took role call to vote:

Chair Fuxman - yes
Ms. Gorseth - yes
Ms. Brunell - yes
Ms. McDonough – yes
Ms Collins - yes
Mr. Brand – yes

Ms. Flathers - yes

OPEN SESSION

Chair Fuxman resumed the open session meeting at approximately 7:07 pm and stated that the meeting was being recorded by Pegasus.

Pledge of Allegiance

Moment of Silence - To honor those who have sacrificed for our country. Chair Fuxman also acknowledged today's date being the first anniversary of the terrorist attacks in Israel.

Announcements - Ms. Brunell announced that the application for the 2025 Leadership Next Generation Youth Fellowship is now open.

PUBLIC SPEAK

Public Speak is scheduled for a period of fifteen minutes. Each speaker will be permitted a maximum of three minutes during which time they can speak about topics within the scope of responsibility of the School Committee. All remarks will be addressed through the School Committee Chair. Public Speak is not a time for debate or response to comments by the School Committee.

No public speak

TEACHER REPRESENTATIVE - Jefferson Wood

Mr. Wood had no comment tonight.

STUDENT REPRESENTATIVE - Kendall Hacker and Anthony Lu

Kendall made an announcement that the student council has two dates for the food drive donations which will be on November 17th at Stop & Shop and November 24th at Roche Bros. The donations will go to A Place to Turn in Natick.

Anthony announced that Natick High is looking for student representatives to participate on the Net Zero committee and Parent Teacher Organization committee. He also mentioned that the 2028 class dues was raised to $150.

METCO REPRESENTATIVE - Tamika Scott

Ms. Scott made an announcement that METCO had a back to school night on Wednesday, October 2nd which was hosted by the Natick Director, Audi Lynch and that the night was successful.

CONSENT AGENDA

1. Field Trip to New England Institute of Technology - NHS
2. Technology Assets to Retire

DONATIONS/MEMO

1. Donation of $1,000 to "No Place for Hate" grant to Kennedy Middle from Redhawk Foundation.
3. Donation of $1,000 to "Eco Team Project" grant to Kennedy Middle from Redhawk Foundation.
4. Donation of a Dobsonian Telescope to the High School from Steve Gildea.
5. Donations totaling $895 to NHS Athletic Department In Memory of Richard Peristere.
6. Donation from Cognex Corp for a Back-to-School Supply Drive in the amount of $475

Chair Fuxman made a motion to approve the Consent Agenda. Ms. Collins seconded the motion. Ms. Brunell then asked to pull the donations from the Consent Agenda.

Chair Fuxman then asked for a motion to approve items #1 and #2 of the Consent Agenda. Mr. Brand made a motion to approve. Ms. Collins seconded the motion. All were in favor. 7-0-0 Motion passed.

Ms. Brunell explained the reason for pulling the donations from the Consent Agenda. She stated that she is in support of the donations but wanted to talk further about the individual donations and to celebrate that the families are so invested in the town.

Mr. Brunell made a motion to accept the donations. Mr. Brand seconded the motion. ***All were in favor. 7-0-0 Motion passed.***

SUPERINTENDENT'S REPORT

1. Recognition of the Academic Excellence Award from the Massachusetts Association of School Superintendents to Eva Sotiri and Benjamin Vose.

Dr. Spash awarded two students from the class of 2025, Eva Sotiri and Benjamin Vose the Academic Excellence Award. She then read a write up for each recipient from their counselor with the reason for the award.

2. Enrollment

Dr. Spash mentioned the enrollment report didn't have many changes except that the high school had a drop that was under 10 and didn't feel it needed further discussion.

3. Advisory - Dr. Art Fergusson, Teresa Carney and Jodie Cohen

Dr. Spash introduced Dr. Fergusson and Principals Carney and Cohen to talk about Advisory.

Dr. Fergusson, Principal Carney and Principal Cohen went over the presentation for Kennedy and Wilson's Advisory and then shared a video.

Ms. Gorseth asked if this would be replacing the previous social/emotional learning work on the half days? Principal Carney said that it would sort of since it is smaller and a little more focused.

Chair Fuxman mentioned that he was excited about the staff being engaged, the break from technology for students, and the ongoing assessment. He asked the Principals and Dr. Fergusson about the belonging data and were they able to get a better understanding of the students who are disengaged and being targeted? Dr. Fergusson said that they can with some level of precision.

TEACHING, LEARNING, INNOVATION AND EQUITY - Sue Balboni

Ms. Balboni went over the presentation slides for Curricular Audits: Library and Literacy

1. Curricular Audits: Library and Literacy

Ms. Collins asked if there would be an impact because of the few years of COVID or would we be better off with the new standards? Ms. Balboni said that we are implementing the standards which will help our students and ensure that they are addressing the standards and being successful.

Ms. Brunell talked about the standards from DESE from 2017 and can they be trusted? Ms. Balboni said the standards can stay the same but doesn't say how to teach them.

Dr. Spash commented that the standards are good, continue to be robust and believe they are here to stay.

Ms. McDonough asked about "learn and prepare" and wondered if the data was looked at (from September through January) that tells where we might not be meeting the needs for the students? Ms. Balboni replied that they would be looking at all the assessments and hearing from the teachers as to how the students are doing in the classrooms. Dr. Spash added that the Renaissance does not have a writing prompt so we would look at writing across the curriculum.

Mr. Wood commented that the teachers know where the gaps are and they look at the patterns, trends and see areas that are not as robust as they should be.

Chair Fuxman commented on the math audit and what was learned and how it was applied. He then asked if the audit is focused on just tier 1 and whether we are looking at options for tier 2 and tier 3? Ms. Balboni said that in terms of this particular component, we will be looking at tier 1 but along with Ms. Miller, will also be conducting an audit of all the learning materials that are used.

Ms. Gorseth asked if there is a standard percentage for tier 2 and tier 3 that needs to be hit as to how many students need to be referred out with respect to literacy? Ms. Balboni responded that typically it would be 80% at tier 1, 10-15 % for tier 2, and 5% at tier 3.

2. PD Plan Overview with Schedule of Evaluations - Sue Balboni

Ms. Balboni went through the presentation slides for the Professional Development Plan for 2024/2025.

Ms. Balboni mentioned after the presentation that she and one of the principals are making their professional practice goals around collaborative walkthroughs and really looking at teaching practice.

Dr. Spash commented that this is a great example of getting the adults what they need and that it's varied with many choices.

FINANCE - Matt Gillis

1. FY24 4th Quarter Close Out Report - Matt Gillis

Mr. Gillis went over the 4th quarter close out report and provided the following information:

Last year we crossed the $100 million dollar mark for our operation to educate the students. We spent just over $84 million in the general fund, about $3.3 million in grants, and $13.7 million in revolving funds which is pretty close to last years.

Mr. Gillis stated that we returned $7,300 to the Town and for grants, we started the year carrying over just over $600 thousand dollars and will be carrying over $166 thousand dollars for next year.

Ms. Brunell asked about the absence grant that was received last year and do we have a grant for this year? Ms. Balboni said that it was a one time grant and that our chronic absenteeism is not significant as other districts.

Dr. Spash commented that DESE publishes the accountability targets which are set by the state, and we made 4 out of 4 points.

Ms. Brunell asked about the increase in benefit costs by town and why did it happen? Mr. Gillis stated that the health insurance went up about 10%.

CHAIRMAN'S REPORT

1. FATM Warrant 31 update

Chair Fuxman mentioned the Town fall meeting where there is a warrant asking for a moratorium on artificial turfs and fields. Where this specifically is related to the School Department, the School

Committee can weigh in on the subject. Chair Fuxman also mentioned about a joint meeting with the Select Board to get a better understanding of any impacts, costs, etc… The Select Board is having the meeting on Wednesday and we will discuss taking a position on it today.

Ms. McDonough went over what Fincom recommended at the Town meeting and that her recommendation to the committee is to support the referral of the warrant article back to the School Committee and Select Board so conversations can continue.

Ms. Collins wanted to clarify if Ms. McDonough was asking for the same motion since the Fincom recommendation is referral to the sponsor to the Select Board, School Committee and Board of Health? Ms. McDonough said yes, she was and that she supports Fincom's motion.

Ms. Gorseth commented a concern about having it referred back to us in regards to the materials and is there any thought to "no action"? Ms. McDonough stated that since there was already talk about the materials with the Kennedy fields, that referring back to the School Committee would allow discussion.

Ms. McDonough made a motion that the School Committee support the Finance Committee's referral motion on article 31 at the referral motion is moved to refer the subject matter of fall annual Town meeting article 31 to the sponsor, Select Board, the School Committee and the Board of Health. Ms. Collins seconded the motion. ***All were in favor. 7-0-0. Motion passed.***

Chair Fuxman recommended if people were available to watch the Select Board meeting as the meeting would have a lot of comprehensive information.

Ms. Flathers asked if the design process is through the vendors of the fields or is there an understanding of environmental impact included?

Mr. Gillis stated that the designer does have to weigh in and consider all environmental impacts.

2. <u>Future meetings</u>

Dr. Spash went over future meeting agendas that included:

1. October 21st meeting
    a. School Committee Handbook
    b. Dr. Tracy Gladstone/Metrowest Adolescent Health Survey Workgroup
    c. MCAS Presentation
    d. First Quarter Financial Report and the FY26 Budget Calendar
    e. Revisiting of School Committee Goals for 24/25

Chair Fuxman added that there will be an update from the Policy Subcommittee. He also gave a reminder for the School Committee goals and if there is going to be a task group meeting, it will need to be posted.

Chair Fuxman stated that we are not allowed to have meetings during Town meetings which are Tuesdays and Thursdays during their meeting time slot.

Ms. McDonough commented that there needs to be an update on the agenda for the calendar working group.
Ms. Flathers mentioned that Jillian Wilson-Martin, the Sustainability Director, is requesting a couple of meetings where she can give an update.

Mr. Brand made a motion to adjourn the meeting at 9:09 pm. Ms. Collins seconded the motion. ***All were in favor. 7-0-0. Motion passed.***

Respectfully submitted,

Linda McGrath
Recording Secretary

ITEM TITLE: Approval of Executive Session minutes from 10.7.24
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION:

ITEM TITLE: School Improvement Plans (Kennedy, NHS, BenHem, Lilja) - Summary

DATE:

ITEM TYPE:

ITEM SUMMARY:

Kennedy SIP - LINK
High School SIP - LINK
Ben/Hem SIP - LINK
Lilja SIP - LINK
Summary - LINK

BACKGROUND INFORMATION:

RECOMMENDATION:

ATTACHMENTS:

Description	File Name	Type
kennedy sip	11.18_Kennedy_SIP_Presentation_-_SC_Presentation.pdf	Cover Memo
nhs sip	11.18_Natick_High_SIP_Presentation_-_SC_Presentation.pdf	Cover Memo
benhem sip	11.18_BenHem_SIP_Presentation_-_SC_Presentation.pdf	Cover Memo
lilja sip	11.18_Lilja_SIP_Presentation_-_SC_Presentation.pdf	Cover Memo
sip summary	11.18_2024-2025_SIP_Summary.pdf	Cover Memo

NATICK PUBLIC SCHOOLS

SCHOOL IMPROVEMENT KENNEDY MIDDLE SCHOOL

School Committee Meeting
November 18th, 2024

Who are we?

School Mission

Our mission at John F. Kennedy Middle School is to provide a safe and healthy learning community that fosters respect and promotes intellectual, social, and emotional growth. We strive to engage and appropriately challenge students of all levels as we value their individual strengths.

School Vision

Our school is dedicated to cultivating a learning environment where students are empowered to take ownership of their education, work together towards common goals, and develop the perseverance and adaptability needed for success in today's rapidly changing world.

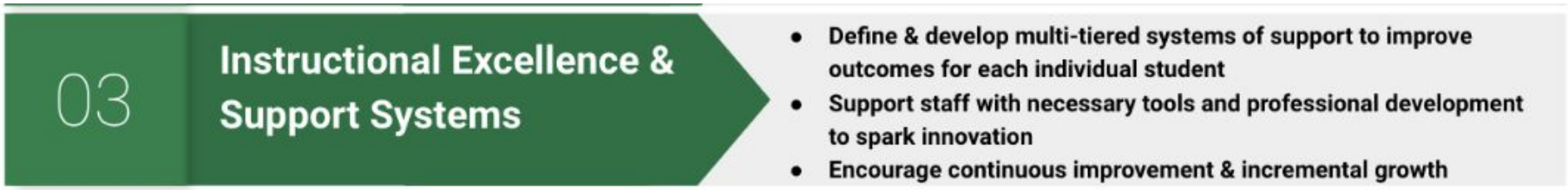
Kennedy middle school takes pride in our inclusive programming, commitment to social emotional learning for all students, and our dedication to growth mindset for all in our community.

School Highlights 2023-2024

- Social emotional learning program implemented on monthly half days
- Response to Intervention during WIN block has been utilized to provide students with intervention and enrichment opportunities
- Executive Functioning workshops during WIN block at every grade level
- Restorative practices have been implemented in all behavioral situations by administration and are continuing to build staff capacity
- Restorative circles were successfully introduced at Kennedy to resolve conflicts
- ACCESS Program provides consistent reverse inclusion opportunities for all students at Kennedy
- Compass Program provides opportunities for structured social emotional learning in a supportive environment throughout the day
- Kennedy's staff have been a vital part of determining how best to give our students what they need academically, socially and emotionally
- Strong, successful, collaborative partnership formed with school leadership and Parent School Council

Alignment Action Plan - Priority #1

Priority #1 - Increasing Student Achievement Outcomes
Accelerate Math Achievement for 6th and 7th Grade Students Performing in the Bottom 25th Percentile



NEEDS ASSESSMENT #1

- Overall progress towards improvement for <u>all students</u> at Kennedy went down **to 61%** in 2024 **from 80%** in 2023
  - "substantial progress toward targets
- Overall progress towards improvement for students in the <u>high needs category</u> went down **to 18%** in 2024 **from 56%** in 2023
  - "moderate progress towards targets"

Link to school profile goal in DESE.

All students vs. High Needs Cumulative Criterion Target Percentages

Overall progress toward improvement targets

	2023	2024
Annual criterion-referenced target percentage	80%	61%
Weight	40%	60%
Cumulative Criterion-referenced target percentage (2023 x 40%) + (2024 x 60%)	69% Substantial progress toward targets	

Overall progress toward improvement targets

	2023	2024
Annual criterion-referenced target percentage	56%	18%
Weight	40%	60%
Cumulative Criterion-referenced target percentage (2023 x 40%) + (2024 x 60%)	33% Moderate progress toward targets	

NEEDS ASSESSMENT #1, CONTINUED

Mathematics scores in the accountability report in the lowest performing student group went from earning 4 points in 2023 to earning 0 points in 2024, which contributed to the lower progress towards improvement in the overall student cumulative criterion target percentages.

2023 & 2024 MCAS Accountability Report

Overall student population

2023 Points awarded

2023 Progress toward improvement targets

Indicator		All students (Non-high school grades) Points earned	Total possible points	Weight %	Lowest performing students (Non-high school grades) Points earned	Total possible points	Weight %
Achievement	English language arts achievement	4	4	-	2	4	-
	Mathematics achievement	3	4	-	4	4	-
	Science achievement	4	4	-	-	-	-
	Achievement total	**11**	**12**	**60.0**	**6**	**8**	**67.5**
Growth	English language arts growth	3	4	-	3	4	-
	Mathematics growth	3	4	-	3	4	-
	Growth total	**6**	**8**	**20.0**	**6**	**8**	**22.5**
High school completion	Four-year cohort graduation rate	-	-	-	-	-	-
	Extended engagement rate	-	-	-	-	-	-
	Annual dropout rate	-	-	-	-	-	-
	High school completion total	**-**	**-**	**-**	**-**	**-**	**-**
Progress toward attaining English language proficiency	**English language proficiency total**	**0**	**4**	**10.0**	**-**	**-**	**-**
Additional indicators	Chronic absenteeism	4	4	-	3	4	-
	Advanced coursework completion	-	-	-	-	-	-
	Additional indicators total	**4**	**4**	**10.0**	**3**	**4**	**10.0**
Weighted total		8.2	9.6	-	5.7	7.6	-
Percentage of possible points			85%	-		75%	-
2024 Annual criterion-referenced target percentage				**80%**			

2024 Progress toward improvement targets

Indicator		All students (Non-high school grades) Points earned	Total possible points	Weight %	Lowest performing students (Non-high school grades) Points earned	Total possible points	Weight %
Achievement	English language arts achievement	4	4	-	2	4	-
	Mathematics achievement	3	4	-	0	4	-
	Science achievement	3	4	-	-	-	-
	Achievement total	**10**	**12**	**60.0**	**2**	**8**	**67.5**
Growth	English language arts growth	3	4	-	3	4	-
	Mathematics growth	3	4	-	3	4	-
	Growth total	**6**	**8**	**20.0**	**6**	**8**	**22.5**
High school completion	Four-year cohort graduation rate	-	-	-	-	-	-
	Extended engagement rate	-	-	-	-	-	-
	Annual dropout rate	-	-	-	-	-	-
	High school completion total	**-**	**-**	**-**	**-**	**-**	**-**
Progress toward attaining English language proficiency	**English language proficiency total**	**4**	**4**	**10.0**	**-**	**-**	**-**
Additional indicators	Chronic absenteeism	4	4	-	3	4	-
	Advanced coursework completion	-	-	-	-	-	-
	Additional indicators total	**4**	**4**	**10.0**	**3**	**4**	**10.0**
Weighted total		8.0	9.6	-	3.0	7.6	-
Percentage of possible points			83%	-		40%	-
2024 Annual criterion-referenced target percentage				**61%**			

NEEDS ASSESSMENT #1, CONTINUED

Mathematics scores in the accountability report in the high needs student group went from earning 2 points in 2023 to earning 0 points in 2024, which contributed to the lower progress towards improvement percentages in the high needs cumulative criterion target percentages.

2023 & 2024 MCAS Accountability Report

High needs population

2023 Progress toward improvement targets

Indicator		High needs Student Group (Non-high school grades)		
		Points earned	Total possible points	Weight %
Achievement	English language arts achievement	2	4	-
	Mathematics achievement	2	4	-
	Science achievement	2	4	-
	Achievement total	**6**	**12**	**67.5**
Growth	English language arts growth	3	4	-
	Mathematics growth	3	4	-
	Growth total	**6**	**8**	**22.5**
High school completion	Four-year cohort graduation rate	-	-	-
	Extended engagement rate	-	-	-
	Annual dropout rate	-	-	-
	High school completion total	**-**	**-**	**-**
Progress toward attaining English language proficiency	**English language proficiency total**	**-**	**-**	**-**
Additional indicators	Chronic absenteeism	4	4	-
	Advanced coursework completion	-	-	-
	Additional indicators total	**4**	**4**	**10.0**
Weighted total		5.8	10.3	-
Percentage of possible points			56%	
2023 Annual criterion-referenced target percentage			**56%**	

2024 Progress toward improvement targets

Indicator		High needs Student Group (Non-high school grades)		
		Points earned	Total possible points	Weight %
Achievement	English language arts achievement	0	4	-
	Mathematics achievement	0	4	-
	Science achievement	1	4	-
	Achievement total	**1**	**12**	**67.5**
Growth	English language arts growth	2	4	-
	Mathematics growth	3	4	-
	Growth total	**5**	**8**	**22.5**
High school completion	Four-year cohort graduation rate	-	-	-
	Extended engagement rate	-	-	-
	Annual dropout rate	-	-	-
	High school completion total	**-**	**-**	**-**
Progress toward attaining English language proficiency	**English language proficiency total**	**-**	**-**	**-**
Additional indicators	Chronic absenteeism	0	4	-
	Advanced coursework completion	-	-	-
	Additional indicators total	**0**	**4**	**10.0**
Weighted total		1.8	10.3	-
Percentage of possible points			18%	
2024 Annual criterion-referenced target percentage			**18%**	

SMARTIE GOAL - ACTION PLAN #1

Priority #1 - Increasing Student Achievement Outcomes
Accelerate Math Achievement for 6th and 7th Grade Students Performing in the Bottom 25th Percentile

SMARTIE GOAL: ***By the end of the 2024-2025 academic year, 100% of Kennedy Middle School students in grades 6 and 7 scoring in the bottom 25th percentile with low growth below 40 SGP on the fall STAR Renaissance Math assessment will meet or exceed their STAR/Renaissance SGP goal of moderate growth to 55 + from fall 2024 to spring 2025.***

Action Step Highlights #1

- Evaluate student MCAS scores and identify areas for improvement
- Evaluate the official accountability criterion data provided by DESE on the school profile and share with all staff, data teams and school leadership
- Evaluate students on STAR benchmark testing to identify students in the targeted group.
- Place students in tier 2 and tier 3 RTI interventions as needed by data provided during data meetings in partnership with grade level team data.
- Work with Kennedy data team to monitor progress after each RTI cycle.
- Progress monitor before and after each trimester via STAR renaissance tests.
- Kennedy math teachers continue to monitor students in the math classrooms and provide solid tier 1 instruction.
- Provide extra help to students during after school math help days.

Link to full SIP

Alignment Action Plan - Priority #2

Priority # 2 - Building a Comprehensive Multi Tiered System of Supports Tier 1 Advisory Model

01	Psychological Safety & Social Emotional Learning	• Foster environments of trust, respect & mutual support that includes supporting staff & addressing behavioral challenges • Strengthen SEL initiatives, integrate Restorative Practices and PBIS to build a more inclusive & supportive culture
02	Relationship Building & Community Engagement	• Strengthen Connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth
04	Communication & Leadership Development	• Ensure all district and building communications are aligned and effectively disseminated; ensure teams are all on the same page • Provide coaching & mentoring to dept heads & teacher leaders to support continuous growth & improvement

Needs Assessment #2

Based on evidence from the Middle School Connectedness Survey administered May 2024:

- 86% of students reported that they are connected to at least one adult in the building
- 89% of students felt they were treated with respect in school
- 81% of students felt that if they had a problem, they didn't have an adult they felt comfortable talking to about it.
- When asked if they felt as if they belong at school, 48% said "very much", 44% said "somewhat"
- When asked if they felt connected to their school, 25% said "very much", "63% said "somewhat"

After school activities data:

- 560 students/week or 61% on average attended after school activities each week at KMS

Previously, Kennedy scheduled tier one SEL programming monthly. Based on staff end of year feedback data, last year's SEL program was not as well received by staff as we would have hoped. Teachers felt restricted by the monthly themes and shared that themes inconsistently matched the need in the classroom at that time. As a result, buy in from staff was low. Teachers wanted more staff across the building involved to provide smaller, more effective group sizes where students could feel increased connection and sense of belonging to our school.

SMARTIE GOAL - ACTION PLAN #2

Priority # 2 - Building a Comprehensive Multi Tiered System of Supports Tier 1 Advisory Model

SMARTIE Goal: Implementation of a Grade-Level Tier 1 Advisory Model at Kennedy Middle School for the 2024-2025 Academic Year

By the end of the 2024-2025 academic year, Kennedy Middle School will design and implement a Tier 1 advisory model that provides all students with small, grade-level advisory groups of 9-10 students, aligned with the school's Multi-Tiered System of Supports (MTSS) framework that allows 100% of students reporting a connection with at least one trusted adult and 100% of students feeling a sense of belonging and connectedness to our school. Growth will be measured by connectedness and belonging surveys with students in Fall and Spring and by continuous surveying of staff and taking feedback through the Advisory Faculty Committee.

Action Step Highlights #2

- Faculty advisory team of 13 staff members assembled
- Summer planning meetings held
- Mission statement determined
- Opening day faculty meeting presentation about advisory held
- Advisory scenarios presented and voted upon by staff
- Advisory schedule put together by committee with administration
- Advisory model shared with school council for feedback
- Model and process shared with school committee
- Advisory model shared with families
- Wayfinder SEL program training with staff
- Advisory kick off October 25th
- Student advisory focus group assembled
- Students and staff survey produced and shared each trimester
- Formative and summative assessments given to all stakeholders
- Connectedness survey pre and post school year

Link to full SIP

Alignment Action Plan - Priority #3

Priority # 3 - Cultivate a School Culture that Empowers Teachers through Collaborative, Framework Aligned Learning Walks

01	Psychological Safety & Social Emotional Learning	• Foster environments of trust, respect & mutual support that includes supporting staff & addressing behavioral challenges • Strengthen SEL initiatives, integrate Restorative Practices and PBIS to build a more inclusive & supportive culture
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth
04	Communication & Leadership Development	• Ensure all district and building communications are aligned and effectively disseminated; ensure teams are all on the same page • Provide coaching & mentoring to dept heads & teacher leaders to support continuous growth & improvement
05	Celebration of Success & Strengths	• Acknowledgement of achievements! • Regularly celebrate the strengths & successes of students and staff.

Needs Assessment #3

- 34% of staff reported they felt evaluations were not consistent between evaluators at Kennedy
  - Consistency in evaluation will promote a more positive and successful experience across classes and grade levels, thus more opportunities for growth.
  - Alignment of instructional leaders at Kennedy will provide messaging to staff during and after walkthroughs that are powerful and direct tools for change in student outcomes.

- 50% of staff reported that DESE frameworks were mentioned between 0% - 50% of the time during conversation afterwards or in their written evaluations.
  - Linking evaluation to DESE frameworks ensures students receive lessons to promote academic achievement at grade level.

- 52% of staff reported UDL look-fors were mentioned some of the time during their evaluations.
- 17.5% of staff reported UDL look-fors were not mentioned at all.
  - Look-fors in UDL practice supports access to curriculum for all students.

- 50% of staff rated their psychological safety around the evaluation was in the neutral to worst categories
  - Increase in psychological safety of staff around evaluation and walkthroughs would promote a model of continuous growth and feedback of practice at Kennedy.

Link to Data on Staff Survey on Evaluation Process

SMARTIE GOAL - ACTION PLAN #3

Priority # 3 - Cultivate a School Culture that Empowers Teachers through Collaborative, Framework Aligned Learning Walks

SMARTIE GOAL: *By the end of the 2024-2025 academic year, the principal of Kennedy Middle School will establish a school culture that values and prioritizes learning walks as a tool for providing teachers with constructive, framework-aligned feedback to improve instruction and create the most successful learning environment for all students. This goal will be measured by an increased satisfaction rate of new evaluation and learning walk protocols via staff survey by 20% and a feeling of increased psychological safety and consistency in practice by all evaluators at Kennedy.*

Action Step Highlights #3

- Walkthroughs with district office to set benchmarks around DESE framework aligned walkthroughs
- Baseline survey (pre-assessment) on current evaluation practice of staff
- Implementation of tracking/look for system to be used SY 2024-2025
- Educate Kennedy Instructional Leadership team on aligned evaluation practice
- Learning walks with instructional leaders will take place at Kennedy 4x per month throughout the year
- End of year staff survey (post assessment) on learning walk protocol and progress

Link to full SIP

NATICK PUBLIC SCHOOLS

SCHOOL IMPROVEMENT
NATICK HIGH SCHOOL

School Committee Meeting
November 18, 2024

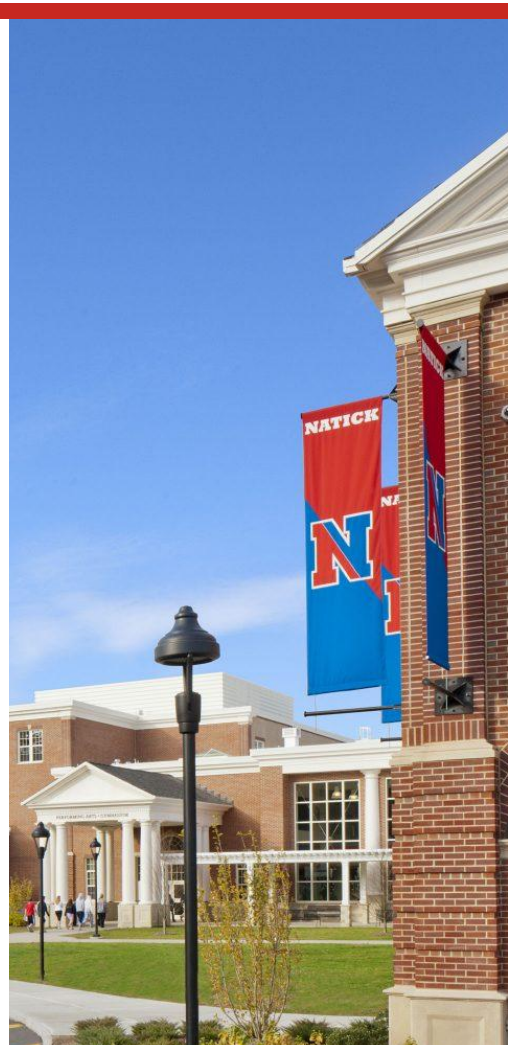
Welcome to Natick High School!

Our Mission: As part of a larger community, Natick High School seeks to develop students with creative minds, healthy lifestyles and strong character who will contribute ingenuity, service, acceptance, and leadership to an ever-changing society.

As globally literate citizens, Natick High students will achieve their highest academic potential by communicating clearly, thinking critically, problem-solving creatively, and working collaboratively while mastering subject information.

Through diverse programming, Natick High students will engage in active learning that promotes wellness while preparing students for college, career and life choices.In a safe and supportive environment,

Natick High students will demonstrate responsibility, integrity, and respect in their daily lives.



Welcome to Natick High School!

Our School Vision:

Natick High School students will:

- Write with focus, development, and detail.
- Orally communicate ideas and information coherently and with clarity.
- Analyze and solve real-world problems.
- Use appropriate technology to research, organize, and present information.
- Make informed choices and practice behaviors necessary to achieve and maintain their physical well-being.
- Conduct themselves with honesty and integrity.
- Demonstrate personal responsibility for their learning, and in their behavior.
- Practice social responsibility and active citizenship.

School Highlights 2023-2024

At Natick High School, in the 2023 - 2024 school year, we

- Achieved **Unified National Banner Recognition** from Special Olympics North America
- Engaged over a **third of our student body (600+ students, a 13% increase over 22-23) in AP coursework**, with 90% of AP scores of 3 or higher; Were placed on the AP Honor Roll with Gold Medal Status
- Successfully **decreased vape use** in school bathrooms by an average of 30% and substantially decreased cell phone use in classrooms
- **Decreased** the percentage of students earning **low grades** (D+ or lower) for the semester amongst the full study body, and also within our special education and Hispanic student subgroups
- Sent 91.4% of our **graduates on to further education**, ~1% to the armed forces, ~2% to gap year, and ~6% into the workforce

Alignment Action Plan - Priority #1

Priority #1: Increasing Access and Achievement in Math

03

Instructional Excellence & Support Systems

- **Define & develop multi-tiered systems of support to improve outcomes for each individual student**
- **Support staff with necessary tools and professional development to spark innovation**
- **Encourage continuous improvement & incremental growth**

Needs Assessment - Priority #1

Priority #1: Increasing Access and Achievement in Math

Many Natick High School students are achieving at high levels in math.

- Term grades in NHS math courses (*84% of students had a C- or higher for semester grades in 23-24)*
- Scores on independent assessments like 10th grade MCAS (*3-year average of students Meeting or Exceeding Expectations is ~72%*)
- 9th grade Renaissance testing (*71% Exceeds or Meets for BOY and EOY in 23-24*).

Notable percentage of students are not meeting grade level targets in math.

- Within Algebra II courses, the number students with“low grades” (grades below a C-) is higher than in other math courses.
- Requisite skills for Algebra II include the entire Algebra I and Geometry curricula
- One year gap in learning algebra between Algebra I and Algebra II, when students take Geometry

SMARTIE GOAL - PRIORITY #1

Priority #1: Increasing Access and Achievement in Math

***The Basic Idea**: Infuse greater algebra content into our Geometry courses this year to:*

1. *Reinforce students' algebra skills and*
2. *Improve overall math skill development by merging these two essential content areas.*

Going forward, we believe that this will lead to a decrease in students with low grades (below a C-) in Algebra II.

SMARTIE GOAL #1

By the end of the 24-25 academic year, at least 80% of all students taking Geometry will show proficiency by scoring 70% or higher on newly embedded algebra standards, as measured by their performance on those standards in formative and summative assessments. This will be achieved by

- **Conducting a Needs Assessment** to identify lagging algebra skills by examining data on past performance
- **Collecting Data** by developing a data tracking tool that tracks students' performance on these key algebra standards
- **Implementing Key Instructional Strategies** including creating lesson modules that embed algebra standards into the geometry coursework, providing targeted tier 1, tier 2, and tier 3 supports, adoption of the UDL framework to remove learning barriers, and providing online math resources to provide targeted practice in specific algebra standards based on individual students' needs
- **Tracking Our Impact** on a variety of algebra-embedded assessments
- **Supporting Our Educators** with coaching and professional development
- **Providing Regular Feedback** to educators through post-conferences following regular walkthroughs of Geometry classrooms

Action Step Highlights - Priority #1

Priority #1: Increasing Access and Achievement in Math

1. **Conducting a Needs Assessment**: Determining which algebra standards to focus on
   - Considering data from MCAS → Which standards have <70% of students showing proficiency?
   - Considering feedback from Algebra II teachers → Which requisite skills are lagging in each Algebra II unit?
2. **Collecting Data**
3. **Implementing Key Instructional Strategies**
   - Creating lesson modules that embed algebra standards into the Geometry coursework
   - Online math resources to provide targeted practice in specific algebra standards based on individual students' needs.
   - Provide ongoing feedback, extra-help and relearn opportunities to students who are not meeting the standards.
   - Recommending selected students to Math Workshop to work on specific algebra skills
4. **Tracking Progress**
5. **Supporting Teachers**
   - PLC and individual meetings with the Personalized Learning Coaches
   - Coaching from the ELL Department Head on supporting English Language Learners
   - Support for the ACES Math teacher
6. **Provide Feedback:** Paired walkthroughs

Link to full SIP

Alignment Action Plan - Priority #2

Priority #2: Implement the first phase of an MTSS System

01	Psychological Safety & Social Emotional Learning	• Foster environments of trust, respect & mutual support that includes supporting staff & addressing behavioral challenges • Strengthen SEL initiatives, integrate Restorative Practices and PBIS to build a more inclusive & supportive culture
02	Relationship Building & Community Engagement	• Strengthen Connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth
04	Communication & Leadership Development	• Ensure all district and building communications are aligned and effectively disseminated; ensure teams are all on the same page • Provide coaching & mentoring to dept heads & teacher leaders to support continuous growth & improvement

Needs Assessment - Priority #2

Priority #2: Implement the first phase of an MTSS System

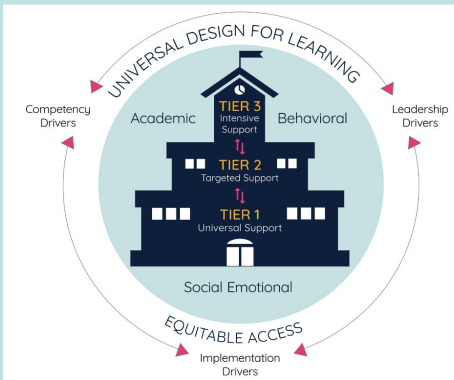
Natick High School has many supports for students including RTI delivered through a workshop model, but currently lacks a comprehensive Multi-Tiered System of Support (MTSS) to best support students for academic, social, emotional and behavioral success.

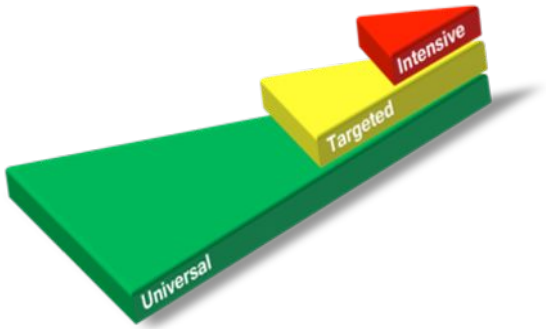
- ***Social, Emotional & Behavioral Indicators of Need:***
  - The Metrowest Adolescent Health Survey indicated that 20.8% of all NHS students say that life (over the last 30 days) is "very stressful." While this is down from an all-time high of 35.8% (in 2016), it merits further targeted interventions.
  - Last year, 16.6% of students had chronic absenteeism (students who missed more than 10% of the year).
  - Discipline referrals were up by 18% last year, with the vast majority of referrals for avoidance behaviors (wandering, class cuts, tardiness, etc.)
- ***Academic Indicator of Need:***
  - While the percentage of students earning "low grades" (D+ or below) decreased from the prior year (17.5% in 22-23 and 15.8% in 23-24), there is still more work to be done to support all students to achieve their personal best.

SMARTIE GOAL - PRIORITY #2

Priority #2: Implement the first phase of an MTSS System

The Basic Idea: *Engage in a multi-year implementation plan to fully embed an MTSS framework into our practice so that all students can consistently get what they need to be their personal best.*





SMARTIE GOAL #2

Implement phase 1 of a multi-year process to embed a Multi-Tiered System of Support (MTSS) at Natick High School including:

1. Piloting a tier 3 academic and behavioral (attendance) intervention program with a cohort of 10th graders
2. Training groups of staff on tier 1 academic support strategies, tier 1 social-emotional support strategies and tier 2 behavioral interventions through targeted professional development
3. Creating a scope and sequence for embedding a tier 1 social-emotional learning curriculum into high school classrooms and piloting portions of the curriculum in select learning spaces.
4. Piloting a tier 3 behavioral intervention called the “Highly Structured Day” in place of traditional in-school suspension
5. Developing an implementation plan for phase 2.

Action Step Highlights - Priority #2

Priority #2: Implement the first phase of an MTSS System

1. **Piloting a tier 3 academic and behavioral (attendance) intervention program with a cohort of 10th graders**
   - Cohorting a group of general education and special education together into English, social students and study hall/skills development classes
   - Create community through centralized communication with one program leader, regular positive behavior incentives for increasing class and school attendance and for increasing work production
   - Purposeful centering of creating relational trust with adults.
   - Potential expansion to grade 11 in 25-26 if indicated by efficacy data

2. **Training groups of staff on tier 1 academic support strategies, tier 1 social-emotional support strategies and tier 2 behavioral interventions through targeted professional development.**
   - Professional development "strands" in multiple MTSS target areas
   - Purposeful grouping of staff to maximize spread across all school departments
   - Necessary skill-building for expansion into phase 2.

Link to full SIP

Action Step Highlights - Priority #2 (cont.)

Priority #2: Implement the first phase of an MTSS System

3. **Creating a scope and sequence for embedding a tier 1 social-emotional learning curriculum into high school classrooms and piloting portions of the curriculum in select learning spaces.**
    - Necessary component of building resilience, increasing relational trust and increasing prosocial behaviors
4. **Piloting a tier 3 behavioral intervention called the "Highly Structured Day" in place of traditional in-school suspension**
    - A more supportive version of in-school suspension with embedded academic recovery options, embedded reflective and restorative opportunities, and counseling check-ins
    - Designed to decrease out-of-school suspension rates and facilitate building adult relationships with students who are struggling
5. **Developing an implementation plan for phase 2.**

Link to full SIP

Alignment Action Plan - Priority #3

Priority #3: Developing Proficiency in Universal Design for Learning (UDL)

02	Relationship Building & Community Engagement	• Strengthen connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth
04	Communication & Leadership Development	• Ensure all district and building communications are aligned and effectively disseminated; ensure teams are all on the same page • Provide coaching & mentoring to dept heads & teacher leaders to support continuous growth & improvement

Needs Assessment - Priority #3

Priority #3: Developing Proficiency in Universal Design for Learning (UDL)

While many students successfully meet learning targets at Natick High School, this is not true of all students, as evidenced by semester grades in 23-24, wherein 15.8% of students had at least one grade below a C-.

This indicates the need to diversify our teaching practices to reach a wider range of students. As such, Natick High School is in the process of embedding the Universal Design for Learning framework into all classrooms. We have chosen this framework because, as outlined on the DESE website, “is an approach to designing learning experiences .. that meet the needs of the widest range of learners.”

In order to implement this model, the team of department heads at Natick High School must achieve proficiency in their own understanding of the UDL framework so that they can coach NHS teachers towards reaching all learners.

SMARTIE GOAL - PRIORITY #3

Priority #3: Developing Proficiency in Universal Design for Learning (UDL)

The Basic Idea: *To increase achievement for all learners, those who supervise and evaluator teachers must be able to accurately and consistently recognize effective teaching practices, and give feedback to improve teaching practices to support educator growth.*

SMARTIE GOAL #3

By the end of the 24-25 school year, 100% of the department heads in the major academic areas (math, English, science, social studies, ELL, and world language) will be able to:

- Accurately assess their teachers on at least 3 of the 10 major indicators of Universally Designed Instruction, as outlined in the UDL look-for tool and the associated ratings scale, and
- Give targeted, actionable feedback to teachers to grow their skills at reaching all learners.

Action Step Highlights - Priority #3

Priority #3: Developing Proficiency in Universal Design for Learning (UDL)

- Personalized Learning Instructional Coaches will coach Department Heads on their own teaching practice with attention to the UDL look-fors.
- Department Heads, Personalized Learning Coaches, Vice-Principal of Teaching and Learning and Principal will engage in a full day of learning walks and post-observation debrief with our consultant through DESE Inclusive Academy grant.
- The Principal and Department Heads will do regular paired walk throughs to calibrate ratings scales and identify essential feedback for educators'.
- The Principal, Vice-Principal of Teaching and Learning, the Personalized Learning Instructional Coaches and Department Heads will practice using the observation tools associated with the UDL look-fors using videos of instruction and debriefing.

Link to full SIP

Natick Public Schools

School Improvement
Bennett Hemenway
Elementary School

School Committee Meeting
November 18, 2024

Bennett Hemenway Elementary School

School Mission:

At Bennett Hemenway, we build positive relationships to learn, to take care of ourselves and others, and our community to make our world a better place.

School Vision:

At **Ben Hem** we:

- Cherish all children and support their development as caring citizens
- Develop a joy of learning and master foundational academic skills that provide opportunities for learners to follow their interests in the future
- Create a welcoming community in order to:
  - Support and care for all students through an inclusive spirit.
  - Learn and be curious about others
  - Seek perspectives that are different from our own
  - Model and teach healthy relationship-building to support everyone's social-emotional success

* Mission & Vision statement updated during the 23-24 SY

School Highlights 2023-2024

- Completed an external review of our Therapeutic Learning Center programming.
- Reinstated student led Whole School Assemblies to help reinforce our school's core values: We Take CARE of Ourselves, Each Other and Our World
- Successfully supported teachers and students with new Illustrative Math curriculum implementation in grades K-4
- Welcomed Kodiak, an English Sheepdog, as a therapy dog on campus to support all learners.
- Worked with foodservice to install a Babylon Grow House and planned to begin composting on day one of the 24-25 school year.
- Increase of all levels of ML students on campus with support from full-time EL teacher

Alignment Action Plan - Priority #1

Increase 3rd Graders skills in math constructed and short answers

03 Instructional Excellence & Support Systems

- Define & develop multi-tiered systems of support to improve outcomes for each individual student
- Support staff with necessary tools and professional development to spark innovation
- Encourage continuous improvement & incremental growth

By May 2025, 3rd-grade students will improve their ability to construct short answers and constructed responses in math by at least one level as measured through IM end-of-unit assessments and cool-downs targeted on MP Standard 3: *Construct viable arguments and critique the reasoning of others.* Levels are defined as:

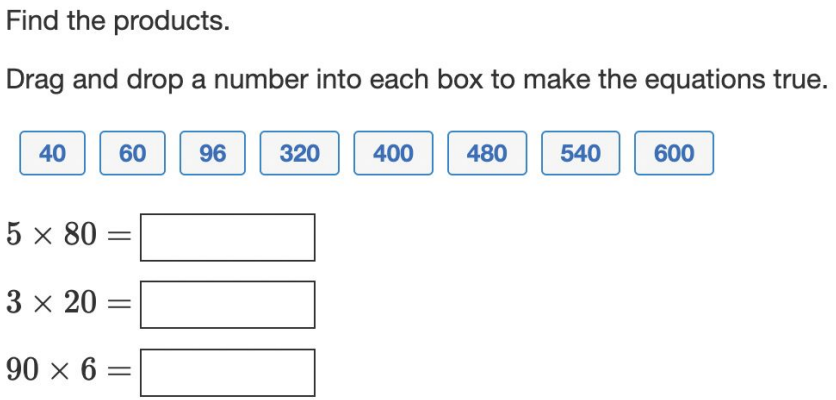
- **Emerging:** Little to no written explanation, but can explain thinking orally
- **Developing:** Has some mathematical language but displays misunderstandings or has an unclear explanation
- **Meeting:** Understand the process and explain thinking using all necessary vocabulary.

Needs Assignment/ Action Plan Highlights #1

Longitudinal MCAS data showed a need for improvement in Grade 3 Math constructed and short answer questions.

*Constructed response samples and scoring guide

*MCAS Short Answer Release Item



Find the products.

Drag and drop a number into each box to make the equations true.

40 | 60 | 96 | 320 | 400 | 480 | 540 | 600

$5 \times 80 =$ ☐

$3 \times 20 =$ ☐

$90 \times 6 =$ ☐

Analyze student work and assess instructional strategies that support next steps during PLC meetings and data team meetings

Review and align with MCAS open-response and short answer criteria and IM MPR.1: Stronger and Clearer Each Time Protocol

Embed on-going practice throughout the year to include feedback loops with students

Alignment Action Plan - Priority #2

Understanding & Addressing Chronic Absenteeism with a Focus on our ML Population

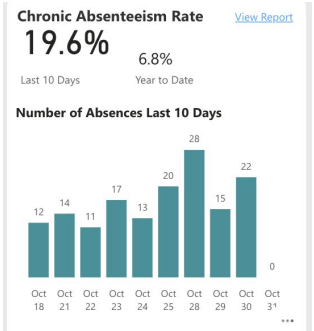
02	Relationship Building & Community Engagement	• Strengthen Connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
05	Celebration of Success & Strengths	• Acknowledgement of achievements! • Regularly celebrate the strengths & successes of students and staff.

By June 2025, we aim to reduce the average number of days EL students are absent during the school year by at least 50% through the implementation of targeted interventions, increased family engagement, and improved attendance monitoring practices.

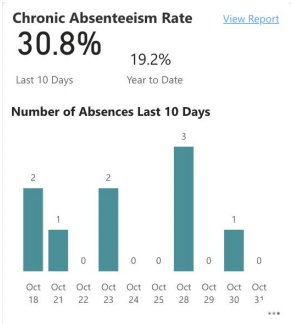
Needs Assignment / Action Plan Highlights #2

During the 2023-2024 school year, our Multilingual Learners missed school twice as many days as their non ML peers. This goal aims to enhance attendance for this targeted population by implementing intentional actions tailored to support these improved student attendance for this demographic. (Elementary Attendance data from Open Architects 2023-2024)

Oct YTD: Non ML



Oct YTD: ML



Meet with families to better understand the obstacles to school attendance.

A monthly **attendance team** will meet to analyze attendance data, identify at-risk students, and plan interventions.

School staff will send **reminders to families** about attendance policies, emphasizing the importance of minimizing absences due to vacations.

General Education staff and EL teachers will collaborate to build positive relationships with multilingual families and provide culturally responsive support.

Clinical staff will offer individualized support to students with attendance-related challenges and coordinate parent conferencing as needed.

School Counselors and Clinic Staff will collaborate and teach incoming Kindergarten Parents about attendance expectations, the use of routines in establishing a success school year and setting positive home/school routines

Work with students to incentivize attendance and celebrate success throughout the school year

Alignment Action Plan - Priority #3

MTSS/SEL Goal

01	Psychological Safety & Social Emotional Learning	• Foster environments of trust, respect & mutual support that includes supporting staff & addressing behavioral challenges • Strengthen SEL initiatives, integrate Restorative Practices and PBIS to build a more inclusive & supportive culture
02	Relationship Building & Community Engagement	• Strengthen Connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth

By June 2025, Bennett Hemenway Elementary School will implement a strengthened Multi-Tiered System of Support (MTSS) framework that integrates social-emotional learning (SEL) and trauma-sensitive practices. Based on the successful implementation of Tier One strategies, we will experience at least a 20% reduction in office referrals compared to 23-24 SY data in the following areas: bus conduct, recess, and specials.

Needs Assignment #3

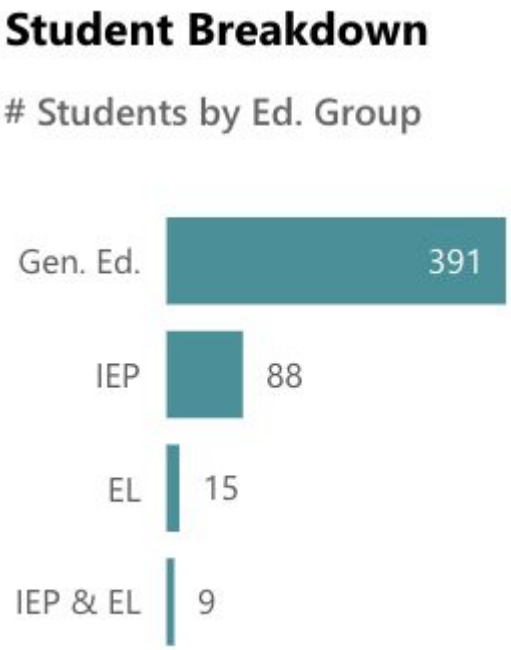
Bennett Hemenway Elementary School is proud to serve a diverse population of learners, including two specialized programs designed to support students with social, emotional, or behavioral disabilities, as well as those with autism or other unique cognitive profiles.

Tier One efforts in social-emotional learning have been prioritized for a few years, specifically in response to student needs upon return from the pandemic. These initiatives include the use of a Chill Zone in every classroom, understanding the size of the problem, and employing shared language to establish class goals. Our next step is to foster greater self-awareness within students, enabling them to articulate their feelings and identify their needs with minimal adult prompting.

Additionally, our TLC Program recently participated in a *Coordinated Program Review,* which has further informed and influenced our efforts to support all students in applying strategies that support their social-emotional success effectively. Although this review was targeted to a specific subset of our school building, this feedback can be generalized to the entire school community as focus areas for improvement.

B. Social-Emotional Instruction and Support: the use of a variety of approaches and skills to meet student needs, with opportunities for practice, feedback, and generalization
SCORE 5/10= 50% FINDING: Partially Evidenced

G. Professional Development: procedures for hiring and retaining qualified individuals to work in the program
SCORE 4/6= 67% FINDING: Partially Evidenced



Action Plan Highlights #3

- 100% of elementary staff will receive at least two professional development sessions on SEL, PBIS, and trauma-sensitive practices.
- 85% of classrooms will consistently implement evidence-based SEL strategies as measured by CASEL Indicators of Schoolwide SEL Observation Rubric.
- Integrate the TLIP framework in our program management planning and professional development needs of SPED teams; specifically within the TLC program for 24-25 SY.
- Ongoing review of RtI process to help ensure equitable access to tiered supports for all students, with targeted interventions provided for students with complex needs.
- Compare SABRES beginning of year data with end of year data. (Incorporate MySABRES student self reports if applicable)

NATICK PUBLIC SCHOOLS

SCHOOL IMPROVEMENT LILJA

School Committee Meeting
November 18, 2024

Mission & Vision

School Mission

The mission of Lilja School is to create a supportive, inclusive community that inspires everyone to be learners, reach their full potential, and become respectful, empowered citizens.

School Vision

Lilja is committed to nurturing a passion for learning that lasts a lifetime, recognizing it as the cornerstone of each child's future achievements. We believe natural curiosity serves as a powerful motivator for growth and knowledge acquisition.

Our school culture is defined by a set of common values, fostering close partnerships, providing a secure learning atmosphere, and blending academic challenge with the joy of hands-on experiential learning that encourages cooperation and teamwork.

Lilja celebrates and embraces the beauty of diversity in all its forms. We believe that every student brings a unique perspective and set of experiences that enrich our school community.

School Highlights 2023-2024

In the 2023-2024 school year, Lilja is proud to have created strong sub-separate programming for autistic students through rigorous program evaluation, engagement in consultation with experts, and strong family partnerships. We responded to student passion for eco-friendly advancements, pioneering initiatives in our cafeteria that included moving to a live lunch line and being the first elementary school in the district to enact a composting system. Additionally, Lilja's Accountability data recognizes the strong work we do with struggling students, achieving nearly all possible points in Achievement, Growth, and Chronic Absenteeism.

Alignment Action Plan - Priority #1

Enhancing Tier 1 Literacy Instruction in Lower Elementary

Aligned with School Leader's:

- **Student Learning Goal**
- **Professional Learning Goal**
- **School Improvement Goal**

Needs Assessment

Accountability data from DESE indicates that while Lilja has a strong response to our lowest performing students, we have room to strengthen our Tier 1 instructional practices.

Data from the fall Renaissance benchmarking and the criteria for intervention yielded 100 goal areas for students in grades 1 through 4.

Of these goals, 25 were in first grade literacy and 23 were in second grade literacy, suggesting a need to enhance our tier 1 early literacy instruction.

As of the fall benchmarking, 73% of first grade students were meeting or exceeding and 81% of kindergarten students were meeting or exceeding on the Star Early Literacy measure.

SMARTIE GOAL - ACTION PLAN #1

By the end of the 2024-2025 school year, 85% of students in grades K and 1 will perform at or above the 40th percentile as measured by the Spring Renaissance literacy benchmarking assessment (Star Early Literacy). This will be achieved through the implementation of a comprehensive professional development program targeted at grades K & 1, including:

- *Weekly Curriculum Leadership meetings with Coaches and administration*
- *Quarterly peer observations with structured feedback protocols for teachers*
- *Development and implementation of instructional Learning Walks focused on evidence-based ELA instructional practices*
- *BiWeekly coaching support (co-planning, co-teaching, debriefing) from ELA academic coaches*

Particular attention will be paid to ensuring equitable outcomes for English Language Learners and students with disabilities, with targeted support and resources provided to address their unique learning needs.

Action Step Highlights

- Weekly Curriculum Leadership meetings with Coaches and administration
- Development and implementation of quarterly peer observations with structured feedback protocols
- BiWeekly coaching support (co-planning, co-teaching, debriefing) from ELA academic coaches for grades K & 1
- Development and implementation of monthly Learning Walks focused on evidence-based ELA instructional practices.

Link to full SIP

Alignment Action Plan - Priority #2

Coaching Systems

Aligned with School Leader's:

- **Student Learning Goal**
- **Professional Learning Goal**
- **School Improvement Goal**

Needs Assessment

Baseline data gathered via teacher feedback survey indicates that teachers feel overall neutrally about the impact of the academic coaches (49% of all responses neutral, 31% of all responses positive.).

They express a need for more clarity, collaboration, and hands-on support from the academic coaches to help them be more effective in the classroom. Streamlining the coaching model and integrating it better with day-to-day instruction seems to be a key need. Overall, the teachers want the coaches to be more embedded in the classroom experience, collaborate more closely with them on planning and instruction, strengthen the interventionist support, and consider the needs of all students - not just the lowest performers.

Increased presence, collaboration, and a holistic approach seem to be the key areas for coaches to focus on for better supporting teacher growth.

SMARTIE GOAL - ACTION PLAN #2

By the end of the 2024-2025 school year the development of a comprehensive academic coaching system will improve the coaching experience for teachers, increasing the positive survey responses by 20% over gathered baseline data as measured by teacher feedback surveys.

Action Step Highlights

- Collaborate with the district team to develop a clear vision and guiding principles for the academic coaching system, ensuring alignment with the school's and district's strategic priorities and focused on providing targeted, job-embedded support to teachers.

- Engage in a comprehensive professional development program for coaches, focusing on coaching strategies, data analysis, and culturally responsive practices.

- Facilitate regular feedback loops between coaches, teachers, and school leadership to continuously refine and improve the coaching system.

- Administer teacher feedback survey to staff in May, gathering 100% response rate from classroom teachers, thereby identifying post survey data.

Link to full SIP

Alignment Action Plan - Priority #3

A Culture of Support for Student Behavior

Aligned with School Leader's:

- **School Improvement Goal**

Needs Assessment

There is a high incidence of unexpected behaviors occurring in communal and less structured environments. SEL Walkthrough data indicates a notable absence of Core Values in community spaces:

- *Hallway average rating: 2.1*
- *Playground average rating: 1.8*
- *Main Entrance average rating: 2.2*
- *Cafeteria average rating: 1.8*
- *Front Office average rating: 2.6*
- *Bathroom average rating: 2.2*

Additionally, staff survey data indicates only 20% of staff are confident in their understanding of Lilja's PBIS system and its implementation, and most (58% of respondents) feel that students have a limited understanding of the behavioral expectations and reinforcement systems in place at Lilja.

SMARTIE GOAL - ACTION PLAN #3

By the end of the 2024-2025 school year, the school will have successfully renewed a PBIS framework, as evidenced by a 60% increase in staff and student understanding of Lilja's PBIS system over baseline survey response data, and an increased visibility of PBIS in the building to a 3.0 average across the community spaces as measured through SEL Walkthrough data.

This will be achieved through the creation of a PBIS leadership team, delivery of staff professional development and establishment of school-wide behavioral expectations, and increasing the presence of PBIS culture in communal spaces.

Action Step Highlights

- Needs Assessment
- Creation of PBIS committee
- Development of staff, student, and family Core Value surveys
- Student survey and leadership groups
- Family survey
- Establishment and Publication of Updated Core Values, PBIS system across Lilja Settings
- Plan for updating community spaces to infuse with Core Value visuals
- Creation of PBIS Drive with staff orientation information and student orientation slides
- Expanding staff capacity through psychoeducation (ongoing faculty meetings, PD opportunities)

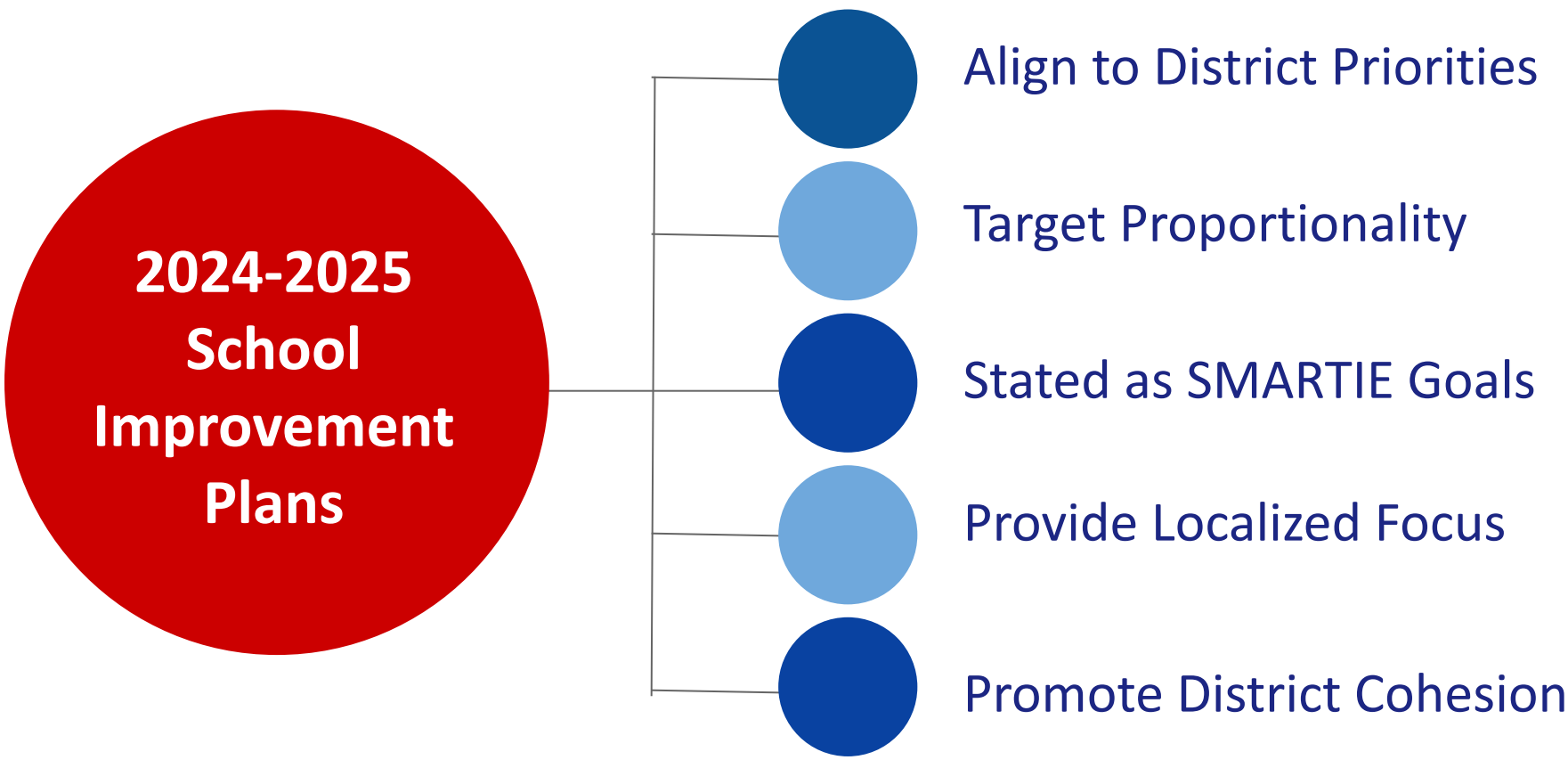
Link to full SIP

NATICK PUBLIC SCHOOLS

SCHOOL IMPROVEMENT PLANS DISTRICT SUMMARY

School Committee Meeting
November 18, 2024

2024-2025 SIPs



2024-2025 District Priorities

01	Psychological Safety & Social Emotional Learning	• Foster environments of trust, respect & mutual support that includes supporting staff & addressing behavioral challenges • Strengthen SEL initiatives, integrate Restorative Practices and PBIS to build a more inclusive & supportive culture
02	Relationship Building & Community Engagement	• Strengthen Connection among staff, students and parents so that everyone has a sense of belonging and feels valued • Enhance partnerships with parents and the broader community
03	Instructional Excellence & Support Systems	• Define & develop multi-tiered systems of support to improve outcomes for each individual student • Support staff with necessary tools and professional development to spark innovation • Encourage continuous improvement & incremental growth
04	Communication & Leadership Development	• Ensure all district and building communications are aligned and effectively disseminated; ensure teams are all on the same page • Provide coaching & mentoring to dept heads & teacher leaders to support continuous growth & improvement
05	Celebration of Success & Strengths	• Acknowledgement of achievements! • Regularly celebrate the strengths & successes of students and staff.

2024-2025 Themes

- Literacy & Math Growth & Achievement
- Multi-Tiered Systems of Support
- Social Emotional Learning & Psychological Safety
- Family & Community Engagement
- Equitable Access to Learning Opportunities
- Data Driven Decision Making
- Professional Development & Coaching
- Attendance & Engagement

ITEM TITLE: 2024-2025 Student Handbooks
DATE:
ITEM TYPE:
ITEM SUMMARY: 2024-2025 Student Handbooks - LINK
BACKGROUND INFORMATION:
RECOMMENDATION:

ATTACHMENTS:

Description	File Name	Type
2024-2025 student handbooks	11.18_2024-2025_Student_Handbooks.pdf	Cover Memo

2024-2025 Student Handbooks

School Committee Meeting 11.18.24

Process

- Each school in Natick has its own Student Handbook.
- The Superintendent and team review and approve handbooks annually.
- For 2024-2025, schools provided a summary of changes from the prior year, which was compiled into a memo for the School Committee.
- While the School Committee does not approve handbooks, they review them to ensure alignment with School Committee policies.
- School Committee members reviewed the handbooks and summary of changes, and all their questions were addressed.
- The 2024-2025 student handbooks are now approved.

Summary of Changes from prior year

- Policy Language Refinements
- Focus on Inclusivity
- Discipline Practices
- Security and Safety Updates
- COVID-19 Guidelines Removed

Links to 2024-2025 Natick Student Handboooks

– – –

- Natick Preschool 2023-2024 / 2024-2025
- BenHem Elementary 2023-2024 / 2024-2025
- Brown Elementary 2023-2024 / 2024-2025
- Lilja Elementary 2023-2024 / 2024-2025
- Memorial Elementary 2023-2024 / 2024-2025
- Kennedy Middle School 2023-2024 / 2024-2025
- Wilson Middle School 2023-2024 / 2024-2025
- Natick High School 2023-2024 / 2024-2025

ITEM TITLE: Custodial Union (Local #1116)
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION:

ITEM TITLE: Food Service Negotiations
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION:

ITEM TITLE: MASC Conference Update (SC Members)
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION:

ITEM TITLE: Next Steps to Becoming a Climate Leader - Jillian Wilson Martin
DATE:
ITEM TYPE:
ITEM SUMMARY: Summary Presentation - LINK
Zero Emissions Vehicle Fleet Policy - LINK
Draft - Municipal Decarbonization Roadmap - LINK

BACKGROUND INFORMATION:
RECOMMENDATION:

ATTACHMENTS:

Description	File Name	Type
summary presentation	11.18_Next_Steps_to_Become_a_Climate_Leader_-_Summary_Presentation_(2).pdf	Cover Memo
Zero Emissions Vehicle Fleet Policy	11.18_Zero-Emission_VehicleFirst_Policy.pdf	Cover Memo
Draft - Municipal Decarbonization Roadmap	11.18_Draft_Municipal_Decarbonization_Plan_11172024.pdf	Cover Memo

Actions Required to Unlock Climate Leader Funding

November 2024

From Green Community to Climate Leader

Green Communities Criteria

- ☐ Adopt as-of-right siting for RE/AE generation, R&D, or manufacturing
- ☐ Adopt expedited permitting process
- ☐ Create an Energy Reduction Plan to reduce energy use by 20% in 5 years
- ☐ Purchase only fuel-efficient vehicles
- ☐ Adopt the Stretch Code

Natick has received $2M+ in DOER funding since becoming a Green Community

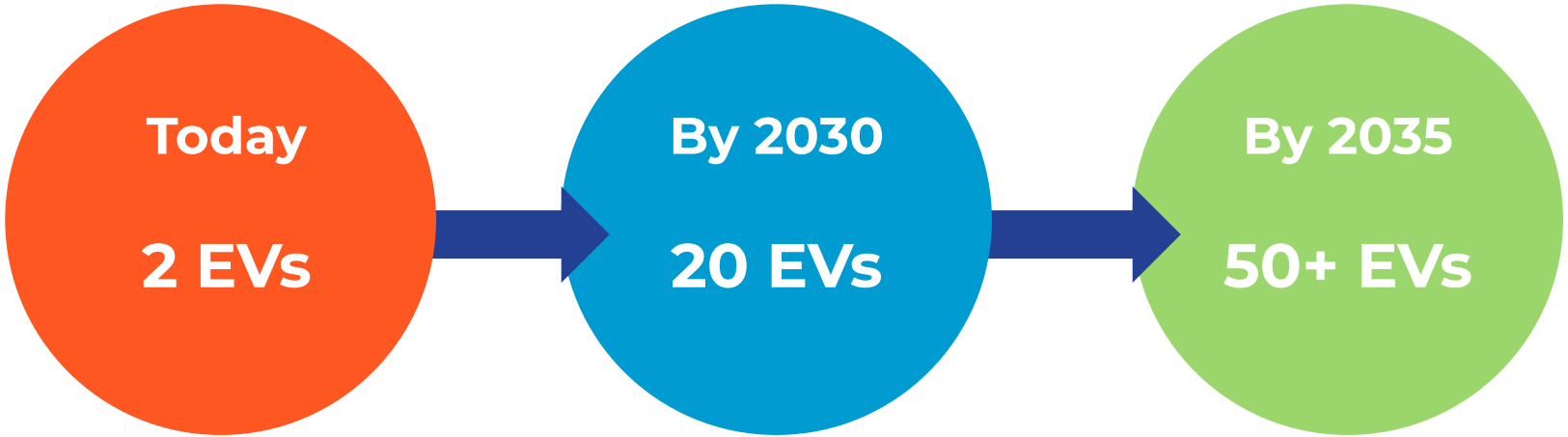
Climate Leaders Criteria

- ☐ Establish/maintain local committee to advise, coordinate, and/or lead clean energy and climate activities
- ☐ Municipal decarbonization commitment
- ☐ Adopt Specialized Energy Code for new construction
- ☐ **Adopt a Municipal Decarbonization Roadmap with 2030 & 2050 goals**
- ☐ **Adopt a Zero Emissions Vehicle First fleet policy**

Zero Emissions Vehicle First Policy

November 2024

Planning for the Future Fleet



2 sedans

12 sedans / crossovers
6 light duty utility
2 vans

All new light duty passenger vehicles are EVs

What does “Zero Emissions First” mean?

When replacing a vehicle, if a zero emissions vehicle (ZEV) is available that can meet operational needs, the Town will prioritize its purchase

“ZEV first” does not mean EV only

Evaluating Vehicle Replacements

What function does the vehicle serve?

- Purpose
- Necessary size
- Daily range
- Towing capacity
- Customizations

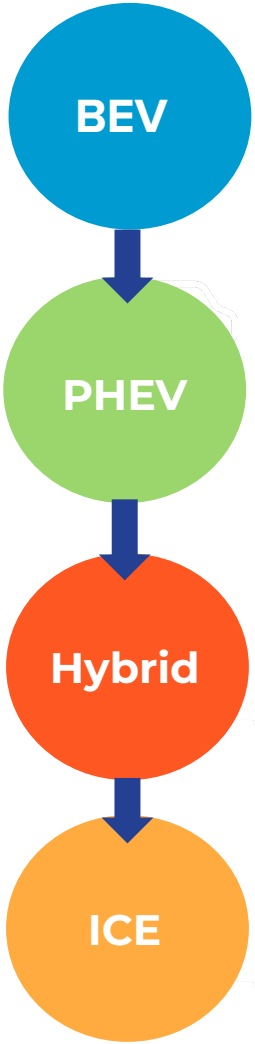
Are there EVs available in the market that meet operational needs?

Is there adequate charging infrastructure?

Can Maintenance support the vehicle?

Prioritizing Selection of ZEVs

Order set by DOER



Battery Electric Vehicle

Plug-in Hybrid Electric Vehicle

Battery/Internal Combustion Engine Vehicle

Most Efficient Internal Combustion Engine Vehicle

School Committee & ZEV Policy

Policy Adoption Required by DOER

Upcoming Vehicle Purchases

Exemptions:

School buses and vehicles over 8,500 GVW are exempt

7 Passenger Van, *2017 Transit Connect*

Annual Mileage: 1,500 miles
Daily Range*: <10 miles

No hybrid or electric option currently available from standard manufacturers

14 Passenger Van, *2016 E-450*

Annual Mileage: 4,300 miles
Daily Range*: 24 miles

No hybrid or electric option currently available from standard manufacturers

Box Truck, *2022 F-350*

Annual Mileage: 6,000 miles
Daily Range*: 33 miles

Electric options may exist through Ford, Natick's standard fleet manufacturer

**Daily range estimate was calculated as total annual miles divided by 180 school days*

Upfront Funding

IRA (Federal Rebate): $7,500

Make Ready (State Rebate): $7,500

Green Communities (Grant): $7,500

Life Cycle Costs

Maintenance: 40% less

Fuel: 30-50% less

Annual Savings: $14,077

FY 2025 Examples

F-150 Lightning (EV)	$54,000
After EV Rebates	$39,000
F-150 (ICE)	$47,000
EV Savings	**$8,000**

E-Transit (EV)	$68,000
After EV Rebates	$61,500
Transit (ICE)	$61,000
EV Savings	**$500**

Municipal Decarbonization Roadmap

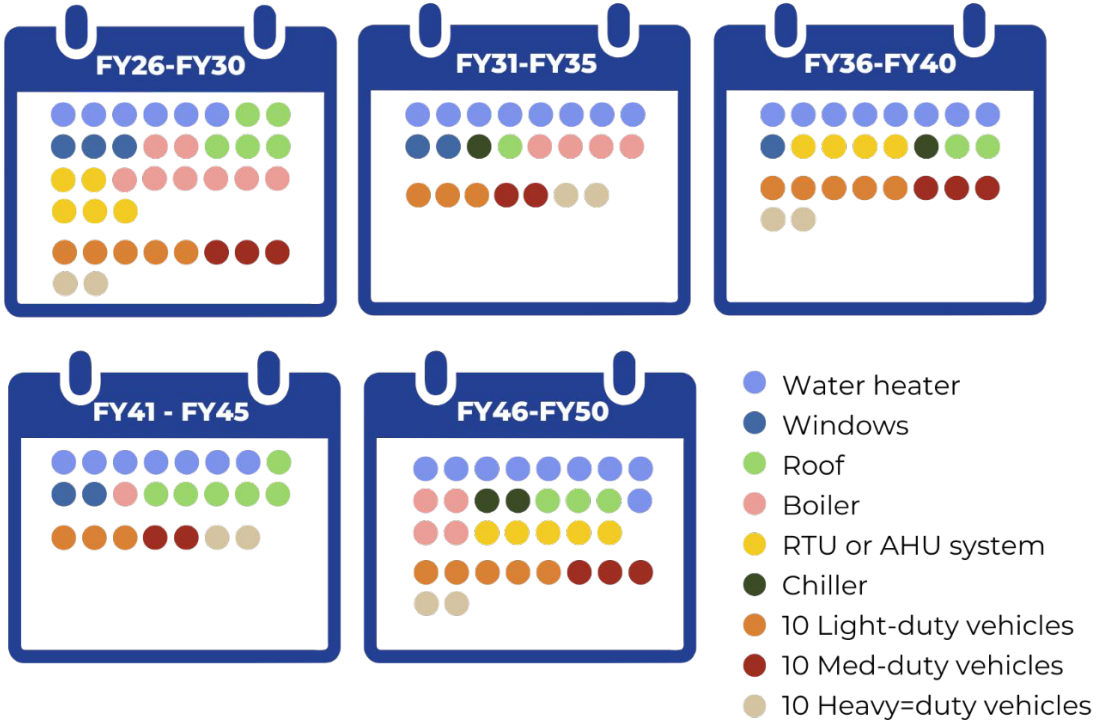
November 2024

25 Year Planning Tool

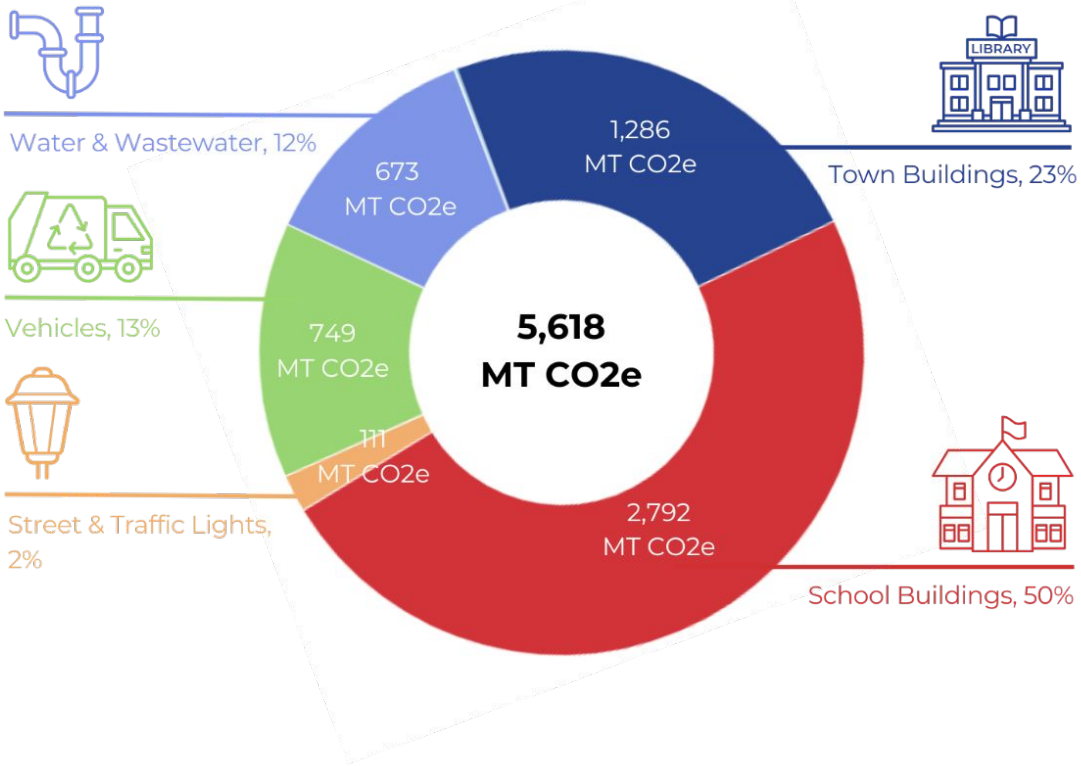
Follows "Zero Over Time" approach

Intent is to pair "trigger events" (i.e., large capital projects) with decarbonization opportunities, where technically & financially feasible

Trigger Event Calendar based on end-of-useful life standards



Natick's FY 2022 Baseline Emissions



11,834 megawatt-hours of electricity

404,523 therms of natural gas

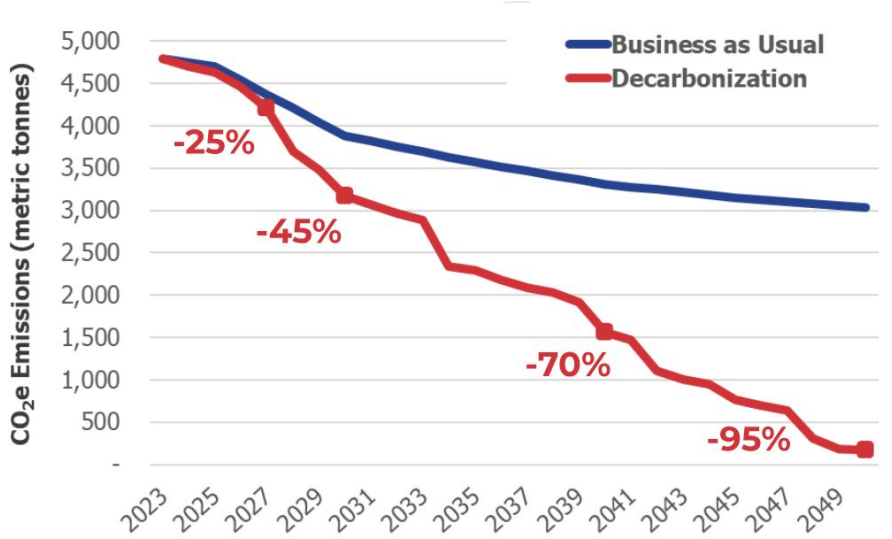
7,534 gallons of fuel oil

56,056 gallons of gasoline

23,718 gallons of diesel

Natick's Projected Emissions for 2027-2050

DOER Targets	2027	2030	2040	2050
Reduce emissions from onsite fossil fuels	-20%	-35%	-60%	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	5%	20%	75%	100%
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	0%	20%	50%	100%
Energy Use Intensity reduction	-20%	-25%	-25%	-30%
Total Emissions Reduction Goals (% of 2022 emissions)	>15%	>35%	>65%	>95%



Focus on Top 8 Buildings

Responsible for nearly 70% of all school and municipal emissions

Building	Electricity	Fossil Fuels	Total	% of Total	EUI
Natick High School	**460**	**260**	**720**	**17.7%**	**45**
Ben-Hem Elementary School	**146**	**242**	**388**	**9.5%**	**84**
Wilson Middle School	**147**	**220**	**367**	**9.0%**	**47**
J F Kennedy Middle School	**169**	**164**	**333**	**8.2%**	**39**
Brown Elementary School	**146**	**136**	**282**	**6.9%**	**78**
Police & Fire Headquarters	137	134	271	6.6%	85
Morse Institute Library	138	91	229	5.6%	62
Memorial Elementary School	**56**	**172**	**228**	**5.6%**	**62**

EUI = Energy Use Intensity, a metric that measures how much energy a building uses relative to its size

Opportunities, Not Obligations

Decisions to be made on a project-by-project basis

May consider adopting guidelines to support decision-making

Working Draft of Guidelines

Existing Buildings

a. **Design alternatives**

b. **Maximize funding**

c. **Evaluate options** based on feasibility, life cycle costs, and net zero impacts.

d. When net zero is not practicable, ensure that **steps are taken to support future efforts**

e. Evaluate and implement **building envelope upgrades**

f. Establish and adhere to a **low target energy use intensity targets**

g. Where appropriate, add install **renewables plus storage**

h. Maximize **resilient design**

New Buildings

a. **Strive to achieve zero net energy**, where sufficient renewable energy is generated onsite to offset the building's annualized energy consumption.

b. **Implement energy storage** wherever possible, especially when **paired with onsite renewables**.

c. **Prioritize sites that provide access to public transportation and alternative modes of transportation.**

d. Evaluate and implement strategies to **reduce embodied carbon contained in building materials.**

Thank You & Next Steps

1. *Share questions and feedback by November 27*
2. *Vote at December 2 meeting*
3. *Submit letter to DOER confirming adoption*

Town of Natick
Zero-Emission Vehicle First Fleet Policy

Date Adopted:

Effective Date:

Revisions:

BACKGROUND

The Natick Select Board approves the following Zero-Emission Vehicle First Fleet Policy (Policy) to govern the replacement and purchase of Natick municipal vehicles with the most sustainable vehicle option, as defined below. This Policy is adopted to comply with the Massachusetts Department of Energy Resources (DOER) Climate Leader Communities program requirements and replaces the Fuel Efficient Vehicle Policy Natick adopted in 2010.

POLICY STATEMENT

Whereas the Town of Natick (Town) committed to reduce its energy use by 20% using a 2007 baseline and purchase only fuel-efficient vehicles for municipal use whenever such vehicles are commercially available as required by Natick's participation in the Green Communities program and established by the Green Communities Act M.G.L. Chapter 25A Section 10;

Whereas the Town, as directed by Natick Town Meeting through a 2018 Non-Binding Resolution, is committed to achieving community-wide, net zero greenhouse gas (GHG) emissions by 2050;

Whereas Priority 18 in the Town's 2021 Net Zero Action Plan, which was unanimously endorsed by the Natick Select Board, Planning Board and School Committee in 2021,

calls for the Town to lead by example by setting a zero emissions standard for the municipal fleet; and

Whereas the adoption of a zero-emission vehicle first policy is a requirement to participate in and receive grants from DOER's Climate Leader Communities program,

The Select Board hereby adopts this Zero-Emission Vehicle First Fleet Policy to set standards and guidelines for the purchase, operation, and maintenance of the Town's municipal fleet vehicles to reduce greenhouse gas (GHG) emissions and advance Natick's net zero goal. This Policy requires:

- The ongoing maintenance of a municipal fleet inventory,
- The evaluation and prioritization, where feasible and sensible, of zero-emission vehicles for the replacement or addition of all non-exempt vehicles in the municipal fleet,
- Planning, installation and maintenance of electric vehicle charging stations to support the electrification of the municipal fleet over time, and
- The implementation of best practices for operating and maintaining zero-emission and fuel-efficient vehicles.

We the Natick Select Board do hereby approve the following Zero-Emissions First Vehicle Fleet Policy dated this ___ day of _____ 2024.

NATICK SELECT BOARD

_____

NAME, Chair

_____

NAME, Vice Chair

_____

NAME, Clerk

_____

NAME, Member

_____

NAME, Member

TOWN OF NATICK
ZERO-EMISSIONS VEHICLE FIRST FLEET POLICY

I. Purpose

The purpose of the Zero-Emission First Vehicle Policy is to set standards and guidelines for the purchase, operation, and maintenance of the Town of Natick's fleet vehicles that will advance the economic, energy, and climate sustainability of municipal operations by achieving long-term reductions in energy costs, energy consumption, and greenhouse gas (GHG) emissions.

The primary objectives of this policy are to:

- Accelerate the adoption of emissions-reduction technologies and the transition of the fleet to all electric or other environmentally advantageous vehicles
- Minimize the long-term environmental and financial impacts of fleet vehicles
- Optimize the composition of the fleet to achieve maximum fuel efficiency
- Advance the installation of electric charging infrastructure across municipal facilities
- Prioritize the utilization of grants, rebates, and incentives to support the acquisition of vehicles and technologies that will improve efficiency and reduce greenhouse gas emissions.

This policy shall not require a department to take any action that conflicts with local, state, or federal requirements. It does not mandate the procurement of products that do not perform adequately for their intended use, it does not exclude adequate purchasing competition, and it does not require the purchase of a vehicle that is not commercially available.

II. Applicability and Responsibility

This policy applies to all divisions and departments of the Town of Natick that utilize the municipal fleet. It applies to road-worthy passenger vehicles, pick up and utility trucks, and SUVs the Town owns or leases. It does not apply to specialized equipment or off-road vehicles.

The Town Administrator, Director of Public Works and directors of all Departments that employ Fleet Vehicles shall be responsible for the adherence to this policy. The Equipment Maintenance Supervisor and Sustainability Director shall serve in an advisory role to the Select Board when there are questions of policy interpretation, implementation, or proposed amendments to this policy.

III. Vehicle Procurement

A. Electric-first Procurement

Vehicle procurement shall be prioritized as follows:

1. Battery-electric vehicle (BEV)
2. Plug-in hybrid electric vehicle (PHEV)
3. Hybrid electric vehicle (HEV) or other alternative fuel vehicle (AFV)
4. Most fuel efficient available standard vehicle operated by an internal combustion engine fueled by fossil fuels

The fleet policy is electric-first, meaning that electric vehicles shall be prioritized when the Town purchases or leases vehicles for municipal operations, followed by plug-in hybrid vehicles, then hybrid electric or other alternative fuel vehicles.

B. Fuel-efficient Requirements for Standard Vehicles

If it is determined that a BEV, PHEV or HEV cannot meet the Town's operational needs, the purchased or leased vehicle must be the lowest emission, most fuel-efficient class, drive train, and model available that will fulfill the intended municipal function.

When determining the most fuel-efficient vehicle for a given class, the Town will utilize the fuel efficiency limits contained in the most recent guidance for the Fuel-efficient Vehicle Policy established by DOER's Green Communities Division. These limits are based on the most recently published U.S. Environmental Protection Agency combined city and highway MPG ratings (see www.fueleconomy.gov). The EPA maintains a database on vehicle fuel efficiency that is updated throughout the year as new models are released.

1) Exemptions to Fuel Efficiency Requirements

Vehicles that are not required to meet the fuel efficiency requirements of Green Communities Criteria 4 and defined in the definitions of "exempt vehicles".

Exempt vehicle purchases should prioritize the most fuel-efficient model available and consider fuel-reduction and emissions-reduction technology, such as diesel particle filters, selective catalytic reduction systems, exhaust gas recirculation, NOx absorbers, oxidation catalysts, anti-idling devices, etc.

Where opportunities exist, particularly if grants and new technologies are or become available, the Town should pilot ZEV options for exempt vehicles.

Where the Town contracts vehicle services, the Town will allow for consideration of contracts and seek out companies for competitive bidding that offer the use of electric and/or fuel-efficient vehicles.

IV. Vehicle Inventory

The Town will maintain an inventory of all Town-owned vehicles and a plan for replacing any vehicles with vehicles that adhere to the zero-emission first vehicle hierarchy established by this policy.

This inventory will include the following information: model, make, model year, month and year purchased, VIN, drive system, weight class, miles per gallon, annual miles driven, total fuel consumption, Department, vehicle function, and month and year sold.

On an annual basis, the Town will review the Vehicle Inventory, along with this policy, to plan for new acquisitions as part of the capital planning process.

V. Vehicle Replacement, Recycling and Transfers

All vehicles shall be replaced with the zero-emission first hierarchy indicated by this policy.

Vehicles shall be replaced when they are no longer operable and will not be recycled from one municipal department to another unless the recycled replacement is more efficient than the vehicle it is replacing. In addition, when considering vehicle replacement, the function of the vehicle will be reviewed for potential replacement with a more fuel-efficient vehicle, including a zero-emission non-exempt vehicle.

The Equipment Maintenance Supervisor is responsible for any transfer of vehicles between Departments, and shall ensure all transfers comply with Criteria 4 published by the MA DOER Green Communities Division. The Town Administrator and the Director of Sustainability shall be explicitly apprised of any vehicle transfer and all appropriate records shall be updated**.**

VI. Fleet Composition

The Town shall procure optimally sized vehicles and equipment according to assessed and anticipated needs over time. Specifically, the Town will ensure that

purchase plans require vehicle class and model of the smallest size and weight appropriate for each vehicle's tasks over the expected lifetime of that vehicle. All positions requiring vehicle use shall be evaluated as to the required vehicle class size necessary to conduct the job(s).

The Town will regularly evaluate ways to reduce its fleet size. Departments shall also investigate whether vehicles can be shared between Departments. When retiring a vehicle from the fleet, the Town will evaluate whether replacement is necessary.

VII. DEFINITIONS

Battery Electric Vehicles (BEV): An electric vehicle that draws propulsion energy solely from an onboard electrical energy storage device during operation that is charged from an external source of electricity. Also known as All-electric or Full-electric vehicles.

Combined City and Highway MPG (EPA Combined fuel economy): The fuel economy from driving a standard combination of 43% city and 57% highway miles, calculated as follows: = (1 / ((0.43 / City MPG) + (0.57 / Highway MPG)))

Electric Vehicle: a vehicle that gets all or part of its energy from electricity instead of gasoline

Exempt Vehicles: Vehicles that are exempt from this Policy include off-road vehicles, motorcycles, and heavy-duty vehicles. Heavy-Duty vehicles are defined as having a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds. Examples include fire engines, ambulances, and some public works vehicles.

Fuel Efficient Vehicle (FEV) Policy: Issued by the Department of Energy Resources (DOER) to fulfill the requirements of the Green Communities Act. The FEV Policy requires designated Green Communities to acquire fuel-efficient vehicles and applies to all light-duty vehicle acquisitions with a gross vehicle weight rating (GVWR) of 8,500 pounds or less.

Gross Vehicle Weight Rating (GVWR): The maximum safe operating weight of a vehicle, as specified by the manufacturer, including passenger and cargo loads.

Heavy-duty Vehicle: For purposes of this Policy, a vehicle with a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds

Hybrid Electric Vehicle (HEV): Vehicle that is powered by an internal combustion engine and a small electric motor that uses energy stored in a battery. Under

light load, for instance during initial acceleration, only electricity is consumed. The vehicle is typically fueled with gasoline to operate the internal combustion engine, and the battery is charged through the engine and regenerative braking, not by plugging in. The battery can only be charged from the electric grid and the gasoline engine.

Non-exempt Vehicle: Any vehicle that is not exempt according to the definition above.

Passenger and Light duty: For purposes of this Policy, a vehicle with a GVWR of less than 8,500 pounds.

Plug-in Hybrid Electric Vehicle (PHEV): An electric vehicle with an on-board electrical energy storage device that can be recharged from an external source of electricity and that also has the capability to run on another fuel.

Zero Emission Vehicle (ZEV): Zero emission vehicles include battery electric vehicles, plug-in hybrid electric vehicles, and fuel-cell electric vehicles; if the most recent definition of ZEVs per the Massachusetts Zero Emission Vehicle Commission diverges from this scope, the Commission definition shall take precedence.

Municipal Decarbonization Roadmap

Working Draft, November 12, 2024

Table of Contents

Acknowledgements

Thank you to the staff and community members who helped collect data, provide input and advocate for improvements throughout the development of Natick's Municipal Decarbonization Roadmap.

We look forward to working with you to implement this Roadmap as part of our net zero journey.

Town of Natick Staff

James Errickson, Town Administrator
Jon Marshall, Deputy Town Administrator of Operations
William Spratt, Executive Director of Public Works & Facilities Management
Ken Fisher, Equipment Maintenance Supervisor
Jillian Wilson Martin, Sustainability Director
Ben McArthur, Sustainability Coordinator

Natick Public Schools Staff

TBD

Natick Net Zero Committee

Ann Lentell, Chair
David Landman, Vice Chair
Maria McMoran, Clerk
Kate Flathers, School Committee Representative
Mark Ralston, Member
Conor Carney, Member
Sre Ashokraja, Youth Representative
Shresta Chakilam, Youth Representative

PowerOptions

Michelle Gardner

Massachusetts Department of Energy Resource, Green Communities Program

Mark Rabinsky, Deputy Director
Dillan Patel, Northeast Regional Coordinator

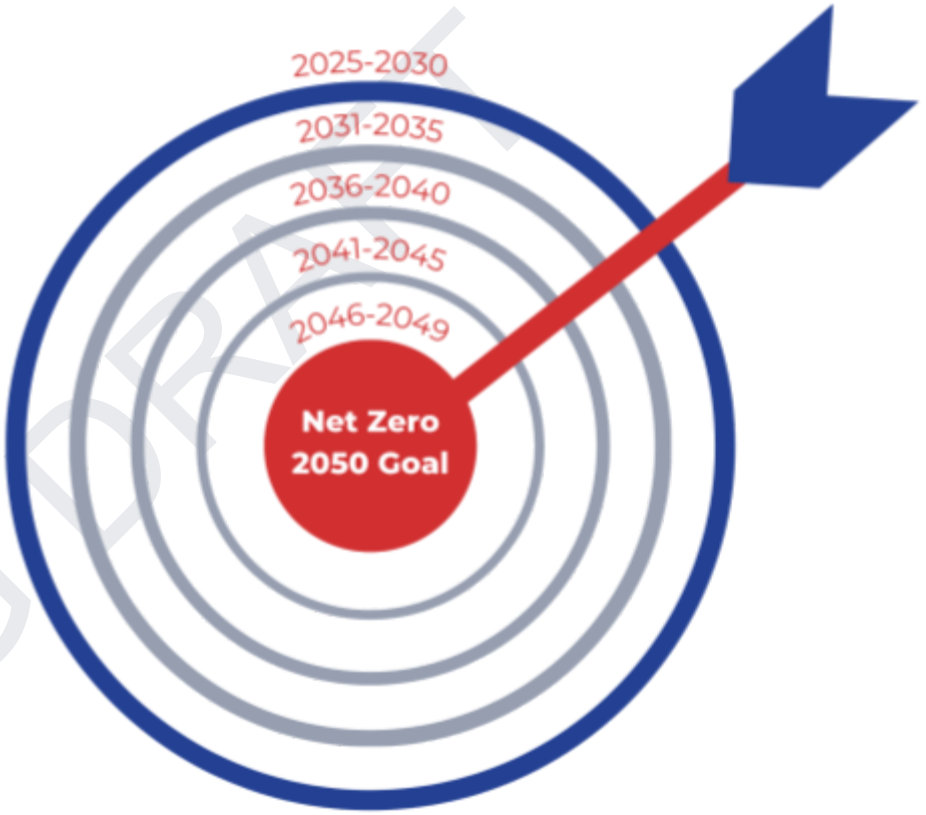
Introduction

The Town of Natick and Natick Public Schools are striving to reach net zero greenhouse gas (GHG) emissions by 2050.

Pursuing this goal is in line with our community's values, Natick's history as a sustainability leader, and the direction set by Natick's elected officials, including Town Meeting, the Select Board, School Committee and Planning Board.

This work builds on Natick's 2021 Net Zero Action Plan, which outlined strategies to achieve net zero and identified priority actions for municipal operations. It recommended Natick change where our energy comes from, electrify our buildings, and switch to more efficient and cleaner vehicles.

In the years between now and 2050, our municipality will have hundreds of opportunities to advance these recommendations. We will replace every water heater, in every public building, at least once. We will replace more than 20 heating and cooling systems. We will re-roof at least 13 buildings. We will more than twice replace each of our fleet's 151 vehicles, and we will likely construct or significantly renovate four buildings. Each of these life cycle events and the decisions we make when we encounter them will influence Natick's net zero goal.



This document, known as Natick's Municipal Decarbonization Roadmap, sets a long-term strategy for identifying, planning for and leveraging these opportunities to advance our community's net zero ambitions over time.

Alignment with State Goals & Funding Opportunities

The Municipal Decarbonization Roadmap is in response to the 2018 non-binding resolution Town Meeting passed to adopt a community-wide 2050 net zero GHG reduction goal. It directly advances priority actions identified in Natick's 2021 Net Zero Action Plan, which was unanimously endorsed by the Natick Select Board, School Committee and Planning Board, and aligns with current municipal energy conservation and electrification initiatives.

This work also aligns with and advances GHG targets set by the Commonwealth of Massachusetts and positions Natick to receive funding to advance municipal decarbonization. In 2021, the state's signature climate law, An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy, was amended to require the Secretary of the Executive Office of Energy and the Environment (Secretary) to set statewide GHG emissions limits and sector-specific emissions sublimits that are to be met every five years. These limits require GHG emissions to be at least thirty-three percent below 1990 levels in 2025, and fifty percent below 1990 levels in 2030.

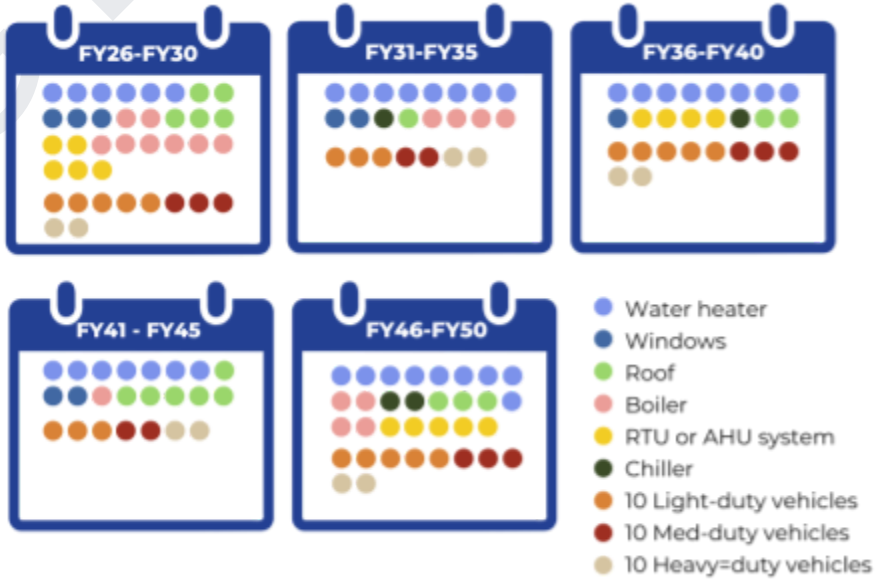
The Massachusetts Department of Energy Resources (DOER) has supported municipalities with grants and technical assistance to reduce energy use in accordance with An Act Relative to Green Communities, and Natick has received more than $2 million from the Green Communities program since 2010. In 2024, DOER established the Climate Leader Community certification as a framework for municipalities to provide additional funding to municipalities in achieving the Secretary's set limits. Developing this Municipal Decarbonization Roadmap completes one of the six criteria necessary to make Natick eligible for this funding.

Purpose & Strategy

The purpose of the Municipal Decarbonization Roadmap is to provide municipal decision makers with a long-term planning strategy for decarbonizing municipal operations by 2050. This strategy closely aligns with RMI's "Zero Over Time" approach[1], which involves spreading out energy efficiency, electrification, renewable energy, and energy storage projects over the life of a capital asset.

In simple terms, the Municipal Decarbonization Roadmap is essentially a 25 year calendar of net zero upgrades (see Figure 1 for number of capital projects planned for each five year period between FY 2026 and FY2050). It identifies "trigger events" that will happen over the next 25 years, and lays out a high-level plan to leverage these moments to reduce or eliminate fossil fuels. The Roadmap does not assess the financial implications – positive or negative – of pursuing net zero energy upgrades, nor does it provide a detailed, technical or feasibility assessment of individual decarbonization opportunities. Financial implications are also not considered due to the long-term nature of this Roadmap and the many factors that can influence market conditions over time.

Figure 1. Estimated Capital Replacement Calendar



[1] https://rmi.org/insight/zero-over-time-for-building-portfolios/

Developing this Roadmap

Natick's Municipal Decarbonization Roadmap was developed by PowerOptions, the largest energy-buying consortium in New England and a trusted energy consultant for nonprofits and public entities, through a technical assistance grant funded by the Massachusetts Department of Energy Resources. PowerOptions used a combination of in-house economic models, a virtual energy audit, and Helioscope solar software to produce Natick's Municipal Decarbonization Roadmap.

PowerOptions's modeling was reliant on building and vehicle data collected by Natick staff and evaluates strategies to decarbonize Natick's 23 primary public buildings and 151 vehicles between 2025-2050.

Fiscal Year 2022 was used as the baseline for this analysis for all vehicles and buildings, with the exception of Kennedy Middle School which uses Fiscal Year 2023 (FY 2022, the building was not fully constructed). Data collected for each of Natick's 22 buildings is provided in the Appendix. It includes:

- Monthly energy use in native units (kWh of electricity, therms of natural gas, gallons of oil)
- Monthly energy costs
- Square footage
- Age of roof, heating system(s), air conditioning system(s), water heater(s), and range(s), as applicable
- Type and quantity of heating system(s), air conditioning system(s), water heater(s) and range(s)
- Fuel type for heating system(s), water heater(s) and range(s)
- Presence of ventilation system
- Window type and quantity of single pane windows
- Age and presence of solar array
- Presence of dryers

Building strategies assessed include: energy efficiency, electrification (fuel-switching away from fossil fuels to electric alternatives), on-site solar photovoltaics, and Renewable Energy Certificates. For projects occurring between 2025 and 2030, the timeline for implementing these strategies was matched with Natick's five-year capital plan. For projects occurring in 2031 and beyond, an estimated timeline was determined based on the following useful life standards:

- Roof: 20-25 years
- Boiler: 30-50 years
- Air Handling Unit (AHU)/Rooftop Unit (RTU): 20-30 years
- Building Management System: 10-15 years
- Chiller: 25-30 years
- Water heater: 7-12 years
- Range: 15-20 years

Vehicles registered to Natick in the Massachusetts Vehicle Registry were included in the analysis. Motorcycles, non-road equipment (NRE) or trailers, and contracted vehicles, such as school buses, were excluded from the analysis. Vehicles in Natick's fleet were assessed to match each existing vehicle with the best candidates for battery electric vehicles (BEV). For conservative purposes, a 10 year lifespan was assigned to every vehicle in the fleet.

Natick's Progress to Net Zero

The Town of Natick has been a leader in energy efficiency and decarbonization for more than 20 years.

In 2004, Natick joined ICLEI Local Governments for Sustainability, which required the town to establish a baseline greenhouse gas emissions inventory and set reduction goals.

In 2010, Natick was one of the first Green Communities designated by DOER. Since joining, the Town has received more than $2 million in grants through the program.

In 2012, Natick became one of the first municipalities to install solar on school and municipal buildings. These efforts have saved the Town more than $1 million in energy costs to-date.

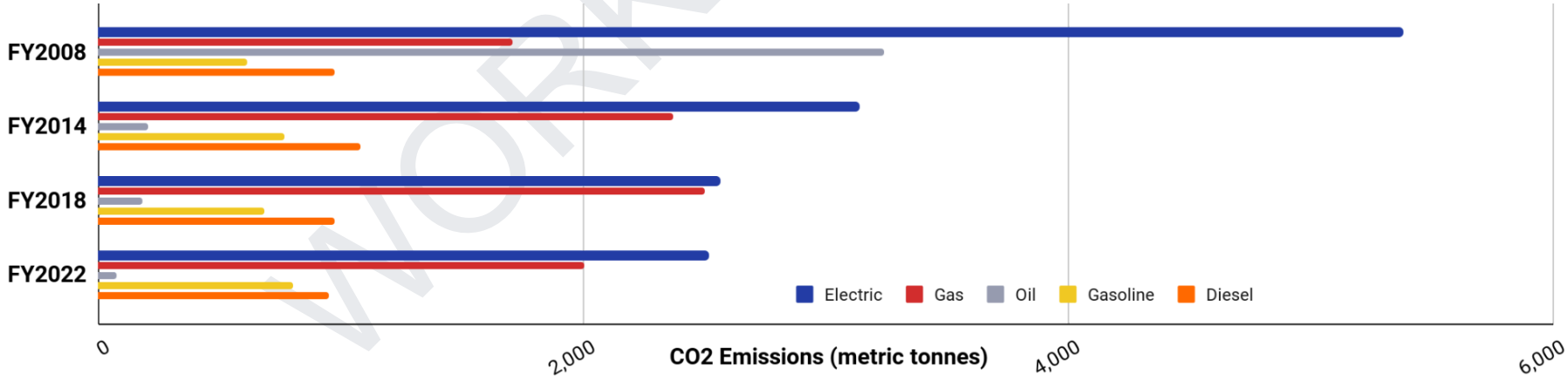
In 2014, Natick was one of the first Green Communities to achieve its 20% energy reduction goal. This was primarily achieved through the replacement of HVAC systems, which resulted in the conversion of buildings from oil to natural gas heating.

In 2016, Natick became one of the first municipalities to purchase an electric vehicle and install public charging stations.

In 2020, Natick became one of the first municipalities to install a solar plus storage project in conjunction with the new Kennedy Middle School.

In 2023, Natick was one of just 24 communities nationwide to receive a Renew America's Schools grant from the United States Department of Energy to install heat pumps and reduce onsite fossil fuel use at Bennett-Hemenway Elementary School.

Figure 2. Municipal Emissions by Source Over Time



A New Baseline: Fiscal 2022 Emissions

The Town of Natick and Natick Public Schools (the municipality) are responsible for serving the 37,000 residents who call our community home.

In service of these residents, the municipality performs a variety of functions. On an annual basis, we:

- Educate approximately 5,300 students from Pre-K through age 22,
- Pump approximately one billion gallons of clean drinking water to Natick homes and businesses,
- Maintain more than 212 acres of playing fields and open space,
- Conduct nearly 5,000 health inspections,
- Circulate more than 440,000 materials through our public libraries,
- Collect trash and recycling from approximately 10,500 households,
- Plow nearly 700 streets, totalling 170 miles, when it snows,
- And more.

These activities require the use of energy and generate GHG emissions. In Fiscal Year 2022, Natick's municipal and school operations emitted 5,618 metric tonnes of carbon dioxide equivalent (MT CO2e). See Appendix, Table 1 for details.

Figure 3. FY 2022 School & Municipal Energy Use

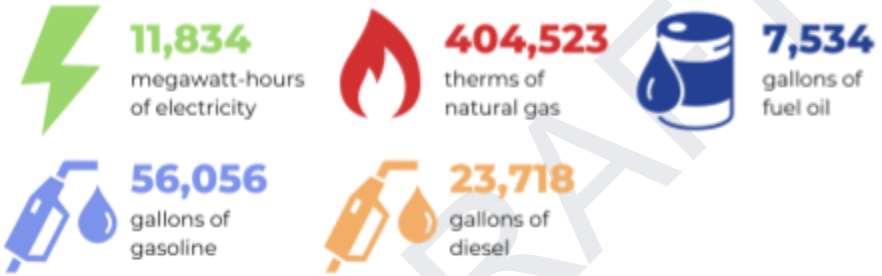


Figure 4. FY 2022 School & Municipal GHG Emissions

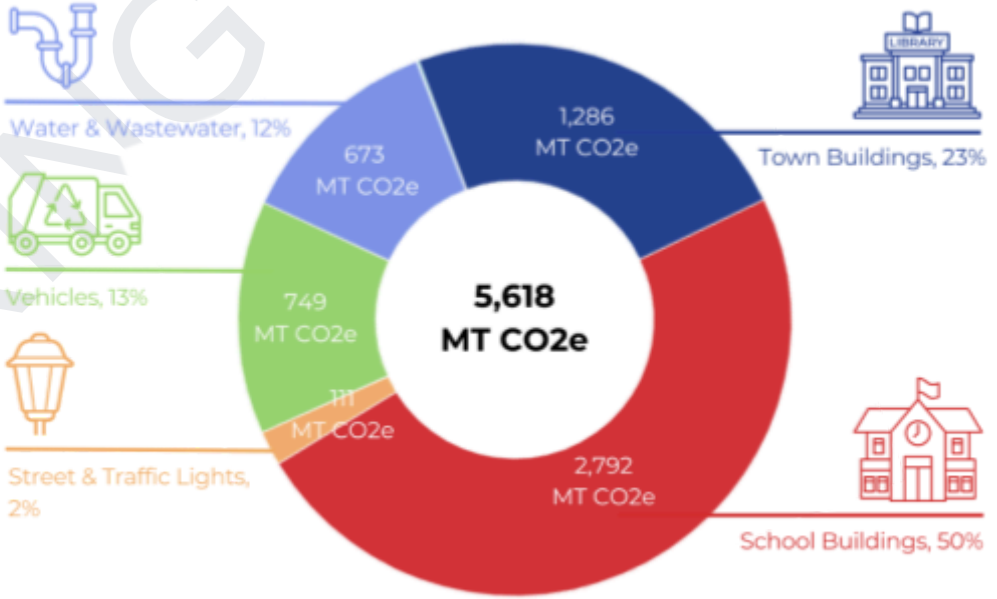


Table 2. FY 2022 Building Energy Use & Greenhouse Gas Emissions (MT CO2e)

Building	Electricity	Fossil Fuels	Total	% of Total
Natick High School	**460**	**260**	**720**	**17.7%**
Ben-Hem Elementary School	**146**	**242**	**388**	**9.5%**
Wilson Middle School	**147**	**220**	**367**	**9.0%**
J F Kennedy Middle School	**169**	**164**	**333**	**8.2%**
Brown Elementary School	**146**	**136**	**282**	**6.9%**
Police & Fire Headquarters	**137**	**134**	**271**	**6.6%**
Morse Library	**138**	**91**	**229**	**5.6%**
Memorial Elementary School	**56**	**172**	**228**	**5.6%**
Lilja Elementary School	56	162	218	5.3%
Ice Rink	101	98	199	4.9%
DPW Headquarters	46	123	169	4.1%
Johnson Elementary School	16	153	169	4.1%
Community Senior Center	73	47	120	2.9%
East School	8	79	87	2.1%
Town Hall	78	-	78	1.9%
Cole Recreation Center	16	53	69	1.7%
Fire Dept West - Station 4	56	1	57	1.4%
Golf Course	27	-	27	0.7%
LFNR Garage	5	16	21	0.5%
Fire Dept East - Station 3	9	11	20	0.5%
Fire Dept South - Station 2	9	11	20	0.5%
Oak Street Storage	3	-	3	0.1%
Recycling Center	3	-	3	0.1%
Total	**1,905**	**2,173**	**4,078**	**100%**

School and Municipal Buildings

The majority (73%) of Natick's municipal emissions came from the use of our schools and public buildings. In Fiscal Year 2022, Natick's 23 school and municipal facilities emitted 4,078 MT CO2e of the Town's 5,618 MT CO2e (Table 2).

Of Natick's building-related emissions, Natick High School (18%), Bennett-Hemenway Elementary School (10%), Wilson Middle School (9%), Kennedy Middle School (8%), Brown Elementary School (7%), Police and Fire Headquarters (7%), Morse Library (6%), and Memorial Elementary School (6%) contributed to nearly 70 percent of the Town's building emissions, and 50 percent of the Town's total Fiscal Year 2022 emissions. Natick aims to electrify all buildings and vehicles in the Town over time, but focusing decarbonization efforts on these eight high impact facilities will significantly reduce overall emissions (Table 2).

Municipal Vehicles

The municipal fleet was responsible for 13% of the Town's emissions in FY 2022. The analyzed fleet consists of 151 vehicles that are a mix of 66 light-duty vehicles (LDV), 49 medium-duty vehicles (MDV), and 36 heavy-duty vehicles (HDV), including two electric vehicles (EVs) already owned by the Town.

Table 3. FY 2022 Vehicle GHG Emissions (MT CO2e)

Light-duty	Medium-duty	Heavy-duty
281	**157**	**310**

Water & Wastewater

Water and sewer operations generate 12% of the municipality's emissions and are primarily driven by the electricity required to pump water and wastewater to and from Natick homes and businesses. These processes require limited on-site fossil fuel combustion, and emissions for this sector are anticipated to fall as the electric grid transitions to renewable sources over time.

Street, Traffic & Park Lights

Outdoor lighting, including streetlights, traffic lights and lights in parks are responsible for just 2% of municipal emissions. Similar to emissions from water and wastewater operations, lighting-related emissions are expected to diminish with the greening of the grid between now and 2050.

Future Emissions

The Town of Natick is committed to achieving net zero and providing local support for the GHG emissions limits set by the Secretary of the Executive Office of Energy and the Environment.

To become a Climate Leader Community, Natick is required to adopt the Massachusetts Department of Energy Resources's (DOER) minimum GHG emissions reduction timeline for municipalities (Table 3). These targets focus on:

- Reducing emissions from the use of onsite fossil fuels,
- Transitioning to Zero Emission Vehicles (ZEVs) in the municipal fleet, with a focus on light-duty vehicles in the near term, and
- Improving the Energy Use Intensity score of Natick's public buildings, through energy efficiency and electrification.

Table 4 identifies DOER's targets for each of these measures in 2027, 2030, 2040 and 2050.

Table 4. Minimum Emissions Reduction Timeline, established by DOER

DOER Targets	2027	2030	2040	2050
Reduce emissions from onsite fossil fuels	-20%	-35%	-60%	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	5%	20%	75%	100%
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	0%	20%	50%	100%
Energy Use Intensity reduction	-20%	-25%	-25%	-30%
Total Emissions Reduction Goals (% of 2022 emissions)	>15%	>35%	>65%	>95%

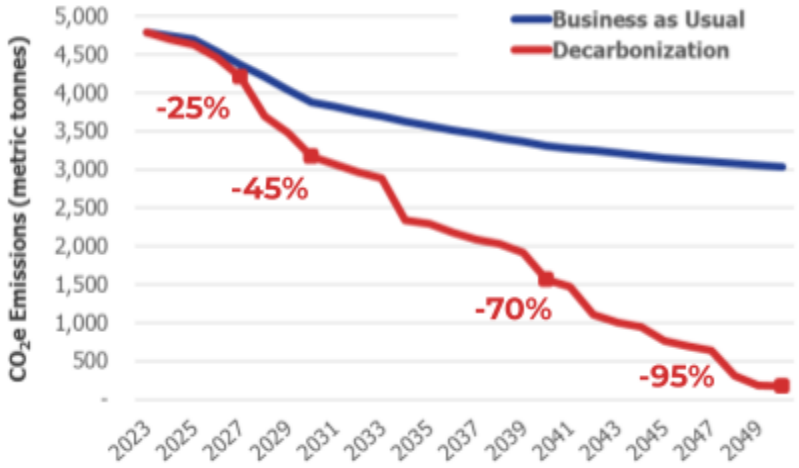
Natick's Projected Emissions

By pursuing the decarbonization actions outlined in this Roadmap, the Town of Natick is projected to meet or exceed DOER's minimum emissions reduction goals. By 2050, this roadmap estimates that Natick can reduce our GHG emissions by 75 thousand cumulative MT CO2e, transition our fleet to ZEVs, lower our building's Energy Use Intensity (EUI) scores by nearly 40 percent, and meet the emissions reductions goals set by the Secretary.

Table 5. Natick's Emission Reduction Timeline as a Result of Decarbonizing

Natick Projections	2027	2030	2040	2050
Reduce emissions from onsite fossil fuels	-20%	-46%	-96%	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	17%	39%	97%	100%
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	0%	0%	11%	100%
Energy Use Intensity reduction	-8%	-22%	-38%	-39%
Total Emissions Reduction Goals (% of 2022 emissions)	18%	43%	82%	97%

Figure 4. Natick's Projected Emissions



Powered by a Changing Electrical Grid

In 2021, roughly half of Massachusetts's electric load was met by the generation of in- and out-of-state clean energy sources, such as solar, hydropower, and wind. The state has multiple standards that require escalating percentages of electricity delivered to Massachusetts customers to come from clean energy.

Natick and the Commonwealth's net zero goals rely heavily on further greening the grid. Without significant increases in clean energy, electrification will not result in meaningful GHG reductions.

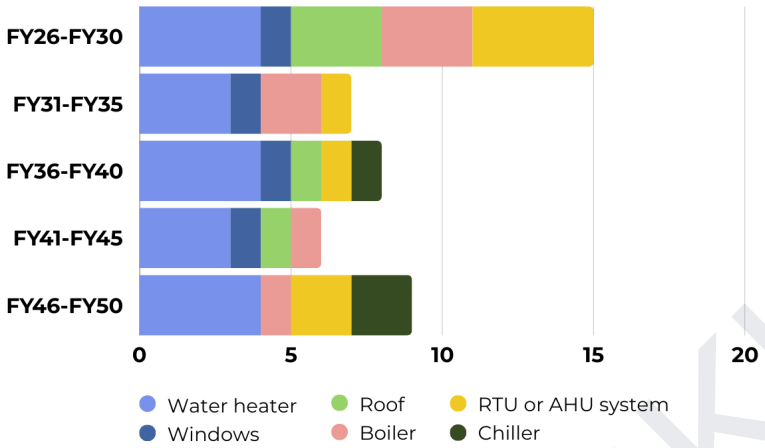
For this analysis, electricity emissions factors are sourced from the Massachusetts Clean Energy and Climate Plan for 2050, and represent estimates based on the New England grid. Using these projections, Natick's emissions will fall by about 35% by 2050 due to grid improvements alone. This is illustrated by the "Business as Usual" line in Figure 4. The Decarbonization line shows how Natick's emissions will fall if fossil fuel usage is reduced over time.

Building Decarbonization Roadmap

Natick's roadmap for building decarbonization focuses on our eight highest impact buildings and aligns net zero upgrades with major building life-cycle events, like equipment replacements.

Over the next 25 years, these buildings will require significant capital investment - especially in the near term. Five of the eight buildings were constructed or substantially renovated between 1995 and 2003, and major HVAC components of these buildings are near end of life.

Figure 5. Capital Improvements Timeline for Top Buildings



The following pages profile each of these eight buildings and are ranked in priority order, based on the amount of emissions they generate. Each profile provides a high-level overview of the building; opportunities to decarbonize through energy efficiency and electrification (in tandem with planned capital improvements); and a bar chart that shows how, by implementing these measures, Natick could reduce emissions from fossil fuels for each building over time.

Proposed strategies for each building and their associated timing are identified in Table 6; however, these are ideas only and should not be considered final. Technical and financial analysis will be necessary on a project-by-project basis, as part of the capital planning process.

Opportunities, Not Obligations

Natick acknowledges that decarbonization will occur over time and that the electrification of existing buildings can be a complex and monumental task. This Roadmap identifies capital needs and opportunities to consider. It does not presume the proposed strategies will ultimately prove financially or technically practicable, nor does it obligate Natick to pursue them.

Table 7. Capital Needs & Opportunities to Consider

Capital Need	Opportunities to Consider
HVAC Equipment Replacement	Fuel switching from gas to electric. Replacing equipment with higher-efficiency equipment or new technology. Right-sizing equipment to the actual loads, and downsizing if load-reducing ECMs were performed.
Water Heater Replacement	Fuel switching from gas to electric. Converting to a heat pump water heater.
Roof Replacement	Adding insulation, based on the energy analysis. Ensuring the new roof meets load requirements for future solar installation. Adding toplighting, though design carefully to avoid introducing too much heat. Adding solar. Using reflective/white roofing material.

Building Decarbonization Roadmap

Guiding Principles for Building Decarbonization

In practice, this Roadmap seeks to incorporate net zero strategies into the capital planning process, and encourages facilities and sustainability staff to work together to plan for system replacements before they become emergencies and result in like-for-like replacements. This will require greater alignment across departments, and municipal staff are committed to working with the Select Board and School Committee to define and formalize internal policies and processes.

In doing so, the Town of Natick will strive to follow these guiding principles:

For Existing Buildings, when capital improvements are planned for electrical, heating, ventilation, or air conditioning systems, the Town shall:

a. Design 1) a like-for-like replacement option, 2) a more energy efficient option, and 3) where applicable, an option that provides an alternative to the on-site combustion of fossil fuels.

b. Engage with its local utility, state and federal financial grant and incentive programs as early as possible (ideally during the feasibility phase, but no later than the beginning of schematic design) to benefit from design support and to maximize funding.

c. Evaluate design options based on feasibility, life cycle costs, and net zero impacts.

d. When net zero strategies are not practicable, ensure that steps are taken to develop and incorporate plans to facilitate the building's future transition to low- or zero-carbon fuels.

e. Evaluate building envelope upgrades and implement said upgrades where technically and fiscally feasible.

f. Establish and adhere to a low target energy use intensity for overall building or site performance.

g. Where appropriate, design and install renewable energy and energy storage.

h. Maximize resilient design to protect critical infrastructure and continued operation when modeled for long-term climate impacts.

For New Construction and Substantial Renovations, where possible and when cost-effective, the Town shall:

a. Strive to achieve zero net energy, where sufficient renewable energy is generated onsite to offset the building's annualized energy consumption. Electricity generated by onsite renewables offsets the use of electricity from the grid. As such, onsite renewables provide zero-emission electricity and can reduce a building's GHG emissions compared to electricity provided by the grid, until the grid is fully decarbonized. Onsite fuel combustion (propane, gas, oil) cannot be offset from the use of onsite renewable electricity generation.

b. Implement energy storage wherever possible, especially when paired with onsite renewables.

c. Prioritize sites that provide access to public transportation and alternative modes of transportation.

d. Evaluate and implement strategies to reduce embodied carbon contained in building materials.

#1: Natick High School (720 MT CO2e)

Natick High School is the largest public building in our community and it emits the highest amount of GHG emissions. The school consumes a large amount of electricity and uses natural gas rooftop units (RTU) in combination with energy recovery units (ERUs) to heat and cool the 254,829 square foot building.

Despite having high emissions, the building's EUI of 45 is low compared to most Natick schools. This could be, in part, due to the existing 301 kW behind-the-meter rooftop solar array. Note, the solar canopy is ahead-of- the-meter and does not feed into the building.

Decarbonization Roadmap

The implementation of efficiency and electrification measures could help reduce Natick High School's emissions by 95% through 2050.

Energy Efficiency

While there are no immediate energy efficiency measures planned, options will be explored prior to electrification. Measures such as ensuring efficient building management system (BMS) run times could reduce fossil fuel emissions by up to 6 percent.

Electrification

The Town will explore electrifying the school's existing natural gas equipment at or near its projected end-of-useful life. The first opportunity will be with the near term replacement of the building's domestic hot water heating system, which is responsible for approximately 20% of the building's fossil fuel consumption.

Before replacing the school's boilers and RTUs, Natick will explore adding heat pumps to the building. Given the size of the school, ground-source heat pumps (GSHP) may be an appropriate solution, and could also be used for domestic hot water heating in future years. Lastly, induction range stovetops will help the school achieve net zero emissions by 2050.

Building Characteristics

Square Footage: *254,829*

FY2022 Emissions: *720 $MTCO_2e$*

FY2022 EUI: *45*

Existing Solar: *Yes, 301 kW & 494 kW*

HVAC: *2012, natural gas/fuel oil*

Water Heating: *2012, natural gas*

Kitchen: *2012, natural gas*

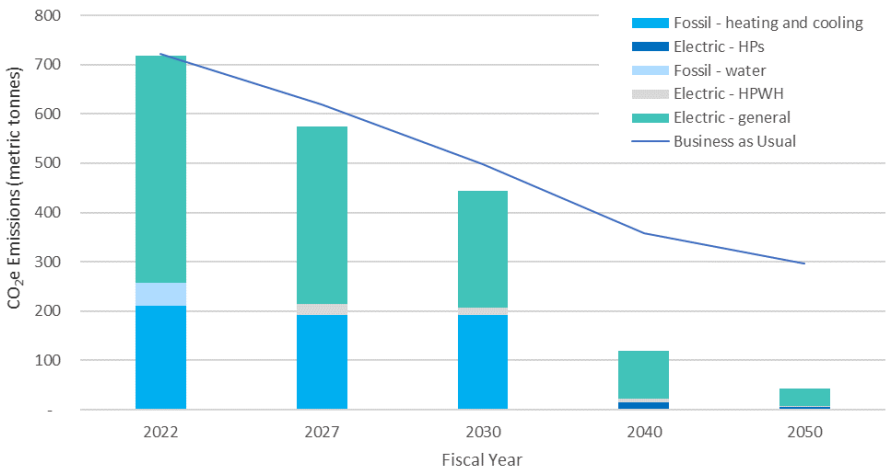
Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2040, GSHP*

Water Heating: *2026, HPWH or GSHP*

Kitchen: *2035, induction range*



#2: Bennett-Hemenway Elementary (388 MT CO2e)

Bennett-Hemenway (Ben-Hem) Elementary emitted the third highest amount of GHG emissions in Fiscal Year 2022. Though the emissions were lower than Natick High and Kennedy Middle School, Ben-Hem's EUI was nearly double, at 84. This is likely related to the inefficiencies associated with the dated natural gas and oil boilers.

Ben-Hem was designed to include a chiller that was never installed. In its absence, the lack of centralized air conditioning has been problematic for building occupants.

Building Characteristics

Square Footage: *80,000*

FY2022 Emissions: *388 MTCO2e*

FY2022 EUI: *84*

Existing Solar: *Yes, 103 kW*

HVAC: *1999, natural gas/fuel oil*

Water Heating: *2012, electric*

Decarbonization Roadmap

Natick recently received a $2+ million grant from the U.S. Department of Energy (DOE) to support energy efficiency and electrification. The implementation of this grant will reduce the use of on-site fossil fuels by 60% by 2026. Longer term, the building has an opportunity to reduce emissions by 95% through 2050.

Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2026, ASHP and Condensing Boilers*

Water Heating: *2025, HPWH*

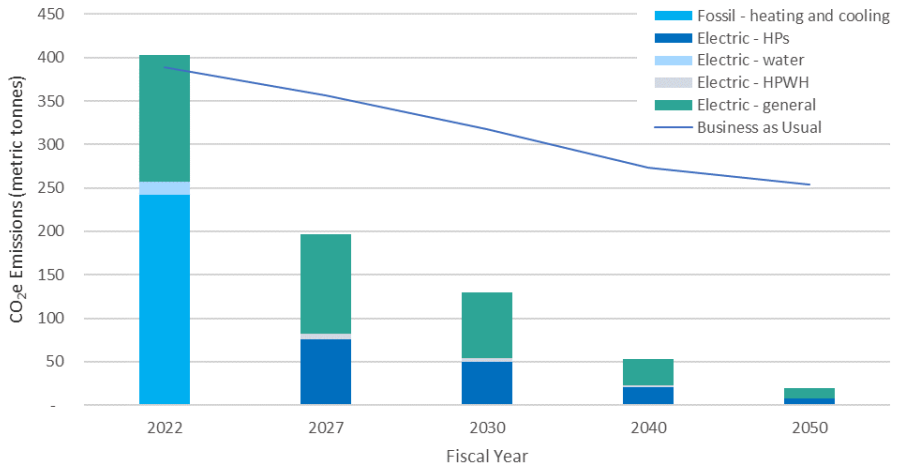
Solar: *2032 replace with roof*

Energy Efficiency

Natick will replace the building's controls system as part of the DOE project and will pursue other energy conservation measures, such as an LED lighting retrofit for all classrooms at this property in the near-term.

Electrification

Natick will add an ASHP heat pump in place of a chiller, replace existing natural gas RTUs with heat pump RTUs, and install condensing boilers in conjunction with the DOE grant by the end of 2026. The existing electric resistance water heater could also be upgraded to a heat pump water heater in the near future. At the end of the condensing boilers and heat pump's useful life, the Town will revisit technologies available on the market and will seek to fully eliminate the use of fossil fuels for heating.



#3: Wilson Middle School (367 MT CO2e)

Wilson Middle School emitted 367 MTCO2e in Fiscal Year 2022, and accounted for 7% of all municipal emissions. Due to the presence of a large rooftop solar array, the majority of Wilson's emissions come from heating. The building relies on natural gas boilers, RTUs and window AC units to condition the building.

Decarbonization Roadmap

This building's HVAC equipment is nearing the end of its useful life and the building is currently being assessed by a third-party consultant as part of Eversource's Deep Energy Retrofit program. As part of this effort, a technical analysis will be complete that outlines electrification and energy efficiency opportunities and their associated energy, emissions and cost savings.

Energy Efficiency

Detailed recommendations for energy efficiency will be available upon completion of the consultant's report. This is expected to include opportunities such as: ensuring efficient run times through building controls, replacing or repairing existing sensors and equipment such as VFDs, and optimizing equipment start/stop.

Electrification

Electrification upgrades to existing equipment will begin in or around 2027, following the Eversource analysis. RTU heat pumps and VRFs may be considered at this building, as they would be an efficient solution to meeting the school's energy demands. Heat pump water heaters may also replace the existing natural gas heaters around the same time.

Building Characteristics

Square Footage: *134,000*

FY2022 Emissions: *367 MTCO2e*

FY2022 EUI: *47*

Existing Solar: *Yes, 302 kW*

HVAC: *2003, natural gas*

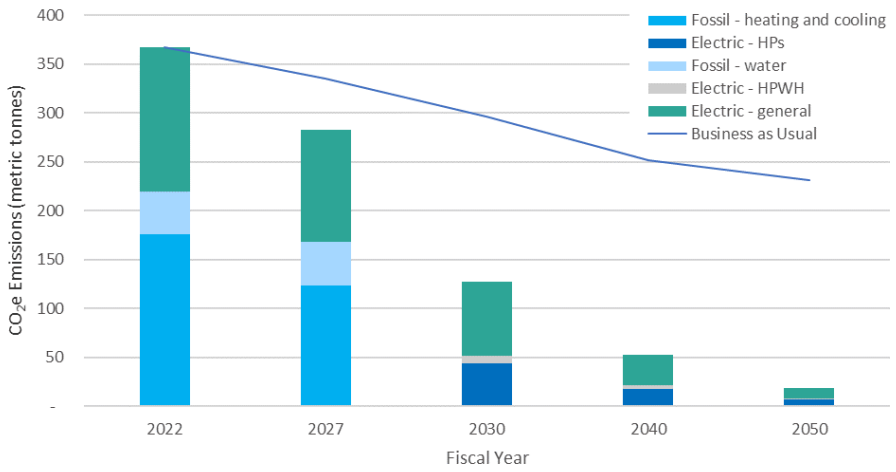
Water Heating: *2018, natural gas*

Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2028, RTU heat pumps and VRF*

Water Heating: *2028, HPWH*



#4: Kennedy Middle School (333 MT CO2e)

Kennedy Middle School is Natick's newest and most efficient school, with an EUI of 39. The building it replaced had an EUI of 63.

The building is primarily conditioned by RTUs and a chiller, and relies on natural gas for heating needs. It has on-site solar PV panels, which include rooftop and parking canopy arrays and the town's first commercial battery storage system. The battery deploys solar power to reduce the building's monthly electricity demand charges; a separate diesel generator provides backup power.

Data used for this building is from FY 2023, which is the first year the school was fully operational, with no construction occurring.

Decarbonization Roadmap

Given the building is brand new, significant capital improvements are not expected to occur at Kennedy Middle School until 2050.

Energy Efficiency

Kennedy is currently using more energy than modeled during the building's design process, and staff are working to optimize the building's controls to avoid excess energy usage.

Kennedy also has excess heating capacity (beyond necessary redundancies) - just one of the building's extra boilers could meet the heating demand for the entirety of Brown. As Natick explores campus-wide solutions for this site, connecting the building's heating system should be considered.

Electrification

A campus-wide ground-source heat pump system is an interesting opportunity to explore for Kennedy and Brown when Kennedy's boilers are due for replacement.

Building Characteristics

Square Footage: *182,000*

FY2023 Emissions: *333 MTCO2e*

FY2023 EUI: *39*

Existing Solar: *Yes, 302 kW*

HVAC: *2021, natural gas*

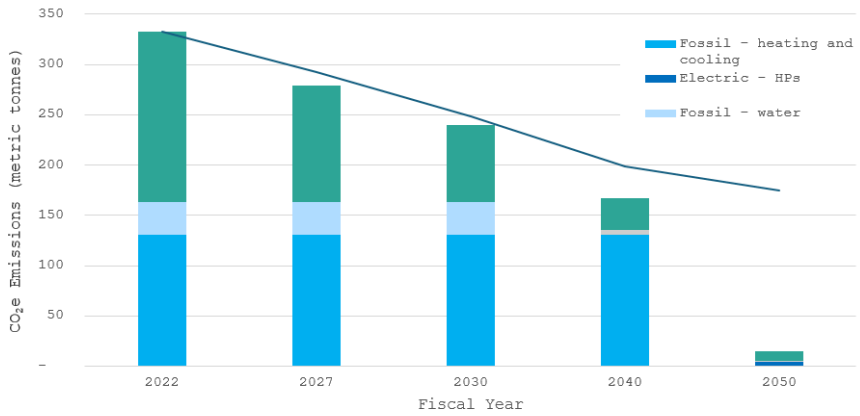
Water Heating: *2021, natural gas*

Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2050, GSHP*

Water Heating: *2033, HPWH*



#5: Brown Elementary (282 MT CO2e)

Brown Elementary School emitted the next highest GHG emissions in Fiscal Year 2022, and had an EUI of 78.

The building has about 25 classrooms that are served by standard unit ventilators. It has a forced hot water system that relies on two natural-gas fired boilers, and five AHUs provide conditioning for larger spaces. The new modular building is the only classroom space with air conditioning (beyond window units) and is heated using electricity.

Building Characteristics

Square Footage: *61,035*

FY2022 Emissions: *283 MTCO2e*

FY2022 EUI: *78*

HVAC: *2017, natural gas*

Water Heating: *2011, electric (main)*

Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2028, VRF*

Water Heating: *2025, HPWH*

Decarbonization Roadmap

Brown is currently participating in a scoping study to determine if it is a good fit for Eversource's Deep Energy Retrofit program.

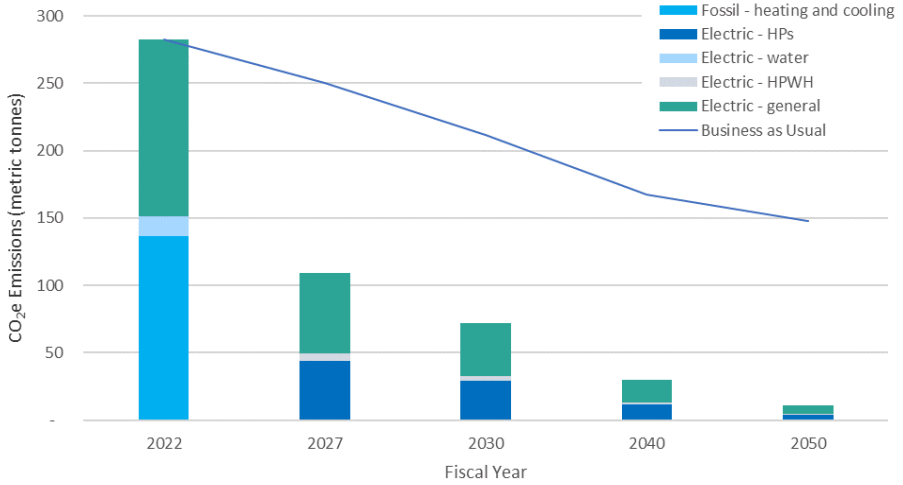
Energy Efficiency

Energy efficiency measures may include ensuring BMS and ventilation efficiencies and upgrading lighting controls and fixtures. These could reduce the school's energy consumption by nearly 20 percent in the near-term.

Electrification

Upgrades to the building's air handling units (AHUs) and building management system are necessary in the coming five years, and Natick will leverage consultant recommendations to pursue opportunities for electrification. The school's boiler is expected to reach its end-of-useful life around 2028, and VRF heat pumps may be an appropriate solution to meet the school's energy needs at that time.

In the interim, Natick has applied for grant funding to replace the main water heater (installed in 2012) with a heat pump water heater, and will seek to replace the building's two smaller water heaters with similar technology at the end of their useful life.



#6: Police & Fire Headquarters (271 MT CO2e)

The Police & Fire Headquarters contributed to 271 MTCO2e in Fiscal Year 2022. This building does not emit as many GHG emissions as some of Natick's school buildings, but is still a top (7 percent) contributor to the Town's overall emissions.

The Police & Fire Headquarters building encompasses approximately 54,000 gross square feet of space and is essentially split into two halves. The east side houses the Fire Department and the west side houses the Police Department. The Fire Department side of the building operates 24/7/365, and has approximately 13 bunk rooms and a minimum of 20 firefighters on duty per shift.

Decarbonization Roadmap

Energy Efficiency

The demands placed on the operations of this emergency response facility dictate much of its non-discretionary energy consumption. However, energy efficiency opportunities do exist and a 2019 analysis suggests that adjusting building management controls, evaluating equipment sizing, and exploring potential economies in the sharing of systems may result in savings.

Electrification

While the domestic hot water boilers and associated pumps were replaced in 2011, the heating equipment at this building was installed in 1996, and is well past its projected end-of-useful life. Natick will need to prioritize maintaining emergency response operations above all else at this building, and will consider electrification upgrades to the existing equipment in conjunction with HVAC replacements. VRF heat pumps may be an option to meet the headquarters' energy demands. Heat pump water heaters will also be considered for electrifying the existing equipment. Induction range stovetops will be the final measure required to achieve net zero emissions by 2050.

Building Characteristics

Square Footage: *53,970*

FY2022 Emissions: *271 MTCO2e*

FY2022 EUI: *85*

HVAC: *1996, natural gas*

Water Heating: *2011, natural gas*

Kitchen: *natural gas*

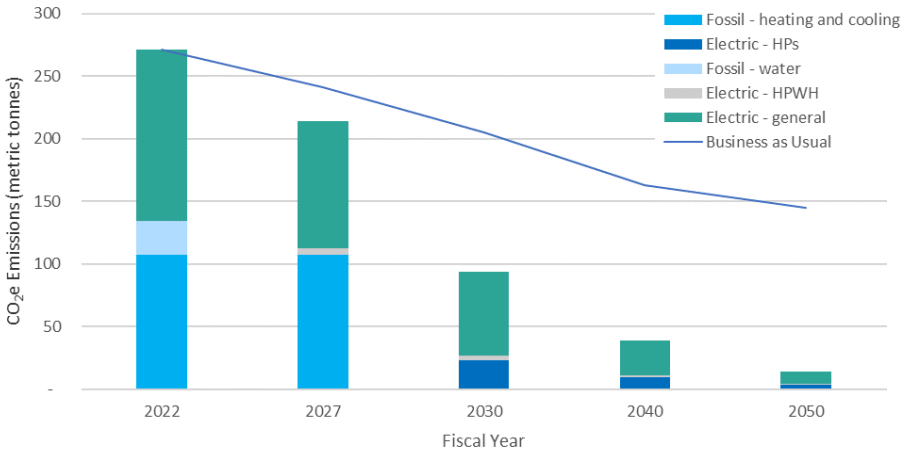
Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2028, VRF*

Water Heating: *2028, HPWH*

Kitchen: *2040, induction*



#7: Morse Institute Library (229 MT CO2e)

The Morse Library emitted the seventh highest GHG emissions in Fiscal Year 2022, at 229 MTCO2e.

The library was built in 1873 and sustained a series of additions in 1927 and 1964. A large renovation of the building was completed in 1997 that preserved and paired the 1873 building with a large modern addition. Today the building is 60,860 square feet, houses more than 299,105 books and materials, and welcomes nearly 1,000 patrons each day.

In 2023, the Town completed several large HVAC-related projects at the library. It replaced the chiller with a heat pump, replaced building controls, and repaired or replaced a significant amount of HVAC-related equipment, including VAV boxes, etc. While the heat pump provides AC and heating, the building does currently rely on its original gas boilers (1996) for the majority of heating needs.

Decarbonization Roadmap

Energy Efficiency

This building has undergone a variety of energy efficiency projects in the past 10 years, including a full LED retrofit, the installation of VFDs, addition of occupancy sensors, and replacement of the archive room's Liebert system. As the Town optimizes the new controls, additional energy efficiency improvements will follow.

Electrification

The boilers, which are due for replacement, represent an opportunity for further electrification in the coming years. However, the building's heating and cooling system is already complex and the Town will need to carefully evaluate options to determine the best approach to electrification. Heat pump water heaters will not be needed in the near-term but may be installed at the current electric resistance tanks' projected end-of-useful life, near 2032.

Building Characteristics

Square Footage: *60,680*

FY2022 Emissions: *229 MTCO2e*

FY2022 EUI: *62*

Existing Solar: *No*

HVAC: *1996, natural gas; 2024, heat pump*

Water Heating: *2022, electric*

Kitchen: *electric*

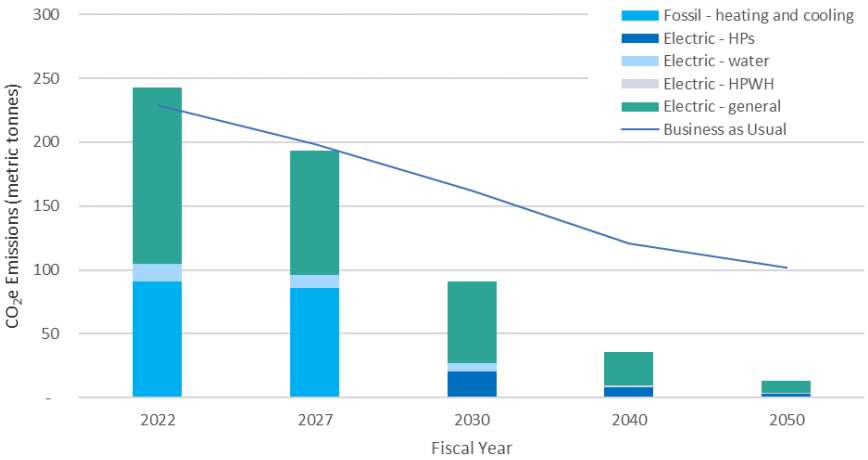
Proposed Strategy

Energy Efficiency: *2025-2029*

HVAC: *2030, VRF*

Water Heating: *2032, HPWH update*

Kitchen: *2040, induction*



#8: Memorial Elementary (228 MT CO2e)

The Memorial Elementary School emitted 228 MTCO2e, the next highest in Fiscal Year 2022, accounting for 5.8 percent of total municipal emissions.

Memorial was built in 1970 and was last renovated in 2009. Solar was added to the building in 2012 and many of the HVAC mechanical systems were updated in 2014. However, the electrical systems remain in poor condition, and the Town has submitted an application to the MSBA to have the building considered for replacement or major renovations.

Decarbonization Roadmap

A significant number of opportunities for energy efficiency and electrification exist if the building is replaced or renovated. MSBA offers additional funds to support electrification and air quality improvements, and Natick should explore these as it evaluates design alternatives.

If the Town pursues new construction, the Specialized Stretch Code will pertain to this building. The Town will explore designs that are all electric, with the goal of offsetting all of the building's energy use with on-site renewable energy. In doing so, the Town will work to ensure the building's roof and parking lot are designed to accommodate solar arrays, even if they are not installed until a future date. As part of a new construction design, the Town will also consider the viability of a ground source heat pump (GSHP) system to support the building's heating and cooling needs.

If the Town chooses a renovation approach, some of the above strategies may also be considered. Without changes to the existing HVAC distribution system, a GSHP may not be possible and a VRF system may be another option to explore.

Building Characteristics

Square Footage: *65,000*

FY2022 Emissions: *228 MTCO2e*

FY2022 EUI: *62*

Existing Solar: *Yes, 116 kW*

HVAC: *2013, natural gas*

Water Heating: *2013, natural gas*

Proposed Strategy

Energy Efficiency: *: 2025-2029*

HVAC: *2034, VRF (with renovations) or GSHP (new construction)*

Water Heating: 2034, HPWH

Vehicle Decarbonization Roadmap

Natick will take a gradual approach to decarbonizing its fleet and will prioritize transitioning vehicles that:

- Are due for replacement
- Have zero emission vehicles (ZEV) alternatives available that meet operational and charging/maintenance needs, and
- Are available on the market at a low cost.

In the near future (2025-2030), this will primarily involve administrative vehicles (such as passenger sedans, light-duty trucks, and light-duty vans). Emergency vehicles, specialty equipment, and medium-duty trucks will be considered in later stages.

Zero-Emission Vehicle First Policy

Natick's approach to decarbonizing its municipal fleet is detailed in its Zero-Emission Vehicle (ZEV) First Policy, which requires Town staff to prioritize the purchase of ZEVs for new vehicles, when a ZEV is available that can meet operational needs. It does not require the purchase of electric vehicles and will not encourage or allow for the purchase of a vehicle that does not meet operational needs.

In implementing the ZEV First Policy, the Equipment Maintenance Supervisor, in collaboration with department heads, will evaluate the needs of a vehicle that is scheduled to be replaced or added and assess ZEV options. This analysis will follow the below process:

Step 1: Evaluation of operational needs, such as:

- Expected daily miles driven/range
- Necessary hauling/towing capacity
- Required customizations or upfits (e.g., emergency lights)

Step 2: Review of vehicles that are available to meet operational needs, following the below hierarchy, as set by DOER:

1. Battery-electric vehicle (BEV)
2. Plug-in hybrid electric vehicle (PHEV)
3. Hybrid electric vehicle (HEV) or other alternative fuel vehicle (AFV)
4. Most fuel efficient available standard vehicle operated by an internal combustion engine (ICE) fueled by fossil fuels

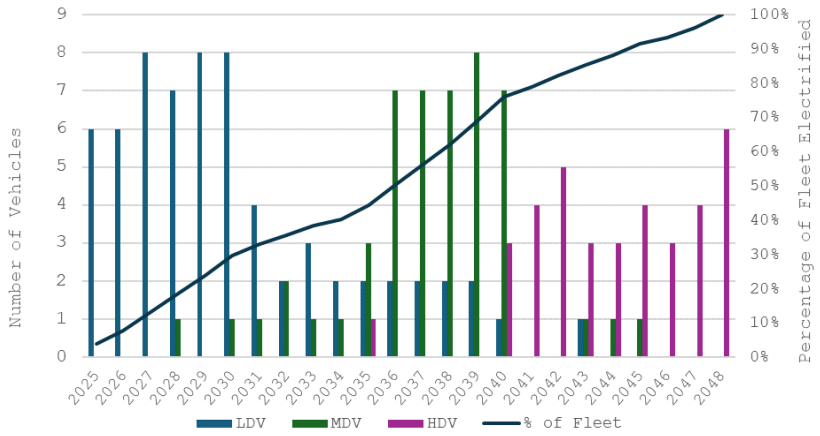
Step 3: Evaluation of charging/maintenance requirements

- Availability of charging infrastructure
- Ability of Equipment Maintenance Division to support the vehicle

In accordance with the proposed policy, if a BEV is not available that can meet Natick's operational needs and charging/maintenance requirements, then the next category in the hierarchy will be considered for purchase, and so forth.

Procurement Timeline

The following procurement timeline is based on cost-effectiveness, annual budget considerations, and the remaining useful life of each vehicle in Natick's existing fleet. Please note that these assumptions are subject to change based on evolving factors such as market development and vehicle availability.



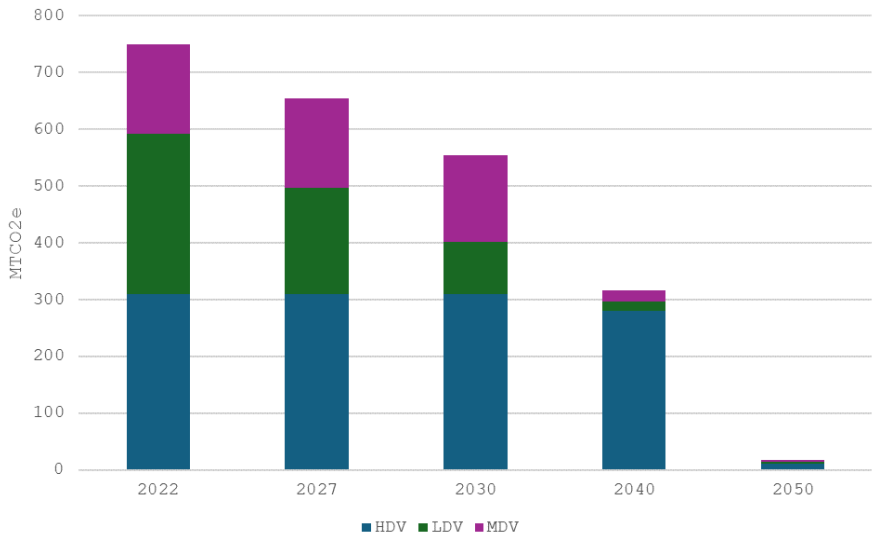
In 2025-2030, this Roadmap projects that 43 light- and 2 medium-duty vehicles can be converted to electric. These are primarily sedans, SUVs, and pickup trucks—all of which have mature EV market options that are cheaper and cleaner to operate than their gas/diesel alternatives. Strong state incentives make immediate purchase possible and recommended.

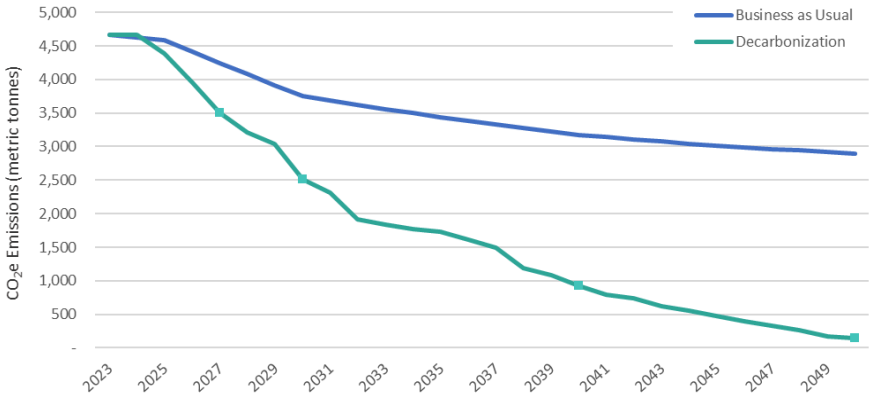
Between 2031-2040, another 21 light-, 37 medium-, and 1 heavy-duty vehicles are expected to be converted to ZEVs. These vehicles comprise LDVs, transit vans and pickup trucks. This will allow Natick to reap the benefits of projected reductions in battery costs, and global competition that is expected to reduce vehicle cost. The medium- and heavy-duty market is in the early stages of development, and we anticipate significant advancements will lead to increased cost-effectiveness in the future.

In 2041-2050, the remaining 2 light-, 10 medium-, and 35 heavy-duty vehicles will be cost-competitive candidates for EV replacement. These HDVs are mostly comprised of fire trucks and heavy-duty trucks. Currently, electric alternatives for these vehicle types, particularly those with specialty features like mounted cranes and snowplows, are limited or non-existent. GM announced plans to launch EV heavy-duty trucks by 2035.

Projected Impact

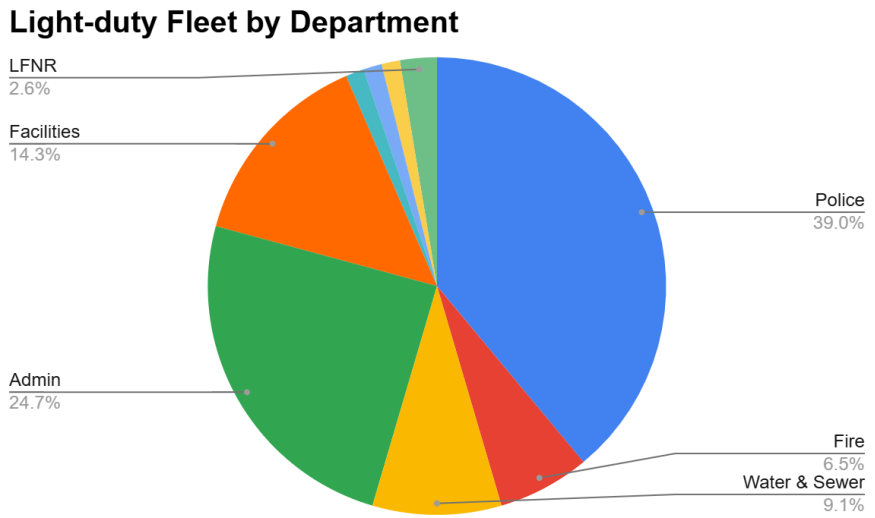
Converting the current fleet of internal combustion engine vehicles to battery electric vehicle platforms could result in avoiding 9,500 metric tonnes of CO2e emissions cumulatively through 2050.





Light-duty Vehicles (281 MT CO2e)

There are 66 light-duty vehicles in Natick's fleet. Light-duty vehicles are used across departments with the highest concentration in Police (39%), Administration (25%), and Facilities (14%). Non-emergency vehicles are primarily used for inspections, transporting tools and hauling light cargo to work sites. Plows are not added to these vehicles, towing capacity is not a factor, and the average daily range is less than 30 miles, in some cases significantly less.



Decarbonization Roadmap

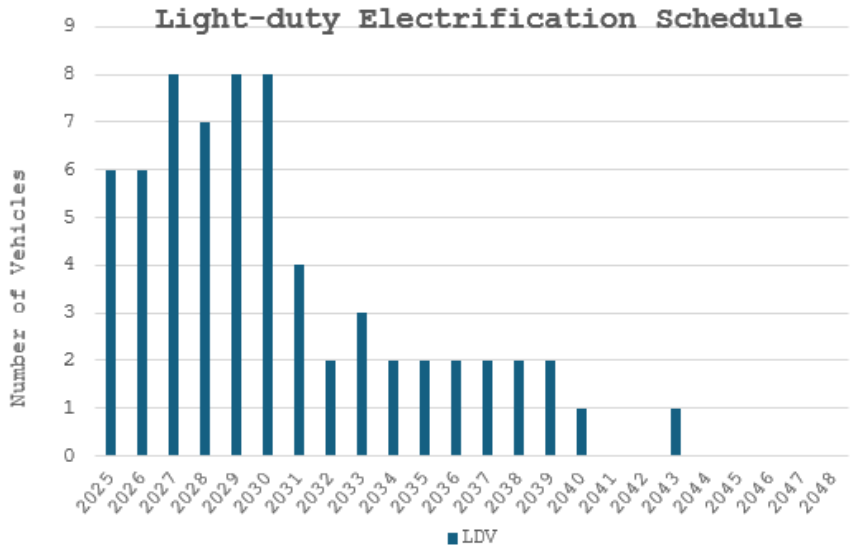
Market Availability

The light-duty EV market has expanded significantly since Natick's first EVs were purchased in 2016. New models typically have ranges between 250-300 miles, well above Natick's average daily usage. Numerous electric options are available for passenger SUVs, vans, and light-duty pickups. There is also one pursuit-rated electric cruiser available (the Chevy Blazer) and others are expected to become available soon. This means nearly all of Natick's light-duty vehicles have EV counterparts that would meet operational needs.

Charging Infrastructure

Light-duty vehicles have smaller batteries that allow for Level II chargers to provide sufficient charging within a reasonable time. The typical Natick use case would allow for once-a-week overnight charging without disrupting operations and Natick is working to install a total of approximately eight Level II chargers in spring 2025. These will be located where the majority of light-duty vehicles are parked (behind Police/Fire, at the DPW and the Maintenance shop).

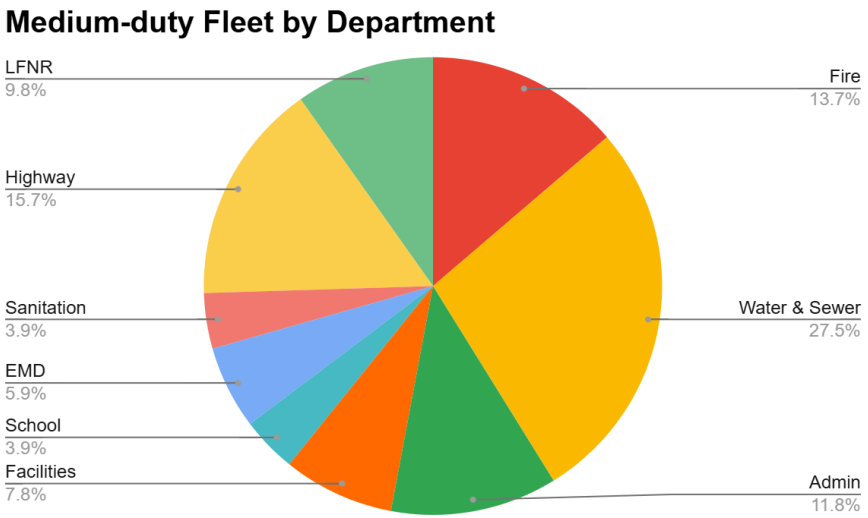
Police cruisers have different charging needs. These vehicles drive an average of 60 miles per day, but operate 24/7. They require faster charging during less predictable periods of time, which can be addressed by DCFC chargers or faster Level II chargers. Natick will work to install these chargers at Police/Fire in conjunction with the transition of light-duty, emergency vehicles.



Medium-duty Vehicles (157 MT CO2e)

There are 49 medium-duty vehicles in Natick's fleet, weighing between 10,001 - 26,000 lbs. The majority of medium-duty vehicles are operated by various departments within the DPW, including Water & Sewer, Highway, and LFNR. The majority of medium-duty trucks at DPW are Ford F350-600s. These are used for plowing and moving moderate to heavy cargo and trailers, and often require hauling capacity of over 20,000 lbs. Their average daily range is low, often not exceeding 25 miles per day.

Fire has the largest number of non-DPW medium-duty vehicles. Their vehicles are at various fire departments around Town and are not centrally located.



Decarbonization Roadmap

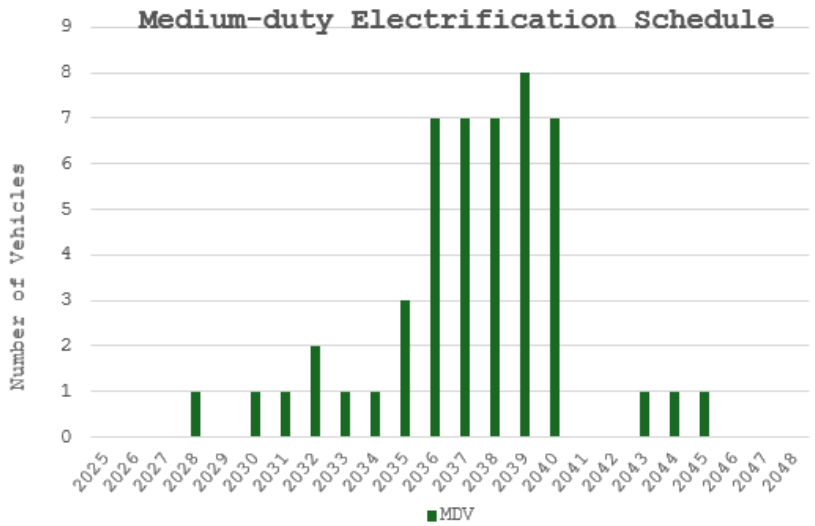
Market Availability

Unlike the light-duty market, the medium-duty EV market is still in a developmental phase. While some medium-duty transport vans with sufficient range are available, there is currently a lack of medium-duty vehicles that can meet Natick's operational needs. Manufacturers have estimated 2028 as the earliest the market will see medium-duty EVs with sufficient towing capacity.

Charging Infrastructure

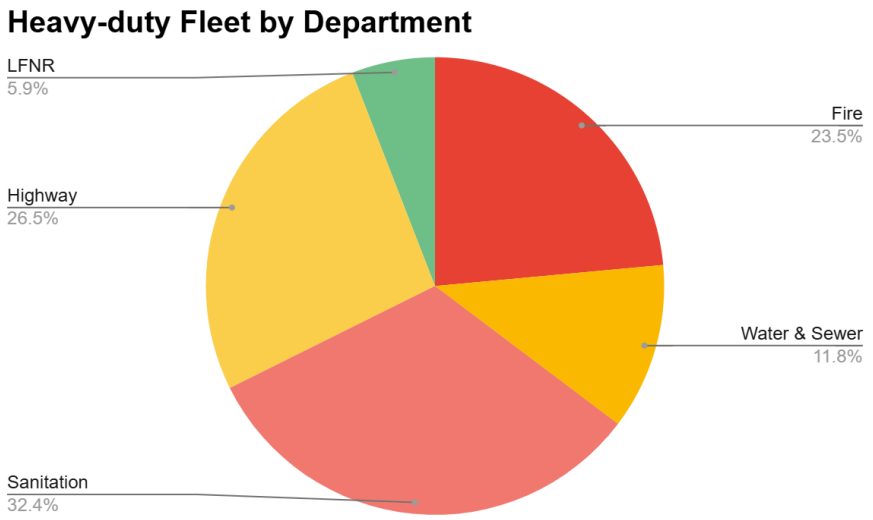
Medium-duty vehicles have larger batteries, but can still get sufficient charge in reasonable time from a standard Level II charger. Faster Level II chargers could also support medium-duty vehicles that may sometimes operate off-hours (such as those doing night road work).

However, significant coordination with the utility will be required to support medium-duty charging, especially for DPW vehicles which, due to their location and the number needed, are expected to require a new electrical service. As such, a wait and see approach is likely, with the uncertain market timing of medium-duty EV rollouts playing a large role in timing planning for additional chargers.



Heavy-duty Vehicles (310 MT CO2e)

The heavy-duty portion of the fleet consists of 36 vehicles over 26,00 lbs. The majority of these vehicles are operated by DPW divisions, including Sanitation, Highway, and LFNR. The remainder are operated by Fire. The daily range of heavy-duty DPW vehicles varies, with trash and recycling trucks having a higher daily average (about 70 miles, due primarily to the distance between Natick and the incinerator and the recycling processing facility).



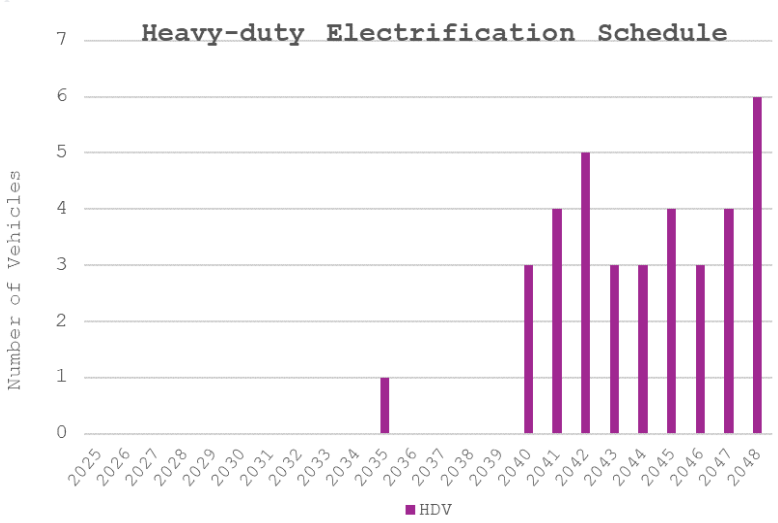
Decarbonization Roadmap

Market Availability

The market for heavy-duty EVs is in an early stage. Available equipment is unproven or currently unable to meet Natick's operational needs. In 2024, electric recycling and garbage trucks lack the range needed to collect and haul daily routes. A growing number of electric fire trucks are on the market, but they are relatively new and often cost prohibitive. A wait and see approach is the best course of action for heavy-duty vehicles in the short term.

Charging Infrastructure

The charging needs of heavy-duty vehicles varies. Some can charge on Level II or DCFC ports, while others can only receive power from DCFC. At present, DCFC is often the most practical, given the size of the battery in heavy duty vehicles, but this may change over time. Most heavy-duty vehicles are located at the DPW. As previously noted, serving this area would require a new service. Space may be another challenge. DCFC chargers have larger footprints that would impact already limited and highly managed space. Heavy-duty vehicles often share space and need to be constantly moved which can create logistical problems for charger/cord placement.



These challenges are not insurmountable, and other municipalities have already successfully deployed heavy-duty electric vehicles. As the market for heavy-duty develops, Natick will work to develop a charging plan that considers costs, physical footprint and logistics.

Next Steps

This roadmap illustrates that the Town of Natick can effectively meet the emissions reductions targets set by the Secretary and required for the Climate Leader Community certification. By 2050, the electrification measures outlined in this roadmap are estimated to reduce Natick's GHG emissions by nearly 75 thousand cumulative MT CO_2e, lowering our EUI by nearly 40 percent.

To become a certified Climate Leader, Natick will move forward with several planned projects aimed at reducing energy consumption and GHG emissions, such as those at Bennett-Hemenway Elementary, and will strive to implement this Municipal Decarbonization Roadmap.

Implementation

Implementation of this Roadmap will be administered by the Sustainability Office, with support from the Town Administrator and Superintendent of Schools.

Municipal Decarbonization Working Group

To support implementation, Natick plans to launch a Municipal Decarbonization Working Group, whose composition will be determined by the Natick's Town Administrator and Superintendent of Schools. This group may include:

- Deputy Town Administrator
- Executive Director of Public Works & Facilities
- Representative from Natick Public Schools
- Sustainability Director
- Facilities Management Director
- Equipment Maintenance Supervisor

Together these staff will work to implement the roadmap. The group will use the ZEV First Policy to guide fleet decisions and will draft clear guidelines to support building-related decisions. The group will also work together to update this Roadmap every three years,as required by the Climate Leader Communities program.

Table 1. Fiscal 2022 Municipal Emissions

	Electricity	Fossil Fuels	Total	Percent of Total
Town Buildings	**701**	**585**	**1,286**	**22.9%**
Police & Fire Headquarters	137	134	271	4.8%
Morse Library	138	91	229	4.1%
Ice Rink	101	98	200	3.6%
DPW Headquarters	46	123	169	3.0%
Community Senior Center	73	47	120	2.1%
Town Hall	78	-	78	1.4%
Cole Recreation Center	16	53	69	1.2%
Fire Dept West Natick - Station 4	56	1	57	1.0%
Golf Course	27	-	27	0.5%
LFNR Garage	5	16	20	0.4%
Fire Dept East Natick - Station 3	9	11	20	0.4%
Fire Dept South Natick - Station 2	9	11	20	0.4%
Oak Street Storage	3	-	3	0.1%
Recycling Center	3	-	3	0.1%
Schools	**1,204**	**1,588**	**2,792**	**49.7%**
Natick High School	460	260	720	12.8%
Bennett-Hemenway Elementary School	146	242	388	6.9%
Wilson Middle School	147	220	367	6.5%
Brown Elementary School	146	136	282	5.0%
Memorial Elementary School	56	172	228	4.1%
Lilja Elementary School	56	162	217	3.9%
J F Kennedy Middle School	169	164	333	5.9%
Johnson Elementary School	16	153	169	3.0%
East School	8	79	88	1.6%
Street/Traffic Lighting	**111**	**0**	**111**	**2.0%**
Streetlights	66	-	66	1.2%
Traffic Lights	24	-	24	0.4%
Park / Facility Lights	21	-	21	0.4%
Vehicles		**742**	**742**	**13.2%**
Vehicles		742	742	13.2%
Water & Wastewater	**588**	**85**	**673**	**12.0%**
Springvale Water	260	82	342	6.1%
Elm Water	162	-	162	2.9%
Wastewater Pump Stations	120	2	122	2.2%
Water - various locations	41	1	42	0.7%
Water - Morse Pond	5	-	5	0.1%
Charging Stations	**7**		**7**	**0.1%**
Charging Stations	7	-	7	0.1%
Total	**2,618**	**3,000**	**5,618**	**100.0%**

Table 6. Possible Decarbonization Measures by Building

Building	Possible Efficiency Measures	Possible Year for HP HWH	Possible Heating System Replacement	Possible Year for Heating System Replacement	Solar PV	Possible Year for Increased Solar
Natick High	- Ensure efficient BMS run times/temperature settings - Upgrade lighting controls and fixtures as needed	2026	GSHP	2040, End of Life of current equipment	Existing	2032
Kennedy Middle	- Ensure efficient BMS run times and temperature settings	2032	HP Packaged Unit (RTU)	2045, End of Life of current equipment	Existing	N/A
Wilson Middle	- Ensure efficient BMS run times and temperature settings	2028	HP Packaged Unit (RTU)	2028, End of Life of current equipment	Existing	N/A
Ben-Hem Elementary	*No EE measure recommendations*	2048	ASHP/VRF	2048, End of Life of current equipment (installed ~2026)	Existing	2032
Police & Fire Headquarters	- Monitor temperature setpoints and/or add additional control points - Ensure efficient ventilation rates - Upgrade lighting controls and fixtures as needed	2026	VRF	2028, End of Life of current equipment	Not feasible	N/A
Morse Library	- Ensure efficient BMS run times and temperature settings - Upgrade lighting controls and fixtures as needed	2032	VRF (for boilers)	2030, End of Life of current equipment	Not feasible	N/A
Ice Rink	- Monitor temperature setpoints and/or add additional control points	2048	HP Packaged Unit (RTU)	2040, End of Life of current equipment	Existing	2037
Town Hall	- Monitor temperature setpoints and/or add additional control points	2029	VRF	2034, End of Life of current equipment	Not feasible	N/A
Community Senior Center	- Upgrade lighting controls and fixtures as needed	2025	VRF	2049, End of Life of current equipment	Existing	2032
Brown Elementary	- Ensure efficient BMS run times and temperature settings - Upgrade lighting controls and fixtures as needed	2042	VRF	2042, End of Life of current equipment (update planned for ~2026)	Existing Parking Lot Canopy	2041
Fire Dept West - Station 4	- Ensure efficient ventilation rates	2031	HP Packaged Unit (RTU)	2049, End of Life of current equipment	Existing	2041

Memorial Elementary	- Monitor temperature setpoints and/or add additional control points - Ensure efficient ventilation rates	TBD	VRF	TBD based on renovation/ replacement timeline	Existing	2032
Lilja Elementary	- Monitor temperature setpoints and/or add additional control points - Ensure efficient ventilation rates - Upgrade lighting controls and fixtures as needed	2042	VRF	2042, End of Life of current equipment (update planned for ~2026)	Existing	2037
DPW HQ	- Monitor temperature setpoints and/or add additional control points - Ensure efficient ventilation rates	2030	HP Packaged Unit (RTU)	2034, End of Life of current equipment	Existing	2037
Cole Recreation Center	- Monitor temperature setpoints and/or add additional control points - Ensure efficient ventilation rates	TBD	VRF	TBD based on renovation/ replacement timeline	83+ kW Canopy	TBD
Johnson Elementary	- Ensure efficient ventilation rates	TBD	VRF	TBD based on renovation/ replacement timeline	N/A	N/A
Fire Dept East - Station 3	- Monitor temperature setpoints and/or add additional control points	2027	Ductless ASHP	2026, End of Life of current equipment	Not feasible	N/A
East School	- Ensure efficient ventilation rates	2031	VRF	2028, End of Life of current equipment	Requires Phase 3 power upgrade	N/A
Fire Dept South - Station 2	- Monitor temperature setpoints and/or add additional control points	2029	Ductless ASHP	2027, End of Life of current equipment	Not feasible	N/A
LFNR Garage	*No EE measure recommendations*	2025	Ducted ASHP	2026, End of Life of current equipment	N/A	N/A
Oak Street Storage	TBD based on renovation/ replacement timeline					

ITEM TITLE: Future meetings
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION:

ITEM TITLE: Approve SIPs
DATE:
ITEM TYPE:
ITEM SUMMARY:
BACKGROUND INFORMATION:
RECOMMENDATION: