



Zoning & Planning Committee Agenda

City of Newton **In City Council**

Monday, September 23, 2024

6:30 pm – PLEASE NOTE EARLY START TIME

Room 204

The Zoning and Planning Committee will hold this meeting as a hybrid meeting on Monday, September 23, 2024 at 6:30 PM that the public may access in-person or virtually via Zoom. To attend this meeting via Zoom use this link: <https://newtonma-gov.zoom.us/j/89487284176> or call 1-646-558-8656 and use the following Meeting ID: 894 8728 4176.

Item Scheduled for Discussion:

- #42-24 Request for Discussion and Ordinance to require energy use reporting**
COUNCILORS ALBRIGHT, DANBERG, and LEARY on behalf of the Newton Citizens Commission on Energy (NCCE), requesting discussion and an ordinance that would require large property owners (campuses and large commercial buildings) to report energy use and associated greenhouse gas emissions annually to the city of Newton, to be used to encourage reductions in said energy use and greenhouse gas emissions in accordance and support of the goals set forth in the Newton Climate Action Plan.
Zoning & Planning Held 8-0 on 05/28/24
Zoning & Planning Held 5-0-1 (Councilor Danberg Abstaining) on 06/10/24
Zoning & Planning Held 7-0 on 07/22/24
- #45-24 Discussion and Possible Amendment to Inclusionary Zoning Ordinance to include Training**
COUNCILORS DANBERG, BIXBY, MALAKIE, DOWNS, AND WRIGHT requesting discussion and possible amendment to require that developers and property managers provide training for their employees regarding bias toward residents of the IZ units and how to mitigate this bias.
Zoning & Planning Held 8-0 on 03-25-24

The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.

#44-24 Requesting re-evaluation and possible amendments to Inclusionary Zoning Ordinance

COUNCILORS DANBERG, ALBRIGHT, KALIS, WRIGHT, OLIVER, MALAKIE, LIPOF, AND LUCAS requesting a discussion with the Planning and Development Department and the Newton Housing Partnership about the City's Inclusionary Zoning Ordinance and possible amendments to the ordinance to include 4-6 units, including raising the requirements for the number of affordable units in large developments.

Zoning & Planning Held 8-0 on 03-25-24

#317-24 Requesting discussion and possible amendments to Section 5.4.2

HER HONOR THE MAYOR requesting a discussion and possible amendments to retaining wall regulations for Multi-Family/Commercial/Industrial/Civic Buildings in Section 5.4.2 of Chapter 30 Zoning.

#209-24 Requesting discussion and possible amendment to Section 3.4.4 of Chapter 30 Zoning

TERRENCE P. MORRIS, ESQ. on behalf of Brian Traugott requesting discussion and possible zoning ordinance amendment to Section 3.4.4 Garage Design Standards, subsection B. Definitions, Subparagraph 1, "Garage" by inserting the words "above grade" after the clause, "or portion of the structure" as it appears in the 1st sentence of the "Garage" definition.

**Respectfully Submitted,
R. Lisle Baker, Chair**



Newton City Councilor R. Lisle Baker

Date: September 20, 2024
To: Zoning & Planning Committee
Cc: Jonathan Yeo, Chief Operating Officer
From: R. Lisle Baker, Chair of Zoning & Planning Committee
Re: 9/23 Discussion on BERDO

Dear Colleagues,

At the upcoming meeting on Monday, September 23rd the Zoning & Planning Committee will continue discussions on BERDO (Building Emissions Reduction and Disclosure Ordinance). We are starting the meeting early at 6:30 to allow time for a full presentation, Committee discussion and Committee action on the item.

As we have other matters on Monday to attend to as well, I have asked Bill Ferguson, Co-Director of Sustainability, and the Newton Citizens Commission on Energy, to help the Committee prepare in advance by providing not only his presentation but also additional explanatory information in addition to the ordinance itself. He has prepared for us the following attachments, attached to this memo and are in the following order:

- Presentation from Synapse Energy Economics, Inc.
- Draft of the proposed ordinance
- FAQ regarding BERDO
- Draft of the ordinance that includes Councilor Danberg's proposed amendment

Mr. Ferguson and a consultant from Synapse Energy Economics, Inc. will present the attached presentation and stop after each major section for Councilor questions. The Committee will also take up during this meeting the amendment from Councilor Danberg to include residential buildings over 20,000 sf with central heating and water heating systems as part of the ordinance.

Please review these BERDO materials carefully in advance of our meeting to make the best use of the limited time we have.

Thank you,

R. Lisle Baker, Chair of Zoning & Planning Committee



Newton Building Energy Disclosure and Reporting Ordinance (BERDO)

Zoning and Planning Committee Hearing

September 23, 2024

Philip Eash-Gates, PE CEM

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Agenda: Questions from Prior Hearings

Context

Feasibility and Cost of Complying

- Will Newton require quick decarbonization like Boston and Cambridge?
- When will owners need to reduce emissions?
- How will BERDO affect energy costs? Is decarbonization affordable?
- What financial resources are available?

Case Studies

- Do case studies show that decarbonization is achievable?

Technical Assistance and Support

- Does the City have adequate staffing?
- What resources are available to help building owners comply?

Reporting Energy Data

- How challenging is it to use Energy Star Portfolio Manager?
- Can building owners obtain tenant energy data?
- Has reporting been challenging in Boston? How will Newton be different?

Impacts of BERDO on Newton

- What will BERDO cost taxpayers?
- How will BERDO affect property values and Newton's tax base?

Context

Building Performance Standards

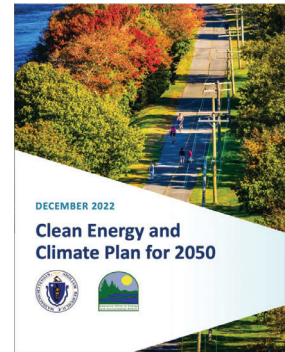
- Leading policy tool available to local government for building decarbonization
 - Large impact, few regulated buildings, resilient to legal challenge
- 17 jurisdictions have adopted performance standards
- 35+ more have committed to adoption by 2026

STATUS OF BUILDING PERFORMANCE STANDARDS IN THE UNITED STATES



Massachusetts Context

- Supportive environment for local decarbonization policies
- Tapestry of supply- and demand-side initiatives
 - Renewable Portfolio Standard and Clean Energy Standard
 - Proposed Clean Heat Standard
 - Mass Save program for energy efficiency and electrification
 - Federally funded programs through *Inflation Reduction Act*
- Net zero emissions in 2050 required under *Global Warming Solutions Act* (GWSA) and Clean Energy and Climate Plan (CECP)
- Newton BERDO efforts toward decarbonizing offers benefits:
 - Hedges against uncertainty in state planning to meet GWSA requirements
 - Phased decarbonization avoids early replacement, lowering costs
 - Reduces exposure to rising gas rates under state policy



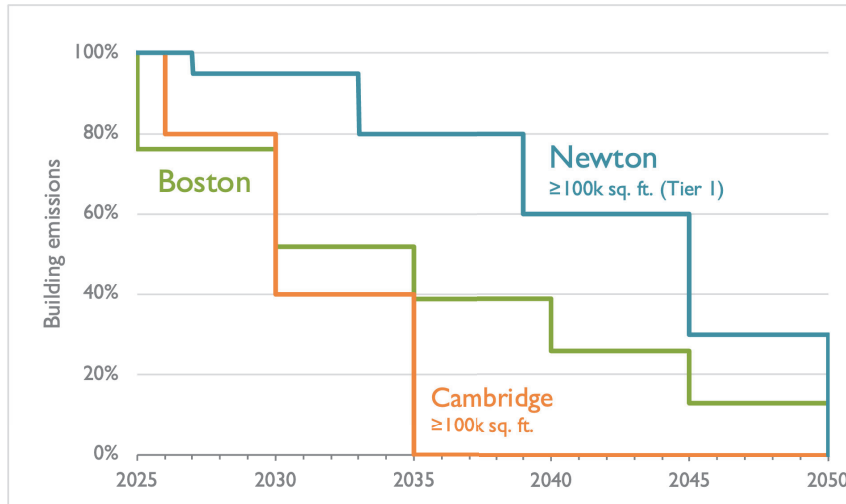
Feasibility and Cost of Complying

Pace of Decarbonization

Will Newton require quick decarbonization like Boston and Cambridge?

- Newton standards are aligned to capital planning cycles
- Reductions are comparatively later, less frequent, and more gradual

BUILDING PERFORMANCE STANDARD EMISSION LIMITS IN MASSACHUSETTS



Notes:

Boston and Cambridge include electricity emissions

Cambridge allows carbon offsets for buildings ≥ 100,000 sq. ft.

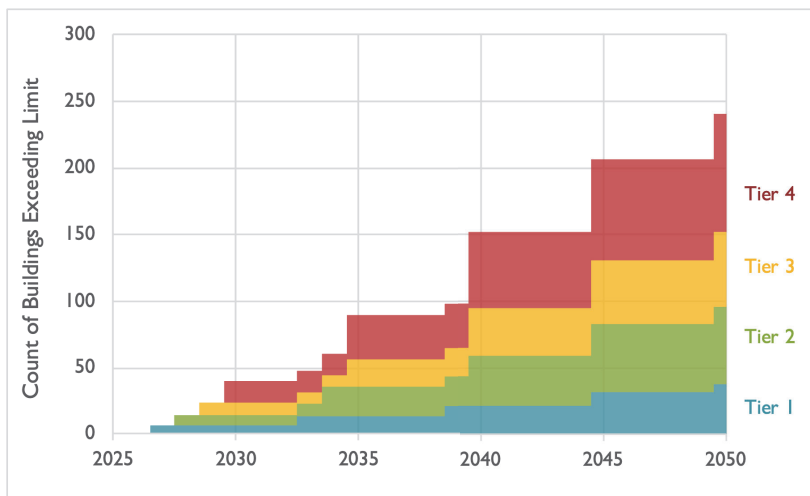
Newton and Cambridge have slower pace for buildings < 100,000 sq. ft.

Pace of Decarbonization

When will owners need to reduce emissions?

- About 10 buildings impacted each year; 40 buildings by 2030
- Most buildings (67%) will comply until 2040
- All public and non-profit affordable housing buildings (nine total) comply until 2040

COUNT OF BUILDINGS OVER BERDO LIMITS (IN ABSENCE OF UPGRADES)



Notes:

Assumes Newton buildings have similar performance as Boston buildings of same type

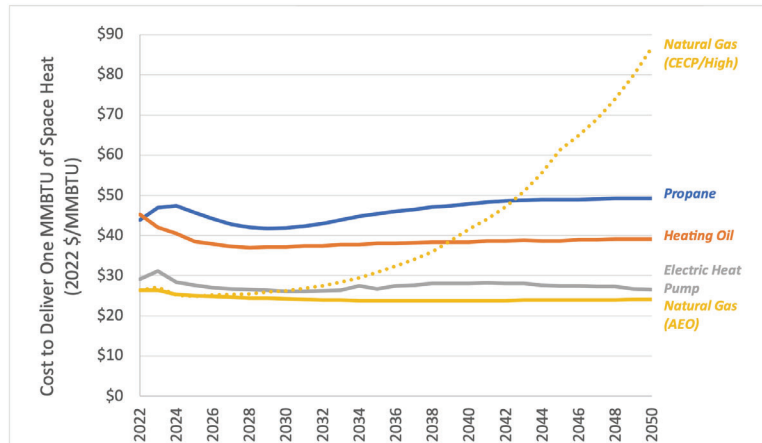
Does not total to 293 buildings because all-electric buildings will not need to make changes.

Cost of Complying: Energy

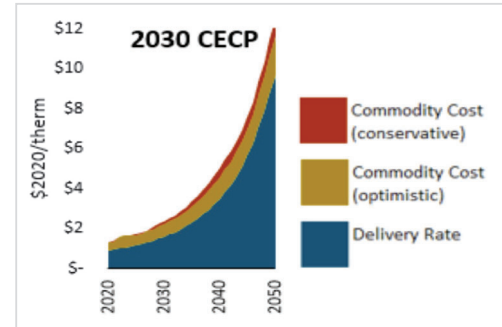
How will BERDO affect energy costs?

- Studies for MA DEP and MA DPU forecast heat pumps to be less expensive to operate than gas heating by 2030 under CECP
- Gas heating costs are expected to rise to 300%–700% of current costs by 2050
- BERDO reduces exposure to rising gas rates

MASSACHUSETTS SPACE HEATING COST FORECAST



MASSACHUSETTS NATURAL GAS COST FORECAST



Sources: Sustainable Energy Advantage and Synapse Energy Economics for MA DEP, 2023 ([Link](#))

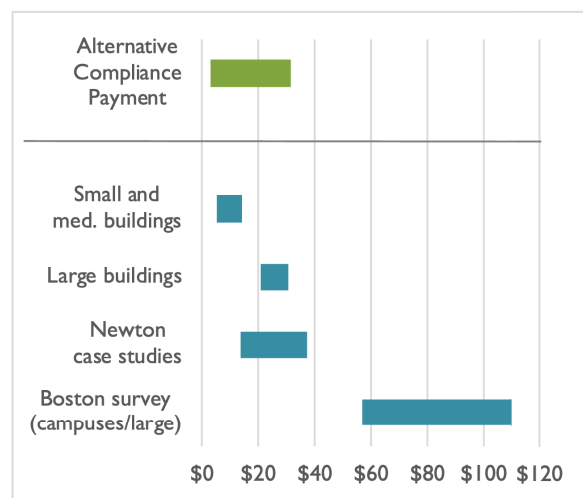
Energy+Environmental Economics and Scott Madden Management Consultants for MA DPU, 2022. ([Link](#))

Cost of Complying: Capital Costs

Is decarbonization affordable?

- Synapse and BERDO Team evaluated completed projects, published literature, contractor quotes, and interviews with industry professionals
- Costs vary by building type and size
- Typical costs
 - One-time: \$5–35 per sq. ft. before incentives
 - Amortized: \$0.40–\$3.00 per sq. ft. annual (at 6% over 20-year equipment life)

BUILDING UPGRADE COSTS (BEFORE INCENTIVES)



Sources: Jones, B. 2021, Synapse 2024, City of Newton 2024, City of Boston 2024, Synapse 2024, various contractors

Cost of Complying: Capital Costs

Is decarbonization affordable?

- Amortized: \$0.40–\$3.00 per sq. ft. annual

- Compared to annual operating costs:



Commercial rent for offices in Newton: \$42 per sq. ft. (+4% costs)



Multifamily rent in Newton: \$2,810 per unit (+4% costs)

- Incentives will reduce net costs

Sources: National Association of Realtors 2024

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Cost of Complying: Financial Support

What financial resources are available?

- **Mass Save commercial incentives**: \$9.00–\$15.00 per sq. ft.
 - Heat pumps: \$2,500–\$4,500 per ton
 - Heat pump water heaters: \$1,000–\$2,200 per unit
 - Deep energy retrofits: \$1 per sq. ft.
- **179D Federal tax deduction** for commercial retrofits: \$0.50–\$6.00 per sq. ft.
 - Sliding scale for achieving 25–50% energy savings: \$0.50–\$1.00 per sq. ft.
 - **Plus** \$2.50–\$5.00 per sq. ft. for meeting prevailing wage and apprenticeship requirement
 - Capped at price of retrofit

Combined
incentives up to
\$20+ per sq. ft.

Low- and no-
interest loans



Cost of Complying: Financial Support

What financial resources are available?

- **Low- and no-interest financing** for energy upgrades
- Property Assessed Clean Energy (PACE):
 - Low-interest loans to commercial and multifamily owners
 - Repaid through property taxes with terms up to 20 years
 - Available through MassDevelopment and DOER
 - Can reduce tax liability
- Massachusetts Community Climate Bank:
 - Loans for affordable housing
 - \$70 million to date in seed funding
 - Available through MassHousing
- Eversource and National Grid:
 - 0%–2% interest loans up to \$500,000
 - Terms up to 7 years
 - Incentives used to buy down interest rate

Combined
incentives up to
\$20+ per sq. ft.

Low- and no-
interest loans



nationalgrid

EVERSOURCE

Case Studies

Local Case Studies



Buildings in Newton

- | | |
|---|---------------------------------|
| 1. 181 Lexington Apartments | <i>Planning phase</i> |
| 2. Newton Early Childhood Program | <i>Complete</i> |
| 3. Auburndale Library | <i>Complete</i> |
| 4. First Unitarian Universalist Society in Newton | <i>Multiple phases complete</i> |
| 5. Chapman Construction and Design office | <i>Phase 1 complete</i> |



Project costs

- Before incentives: \$14 to \$37 per sq. ft.
- After incentives: \$10 to \$32 per sq. ft.
- Incremental cost vs. fossil fuel equipment: −\$4 to +\$5 per sq. ft.



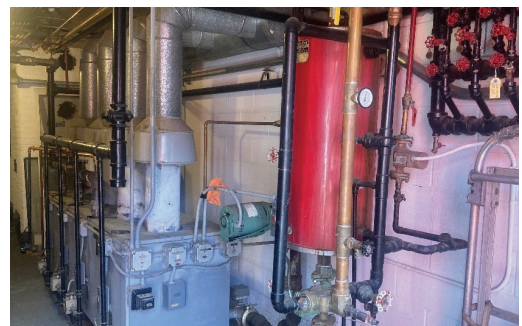
Energy savings

- Energy use: 53% to 76% MMBtu savings
- Cost: 41% cost decrease to 18% cost increase (gas prices will increase)

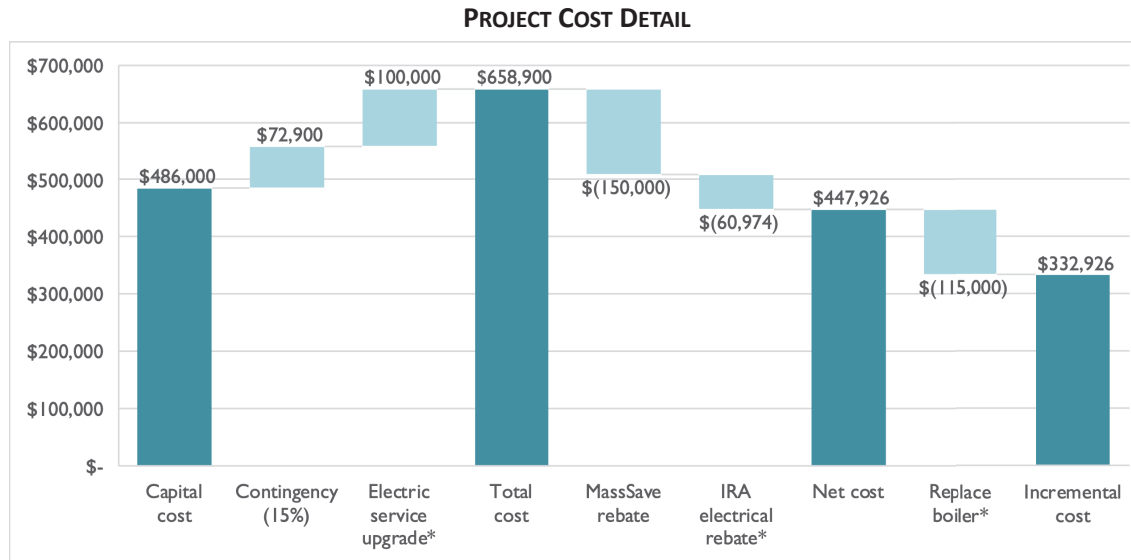
181 Lexington Street

- **Location:** Newton, MA
- **Sector:** Multifamily
- **Project size:** 24,570 sq. ft. (30 units)
- Complies with BERDO until 2035
- **Project scope for full decarbonization:**
 - Replace gas boilers with central heat pump for space heat and domestic hot water
 - Electrical service upgrade
- **Project cost:**
 - Total: \$660,000
 - Incremental: \$330,000 (\$11,000 per unit)
 - Monthly per-unit cost: \$80, +3% rent (financed at 6% interest, 20 year)

181 LEXINGTON STREET WITH BOILER ROOM



181 Lexington Street

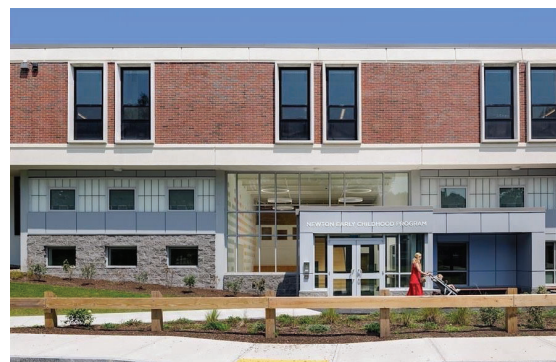


- Incentives expected to reduce project costs by 32%
- Firm contractor quotation and evaluation from Mass Save
- Estimated costs: electric service upgrade, IRA rebate, boiler cost

Newton Early Childhood Program

- **Location:** Newton, MA
- **Sector:** Education
- **Project size:** 42,000 sq. ft.
- **Project cost:** \$1.5 million
- **Project completed FY2022**
 - Fully decarbonized
 - Replace central boilers with all-electric VRF heat pump (lowest lifecycle cost option)
 - New roof with continuous insulation
- **Project cost**
 - Total: \$1,570,000 (\$37 per sq. ft.)
 - Incremental: -\$655,000
Compared to \$2.2 million boiler and heating distribution replacement

NECP WITH RETROFIT SCENARIO COSTS



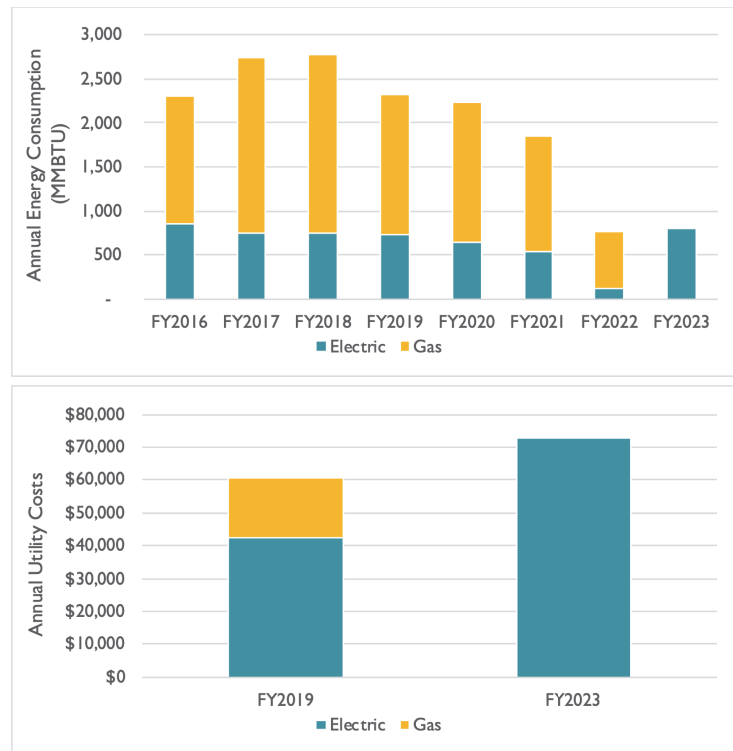
HVAC System Type	Capital Cost	Annual Electric Costs	Annual Gas Costs	Annual Maint. Costs	Total Annual Costs
Standard efficiency gas boilers	\$2,005,000 (estimate)	\$46,379	\$26,731	\$15,875	\$88,985
High efficiency gas boiler	\$2,225,000 (estimate)	\$36,293	\$18,867	\$20,250	\$75,410
All-electric VRF heat pumps	\$1,570,000 (actual)	\$42,924	\$0	\$23,300	\$66,225

Newton Early Childhood Program

- Energy use reduced 65% (actual)
- Energy costs rose 18%
- Energy costs increased due to 55% electricity price increase

- 2019: \$0.20/kWh
- 2023: \$0.31/kWh
- Energy costs would have been higher in 2023 with boiler

NECP UTILITY DATA



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Auburndale Library

- **Location:** Newton, MA
- **Project size:** 5,484 sq. ft.
- **Project cost:** \$75,000
- Example of historic building achieving full decarbonization
- **Project completed FY2020**
 - Fully decarbonized
 - Air-source heat pumps
 - Attic insulation and air sealing
- **Project cost**
 - Total: \$76,000 (\$14 per sq. ft.)
 - Would have been eligible for \$22,000 in rebates under the current program

AUBURNDALE LIBRARY WITH RETROFIT COSTS

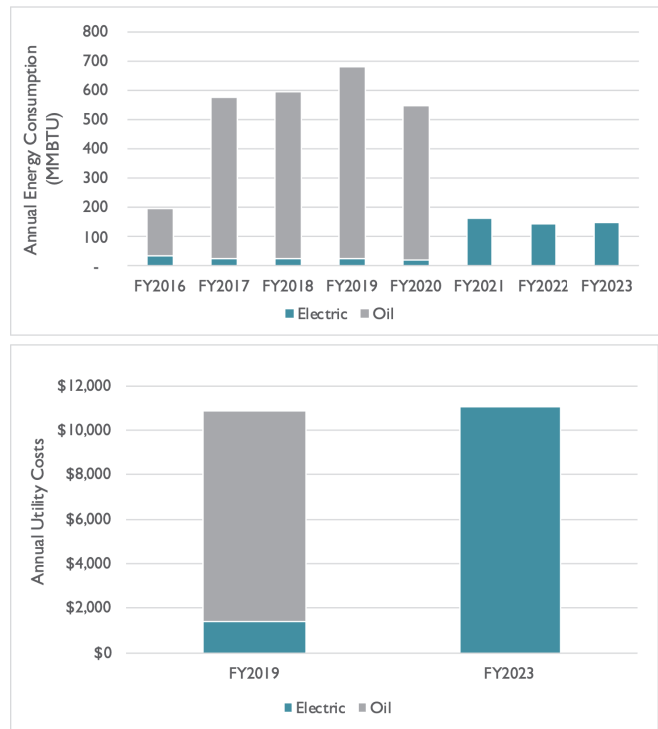


Upgrade	Upgrade Cost	Cost per sq. ft.
Insulation and air sealing	\$11,610	\$2
Air-source heat pumps	\$64,800	\$13
Total cost	\$76,410	\$14

Auburndale Library

- Energy use reduced 76% (actual)
- Energy costs unchanged despite 25% electricity price increase
 - 2019: \$0.20/kWh
 - 2023: \$0.25/kWh
 - Energy costs would have been higher in 2023 with boiler

AUBURNDALE LIBRARY UTILITY DATA



First Unitarian Universalist Society in Newton

- **Location:** Newton, MA
- **Project size:** 30,240 sq. ft.
- **Emission intensity:** 2.0 kgCO₂e/sq. ft.
- Complies with BERDO until 2045
- **Phased decarbonization since late 1990s**
 - Tracking energy in Portfolio Manager
 - Staged heating replacement
 - Steam with hot water
 - Failing AC condensers with heat pumps
 - Partitioned HVAC into 19 zones
 - Temperature setback in vacant rooms
 - Remote monitoring: equipment and energy
- Example of non-profit house of worship voluntarily decarbonizing over time

UNITARIAN UNIVERSALIST BUILDING



Keys to success

- Expertise and commitment from members
- Long-term planning
- Adaptation over time
- Efficiency plus electrification

Chapman Construction and Design HQ

- **Location:** Newton, MA
- **Building type:** Office and retail
- **Project size:** 19,000 sq. ft.
- **Phase 1 completed 2010 (LEED Platinum)**
 - Solar PV, 47 kW
 - Solar thermal domestic hot water
 - Envelope: air sealing, roof insulation, wall insulation, window film
 - LED lighting with daylighting
- **Project cost:**
 - \$230,000 (\$12 per sq. ft.)
 - \$130,000 grant from Massachusetts Technology Council
- **Energy savings:** \$20,000 per year, 5-year simple payback

CHAPMAN CONSTRUCTION AND DESIGN BUILDING



Phase 2 plan, 2027

- Full decarbonization
- Further improvements to building envelope
- VRF Heat pump
- Energy recovery ventilation
- Expansion of solar PV array

Technical Assistance and Support

Comparison to Boston Resources

Does the City have adequate staffing to help building owners comply?

- Relative to the number of buildings, Newton has greater staffing than Boston
- Newton reporting is simpler: no water, no district steam, no grid emissions, no tracking renewables
- Newton emission requirements phase-in over 4 years

	Boston BERDO	Newton BERDO (with residential)
Buildings	5,717*	293 (412)
Owners	3,136	179 (261)
Staff	9 FTE 635 buildings per FTE 348 owners per FTE	1 FTE 293 (412) buildings per FTE 179 (261) owners per FTE
Annual Consulting Budget	\$500,000 \$87 per building	\$165,000 \$563 (\$400) per building

**Note: Boston regulates at the parcel-level, so the number of buildings is greater than shown*

City Assistance for Building Owners

What resources are available to help building owners comply?

- City will offer public trainings and one-on-one assistance
 - Use of ENERGY STAR Portfolio Manager
 - Explanation of how to obtain energy use data
 - Developing a BERDO compliance plan
 - Flexibility measure options: Building Portfolios, Individual Compliance Schedules, Hardship Plans
- City will host public seminars
 - Manufacturers and vendors: on technology solutions
 - Utilities: on available assistance and how to access it (technical assistance, rebates and incentives, financing options, aggregated energy use data)
- Newton BERDO website: resource clearinghouse with detailed FAQ



State Assistance for Building Owners

What resources are available to help building owners comply?

- MassCEC Building Performance Exchange for large building decarbonization
 - \$4 million in state funding; pursuing \$2 million in federal funds
 - Information and technical assistance to help comply with BERDO-like policies throughout Massachusetts
 - Centralized information on state policies, initiatives, and programs
 - Clearinghouse for financing, incentives, and qualified building professional registry
 - New offerings: tools, guidebooks, case studies, trainings, events, and seminars
 - Early rollout for communities with BERDO policies expected 2025/2026
- MassCEC Building Electrification and Transformation Accelerator (BETA)
 - Portfolio of resources to help commercial and multifamily owners electrify
 - No cost, in-depth audits to develop decarbonization plan (pilot stage)



State Assistance for Building Owners

What resources are available to help building owners comply?

Large Building Energy Reporting (LBER) program

- Requires utilities to report energy use for large buildings
- DOER consultant assembling energy use and building information
- First LBER reports issued October 2025, but utilities can request extensions
- Key differences compared to BERDO
 - Does not require emissions reductions
 - Includes electricity emissions
 - Requires utilities to report natural gas and electricity, not building owners
- BERDO Team is monitoring LBER closely to determine if it is useful for BERDO
- BERDO ordinance language allows City to incorporate use of LBER via regulations

*“Owner...shall accurately report to the BERDO Administrator, **via the Portfolio Manager or as required by the Regulations**”*
- City submitting comments to DOER on draft regulations to align with BERDO



Utility Assistance for Building Owners

What resources are available to help building owners comply?

- Mass Save 3-year plan (2025-2027)
 - Funded at \$5 billion, including \$3.5 billion for incentives
 - **\$437 million for multifamily and commercial customers of Eversource and National Grid**
 - Install over **115,000 heat pumps**
 - Reduce GHG emissions by **1.0 million metric tons CO₂e**
 - Incentives for **natural gas equipment phased out** by law (more available for electrification)
 - Statewide customer call center
 - Equity: Main Streets program for downtowns, schools, **\$1 billion income-based incentives**
- Rebates and Incentives: for insulation, air sealing, HVAC controls, heat pump DHW heaters, heat pump heating.
- **Low- or no-cost financing programs**
- **Free scoping and technical assistance studies** to help owners decarbonize buildings
 - Comprehensive building assessment, portfolio prioritization, decarbonization roadmap, existing building commissioning, and more



Reporting Energy Data

Setting up Portfolio Manager

How challenging is it to use Energy Star Portfolio Manager?

1. Create account: <https://portfoliomanager.energystar.gov/pm/signup>
2. Obtain energy bills
 - **Gas and electric:** Bills for prior year (January bill includes 12 months prior)
 - **Oil and propane:** Delivery receipts for prior year
 - **Tenant data:** Available through utility portal and LBER reports; City will help
3. Identify building size (sq. ft.) and ID from the list on the City of Newton website: <https://newtonma.gov/newtonBERDO>
4. Enter building information and energy data into Portfolio Manager

Setting up Portfolio Manager

How challenging is it to use Energy Star Portfolio Manager?

- Junior staffer learned Portfolio Manager and reported 30 City buildings in 15 hours
- Demo video: 2 minutes to enter Newton City Hall using collected data

The screenshot displays the Energy Star Portfolio Manager interface. On the left, a video player shows a demo of the software. On the right, a table lists 30 properties with their energy data. The table includes columns for Name, Energy Current Date, Direct GHG Emissions Intensity (kgCO2e/m²), Total Location-Based GHG Emissions Intensity (kgCO2e/m²), and Site EUI (kBtu/ft²).

Name	Energy Current Date	Direct GHG Emissions Intensity (kgCO2e/m²)	Total Location-Based GHG Emissions Intensity (kgCO2e/m²)	Site EUI (kBtu/ft²)
110 Crafts St., Concord, MA 01742	03/31/2024	1.5	2.1	36.7
60 Crafts St., Concord, MA 01742	12/31/2023	3.9	4.7	64.0
Avonier Elementary School (NEW)	03/31/2024	1.5	3.4	53.9
Avonier School	03/31/2024	1.1	1.3	17.7
Baseline MS	03/31/2024	1.8	2.6	45.2
Baseline ES	03/31/2024	3.7	4.5	80.1
C.C. Burr ES	03/31/2024	2.1	2.9	49.8
Calvin ES	03/31/2024	1.2	2.6	41.5
Charles E. Brown MS	03/31/2024	4.5	5.3	95.3
Countdown ES	03/31/2024	2.9	3.9	65.9
F.J. Day MS	03/31/2024	1.9	3.5	58.2

Setting up Portfolio Manager

Has reporting been challenging in Boston? How will Newton be different?

- Boston works with owners to resolve issues and has had nearly complete reporting (only 3.8% of 2022 reports are pending revisions)
- Newton reporting is simpler
 - Fewer utilities: no water or district steam reporting
 - Electricity emissions excluded: no grid emissions, no solar metering, no tracking renewables, no changing emission factors
 - Single platform: streamlined reporting (Boston and Cambridge uses two)



Environment Department

BERDO REPORTING FORM

Welcome to BERDO Reporting!

This platform is used to submit additional information for BERDO not collected through Energy Star Portfolio Manager.

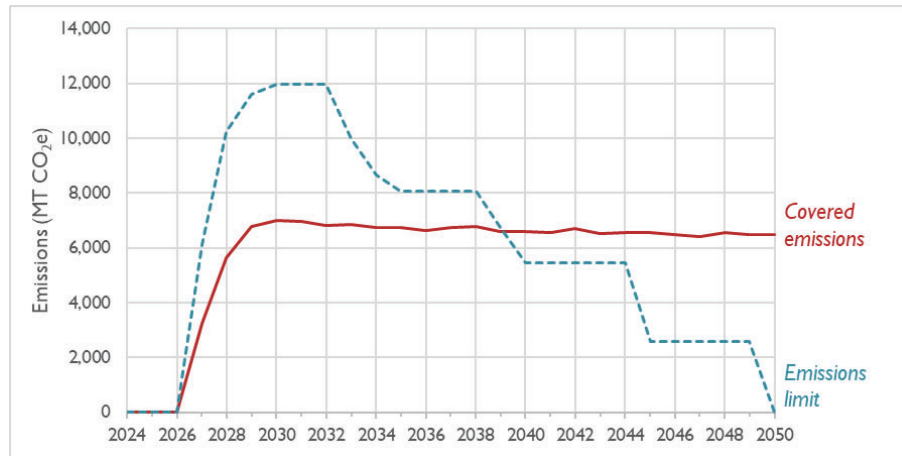
Impacts of BERDO on Newton

BERDO Administration Cost

What will BERDO cost taxpayers?

- City of Newton will hire 1 full-time personnel to administer BERDO
- City of Newton has an annual consultant budget of \$165,000
- Municipal facilities will comply with BERDO until 2040 → no cost

MUNICIPAL FACILITY EMISSIONS COMPARED TO BERDO LIMIT



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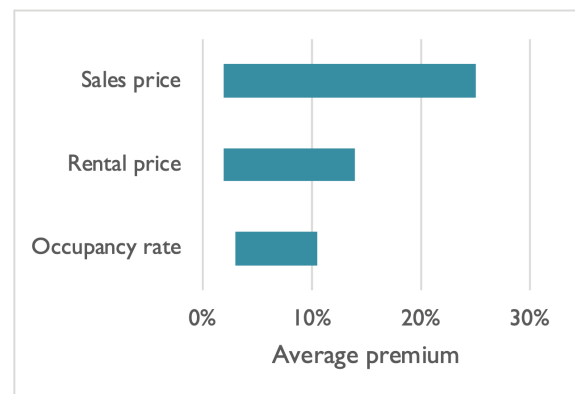
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Economic Competitiveness

How will BERDO affect property values and Newton's tax base?

- Stakeholders question if BERDO will hurt Newton's economic competitiveness
- Seven peer-reviewed studies show high-performing buildings garner market premiums
 - Average sale price increase: 2–25%
 - Average rental price increase: 2–14%
 - Average occupancy rate increase: 3–11%

ADDED VALUE OF ENERGY STAR-LABELED COMMERCIAL BUILDINGS IN THE UNITED STATES



Sources (research assembled by IMT): Devine and Kok 2015, Wiley et al. 2010, Fuerst and McAllister 2009/2011, Jackson 2009, Pivo and Fisher 2010, Kok et al. 2010

Thank you!

Philip Eash-Gates, PE, CEM
Principal Associate
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peash-gates@synapse-energy.com

**City of Newton Proposed Building Emissions
Reduction and Disclosure Ordinance (BERDO)
May 20, 2024**

WHEREAS: Buildings contribute to 64 percent of greenhouse gas emissions in the City of Newton; and

WHEREAS: Non-Residential Buildings over 20,000 Gross Floor Area contribute 23 percent of greenhouse gas emissions in the City of Newton; and

WHEREAS: The City of Newton's Climate Action Plan details strategies to reduce carbon emissions from buildings; and

WHEREAS: The Newton City Council passed a resolution unanimously in April 2022 declaring that the City should pass a Building Emissions and Reduction Ordinance.

THEREFORE, THE FOLLOWING ORDINANCE IS ADOPTED:

SECTION 1. Building Emissions Reduction and Disclosure

(a) Purpose

It is the intent of this Ordinance to reduce the emissions of air pollutants, including greenhouse gases, from building energy consumption, and thereby to encourage efficient use of energy; to develop further investment in building a green economy, and to protect public health. To do so, the provisions of this Ordinance require the reporting and disclosure of annual energy use in all

**City of Newton Proposed Building Emissions
Reduction and Disclosure Ordinance (BERDO)
May 20, 2024**

covered Buildings and compliance with emissions reduction requirements in accordance with this Ordinance.

(b) Definitions

When used in this Ordinance, unless a contrary intention clearly appears, the following terms shall have the following meaning:

Alternative Compliance Payment means a per-metric ton payment based on the average cost per metric ton of CO₂e to decarbonize Buildings subject to this Ordinance.

BERDO Administrator means the City employee designated as the individual employed to implement the BERDO program.

Building means a building that equals or exceeds 20,000 square feet in Gross Floor Area and in which at least 20,000 square feet of Gross Floor Area is used for non-residential purposes.

Building Portfolio means two or more Buildings, on one or more properties, provided that all Buildings within the Portfolio have the same Owner; for this purpose, a Building management company does not constitute an Owner.

Building Use means (i) space type as defined in the Regulations, which refers to the primary activity for which a given space is utilized, as entered into the EPA Energy Star Portfolio Manager

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reporting tool; or (ii) other activities as defined in Portfolio Manager or by the Regulations.

Carbon Dioxide Equivalent (CO_{2e}) means greenhouse gas Emissions, including carbon dioxide, methane, and nitrous oxide. CO_{2e} shall be calculated using a methodology as set forth in the Regulations.

Emergency Backup Generation/Backup Power means a device or mechanism, such as battery storage, reciprocating internal combustion engine, or turbine, that serves solely as a secondary source of mechanical or electrical power whenever the primary Energy supply is disrupted or discontinued during power outages or natural disasters that are beyond the control of the Owner, occupant, or operator of a Building.

Emissions means the emission of greenhouse gases, measured in units of CO_{2e} associated with the Energy used by a Building, excluding electricity.

Emissions Factor means CO_{2e} calculated according to regional Energy and greenhouse gas factors as set forth in the Regulations.

Energy means electricity and any fuel source including, but not limited to, natural gas, fuel oil, propane and any other sources of Energy that the BERDO Administrator may designate.

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Portfolio Manager or EPA ENERGY STAR Portfolio Manager means the U.S. Environmental Protection Agency's online tool for reporting and managing Building Energy data.

Environmental Justice Population means a neighborhood that meets one or more of the following criteria: (i) the annual median household income is not more than 65 percent of the statewide annual median household income; (ii) minorities comprise 40 percent or more of the population; (iii) 25 percent or more of households lack English language proficiency; or (iv) minorities comprise 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the state annual median income; or such other meaning as is adopted or amended by the Commonwealth's Executive Office of Energy and Environmental Affairs, by state statute, or defined in the Regulations.

Gross Floor Area (GFA) means the sum of the floor area of the Building measured from the exterior face of the exterior walls of the Building as per the City of Newton Assessors' records. The BERDO Administrator shall publish Regulations governing the calculation of Gross Floor Area, including types of areas that shall be excluded from the calculation.

Hardship Compliance Plan means alternative Emissions reduction targets and/or timelines for a Building or Building Portfolio.

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Individual Compliance Schedule means an alternative timeline for complying with the Emissions Standards outlined in this Ordinance.

Owner means a Building's Owner of record, provided that the "Owner" may be deemed to include (i) multiple Owners in common ownership and (ii) the association or organization of unit Owners responsible for overall management in the case of a condominium. In the case of a Building subject to a lease that assigns maintenance, regulatory compliance, and/or capital improvement costs to Tenants with a term of at least 30 years, inclusive of all renewal options, the Owner may designate the lessee as "Owner" for purposes of compliance with this Ordinance; such designation must be provided in writing to the BERDO Administrator as required by the Regulations. An Owner may designate an agent to act on its behalf, including reporting as required by this Ordinance; provided, however, that any designation (i) must be provided in writing to the—BERDO Administrator, and (ii) does not relieve the Owner of any compliance obligation under this Ordinance.

Regulations means the Newton Building Emissions Reduction and Disclosure Regulations.

Tenant means any tenant of a Building covered by this Ordinance.

Verification Year means any year in which an Owner must report third-party verified reporting data. Verification Years will be the

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second reporting year for each building category following the enactment of this Ordinance, and every five years thereafter.

(c) Building Portfolios

Building Portfolios must be approved by the BERDO Administrator and Building Portfolio Owners must submit documentation confirming eligibility as a Building Portfolio. Notwithstanding the approval of a Building Portfolio, Owners must continue to report the Energy use, Emissions data, and any other information required by this Ordinance for each individual Building. If a Building is removed from or added to a Building Portfolio for any reason, including transfer to a different Owner, the Building shall retain its individual reporting data and be subject to the Emissions standards, and the Building Portfolio shall be adjusted to reflect the removal or addition of the Building.

(d) Energy and Emissions Reporting Required

(i) Data Reporting Requirements

Each year, the Owner of each Building subject to reporting requirements shall accurately report to the BERDO Administrator, via the Portfolio Manager or as required by the Regulations, the following information for the previous calendar year:

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- (a) Energy use of each Building and other Building characteristics necessary to evaluate CO₂e Emissions on a kilogram (kg) CO₂e per square foot (SF) per year basis.
- (b) The primary Building Use(s) of each Building in accordance with the categories listed in the Portfolio Manager and the Regulations. Multiple primary Building Uses shall be reported, provided that each use occupies at least 10 percent of the Building's Gross Floor Area.
- (c) Contact information for Owners and any designated agents.

(ii) Reporting Schedules

The initial reports shall occur according to the following schedule:

1. For every Building equal to or greater than 100,000 square feet Gross Floor Area, the first report shall be submitted no later than September 15, 2025.
2. For every Building equal to or greater than 20,000 square feet Gross Floor Area but less than 100,000 square feet Gross Floor Area, the first report shall be submitted no later than September 15, 2026.

Building Owners may apply to the BERDO Administrator for a one-time six-month extension of their reporting deadline.

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(e) Direct Upload

Provided that the necessary mechanisms already exist, Building Owners may authorize electric and gas utilities or other third party to report Building-specific data on their behalf to the BERDO Administrator. Such authorization shall not create an obligation on the part of electrical and gas utilities or remove the obligation of Building Owners to comply with reporting requirements.

(f) Equitable Emissions Investment Fund

The City Comptroller shall establish the Equitable Emissions Investment Fund (hereinafter, the “Fund”) as a separate account, and credit to the Fund all Alternative Compliance Payments, penalties and fees paid pursuant to this Ordinance.

The City may incur liabilities against and spend monies from the Fund.

At the discretion of the BERDO Administrator, and with approval by the Mayor, expenditures from the Fund may be made for the following purposes:

- a. Projects that benefit Environmental Justice Populations
- b. Costs incurred by the City in administering the program created pursuant to this Ordinance;

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- c. Costs incurred by the City in complying with the program created pursuant to this Ordinance;
- d. Costs incurred by non-profit entities that operate within the City, including but not limited to entities that operate affordable housing, in complying with the program created pursuant to this Ordinance;
- e. Other projects intended to reduce greenhouse gas emissions within the City; [or](#)
- f. Technical assistance to property owners subject to BERDO related to implementation of the requirements of this ordinance.

(g) Data Verification

- a. Building Owners shall self-certify their reporting data every year.

In a Building's second year of reporting, Building Owners shall provide a third-party verification of their reporting data for the previous year. For every Verification Year thereafter, Building Owners shall provide a third-party verification for the five calendar years prior to, but not including the current year. Third-party verifications must be performed by qualified Energy professionals,

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as defined by the Regulations, and submitted no later than the reporting deadline of the relevant year.

(h) Emissions Requirements

Each Building subject to the reporting requirements of this Ordinance shall comply with the CO₂e Emissions standards set forth in Table 1 below; unless the Building Owner has received an approved Individual Compliance Schedule pursuant to the requirements in SECTION 1(k) or an approved Hardship Compliance Plan pursuant to SECTION 1(l). Buildings must comply with the Emissions standards on an annual basis and compliance shall be measured as a total of kg of CO₂e Emissions per square foot. Buildings will be subject to the emissions standards in Table 1 based on the schedule for each Tier and Building Category in Tables 2 through 5.

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Table 1: CO₂e Emissions Standards by Building Use

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	Period 1	Period 2	Period 3	Period 4	Period 5
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Residential	4.8	2.8	1.7	.08	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

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Table 2. Compliance Periods by Building Use—Tier 1 Buildings:
Buildings equal to or greater than 100,000 square feet Gross Floor
Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2027- 2032	2033- 2038	2039- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Residential	4.8	2.8	1.7	.08	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

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Table 3. Compliance Periods by Building Use—Tier 2 Buildings:
Buildings equal to or greater than 50,000 square feet and less than
100,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2028- 2033	2034- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Residential	4.8	2.8	1.7	.08	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

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Table 4. Compliance Periods by Building Use—Tier 3 Buildings:
Buildings equal to or greater than 35,000 square feet and less than
50,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2029- 2034	2035- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Residential	4.8	2.8	1.7	.08	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

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Table 5. Compliance Periods by Building Use—Tier 4 Buildings:
Buildings equal to or greater than 20,000 square feet and less than
35,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2030- 2034	2035- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Residential	4.8	2.8	1.7	.08	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

(i) Blended Emissions Standard

Buildings or Building Portfolios with more than one primary use may comply with a blended CO₂e Emissions standard as defined

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by Regulation; provided, however, that a use may constitute a primary use only if it occupies at least 10 percent of a Building's

or Building Portfolio's Gross Floor Area. Building Owners using a blended CO₂e Emissions standard must (i) designate the blended standard in annual reports to the BERDO Administrator, and (ii) provide documentation verifying the qualification of each primary use in annual reports to the BERDO Administrator for the first year a blended CO₂e Emissions standard is used and in any subsequent year for which the blended Emissions standard or primary use(s) changes.

(j) Energy Use Exempt from Emissions Requirements

- i. Electricity which is used by a covered Building or Building Portfolio is exempt from the CO₂e Emissions Standard of this ordinance;
- ii. Building Owners may deduct Energy used by Emergency Backup Generation/Backup Power supply equipment from a Building's total Energy use subject to the CO₂e Emissions standard of this Ordinance, provided that emergency Backup Generation/Backup Power provides Energy only to the Building or Building Portfolio; and:
- iii. Building Owners annually report (i) Energy used by Emergency Backup Generation / Backup Power; (ii) the date(s), hour(s) and conditions that required the use of

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Emergency Backup Generation/Backup Power; and (iii) any other information required by the Regulations. Such reporting shall be subject to the self-certification and third-party verification procedures in SECTION 1(g);

- iv. In the event that Emergency Backup Generation/Backup Power serves, or has the potential to serve, multiple Buildings in a Building Portfolio, the Energy use from such activities shall be allocated to individual Buildings in proportion to the gross square footage of each Building.

The BERDO Administrator may revise the availability and use of these exemptions or add additional exemptions pursuant to the Regulations.

(k) Individual Compliance Schedules

Owners of Buildings or Building Portfolios may apply for an Individual Compliance Schedule as an alternative to the CO₂e Emissions standard reduction schedule in Tables 2 through 5. Individual Compliance Schedules must establish declining CO₂e Emissions standards in 5- to 6-year increments, and such standards must (i) decline on a linear basis, (ii) reduce Emissions 40 percent by period 3, and (iii) reduce Emissions 100 percent by period ~~5~~⁶; and

Use a baseline from any year between 2013 and the first required reporting year, provided, however, that the Building or Building

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Portfolio Owner provides documentation of Energy use, Gross Floor Area, and relevant Emissions Factors by the Building or Building Portfolio for the selected baseline year and the year in which an Individual Compliance Schedule is requested, in accordance with the data verification requirements of this Ordinance and the Regulations.

A Building or Building Portfolio that failed to comply with previous reporting requirements may use an Individual Compliance Schedule; provided, however, that the necessary data has been submitted to the BERDO Administrator and any applicable penalties for past non-compliance are paid in full.

Individual Compliance Schedules must be approved by the BERDO Administrator. Building and Building Portfolio Owners must submit the information required in this Ordinance, and any other documentation specified in the Regulations, when requesting an Individual Compliance Schedule. The BERDO Administrator may include additional conditions on the approval of Individual Compliance Plans, consistent with the Regulations.

(l) Hardship Compliance Plans

A Building Owner may apply to the BERDO Administrator for a Hardship Compliance Plan if there are extraordinary characteristics or circumstances associated with the Building in complying with the Emissions standards in this Ordinance. Such characteristics or circumstances may include historic Building designations, pre-

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existing long-term Energy contracts without reopeners, or extraordinary financial hardship. Implementation guidelines will be further detailed in the Regulations. The application, review process, and conditions for Hardship Compliance Plans shall be set forth in the Regulations. The BERDO Administrator shall have sole discretion in approving Hardship Compliance Plans; such plans may include alternative Emissions standards and timelines for compliance. The BERDO Administrator may include additional conditions on the approval of Hardship Compliance Plans consistent with the Regulations.

(m) Alternative Compliance Payments

Owners of Buildings or Building Portfolios may mitigate CO₂e Emissions from Energy use by making Alternative Compliance Payments. The price of an Alternative Compliance Payment shall be based on the average cost per metric ton of CO₂e to decarbonize Buildings subject to this Ordinance. The initial cost of an Alternative Compliance Payment shall be \$234 per metric ton of CO₂e. The cost of an Alternative Compliance Payment shall be reviewed every five years by the BERDO Administrator, which shall make recommended adjustments, if any, to the City Council.

(n) Preservation of Documents

Building Owners shall preserve records and information (i) required to be submitted by this Ordinance and/or (ii) submitted pursuant to this Ordinance in order to demonstrate compliance

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with the Emissions standards, including but not limited to information regarding Building Uses, Emissions Factors, compliance mechanisms outlined in this Ordinance, Individual Compliance Schedules, and Hardship Compliance Plans, for such time as set forth in the Regulations, and shall make such records available for inspection and audit by the BERDO Administrator or the Law Department upon request.

(o) Obligation to Request and Report Information

Where a unit or other space in a Building is occupied by a Tenant and the unit or space is separately metered, the Tenant of such space shall, within 30 days of request by the Owner and in a form to be determined by the BERDO Administrator, provide all information that cannot otherwise be acquired by the Owner and that is needed to comply with the requirements of this Ordinance. Failure by Tenant to comply with the requirements of this Ordinance may result in penalties as provided in this Ordinance.

1. The Owner may request information related to the Tenant's metered Energy and other related information for the previous calendar year no earlier than January 1 and no later than January 31 of any year in which the Owner is required to report such information.
2. Failure of any Tenant to report the information required in this Ordinance does not relieve the Owner of the obligation to report.

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3. Where an Owner of a Building is unable to obtain complete Energy use data due to the failure of any Tenant to report the information required, the Owner shall use values or formulas established by the BERDO Administrator to estimate whole Building Energy use.

(p) Disclosure

The BERDO Administrator shall make Energy and Emissions information for Buildings available to the public on the City's website no later than November 30 of every year, except for 2025, in which it shall make such information available to the public no later than December 15, 2025. Such disclosure shall include, at a minimum, Building identification, Energy use intensity, CO₂e Emissions per square foot, and Emissions compliance status. Before any such disclosure, the BERDO Administrator shall subject all data to a quality-assurance/quality-control process.

1. At least 30 Days prior to disclosure, the BERDO Administrator shall provide Building Owners an opportunity to review the accuracy of information to be disclosed.
2. The Building Administrator shall also, from time to time, publicly report on implementation of, compliance with, and overall results from this Ordinance.

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(q) Enforcement for Failure to Comply with this Ordinance

Any violation of this ordinance shall be punishable by a fine of three hundred (\$300.00) dollars per day for each day the violation continues. Each day a violation continues shall constitute a separate offense. Where noncriminal disposition of this section by civil fine has been provided for in sections 17-22 and 17-23 of these ordinances, as amended, pursuant to the authority granted by M.G.L. c. 40, section 21D, said violation may be enforced in the manner provided in such statute. Penalties under this section will not be levied prior to the third year of the effective date of the emissions requirement.

(r) Notice

Within two months of the adoption of this Ordinance, notification concerning reporting and disclosure obligations and emissions reductions obligations shall be provided to Owners subject to the requirements of this Ordinance.

This notice, and any other notice required by this Ordinance shall be delivered to the contact information in the Assessor's database unless an Owner provides alternative contact information to the City Assessor's office.

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SECTION 2. If any provision of this ordinance is held invalid by a court of competent jurisdiction, then such provision should be considered separately and apart from the remaining provisions, which shall remain in full force and effect.

SECTION 3. The provisions of this Ordinance shall be effective upon passage.

DRAFT

Newton BERDO Frequently Asked Questions

September 17, 2024

This FAQ addresses questions about the proposed BERDO ordinance raised by the general public and Newton City Council at the Public hearing held in City Hall Council Chambers by the Zoning and Planning Committee on June 10, 2024. Additional questions were added by the City staff to help make the document more comprehensive in scope.

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Introduction to BERDO

1. What is BERDO?

The Building Emissions Reduction and Disclosure Ordinance (BERDO) requires large commercial buildings to report their energy use and reduce their on-site greenhouse gas emissions according to declining emissions standards that reach zero by 2050. [Boston](#) and [Cambridge](#) recently enacted similar ordinances.

Massachusetts [law](#) requires the state to achieve net zero greenhouse gas emissions by 2050, and Newton has a [goal](#) of achieving net zero by 2050. The building sector currently accounts for [35 percent of statewide emissions](#) in Massachusetts and 66% in Newton. Adopting BERDO will make Newton a leader in reducing building sector emissions within the state, and by acting early rather than waiting for statewide policies to come into effect, will also reduce costs for building owners.

2. I own real estate in Newton. How do I know if my building(s) will be covered by BERDO?

With few exceptions, BERDO will cover all non-residential buildings with floor areas of at least 20,000 square feet. While residential buildings will not be included in the first iteration of the ordinance, the mayor proposes to add residential buildings with at least 20,000 square feet of floor area to the ordinance in April 2025.

To determine if your building is covered, check the [list of covered buildings](#) on Newton's website. The list is updated annually using data from the Assessor's Office. You can also find a detailed description of the process used to develop the list on the same webpage.

3. What types of emissions will BERDO cover?

BERDO will regulate direct emissions from covered buildings. Also called Scope 1 emissions, direct emissions result from fuel burned on-site in a furnace, boiler, water heater, or other combustion-based equipment. The largest contributors to direct emissions are usually space and water heating. Depending on the building type, there may be additional direct emissions from end-uses such as cooking. Fuel used for backup power generation is not regulated by BERDO.

BERDO will not cover emissions associated with building electricity use (Scope 2 emissions), since Massachusetts has already implemented state-level policy to decarbonize the electricity sector. All-electric buildings have no on-site fuel combustion and therefore zero regulated emissions under BERDO.

4. What will I need to do to comply with BERDO?

There are two main components to BERDO compliance: data reporting and emissions reductions.

Reporting: Each year, you will need to report energy use data for your building in Energy Star Portfolio Manager. In the second reporting year for each building, and every five years thereafter, you will need to complete 3rd party verification of the energy data you have reported. The BERDO Regulations will give more details on the types of energy professionals who are eligible to complete this verification.

Emissions Reductions: You will need to reduce your building's emissions so that its emissions intensity is less than or equal to the applicable emissions limit in each year. Emission intensity is measured in kg (kilograms) of carbon dioxide equivalent per square foot per year (kgCO₂e/SF/yr). Another option is to pay an Alternative Compliance Payment (ACP) if your building's covered emissions are higher than the limit. The ACP is currently set at \$234 per MT CO₂e. The emissions limit for your building will depend on its size and primary use (see table below). Owners of buildings with more than one primary use may request a blended emissions limit, calculated as the weighted average of the applicable limits.

Owners of multiple buildings may comply with BERDO for each building individually or for their building portfolio as a whole. Under the portfolio approach, total emissions from the building portfolio must be lower than the aggregate portfolio emissions limit, which is the sum of the floor area of each building times its emissions intensity limit.

Instead of following the standard emissions limits, building owners also have the option to apply for an individual compliance schedule, which is based on a building's historical emissions.

Tier	Description
1	Non-residential, ≥100,000 sq ft
2	Non-residential, 50,000–99,999 sq ft
3	Non-residential, 35,000–49,999 sq ft
4	Non-residential, 20,000–34,999 sq ft

Building use	Emission standards (kgCO ₂ e/SF/yr)				
	Period 1	Period 2	Period 3	Period 4	Period 5
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

Building owners facing extraordinary circumstances that affect their ability to comply with BERDO may apply for hardship compliance plans. Examples of potential qualifying circumstances include historic building designations, pre-existing energy contracts without reopener, or extraordinary financial hardship.

For more information, see the [draft ordinance](#). After the ordinance is passed, the BERDO Administrator will publish regulations with additional details about each of these steps.

5. What types of changes can I make to my building to reduce its greenhouse gas emissions?

Measures that reduce your building's fuel consumption will reduce its greenhouse gas emissions under BERDO. These include:

- Building shell improvements such as air sealing, insulation, and windows.
- Other energy efficiency measures that reduce fuel use, including HVAC tune-up and controls, low-flow fixtures that conserve hot water, and duct sealing.
- Electrification of end-uses that currently use combustion-based equipment, for example installing heat pumps for space heating, heat pump water heaters, and electric ranges for cooking.

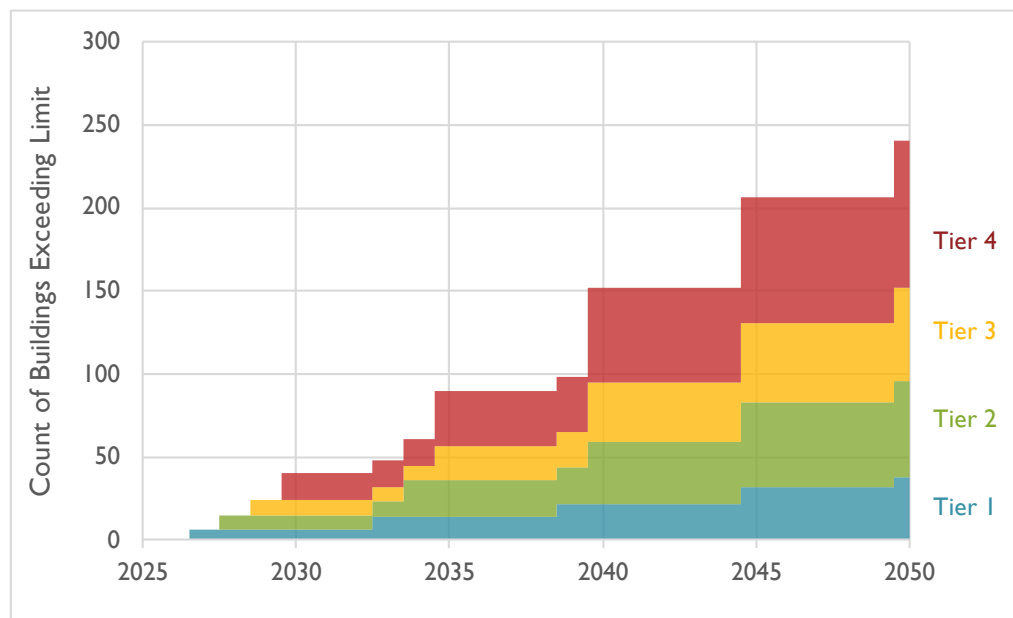
6. When will I need to reduce my building's emissions?

You will need to reduce your building's emissions in line with the relevant emissions standard, or else pay an Alternative Compliance Payment (ACP) of \$234 per MT CO₂e. Building type determines which emissions standard applies, and building floor area determines which implementation tier a given building falls under. Refer to the tables in the question above, "*What will I need to do to comply with BERDO?*". Compliance deadlines begin sooner for larger buildings, but all tiers reach zero direct emissions by 2050. The Newton BERDO emissions limits are designed to give building owners sufficient

lead times to incorporate necessary upgrades into their capital planning and to minimize early equipment replacements (replacement of existing equipment before it reaches the end of its useful life).

Tier	Period 1	Period 2	Period 3	Period 4	Period 5
1	2027-2032	2033-2038	2039-2044	2045-2049	2050-
2	2028-2033	2034-2039	2040-2044	2045-2049	2050-
3	2029-2034	2035-2039	2040-2044	2045-2049	2050-
4	2030-2034	2035-2039	2040-2044	2045-2049	2050-

We estimate that BERDO will impact approximately six buildings in 2027 and 10 additional buildings each year thereafter. Most owners will have substantial time to make improvements, with approximately two-thirds of buildings complying until 2040. While residential buildings are not included in the initial BERDO policy, the City plans to add them in 2025; notably, we expect all public and non-profit affordable housing buildings (nine total) will comply until 2040 or later.



Cost and Feasibility of Building Decarbonization

7. I'm concerned about how much it will cost me to comply with BERDO. Are decarbonization technologies affordable? What resources are available to help building owners pay for them?

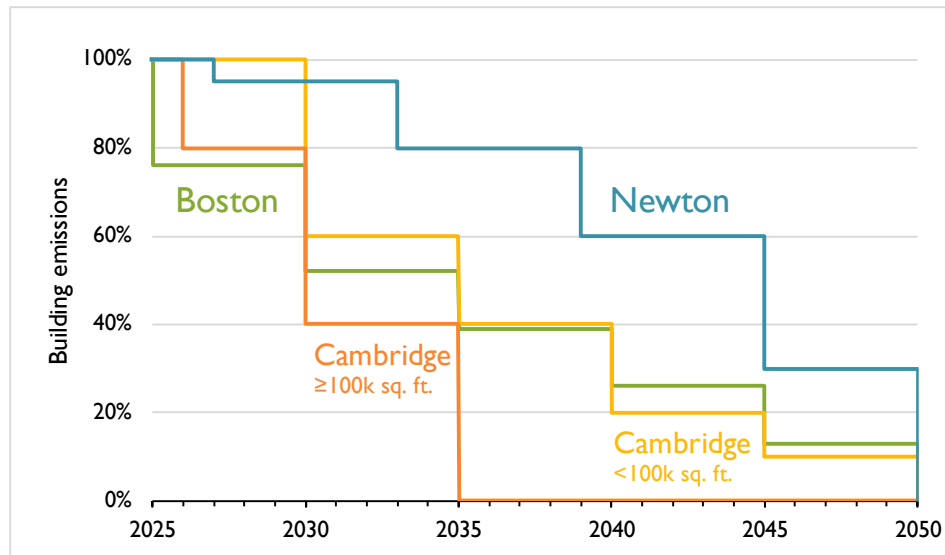
Based on the BERDO team's research and existing Newton case studies, we expect that the incremental costs of decarbonization technologies will fall in the range of \$5–20 per square foot, although this will vary based on building characteristics. By phasing equipment installations, these costs can be spread over several decades. Building owners will typically be able wait until equipment

would have needed to be replaced anyway, which will reduce costs compared to last-minute decarbonization (which could occur if Newton waits to decarbonize its building stock until state law requires it). A variety of state and federal incentives, including the ones listed below, can help reduce the cost of complying with BERDO:

- **State rebates:** [MassSave](#) offers commercial incentives of \$2,500–\$4,500 per ton for heat pumps and \$1,000–\$2,200 per unit for heat pump water heaters. MassSave also offers weatherization incentives.
- **Federal tax deductions:** The [179D federal tax deduction](#) offers up to \$1.88 per square foot for energy efficient building improvements, including building envelope and HVAC system measures.
- **Property Assessment Clean Energy (PACE):** [PACE](#) is a program for financing energy upgrades through a property betterment assessment, which repays the financing, and is available through MassDevelopment and Department of Energy Resources.
- **Massachusetts Community Climate Bank (MCCB):** [MCCB](#), which launched in 2023, is the nation’s first green bank dedicated to affordable housing. It is located within MassHousing, the Commonwealth’s housing finance agency, and helps owners of affordable housing finance decarbonization measures in their buildings.
- **Low-interest financing:** Eversource and National Grid offer financing through [MassSave](#) for commercial customers, including multifamily housing and non-profits. Loans are available for up to 7 years and up to \$500,000. MassSave incentives are used to buy down interest rates to 0–2 percent.

8. Will Newton BERDO require owners to decarbonize quickly like Boston BERDO and Cambridge BEUDO?

Newton BERDO will require more gradual emissions reductions than Boston BERDO and Cambridge BEUDO. This will allow building owners to align needed investments with capital planning cycles. We expect that owners will rarely, if ever, need to replace equipment before it wears out, which will reduce overall costs. In rare circumstances where BERDO compliance would require an upgrade that is not aligned to equipment replacement cycles, building owners can pay the Alternative Compliance Payment (ACP) to buy time.



9. Will BERDO require me to perform a gut renovation or deep energy retrofit of my building?

No, complying with BERDO will not require gut renovation or deep energy retrofits in most buildings. Importantly, BERDO does not require buildings to achieve net zero energy by generating the same amount of energy onsite that they consume. Instead, BERDO only requires buildings to eliminate emissions from on-site combustion of fuels. This can be achieved without significant disruption to building occupants.

The phased emissions trajectories and long periods (5–6 years each) are intended to allow alignment of BERDO-related upgrades with capital planning cycles such that building owners can typically wait until equipment would have needed to be replaced anyway. Swapping zero-carbon equipment in is therefore no more intrusive than equipment replacements would have been under a business-as-usual scenario.

10. Can you provide examples of buildings that have successfully installed heat pumps or other decarbonization technologies?

The City has prepared four case studies of buildings in Newton that have substantially or fully decarbonized through voluntary action. These include:

1. Newton Early Childhood Program education building
2. Auburndale Library
3. First Unitarian Universalist Society in Newton
4. Chapman Construction and Design office building

In addition to reducing or eliminating greenhouse gas emissions, these buildings have cut energy use by 53–76 percent. Costs for complete decarbonization ranged from \$10–\$32 per square foot after utility incentives. Compared to installing new fossil fuel equipment, the incremental costs ranged from \$4 per square foot less expensive to \$5 per square foot more expensive.

11. Will BERDO require building owners to take on debt?

Building owners may pay for upgrades in any manner they see fit. There are low-cost financing options available for technologies such as heat pumps that will likely be more advantageous than pure equity financing. Debt financing also offers tax benefits, because federal tax law allows businesses to deduct interest payments for loans.

12. I've heard it's more challenging for buildings that heat with forced hot water to electrify. What options are available for these buildings?

Buildings that heat with forced hot water do not have existing ductwork that could be used with a central ducted air-to-air heat pump. Adding ductwork in an existing building can be disruptive and costly. However, several options exist for decarbonizing the space heating in buildings that heat with forced hot water:

- Install ductless heat pumps such as mini-splits or variable refrigerant flow (VRF) heat pumps
- Replace the existing central boiler with an air-to-water heat pump. Historically, such equipment has not been able to provide sufficiently high-temperature water (often 170–180°F) to meet heating needs in the coldest times of year. However, there are solutions to this problem:
 - Install a standard air-to-water heat pump with a backup electric resistance boiler
 - Several manufacturers now offer high-temperature air-to-water heat pump systems. These heat pumps are newer to the U.S. market and are usually more expensive to purchase. Examples include:
 - Daikin: [VRV](#) with water kit such as [Mega-Q](#) (up to 194°F) or [Ark Heat boost](#) (up to 180°F)
 - LG: [Multi V 5](#) with [Hydro Kit](#) (up to 176°F)
 - Mayekawa: [Unimo Series](#) (up to 194°F)
 - Watts: [Lync Aegis](#) (configurations up to 185°F)
 - Mitsubishi and Samsung are expected to bring high-temperature commercial products to market in 2024/2025

Redwood Energy's [Pocket Guide to All-Electric Commercial Retrofits](#) discusses these options and more.

13. Can the electric grid handle the new loads if buildings switch from fossil fuels to electricity?

Electrifying building heating systems will place increased demand on the electric grid. Fortunately, grid operators and utilities are already planning for this new load so that the electric power system will be prepared to serve it reliably. For example, ISO-NE, the grid operator in New England, now includes detailed heating electrification [forecast](#) as part of its annual load projection process. In Massachusetts, the Department of Energy Resources oversees a Grid Modernization Advisory Council (GMAC) that reviews grid modernization plans developed by Massachusetts utilities.

Importantly, historical load growth in the United States has been far greater than what New England faces today. Over the period 1950–2000, the average annual [growth in U.S. electricity demand](#) was 5.0 percent. By comparison, ISO New England expects electricity demand to grow by about 2.0 percent annually on average over the next decade, including the impact of electrification of vehicles and heating (see report “[2024-2033 Forecast Report of Capacity, Energy, Loads, and Transmission](#)”).

The grid in New England is currently summer peaking. This will remain the case at least through the early 2030s, according to the latest ISO-NE forecasts. While this is the case, space heating electrification can contribute to reductions in electric rates, because fixed system costs (which are determined by the summer peak) can be spread over a greater volume of electric sales.

Additionally, technologies and programs exist today to mitigate peak demand increases and other potential grid challenges from heating electrification. Working proactively with design professionals, facility managers, and the electric utility when planning building electrification projects can help accomplish this. In particular, the peak load of electrification can be reduced by pairing electrification measures with energy efficiency and demand response improvements. Insulating buildings and sealing air gaps can reduce peak loads from heat pumps for space heating and cooling. For buildings with high ventilation rates, such as hospitals and laboratories, energy recovery systems that collect waste energy from exhaust air can be very cost-effective and will reduce peak loads for space heating and cooling when using heat pumps. For sites that use large amounts of hot water, such as multifamily buildings, heat exchangers that capture waste heat from the building’s sewer lines can cost-effectively reduce the contribution of water heating to peak loads.

Obtaining and Reporting Energy Data

14. How challenging is it to learn Energy Star Portfolio Manager?

Energy Star Portfolio Manager is a free, user-friendly tool developed by the U.S. Environmental Protection Agency. [Nearly a quarter](#) of U.S. commercial building space is already benchmarked in Energy Star Portfolio Manager. EPA has been refining the tool for over twenty years, since it was [first released](#) in 2000. EPA publishes extensive [training material](#) on its website, including [how-to guides](#) that walk you through all the steps you will need to enter your building’s data. The City of Newton will also be offering training on the use of this tool.

15. How time consuming is it to import data into Energy Star Portfolio Manager?

Reporting energy data in Energy Star Portfolio Manager requires some initial setup time to become acquainted with the tool and enter building characteristics such as floor area and primary use. For reference, it took a junior member of the consulting firm working with the City of Newton about 15 hours to learn the tool and report initial data for 30 city buildings. While the City may have benefited from some efficiencies of scale, this initial step should not take more than a few hours per building, including time necessary to assemble information about each building.

After this initial stage, entering annual energy data is even less time-consuming. If you are the sole utility account holder for your building, you can authorize Eversource and National Grid to automatically upload electricity and gas data to ESPM for you. If you would rather enter the data yourself, you can easily do so using your utility bills; each bill shows data for the past twelve months. If your building has tenants, both Eversource and National Grid will aggregate the tenant data for you (see next question). Finally, if your building uses a delivered fuel such as oil or propane, you can enter consumption data into ESPM using fuel receipts.

The City of Newton will offer public trainings and one-on-one assistance to building owners to help them comply with BERDO. This will include topics such as the use of ENERGY STAR Portfolio Manager, how to obtain energy use data, developing a BERDO compliance plan, and how to use BERDO flexibility measures: Building Portfolios, Individual Compliance Schedules, and Hardship Plans. Further, the [Newton BERDO website](#) will be expanded to offer a resource clearinghouse for stakeholders.

For more information, see Portfolio Manager's [instructions](#) on importing utility data.

16. My building has tenants. What if I'm unable to obtain energy use data from some of them?

We have been working with the utilities to enable building owners to obtain tenant data through a utility portal set up for this purpose. Building owners can request the data using National Grid's portal [here](#) and Eversource's portal [here](#). Also, we expect that the State's Large Building Energy Reporting (LBER) database that will be published annually starting October 2025 will contain this data. If all else fails, Section 1 (o) 3 of BERDO requires that: "When an Owner of a Building is unable to obtain complete Energy use data due to the failure of any Tenant to report the information required, the Owner shall use values or formulas established by the BERDO Administrator to estimate whole Building Energy use."

The City of Newton will coordinate with National Grid and Eversource to provide training to building owners on the use of these portals.

17. I've heard some building owners in Boston have faced challenges with reporting. Is that true? How is Newton BERDO reporting different?

Boston works with owners to resolve any issues and has had nearly complete reporting (only 3.8 percent of reports are pending revisions for 2022). Compared to Boston, Newton will use a simplified reporting process, because Newton BERDO excludes electricity emissions. This means that there is no need to report quantities such as renewable electricity purchases, onsite renewable generation, custom emissions factors, or electricity used for EV charging. Excluding electricity also allows Newton to use one reporting platform only (Energy Star Portfolio Manager), whereas Boston and Cambridge each use two (Energy Star Portfolio Manager and BEAM/Touchstone). This will create a more streamlined and simplified data reporting process for building owners in Newton.

Navigating the Administrative Aspects of BERDO

18. What resources will the City of Newton provide to help me navigate BERDO requirements?

The City will have staff and consulting support available to assist building owners in navigating BERDO. Relative to the number of buildings, Newton has greater staffing than Boston (293 buildings and 179 building owners per FTE and \$563 of consulting budget per building in Newton, compared to 635 buildings and 348 building owners and \$87 in Boston). Reporting in Newton is also simpler because it does not include water, district steam, grid emissions, or renewables tracking.

The City will offer public trainings and one-on-one assistance on topics such as using ENERGY STAR Portfolio manager, obtaining energy use data, developing a BERDO compliance plan, and accessing flexibility measure options (including building portfolios, individual compliance schedules, and hardship plans). The City will also host public seminars with equipment manufacturers and vendors, utilities, and other experts. Finally the [Newton BERDO website](#) will be expanded to offer a resource clearinghouse for building owners and other stakeholders.

In addition to resources offered by the City of Newton itself, building owners can access assistance and technical support from the state and from their utilities. The Commonwealth's Large Building Energy Reporting (LBER) program will publish a database of energy use information about every building over 20,000 square feet in Massachusetts and will be publicly available starting in October 2025. MassCEC is establishing a Building Performance Exchange for large building decarbonization that will provide information and technical assistance to stakeholders for compliance with BERDO policies and energy reporting throughout the state. Early rollout for communities with BERDO policies is expected in 2025/2026. Through the utility-funded Mass Save program, building owners can access rebates and incentives for building decarbonization measures, low- or no-cost financing programs, and free scoping and technical assistance studies.

19. Does the City have adequate resources allocated to support building owners?

The City has budgeted for consultants for FY2025. In FY2026, the City will assign an FTE supplemented by consultants. The first reports are due for 47 buildings on Sept. 15, 2025. We will use the most efficient combination of consultants and City staff needed to get the job done effectively.

It is important to note that under the Commonwealth's Large Building Energy Reporting program (Section 41 of Ch. 179 of the Acts of 2022) utilities will be required to report annually to the State the energy use for all buildings over 20,000 square feet. These reports will be due in March 2025 and available in October 2025. The City is coordinating with the State Department of Energy Resources on this reporting program. This will greatly simplify reporting by building owners. We will also set up and provide training and reporting assistance during this first period which will also be available to the remaining buildings that are due to report on September 15, 2026. Note that BERDO does not impose

penalties or fines until the third year of the emissions standard for each Tier. This leaves ample time for building owners to develop the capacity to submit reports before fines become a factor.

20. Will there be a process for appeals if an owner disagrees with a city ruling related to BERDO?

The BERDO ordinance will be implemented using objective calculations and criteria. The ordinance does not provide for an administrative appeal process.

21. If an owner fails to pay fines related to failure to report or non-compliance, will those fines be tied to the owner or the asset?

The owner of a building that is not in compliance with the ordinance will be responsible for all fines that have accrued, including for violations that exist when the owner acquires title to a property subject to BERDO.

22. How much should property owners expect to pay for the required 3rd-party certifications?

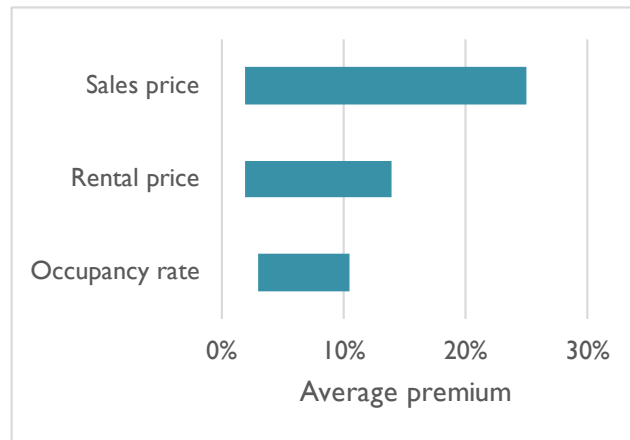
In general, we would not expect it to cost building owners more than \$500-\$1,000 per building depending on size of building, number of meters, and availability of building information; this is the median cost range reported by third-party verifiers in a recent RFI (Request For Information) issued by the City of Boston (note that Boston's reporting requirements are more complex than Newton's). Owners with more buildings will probably get some economies of scale such as the City did. Verifiers are only needed the second year and every 5 years after that. Also, beginning in October 2025, the state will be publishing energy use data for all buildings over 20,000 square feet. (This is a requirement of State law, Section 41 of Chapter 179 of the Acts of 2022.) The City is working with Mass Department of Energy Resources on the regulations for this program to try to coordinate it with Newton BERDO and help simplify reporting requirements for Newton building owners.

Impacts of BERDO on the City of Newton

23. It's important to me that Newton maintains its economic competitiveness within the state. How will BERDO affect our local businesses? What about our property values and tax base?

Newton is a desirable location to live and work for many reasons, including its public school system, transportation options, proximity to Boston, and active community life. BERDO will not affect any of these positive characteristics. Preserving property values is also important to the long-term financial stability of Newton. Fortunately, the upgrades required by BERDO are likely to increase commercial property values. A [review](#) of studies published by the Institute for Market Transformation found that more energy efficient commercial buildings garner higher market value, sales price, and occupancy rates. As the stringency of state building sector emissions policies increases, buildings with reduced emissions intensities will only become more valuable.

Added value of ENERGY STAR-labeled commercial buildings in the United States



Sources: Devine and Kok 2015, Wiley et al. 2010, Fuerst and McAllister 2009/2011, Jackson 2009, Pivo and Fisher 2010, Kok et al. 2010, research assembled by IMT

**24. Religious institutions and nonprofits are important parts of the community fabric in Newton.
What resources are available to help these organizations comply with BERDO?**

Acting on climate change is a crucial component of many religious institutions' commitment to stewardship. Newton residents are already taking steps to decarbonize their houses of worship. For example, the First Unitarian Universalist Society in Newton, which occupies a historic building constructed in 1905, has already begun installing air source heat pumps in parts of their building. The Massachusetts chapter of Interfaith Power and Light highlights [success stories](#) from houses of worship around the state who have prioritized reducing their carbon emissions—including Eliot Church in Newton—and compiles [resources](#) for religious communities seeking to reduce their emissions. Like all institutions covered by BERDO, nonprofits and religious institutions are eligible to apply for hardship compliance plans if complying with BERDO would cause them exceptional financial hardship.

**25. I'm concerned about the potential impact of BERDO on renters and low-income households.
What resources are available to help low-income and renter-occupied housing comply with BERDO?**

While residential buildings are not included in the initial BERDO policy, the City plans to add them in 2025. The City is assisting affordable housing owners with building decarbonization planning and implementation and we expect all public and non-profit affordable housing buildings (nine total) will comply until 2040 or later. The cost of rent in government-subsidized housing is fixed and won't be affected by BERDO. Financial resources are available to support the decarbonization of low-income housing. Low-income properties receive greater support for decarbonization through the utility-funded Mass Save program than do other utility customers. Building owners can access rebates and incentives for building decarbonization measures, low- or no-cost financing programs, and free scoping and technical assistance studies. Additionally, the [Massachusetts Community Climate Bank](#) has [\\$70 million in seed funding to provide loans to affordable housing for clean energy retrofits](#).

Based on local case studies, we expect the cost of complying with BERDO is equivalent to a 4 percent increase in rent for market-rate housing, which we do not expect to impact the amount of naturally affordable housing in Newton

26. How does BERDO relate to statewide policies, including upcoming energy reporting requirements?

The BERDO emissions targets are aligned with statewide climate law, which requires Massachusetts to achieve net zero greenhouse gas emissions by 2050. It is also consistent with approaches to building decarbonization in [Boston](#) and [Cambridge, both of which](#) recently enacted similar ordinances that reach net zero greenhouse gas emissions by 2050. By acting early to decarbonize large buildings through Newton BERDO, Newton residents will access several benefits: BERDO will serve as a hedge against uncertainty in state planning to meet GWSA requirements; phased decarbonization will avoid early replacement, lowering costs; and BERDO will reduce residents' exposure to rising gas rates under state policy.

Under the Commonwealth's Large Building Energy Reporting program (Section 41 of Ch. 179 of the Acts of 2022), utilities will be required to report annually to the State the energy use for all buildings over 20,000 square feet. These reports will be due in March 2025 and available in October 2025. The City is coordinating with the State Department of Energy Resources on this reporting program. This will greatly simplify reporting by building owners.

27. I'm concerned that BERDO singles out the owners of certain types of buildings. Don't we need to reduce the emissions from all buildings, not just large commercial buildings?

We are starting with large buildings because it is manageable and impactful with only 293 commercial buildings accounting for 23 percent of Newton's total emissions. When we add large residential buildings, it will be 413 buildings accounting for 28 percent of Newton's total emissions. There are over 34,000 residential units in the city including over 24,000 single family homes. Implementing a BERDO for this many buildings would be costly to manage and administer. At this time the City is encouraging voluntary energy efficiency and electrification through its 4 Our Future Program and Energy Coach Program. We are always working on ways to make these programs more effective.

28. How much will BERDO implementation cost Newton taxpayers?

We estimate the total annual cost to be up to \$290,000 per year. The administration does not anticipate seeking an override for this purpose.

29. How will Newton use the funds generated by BERDO fines and alternative compliance payments?

Fines, fees, and penalties are placed in a special city fund to be administer by the Climate and Sustainability Office. The funds can be used for:

- Projects that benefit environmental justice populations in Newton
- Costs to the City to administer BERDO
- Cost to the City to comply with BERDO
- Costs to local nonprofits (such as affordable housing providers) to comply
- Projects to reduce greenhouse gas emissions in Newton
- Education related to implementation of BERDO

Planned content for Newton BERDO clearinghouse

Energy use reporting

- Reporting tool
- How to gather whole building data (including tenants) from the utilities
- Obtaining utility data
- Large Building Energy Reporting (LBER) program

Electrification solutions

- Equipment manufacturers
- HVAC design & implementation companies
- Case studies
- MassCEC Building Performance Exchange
- MassCEC Building Electrification and Transformation Accelerator (BETA)

Financial Resources

- MassSave incentives and rebates
- MassSave financing
- Property Assessed Clean Energy (PACE)
- 197D tax deduction
- Massachusetts Community Climate Bank

Emission Requirements for your building

- Multi-year visualization tool
- Compliance flexibility measures
- Alternative compliance payment

Energy Efficiency Solutions to reduce emissions

- Boiler controllers
- Air leak testing & sealing

Overview of Newton BERDO elements

- Reporting requirements & data entry

- Focus on direct emissions: gas & oil
- Emission limits by year
- Starting timeline for different building types & sizes

Help Desk:

- Data Entry
- Emission limits for your building
- Decarbonization options

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

WHEREAS: Buildings contribute to 64 percent of greenhouse gas emissions in the City of Newton; and

WHEREAS: ~~Non-Residential~~ Buildings over 20,000 Gross Floor Area contribute 2823 percent of greenhouse gas emissions in the City of Newton; and

WHEREAS: The City of Newton's Climate Action Plan details strategies to reduce carbon emissions from buildings; and

WHEREAS: The Newton City Council passed a resolution unanimously in April 2022 declaring that the City should pass a Building Emissions and Reduction Ordinance.

THEREFORE, THE FOLLOWING ORDINANCE IS ADOPTED:

SECTION 1. Building Emissions Reduction and Disclosure

(a) Purpose

It is the intent of this Ordinance to reduce the emissions of air pollutants, including greenhouse gases, from building energy consumption, and thereby to encourage efficient use of energy; to develop further investment in building a green economy, and to protect public health. To do so, the provisions of this Ordinance require the reporting and disclosure of annual energy use in all

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

covered Buildings and compliance with emissions reduction requirements in accordance with this Ordinance.

(b) Definitions

When used in this Ordinance, unless a contrary intention clearly appears, the following terms shall have the following meaning:

Alternative Compliance Payment means a per-metric ton payment based on the average cost per metric ton of CO₂e to decarbonize Buildings subject to this Ordinance.

BERDO Administrator means the City employee designated as the individual employed to implement the BERDO program.

Building means a building that equals or exceeds 20,000 square feet in Gross Floor Area ~~and in which at least 20,000 square feet of Gross Floor Area is used for non-residential purposes.~~

Building Portfolio means two or more Buildings, on one or more properties, provided that all Buildings within the Portfolio have the same Owner; for this purpose, a Building management company does not constitute an Owner.

Building Use means (i) space type as defined in the Regulations, which refers to the primary activity for which a given space is utilized, as entered into the EPA Energy Star Portfolio Manager

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

reporting tool; or (ii) other activities as defined in Portfolio Manager or by the Regulations.

Carbon Dioxide Equivalent (CO_{2e}) means greenhouse gas Emissions, including carbon dioxide, methane, and nitrous oxide. CO_{2e} shall be calculated using a methodology as set forth in the Regulations.

Emergency Backup Generation/Backup Power means a device or mechanism, such as battery storage, reciprocating internal combustion engine, or turbine, that serves solely as a secondary source of mechanical or electrical power whenever the primary Energy supply is disrupted or discontinued during power outages or natural disasters that are beyond the control of the Owner, occupant, or operator of a Building.

Emissions means the emission of greenhouse gases, measured in units of CO_{2e} associated with the Energy used by a Building, excluding electricity.

Emissions Factor means CO_{2e} calculated according to regional Energy and greenhouse gas factors as set forth in the Regulations.

Energy means electricity and any fuel source including, but not limited to, natural gas, fuel oil, propane and any other sources of Energy that the BERDO Administrator may designate.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Portfolio Manager or EPA ENERGY STAR Portfolio Manager means the U.S. Environmental Protection Agency's online tool for reporting and managing Building Energy data.

Environmental Justice Population means a neighborhood that meets one or more of the following criteria: (i) the annual median household income is not more than 65 percent of the statewide annual median household income; (ii) minorities comprise 40 percent or more of the population; (iii) 25 percent or more of households lack English language proficiency; or (iv) minorities comprise 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the state annual median income; or such other meaning as is adopted or amended by the Commonwealth's Executive Office of Energy and Environmental Affairs, by state statute, or defined in the Regulations.

Gross Floor Area (GFA) means the sum of the floor area of the Building measured from the exterior face of the exterior walls of the Building as per the City of Newton Assessors' records. The BERDO Administrator shall publish Regulations governing the calculation of Gross Floor Area, including types of areas that shall be excluded from the calculation.

Hardship Compliance Plan means alternative Emissions reduction targets and/or timelines for a Building or Building Portfolio.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO)

Councilor Danberg Proposed Amendment

Individual Compliance Schedule means an alternative timeline for complying with the Emissions Standards outlined in this Ordinance.

Non-Residential Building means a Building in which at least 20,000 square feet of the Gross Floor Area is used for commercial, retail, office, professional, educational, or other non-residential purposes.

Owner means a Building's Owner of record, provided that the "Owner" may be deemed to include (i) multiple Owners in common ownership and (ii) the association or organization of unit Owners responsible for overall management in the case of a condominium. In the case of a Building subject to a lease that assigns maintenance, regulatory compliance, and/or capital improvement costs to Tenants with a term of at least 30 years, inclusive of all renewal options, the Owner may designate the lessee as "Owner" for purposes of compliance with this Ordinance; such designation must be provided in writing to the BERDO Administrator as required by the Regulations. An Owner may designate an agent to act on its behalf, including reporting as required by this Ordinance; provided, however, that any designation (i) must be provided in writing to the—BERDO Administrator, and (ii) does not relieve the Owner of any compliance obligation under this Ordinance.

Regulations means the Newton Building Emissions Reduction and Disclosure Regulations.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Residential Building means a Building in which 50 percent or more of the Gross Floor Area, including hallways and other common spaces, are used for residential purposes, and the Building utilizes centralized heating systems.

Tenant means any tenant of a Building covered by this Ordinance.

Verification Year means any year in which an Owner must report third-party verified reporting data. Verification Years will be the second reporting year for each building category following the enactment of this Ordinance, and every five years thereafter.

(c) Building Portfolios

Building Portfolios must be approved by the BERDO Administrator and Building Portfolio Owners must submit documentation confirming eligibility as a Building Portfolio. Notwithstanding the approval of a Building Portfolio, Owners must continue to report the Energy use, Emissions data, and any other information required by this Ordinance for each individual Building. If a Building is removed from or added to a Building Portfolio for any reason, including transfer to a different Owner, the Building shall retain its individual reporting data and be subject to the Emissions standards, and the Building Portfolio shall be adjusted to reflect the removal or addition of the Building.

(d) Energy and Emissions Reporting Required

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

(i) Data Reporting Requirements

Each year, the Owner of each Building subject to reporting requirements shall accurately report to the BERDO Administrator, via the Portfolio Manager or as required by the Regulations, the following information for the previous calendar year:

- (a) Energy use of each Building and other Building characteristics necessary to evaluate CO₂e Emissions on a kilogram (kg) CO₂e per square foot (SF) per year basis.
- (b) The primary Building Use(s) of each Building in accordance with the categories listed in the Portfolio Manager and the Regulations. Multiple primary Building Uses shall be reported, provided that each use occupies at least 10 percent of the Building's Gross Floor Area.
- (c) Contact information for Owners and any designated agents.

(ii) Reporting Schedules

The initial reports shall occur according to the following schedule:

1. For every Non-Residential Building equal to or greater than 100,000 square feet Gross Floor Area, the first report shall be submitted no later than September 15, 2025.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

2. For every Non-Residential Building equal to or greater than 20,000 square feet Gross Floor Area but less than 100,000 square feet Gross Floor Area, the first report shall be submitted no later than September 15, 2026.

2.3. For every Residential Building, the first report shall be submitted no later than September 15, 2026.

Building Owners may apply to the BERDO Administrator for a one-time six-month extension of their reporting deadline.

(e) Direct Upload

Provided that the necessary mechanisms already exist, Building Owners may authorize electric and gas utilities or other third party to report Building-specific data on their behalf to the BERDO Administrator. Such authorization shall not create an obligation on the part of electrical and gas utilities or remove the obligation of Building Owners to comply with reporting requirements.

(f) Equitable Emissions Investment Fund

The City Comptroller shall establish the Equitable Emissions Investment Fund (hereinafter, the “Fund”) as a separate account, and credit to the Fund all Alternative Compliance Payments, penalties and fees paid pursuant to this Ordinance.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

The City may incur liabilities against and spend monies from the Fund.

At the discretion of the BERDO Administrator, and with approval by the Mayor, expenditures from the Fund may be made for the following purposes:

- a. Projects that benefit Environmental Justice Populations
- b. Costs incurred by the City in administering the program created pursuant to this Ordinance;
- c. Costs incurred by the City in complying with the program created pursuant to this Ordinance;
- d. Costs incurred by non-profit entities that operate within the City, including but not limited to entities that operate affordable housing, in complying with the program created pursuant to this Ordinance;
- e. Other projects intended to reduce greenhouse gas emissions within the City; or
- f. Technical assistance to property owners subject to BERDO related to implementation of the requirements of this ordinance.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

(g) Data Verification

- a. Building Owners shall self-certify their reporting data every year.

In a Building's second year of reporting, Building Owners shall provide a third-party verification of their reporting data for the previous year. For every Verification Year thereafter, Building Owners shall provide a third-party verification for the five calendar years prior to, but not including the current year. Third-party verifications must be performed by qualified Energy professionals, as defined by the Regulations, and submitted no later than the reporting deadline of the relevant year.

(h) Emissions Requirements

Each Building subject to the reporting requirements of this Ordinance shall comply with the CO₂e Emissions standards set forth in Table 1 below; unless the Building Owner has received an approved Individual Compliance Schedule pursuant to the requirements in SECTION 1(k) or an approved Hardship Compliance Plan pursuant to SECTION 1(l). Buildings must comply with the Emissions standards on an annual basis and compliance shall be measured as a total of kg of CO₂e Emissions per square foot. Buildings will be subject to the emissions standards in Table 1 based on the schedule for each Tier and Building Category in Tables 2 through 5.

**City of Newton Proposed Building Emissions
Reduction and Disclosure Ordinance (BERDO)
Councilor Danberg Proposed Amendment**

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City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 1: CO₂e Emissions Standards by Building Use

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	Period 1	Period 2	Period 3	Period 4	Period 5
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 2. Compliance Periods by Building Use—Tier 1 Buildings:
Buildings equal to or greater than 100,000 square feet Gross Floor
Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2027- 2032	2033- 2038	2039- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 3. Compliance Periods by Building Use—Tier 2 Buildings:
Non-Residential Buildings equal to or greater than 50,000 square
feet and less than 100,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2028- 2033	2034- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 4. Compliance Periods by Building Use—Tier 3 Buildings:
Residential Buildings Equal to or Greater than 50,000 Square Feet
and Non-Residential Buildings equal to or greater than 35,000
square feet and less than 50,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2029- 2034	2035- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 5. Compliance Periods by Building Use—Tier 4 Buildings:
Buildings equal to or greater than 20,000 square feet and less than
35,000 square feet Gross Floor Area.

Building Use	Emission standards (kgCO ₂ e/SF/yr)				
	2030- 2034	2035- 2039	2040- 2044	2045- 2049	2050-
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Table 6. Compliance Periods by Building Use—Tier 5
Buildings: Residential Buildings Equal to or Greater than
20,000 Square Feet and Less than 50,000 square feet **Gross
Floor Area.**

<u>Building use</u>	<u>Emission standards (kgCO₂e/SF/yr)</u>				
	<u>2031- 2034</u>	<u>2035- 2039</u>	<u>2040- 2044</u>	<u>2045- 2049</u>	<u>2050-</u>
<u>Residential</u>	<u>4.8</u>	<u>2.8</u>	<u>1.7</u>	<u>.08</u>	<u>0.0</u>

(i) Blended Emissions Standard

Buildings or Building Portfolios with more than one primary use may comply with a blended CO₂e Emissions standard as defined by Regulation; provided, however, that a use may constitute a primary use only if it occupies at least 10 percent of a Building's

or Building Portfolio's Gross Floor Area. Building Owners using a blended CO₂e Emissions standard must (i) designate the blended standard in annual reports to the BERDO Administrator, and (ii) provide documentation verifying the qualification of each primary use in annual reports to the BERDO Administrator for the first year a blended CO₂e Emissions standard is used and in any subsequent year for which the blended Emissions standard or primary use(s) changes.

**City of Newton Proposed Building Emissions
Reduction and Disclosure Ordinance (BERDO)
Councilor Danberg Proposed Amendment**

(j) Energy Use Exempt from Emissions Requirements

- i. Electricity which is used by a covered Building or Building Portfolio is exempt from the CO₂e Emissions Standard of this ordinance;
- ii. Building Owners may deduct Energy used by Emergency Backup Generation/Backup Power supply equipment from a Building's total Energy use subject to the CO₂e Emissions standard of this Ordinance, provided that emergency Backup Generation/Backup Power provides Energy only to the Building or Building Portfolio; and:
- iii. Building Owners annually report (i) Energy used by Emergency Backup Generation / Backup Power; (ii) the date(s), hour(s) and conditions that required the use of Emergency Backup Generation/Backup Power; and (iii) any other information required by the Regulations. Such reporting shall be subject to the self-certification and third-party verification procedures in SECTION 1(g);
- iv. In the event that Emergency Backup Generation/Backup Power serves, or has the potential to serve, multiple Buildings in a Building Portfolio, the Energy use from such activities shall be allocated to individual Buildings in proportion to the gross square footage of each Building.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

The BERDO Administrator may revise the availability and use of these exemptions or add additional exemptions pursuant to the Regulations.

(k) Individual Compliance Schedules

Owners of Buildings or Building Portfolios may apply for an Individual Compliance Schedule as an alternative to the CO₂e Emissions standard reduction schedule in Tables 2 through 5. Individual Compliance Schedules must establish declining CO₂e Emissions standards in 5- to 6-year increments, and such standards must (i) decline on a linear basis, (ii) reduce Emissions 40 percent by period 3, and (iii) reduce Emissions 100 percent by period ~~5~~⁶; and

Use a baseline from any year between 2013 and the first required reporting year, provided, however, that the Building or Building Portfolio Owner provides documentation of Energy use, Gross Floor Area, and relevant Emissions Factors by the Building or Building Portfolio for the selected baseline year and the year in which an Individual Compliance Schedule is requested, in accordance with the data verification requirements of this Ordinance and the Regulations.

A Building or Building Portfolio that failed to comply with previous reporting requirements may use an Individual Compliance Schedule; provided, however, that the necessary data

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

has been submitted to the BERDO Administrator and any applicable penalties for past non-compliance are paid in full.

Individual Compliance Schedules must be approved by the BERDO Administrator. Building and Building Portfolio Owners must submit the information required in this Ordinance, and any other documentation specified in the Regulations, when requesting an Individual Compliance Schedule. The BERDO Administrator may include additional conditions on the approval of Individual Compliance Plans, consistent with the Regulations.

(I) Hardship Compliance Plans

A Building Owner may apply to the BERDO Administrator for a Hardship Compliance Plan if there are extraordinary characteristics or circumstances associated with the Building in complying with the Emissions standards in this Ordinance. Such characteristics or circumstances may include historic Building designations, pre-existing long-term Energy contracts without reopeners, or extraordinary financial hardship. Implementation guidelines will be further detailed in the Regulations. The application, review process, and conditions for Hardship Compliance Plans shall be set forth in the Regulations. The BERDO Administrator shall have sole discretion in approving Hardship Compliance Plans; such plans may include alternative Emissions standards and timelines for compliance. The BERDO Administrator may include additional conditions on the approval of Hardship Compliance Plans consistent with the Regulations.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

(m) Alternative Compliance Payments

Owners of Buildings or Building Portfolios may mitigate CO₂e Emissions from Energy use by making Alternative Compliance Payments. The price of an Alternative Compliance Payment shall be based on the average cost per metric ton of CO₂e to decarbonize Buildings subject to this Ordinance. The initial cost of an Alternative Compliance Payment shall be \$234 per metric ton of CO₂e. The cost of an Alternative Compliance Payment shall be reviewed every five years by the BERDO Administrator, which shall make recommended adjustments, if any, to the City Council.

(n) Preservation of Documents

Building Owners shall preserve records and information (i) required to be submitted by this Ordinance and/or (ii) submitted pursuant to this Ordinance in order to demonstrate compliance with the Emissions standards, including but not limited to information regarding Building Uses, Emissions Factors, compliance mechanisms outlined in this Ordinance, Individual Compliance Schedules, and Hardship Compliance Plans, for such time as set forth in the Regulations, and shall make such records available for inspection and audit by the BERDO Administrator or the Law Department upon request.

(o) Obligation to Request and Report Information

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

Where a unit or other space in a Building is occupied by a Tenant and the unit or space is separately metered, the Tenant of such space shall, within 30 days of request by the Owner and in a form to be determined by the BERDO Administrator, provide all information that cannot otherwise be acquired by the Owner and that is needed to comply with the requirements of this Ordinance. Failure by Tenant to comply with the requirements of this Ordinance may result in penalties as provided in this Ordinance.

1. The Owner may request information related to the Tenant's metered Energy and other related information for the previous calendar year no earlier than January 1 and no later than January 31 of any year in which the Owner is required to report such information.
2. Failure of any Tenant to report the information required in this Ordinance does not relieve the Owner of the obligation to report.
3. Where an Owner of a Building is unable to obtain complete Energy use data due to the failure of any Tenant to report the information required, the Owner shall use values or formulas established by the BERDO Administrator to estimate whole Building Energy use.

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

(p) Disclosure

The BERDO Administrator shall make Energy and Emissions information for Buildings available to the public on the City's website no later than November 30 of every year, except for 2025, in which it shall make such information available to the public no later than December 15, 2025. Such disclosure shall include, at a minimum, Building identification, Energy use intensity, CO₂e Emissions per square foot, and Emissions compliance status. Before any such disclosure, the BERDO Administrator shall subject all data to a quality-assurance/quality-control process.

1. At least 30 Days prior to disclosure, the BERDO Administrator shall provide Building Owners an opportunity to review the accuracy of information to be disclosed.
2. The Building Administrator shall also, from time to time, publicly report on implementation of, compliance with, and overall results from this Ordinance.

(q) Enforcement for Failure to Comply with this Ordinance

Any violation of this ordinance shall be punishable by a fine of three hundred (\$300.00) dollars per day for each day the violation continues. Each day a violation continues shall constitute a separate offense. Where noncriminal disposition of this section by

City of Newton Proposed Building Emissions Reduction and Disclosure Ordinance (BERDO) Councilor Danberg Proposed Amendment

civil fine has been provided for in sections 17-22 and 17-23 of these ordinances, as amended, pursuant to the authority granted by M.G.L. c. 40, section 21D, said violation may be enforced in the manner provided in such statute. Penalties under this section will not be levied prior to the third year of the effective date of the emissions requirement.

(r) Notice

Within two months of the adoption of this Ordinance, notification concerning reporting and disclosure obligations and emissions reductions obligations shall be provided to Owners subject to the requirements of this Ordinance.

This notice, and any other notice required by this Ordinance shall be delivered to the contact information in the Assessor's database unless an Owner provides alternative contact information to the City Assessor's office.

SECTION 2. If any provision of this ordinance is held invalid by a court of competent jurisdiction, then such provision should be considered separately and apart from the remaining provisions, which shall remain in full force and effect.

SECTION 3. The provisions of this Ordinance shall be effective upon passage.



Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Office of the Mayor

#317-24

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(617) 796-1100
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(617) 796-1113
TDD/TTY
(617) 796-1089
Email
rfuller@newtonma.gov

August 5, 2024

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Honorable City Councilors:

I respectfully submit this docket item to your Honorable Council requesting a discussion and possible amendments to Retaining Wall Regulations for Multi-Family/Commercial/Industrial/Civic Buildings in the Zoning Ordinance at Section 5.4.2. The amendments are needed to address unintentional impacts created in the April 2024 zoning amendments requiring special permits for retaining walls.

Attached is a memo from the Planning Department providing background information and examples for this docket item.

Thank you for your consideration of this matter.

Sincerely,

Mayor Ruthanne Fuller



Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

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Barney Heath
Director

MEMORANDUM

TO: Mayor Ruthanne Fuller
Jonathan Yeo, Chief Operating Officer

FROM: Barney Heath, Director, Department of Planning and Development
Jennifer Caira, Deputy Director, Department of Planning and Development
Zachery LeMel, Chief of Long Range Planning

RE: Request to docket a discussion and possible **amendment to Retaining Wall Regulations for Multi-Family/Commercial/Industrial/Civic Buildings – Zoning Ordinance Sec. 5.4.2.**

Date: July 24, 2025

CC: Alissa O. Giuliani, City Solicitor

Overview

In April 2024, the City Council approved a zoning amendment to Sec. 5.4.2. that requires a special permit for any retaining wall over four feet in height in all zoning districts. Previously, only retaining walls over four feet within the setback required a special permit while retaining walls outside of the set-back areas had not required a special permit.

The City Council supported this amendment as an important first step with the understanding that additional measures (i.e. how height is measured) were being considered. The City Council brought forward this amendment to address grade and wall issues with a particular focus in single- and two-family districts. The ordinance presently applies in all zoning districts.

We have come to recognize that this recently enacted retaining wall requirement can be counter-productive in multi-family, commercial and industrial zones. The Planning staff is seeing beneficial retaining walls recently completed developments. Our intention is to explore with the City Council where modifications might be made to the current ordinance in the aforementioned districts and/or building types.

Examples of multi-family/mixed-use projects that now require a special permit where a retaining wall is beneficial and could be allowed by right or with administrative review with an appeal option to ZAP

935 Washington Street (corner of Washington and Lowell) – 18 units



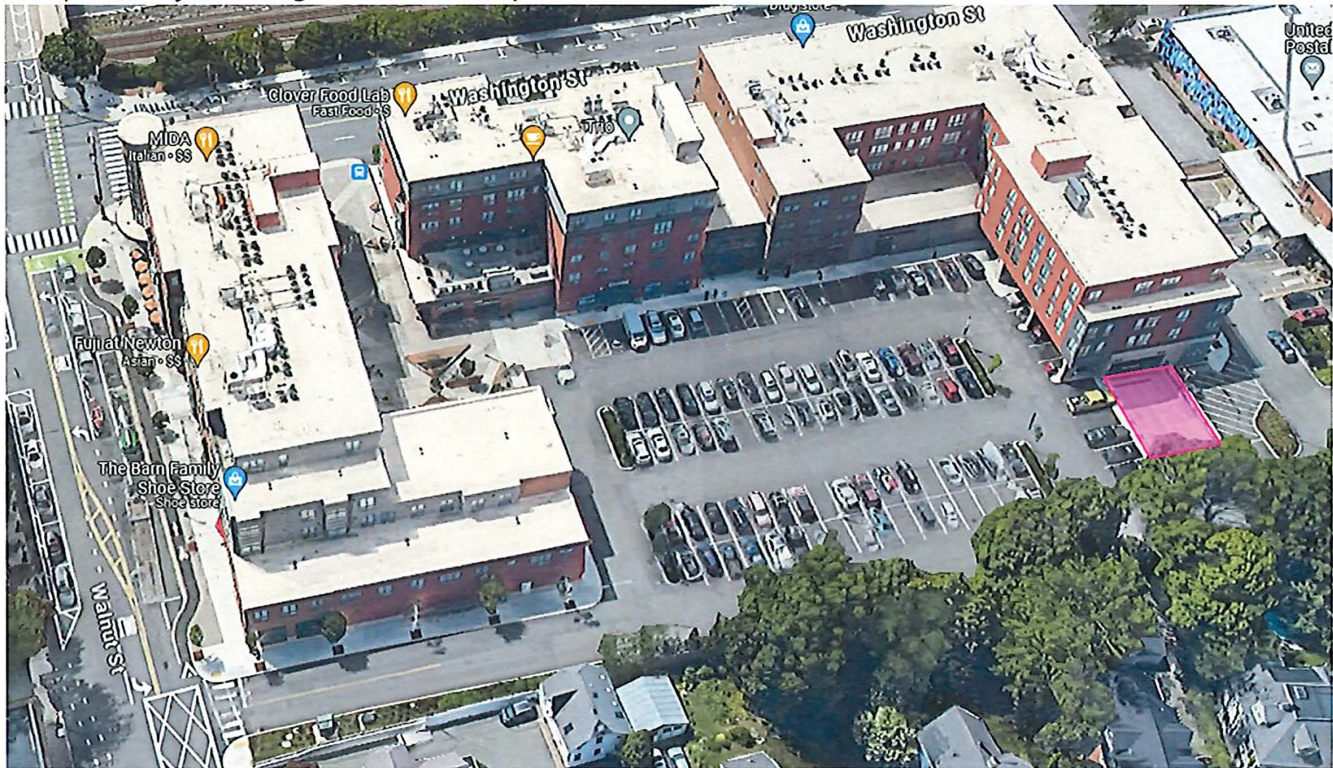
Fully below grade driveway and retaining wall leads to parking beneath the building

429 Cherry Street – 19 units



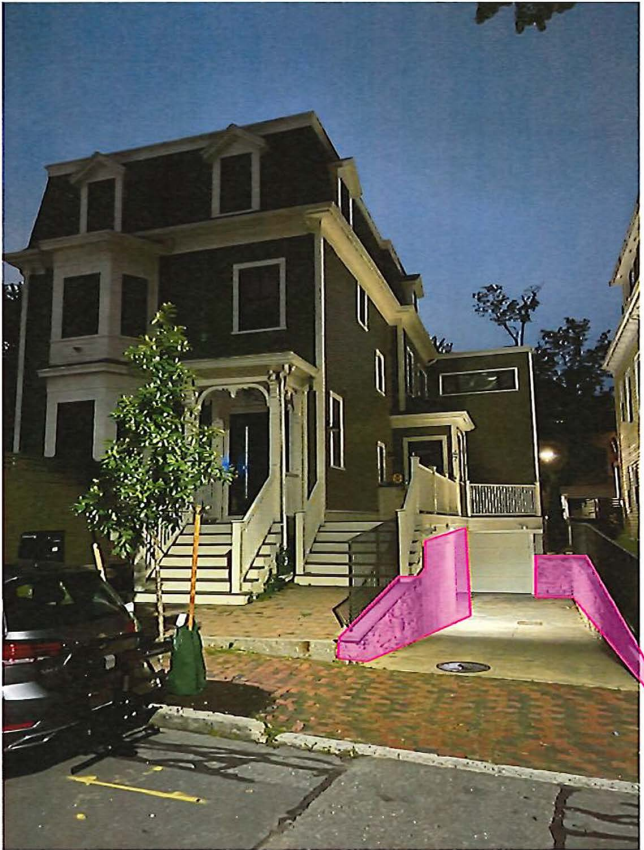
Fully below grade driveway and retaining wall leads to parking beneath the building

Trio (corner of Washington and Walnut) – Mixed-Use



Fully below grade driveway and retaining wall leads to parking beneath the building

Adaptive Reuse, Cambridge, MA – 4-units



Some portions of the retaining wall are above grade, though the majority is fully below

Next Steps

Once docketed, staff plan to explore these options and make a full recommendation to the City Council.

**CITY COUNCIL
CITY OF NEWTON
DOCKET REQUEST FORM**

DEADLINE NOTICE: Council Rules require items to be docketed with the Clerk of the Council NO LATER THAN 7:45 P.M. TUESDAY, PRIOR TO THE MONDAY FULL COUNCIL MEETING to be voted to be assigned to Committee(s) that evening.

To: Clerk of the City Council ZAP Committee

Date: April 29, 2024

From (Docketer): Terrence P. Morris, Esq.

Address/phone/email: 57 Elm Road Newton, MA ▪ 617 202-9132 ▪ tpmorris.landuse.law@comcast.net

Additional sponsors:

1. **Please docket the following item (edit if necessary):** Proposed zoning ordinance amendment to Section 3.4.4. Garage Design Standards, subsection B. Definitions, Subparagraph 1, “Garage ” by inserting the words “above grade” after the clause, “or portion of the structure” as it appears in the 1st sentence of the “Garage” definition.
2. **The purpose and intended outcome of this item is:** Clarification of the applicability of the Garage Design Standards provision in the Ordinance to above grade accessory structures.
3. **I recommend that this item be assigned to the following committees:** Zoning & Planning.
4. **This item should be taken up in committee:** As soon as possible, preferably within a month; because the application of certain design standards to a two-family dwelling currently under construction is resulting in a deleterious and absurd result.
5. **I estimate that consideration of this item will require approximately:** Less than one hour
6. **The following people should be notified and asked to attend deliberations on this item. (Please check those with whom you have already discussed the issue, especially relevant Department Heads):**

City Personnel

Citizens (include telephone numbers/email please)

Jane Santosuosso, Chief ZCO

Brian Traugott, (585) 478-0454; btraugs@gmail.com

Anthony Ciccariello, Commissioner ISD

7. **The following background materials and/or drafts should be obtained or prepared by the Clerk’s office prior to scheduling the item for discussion:**

8. **I have provided additional materials and/or undertaken the following research independently prior to scheduling the item for discussion: excerpt from the zoning ordinance definition for "Garage" and proposed draft Council Order; illustration of an absurd application of the Design standards to a below grade garage.**
9. **I would like to discuss this item with the Chair before any decision is made on how and when to proceed.**
10. **I would like the Clerk's office to confirm that this item has been docketed. My daytime phone number is: 617 202-9132.**
11. **I would like the Clerk's office to notify me when the Chairman has scheduled the item for discussion.**

Thank you.

Terrence P. Morris

Terrence P. Morris, Esq.

CITY OF NEWTONIN CITY COUNCIL

ORDINANCE NO. 8-67

February 16, 2021

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NEWTON AS FOLLOWS:

That the Revised Ordinances of Newton, Massachusetts, 2017, as amended, be and are hereby further amended with respect to **Chapter 30 ZONING** as follows:

1. DELETE **Ordinance No. A-78** dated June 20, 2016 in its entirety.
2. DELETE **Section 3.4.2.B.1** in its entirety and renumber **Sections 3.4.2.B.2, 3, and 4** to **3.4.2.B.1, 2 and 3** accordingly.
3. DELETE **Section 3.4.3 Accessory Buildings** in its entirety and insert in place thereof the following language:

3.4.3 Accessory Buildings

- A. Except as provided in Sec. 6.7, accessory buildings shall conform to the following requirements:
 1. An accessory building shall be no nearer to any side or rear lot line than 5 feet, and no nearer to any front lot line than the distance prescribed for the principal building.
 2. No portion of any accessory building shall be less than 5 feet from any point on any principal building on the subject lot.
 3. An accessory building with a sloping roof shall have a maximum height of 22 feet. An accessory building with a flat roof shall have a maximum height of 18 feet. An accessory building shall have no more than 1½ stories.
 4. The ground floor area of an accessory building shall not exceed 700 square feet.
4. INSERT following **Section 3.4.3** a new **Section 3.4.4 Garage Design Standards** as follows:

3.4.4 Garage Design Standards**A. Applicability**

Garage Design Standards apply in all Residence Districts

B. Definitions

1. **Garage.** An attached or detached structure, or portion of a structure, that is able to be accessed by an automobile or is used or intended to be used primarily for the storage or parking of 1 or more automobiles. A detached Garage is an Accessory Building (See Sec. 3.4.3).

ABOVE
GRADE

DRAFT
-24

CITY OF NEWTON

IN CITY COUNCIL

PROPOSED COUNCIL ORDER NO. _____

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NEWTON AS
FOLLOWS:

That the Revised Ordinances of Newton, Massachusetts, 2017, as amended and are hereby
further amended with respect to Chapter 30 Zoning as follows:

1. That Section 3.3.4.B.1 is hereby amended as follows:

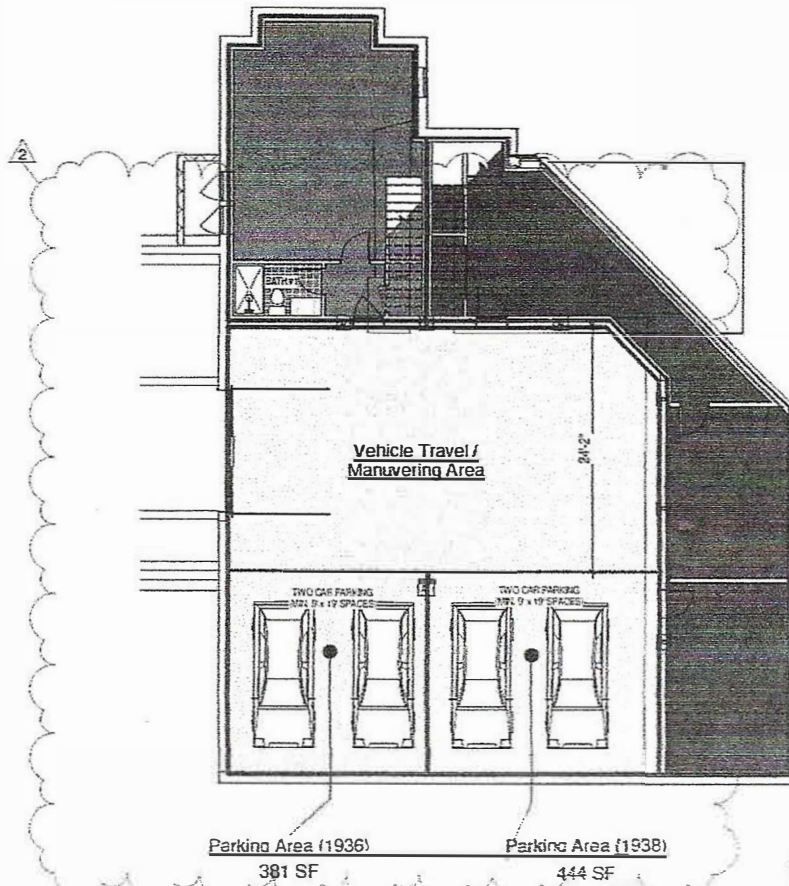
By inserting the words “above grade” after the clause, “or portion of the structure”
as it appears in the 1st sentence of the “Garage” definition, so that it reads as
follows:

B. Definitions

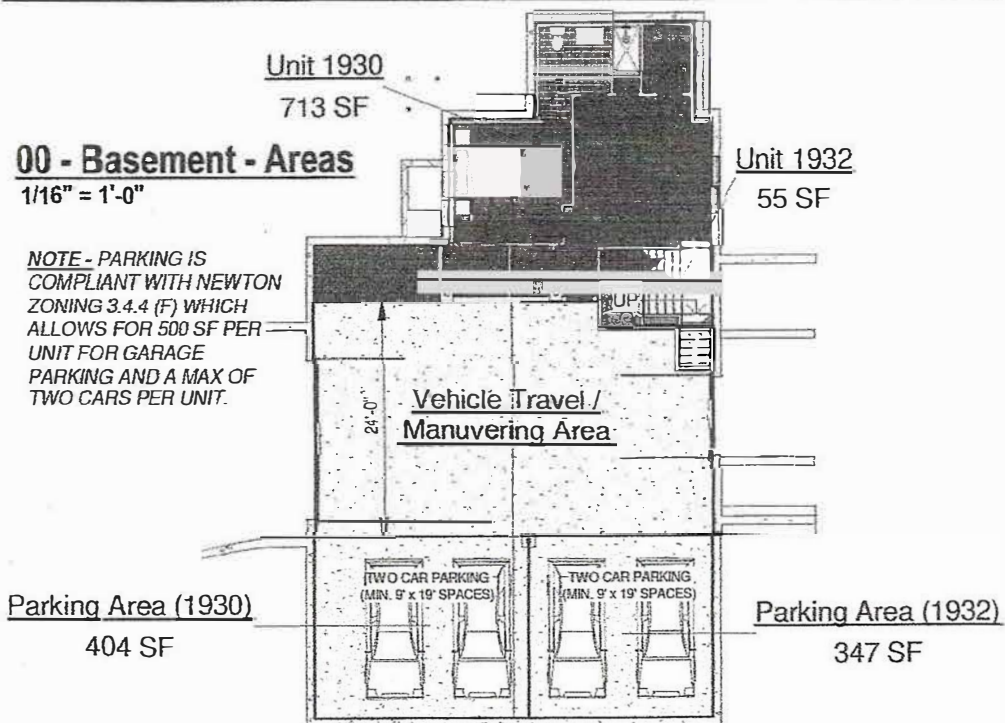
1. Garage. An attached or detached structure, or portion of a structure
above grade, that is able to be accessed by an automobile or is used or
intended to be used primarily for the storage or parking of 1 or more
automobiles. A detached Garage is an Accessory Building (See sec.
3.4.3).

Approved as to legal form and character:

City Solicitor



00 - Basement - Areas



Therapy Terrence P. Morris, Esq.
Law Offices of Terrence P. Morris LLC
57 Elm Road
Newton, MA 02460
617 202-9132

May 1, 2024

By electronic transmission: jnorton@newtonma.gov

Jaclyn Norton, ZAP Committee Clerk
Office of the City Clerk
1000 Commonwealth Avenue
Newton, MA 02459

Re: Docket Request
Proposed Zoning Amendment

Dear Jaclyn,

This letter is to clarify that my filing of a proposed zoning amendment with your office on Monday, April 29, 2024, was initiated on behalf of a client, Brian Traugott. Mr. Traugott is the owner of two properties at 1930-32 and 1936-38 Commonwealth Avenue, which have been adversely impacted by application of the Garage Design Standards as currently set forth in the zoning ordinance. Should you need anything further please advise. Mr. Traugott is also one of the persons identified, along with contact information, in the application to be notified.

Thank you for your assistance in this matter.

Sincerely,

Terrence P. Morris

Terrence P. Morris

Cc: Brian Traugott, ***via email***
Andrew Lee, Esq.,
Associate City Solicitor, ***via email***

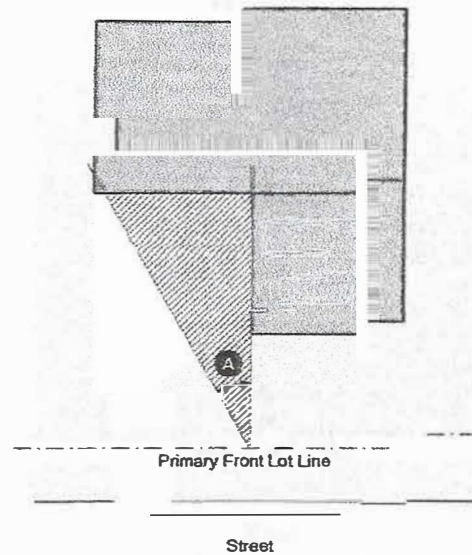
3.4.4. Garage Design Standards

A. Applicability

Garage Design Standards apply in all Residence Districts

B. Definitions

1. **Garage.** An attached or detached building, or portion of a building, that is able to be accessed by an automobile or is used or intended to be used primarily for the storage or parking of 1 or more automobiles. A detached Garage is an Accessory Building (See Sec. 3.4.3.)
2. **Front Facing Garage.** A Garage with a Garage Door or Doors facing the Primary Front Lot Line at an angle between 0 and 59 degrees perpendicular to the Primary Front Lot Line. The angle shall be measured between the Garage Door or Doors and a line parallel to the Primary Front Lot Line at the midpoint of the Primary Front Lot Line. If there is a curve at the midpoint, the angle shall be measured between the Garage Door or Doors and a line tangent to the curve at the midpoint of the Primary Front Lot Line.
3. **Side Facing Garage.** A Garage with a Garage Door or Doors facing the Primary Front Lot Line at an angle between 60 and 90 degrees. The angle shall be measured between the Garage Door or Doors and a line parallel to the Primary Front Lot Line at the midpoint of the Primary Front Lot Line. If there is a curve at the midpoint, the angle shall be measured between the Garage Door or Doors and a line tangent to the curve at the midpoint of the Primary Front Lot Line.



Side-Facing Garage Door Location	min	max
Angle allowed within (angle from Primary Front Lot Line)	60 degrees	90 degrees

4. **Garage Door.** The door to a Garage that provides access for an automobile. Garage door width is measured from the inside face of the door jambs.
 - a. **Single Garage Doors** are Garage Doors used for a single automobile to access a Garage.
 - b. **Double Garage Doors** are Garage Doors used for 2 automobiles to access a Garage side-by-side.
5. **Garage Wall.** Any wall enclosing a Garage including that wall containing the Garage entrance.
6. **Front Elevation.** The exterior wall of a principal building oriented in whole or in part toward the Primary Front Lot Line. The Front Elevation does not include any exterior wall of a building more than 10 feet behind the frontmost exterior wall oriented in whole or in part toward the Primary Front Lot Line.

D. Standards for Side Facing Garages

1. A Side Facing Garage may be located in front of the Front Elevation, but not within the front setback, if it meets the following:
 - a. A minimum of 10% Fenestration on the Garage Wall facing the Primary Front Lot Line as measured from the exterior.
2. A Single Garage Door may be up to 9 feet wide.
3. A Double Garage Door may be up to 16 feet wide.

E. Standards for Single-Family, Detached residential buildings

1. There may be no more than 700 square feet in total Garage area on a lot providing for no more than 3 automobiles. A lot may contain no more than one attached Garage and one detached Garage.

F. Additional Standards for Two-Family, Detached residential buildings

1. Parking spaces in Garages are counted toward the minimum number of accessory parking spaces required by Sec. 5.1.4. Garages may be attached or detached.
 - a. For each residential unit, there shall be no more than 500 square feet in total Garage area, no more than one Garage, and each Garage shall provide for no more than 2 automobiles.

G. Exemptions

1. A detached or attached Front Facing Garage that is set back more than 10 feet from the Front Elevation is exempt from the standards for Front Facing Garages (Sec. 3.4.4.C).
2. A detached or attached Side Facing Garage that is set back from the Front Elevation, and is not on a corner lot, is exempt from the standards for Side Facing Garages (Sec. 3.4.4.D).
3. Garages located on Rear Lots are exempt from the standards for Front Facing Garages (Sec. 3.4.4.C) and standards for Side Facing Garages (Sec. 3.4.4.D).

H. By Special Permit

1. For Single-Family, Detached residential buildings: a Garage with provision for more than 3 automobiles, or a second attached or detached Garage, or more than 700 square feet in total Garage area on a lot, or more than 2 Garages.
2. For residential buildings: the Front Elevation may include those portions of the exterior wall oriented in whole or in part toward the Primary Front Lot Line that are more than 10 feet behind the frontmost exterior wall.

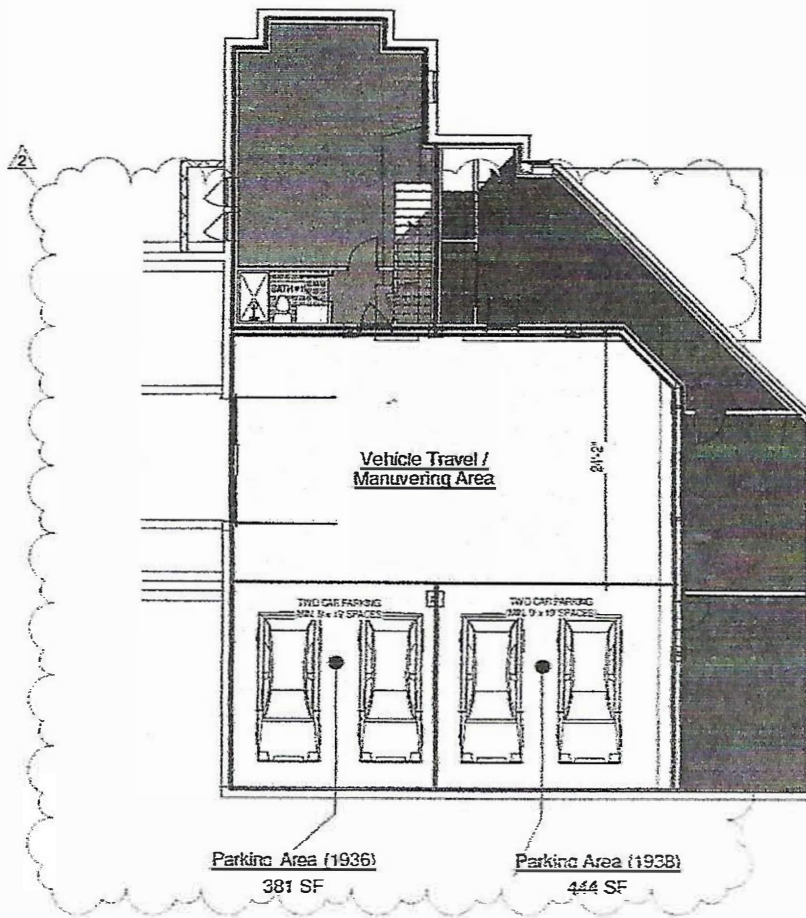
(Ord. No. A-78, 06/20/16; Ord. No. A-84, 06/20/16; Ord. No. A-95, 12/05/16; Ord. No. A-105, 03/06/17; Ord. No. B-6, 03-19-18; Ord. No. B-67, 02-16-21; Ord. No. B-63, 11-09-21)

3.4.5. Accessory Apartments

See Sec. 6.7.1

3.4.6. Temporary Uses Allowed

[reserved]



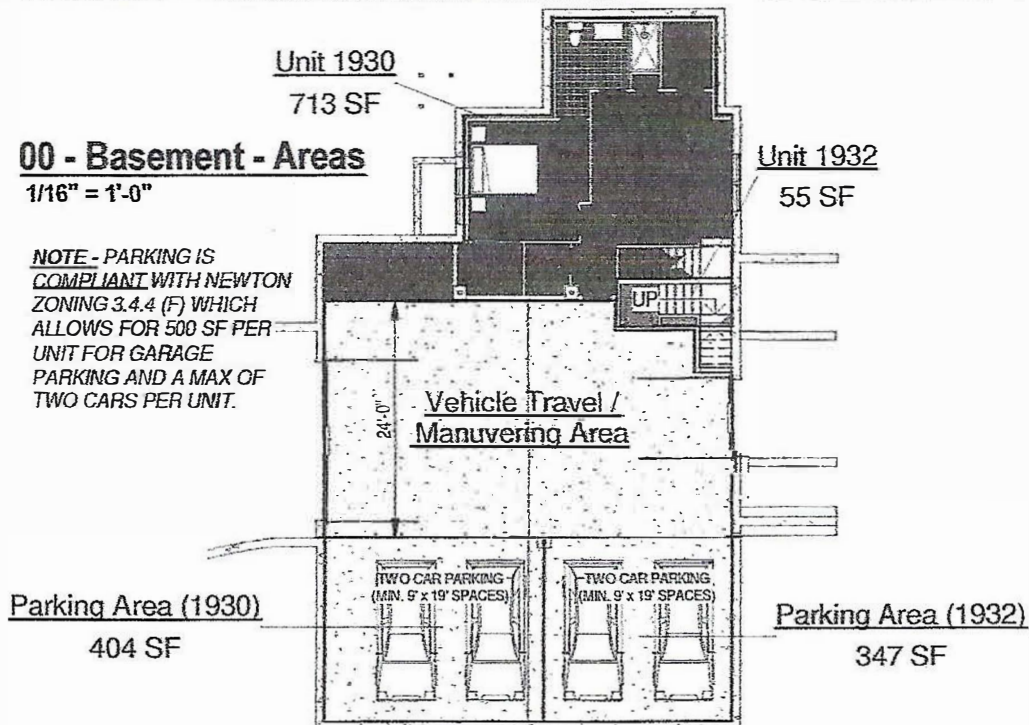
1936-1938

00 - Basement - Areas

NOTE - PARKING IS COMPLIANT WITH NEWTON ZONING 3.4.4 (F) WHICH ALLOWS FOR 500 SF PER UNIT FOR GARAGE PARKING AND A MAX OF TWO CARS PER UNIT.

00 - Basement - Areas

1/16" = 1'-0"



1930-1932

NOTE - PARKING IS COMPLIANT WITH NEWTON ZONING 3.4.4 (F) WHICH ALLOWS FOR 500 SF PER UNIT FOR GARAGE PARKING AND A MAX OF TWO CARS PER UNIT.

MIDDLESEX COUNTY REGISTRY OF DEEDS

1930 COMMONWEALTH AVENUE

PLAN REFERENCE:
BOOK 22192 PAGE 386DEED REFERENCE:
BOOK 80155 PAGE 124OWNER OF RECORD:
VONATRAUGS COMM AVE LLC

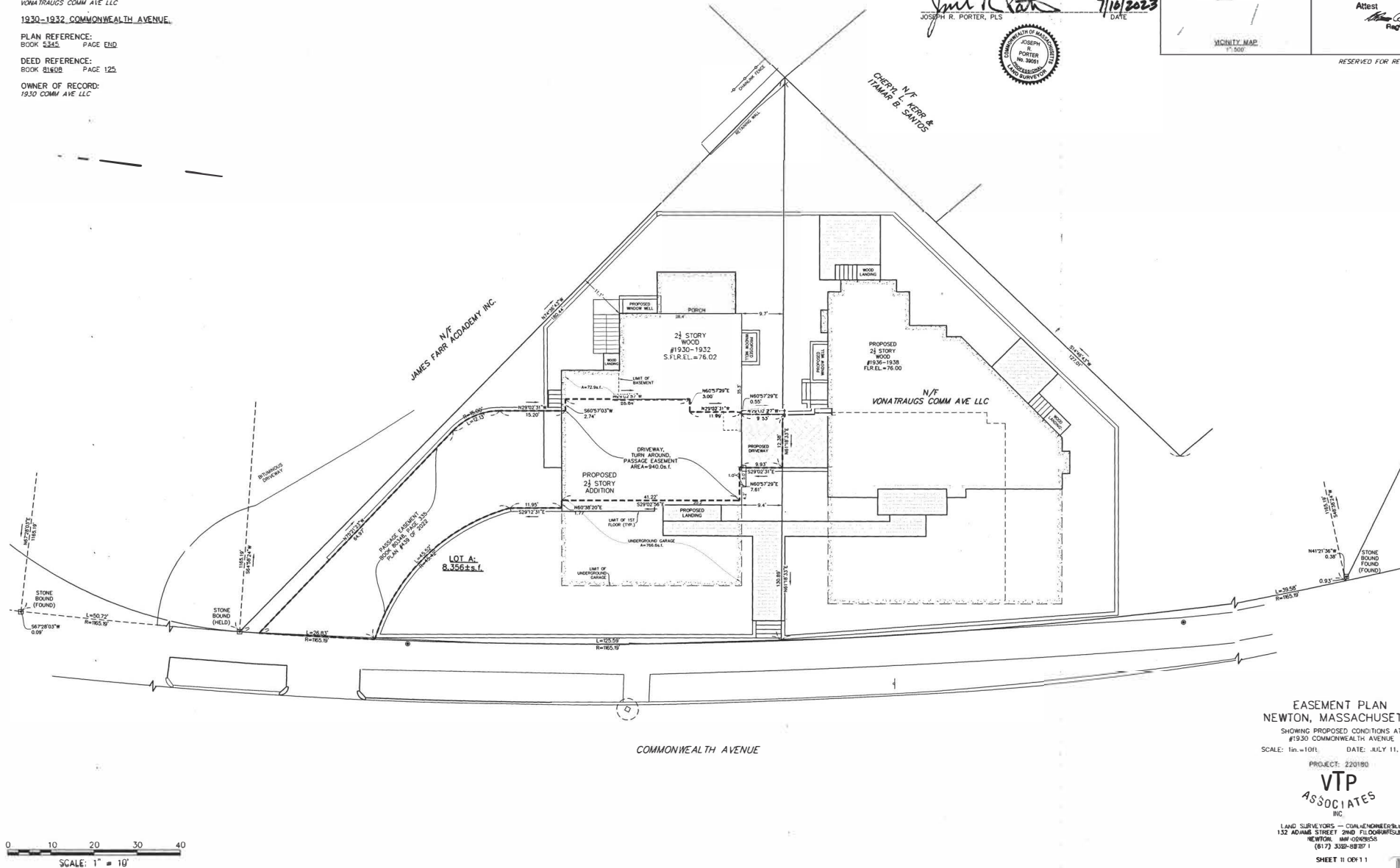
1930-1932 COMMONWEALTH AVENUE

PLAN REFERENCE:
BOOK 5345 PAGE ENDDEED REFERENCE:
BOOK 81808 PAGE 125OWNER OF RECORD:
1930 COMM AVE LLCN/F
ELIZABETH M. MONAHAN
& JEAN E. BARTHOLOMEWI CERTIFY THAT THE PROPERTY LINES SHOWN HEREON ARE THE
LINES DIVIDING EXISTING OWNERSHIP, AND THE LINES OF STREETS
OR WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR
WAYS ALREADY ESTABLISHED AND NO NEW LINES FOR THE DIVISION
OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN, AND
THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE
RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE
COMMONWEALTH OF MASSACHUSETTS.J. R. Porter
JOSEPH R. PORTER, PLS. DATE 7/10/2023

Middlesex Registry of Deeds,
Southern District
Cambridge, Massachusetts
Plan No. 159 of 2023
Rec'd 7-12-2023
at 11:43 AM

Attest
[Signature]
Register

RESERVED FOR REGISTRY USE



459 of 2023