



Watertown City Council

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6470

ELECTED OFFICIALS:

Mark S. Sideris,
Council President

Vincent J. Piccirilli, Jr.,
Vice President &
District C Councilor

John M. Airasian,
Councilor At Large

Caroline Bays,
Councilor At Large

John G. Gannon,
Councilor At Large

Anthony Palomba,
Councilor At Large

Nicole Gardner,
District A Councilor

Lisa J. Feltner,
District B Councilor

Emily Izzo,
District D Councilor

CITY COUNCIL MEETING

TUESDAY, JANUARY 10, 2023 AT 7:00 PM

**RICHARD E. MASTRANGELO COUNCIL CHAMBER
ADMINISTRATION BUILDING, 149 MAIN STREET**

AGENDA

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <http://vodwcatv.org/CablecastPublicSite/?channel=3>
- B. The Public may join the virtual meeting online:
<https://watertown-ma.org.zoom.us/j/92991331344>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 929 9133 1344
- D. Public may comment through email: vpiccirilli@watertown-ma.gov

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- 1. ROLL CALL
 - 2. PLEDGE OF ALLEGIANCE
 - 3. PUBLIC FORUM
 - 4. EXAMINATION OF RECORDS OF PREVIOUS MEETINGS
 - A. City Council Meeting Minutes - December 13, 2022
 - 5. PRESIDENT'S REPORT
 - 6. PUBLIC HEARINGS
 - A. Public Hearing and Vote on a Petition from Comcast for a Grant of Location in Galen Street So That the Davis Co. in Conjunction with Comcast May Place Two 4-Inch Conduits from Utility Pole #137/1 Location on Union Street Located Within the Sidewalk to a Manhole Being Placed the Davies Co. within Galen Street. The Recommendations and Conditions Set Out by the Department of Public Works Shall Be Required Upon Approval of This Application.
 - B. Public Hearing and Vote on a Petition from Comcast for a Grant of Location in Arsenal Street So That Comcast Corporation May Place Two 4-Inch Conduits from Utility Pole #46 Located on Arsenal Street Behind the Sidewalk to a Manhole Placed by the Owner of 250 Arsenal Place for a Total Distance of Approximately 150 Linear Feet to Provide Service to 250 Arsenal Street. The Recommendations

and Conditions Set Out by the Department of Public Works Shall Be Required Upon Approval of This Application.

- C. Public Hearing and Vote on a Petition from Eversource for a Grant of Location in Pleasant to Install Approximately 60 Feet of Conduit From MH 23550 on Pleasant Street Easterly Towards the Intersection of Pleasant Street and Main Street; in Main Street to Install Approximately 177 Linear Feet of Conduit From the Intersection of Pleasant Street and Main Street Easterly to MH 3701; and in North Beacon Street to Install Approximately 1612 Linear Feet of Conduit From MH 3700 at Riverside Street and North Beacon Street Easterly Connecting MH 9898, MH 9899, MH 9900, and MH 9904. The Recommendations and Conditions Set Out by the Department of Public Works Shall Be Required Upon Approval of This Application.
 - D. Public Hearing and Vote on a Petition from Verizon for a Grant of Location in Galen Street to Install and Maintain Approximately 120 Linear Feet of 4-Inch Schedule 40 PVC Conduit from Manhole 16/205A Within Galen Street to the Property Line of 66 Galen Street and Approximately 120 Linear Feet of 4-Inch Schedule 40 PVC Conduit from Manhole 16-205 Within Galen Street to the Property Line of 66 Galen Street and in Water Street to Install and Maintain Approximately 24 Linear Feet of 4-Inch Schedule 40 PVC Conduit From the Property Line of 66 Galen Street Under Water Street to the 0 Water Street Property Line With Permission to Lay and Maintain Underground Conduits, Manholes, Cables, and Wires in the Above or Intersecting Public Ways for the Purpose of Making Connections With Such Poles and Buildings As It May Desire for Distributing Purposes. The Recommendations and Conditions Set Out by the Department of Public Works Shall Be Required Upon Approval of This Application.
 - E. Public Hearing and a Vote on a Proposed Order Authorizing the Sum of \$150,000 to Be Appropriated to Pay Costs of Designing and Constructing a New Gazebo at Upper Saltonstall Park, Including all Costs for Incidental and Related Thereto; and That to Meet This Appropriation, the Treasurer, with the Approval of the City Manager, Is Authorized to Borrow Said Amount Under and Pursuant to M.G.L. c.44 Section 7(1), or Pursuant to Any Other Enabling Authority, and to Issue Bonds or Notes of the City Therefor.
 - F. Public Hearing and a Vote on a Proposed Order Authorizing the Sum of \$2,600,000 To Be Appropriated to Pay Costs of Acquiring Easements for the Mount Auburn Street Corridor Project, Including the Costs of Appraisals and All Other Costs Incidental and Related Thereto; and to Meet This Appropriation, the Treasurer, With the Approval of the City Manager Is Authorized to Borrow Said Amount Under and Pursuant to M.G.L. c. 44 section 7(1), or Pursuant to Any Other Enabling Authority, and to Issue Bonds or Notes of the City Therefor.
 - G. Public Hearing and Vote on a Proposed Order Authorizing the Sum of \$200,000 to Be Appropriated to Pay Costs of Purchasing a Swap Loader Trash Compactor Vehicle for the Department of Public Works, Including All Costs Incidental and Related Thereto; and to Meet This Appropriation, the Treasurer, With the Approval of the City Manager, Is Authorize to Borrow Said Amount Under and Pursuant to M.G.L. c. 44, section 7(1), or Pursuant to Any Other Enabling Authority, and to Issue Bonds or Notes of the City Therefor.
7. INFORMATIONAL PRESENTATIONS
- A. Informational Presentation on the New Multifamily Zoning Requirements for MBTA Communities
8. MOTIONS, ORDINANCES, ORDER, AND RESOLUTIONS
- A. Confirmatory Order to Acquire 124 Watertown Street (Parker School)

9. REPORTS OF COMMITTEES

- A. Committee on Economic Development and Planning Report Regarding the Reuse and Design of a Building at the Former Police Station and the Review of the Specialized Stretch Code with Recommendations - Lisa J. Feltner, Chair

ACTION ITEMS:

1. That the City Council Close Out the Prior Referral to Develop Policy Guidance for the Reuse of the Former Police Station as the Potential Reuse of the Site Will Be Included in the Watertown Square Study Per the November 22, 2022 Budget Policy Guidelines
2. That the City Council Vote to Adopt the Specialized Stretch Code Consisting of Appendix RC of 225 CMR 22 (Low Rise Residential) and Appendix CC of 225 CMR 23 (All Other Buildings), Assuming There Are No Substantial Changes to the Final Regulations to Be Published by the Secretary of State in Late December 2022, and Furthermore to Be Made Effective in Watertown Six Months After the City Council Vote

10. NEW BUSINESS

- A. Referral to the Committee on Rules and Ordinances to Discuss Rules Regarding Annual Councilor Meetings
- B. Referral to the Committee on Rules and Ordinances to Discuss Creating an Ordinance Requiring Closed Captioning on Public-Facing Televisions in Restaurants and Bars

11. COMMUNICATIONS FROM THE CITY MANAGER

- A. Deputy City Manager
- B. Classification and Compensation Study
- C. Personnel Department Assessment Review
- D. Residents' Advisory Committee
- E. Moxley Court Project
- F. Filippello Park Spray Pad Project

12. REQUESTS FOR INFORMATION/REVIEW OF LIST OF PENDING MATTERS

13. ANNOUNCEMENTS

14. PUBLIC FORUM

15. RECESS OR ADJOURNMENT



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Emily Izzo,
District D Councilor

NOTICE OF PUBLIC HEARING – COMCAST Grant of Location: GALEN STREET

December 28, 2022

Dear Abutters:

The City Council of the City of Watertown will hold a public meeting on Tuesday, January 10, 2023 at 7:00 p.m. in the Richard E. Mastrangelo Council Chamber, 149 Main St., Watertown, MA along with remote opportunities for participation with public access provided as follows:

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <http://vodwcatv.org/CablecastPublicSite/?channel=3>
- B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/92991331344>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 929 9133 1344 #
- D. Public may also comment through email: vpiccirilli@watertown-ma.gov

on a petition from Comcast for consideration of a Grant of Location for the following installations:

- Galen Street – The Davies Co. in conjunction with Comcast Corporation intends to place two 4-inch conduits from utility pole #137/1 located on Union Street located within the sidewalk to a manhole being placed by the Davies Co. within Galen Street.

This work is necessary to provide telecommunication services to 66 Galen Street. Upon completion of the Department of Public Works review, the following recommendations and conditions for consideration by the City Council will be required should the Grant of Location be approved for this application.

Additional Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.

3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces, should be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, AAB and City of Watertown standards.
6. All work within the right of way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices, such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted, and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.

Please feel free to contact Mark Pavone at 508-530-8681 for any technical questions you may have.

Your participation is not necessary, if you choose not to object to the above petition.

Sincerely,

Watertown City Council



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET
WATERTOWN MA 02472

Gregory M. St. Louis, PE
Superintendent of Public Works

(P) 617-972-6420
(F) 617-972-6402

TYPE: Grant of Location
DATE: September 30, 2022
APPLICANT: Comcast
WORK ORDER: WO#
LOCATION: Galen Street

The City of Watertown Department of Public Works has reviewed the attached petition by Comcast for consideration of a Grant of Location for the following installations:

- **Galen Street –The Davies Co. in Conjunction with Comcast Corporation intends to place two 4-inch conduits from utility pole #137/1 located on Union St located within the sidewalk to a manhole being placed by the Davies Co. within Galen Street as shown on plans submitted.**

This work is necessary to provide telecommunications to 66 Galen Street. Upon completion of our review, we are submitting the following recommendations and conditions for consideration by the City Council should the Grant of Location be approved for this application. A photo of the location of the proposed work is presented attached to this document.

Standard Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces shall be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, MAAB and City of Watertown standards.
6. All work within the Right of Way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to all applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and shall be kept in a neat and orderly fashion.

9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.



Photo 1: View of Galen Street facing North at location of proposed service connection



Photo 2: View of Galen Street facing South at location of proposed service connection



Photo 3: View of connection point on Union Street facing West

**CITY OF WATERTOWN
MASSACHUSETTS**

PETITION for GRANT OF LOCATION

To the Petitioner:

City of Watertown Ordinance Section 23-52 requires that each petition for grant of location be submitted to the Public Works Department for a preliminary review. The comments of the Public Works Commissioner will be part of the record submitted to the City Council. Upon filing with the City Council, the petition will be scheduled for a public hearing before the Public Facilities Committee of City Council. **The petitioner is responsible for insuring that the petition is complete and all required materials are in order for review.** Attached please find the City Engineer's Standard Requirements for Plans and the Department of Public Works Permit Processing brochure.

Grant of Location Process:

1. Applicant submits completed Petition Form and required materials to the City Council
2. Public Works Department conducts preliminary review and gives written comments to the applicant
3. Engineering Division files Petition Form with comments with the Clerk of the City Council
4. City Council schedules petition for a public hearing before the Public Facilities Committee of the City Council
5. Public Facilities Committee recommendations are forwarded to the City Council for a final decision

I. IDENTIFICATION (Please Type or Print Clearly)

Company Name__ Comcast Of Massachusetts _____

Address__ 440 Myles Standish BLVD Taunton MA

Phone Number 774 644 9104

Fax Number _____

Contact Person Manuel Furtado

Title Project Coordinator

Signature _____ Date 9/22/22
Person filing application

If a telecommunications company, indicate how certified by the Department of Telecommunications and Energy: Utilities CO

II. DESCRIPTION OF PROJECT: to be completed by petitioner

- A. Write here or attach a description of the project including, location, proposed time frame for completion, type of materials to be used, benefit provided to the City, project mitigation plan as applicable, street reconstruction plan including timetable for completion.

The Davies Co in Conjunction with Comcast Corporation Intends to Place 2-4" conduits from a utility pole located on Union St UP# 137/1 located within the Sidewalk to a Manhole being Placed by the Davies Co within Galen Street as shown on Plans submitted

- B. Include or attach a sketch to provide a visual description of the project. If plans are attached, provide:
Title of Plan 66 Galen Street SOW Date of plan 9/22/222

III. PUBLIC WORKS DEPARTMENT REVIEW

Date received by Public Works Department DATE

Check One:

Minor Project



Major Project



Lateral



(Refer to City Engineer Standard Requirements for Plans for definition of minor and major project)

Plans Submitted:

Certified Plot Plan



Stamped Plans



DATE AND COMMENTS:

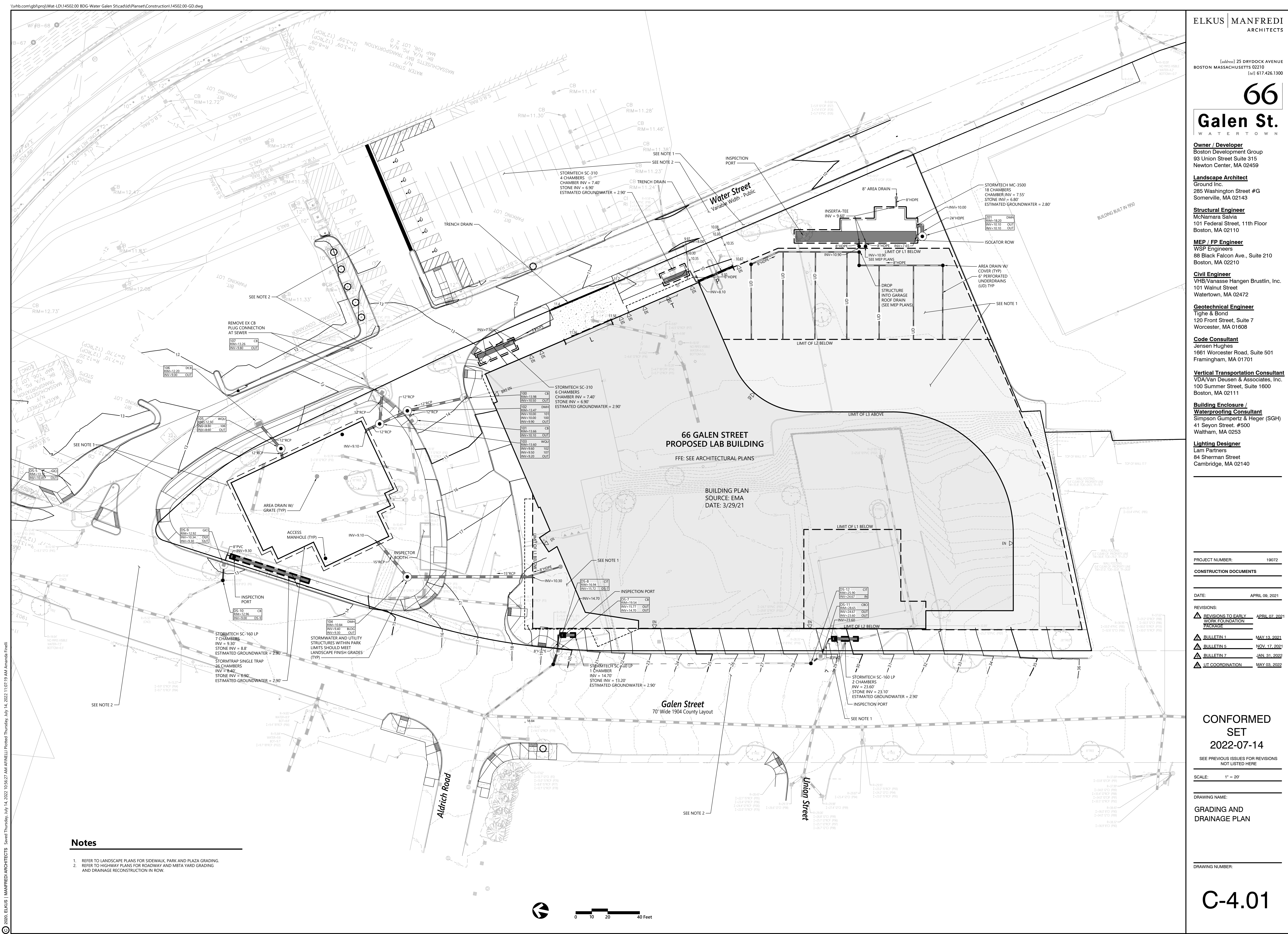
RECOMMENDATIONS:

V. RECOMMENDATION TO PUBLIC FACILITIES COMMITTEE:

Commissioner, Public Works

Date





PROJECT NUMBER: 19072

CONSTRUCTION DOCUMENTS

DATE: APRIL 09, 2021

REVISIONS:
Δ REVISIONS TO EARLY WORK FOUNDATION PACKAGE APRIL 07, 2021

Δ BULLETIN 1 MAY 13, 2021
Δ BULLETIN 5 NOV. 17, 2021
Δ BULLETIN 7 JAN. 31, 2022
Δ UT COORDINATION MAY 03, 2022

CONFORMED
SET
2022-07-14

SEE PREVIOUS ISSUES FOR REVISIONS
NOT LISTED HERE

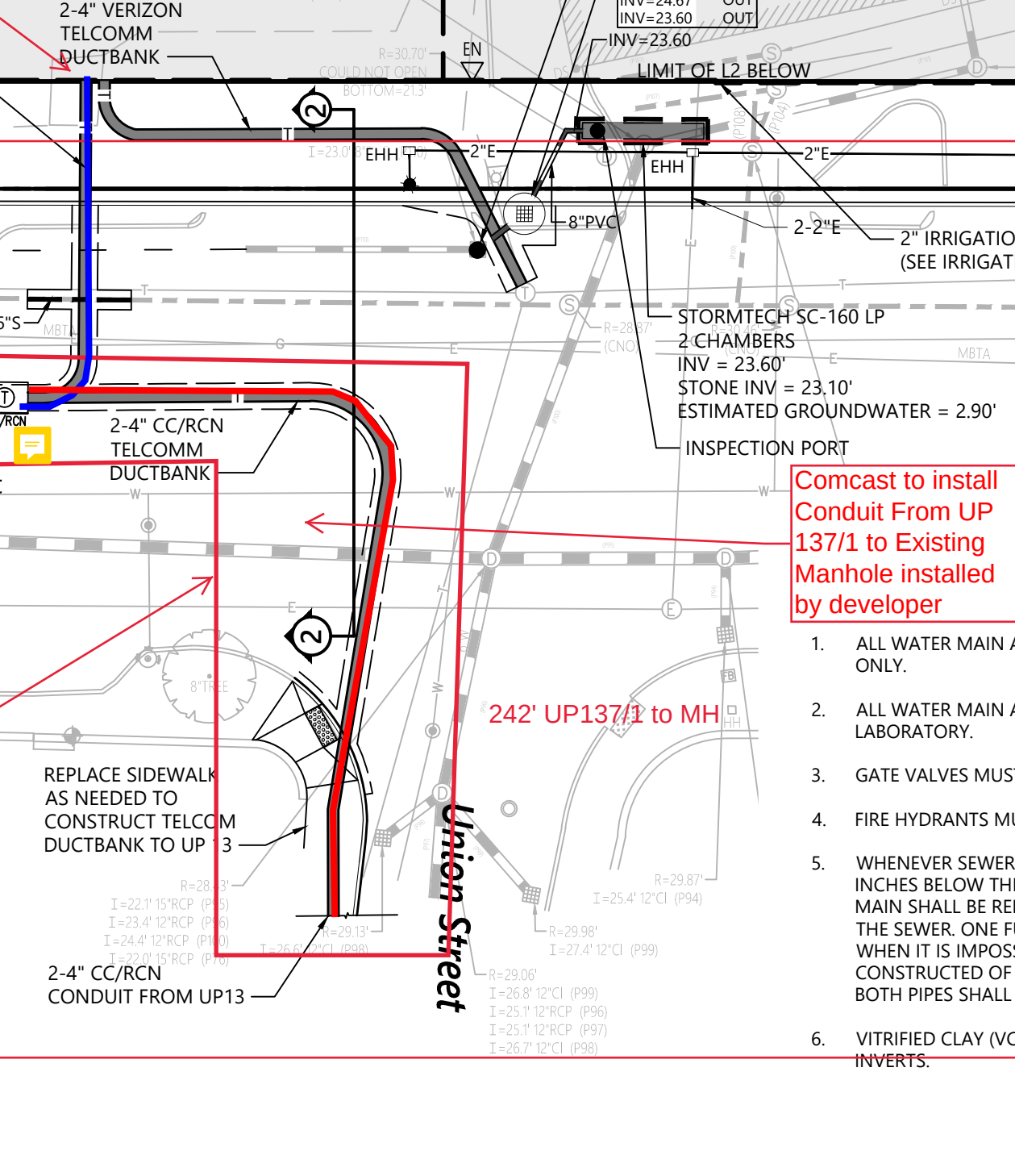
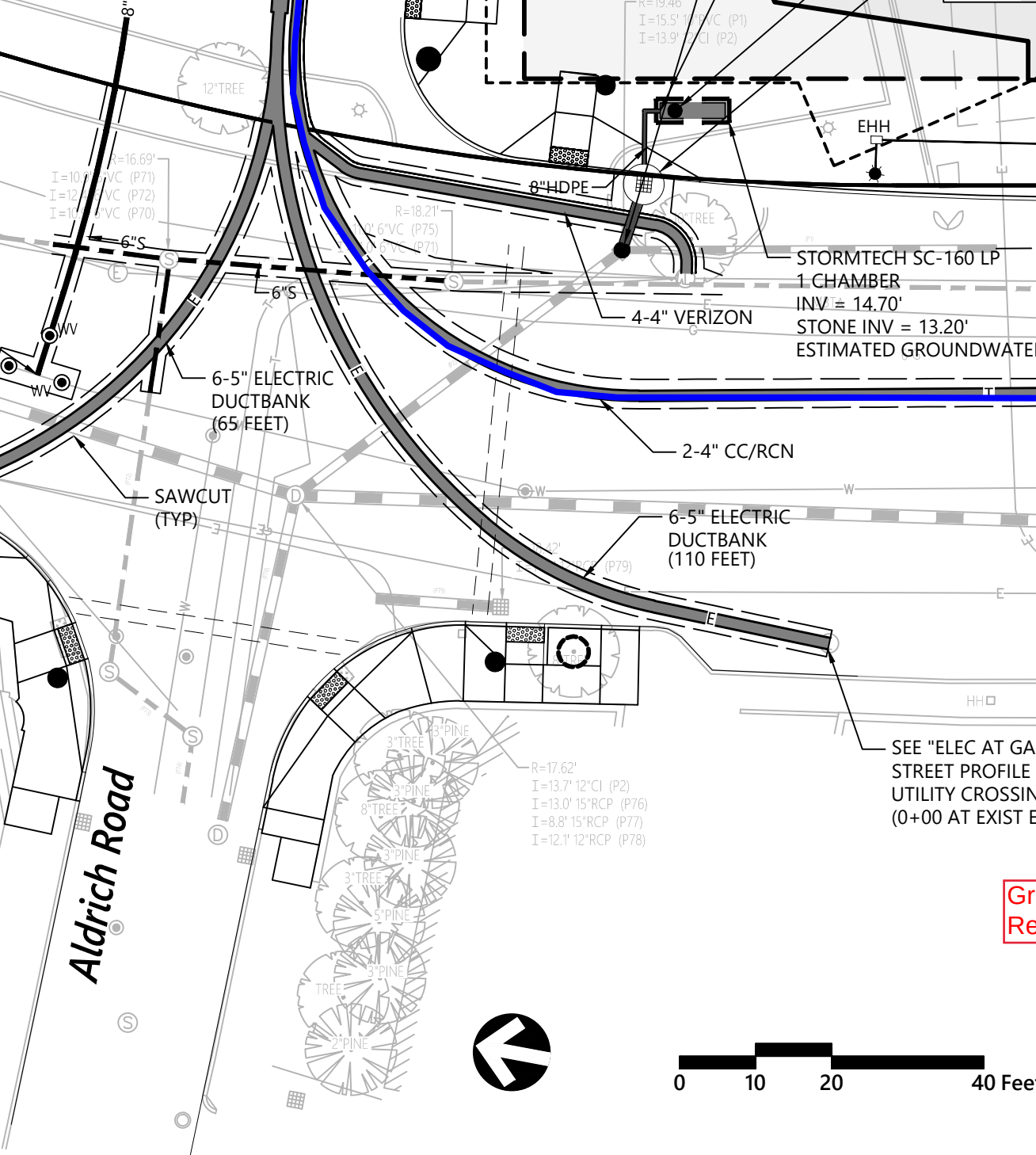
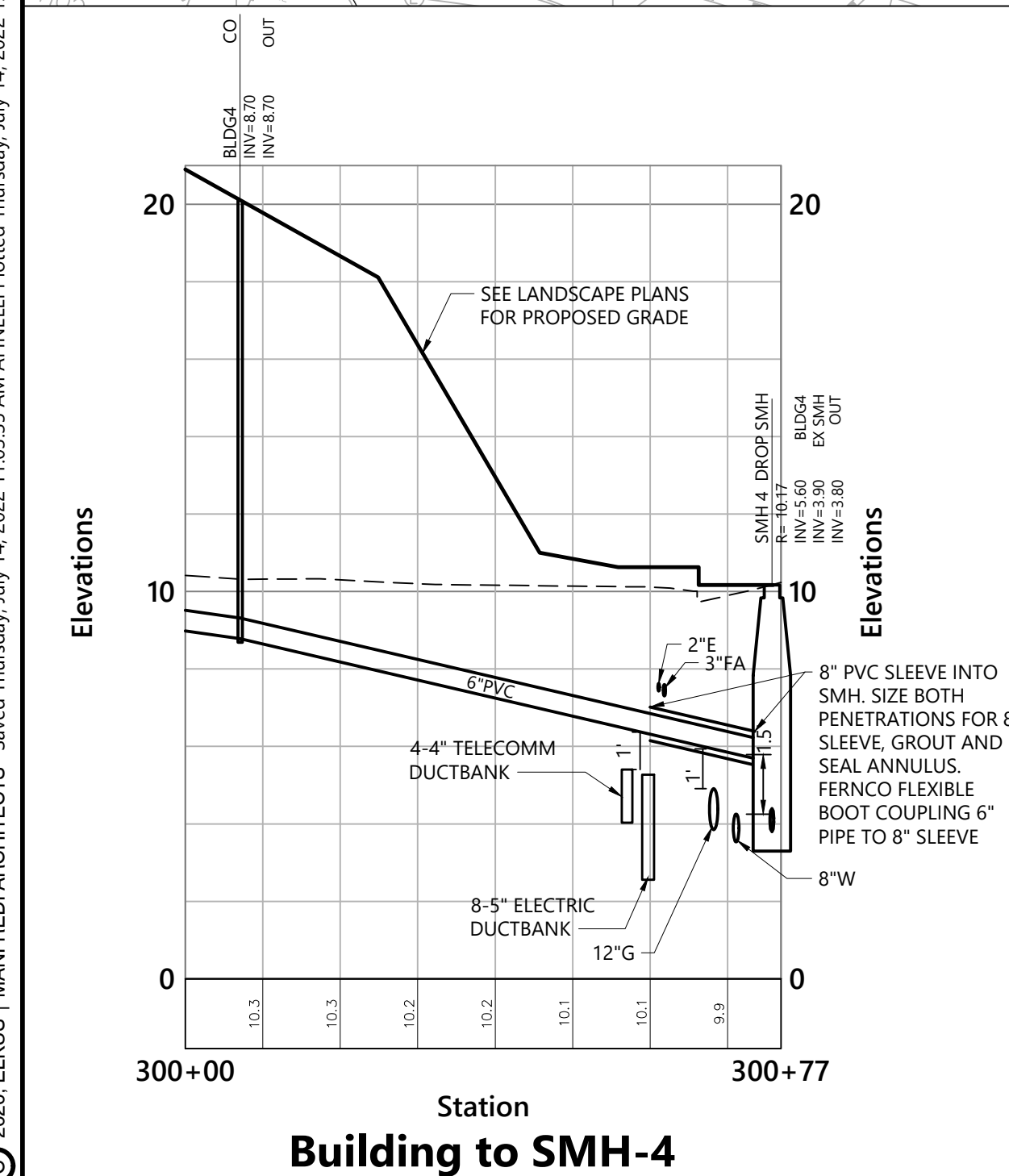
SCALE: 1" = 20'

DRAWING NAME:

GRADING AND
DRAINAGE PLAN

DRAWING NUMBER:

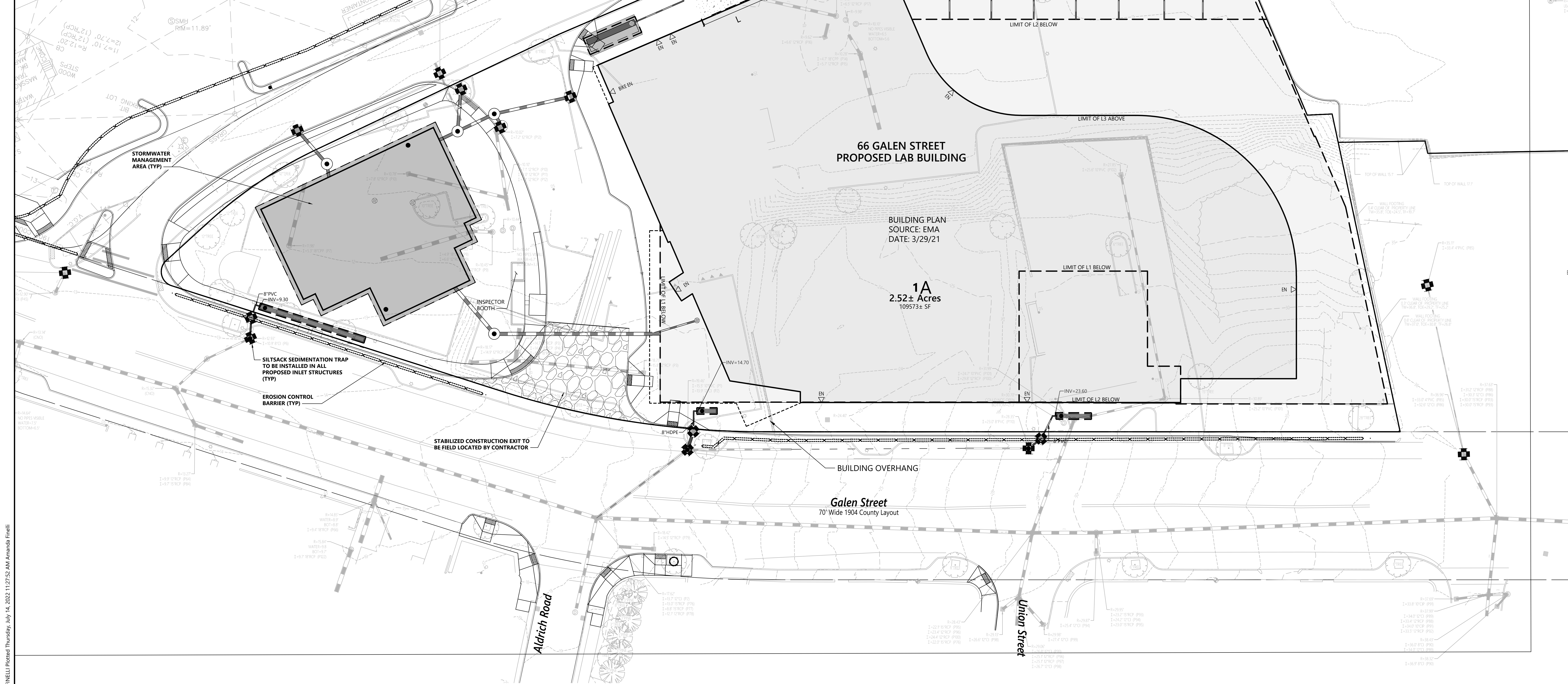
C-4.01



CONFORMED	
SET	
2022-07-14	
SEE PREVIOUS ISSUES FOR REVISIONS NOT LISTED HERE	
SCALE:	1" = 20'
DRAWING NAME:	
UTILITY PLAN	
DRAWING NUMBER:	
C-5.01	

1. THE QUANTITIES AND LOCATIONS OF EROSION/SEDIMENTATION CONTROL MEASURES (INCLUDING TEMPORARY SEDIMENTATION BASINS) SHOWN ON THIS SITE MAP ARE APPROXIMATE. THIS SITE MAP, LIKE THE SWPPP, IS A DYNAMIC DOCUMENT AND MUST BE CONTINUALLY UPDATED BY THE OPERATOR(S) THROUGHOUT CONSTRUCTION. PROJECT OPERATOR(S) SHALL UPDATE SITE MAP TO SHOW FINAL LOCATIONS OF STORMWATER CONTROL MEASURES AND PROVIDE INFORMATION FOR TYPES OF CONTROLS PROVIDED. PROJECT OPERATOR(S) ARE RESPONSIBLE TO IMPLEMENT, INSPECT, MAINTAIN, REPAIR, AND MODIFY EROSION/SEDIMENTATION CONTROL MEASURES (INCLUDING TEMPORARY SEDIMENTATION BASINS).
2. STORMWATER CONTROLS MUST BE DESIGNED, INSTALLED AND MAINTAINED IN COMPLIANCE WITH PART 2.1 OF THE 2017 CGP.
3. EROSION AND SEDIMENT CONTROLS MUST BE IMPLEMENTED TO ADDRESS THE REQUIREMENTS OF PART 2.2 OF THE 2017 CGP.
4. IF ANY STORMWATER CONTROLS MUST BE DESIGNED (E.G. SEDIMENT BASINS OF CONVEYANCE CHANNELS), THE DESIGN DOCUMENTATION MUST BE INCLUDED IN ATTACHMENT 5 OF THE SWPPP MANUAL.
5. THE ITEMS LISTED BELOW ARE REQUIRED TO BE SHOWN ON THIS SITE MAP PER PART 7.2.4 OF THE 2017 CGP. THIS SITE MAP ALREADY INCLUDES SOME OF THE ITEMS IDENTIFIED BELOW, BUT IT IS THE RESPONSIBILITY OF THE PROJECT OPERATOR(S) TO SUPPLEMENT THE INFORMATION INCLUDED HEREON TO ENSURE THAT ALL REQUIRED ITEMS ARE PROVIDED. PROJECT OPERATOR(S) SHALL CONTINUALLY UPDATE THIS SITE PLAN TO DOCUMENT THESE ITEMS THROUGHOUT CONSTRUCTION, INCLUDING BUT NOT LIMITED TO:

- BOUNDARIES OF THE AREA OF DISTURBANCE
- 50-FOOT BUFFER AROUND THE AREA OF DISTURBANCE
- IDENTIFY AREA OF STEEP SLOPE
- LOCATIONS OF STOCKPILES
- LOCATION OF CONSTRUCTION VEHICLE ACCESS
- ALL STORMWATER DISCHARGE POINTS FROM THE AREA OF DISTURBANCE (TO WATERBODIES AND TO STORM DRAIN INLETS)
- LOCATION OF ALL SURFACE WATERS WHERE THE AREA OF DISTURBANCE DISCHARGES
- THE LOCATION AND NATURE OF ALL EROSION AND SEDIMENT CONTROLS
- PERIMETER CONTROLS
- STORM DRAIN INLET CONTROLS
- A NOTE THAT INDICATES THAT THE CONTRACTOR WILL PROVIDE INFORMATION FOR ANY OTHER TYPES OF CONTROLS REQUIRED
- LOCATION OF ON-SITE AND OFF-SITE CONSTRUCTION SUPPORT ACTIVITY AREAS COVERED BY THIS PERMIT
- AREAS OF FEDERALLY LISTED CRITICAL HABITAT WITHIN THE SITE AND/OR AT DISCHARGE LOCATIONS
- DRAINAGE PATTERNS OF STORMWATER AND AUTHORIZED NON-STORMWATER BEFORE AND AFTER MAJOR GRADING ACTIVITIES
- LOCATION OF ALL POTENTIAL POLLUTANT GENERATING ACTIVITIES
- LOCATIONS WHERE ANY CHEMICALS WILL BE USED AND STORED



DOCUMENT USE:

THIS BASE PLAN ILLUSTRATES THE MINIMUM PERIMETER EROSION & SEDIMENTATION CONTROLS. THE SWPPP OPERATOR SHALL UPDATE THIS PLAN THROUGHOUT THE DURATION OF CONSTRUCTION TO SHOW THE LOCATIONS OF PROPOSED/CONSTRUCTED EROSION & SEDIMENTATION CONTROLS DEEMED NECESSARY TO MEET THE REQUIREMENTS OF THE NPDES CGP.

PROJECT EBS NARRATIVE:

THE PROPOSED PROJECT CONSISTS OF A 331,900 GSF LAB AND OFFICE BUILDING. THE SITE IS APPROXIMATELY 2.55 ACRES. THE PROJECT DISTURBANCE EXCEEDS 1 ACRE THEREFORE IS SUBJECT TO THE REQUIREMENTS OF THE EPA CONSTRUCTION GENERAL PERMIT.

EROSION AND SEDIMENTATION CONTROL TECHNIQUES

THE EROSION AND SEDIMENTATION CONTROLS SHOWN HEREON ARE PERIMETER MEASURES ONLY AND ARE PROVIDED AS A STARTING POINT FOR CONTRACTOR'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR IS REQUIRED TO PROVIDE ADDITIONAL INTERIM EROSION AND SEDIMENTATION CONTROLS, INCLUDING BUT NOT LIMITED TO THOSE LISTED BELOW. THE CONTRACTOR SHALL MANAGE EROSION AND SEDIMENTATION DURING CONSTRUCTION TO PREVENT IMPACTS TO RESOURCE AREAS, ROADWAYS, AND ADJUTING PROPERTIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE EROSION AND SEDIMENTATION CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION.

CATCH BASIN PROTECTION

NEWLY CONSTRUCTED AND EXISTING CATCH BASINS WILL BE PROTECTED WITH SILT SACKS THROUGHOUT CONSTRUCTION.

GRAVEL AND CONSTRUCTION ENTRANCE/EXIT

A TEMPORARY CRUSHED-STONE CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED. A CROSS SLOPE WILL BE PLACED IN THE ENTRANCE TO DIRECT RUNOFF TO THE SEDIMENT TRAP.

VEGETATIVE SLOPE STABILIZATION

STABILIZATION OF OPEN SOIL SURFACES WILL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. UNLESS THERE IS SUFFICIENT SNOW COVER TO PROHIBIT IMPLEMENTATION, VEGETATIVE SLOPE STABILIZATION WILL BE USED TO MINIMIZE EROSION ON SLOPES OF 3:1 OR FLATTER. ANNUAL GRASSES, SUCH AS ANNUAL RYE, WILL BE USED TO ENSURE RAPID GERMINATION AND PRODUCTION OF ROOTMASS. PERMANENT STABILIZATION WILL BE COMPLETED WITH THE PLANTING OF PERENNIAL GRASSES OR LEGUMES. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED BY HYDRO-SEEDING OR SODDING. A SUITABLE TOPSOIL, GOOD SEEDBED PREPARATION, AND ADEQUATE LIME, FERTILIZER AND WATER WILL BE PROVIDED FOR EFFECTIVE ESTABLISHMENT OF THESE VEGETATIVE STABILIZATION METHODS. MULCH WILL ALSO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER.

TEMPORARY SEDIMENT BASINS

TEMPORARY SEDIMENT BASINS WILL BE DESIGNED EITHER AS EXCAVATIONS OR BERMED STORMWATER DETENTION STRUCTURES (DEPENDENT ON GRADING) THAT WILL RETAIN RUNOFF FOR A SUFFICIENT PERIOD OF TIME TO ALLOW SUSPENDED SOIL PARTICLES TO SETTLE OUT PRIOR TO DISCHARGE. THESE TEMPORARY BASINS WILL BE LOCATED BASED ON CONSTRUCTION NEEDS AS DETERMINED BY THE CONTRACTOR AND OUTLET DEVICES WILL BE DESIGNED TO CONTROL VELOCITY AND SEDIMENT. POINTS OF DISCHARGE FROM SEDIMENT BASINS WILL BE STABILIZED TO MINIMIZE EROSION. AT A MINIMUM, SEDIMENTATION BASINS SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE STORAGE FOR THE VOLUME OF RUNOFF GENERATED FROM A 2-YR 24-HR DESIGN STORM, OR AT LEAST 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINING TO THE BASIN.

STOCKPILE MANAGEMENT

SIDE SLOPES OF STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES NOT USED WITHIN 30 DAYS NEED TO BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE. STRAW BALES AND SILT FENCE ARE TO BE PLACED AROUND THE STOCKPILE AREA APPROXIMATELY 10 FEET FROM THE TOE OF SLOPE.

DUST CONTROL

PERIODICALLY MOISTEN EXPOSED SURFACES ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAY DAMP AND REDUCE DUST.

TEMPORARY EROSION AND SEDIMENTATION CONTROL MAINTENANCE (THROUGHOUT CONSTRUCTION)

THE SITE CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS. RECORDS OF THE INSPECTIONS WILL BE PREPARED AND MAINTAINED ON-SITE BY THE CONTRACTOR.

SILT SHALL BE REMOVED FROM BEHIND BARRIERS IF GREATER THAN 6-INCHES DEEP OR AS NEEDED.

DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION.

SEDIMENT THAT IS COLLECTED IN STRUCTURES SHALL BE DISPOSED OF PROPERLY AND COVERED IF STORED ON-SITE.

EROSION CONTROL STRUCTURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED EARTH HAS BEEN SECURELY STABILIZED. AFTER REMOVAL OF STRUCTURES, DISTURBED AREAS SHALL BE REGRADED AND STABILIZED AS SOON AS PRACTICAL.

MAINTAIN THE CONSTRUCTION ENTRANCE IN A CONDITION WHICH WILL PREVENT TRACKING AND WASHING OF SEDIMENTS ONTO PAVED SURFACES.

INFILTRATION AREA PROTECTION DURING CONSTRUCTION

FOR THE LONG-TERM FUNCTION OF THE INFILTRATION BASIN(S)/STRUCTURE(S), CARE SHALL BE TAKEN IN THE INFILTRATION AREAS DURING CONSTRUCTION THE CONTRACTOR SHALL EMPLOY THE FOLLOWING MINIMUM BEST MANAGEMENT PRACTICES (BMPs):

1. INFILTRATION AREAS SHALL NOT BE USED AS TEMPORARY CONSTRUCTION SEDIMENTATION BASINS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. IF INFILTRATION AREAS ARE USED AS TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION, THEN THE SOILS SHALL BE EXCAVATED A MINIMUM OF 2" FROM THE TEMPORARY BASIN BOTTOM TO REMOVE CLOGGED SOILS.
2. STORMWATER RUNOFF FROM EXPOSED SURFACES SHALL BE DIRECTED AWAY FROM THE INFILTRATION BASIN(S)/STRUCTURE(S) DURING CONSTRUCTION.
3. CONSTRUCTION EQUIPMENT, VEHICULAR TRAFFIC, PARKING OF VEHICLES, AND STOCKPILING OF CONSTRUCTION MATERIALS SHALL BE LOCATED OUTSIDE OF THE INFILTRATION AREAS.
4. EXCAVATION FOR CONSTRUCTION OF THE INFILTRATION BASIN(S)/STRUCTURE(S) SHALL ENSURE THAT THE SOIL AT THE BOTTOM OF THE EXCAVATION IS NOT COMPACTED OR SMEARED.

THE PERIMETER OF THE INFILTRATION AREAS SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF THE AREA FOR ACTIVITIES THAT MIGHT DAMAGE THE INFILTRATION ABILITY OF THE SYSTEM.

Owner / Developer
Boston Development Group
93 Union Street Suite 315
Newton Center, MA 02459

Landscape Architect
Ground Inc.
285 Washington Street #G
Somerville, MA 02143

Structural Engineer
McNamara Salvia
101 Federal Street, 11th Floor
Boston, MA 02110

MEP / FP Engineer
WSP Engineers
88 Black Falcon Ave., Suite 210
Boston, MA 02210

Civil Engineer
VHB/Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Geotechnical Engineer
Tighe & Bond
120 Front Street, Suite 7
Worcester, MA 01608

Code Consultant
Jensen Hughes
1861 Worcester Road, Suite 501
Frammingham, MA 01701

Vertical Transportation Consultant
VDA/Van Deusen & Associates, Inc.
100 Summer Street, Suite 1600
Boston, MA 02111

Building Enclosure / Waterproofing Consultant
Simpson Gumpertz & Heger (SGH)
41 Seyon Street, #500
Waltham, MA 0253

Lighting Designer
Lam Partners
84 Sherman Street
Cambridge, MA 02140

PROJECT NUMBER: 19072

CONSTRUCTION DOCUMENTS

DATE: APRIL 09, 2021

REVISIONS:
Δ REVISIONS TO EARLY WORK FOUNDATION PACKAGE APRIL 07, 2021
Δ BULLETIN 5 NOV. 17, 2021

CONFORMED
SET
2022-07-14

SEE PREVIOUS ISSUES FOR REVISIONS NOT LISTED HERE

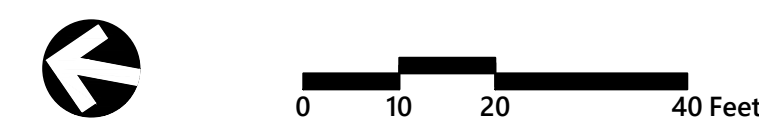
SCALE: 1" = 20'

DRAWING NAME:

EROSION &
SEDIMENTATION
CONTROL PLAN

DRAWING NUMBER:

C-6.01





Watertown City Council

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6470

ELECTED OFFICIALS:

Mark S. Sideris,
Council President

Vincent J. Piccirilli, Jr.,
Vice President &
District C Councilor

John M. Airasian,
Councilor At Large

Caroline Bays,
Councilor At Large

John G. Gannon
Councilor At Large

Anthony Palomba,
Councilor At Large

Nicole Gardner,
District A Councilor

Lisa J. Feltner,
District B Councilor

Emily Izzo,
District D Councilor

NOTICE OF PUBLIC HEARING – COMCAST Grant of Location: ARSENAL STREET

December 29, 2022

Dear Abutters:

The City Council of the City of Watertown will hold a public meeting on Tuesday, January 10, 2023 at 7:00 p.m. in the Richard E. Mastrangelo Council Chamber, 149 Main St., Watertown, MA along with remote opportunities for participation with public access provided as follows:

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <http://vodwcatv.org/CablecastPublicSite/?channel=3>
- B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/92991331344>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 929 9133 1344 #
- D. Public may also comment through email: vpiccirilli@watertown-ma.gov

on a petition from Comcast for consideration of a Grant of Location for the following installations:

- Arsenal Street – Comcast Corporation intends to place two 4-inch conduits from utility pole #46 located on Arsenal Street behind the sidewalk to a manhole placed by the owner of 250 Arsenal Place for a total distance of approximately 150 linear feet to provide service to 250 Arsenal Street.

This work is necessary to provide telecommunication services to 250 Arsenal Street. Upon completion of the Department of Public Works review, the following recommendations and conditions for consideration by the City Council will be required should the Grant of Location be approved for this application.

Additional Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times, or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.

3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces, should be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, AAB and City of Watertown standards.
6. All work within the right of way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices, such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted, and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.

Please feel free to contact Manuel Furtado at 1-774-644-9104 or at manuel_furtado@cable.comcast.com for any technical questions you may have.

Your participation is not necessary, if you choose not to object to the above petition.

Sincerely,

Watertown City Council



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET
WATERTOWN MA 02472

Gregory M. St. Louis, PE
Superintendent of Public Works

(P) 617-972-6420
(F) 617-972-6402

TYPE: Grant of Location
DATE: September 30, 2022
APPLICANT: Comcast
WORK ORDER: WO#
LOCATION: Arsenal Street

The City of Watertown Department of Public Works has reviewed the attached petition by Comcast for consideration of a Grant of Location for the following installations:

- **Arsenal Street – Comcast Corporation Intends to place two 4-inch Conduits from utility pole #46 located on Arsenal Street behind the sidewalk to a manhole placed by the owner of 250 Arsenal Place for a total distance of approximately 150 linear feet to provide service to 250 Arsenal St.**

This work is necessary to provide telecommunications to 250 Arsenal Street. Upon completion of our review, we are submitting the following recommendations and conditions for consideration by the City Council should the Grant of Location be approved for this application. A photo of the location of the proposed work is presented attached to this document.

Standard Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces shall be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, MAAB and City of Watertown standards.
6. All work within the Right of Way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to all applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and shall be kept in a neat and orderly fashion.

9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.



Photo 1: View of pull box on Arsenal Street where the service connection is proposed.



Photo 2: View of Arsenal Street facing West at location of proposed service connection (under construction barrels)



Photo 3: View of Arsenal Street facing East at location of proposed service connection (under construction barrels)

CITY OF WATERTOWN MASSACHUSETTS

PETITION for GRANT OF LOCATION

To the Petitioner:

City of Watertown Ordinance Section 23-52 requires that each petition for grant of location be submitted to the Public Works Department for a preliminary review. The comments of the Public Works Commissioner will be part of the record submitted to the City Council. Upon filing with the City Council, the petition will be scheduled for a public hearing before the Public Facilities Committee of City Council. **The petitioner is responsible for insuring that the petition is complete and all required materials are in order for review.** Attached please find the City Engineer's Standard Requirements for Plans and the Department of Public Works Permit Processing brochure.

Grant of Location Process:

1. Applicant submits completed Petition Form and required materials to the City Council
2. Public Works Department conducts preliminary review and gives written comments to the applicant
3. Engineering Division files Petition Form with comments with the Clerk of the City Council
4. City Council schedules petition for a public hearing before the Public Facilities Committee of the City Council
5. Public Facilities Committee recommendations are forwarded to the City Council for a final decision

I. IDENTIFICATION (Please Type or Print Clearly)

Company Name__ Comcast Of Massachusetts _____

Address__ 440 Myles Standish BLVD Taunton MA _____

Phone Number 774 644 9104

Fax Number _____

Contact Person Manuel Furtado

Title Project Coordinator

Signature _____ Date 9/22/22 _____

Person filing application

If a telecommunications company, indicate how certified by the Department of Telecommunications and Energy: Utilities CO

II. DESCRIPTION OF PROJECT: to be completed by petitioner

- A. Write here or attach a description of the project including, location, proposed time frame for completion, type of materials to be used, benefit provided to the City, project mitigation plan as applicable, street reconstruction plan including timetable for completion.

Comcast Corporation Intends to Place 2-4" conduits from a utility pole 46 located on Arsenal Street Behind the Sidewalk to a Manhole Placed by the owner of 250 Arsenal Place for a total distance of est 150' to Feed a 250 Arsenal PI As shown in Attached Prints

- B. Include or attach a sketch to provide a visual description of the project. If plans are attached, provide:
Title of Plan 250 Arsenal PI SOW Date of plan 9/22/222

III. PUBLIC WORKS DEPARTMENT REVIEW

Date received by Public Works Department DATE

Check One:

Minor Project



Major Project



Lateral



(Refer to City Engineer Standard Requirements for Plans for definition of minor and major project)

Plans Submitted:

Certified Plot Plan



Stamped Plans



DATE AND COMMENTS:

RECOMMENDATIONS:

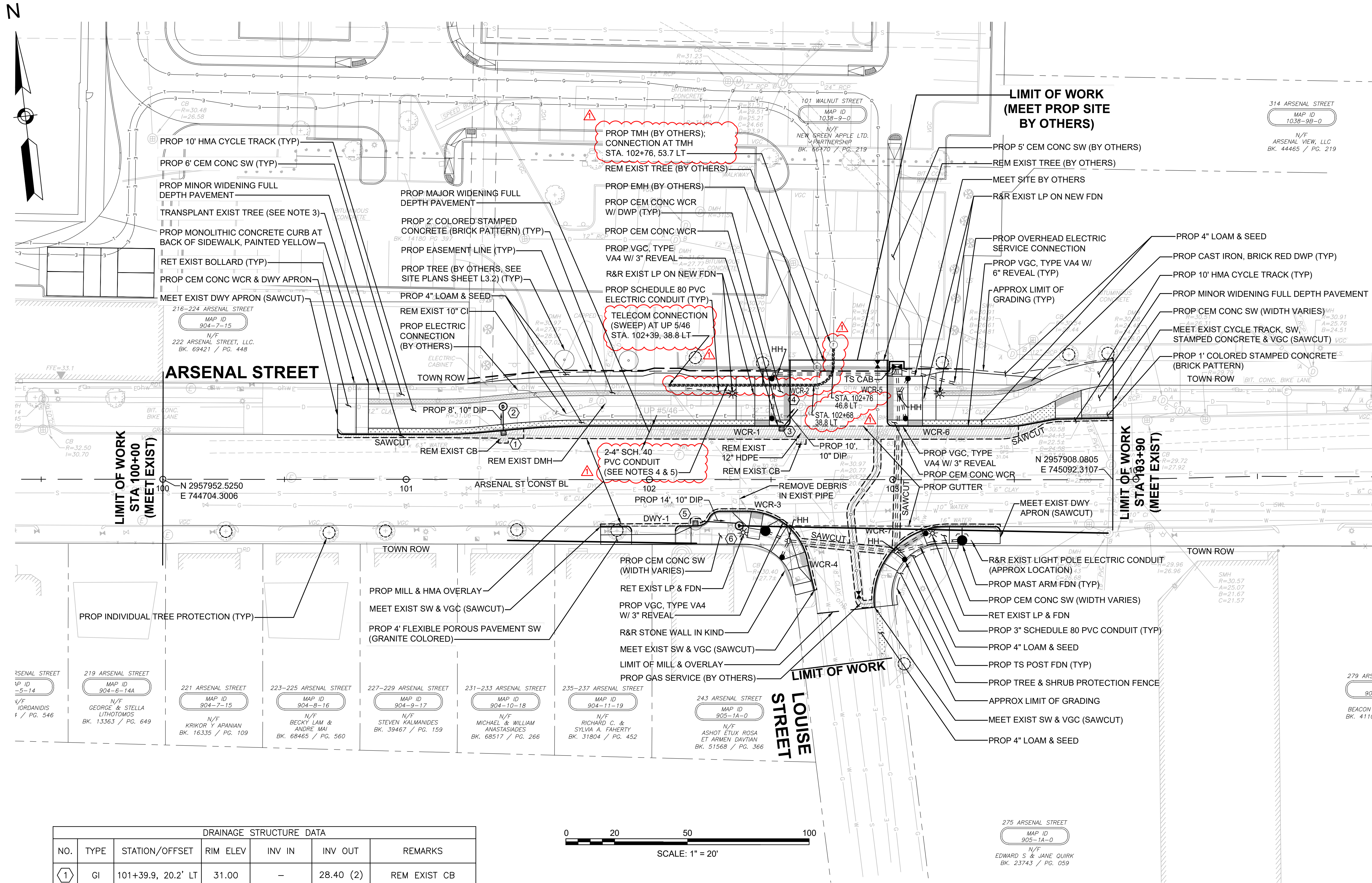
V. RECOMMENDATION TO PUBLIC FACILITIES COMMITTEE:

Commissioner, Public Works

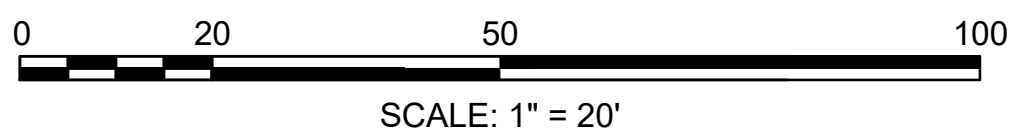
Date



T:\8501 Watertown - Louise St FGH 8124\Design\DWG\8501GN.dwg 10/24/2022 1:36 PM EDT



DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION/OFFSET	RIM ELEV	INV IN	INV OUT	REMARKS
1	GI	101+39.9, 20.2' LT	31.00	-	28.40 (2)	REM EXIST CB
2	DMH	101+39.9, 29.9' LT	31.61	CONTRACTOR TO VERIFY INVERTS IN FIELD	CONTRACTOR TO VERIFY INVERTS IN FIELD	CONSTRUCT OVER EXIST 12\"/>
3	GI	102+54.3, 22.0' LT	30.21	-	27.65 (4)	REM EXIST CB
4	EXIST. DMH	102+62.2, 30.4' LT	30.41	27.40 (A) 24.80 (C) 27.50 (3)	24.70 (B)	CORE HOLE IN EXIST REM EXIST HDPE
5	CB	102+19.0, 19.0' RT	30.65	-	27.90 (6)	-
6	EXIST. CB	102+37.0, 19.0' RT	31.34	27.75 (5)	27.70	CIT TO DMH



NOTE:

- WORK WITHIN 200' OF GAS REGULATOR PIT ON LOUISE STREET REQUIRES NATIONAL GRID NOTIFICATION
- ALL EXISTING SEWER, DRAINAGE, ELECTRIC MANHOLE COVERS, GAS AND WATER GATES, ETC. SHALL BE ADJUSTED TO FINISHED GRADE.
- TREE SHALL BE REPLANTED AT A LOCATION DETERMINED BY THE WATERTOWN DEPARTMENT OF PUBLIC WORKS
- THE CONTRACTOR SHALL CONSTRUCT THE INDICATED TELECOMMUNICATIONS CONDUIT WITH 24\"/>
- COMCAST SHALL OCCUPY ONE OF THE INDICATED TELECOMMUNICATIONS CONDUITS AND ASTOUND SHALL OCCUPY THE OTHER.

PROJECT TITLE

Arsenal Street at Louise Street Intersection Improvements

Watertown, Massachusetts

PREPARED FOR

Atlantic/P3 Life Sciences Holdings III, LLC

San Diego, California

Vanasse & Associates inc
Transportation Engineers & Planners

35 N.E. BUSINESS CENTER DRIVE
ANDOVER, MA 01810-1071
TEL: (978) 474-8800
www.rdma.com

DESIGNED BY	MPP
DRAWN BY	MPP
CHECKED BY	SMB
DATE	OCTOBER 2021
SCALE	1" = 20'
STAMP	

REVISIONS		
NO.	DESCRIPTION	DATE
1	TELECOM CONDUIT	10/24/22

DRAWING TITLE

Construction Plan

SHEET 5 OF 22	DRAWING NUMBER
JOB NO. 8501	5
CAD 8501GN	



Watertown City Council

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6470

ELECTED OFFICIALS:

Mark S. Sideris,
Council President

Vincent J. Piccirilli, Jr.,
Vice President &
District C Councilor

John M. Airasian,
Councilor At Large

Caroline Bays,
Councilor At Large

John G. Gannon
Councilor At Large

Anthony Palomba,
Councilor At Large

Nicole Gardner,
District A Councilor

Lisa J. Feltner,
District B Councilor

Emily Izzo,
District D Councilor

NOTICE OF PUBLIC HEARING – EVERSOURCE GROUP

**Grant of Location: PLEASANT STREET, MAIN STREET AND NORTH
BEACON STREET
WO #4961572**

December 27, 2022

Dear Abutters:

The City Council of the City of Watertown will hold a public meeting on Tuesday, January 10, 2023 at 7:00 p.m. in the Richard E. Mastrangelo Council Chamber, 149 Main St., Watertown, MA along with remote opportunities for participation with public access provided as follows:

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <http://vodwcatv.org/CablecastPublicSite/?channel=3>
- B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/92991331344>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 929 9133 1344 #
- D. Public may also comment through email: vpiccirilli@watertown-ma.gov

on a petition from Eversource for consideration of a Grant of Location for the following installations:

- Pleasant Street - Install approximately 60 linear feet of conduit from MH 23550 on Pleasant Street easterly towards the intersection of Pleasant Street and Main Street
- Main Street – Install approximately 177 linear feet of conduit from the intersection of Pleasant Street and Main Street easterly to MH 3701
- North Beacon Street - Install approximately 1612 linear feet of conduit from MH3700 at Riverside Street and North Beacon Street easterly connecting MH 989, MH 9899, MH 9900, and MH 9904

This work is necessary to provide electrical service to North Beacon Street. Upon completion of the Department of Public Works review, the following recommendations and conditions for consideration by the City Council will be required should the Grant of Location be approved for this application.

Additional Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces, should be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, AAB and City of Watertown standards.
6. All work within the right of way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices, such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted, and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.
11. The work is subject to test pits to be performed prior to work commencement and a pre-construction meeting and site walk with DPW.

Please feel free to contact Joanne Callender at 781-314-5053 for any technical questions you may have.

Your participation is not necessary, if you choose not to object to the above petition.

Sincerely,

Watertown City Council



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET
WATERTOWN MA 02472

Gregory M. St. Louis, PE
Superintendent of Public Works

(P) 617-972-6420
(F) 617-972-6402

TYPE: Grant of Location
DATE: December 02, 2022
APPLICANT: Eversource
WORK ORDER: WO# 4961572
LOCATION: Pleasant Street, Main Street, and North Beacon Street

The City of Watertown Department of Public Works has reviewed the attached petition by Eversource for consideration of a Grant of Location for the following installations:

- **Pleasant Street – Install approximately 60 linear feet of conduit from MH 23550 on Pleasant Street easterly towards the intersection of Pleasant Street and Main Street.**
- **Main Street – Install approximately 177 linear feet of conduit from the intersection of Pleasant Street and Main Street easterly to MH 3701.**
- **North Beacon Street – Install approximately 1612 linear feet of conduit from MH 3700 at Riverside St and North Beacon Street easterly connecting MH 9898, MH 9899, MH 9900, and MH 9904.**

This work is necessary to provide electrical service to North Beacon Street. Upon completion of our review, we are submitting the following recommendations and conditions for consideration by the City Council should the Grant of Location be approved for this application. A photo of the location of the proposed work is presented attached to this document.

Standard Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and/or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces shall be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, MAAB and City of Watertown standards.
6. All work within the Right of Way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to all applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices. Work may be performed during night hours.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.

8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and shall be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.
11. The work is subject to test pits to be performed prior to work commencement and a pre-construction meeting and site walk with DPW.



Photo 1: View of Main Street facing east from Manhole #23550



Photo 2: View of Manhole #3701 on Main Street and Spring Street



Photo 3: View of North Beacon Street facing East at location of Manhole #3700



Photo 4: View of North Beacon Street facing East at Manhole #9899



Photo 5: View of North Beacon Street facing East at Manhole #9900



Photo 6: View of North Beacon Street facing East at Manhole #9902



Photo 7: View of North Beacon Street and Irving Street Intersection at location of Manhole #9904

September 7, 2022

City Council
City Hall
149 Main Street
Watertown, MA 02472

RE: North Beacon Street
Watertown, MA
W.O.# 4961572

Dear Members of the Council:

The enclosed petition and plan are being presented by the NSTAR Electric Company d/b/a EVERSOURCE ENERGY for the purpose of obtaining a Grant of Location in the following streets:

Pleasant Street – Install approximately 60 feet of conduit.

Main Street - Install approximately 177 feet of conduit.

North Beacon Street – Install approximately 1612 feet of conduit.

The reason for this work is to provide overhead and underground service to North Beacon Street, Watertown.

If you have any further questions, please contact Joanne Callender at 781-314-5053. Your prompt attention to this matter would be greatly appreciated.

Very truly yours,

Richard M. Schifone

Richard M. Schifone, Supervisor
Rights and Permits

RMS/wls
Attachments

**PETITION OF NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY FOR
LOCATION FOR CONDUITS
AND MANHOLES**

To the **City Council** of the City of **WATERTOWN** Massachusetts:

Respectfully represents **NSTAR ELECTRIC Company d/b/a Eversource Energy** a company incorporated for the transmission of electricity for lighting, heating or power, that it desires to construct a line for such transmission under the public way or ways hereinafter specified.

WHEREFORE, your petitioner prays that, after due notice and hearing as provided by law, the council may by Order grant to your petitioner permission to construct, and a location for, such a line of conduits and manholes with the necessary wires and cables therein, said conduits and manholes to be located, substantially as shown on the plan made by **T. Thibault, dated November 1, 2021, Revised September 2, 2022,** and filed herewith, under the following public way or ways of said City:

**NSTAR ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY**

Pleasant Street - Easterly from manhole MH23550, 60 feet southwest of Main St, install approximately 60 feet of conduit.

Main Street - Easterly from the intersection of Pleasant Street and Main Street, to MH3701, approximately 60 feet south of Spring Sreet, install approximately 177 feet of conduit.

North Beacon Street – Easterly from manholes MH23551 and MH3700, at Riverside Street, install approximately 1612 feet of conduit.

WO# 4961572

BY *Richard M. Schifone*
Richard M. Schifone, Supervisor
Rights & Permits

Dated this ____ day of _____ 2022

City of **WATERTOWN** Massachusetts

Received and filed _____ 2022

ORDER FOR LOCATION FOR CONDUITS AND MANHOLES
City of WATERTOWN

WHEREAS, **NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY** has petitioned for permission to construct a line for the transmission of electricity for lighting, heating or power under the public way or ways of the City thereafter specified, and notice has been given and a hearing held on said petition as provided by law.

It is ORDERED that **NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY** be and hereby is granted permission to construct and a location for, such a line of conduits and manholes with the necessary wires and cables therein under the following public way or ways of said City:

Pleasant Street - Easterly from manhole MH23550, 60 feet southwest of Main St, install approximately 60 feet of conduit.

Main Street - Easterly from the intersection of Pleasant Street and Main Street, to MH3701, approximately 60 feet south of Spring Street, install approximately 177 feet of conduit.

North Beacon Street - Easterly from manholes MH23551 and MH3700, at Riverside Street, install approximately 1612 feet of conduit.

WO# 4961572

All construction work under this Order shall be in accordance with the following conditions:

1. Conduits and manholes shall be located as shown on the plan made by **T. Thibault, dated November 1, 2021, Revised September 2, 2022**, on the file with said petition.
2. Said shall comply with the requirements of existing by-laws and such as may hereafter be adopted governing the construction and maintenance of conduits and manholes.
3. Company All work shall be done to the satisfaction of the city council or such officer or officers as it may appoint to supervise the work.

1	_____	
2	_____	
3	_____	City Council
4	_____	the City of
5	_____	WATERTOWN

CERTIFICATE

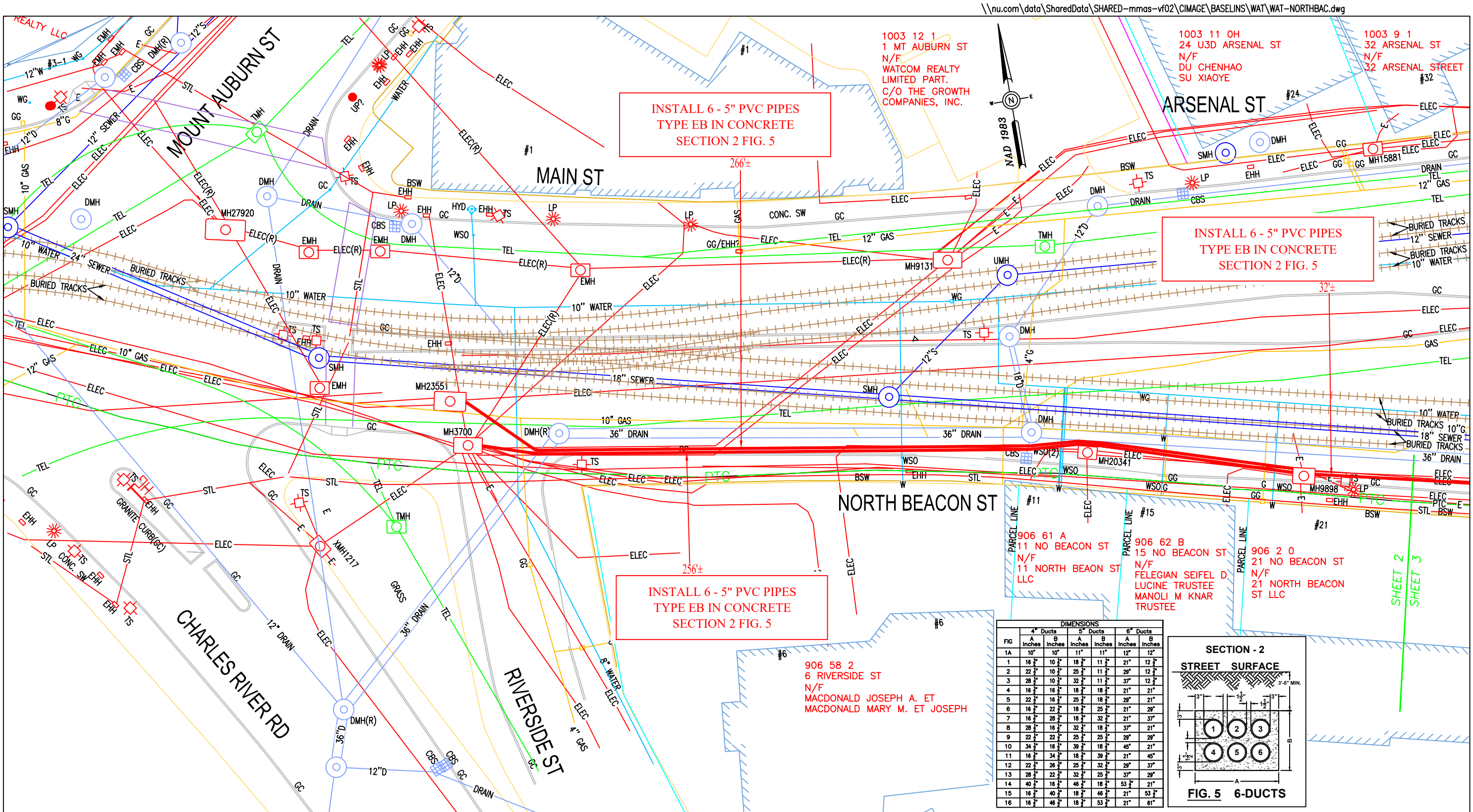
We hereby certify that the foregoing Order was adopted after due notice and a public hearing as prescribed by Section 22 of Chapter 166 of the General Laws (Ter. Ed.), and any additions thereto or amendments thereof, to wit: after written notice of the time and place of the hearing mailed at least seven days prior to the date of the hearing by the council to all owners of real estate abutting upon that part of the way or ways upon, along or across which the line is to be constructed under said Order, as determined by the last preceding assessment for taxation, and a public hearing held on the _____ day of _____ 2022 at _____ in said City.

1	_____	
2	_____	
3	_____	City Council
4	_____	the City of
5	_____	WATERTOWN

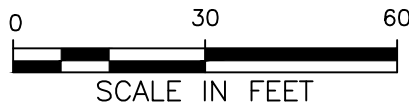
CERTIFICATE

I hereby certify that the foregoing are true copies of the Order of the **City Council** of the City of **WATERTOWN**, Massachusetts, duly adopted on the _____ day of _____, 2022 and recorded with the records of location Orders of said Town, Book _____, Page _____ and of the certificate of notice of hearing thereon required by Section 22 of Chapter 166 of the General Laws (Ter.Ed.) and any additions thereto or amendments thereof, as the same appear of record.

Attest: _____
Clerk of the City of **WATERTOWN**, Massachusetts



NOTES:
THE LOCATION OF UNDERGROUND STRUCTURES ARE FROM PLANS AND RECORDS AND ARE APPROXIMATE ONLY. IN ADDITION, SURFACE FEATURES OF UTILITIES AND SERVICES LOCATED BY FIELD SURVEY ARE TIED-IN TO THEIR NEAREST MAIN SERVICE LINE IF NO RECORDS WERE AVAILABLE TO CONFIRM ITS UNDERGROUND EXISTENCE.
ANY UNDERGROUND STRUCTURES NOT EVIDENT WERE REQUESTED, YET UNAVAILABLE AT THIS PRESENT TIME.



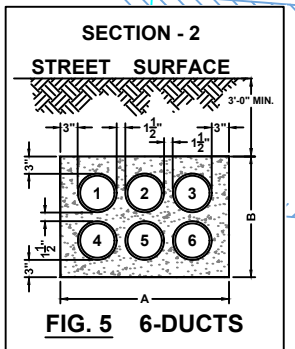
WARNING
PIPE TYPE CABLE
IN THIS AREA

BY YOUR USE OF THE INFORMATION CONTAINED IN THIS MAP, YOU AGREE THAT NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IS GIVEN WITH RESPECT TO THE INFORMATION. NEITHER NSTAR ELECTRIC COMPANY, NSTAR GAS COMPANY NOR ITS PARENTS, AFFILIATES, OFFICERS, DIRECTORS, SHAREHOLDERS, EMPLOYEES OR AGENTS (COLLECTIVELY THE "NSTAR ENTITIES") SHALL BE LIABLE FOR ANY LOSS OR INJURY CAUSED IN WHOLE OR IN PART BY USE OF THIS INFORMATION, OR IN RELIANCE UPON IT, TO THE MAXIMUM EXTENT ALLOWED BY LAW. YOU AGREE BY YOUR ACCEPTANCE OF THE INFORMATION TO RELEASE, INDEMNIFY AND HOLD THE NSTAR ENTITIES HARMLESS FROM ANY SUCH LOSS OR INJURY.

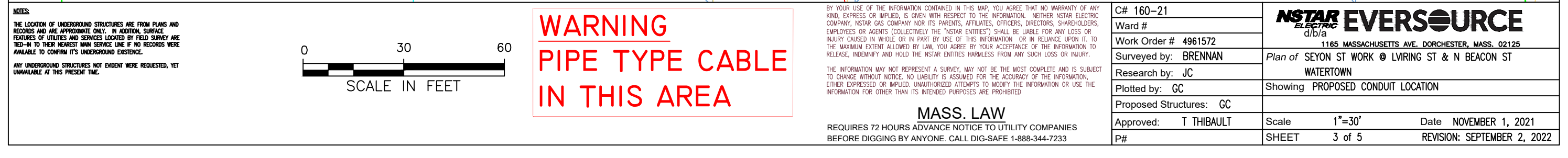
THE INFORMATION MAY NOT REPRESENT A SURVEY, MAY NOT BE THE MOST COMPLETE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE INFORMATION, EITHER EXPRESSED OR IMPLIED. UNAUTHORIZED ATTEMPTS TO MODIFY THE INFORMATION OR USE THE INFORMATION FOR OTHER THAN ITS INTENDED PURPOSES ARE PROHIBITED.

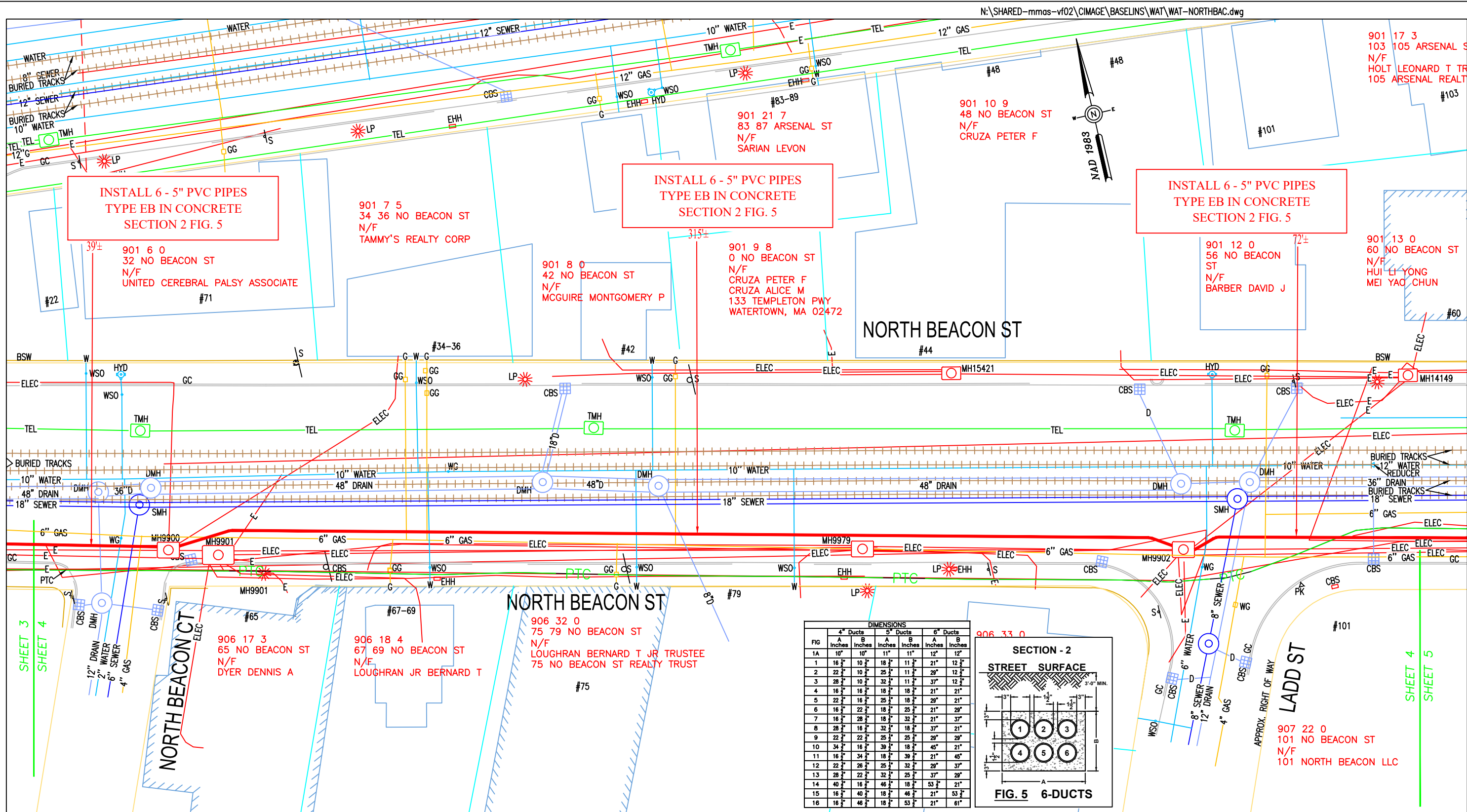
MASS. LAW
REQUIRES 72 HOURS ADVANCE NOTICE TO UTILITY COMPANIES BEFORE DIGGING BY ANYONE. CALL DIG-SAFE 1-888-344-7233

DIMENSIONS						
FIG	4" Ducts		5" Ducts		6" Ducts	
	A Inches	B Inches	A Inches	B Inches	A Inches	B Inches
1A	10"	10"	11"	11"	12"	12"
1	16"	10"	18"	11"	21"	12"
2	22"	10"	25"	11"	29"	12"
3	28"	10"	32"	11"	37"	12"
4	16"	16"	18"	18"	21"	21"
5	22"	16"	25"	18"	29"	21"
6	16"	22"	18"	25"	21"	29"
7	16"	28"	18"	32"	21"	37"
8	28"	16"	32"	18"	37"	21"
9	22"	22"	25"	25"	29"	29"
10	34"	16"	39"	18"	45"	21"
11	16"	34"	18"	39"	21"	45"
12	22"	26"	25"	32"	29"	37"
13	28"	22"	32"	25"	37"	29"
14	40"	16"	46"	18"	53"	21"
15	16"	40"	18"	46"	21"	53"
16	16"	46"	18"	53"	21"	61"

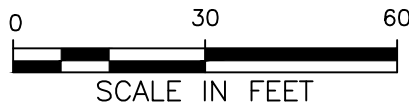


C# 160-21	NSTAR EVERSOURCE 1165 MASSACHUSETTS AVE. DORCHESTER, MASS. 02125	
Ward #	Plan of SEYON ST WORK @ LVIRING ST & N BEACON ST	
Work Order # 4961572	WATERTOWN	
Surveyed by: BRENNAN	Showing PROPOSED CONDUIT LOCATION	
Research by: JC		
Plotted by: GC		
Proposed Structures: GC		
Approved: T THIBAUT	Scale 1"=30'	Date NOVEMBER 1, 2021
P#	SHEET 2 of 5	REVISION: SEPTEMBER 2, 2022





NOTES:
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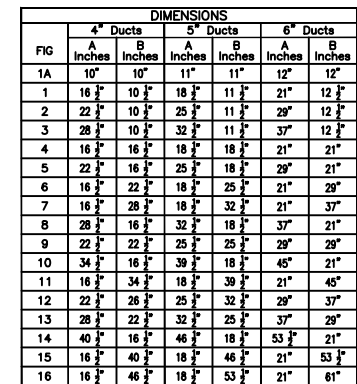
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C# 160-21	NSTAR EVERSOURCE 1165 MASSACHUSETTS AVE. DORCHESTER, MASS. 02125	
Ward #	Plan of SEYON ST WORK @ LVIRING ST & N BEACON ST	
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Surveyed by: BRENNAN	Showing PROPOSED CONDUIT LOCATION	
Research by: JC		
Plotted by: GC		
Proposed Structures: GC		
Approved: T THIBAUT	Scale 1"=30'	Date NOVEMBER 1, 2021
P#	SHEET 4 of 5	REVISION: SEPTEMBER 2, 2022



SECTION - 2

STREET SURFACE

3'-0" MIN.

3"

1 1/2"

1 1/2"

3"

3"

1 1/2"

3"

1

2

3

4

5

6

B

A

FIG. 5 6-DUCTS

WARNING
PIPE TYPE CABLE
IN THIS AREA

C# 160-21
Ward #
Work Order # 4961572
Surveyed by: BRENNAN
Research by: JC
Plotted by: GC
Proposed Structures: GC
Approved: T THIBAUT
P#

Scale	1"=30'	Date	NOVEMBER 1, 2021
SHEET	5 of 5	REVISION:	SEPTEMBER 2, 2022



Watertown City Council

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6470

ELECTED OFFICIALS:

Mark S. Sideris,
Council President

Vincent J. Piccirilli, Jr.,
Vice President &
District C Councilor

John M. Airasian,
Councilor At Large

Caroline Bays,
Councilor At Large

John G. Gannon
Councilor At Large

Anthony Palomba,
Councilor At Large

Nicole Gardner,
District A Councilor

Lisa J. Feltner,
District B Councilor

Emily Izzo,
District D Councilor

NOTICE OF PUBLIC HEARING – VERIZON

Grant of Location: GALEN STREET AND WATER STREET WO #4A0SR7M

December 28, 2022

Dear Abutters:

The City Council of the City of Watertown will hold a public meeting on Tuesday, January 10, 2023 at 7:00 p.m. in the Richard E. Mastrangelo Council Chamber, 149 Main St., Watertown, MA along with remote opportunities for participation with public access provided as follows:

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television): <http://vodwcatv.org/CablecastPublicSite/?channel=3>
- B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/92991331344>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 929 9133 1344 #
- D. Public may also comment through email: vpiccirilli@watertown-ma.gov

on a petition from Verizon for consideration of a Grant of Location for the following installations:

- Galen Street - Install and maintain approximately 120 linear feet of 4-inch schedule 40 PVC conduit from manhole 16/205A within Galen Street to the property line of 66 Galen Street and approximately 120 linear feet of 4-inch schedule 40 PVC conduit from manhole 16-205 within Galen Street to the property line of 66 Galen Street
- Water Street - Install and maintain approximately 24 linear feet of 4-inch schedule 40 PVC conduit from the property line of 66 Galen Street under Water Street to the 0 Water Street property line.
- Permission to lay and maintain underground conduits, manholes, cables, and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as it may desire for distributing purposes.

This work is necessary to provide telecommunication services to 66 Galen Street and adjacent buildings and utility poles. Upon completion of the Department of Public Works review, the following recommendations and conditions for consideration by the City Council will be required should the Grant of Location be approved for this application.

Additional Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces, should be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, AAB and City of Watertown standards.
6. All work within the right of way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices, such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted, and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.

Please feel free to contact Anthony Marini at 401-727-9529 for any technical questions you may have.

Your participation is not necessary, if you choose not to object to the above petition.

Sincerely,

Watertown City Council



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET
WATERTOWN MA 02472

Gregory M. St. Louis, PE
Superintendent of Public Works

(P) 617-972-6420
(F) 617-972-6402

TYPE: Grant of Location
DATE: May 6, 2022
APPLICANT: Verizon
WORK ORDER: WO# 4A0SR7M
LOCATION: Galen Street and Water Street

Watertown Department of Public Works has reviewed the attached petition by National Grid for consideration of a Grant of Location for the following installations:

- **Galen Street – Install and maintain approximately 120 linear feet of 4-inch schedule 40 PVC conduit from manhole 16/205A within Galen Street to the property line of 66 Galen Street and approximately 120 linear feet of 4-inch schedule 40 PVC conduit from manhole 16-205 within Galen Street to the property line of 66 Galen Street.**
- **Water Street - Install and maintain approximately 24 linear feet of 4-inch schedule 40 PVC conduit from the property line of 66 Galen Street under Water Street to the 0 Water Street property line.**
- **Permission to lay and maintain underground conduits, manholes, cables and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as it may desire for distributing purposes.**

This work is necessary to provide telecommunication services to 66 Galen Street and adjacent buildings and utility poles. Upon completion of our review, we are submitting the following recommendations and conditions for consideration by the City Council should the Grant of Location be approved for this application. A photo of the location of the proposed work is presented attached to this document.

Additional Conditions

1. During construction, uninterrupted pedestrian access (or temporary pedestrian facilities) shall be provided at all times or an appropriate alternative path provided.
2. Please be aware that there may be utility infrastructure that is not shown on the plan and may be encountered in the field. If a conflict occurs between the proposed installation and existing City-Owned and/or private utility infrastructure, The City Engineer shall be contacted directly to discuss an appropriate resolution.
3. It is the sole responsibility of the Applicant, and their Contractor, to ensure that and City-Owned and or private utilities, if located within the limits of work should be properly marked and protected during construction activities. **The City of Watertown is not a member of Dig Safe and must be notified separately.**
4. The proposed scope of work requires a DPW Street Opening Permit through the Watertown DPW prior to the start of construction.
5. All disturbances to curbing, grass strips, sidewalks, walkways, and roadway surfaces shall be repaired in kind to the satisfaction of the City of Watertown DPW. If any existing sidewalk is proposed to be removed and replaced in full width, the restoration must be completed in accordance with all current ADA, MAAB and City of Watertown standards.
6. All work within the Right of Way shall require the Contractor to schedule and coordinate a police traffic detail. Traffic control and safety measures shall be implemented in adherence to all applicable OSHA requirements, Massachusetts DOT Work Zone Safety Guidelines and Part VI of the Manual of Uniform Traffic Control Devices.
7. All material stockpiled on roadways and/or roadway shoulders shall be protected with erosion control devices such as silt fence or straw wattles. It will be the sole responsibility of the Contractor to remove any sediment that enters the City drainage system as a result of the proposed work.
8. Equipment, staging, and stockpiles shall not be located in a manner so as to interfere with intersection sightlines and shall be kept in a neat and orderly fashion.
9. Public shade trees within and adjacent to the proposed work zone must be protected. The Contractor shall install individual tree protection on any public shade tree that may be impacted and the Contractor shall not stockpile material or equipment within the drip zone of a public shade tree.
10. Contractor shall coordinate with City Health Department on rodent control requirements.



Photo 1: View of Water Street facing northwest where the connection is proposed across Water Street from 66 Galen Street.



Photo 2: View of Water Street facing northwest closer to Galen Street where the connection is proposed across Water Street from 66 Galen Street.



Photo 3: View of Galen Street facing South where the connection is proposed from manhole MH 16/205 to the 66 Galen Street Property.



Photo 4: View of manhole MH 16/205.

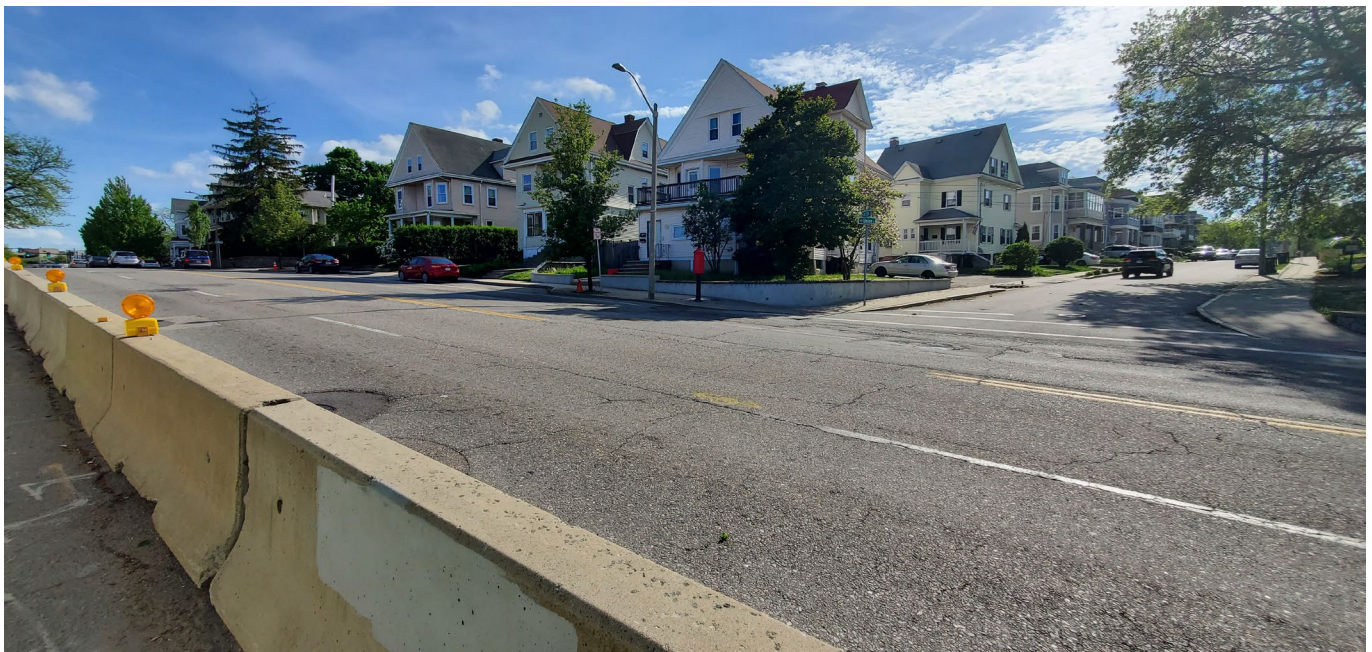


Photo 5: View of Galen Street facing South where the connection is proposed from manhole MH 16/205A to the 66 Galen Street Property.



Photo 6: View of Galen Street facing South where manhole MH 16/205A is located.

PETITION FOR CONDUIT LOCATION

October 28, 2022

To the **City Council**

Of **WATERTOWN**, Massachusetts

VERIZON NEW ENGLAND INC. requests permission to lay and maintain underground conduits, with the wires and cables to be placed therein, under the surface of the following public way or ways:

Galen Street:

Place new 4" conduit on Galen Street. First section will begin at existing manhole MH 16/205A on and will extend approximately 15' northeasterly towards the property line of 66 Galen Street. Second section will begin at existing manhole MH 16/205 and will extend approximately 120' northward to the property line of 66 Galen Street.

Water Street:

Place new 4" conduit on Water Street. Third section will continue from the property line of 66 Galen Street crossing northeasterly under Water Street for approximately 24'.

This petition is necessary to support the new building at 66 Galen Street.

Also for permission to lay and maintain underground conduits, manholes, cables and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as it may desire for distributing purposes.

Plan marked-VZ N.E. Inc. No. **4A0SR7M** dated **October 28, 2022** showing location of conduit to be constructed is filed herewith.

VERIZON NEW ENGLAND INC.

By Anthony Marini
Manager - Right of Way

Dated this 28th day of October, 2022.



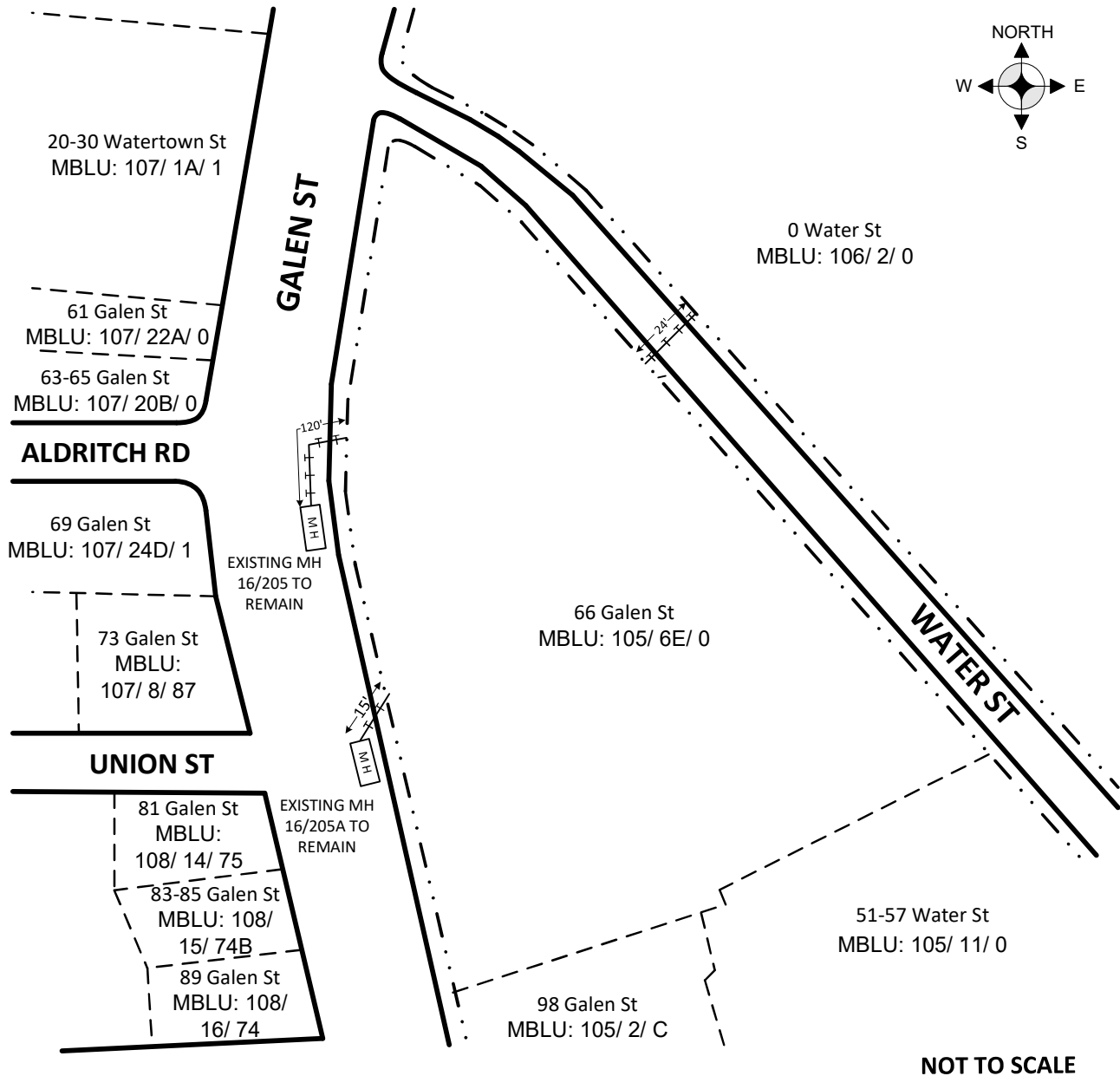
PETITION PLAN

MUNICIPALITY WATERTOWN VZ N.E. Inc. No. _____

VERIZON NEW ENGLAND, INC

DATE : October 28, 2022

SHOWING PROPOSED INSTALLATION OF UG CONDUIT ON GALEN ST AND WATER STREET



LEGEND

----- PROPERTY LINE BOUNDARY

————— EDGE OF PAVEMENT

- . - . - EDGE OF ROADWAY

—+—+—+—+— PROPOSED 4" PVC UNDERGROUND CONDUIT

[M H] MANHOLE

[B] DUCT BANK

ORDER FOR CONDUIT LOCATION

By the City Council of the City of WATERTOWN, Massachusetts.

Notice having been given and a public hearing held, as provided by law,
It is HEREBY ORDERED:

That permission be and hereby is granted VERIZON NEW ENGLAND INC. to lay and maintain underground conduits and manholes, with the wires and cables to be placed therein, under the surface of the following public way or ways as requested in petition of said Company dated the **28th** day of **October, 2022**.

Galen Street:

Place new 4" conduit on Galen Street. First section will begin at existing manhole MH 16/205A on and will extend approximately 15' northeasterly towards the property line of 66 Galen Street. Second section will begin at existing manhole MH 16/205 and will extend approximately 120' northward to the property line of 66 Galen Street.

Water Street:

Place new 4" conduit on Water Street. Third section will continue from the property line of 66 Galen Street crossing northeasterly under Water Street for approximately 24'.

This petition is necessary to support the new building at 66 Galen Street.

Substantially as shown on plan marked- VZ N.E. Inc. No. **4A0SR7M** dated **October 28, 2022** - filed with said petition. Also, that permission be and hereby is granted said VERIZON NEW ENGLAND INC. to lay and maintain underground conduits, manholes, cables and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as it may desire for distributing purposes.

The foregoing permission is subject to the following conditions:

1. The conduits and manholes shall be of such material and construction and all work done in such manner as to be satisfactory to such municipal officers as it may appoint to the supervision of the work, and a plan showing the location of conduits constructed shall be filed with the City when the work is completed.
2. In every underground main line conduit constructed by said Company hereunder one duct not less than three inches in diameter shall be reserved and maintained for the limited purpose of attaching one-way low voltage fire and police signaling wires owned by the municipality or governmental entity for public safety purposes only.
3. Said Company shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of said Company, its agents or servants, or in any manner arising from the rights and privileges granted it by the City.
4. In addition said Company shall, before a public way is disturbed for the laying of its wire or conduits, execute its bond in a penal sum of Ten Thousand Dollars (\$10,000) (reference being had to the bond already on file with said City) conditioned for the faithful performance of its duties under this permit.
5. Said Company shall comply with the requirements of existing by-laws and such as may hereafter be adopted governing the construction and maintenance of conduits and wires, so far as the same are not inconsistent with the laws of the Commonwealth.

I hereby certify that the foregoing order was adopted at a meeting of the City Council of the City of WATERTOWN, Massachusetts, held on the _____ day of _____ 2022.

City Clerk

ORDER FOR CONDUIT LOCATION

We hereby certify that on _____ 2022, at _____ o'clock ____ M. at _____ a public hearing was held on the petition of the VERIZON NEW ENGLAND INC. for permission to lay and maintain underground conduits, manholes and connection, with the wires and cables to be placed therein, described in the order herewith recorded, and that we mail at least seven days before said hearing a written notice of the time and place of said hearing to each of the owners of real estate (as determined by the last preceding assessment for taxation) along the ways or parts of ways upon which the Company is permitted to construct the lines of said Company under said order. And that thereupon said order was duly adopted.

_____	_____
_____	_____
_____	_____
_____	_____

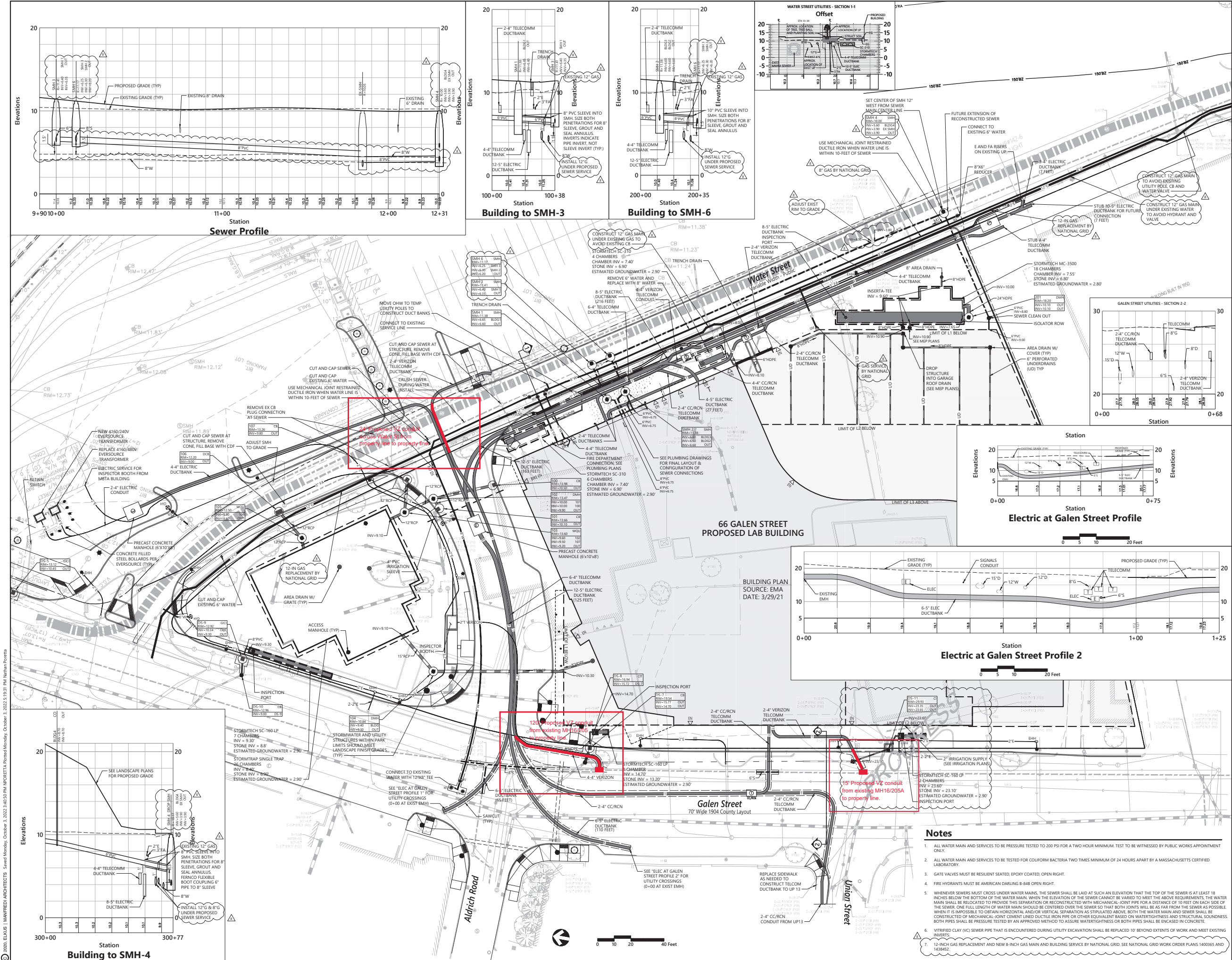
City Council of the City of WATERTOWN, Massachusetts

CERTIFICATE

I hereby certify that the foregoing is a true copy of location order, and certificate of hearing with notice adopted by the City Council of the City of WATERTOWN, Massachusetts, on the _____ day of _____ 2022, and recorded with the records of location orders of said City, Book _____ Page _____. This certified copy is made under the provisions of Chapter 166 General Laws and any additions thereto or amendments thereof.

Attest:

City Clerk



PROJECT NUMBER:	19072
CONSTRUCTION DOCUMENTS	
DATE:	APRIL 09, 2021
REVISIONS:	
Δ REVISIONS TO EARLY WORK FOUNDATION PACKAGE	
Δ BULLETIN 1	MAY 13, 2021
Δ BULLETIN 6	NOV. 17, 2021
Δ BULLETIN 7	JAN. 31, 2022
Δ BULLETIN 8	FEB. 25, 2022
Δ UT COORDINATION	MAY 03, 2022
Δ RDN RTC REVIEW	JUNE 01, 2022
Δ NG GAS WO PLANS	OCT. 03, 2022

SEE PREVIOUS ISSUES FOR REVISIONS
NOT LISTED HERE.

SCALE: 1" = 20'

DRAWING NAME:

UTILITY PLAN

DRAWING NUMBER:



George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
citymgr@watertown-ma.gov

To: Honorable City Council

From: George J. Proakis, City Manager *GJP*

Date: December 7, 2022

RE: Agenda Item - Proposed Loan Order

Attached please find correspondence from Gregory M. St. Louis, Superintendent of Public Works requesting action be taken to authorize a loan order in the amount of \$150,000 to pay costs of designing, engineering, construction, and construction administration services associated with the installation of a new and permanent gazebo to be located at upper Saltonstall Park.

I respectfully request the attached proposed Loan Order of \$150,000 be placed on the December 13, 2022, City Council Agenda as a First Reading.

Thank you for your consideration in this matter.

cc: Gregory M. St. Louis, Superintendent of Public Works
Thomas P. Watkins, Director of Administration and Finance, Department of Public Works
Matthew I. Shuman, City Engineer
Steven T. Magoon, Director of Community Development and Planning/Acting Deputy City Manager
Thomas J. Tracy, City Auditor/Assistant City Manager for Finance
Melissa A. Morrissey, City Treasurer/Collector



28 State Street
Boston, MA 02109-1775
p: 617-345-9000 f: 617-345-9020
hinckleyallen.com

Jay Gonzalez
(617) 378-4256
jgonzalez@hinckleyallen.com

November 22, 2022

George J. Proakis
City Manager
Administration Building
149 Main Street
Watertown, Massachusetts 02472

RE: Draft Loan Order – Gazebo Bonds

Dear George:

As requested, I suggest the following form of loan order to approve the borrowing of funds to pay costs of designing and constructing a new gazebo at Upper Saltonstall Park:

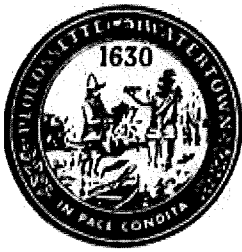
ORDERED: That the sum of \$150,000 is appropriated to pay costs of designing and constructing a new gazebo at Upper Saltonstall Park, including all costs incidental and related thereto; and that to meet this appropriation, the Treasurer, with the approval of the City Manager, is authorized to borrow said amount under and pursuant to M.G.L. c.44, §7(1), or pursuant to any other enabling authority, and to issue bonds or notes of the City therefor.

The order must be published at least five days prior to the holding of a public hearing with respect to the order and its final passage and requires the affirmative vote of at least two-thirds of all members of the City Council, as in the case of any other loan order for bonds.

Please call me if there are any questions about the suggested proceedings.

Sincerely,

Jay Gonzalez



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET

Gregory M. St. Louis, PE
Superintendent

(P) 617-972-6420
(F) 617-972-6402

TO: Mr. George Proakis, City Manager

FROM: Mr. Gregory St. Louis, Superintendent of Public Works

DATE: November 16, 2022

RE: Department of Public Works - Loan Order Request

The Department of Public Works respectfully requests that the necessary actions be taken to authorize the Treasurer to borrow the \$150,000.00 as outlined and approved in the FY 2023-2027 Capital Improvement Program budget for the Gazebo at Upper Saltonstall Park listed within Line 125 under Parks & Forestry of the CIP.

These funds will be utilized for the design, engineering, construction and construction administration services associated with the installation of a new and permanent gazebo to be located at Upper Saltonstall Park.

Recently, the Department of Public Works engaged the services of a design consultant for the renovation of Upper Saltonstall Park, which includes a number of landscape and layout improvements, along with the addition of a new gazebo. The gazebo will be utilized for live performances and the like, and will be a focal point of Upper Saltonstall Park, particularly during events, such as Faire in the Square.

Currently, a temporary stage is utilized. This stage has seen significant wear and tear over the years and takes a significant amount of labor and time to set up and break down. This new permanent structure will be a modern amenity to Upper Saltonstall Park and the City's downtown.

Thank you in advance for your consideration.



George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
citymgr@watertown-ma.gov

To: Honorable City Council

From: George J. Proakis, City Manager 

Date: December 7, 2022

RE: Agenda Item - Proposed Loan Order

Attached please find correspondence from Gregory M. St. Louis, Superintendent of Public Works requesting action be taken to authorize a loan order in the amount of \$2,600,000 to pay costs of identified Appraisals & Easements for the Mt. Auburn Street Corridor Project.

I respectfully request the attached proposed Loan Order of \$2,600,000 be placed on the December 13, 2022, City Council Agenda as a First Reading.

Thank you for your consideration in this matter.

cc: Gregory M. St. Louis, Superintendent of Public Works
Thomas P. Watkins, Director of Administration and Finance, Department of Public Works
Matthew I. Shuman, City Engineer
Steven T. Magoon, Director of Community Development and Planning/Acting Deputy City Manager
Thomas J. Tracy, City Auditor/Assistant City Manager for Finance
Melissa A. Morrissey, City Treasurer/Collector



28 State Street
Boston, MA 02109-1775
p: 617-345-9000 f: 617-345-9020
hinckleyallen.com

Jay Gonzalez
(617) 378-4256
jgonzalez@hinckleyallen.com

November 22, 2022

George J. Proakis
City Manager
Administration Building
149 Main Street
Watertown, Massachusetts 02472

RE: Draft Loan Order – Easements Acquisition Bonds

Dear George:

As requested, I suggest the following form of loan order to approve the borrowing of funds to pay costs of acquiring easements for the Mt. Auburn Street corridor project:

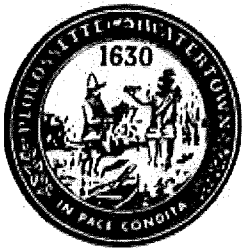
ORDERED: That the sum of \$2,600,000 is appropriated to pay costs of acquiring easements for the Mt. Auburn Street corridor project, including the costs of appraisals and all other costs incidental and related thereto; and that to meet this appropriation, the Treasurer, with the approval of the City Manager, is authorized to borrow said amount under and pursuant to M.G.L. c.44, §7(1), or pursuant to any other enabling authority, and to issue bonds or notes of the City therefor.

The order must be published at least five days prior to the holding of a public hearing with respect to the order and its final passage and requires the affirmative vote of at least two-thirds of all members of the City Council, as in the case of any other loan order for bonds.

Please call me if there are any questions about the suggested proceedings.

Sincerely,

Jay Gonzalez



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET

Gregory M. St. Louis, PE
Superintendent

(P) 617-972-6420
(F) 617-972-6402

TO: Mr. George Proakis, City Manager

FROM: Mr. Gregory St. Louis, Superintendent of Public Works

DATE: November 16, 2022

RE: Department of Public Works - Loan Order Request

In accordance with the FY 2023 - 2027 Capital Improvement Program budget, the Department of Public Works respectfully requests that the necessary actions be taken to authorize the Treasurer to borrow a total of \$2,600,000.00 identified for the Appraisals & Easements for the Mt. Auburn Street Corridor Project. This request of funds is in conjunction with the overall Mt. Auburn Street Reconstruction project (a MassDOT TIP Funding Project). This project is listed within Line 267 under Streets & Sidewalks of the CIP.

The Appraisals & Easements of the Mt. Auburn Street Corridor project is a necessary action needed prior to the start of the overall reconstruction efforts of the street, as it will allow for access to identified areas for reconstruction efforts to commence. These services will be procured within the confines of Massachusetts procurement laws.

We thank you in advance for your consideration.



George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
citymgr@watertown-ma.gov

To: Honorable City Council

From: George J. Proakis, City Manager *GJP*

Date: December 7, 2022

RE: Agenda Item - Proposed Loan Order

Attached please find correspondence from Gregory M. St. Louis, Superintendent of Public Works requesting action be taken to authorize a loan order in the amount of \$200,000 to pay costs of purchasing a swap loader trash compactor vehicle for Parks & Forestry. This purchase will allow for a safer and more efficient use of staff time in the execution of collecting and emptying out the numerous trash receptacles located around the City's parks and sidewalks.

I respectfully request the attached proposed Loan Order of \$200,000 be placed on the December 13, 2022, City Council Agenda as a First Reading.

Thank you for your consideration in this matter.

cc: Gregory M. St. Louis, Superintendent of Public Works
Thomas P. Watkins, Director of Administration and Finance, Department of Public Works
Matthew I. Shuman, City Engineer
Steven T. Magoon, Director of Community Development and Planning/Acting Deputy City Manager
Thomas J. Tracy, City Auditor/Assistant City Manager for Finance
Melissa A. Morrissey, City Treasurer/Collector



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Jay Gonzalez
(617) 378-4256
jgonzalez@hinckleyallen.com

November 22, 2022

George J. Proakis
City Manager
Administration Building
149 Main Street
Watertown, Massachusetts 02472

RE: Draft Loan Order – DPW Equipment Bonds

Dear George:

As requested, I suggest the following form of loan order to approve the borrowing of funds to pay costs of purchasing a swap loader trash compactor vehicle for the Department of Public Works:

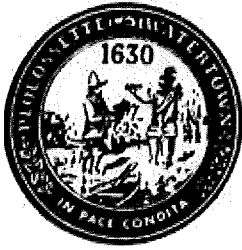
ORDERED: That the sum of \$200,000 is appropriated to pay costs of purchasing a swap loader trash compactor vehicle for the Department of Public Works, including all costs incidental and related thereto; and that to meet this appropriation, the Treasurer, with the approval of the City Manager, is authorized to borrow said amount under and pursuant to M.G.L. c.44, §7(1), or pursuant to any other enabling authority, and to issue bonds or notes of the City therefor.

The order must be published at least five days prior to the holding of a public hearing with respect to the order and its final passage and requires the affirmative vote of at least two-thirds of all members of the City Council, as in the case of any other loan order for bonds.

Please call me if there are any questions about the suggested proceedings.

Sincerely,

Jay Gonzalez



CITY OF WATERTOWN
DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET

Gregory M. St. Louis, PE
Superintendent

(P) 617-972-6420
(F) 617-972-6402

TO: Mr. George Proakis, City Manager
FROM: Mr. Gregory St. Louis, Superintendent of Public Works
DATE: November 16, 2022
RE: Department of Public Works - Loan Order Request

The Department of Public Works respectfully requests that the necessary actions be taken to authorize the Treasurer to borrow the \$200,000.00 as outlined and approved in the FY 2023-2027 Capital Improvement Program budget for the Swap Loader listed within Line 126 under Parks & Forestry of the CIP.

The Department of Public Works intends to utilize these funds to purchase a Trash Compactor unit. The Trash Compactor will allow for a safer and more efficient use of staff time in the execution of collecting and emptying out the numerous trash receptacles located around the City's parks and sidewalks.

The addition of this vehicle is extremely important in order to maintain the safe, efficient and effective operation of the Department. The vehicle will be procured with the principles of economic, operational and fuel efficiency in mind, and within the confines of Massachusetts procurement laws.

Thank you in advance for your consideration.



George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
Citymgr@watertown-ma.gov

To: Honorable City Council

From: George J. Proakis, City Manager 

Date: December 28, 2022

RE: Agenda Item – Informational Presentation on the New Multifamily Zoning Requirements for MBTA Communities

Attached please find email correspondence from Steven Magoon, Director of Community Development and Planning/Acting Deputy City Manager regarding the new multifamily zoning requirements for MBTA communities. This new law requires that each “MBTA community” shall have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and meets other criteria set forth in the statute.

Given the above, I respectfully request an Informational Presentation be placed on the January 10, 2023 City Council Agenda.

Thank you for your consideration in this matter.

cc: Steven Magoon, Director of Community Development and Planning/Assistant City Manager
Mark R. Reich, Esquire, KP Law

Hand, JoAnna

From: Magoon, Steve
Sent: Friday, December 23, 2022 10:43 AM
To: Proakis, George; Sideris, Mark
Cc: Field, Larry; Hand, JoAnna; Osmond, Marsha; Pronovost, Marilyn; Schreiber, Gideon
Subject: MBTA Communities
Attachments: DRAFT Memo to Council MBTA Communities Action Plan(2).docx

Please see the attached memorandum regarding an agenda item for the January meeting of the City Council. I would respectfully request that this be placed on the Council agenda for a brief staff presentation of how we would propose to address this legislation so that we will continue to be in compliance. Let me know if you have any questions. Thanks

Steve Magoon
Acting Deputy City Manager, Director, Community Development and Planning
Watertown Administration Building
149 Main Street
Watertown, MA 02472
Office 617 972-6417
Cell 617 987-1136



CITY OF WATERTOWN
Community Development and Planning
PLANNING OFFICE

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6417
Fax: 617-972-6484

www.watertown-ma.gov

To: George Proakis, City Manager
From: Steve Magoon, Director of Community Development and Planning and
Acting Deputy City Manager
Date: December 22, 2022
Re: Multifamily Zoning Requirement for MBTA Communities

Watertown must submit an action plan by January 31, 2023 providing general information about how it intends to comply with the 2021 MBTA Communities law (i.e., the multifamily zoning requirement). The Department of Community Development and Planning proposes to inform the Commonwealth that the city will begin a planning process in 2023 that will include parameters for a by right multifamily zoning district centered around Watertown Square.

The Commonwealth issued final guidelines¹ in August that require Watertown to adopt by right multifamily zoning with a minimum land area of 24 acres and the capacity² to produce 1,701 units. The action plan submission is required to obtain interim compliance. The city must pass compliant zoning by December 31, 2024. An MBTA community that does not comply is ineligible for funding from the Housing Choice Initiative, the Local Capital Projects Fund, and the MassWorks Infrastructure Program.

The Commonwealth made the action plan “non-binding,” i.e., a community can ultimately choose to adopt zoning that differs from what is presented in its submission. Similarly, although the form asks for a specific timeline, this is intended to show that the community has provided enough time to achieve compliance by the deadline.

We propose to generally identify the Watertown Square area as the likely location and, further, explain that the city intends to begin a public planning process after its Comprehensive Plan Update is issued in 2023. As you know, your budget message in October included a robust planning initiative to consider all

¹ The guidelines are available at: [Multi-Family Zoning Requirement for MBTA Communities | Mass.gov](https://www.mass.gov/info-details/multi-family-zoning-requirement-for-mbta-communities)

² The community must show that it has zoning requirements (dimensional, parking, etc) that would realistically allow for development at the required gross density (15 units/acre). This does not mean that there must be vacant land, as many built sites can be redeveloped given the right economics. Also, the law is a zoning, not production, requirement.

the issues, including multifamily zoning, relevant to a thriving Watertown Square. We propose to identify June 2024 as the target date for adoption of compliant zoning.

Multi-Family Zoning Requirement for MBTA Communities

This page includes Compliance Guidelines on new Section 3A of MGL c. 40A and related materials.

This new law requires that an MBTA community shall have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and meets other criteria set forth in the statute:

- Minimum gross density of 15 units per acre
- Located not more than 0.5 miles from a commuter rail station, subway station, ferry terminal or bus station, if applicable
- No age restrictions and suitable for families with children

On December 15, 2021, the Department of Housing and Community Development (DHCD) issued draft guidelines on how to comply with the law. After the release of the draft guidelines, the Baker-Polito Administration held a public comment period until March 31, 2022. During the public comment period, there were over 24 engagement sessions and DHCD received nearly 400 comments through an online portal. The public comment process served to inform the revised guidelines.

On August 10, 2022, DHCD issued the final guidelines to determine if an MBTA community is in compliance with Section 3A. [Read the letter \(/doc/mbta-communities-final-compliance-guidelines-letter/download\)](#) sent to each MBTA Community from Secretary Mike Kennealy and Undersecretary Jennifer Maddox. We encourage you to visit this page often as it will be updated from time to time.

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[Why is multi-family zoning near transit and in neighboring communities important? \(#why-is-multi-family-zoning-near-transit-and-in-neighboring-communities-important?-\)](#)

[What is the new law? \(#what-is-the-new-law?-\)](#)

[Section 3A Guidelines \(#section-3a-guidelines-\)](#)

[Compliance Model \(#compliance-model-\)](#)

[Complying with Section 3A Guidelines \(#complying-with-section-3a-guidelines-\)](#)

[Technical Assistance for Municipalities \(#technical-assistance-for-municipalities-\)](#)

[Video Resources \(#video-resources-\)](#)

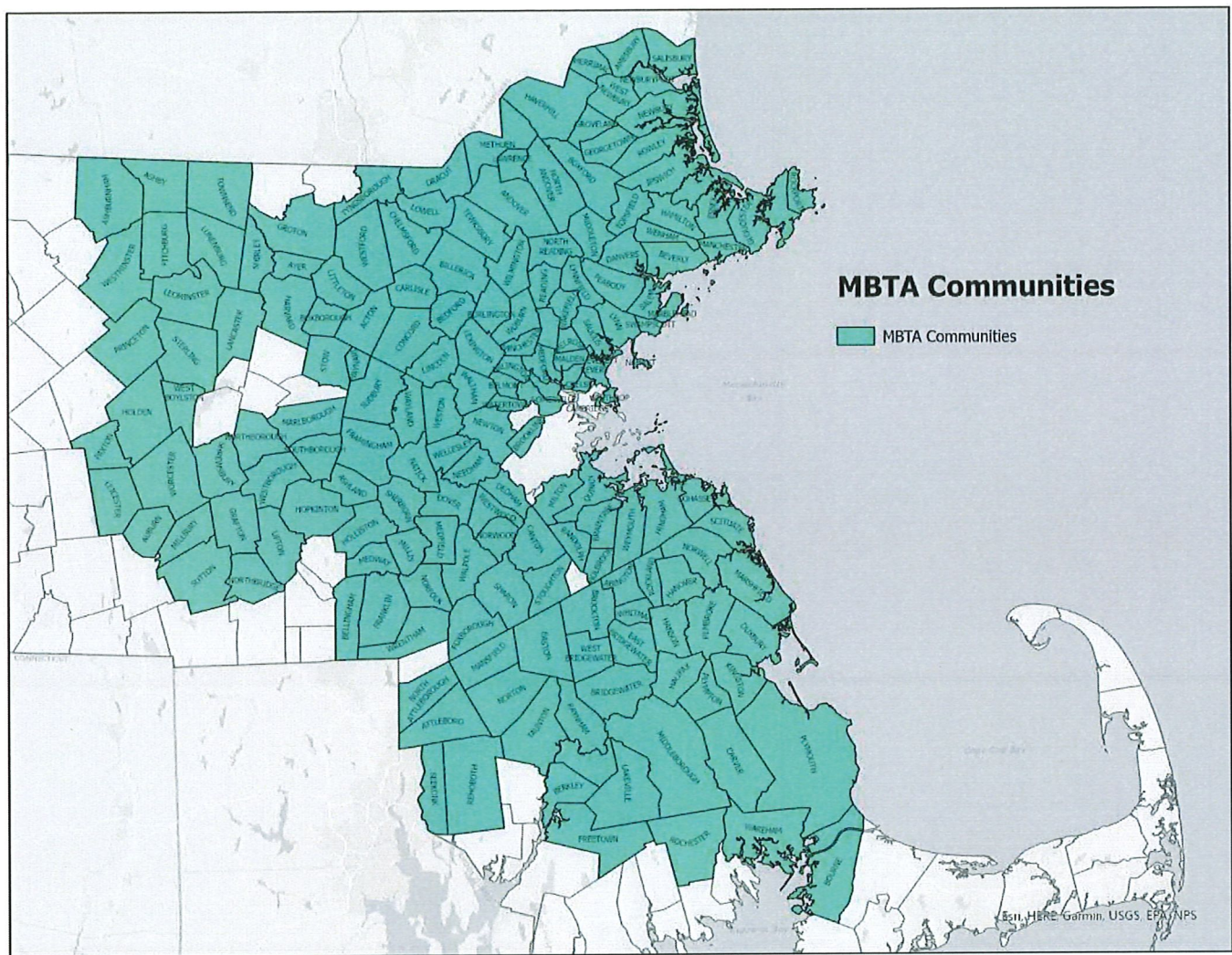
[Contact \(#contact\)](#)

What is an "MBTA Community"?

"MBTA community" is defined by reference to Section 1 of MGL c. 161A:

- ☐ one of the "14 cities and towns" that initially hosted MBTA service;
- ☐ one of the "51 cities and towns" that also host MBTA service but joined later;
- ☐ other "served communities" that about a city or town that hosts MBTA service; or
- ☐ a municipality that has been added to the MBTA under G.L. c. 161A, sec. 6 or in accordance with any special law relative to the area constituting the authority.

In total, 175 MBTA communities are subject to the new requirements of Section 3A of the Zoning Act. While served by the MBTA, Boston is exempted from the Zoning Act, including section 3A. This is illustrated in the map below.



Why is multi-family zoning near transit and in neighboring communities important?

Massachusetts is in a housing crisis.

- Massachusetts has among the highest, and fastest growing, home prices and rents of any state in the nation.
- Rising costs have dramatically increased financial pressures on low- and middle-income families, forcing them to sacrifice other priorities in order to pay housing costs. High housing costs are a primary driver of homelessness.
- These high costs are a disadvantage as we compete economically against peer states. The risk of future job growth moving outside Massachusetts is rising due to the high costs of living.

How does creating zoning for multi-family housing help the housing crisis?

The lack of zoning for multi-family housing is a barrier for new housing development in Massachusetts. By allowing multifamily housing near transit, we can create new housing in walkable neighborhoods closer to transit. This is not just good housing policy, it is good climate and transportation policy, too. The result of transit-oriented development is:

- More housing closer to the places that we go every day, such as local shops, jobs, schools, restaurants, parks, etc.
- Better access to work, services, and other destinations by increasing mobility and utilization of public transit
- Reduced reliance on single occupancy vehicles, which helps in our larger effort to confront the climate crisis

What is the new law?

The requirement is codified as Section 3A of MGL c. 40A:

Section 3A. (a)(1) An MBTA community shall have a zoning ordinance or by-law that provides for at least 1 district of reasonable size in which multi-family housing is permitted as of right; provided, however, that such multi-family housing shall be without age restrictions and shall be suitable for families with children. For the purposes of this section, a district of reasonable size shall: (i) have a minimum gross density of 15 units per acre, subject to any further limitations imposed by section 40 of chapter 131 and title 5 of the state environmental code established pursuant to section 13 of chapter 21A; and (ii) be located not more than 0.5 miles from a commuter rail station, subway station, ferry terminal or bus station, if applicable.

(b) An MBTA community that fails to comply with this section shall not be eligible for funds from: (i) the Housing Choice Initiative as described by the governor in a message to the general court dated December 11, 2017; (ii) the Local Capital Projects Fund established in section 2EEEE of chapter 29; or (iii) the MassWorks infrastructure program established in section 63 of chapter 23A.

(c) The department, in consultation with the Massachusetts Bay Transportation Authority and the Massachusetts Department of Transportation, shall promulgate guidelines to determine if an MBTA community is in compliance with this section.

Section 3A Guidelines

Below you will find a link to the guidelines for determining compliance with Section 3A of MGL c. 40A and summary of revisions made on 10/21/2022.

Guidelines (PDF)

<https://www.mass.gov/doc/compliance-guidelines-for-multi-family-zoning-districts-under-section-3a-of-the-zoning-act/download>

Guidelines (HTML)

</info-details/section-3a-guidelines>

Summary of 10/21 Revisions (PDF)

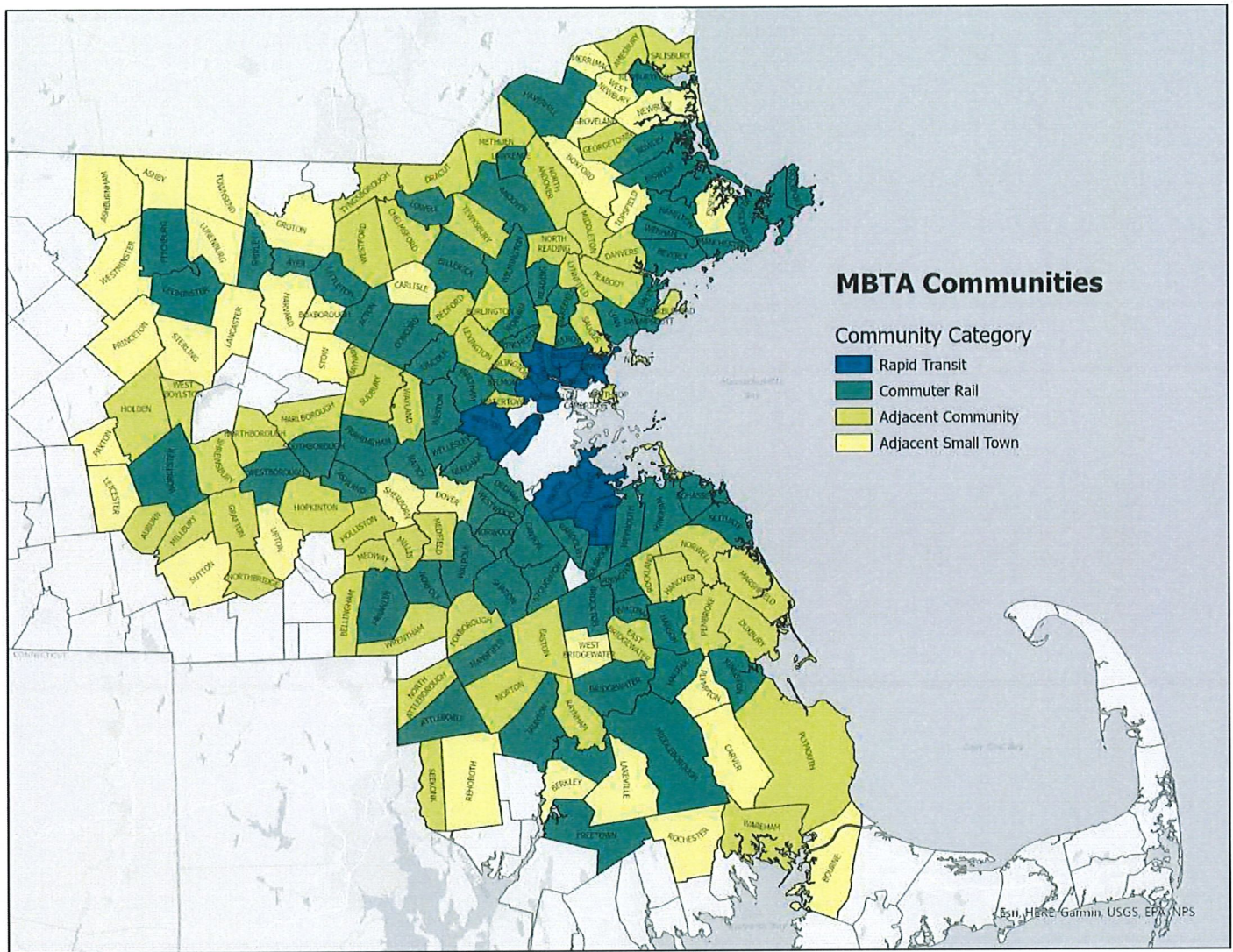
<https://www.mass.gov/doc/summary-of-changes-to-compliance-guidelines-under-section-3a-of-the-zoning-act-102122/download>

Summary of 10/21 Revisions (HTML)

</info-details/summary-of-1021-revisions-to-section-3a-guidelines>

MBTA Community Categories

All communities served by the MBTA must zone to allow for multifamily housing as of right, with a greater obligation for communities with better access to transit stations.



Appendix 1 MBTA Community Categories and Requirements

Show entries

Search:

Community	Community category	2020 Housing Units	Minimum multi-family unit capacity*	Minimum land area**	Developable station area***	% loca
Watertown	Adjacent community	17,010	1,701	24	27	0%
Wayland	Adjacent community	5,296	750	50	-	0%
Wellesley	Commuter Rail	9,282	1,392	50	921	90%
Wenham	Commuter Rail	1,460	365	24	111	20%
West Boylston	Adjacent community	3,052	587	39	-	0%

Showing 156 to 160 of 175 entries

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* Minimum multi-family unit capacity for most communities will be based on the 2020 housing stock and the applicable percentage for that municipality's community type. In some cases, the minimum unit capacity is derived from an extrapolation of the required unit capacity by the statutory minimum gross density of 15 dwelling units per acre. In cases where the required unit capacity from these two methods would exceed 25% of the community's housing stock, the required unit capacity has instead been capped at that 25% level.

** Minimum land area is 50 acres for all communities in the rapid transit, commuter rail and adjacent community types. There is no minimum land area requirement for adjacent small towns. Where 50 acres exceeds 1.5% of the developable land area in a town, minimum land area to 1.5% of developable land area in the town.

*** Developable station area is derived by taking the area of a half-mile circle around an MBTA commuter rail station, rapid transit station, or ferry terminal and removing any areas comprised of excluded land.

**** This data table was updated on 10/21/2022 to correct a minor data error that affected the posted unit capacity and land area requirements for two municipalities (Lincoln, and Manchester-by-the-Sea).

Additional Resources

MBTA Communities - Community Category Designations and Capacity Calculations

(<https://www.mass.gov/doc/mbta-communities-community-category-designations-and-capacity-calculations/download>) (XLSX 30.53 KB)

Compliance Model

The compliance model is the primary tool for measuring a zoning district for compliance with Section 3A of M.G.L. Chapter 40A. There are several zoning requirements in Section 3A related to district size and location, multi-family unit capacity, gross density, and other benchmarks. The compliance model ensures a standard way of evaluating and estimating multi-family zoning districts on these metrics across all MBTA communities.

The compliance model was developed to create *reasonable estimates* that can be used to verify compliance with Section 3A. It is not intended to be as rigorous as a full, detailed build out analysis. Therefore, while the outputs from the model provide good estimates relative to the compliance metrics, they do not provide absolute measures of development potential. The development of the model was completed with the input and assistance of consultants and other experts and key stakeholders.

There is technical assistance available for municipalities seeking support as they use the model. Additional resources, guides, and examples will be posted to this page as they become available.

Compliance Model & Components

(</info-details/compliance-model-components>)

Compliance Model User Guide & Methodology Documents

(</info-details/compliance-model-user-guide-methodology-documents>)

Complying with Section 3A Guidelines

The Guidelines establish timelines for municipalities to adopt compliant zoning districts. MBTA communities that are noncompliant with Section 3A are ineligible for funding from certain funding sources provided by the Commonwealth. There are two forms of compliance, district (or "full compliance") and interim compliance.

District Compliance

District Compliance is achieved when an MBTA community adopts a multi-family zoning district that meets all the requirements of the compliance guidelines and is certified by DHCD. The deadline to submit a compliance application to DHCD varies by community category as shown in the table below.

Community Category	Deadline
Rapid transit community	12/31/2023
Commuter rail community	12/31/2024
Adjacent community	12/31/2024
Adjacent small town	12/31/2025

District Compliance applications will be available in November 2022. MBTA communities will use an online application and submit the results of the compliance model, which is a Microsoft Excel workbook to estimate multi-family unit capacity and to demonstrate gross density of zoning districts. The Guidelines refer to this tool as the compliance model.

Interim Compliance – Action Plan

An MBTA community that does not have zoning in place that complies with Section 3A must take active steps towards achieving compliance in order to remain eligible for certain annual funding rounds. The Guidelines allow communities to create and complete an online Action Plan form that outlines the municipality's process for adopting compliant zoning. When DHCD approves the Action Plan, then the community will achieve "interim compliance" and will retain eligibility for the funding sources that require compliance with Section 3A.

- To remain eligible for the calendar year 2023 round of [MassWorks](https://www.mass.gov/doc/massworks) ([/orgs/massworks](https://www.mass.gov/doc/massworks)) and [Housing Choice](https://www.mass.gov/doc/housing-choice) ([/how-to/housing-choice-community-grant-program](https://www.mass.gov/doc/housing-choice)) grants, as well as the [Local Capital Projects Fund](https://www.mass.gov/doc/local-capital-projects-fund) (<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIII/Chapter29/Section2EEEE>), an MBTA community must submit an Action Plan no later than January 31, 2023.
- No MBTA community may remain in interim compliance after its district compliance deadline has passed.
- A copy of the Action Plan form and access to the online Action Plan form are available below

Submit an Action Plan

(</forms/interim-compliance-action-plan-form>)

Action Plan Form (PDF)

(<https://www.mass.gov/doc/action-plan-for-mbta-communities/download>)

What Can MBTA communities do over the next several months?

Prior to the release of the Compliance Model and District Compliance applications, download a one page summary of **What's Next for Section 3A** that lists activities MBTA communities can begin.

What's Next for Section 3A (PDF)

(<https://www.mass.gov/doc/whats-next-for-section-3a/download>)

What's Next for Section 3A (HTML)

(</info-details/whats-next-for-section-3a>)

Technical Assistance for Municipalities

Technical Assistance with Section 3A compliance is available from many sources, including the [Community One Stop for Growth](#) (</guides/community-one-stop-for-growth>) ([Community Planning](#) (</how-to/community-planning-grant-program>), [Rural and Small Town Development Fund](#) (</how-to/rural-and-small-town-development-fund>) and [Housing Choice](#) (</how-to/housing-choice-grant-program>) Grants), and [Energy and Environmental Affairs Land Use Grants](#) (</service-details/planning-assistance-grants>). If you do not know which type of technical assistance is right for your situation, fill out the "Technical Assistance Inquiry Form" below and DHCD will respond with suggestions.

Technical Assistance Inquiry Form

(</forms/municipal-technical-assistance-form>)

List of TA Grant Awards and Resources

(</info-details/3a-technical-assistance-awards-resources>)

Massachusetts Housing Partnership (MHP):

Early Action Technical Assistance Mini-Round

Starting this summer, MHP will provide direct technical assistance to a limited number of municipalities interested in working to evaluate an existing or proposed multi-family zoning district using the compliance model. Participants will be selected based largely on readiness to proceed, and with a goal of representing a range of community types and community categories. Applications are currently available at [MHP 3A-TA](#) (https://urldefense.com/v3/_https://www.mhp.net/community/complete-neighborhoods-initiative_!!ICUhgQOZqV7M!mA_gNPwRVCK_FqDZaaADxpF2radyjX8yQ4MhQobZMK5KrSukGS4HdKU_EDRn3QTdo7EhAnQA) will be accepted through August 31, 2022.

MHP Technical Assistance for MBTA Communities MHP ("3A-TA")

MHP will offer free and direct technical assistance from staff and pre-qualified consultants to municipalities for activities directly related to compliance with the multi-family zoning requirement. Eligible activities will include siting and mapping the district, developing appropriate use and intensity requirements; calculating capacity yield, drafting zoning by-law/ordinance; and community engagement. Applications for our initial round of technical assistance will be available at [MHP 3A-TA](#) (https://urldefense.com/v3/_https://www.mhp.net/community/complete-neighborhoods-initiative_!!ICUhgQOZqV7M!mA_gNPwRVCK_FqDZaaADxpF2radyjX8yQ4MhQobZMK5KrSukGS4HdKU_EDRn3QTdo7EhAnQA) in September.

Online Workshop Series for MBTA Communities

MHP will be offering a series of trainings during the fall 2022 on topics communities should consider when planning their multi-family districts. The working title is *More than Compliance: Multi-Family Districts that Work for Your Community* and will address related topics ranging from infrastructure basics to community engagement and messaging strategies. Registration details will be available soon on our website at [MHP 3A-TA](#) (https://urldefense.com/v3/_https://www.mhp.net/community/complete-neighborhoods-initiative_!!ICUhgQOZqV7M!mA_gNPwRVCK_FqDZaaADxpF2radyjX8yQ4MhQobZMK5KrSukGS4HdKU_EDRn3QTdo7EhAnQA)

Regional Planning Agencies

We encourage communities to consult with your RPA staff during this process as well. District Local Technical Assistance is available from every RPA and is typically offered in the beginning of the calendar year.

Video Resources

Thursday, September 8, 2022, 1PM

This webinar covers an overview of the Section 3A legislation, key changes made from draft to final guidelines, and a description of the compliance model that will be used to estimate multi-family unit capacity and density in 3A-zoning districts.

Download the presentation for the webinar: [MBTA Communities Webinar Slide 9.8.22 \(/doc/mbta-communities-webinar-slide-9822/download\)](#)

Contact

DHCD Section 3A Team

Online

DHCD3A@mass.gov (mailto:DHCD3A@mass.gov)



[All Topics \(/topics/massachusetts-topics\)](#)

[Site Policies \(/site-policies\)](#)

[Public Records Requests \(/topics/public-records-requests\)](#)

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George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
citymgr@watertown-ma.gov

To: Honorable City Council

From: George J. Proakis, City Manager

Date: January 5, 2023

RE: Agenda Item – Confirmatory Order to Acquire 124 Watertown Street (Parker School)

On December 13, 2022, the Honorable City Council voted to acquire 124 Watertown Street (Parker School). M.G.L. c. 79, §3 requires that an Order of Taking be recorded within thirty (30) days from its adoption. Due to scheduling issues, the closing date has now been set for January 18th. Therefore, City Council will need to confirm its vote of December 13, 2022 to acquire 124 Watertown Street.

I respectfully request the attached Order be placed on the January 10, 2023 City Council Agenda

Thank you for your consideration in this matter.

cc: Steven Magoon, Acting Deputy City Manager/Director of CD&P
Mark R. Reich, Esquire, KP Law

ORDER #

O-2023-

**CONFIRMATORY ORDER TO ACQUIRE
124 WATERTOWN STREET (PARKER SCHOOL)**

ORDERED:

WHEREAS, the City Council voted on December 13, 2022 to acquire 124 Watertown Street, sometimes referred to as the Parker School, in the City of Watertown, from Devi Realty Co LLC, and, further authorized the City Manager to execute an Order of Taking for the property; and

WHEREAS, G.L. c. 79, §3 requires that an Order of Taking be recorded within thirty (30) days from its adoption.

NOW, THEREFORE, BE IT ORDERED that the City Council confirms its vote of December 13, 2022 to acquire 124 Watertown Street by eminent domain;

AND, BE IT FURTHER ORDERED that the City Council authorizes the City Manager to execute and record the Order of Taking with the Middlesex South District Registry of Deeds, and to execute such other documents and instruments as may be necessary or appropriate to carry out the intent of this Order.

Council Member

I hereby certify at a regular meeting of the City Council for which a quorum was present, the above Order was adopted by a vote of ____ for, ____ against and ____ present on January 10, 2023.

Marilyn Pronovost, Council Clerk

Mark S. Sideris, Council President



Watertown City Council

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6470

ELECTED OFFICIALS:

Mark S. Sideris,
Council President

Vincent J. Piccirilli, Jr.,
Vice President &
District C Councilor

John M. Airasian,
Councilor At Large

Caroline Bays,
Councilor At Large

John G. Gannon,
Councilor At Large

Anthony Palomba,
Councilor At Large

Nicole Gardner,
District A Councilor

Lisa J. Feltner,
District B Councilor

Emily Izzo,
District D Councilor

Report of the Committee on Economic Development & Planning Meeting Date: December 6, 2022

The Committee convened on Tuesday, December 6, 2022 at 6:00 pm in the Richard E. Mastrangelo Council Chambers, with remote participation by Zoom. Present were Lisa Feltner, chair; and Vincent Piccirilli, secretary; and John Gannon, vice chair, who was present remotely. Staff present were Steven Magoon, Assistant City Manager/Director of Community Development and Planning; James Kane, Director of Public Buildings; Silas Fyler, Energy Manager; and Edward Lewis, recently retired Energy Manager.

Also present were Councilors Caroline Bays, Nicole Gardner, Anthony Palomba; State Representative Steven Owens; and Environment & Energy Efficiency Committee member Pat Rathbone. Present remotely were President Mark Sideris, Councilors John Airasian and Emily Izzo; Environment & Energy Efficiency Committee member Brian Hebeisen, and residents Ernesta Krackiewicz, Elodia Thomas, Libby Shaw, Sheri Kennedy, Christopher Ives, and Jocelyn Tager.

Councilor Feltner called the meeting to order at 6:15 pm with a roll call. The purpose of the meeting was twofold:

1. Policy Guidance on the Reuse & Design for a Building at the Former Police Station
2. Review the Specialized Stretch Code and Make Recommendation

1. Former Police Station

Mr. Magoon gave an overview of the property. In 2015, it was estimated to cost \$4.5M to do a limited renovation, and \$7M to tear it down and build a new building for municipal office use which was included in the current Capital Improvement Program. Both these estimates are outdated. With the impending purchase of the former Parker School to be used as municipal offices, the former Police Station is no longer needed for municipal office use.

As the Council voted to recommend a comprehensive Watertown Square study, to include the potential reuse of city-owned parcels, including the former Police Station, the original referral should be closed out.

- **Action Item:** Councilor Piccirilli made a motion, seconded by Councilor Gannon, that the Committee recommends the City Council close out the prior referral to develop policy guidance for the reuse of the former Police Station, as the potential reuse of the site will included in the Watertown Square Study per the November 22, 2022 Budget Policy Guidelines. Voted 3-0 on a roll call.

Because of technical difficulties, the meeting was paused at 6:24 pm. The meeting resumed at 6:29 by a unanimous roll call vote.

2. Specialized Stretch Code

The City Manager submitted a memo dated October 20, 2022 on the update of the Massachusetts Municipal Opt-in Specialized Stretch Code, which includes the Department of Energy Resources (DOER) draft regulations dated September 19, 2022 (Attachment A). Mr. Fyler gave a presentation (Attachment B). The following key points were made:

1. The Watertown City Council already adopted the Stretch Code, so the amendments to the Building Stretch Code will automatically apply to projects in Watertown on a 6-month rolling basis in 2023 and 2024, with no further action required by the City Council.
2. The Specialized Stretch Code is a more stringent version of the Building Stretch Code which requires a vote of the City Council to adopt.
3. The amendments to the Building Stretch Code and the Specialized Stretch Code were published in draft form by DOER in September, but the final version will not officially take effect until it is published by the Secretary of State, which is expected to happen on December 23rd. It is not expected to have any changes of substance, just clerical revisions.
4. The first amendments to the Building Stretch Code will take effect July 1, 2023, and the best practice is for building code changes, including the Specialized Stretch Code, to take effect 6 months from adoption, in order to give designers and builders adequate time to respond when submitting plans for approval.
5. The Specialized Stretch Code only applies to new construction, not remodeling.
6. The Specialized Stretch Code ensures that new construction is consistent with net-zero Massachusetts goals for 2050, primarily through deep energy efficiency, reduced heating loads, and efficient electrification.
7. The Specialized Stretch Code accomplishes this by requiring all new building construction to have the increased energy efficiency construction specifications as net-zero buildings.
8. The Specialized Stretch Code gives a builder two choices:
 - a. Construct an all-electric building (i.e. no fossil fuels) which can take advantage of renewable energy, and be solar-ready so it can be upgraded in the future to (but does not actually require installation of) photo-voltaic systems.
 - b. Construct a mixed-fuel building (i.e. fossil fuel + electric), insulated to a higher efficiency level, pre-wired as full electric, and solar-ready so that it can be upgraded in the future to take advantage of renewable energy and the installation of photo-voltaic systems. Some solar is required to be installed depending on the building type.
9. The Specialized Stretch Code does not ban fossil-fuel installations for new buildings, however by requiring that a new mixed-fuel building be fully wired and insulated as a net-zero building, it may be advantageous to the builder to not install fossil fuel systems.

In the ensuing discussion, the general consensus was that Watertown should adopt the Specialized Stretch Code to be effective in July 2023, consistent with the adopted Climate & Energy Action Plan.

- **Action Item:** Councilor Piccirilli made a motion, seconded by Councilor Gannon, that the Committee recommends that the City Council vote to adopt the Specialized Stretch Code consisting of Appendix RC of 225 CMR 22 (low rise residential) and Appendix CC of 225 CMR 23 (all other buildings), assuming there are no substantial changes to the final regulations to be published by the Secretary of State in late December 2022, and furthermore to be made effective in Watertown six months after the City Council vote. Voted 3-0 on a roll call.

The meeting adjourned at 7:24 pm on a unanimous roll call vote.

Addendum: Following the meeting, in an email sent December 31, 2022 (Attachment C), Mr. Fyler was of the opinion that there were no significant changes made from the draft version that was presented at the Dec 6th 2022 meeting and the final version recorded with the Secretary of State.

Report prepared by Vincent Piccirilli

Attachments:

- A. 10/20/22 memo - Update on the Massachusetts Municipal Opt-in Specialized Stretch Code
- B. Presentation - The new Stretch and Specialized Stretch Code
- C. 12/31/22 email from Silas Fyler - EDP update on the Opt-in Specialized Stretch Code



George J. Proakis
City Manager

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WATERTOWN
Office of the City Manager

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To: Honorable City Council

From: George J. Proakis, City Manager 

Date: October 20, 2022

RE: Update on the Massachusetts Municipal Opt-in Specialized Stretch Code

Attached please find email correspondence regarding the subject from Silas Fyler, Project Manager, Department of Public Buildings.

I will bring this up under Communications from the City Manager at the October 25, 2022 City Council Meeting and respectfully request the matter be referred to Committee for policy consideration and guidance by the Honorable City Council.

cc: Silas Fyler, Project Manager, Department of Public Buildings
Steven Magoon, CD&P Director/Assistant City Manager
Mark R. Reich, Esquire, KP Law

Hand, JoAnna

From: Silas Fyler <silas.fyler@watertown.k12.ma.us>
Sent: Wednesday, October 19, 2022 12:58 PM
To: Hand, JoAnna
Cc: Osmond, Marsha
Subject: Re: Agenda Item - Manager's update on the Massachusetts Municipal Opt-in Specialized Stretch Code
Attachments: 225 CMR 22 MA Residential Front end amendments clean Final.pdf; 225 CMR 23 MA Commercial Front end amendments clean Final.pdf; Stretch and Specialized code Regulation Summary 09222022-1.pdf

Hi JoAnna,

As part of the Climate Energy Action Plan (See section BE2.1) the Energy Managers Office is responsible for moving forward on the States new Stretch Code and Specialized Stretch Code. As a Green Community, Watertown has already adopted the presently active Stretch Code and will automatically be committed to the new Stretch Code. However, the Specialized Stretch Code will require a City Council vote to opt-in.

When a municipality votes to adopt the Specialized Code, the Department of Energy and Resources (DOER) recommends that the requirements take effect for new building permit applications beginning on the next January 1st or July 1st, whichever is a minimum of 6 months after the municipal vote. In order for Watertown to have the Specialized Code active by July 1st 2023, the City Council will have to vote by no later than December 31st 2022. If the vote is after December 31st 2022 then the active date is January 1st 2024.

In general the Specialized Stretch Code extends the new Stretch Code to require all new residential and commercial buildings to be either fossil fuel free or to be fully wired for electrification with solar installed.

DOER recently finalized the wording for both of the new codes and submitted them to the Joint Committee on Telecommunications, Utilities, and Energy (TUE) for review. The TUE Committee now has 30 days from DOER submission to call for a public hearing on the proposed regulations and issue a report back to DOER. I am expecting that there will be no significant changes and will become law shortly thereafter. To make this more challenging, DOER must have the Specialized Stretch Code rules available for adoption by December 24, 2022.

Obviously the timeline for the City Council to be able to vote on the Specialized Stretch Code will be tight. Is it possible to have the City Council review the version as it stands now so that when a fully executed version is posted, the City Council could be ready to vote before its last meeting in December?

I have attached DOER's summary of the new Stretch Code and Specialized Stretch Code as well as the detailed rules for your review.

Thanks,

Silas Fyler (he/him)
Project Manager
Department of Public Buildings
Watertown, MA

On Wed, Oct 19, 2022 at 11:31 AM Hand, JoAnna <jhand@watertown-ma.gov> wrote:

Hi Silas,

Do you have a memo and/or background materials to submit to council? The matter will be referred to Committee for policy consideration and guidance by the Honorable City Council. I will need this no later than Noon tomorrow for next week's agenda.

Regards,

JoAnna Hand

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Massachusetts Stretch Code and Specialized Code for Low-Rise Residential

(Note: please see 225 CMR 23 for Commercial, Multi-family and all other construction)

The Massachusetts Stretch energy code (Stretch Code) first became available for municipal adoption in 2009 as Appendix 110.aa and then 115.aa as part of the building code in 780 CMR. In 2021 the Massachusetts legislature passed new legislation moving authority for updates to the Stretch Code to the Department of Energy Resources and 225 CMR.

This code takes effect on January 1, 2023 and is designed to align with the forthcoming MA 10th edition building code promulgated under 780 CMR. Building permit applications for projects received on or after Jan. 1, 2023 in Stretch Code communities shall comply with this code.

As with the 10th edition building code, this energy code is based on modified versions of the 2021 code books as published by the International Code Council (ICC). Specifically, the 2021 International Energy Conservation Code (IECC 2021) as amended.

This section (225 CMR 22) covers low-rise residential buildings. All other buildings are covered by 225 CMR 23. 225 CMR 22 and 23 in combination form the Stretch Code – and must be adopted together and not in part.

Municipalities may also elect to adopt the combination of Appendix RC of 225 CMR 22 (Low rise residential) and Appendix CC of 225 CMR 23 (all other buildings) which together form the Municipal Opt-in Specialized code (Specialized Code).

For communities that have adopted the Stretch Code, the following 225 CMR 22 amendments to the IECC 2021 apply together with 225 CMR 23 for all other buildings.

For communities that adopt the Specialized Code, the following 225 CMR 23 amendments apply in combination with Appendix RC, along with 225 CMR 23 and Appendix CC for all other buildings.

In both the Stretch Code and the Specialized Code these amendments to the IECC 2021 replace Chapter 13 – Energy Efficiency of 780 CMR in the Base energy code.

Please remember that the Massachusetts amendments posted online are *unofficial versions* that are made available for convenience. Official versions of the Massachusetts amendments may be purchased from the State House Bookstore at www.sec.state.ma.us/spr/ and the IECC 2021 can be purchased from the ICC at www.iccsafe.org

225 CMR 22: MASSACHUSETTS FRONT-END AMENDMENTS TO THE INTERNATIONAL ENERGY
CONSERVATION CODE 2021

**MASSACHUSETTS STRETCH ENERGY CODE – 2023 Residential low-rise
amendments to IECC2021**

IECC 2021 and IRC 2021 CHAPTER 11: ENERGY EFFICIENCY

CHAPTER 1 [RE] SCOPE AND ADMINISTRATION

SECTION R103 CONSTRUCTION DOCUMENTS

R103.2 Insert after Subsection R103.2(8) the following:

10. EV Ready Space locations in accordance with Section R404.4.
11. Solar-Ready Zone in accordance with Appendix RB, or Solar Zone Area when complying with Appendix RC for fossil-fuel heated homes.

CHAPTER 2 [RE] DEFINITIONS

R202 GENERAL DEFINITIONS

R202 Add the following definitions:

ALL-ELECTRIC BUILDING. A building with no on-site *combustion equipment* for fossil fuel use or capacity including fossil fuel use in space heating, water heating, cooking, or drying appliances.

CLEAN BIOMASS HEATING SYSTEM. Wood-pellet fired central boilers and furnaces where the equipment has a thermal efficiency rating of 85% (higher heating value) or greater; and a particulate matter emissions rating of no more than 0.08 lb PM_{2.5}/MMBtu heat output.

COMBUSTION EQUIPMENT. Any *equipment or appliance* used for space heating, *service water heating*, cooking, clothes drying and/or lighting that can use *fuel gas, fuel oil* or solid fuel and that is not a *clean biomass heating system*.

ELECTRIC VEHICLE. An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current.

Informational Note: defined as in 527 CMR 12.00: Massachusetts Electrical Code (Amendments) section 625.2.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the *Electric Vehicle* connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *Electric Vehicle*.

Informational Note: defined as in 527 CMR 12.00: Massachusetts Electrical Code (Amendments) section 625.2.

ELECTRIC VEHICLE READY PARKING SPACE (“EV Ready Space”). A designated parking space which is provided with wiring and electrical service sufficient to provide AC level II or equivalent EV charging, as defined by Standard SAE J1772 for *EVSE* servicing light duty *Electric Vehicles*.

ENTHALPY RECOVERY RATIO. Change in the enthalpy of the outdoor air supply divided by the difference between the outdoor air and entering exhaust air enthalpy, expressed as a percentage.

HIGH-EFFICACY LAMPS. Light-emitting diode (LED) lamps with an efficacy of not less than the following:

1. 60 lumens per watt for lamps over 40 watts.
2. 50 lumens per watt for lamps over 15 watts to 40 watts.
3. 45 lumens per watt for lamps 15 watts or less.

MIXED-FUEL BUILDING. A *building* that contains *combustion equipment* or includes piping for such *equipment*.

POTENTIAL SOLAR ZONE AREA. The combined area of any low-sloped roofs and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Annual solar access is the ratio of “annual solar insolation with shade” to the “annual solar insolation without shade”. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

CHAPTER 3 [RE] GENERAL REQUIREMENTS

SECTION R301 CLIMATE ZONES

R301 Replace Section R301 as follows:

R301.1 General. Massachusetts is in *climate zone 5A*

CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY

SECTION R401 GENERAL

R401 Replace Section R401 as follows:

R401.1 Scope. This chapter applies to *residential buildings*. Municipalities which have adopted the Stretch Energy Code shall use the energy efficiency requirements of this chapter, or Chapter 51 where applicable for existing buildings. Municipalities which have adopted the Municipal Opt-in Specialized Stretch energy code shall comply with R401.2.4 including both the requirements of Appendix RC and this chapter.

R401.2 Application. Residential buildings shall comply with Section R401.2.5 and either Sections R401.2.2, R401.2.3 or R401.2.4. R-use buildings without individually separate dwelling units (such as single-room occupancy buildings) may comply with Section R401.2.1. The option selected for compliance shall be identified in the certificate required by Section R401.3.

Exception: Additions under 1,000 sf, *level 1 and level 2 alterations*, and repairs to existing buildings complying with Chapter 5 [RE].

R401.2.1 Prescriptive Compliance Option. The Prescriptive Compliance Option requires compliance with Sections R401 through R404 and R408.

R401.2.2 Passive House Building Certification Option. The Passive House Building Certification Option requires compliance with Section R405 and R404.4.

R401.2.3 Energy Rating Index Option. The Energy Rating Index (ERI) Option requires compliance with Section R406, R403.6 and R404.4.

R401.2.4 Appendix RC. Residential Buildings and dwelling units covered by this chapter may elect to comply with the requirements of IECC Appendix RC and R404 as amended.

R401.2.5 Additional energy efficiency. This section establishes additional requirements applicable to all compliance approaches to achieve additional energy efficiency.

1. For buildings complying with Section R401.2.1, two of the additional efficiency package options shall be installed according to Section R408.2.
2. For buildings electing to be *all-electric buildings*, both R408.2.2 and R408.2.3 shall apply for primary space heating and domestic hot water supply.

R402.1.5.1 Add Subsection R402.1.5.1 as follows:

R402.1.5.1 Approved software for Total UA alternative: The following software is approved for demonstrating Total UA compliance:

REScheck-Web for IECC2021 Massachusetts stretch code available at
<http://www.energycodes.gov/rescheck>

R402.4.1.1 Modify Table R402.4.1.1 to amend the Insulation Installation Criteria as follows:

TABLE R402.4.1.1 AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	INSULATION INSTALLATION CRITERIA
General requirements	All insulation shall be installed at Grade I quality in accordance with ICC/RESNET 301. Air-permeable insulation shall not be used as a sealing material.

R403.3.5 Insert the following to the end of Subsection R403.3.5:

Postconstruction or rough-in testing and verification shall be done by a HERS Rater, HERS Rating Field Inspector, or an applicable BPI Certified Professional. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*.

R403.6 Replace Section R403.6 as follows:

R403.6 Mechanical ventilation.

Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the *ventilation* system is not operating.

Each dwelling unit of a residential building shall be provided with a continuously operating mechanical balanced ventilation system that has been site verified to meet a minimum airflow per:

1. RESNET HERS Index in accordance with RESNET/ICC Standard 301
2. ASHRAE Standard 62.2-2019 or 62.2-2022
3. the following formula for one- and two-family dwellings and townhouses of three or less stories above grade plane:

$$Q = .03 \times CFA + 7.5 \times (N_{br} + 1) - 0.052 \times Q_{50} \times S \times WSF$$

Where: CFA is the conditioned floor area in sq ft

N_{br} is the number of bedrooms

Q_{50} is the verified blower door air leakage rate in cfm measured at 50 Pascals

S is the building height factor determined by this table:

stories above grade plane	1	2	3
S	1.00	1.32	1.55

WSF is the shielded weather factor as determined by this table:

County	WSF
Barnstable	0.60
Berkshire	0.52
Bristol	0.54
Dukes	0.59
Essex	0.58
Franklin	0.52
Hampden	0.49
Hampshire	0.59
Middlesex	0.55
Nantucket	0.61
Norfolk	0.52
Plymouth	0.53
Suffolk	0.66
Worcester	0.59

R403.6.1 Replace Subsection R403.6.1 and Subsections R403.6.1.1 and R403.6.1.2 as follows:

R403.6.1 Heat or Energy Recovery Ventilation.

Heat or energy recovery balanced ventilation systems shall be provided for dwelling units as specified in either Section R403.6.1.1 or R403.6.1.2, as applicable.

R403.6.1.1 Large Systems. Systems with a rated airflow exceeding 300_cfm shall have an enthalpy recovery ratio of not less than 50 percent at cooling design condition and not less than 60 percent at heating design condition, determined in accordance with AHRI 1060 at an airflow not less than the design airflow.

R403.6.1.2 Other Systems. Systems with a rated airflow of 300 cfm or less shall have a sensible recovery efficiency (SRE) of not less than 65 percent at 32°F (0°C) at an airflow not less than the design airflow. SRE shall be determined in accordance with CAN/CSA-C439 and shall be listed. Linear interpolation of listed values for SRE shall be permitted.

R403.6.3 Replace Subsection R403.6.3 as follows:

R403.6.3 Testing and Verification. Installed performance of the mechanical ventilation system shall be tested and verified by a HERS Rater, HERS Rating Field Inspector, or an applicable BPI Certified Professional, and measured using a flow hood, flow grid, Residential IAQ Fault Indicator Display certified to the California Energy Commission, or other airflow measuring device in accordance with either RESNET Standard 380 or ACCA Standard 5.

R403.6.4 – R403.6.7 Add Subsections R403.6.4 – R403.6.7 as follows:

R403.6.4 Air-moving equipment, selection and installation. As referenced in ASHRAE Standard 62.2, Section 7.1, ventilation devices and equipment shall be tested and certified in accordance with HVI 920 (Home Ventilating Institute), or equivalent and the certification label shall be found on the product. Installation of systems or equipment shall be carried out in accordance with manufacturers' design requirements and installation instructions. Where multiple duct sizes and/or exterior hoods are standard options, the minimum size shall not be used.

R403.6.5 Sound Rating. Sound ratings for fans used for whole building ventilation shall be rated at a maximum of 1.0 sone.

Exception: HVAC air handlers and remote-mounted fans need not meet sound requirements. There must be at least 4ft of ductwork between the remote-mounted fan and intake grille.

R403.6.6 Documentation. The owner and the occupant of the dwelling unit shall be provided with information on the ventilation design and systems installed, as well as instructions on the proper operation and maintenance of the ventilation systems. Ventilation controls shall be labeled with regard to their function, unless the function is obvious or unless the function is communicated through a digital user interface provided with the control.

R403.6.7 Air Inlets and Exhausts. All ventilation air inlets shall be located a minimum of 10ft from vent openings for plumbing drainage systems, appliance vent outlets, exhaust hood outlets, vehicle exhaust, or other known contamination sources; and shall not be obstructed by snow, plantings, or any other material. Outdoor forced air inlets shall be covered with rodent screens having mesh openings not greater than ½ inch. A whole house mechanical ventilation system shall not extract air from an unconditioned basement unless approved by a registered design professional. Where wall inlet or exhaust vents are less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, a metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the vent terminal. The sign shall read, in print size no less than one-half (1/2) inch in size, "MECH. VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS".

Exceptions:

1. Ventilation air inlets in the wall $\geq$ 3 ft. from dryer exhausts and contamination sources exiting through the roof.
2. No minimum separation distance shall be required between local exhaust outlets in kitchens/bathrooms and windows.
3. Vent terminations that meet the requirements of the National Fuel Gas Code (NFPA 54/ ANSI Z223 .1) or equivalent.

R404.4 Add Section R404.4 and Table R404.4 as follows:

R404.4 Wiring for Electric Vehicle Charging Spaces (“EV Ready Spaces”). *EV Ready Spaces* shall be provided in accordance with Table R404.4. The dedicated branch circuit shall be identified as “EV READY” in the service panel or subpanel directory, and the termination location shall be marked as “EV READY”. The circuit shall terminate in a NEMA receptacle or a Society of Automotive Engineers (SAE) standard J1772 electrical connector for *EVSE* servicing *Electric Vehicles*, located within 6 feet (1828 mm) of each *EV ready space*. Conductors and outlets for *EVSE* shall be sized and installed in accordance with the MA electrical code.

TABLE R404.4 EV READY SPACE REQUIREMENTS

Type of Building	Number of parking spaces
1 & 2 family dwellings and town homes	At least 1 50-amp branch circuit per dwelling unit to provide for AC Level II charging
All other R-use buildings	At least 20% of all installed spaces served with a 40-amp, 208/240-volt circuit with a minimum capacity of 9.6 kVA.

Exceptions:

1. In no case shall the number of required *EV Ready Spaces* be greater than the number of parking spaces installed.
2. This requirement will be considered met if all spaces which are not *EV Ready* are separated from the premises by a public right-of-way.
3. R-2 multi-family properties may elect to comply with Commercial EV ready requirements in C405.13
4. One or more SAE Level II spaces may be substituted with multiple SAE Level I spaces provided with wiring for a minimum 20amp, 120-volt EVSE, with a ratio of at least 3 Level I spaces for each Level II space required.

R405. Replace Section R405 in its entirety as follows:

R405 Passive House Building Certification Option. Projects may document compliance with either Phius certification in accordance with R405.2 or PHI certification in accordance with R405.3.

R405.1 Compliance. Projects pre-certified as meeting the Phius CORE 2021 or Phius ZERO 2021 Passive Building Standard – North America, or newer, demonstrated using approved software by Phius, where Phius Design-certification is demonstrated by Phius and a Certified Passive House Consultant (CPHC); or,
Projects pre-certified as meeting the Certified Passive House standard using the current software and program criteria by the Passive House Institute (PHI), where PHI certification is demonstrated by a Certified Passive House Designer and a Certified Passive House Certifier.

R405.2 Phius Documentation. When using WUFI Passive or other Phius approved software:

1. Prior to the issuance of a building permit, the following items must be provided to the Building Official:

- a. A Phius 2021 (or newer) Verification Report which demonstrates project compliance with Phius 2021 (or newer) performance requirements.
- b. A statement from the CPHC that the verification report results accurately reflect the plans submitted.
- c. Evidence of project registration from Phius.

OR

- a. A Design Certification Letter from Phius.

2. Prior to the issuance of a certificate of occupancy, the following item(s) must be provided to the building official:

- a. Design Certification Letter from Phius.
- b. An updated Verification Report by the CPHC which reflects “as-built” conditions and test results that demonstrate project compliance with Phius (blower door and ventilation results).
- c. A statement from the CPHC that the envelope meets the Phius hygrothermal requirements found in Appendix B of the Phius 2021 Certification guidebook
- d. A statement from the Phius Certified Verifier or Rater that the project test results and other Phius verification requirements are met.
- e. A copy of the Phius workbook listing all testing results and as-built conditions.

OR

- a. A Project Certificate demonstrating final certification awarded by Phius.

AND

- f. A statement from the Phius Verifier or Rater of compliance with R404.4: EV ready, and Appendix RB: Solar Ready Provisions.

R405.23 Passive House International (PHI) Documentation.

1. If using PHI Passive House software, prior to the issuance of a building permit, the following items must be provided to the Building Official:

- a. A PHPP compliance report which demonstrates project compliance with current PHI performance requirements;
- b. A statement from the Certified Passive House Consultant/Designer (CPHC/D) that the PHPP results and compliance report accurately reflect the plans submitted;
- c. Evidence of project registration from a Certified Passive House Certifier.

OR

- a. A Design Certification Letter from a Certified Passive House Certifier.

2. Prior to the issuance of a certificate of occupancy, the following item(s) must be provided to the building official:

- a. A Design Certification Letter from a Certified Passive House Certifier.

- b. An updated PHPP compliance report which reflects “as-built” conditions and test results (blower door and ventilation results) that demonstrates project compliance with PHI performance requirements;
- c. A copy of the Passive House Verifier’s or Rater’s test results;
- d. A statement from the CPHD that the project test results meet the model performance requirements, all the mandatory limits and any other mandatory requirements.

OR

- a. A Final Certification Letter from a Certified Passive House Certifier;

AND

- e. A statement from the Passive House Verifier or Rater of compliance with R404.4, and Appendix RB: Solar Ready Provisions.

R406.2 *Revise TABLE R406.2 as follows:*

Delete

R401.2.5	Additional efficiency packages
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And replace with:

R403.6.1	Heat or Energy Recovery Ventilation
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Delete

R406.3	Building thermal envelope
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And replace with:

R404.4	Wiring for Electric Vehicle Charging Spaces
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R406.3 *Reserve this section:*

R406.3 Building thermal envelope. Reserved.

R406.4 *Replace Section R406.4 with the following:*

R406.4 Energy Rating Index. The Energy Rating Index (ERI) shall be the RESNET certified HERS index determined in accordance with RESNET/ICC 301. Energy used to recharge or refuel a vehicle used for transportation on roads that are not on the building site shall not be included in the *ERI reference design* or the *rated design*.

R406.5 *Replace Section R406.5 and Table R406.5 with the following:*

R406.5 ERI-based compliance. Compliance based on an ERI analysis requires that the *rated proposed design* and confirmed built dwelling be shown to have an HERS index rating less than or equal to the appropriate value indicated in Table R406.5 when compared to the *HERS index reference design* for each dwelling unit prior to credit for onsite renewable electric generation.

TABLE R406.5 MAXIMUM ENERGY RATING INDEX

Clean Energy Application	Maximum HERS Index score ^{a, b}		
	New construction until June 30, 2024	New construction permits after July 1, 2024	Major-alterations, additions, or Change of use ^c
<i>Mixed-Fuel Building</i>	52	42	52
Solar Electric Generation	55	42	55
<i>All-Electric Building</i>	55	45	55
Solar Electric & <i>All-Electric Building</i>	58	45	58

^a Maximum HERS rating prior to onsite renewable electric generation in accordance with Section R406.5

^b The building shall meet the mandatory requirements of Section R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.

^c Alterations, Additions or Change of use covered by Section R502.1.1 or R503.1.5 are subject to this maximum HERS rating.

R406.5.1 Add Subsection R406.5.1, as follows:

R406.5.1 Trade-off for Clean energy systems. New construction following Section R406 or existing buildings and additions following IECC chapter 5[RE] may use clean energy trade-offs to increase the maximum allowable HERS rating for each unit separately served by any combination of the following:

1. Solar Electric Generation: Solar photovoltaic array rated at 4kW or higher shall offset 3 HERS points for Level 3 alterations, Change of use to Residential R-use categories or for fully attached additions.
2. *All-Electric Buildings* shall offset 3 HERS points for each dwelling unit in new construction, Level 3 alterations, change of use to Residential R-use categories and fully attached additions.

R406.6 Revise Section R406.6 by replacing the reference to Section R406.6 in the first sentence with reference to Section R406.5.

R407 Reserve this Section:

SECTION R407 Reserved.

R408.2.1 Revise the first sentence of Subsection R408.2.1 by replacing 95 percent with 90 percent to read as follows:

R408.2.1 Enhanced envelope performance option.

The total *building thermal envelope* UA, the sum of *U*-factor times assembly area, shall be less than or equal to 90 percent of the total UA resulting from multiplying the *U*-factors in Table R402.1.2 by the same assembly area as in the proposed building.

R408.2.2 *Delete option 1. of Subsection R408.2.2 and renumber option 2. As option 1., and option 3 as option 2.*

R408.2.3 *Delete option 1. of Subsection R408.2.3 and renumber option 2. As option 1., and option 3 as option 2.*

CHAPTER 5 [RE] EXISTING BUILDINGS

R502 ADDITIONS.

R502.1 *Revise Subsection R502.2 by replacing the third and fourth sentence as follows:*

An *addition* shall be deemed to comply with this code where the *addition* alone complies, where the existing *building* and *addition* comply with this code as a single building, or where the *building* with the *addition* achieves a certified HERS rating in accordance with Table R406.5. *Additions* shall be in accordance with Section R502.1.1, R502.2 or R502.3.

R502.1.1 *Add Subsection R502.1.1 as follows:*

R502.1.1 Large additions. *Additions to a dwelling unit exceeding 1,000 sq ft or exceeding 100% of the existing conditioned floor area, shall require the dwelling unit to comply with the maximum HERS ratings for alterations, additions or change of use shown in TABLE R406.5.*

R502.2 *Delete the Exceptions in Subsection R502.2.*

R502.3.1 *Replace the Exception in Subsection R502.3.1 as follows:*

Exception: New envelope assemblies in additions of less than 1,000 sq ft are exempt from the requirements of Section R402.4.1.2.

R503.1.5 *Add new subsection as follows:*

R503.1.5 Level 3 Alterations or Change of Use. *Alterations that meet the IEBC definition for Level 3 Alteration, exceeding 1,000 sq ft or exceeding 100% of the existing conditioned floor area, shall require the dwelling unit to comply with the maximum HERS ratings for alterations, additions or change of use shown in TABLE R406.5.*

R505.1 *Delete the Exception in Section R505.1.*

Appendix RB revise the Appendix RB title as follows:

Appendix RB: Solar-ready Provisions – Detached One- and Two-family Dwellings, Low-rise Residential buildings and Townhouses (Adopted as amended)

RB101.1 Replace Section RB101.1 as follows:

RB101.1 General. These provisions shall be applicable for new construction, except additions under 1,000 sq ft.

Exception:

Buildings and *dwelling units* complying with Appendix RC Sections RC102 or RC105

RB103.1 Replace Section RB103.1 as follows:

RB103.1 General. New R-use buildings including, but not limited to, detached one- and two-family dwellings, and townhouses with not less than 600 square feet (55.74 m²) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.

Exceptions:

1. New residential buildings with a permanently installed on-site renewable energy system.
2. A building with a solar-ready zone that is shaded for more than 70 percent of daylight hours annually.

RB103.3 Replace International Fire Code with Massachusetts Fire Code in Section RB103.3:

Appendix RC revise the Appendix RC title and notes as follows:

APPENDIX RC

MASSACHUSETTS MUNICIPAL OPT-IN SPECIALIZED STRETCH CODE 2023

RESIDENTIAL LOW-RISE BUILDING PROVISIONS

The provisions contained in this appendix together with referenced sections from the Stretch energy code constitute the Specialized opt-in code for residential low-rise buildings, and may be adopted by a city or town together with the Commercial Specialized code Appendix CC as their stretch energy code. When adopted by the local municipality, the provisions in this appendix are mandatory in combination with the IECC2021 with Massachusetts Stretch code amendments.

User Note:

About this appendix: This appendix provides requirements for residential buildings. Where adopted by ordinance as a requirement, Section RC101 language is intended to replace Section R401.2.

SECTION RC101 COMPLIANCE

RC101 Replace Section RC101 as follows:

RC101.1 Compliance. Existing residential buildings shall comply with Chapter 5 of the stretch energy code. New residential buildings shall be *Net Zero Buildings* and comply with Section R404.4 (EV wiring) and either Section R405 (Passive House) or Section R406 (HERS) in accordance with RC101.2, as well as one of the following Specialized code pathways:

1. Section RC102 Zero Energy pathway
2. Section RC103 All-Electric pathway
3. Sections RC104 and RC105 Mixed-Fuel pathway.

RC101.2 Application. New *dwelling units* over 4,000 square feet in *conditioned floor area* shall comply with either RC101.1 option 1. Zero Energy pathway or option 2. All-Electric pathway, and follow either Section RC102 or Section RC103.

R-use buildings with total *conditioned floor area* greater than 12,000 square feet shall comply with the provisions of Section R405 Passive House Building Certification Option, and any of the pathways in Section RC101.1.

RC101.3 Definitions.

NET ZERO BUILDING. A building which is consistent with achievement of MA 2050 net zero emissions, through a combination of highly energy efficient design together with being either a *Zero Energy Building*, or an *All-Electric Building*, or where fossil fuels are utilized, a building fully pre-wired for future electrification and that generates solar power on-site from the available *Potential Solar Zone Area*.

ZERO ENERGY BUILDING. A building which through a combination of highly energy efficiency design and onsite renewable energy generation is designed to result in net zero energy consumption over the course of a year as measured in MMBtus or KWh_{eq}, on a site energy basis, excluding energy use for charging vehicles.

RC102 Replace Section RC102 and Table RC102.2 as follows:

SECTION RC102 ZERO ENERGY PATHWAY

RC102.1 General. New *zero energy buildings* shall comply with Section RC102.2 and demonstrate a certified HERS rating of 0 or less and comply with Section R406, or complete Design Certification to the Phius ZERO standard and comply with Section R405.

RC102.2 Energy Rating Index Zero Energy Score. Compliance with this section requires that the final HERS rated design be shown to have a score less than or equal to the values in Table RC102.2 when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 for both of the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/ICC 301.
2. ERI value including on-site power production calculated in accordance with RESNET/ICC 301 with the OPP in Equation 4.1.2 of RESNET/ICC 301.

TABLE RC102.2 MAXIMUM ENERGY RATING INDEX^a

FUEL USAGE	ENERGY RATING INDEX NOT INCLUDING OPP	ENERGY RATING INDEX INCLUDING OPP
All Electric	45	0
Mixed-Fuel	42	0

a. The building shall meet the requirements of Table R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or R402.1.3.

RC103 Add Section RC103 and Table RC103.2 as follows:

SECTION RC103 ALL ELECTRIC PATHWAY

RC103.1 General. New *all electric buildings* shall comply with Section R401.2.5 and either Section RC103.2 to demonstrate a certified final HERS rating of 45 or less, or Section R405 and be pre-certified to the PHI or Phius CORE standard.

All new buildings shall comply with Appendix RB solar ready provisions and Section R404.4 Wiring for Electric Vehicle Charging Spaces

RC103.2 All Electric Energy Rating Index score. Compliance with this section requires that the rated design be shown to have a certified HERS Index score less than or equal to the values in Table RC103.2 when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 and the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/ICC 301.

TABLE RC103.2 MAXIMUM ENERGY RATING INDEX^a

FUEL USAGE	ENERGY RATING INDEX NOT INCLUDING OPP
All Electric	45

- a. The building shall meet the requirements of Table R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or R402.1.3.

RC104 Add Section RC104 and Table RC104.2 as follows:

SECTION RC104 MIXED-FUEL PATHWAY

RC104.1 General. This section establishes requirements for new *residential mixed-fuel buildings* with any space heating systems, water heating systems or appliances capable of using fossil fuels such as natural gas, heating oil or propane fuel. All buildings shall comply with either:

1. HERS certification: Sections RC104.2 through RC104.5 and RC105
2. Passive House pre-certification: Section R405 and Section RC104.3

RC104.1.1 Biomass heating. New *residential buildings* using *clean biomass heating systems* may comply with this section. Biomass heating that does not meet the performance standards of *clean biomass heating systems* shall not be permitted as a primary heating system.

RC104.2 Energy Rating Index score. Compliance with this section requires that the rated design be shown to have a HERS Index score less than or equal to the values in Table RC103.2 when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 for both of the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/ICC 301.

TABLE RC104.2 MAXIMUM ENERGY RATING INDEX^a

FUEL USAGE	HERS RATING INDEX NOT INCLUDING OPP
Mixed-Fuel building	42

- a. The building shall meet the requirements of Table R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or R402.1.3.

RC104.3 Electric Readiness. Any installed gas, fuel oil or propane furnaces, boilers, water heaters, dryers, or cooking equipment shall comply with the requirements of Sections RC104.3.1 through RC104.3.4. Capacity for the future electric circuits required in this section shall be included in the load calculations of the original installation of electric service to the building and each *dwelling unit*.

RC104.3.1 Space Heating. The building and each *dwelling unit* shall be provided with a designated exterior location(s) in accordance with the following:

1. Natural drainage for condensate from cooling equipment operation or a condensate drain located within 3 feet (914 mm), and
2. A dedicated branch circuit in compliance with IRC Section E3702.11 based on heat pump space heating equipment sized in accordance with R403.7 and terminating within 3 feet (914 mm) of the location with no obstructions. Both ends of the branch circuit shall be labeled "For Future Heat Pump Space Heater."

Exception: Where an electrical circuit in compliance with IRC Section E3702.11 exists for space cooling equipment based on heat pump space heating equipment sized in accordance with R403.7.

RC104.3.2 Household Ranges and Cooking Appliances. An individual branch circuit outlet with a minimum rating of 250-volts, 40-amperes shall be installed within three feet of each gas or propane range or permanently installed cooking appliance.

RC104.3.3 Household Clothes Dryers and Water Heaters. An individual branch circuit outlet with a minimum rating of 250-volts, 30-amperes shall be installed within three feet of each gas or propane household clothes dryer and water heater.

RC104.3.4 Water Heating Space. Any permanently installed domestic hot water heating equipment shall be installed in an indoor space:

- A) with a minimum volume of 700 cubic feet (20,000 L) or the equivalent of one 16-inch (406 mm) by 24-inch (610 mm) grill to a heated space and one 8-inch (203 mm) duct of no more than 10 feet (3048 mm) in length for cool exhaust air.
- B) that is at least 3 feet (914 mm) by 3 feet (914 mm) by 7 feet (2134 mm) high surrounding or within 3 feet (914 mm) of the installed water heater.

RC104.4 On-site Renewable Energy

New buildings shall comply with either RC104.4.1 or RC104.4.2. Buildings following HERS certification shall comply with the requirements of RC105 solar-roof zone. Buildings following the Passive House pre-certification shall comply with Appendix RB solar ready provisions.

RC104.4.1 One- and two- family dwellings and townhouses. One- and two- family dwellings and townhouses shall install an on-site renewable energy system with a nameplate DC power rating measured under standard test conditions, of no less than 4kW per dwelling unit.

Exception:

1. A building where the *potential solar zone area* is less than 300 square feet.

RC104.4.2 Other Group R Occupancies. Buildings in Group R-2, R-3 and R-4 shall install an on-site renewable energy system with a rated capacity of not less than 0.75 W/ft² multiplied by the gross conditioned floor area.

Exceptions:

1. A building with a permanently installed domestic solar water heating system with a minimum solar savings fraction of 0.5.
2. A building where the *potential solar zone area* is less than 300 square feet.

RC104.5 Electric Vehicle Readiness. All buildings shall comply with Section R404.4 Wiring for Electric Vehicle Charging Spaces

RC105 Add Section RC105 as follows:

SECTION RC105 SOLAR-ROOF ZONE

RC105.1 General. New detached one- and two-family dwellings, and townhouses with not less than 600 square feet (55.74 m²) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RC105.2 through RC105.10.

Exceptions:

1. A building where all areas of the roof that would otherwise meet the requirements of Section RC105 are in full or partial shade for more than 70 percent of daylight hours annually.

RC105.2 Construction document requirements for solar- zone. Construction documents shall indicate the solar zone.

RC105.3 Solar zone area. The total solar zone area shall be not less than 300 square feet (27.87 m²) exclusive of mandatory access or setback areas as required by the *MA Fire Code*. New townhouses three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet (185.8 m²) per *dwelling unit* shall have a solar zone area of not less than 150 square feet (13.94 m²). The solar zone shall be composed of areas not less than 5 feet (1524 mm) in width and not less than 80 square feet (7.44 m²) exclusive of access or setback areas as required by the *MA Fire Code*.

RC105.4 Obstructions. Solar zones shall be free from obstructions, including but not limited to vents, chimneys, and roof-mounted equipment.

RC105.5 Shading. The solar zone shall be set back from any existing or new permanently affixed object on the building or site that is located south, east or west of the solar zone a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees and roof plantings.

RC105.6 Capped roof penetration sleeve. A capped roof penetration sleeve shall be provided adjacent to a solar zone located on a roof slope of not greater than 1 unit vertical in 12 units horizontal (8-percent slope). The capped roof penetration sleeve shall be sized to accommodate photovoltaic system conduit and shall have an inside diameter of not less than 1 1/4 inches (32 mm).

RC105.7 Roof load documentation. The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

RC105.8 Interconnection pathway. Construction documents shall indicate pathways for routing of conduit or plumbing from the solar-ready zone to the electrical service panel or service hot water system.

RC105.9 Electrical service reserved space. The main electrical service panel shall have space to allow installation of a dual pole circuit breaker for solar electric installation.

RC105.10 Construction documentation certificate. A permanent certificate, indicating the solar PV system size in AC and DC KW and or solar thermal size in KW equivalent and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

Referenced Standards: *Add the following Reference Standards:*

a. CSA Group
8501 East Pleasant Valley Road, Cleveland, OH 44131-5516
CAN/CSA-C439-18. Laboratory methods of test for rating the performance of heat/energy-recovery ventilators.

b. AHRI Air-Conditioning, Heating & Refrigeration Institute
2311 Wilson Blvd., Suite 400, Arlington, VA 22201
1060-2018. Performance Rating of Air-To-Air Exchangers for Energy Recovery Ventilation Equipment.

Massachusetts Stretch Code and Specialized Code for Commercial buildings

(Note: please see 225 CMR 22.00 for low-rise Residential construction)

The Massachusetts Stretch energy code (Stretch Code) first became available for municipal adoption in 2009 as Appendix 110.aa and then 115.aa as part of the building code in 780 CMR. In 2021 the Massachusetts legislature passed new legislation moving authority for updates to the Stretch Code to the Department of Energy Resources and 225 CMR.

This code takes effect on July 1, 2023 and is designed to align with the forthcoming MA 10th edition building code promulgated under 780 CMR. Building permit applications for projects received on or after July 1, 2023 in Stretch Code communities shall comply with this code.

As with the 10th edition building code, this energy code is based on modified versions of the 2021 code books as published by the International Code Council (ICC). Specifically, the 2021 International Energy Conservation Code (IECC 2021) as amended.

This section (225 CMR 23) covers all buildings except for low-rise residential buildings which are covered by 225 CMR 22. 225 CMR 22 and 23 in combination form the Stretch Code – and must be adopted together and not in part.

Municipalities may also elect to adopt the combination of Appendix RC of 225 CMR 22 (Low rise residential) and Appendix CC of 225 CMR 23 (all other buildings) which together form the Municipal Opt-in Specialized code (Specialized Code).

For communities that have adopted the Stretch Code, the following 225 CMR 23 amendments to the IECC 2021 apply together with 225 CMR 22 for low-rise residential buildings.

For communities that adopt the Specialized Code, the following 225 CMR 23 amendments apply in combination with Appendix CC, along with 225 CMR 22 and Appendix RC for low-rise residential buildings.

In both the Stretch Code and the Specialized Code these amendments to the IECC 2021 replace Chapter 13 – Energy Efficiency of 780 CMR in the Base energy code.

Please remember that the Massachusetts amendments posted online are *unofficial versions* that are made available for convenience. Official versions of the Massachusetts amendments may be purchased from the State House Bookstore at www.sec.state.ma.us/spr/ and the IECC 2021 can be purchased from the ICC at www.iccsafe.org

225 CMR 23: MASSACHUSETTS FRONT-END AMENDMENTS TO THE INTERNATIONAL ENERGY
CONSERVATION CODE 2021

MASSACHUSETTS STRETCH ENERGY CODE – 2023 Commercial amendments to IECC2021

CHAPTER 1 [CE] SCOPE AND ADMINISTRATION

SECTION C103 CONSTRUCTION DOCUMENTS

C103.2 Insert after Subsection C103.2(13) the following:

14. Solar Ready roof zone in accordance with Appendix CB, or *Potential Solar Zone Area* in accordance with Appendix CC.
15. EV Ready Spaces locations in accordance with Section C405.13
16. For buildings using the Relative Performance Pathway (C407.2) because average ventilation at full occupancy is greater than 0.5 cfm/sf, submit mechanical equipment schedules for all new and/or existing air handling equipment designed to supply any quantity of outdoor air to the space, and an airflow riser diagram encompassing the complete project boundary. Mechanical equipment schedules shall clearly indicate the total design outdoor airflow for each unit. The air riser diagram shall include all supply, exhaust, and return air systems serving the space. The air riser diagram shall also include a summary of the total outdoor air supplied, the total gross square footage served by the ventilation system, and the overall flow rate per area in cfm/sf.
17. For mixed fuel building following Appendix CC, construction documents showing electric HVAC retrofit design prepared by the HVAC engineer. The contract documents shall show future replacement of *combustion equipment* based HVAC system with an equivalent all electric system. Contract documents shall show *combustion equipment* to be replaced, future electric equipment, supporting electric, structural, and architectural infrastructure to be installed during building construction, and space allotments for future equipment.

C103.2.2 Add the following Subsection:

C103.2.2 COMcheck submittal. The construction documents submitted with the application for permit shall be accompanied by completed COMcheck Envelope, Lighting and Mechanical Compliance Certificates, and a Plan Review Inspection Checklist for the purposes of demonstrating compliance with the energy provisions of 225 CMR 23.00: *Stretch Energy Code*.

Exception: Projects documenting compliance following Section C407.2 (ASHRAE 90.1 Appendix G) shall follow applicable reporting requirements.

CHAPTER 2 [CE] DEFINITIONS

SECTION C202 GENERAL DEFINITIONS

C202 Add the following definitions:

ALL-ELECTRIC BUILDING. A building with no on-site *combustion equipment* for fossil fuel use or capacity for including fossil fuel use in space heating, water heating, cooking, or drying appliances.

AUTOMATIC LOAD MANAGEMENT SYSTEMS (ALMS). A control system that allows multiple connected *electric vehicle supply equipment (EVSE)* to share a circuit or panel and automatically manage power at each charger, reducing the total connected electrical capacity of all *EVSE*.

CLASS 3 EXHAUST. Exhaust meeting the definition of Class 3 air in ASHRAE/ASHE Standard 62.1-2019, including air with significant contaminant concentration, significant sensory-irritation intensity, or offensive odor. The Class 3 Exhaust system must be capable of reducing exhaust and makeup airflow rates to 50% of the zone design values or the minimum required to maintain pressurization relationship requirements.

CLASS 4 EXHAUST. Exhaust meeting the definition of Class 4 air in ASHRAE/ASHE Standard 62.1-2019, including laboratory fume hood exhaust, exhaust where energy recovery is not allowed by ASHRAE/ASHE Standard 170 for use in energy recovery systems with leakage potential, and systems exhausting toxic, flammable, paint or corrosive fumes or dust. The Class 4 Exhaust system must be capable of reducing exhaust and makeup airflow rates to 50% of the zone design values or the minimum required to maintain pressurization relationship requirements. Excludes *exempt exhaust*.

CLEAN BIOMASS HEATING SYSTEM. Wood-pellet fired central boilers and furnaces with less than 3 million Btu/hour rated heat input, where the equipment has a thermal efficiency rating of 85% (higher heating value) or greater; and a particulate matter emissions rating of no more than 0.08 lb. PM_{2.5}/MMBtu heat output. Or wood chip fired central boilers and furnaces with less than 3 million Btu/hour rated heat input, where the equipment has a thermal efficiency rating of 80% or greater and a particulate matter emissions rating of no more than 0.10 lb. PM_{2.5}/MMBtu heat output.

COMBUSTION EQUIPMENT. Any *equipment* or *appliance* used for space heating, *service water heating*, cooking, clothes drying and/or lighting that can use *fuel gas*, *fuel oil* or solid fuel and that is not a *clean biomass heating system*.

DEDICATED OUTSIDE AIR SYSTEM (DOAS): A ventilation system that supplies 100 percent outdoor air primarily for the purpose of ventilation and that is a separate system from the zone space-conditioning system.

ELECTRIC VEHICLE. An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current.

Informational note: defined as in 527 CMR 12 section 625.2.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE): The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

Informational note: defined as in 527 CMR 12 section 625.2.

ELECTRIC VEHICLE READY PARKING SPACE (“EV READY SPACE”): A designated parking space which is provided with wiring and electrical service sufficient to provide AC Level II or equivalent EV charging, as defined by Standard SAE J1772 for *EVSE* servicing light duty *electric vehicles*.

ENTHALPY RECOVERY RATIO. The ratio of change in enthalpy of the entering supply airflow and the leaving supply airflow to the difference in enthalpy between the entering supply airflow and the entering exhaust airflow, with no adjustment to account for that portion of the psychrometric change in the leaving supply airflow that is the result of leakage of entering exhaust airflow rather than exchange of heat or moisture between the airstreams.

EXEMPT EXHAUST. Exhaust for which energy recovery systems are prohibited by the applicable International Mechanical Code.

EXHAUST SOURCE HEAT PUMP. A type of electric heat pump that utilizes ventilation exhaust air as the thermal energy source.

FUEL GAS. A natural gas, manufactured gas, liquified petroleum gas or a mixture of these.

Informational note: Definition of fuel gas is mirrored from 2021 IMC to be useful in defining combustion equipment. It typically refers to natural gas and propane.

FUEL OIL. Kerosene or any hydrocarbon oil having a flash point not less than 100°F (38°C).

Informational note: Definition of fuel oil is mirrored from 2021 IMC to be useful in defining combustion equipment. It typically refers to heating oil products

GLAZED WALL SYSTEM. System consisting of any combination of both vision glass and/or *spandrel sections* to create an above-grade wall that is designed to separate the exterior and interior environments. These systems include, but are not limited to, curtain walls, window walls, and storefront windows.

MIXED-FUEL BUILDING. A *building* that contains *combustion equipment* or includes piping for such *equipment*.

OTHER EXHAUST. Any exhaust that does not fall under the categories of *Exempt Exhaust, Class 4 Exhaust, or Class 3 Exhaust*.

SENSIBLE ENERGY RECOVERY RATIO. The change in the dry-bulb temperature of the outdoor air supply divided by the difference between the outdoor air and entering exhaust air dry-bulb temperatures, expressed as a percentage.

SPANDREL SECTION. The opaque portion of a *glazed wall system* typically used to conceal or obscure features of the building structure or used for visual effect. A spandrel section may consist of, but is not limited to, an exterior exposed cladding layer (glazing or opaque material) with an interior insulated panel.

TENANT SPACE FIT OUT ZONE. Portion of a building in which only the envelope is completed, and the mechanical, lighting, and other interior systems are either incomplete or partially complete at the time of building permitting. Mechanical, lighting, and other interior systems may be completed under either the same building permit or a different building permit from the host building.

THERMAL BRIDGE: Part of the *building envelope* where otherwise uniform thermal resistance is changed by full or partial penetration of the thermal insulation by materials with higher thermal

conductivities and/or where the interior and exterior areas of the envelope are different, such as, but not limited to, parapets and corners.

CLEAR FIELD: A *thermal bridge* that is uniformly distributed throughout an assembly such that accounting for the *thermal bridge* individually is impractical for whole-building calculations.

LINEAR: A *thermal bridge* that is continuous in one direction of the exterior envelope.

POINT A *thermal bridge* that is discrete and countable on an individual basis for whole-building calculations.

CHAPTER 3 [CE] GENERAL REQUIREMENTS

SECTION C301 CLIMATE ZONES

C301 Replace Section C301 as follows:

C301.1 General. Massachusetts is in *climate zone 5A*

CHAPTER 4 [CE] COMMERCIAL ENERGY EFFICIENCY

SECTION C401 – GENERAL

C401.2 Replace Section C401.2 as follows:

C401.2 Application. Commercial buildings shall comply with either Section C401.2.1 or C401.2.2. When constructed for the first time, all requirements imposed on the building housing a *tenant space fit out zone* shall also apply to the *tenant space fit out zone*. Commercial buildings containing multiple use type classifications (mixed-use buildings) shall comply with C401.2.4

C401.2.1 Prescriptive and Performance Compliance. Commercial buildings shall comply with one of the following:

1. **Prescriptive Compliance:** This pathway may only be used for any nonresidential building, or portions thereof when following C401.2.4, up to 20,000-sf. The Prescriptive Compliance pathway requires compliance with Sections C401.3, C402 through C406, and Section C408.
2. **Targeted Performance Compliance:** This pathway shall be used for dormitory, fire station, library, office, school, police station, post office, and town hall buildings, or portions thereof when following C401.2.4, over 20,000-sf which have average ventilation at full occupancy of 0.5 cfm/sf or less. This pathway can also be used for any building of any size. After 1 July 2024, this pathway shall be used for residential buildings, or portions thereof when following C401.2.4, over 12,000-sf, or the building may comply with Section C401.2.2. The Targeted Performance Compliance pathway requires compliance with Section C401.3, Sections C402 through C406, Section C407.1, Section 408, and select sections of ANSI/ASHRAE/IESNA 90.1-2019 Appendix G as described in Section 407.1.
3. **Relative Performance Compliance:** This pathway may be used by buildings not required to use Option 2. The Relative Performance Compliance pathway requires that the Proposed building complies with Sections C401.3, C402.1.5, C402.2.8, C402.3, C402.4, C402.5, C402.6, C402.7, C403.5, C403.7, C405.2.4, C405.13, C406, C407.2, C408, and ANSI/ASHRAE/IESNA 90.1-2019 using the Appendix G compliance pathway as modified in Section C407.2.

Exception: Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5. This exception does not include *tenant space fit out zones* when constructed for the first time.

C401.2.2 Certified Performance Standard Compliance. Commercial buildings or portions thereof when following C401.2.4 shall comply with one of the following certified performance standards:

1. **Passive House Compliance:** This pathway can be used for any building of any size. The Passive House Compliance pathway requires compliance with Sections C401.3, C402.3, C405, C407.3 and C408.
2. **HERS Compliance:** This pathway can be used for any Group R building with multiple individual *dwelling units*. The HERS pathway requires compliance with Section C401.3, C402.3, C405, C407.4 and C408.

C401.2.4 Add Section C401.2.4 Mixed Use Buildings

C401.2.4 Mixed Use Buildings. Where different building use types within a new building require different Section C401.2 Compliance Pathways, each use type shall separately and individually show compliance with C401.2.1 or C401.2.2 for that respective use type.

C401.4 Add Section C401.4 as follows:

C401.4 Building electrification. Building projects which utilize Section C407.2.1 shall conform with C401.4.1. Building projects which utilize Section C402.1.5.2 shall conform with C401.4.2 except for buildings using the Relative Performance pathway because average ventilation at full occupancy is greater than 0.5 cfm/sf which shall comply with C401.4.1 rather than C401.4.2. Building projects which utilize Section CC104.1, Part 1 shall conform with C401.4.3.

C401.4.1 Partial Space Heating Electrification. Electric air source, *exhaust source*, or ground source heat pumps systems shall supply 25% of the building's peak space heating and ventilation air heating load at the ASHRAE 99.6% winter climatic design condition. Heat pumps used for space and ventilation air heating shall comply with C401.4.4.

C401.4.1.1 The heat pumps shall be controlled to prioritize their primary operation, prior to operation of supplemental fossil-fuel equipment, during non-emergency conditions.

C401.4.2 Full Space Heating Electrification. Electric air source, *exhaust source*, or ground source heat pump systems shall supply 100% of the building's peak space heating and ventilation air heating load at the ASHRAE 99.6% winter climatic design condition. No fossil fuel heating equipment shall be used for space heating or ventilation air heating. Heat pumps used for space and ventilation air heating shall comply with C401.4.4.

C401.4.3 Full Space and Water Heating Electrification. Electric air source, *exhaust source*, or ground source heat pumps systems shall supply 100% of the building's peak space heating and ventilation air heating load at the ASHRAE 99.6% winter climatic design condition. Electric air source, ground source, electric resistance, or solar thermal systems shall supply 100% of the building's service water. No fossil fuel equipment shall be used for space heating, ventilation air heating, or service water heating. Heat pumps used for space and ventilation air heating shall comply with C401.4.4. Heat pump service water heating shall conform to the applicable efficiencies in Section C404.2. Solar thermal service water shall have solar fraction of 0.4 or larger.

C401.4.4 Heat Pump Requirements. Heat pumps used for space heating and ventilation air heating shall comply with C401.4.4.1 through C401.4.4.3.

C401.4.4.1 Heat pump equipment shall conform to the applicable efficiencies in Section C403.3.2.

C401.4.4.2 For buildings with multiple heat pump systems, compliance shall be based on the combined capacity of all heat pump systems serving the building. For purposes of this calculation, the heating capacity of a heat pump system shall not exceed the heating load of that system and the portion of the building served by that system.

C401.4.4.3 For purposes of this calculation, the capacity of *exhaust source heat pumps* shall only include the heating capacity that exceeds the energy recovered by the minimum ventilation heat recovery required by C403.7.4. In addition, for purposes of

this calculation, the capacity of the *exhaust source heat pumps* shall not exceed the heat pump capacity when the exhaust airflow is at 50% of design airflow.

C402.1.3 Delete Subsection C402.1.3 and Table C402.1.3 and mark as Reserved.

C402.1.3 Reserved.

C402.1.5 Replace Section C402.1.5 with the following:

C402.1.5 Component performance alternative. Building envelope values and fenestration areas determined in accordance with C402.1.5.1 or C402.1.5.2 shall be an alternative to compliance with the *U*- factors in Tables C402.1.4 and C402.4 and the maximum allowable fenestration areas in Section C402.4.1. *Fenestration* shall meet the applicable SHGC requirements of Section C402.4.3. Buildings following ANSI/ASHRAE/IESNA 90.1-2019 Appendix G shall comply with this section.

C402.1.5.1 Low glazed wall system buildings. Buildings in which less than or equal to 50% of the total, above-grade wall area of the *building thermal envelope* is a *glazed wall system* shall comply with Equation 4-2a and vision glass used in the *glazed wall system* shall have a maximum whole assembly U factor of U-0.25.

Area-weighted U proposed ≤ 0.1285 (Equation 4-2a)

where:

Area-weighted U proposed = U value for each distinct assembly type of the above grade wall portion of the *building thermal envelope* weighted by vertical area for each distinct assembly type.

C402.1.5.2 High glazed wall system buildings. Buildings in which more than 50% of the total, above-grade wall area of the *building thermal envelope* is a *glazed wall system* shall comply with Equation 4-2b, vision glass used in the *glazed wall system* shall have a maximum whole assembly U factor of U-0.25, and the building complies with Section C401.4.2.

Area-weighted U proposed ≤ 0.1600 (Equation 4-2b)

where:

Area-weighted U proposed = U value for each distinct assembly type of the above grade wall portion of the *building thermal envelope*, weighted by the vertical area for each distinct assembly type.

Exception:

1. Buildings using the Relative Performance pathway because average ventilation at full occupancy is greater than 0.5 cfm/sf shall comply with C401.4.1 rather than C401.4.2.

C402.2.4.1 Delete the exception in Subsection C402.2.4.1:

C402.2.8 Add Subsection C402.2.8 as follows:

C402.2.8 Fireplaces. New combustion fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air as required by the fireplace construction provisions of MA Construction Codes, as applicable. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace.

C402.3 Replace Section C402.3 with the following:

C402.3 Rooftop solar readiness (Mandatory).

Follow Appendix CB: Solar-ready zone – Commercial.

C402.4 Modify Vertical fenestration U-factors in TABLE C402.4 as follows:

CLIMATE ZONE 5 AND MARINE 4

Vertical fenestration U-factor

Fixed fenestration	0.30
Operable fenestration	0.32

Add Subsection C402.4.6:

C402.4.6 Fenestration Documentation. In accordance with Section 303.1.3 fenestration performance shall be documented according to C402.4.6.1 or C402.4.6.2.

C402.4.6.1 Labeled Performance. The thermal transmittance of glazed fenestration products within the scope of NFRC shall be indicated by labels applied to the products at the manufacturing location or by a label certificate produced by an NFRC Approved Calculation Entity.

C402.4.6.2 Calculated Performance. Fenestration products outside the scope of NFRC may demonstrate compliance by submitting a thermal simulation report prepared by a registered design professional for each product as defined by NFRC 100. Thermal simulations shall be performed in accordance with the NFRC 100-2020 simulation procedures at the size and configuration defined in NFRC 100 Table 4-3.

C402.5 Replace Section C402.5 with the following:

C402.5 Air leakage—thermal envelope. The *building thermal envelope* shall comply with Sections C402.5.1 through Section C402.5.10.1.

C402.5.1 Replace Section C402.5.1 with the following and delete the exception:

C402.5.1 Air barriers. A continuous *air barrier* shall be provided throughout the *building thermal envelope*. The continuous *air barrier* is permitted to be any combination of inside, outside, or within the *building thermal envelope*. The *air barrier* shall comply with Sections C402.5.1.1, and C402.5.1.2. The *air leakage* performance of the *air barrier* shall be verified in accordance with Section C402.5.2.

C402.5.1.1 Replace Section C402.5.1.1 with the following:

C402.5.1.1 Air barrier design and documentation requirements. Design of the continuous *air barrier* shall be documented in the following manner:

1. Materials, assemblies, and systems comprising the continuous *air barrier* and their position within each *building thermal envelope* assembly shall be identified.

2. Joints, interconnections, and penetrations of the continuous *air barrier* materials, assemblies and systems shall be detailed.
3. The continuity of the *air barrier* at building element assemblies that enclose conditioned space or provide a boundary between conditioned space and unconditioned space shall be identified.
4. Documentation of the continuous air barrier shall detail methods of sealing the air barrier such as wrapping, caulking, gasketing, taping or other *approved* methods at the following locations:
 - i. Joints around fenestration and door frames.
 - ii. Joints between walls and floors, between walls at building corners, between walls and roofs including parapets and copings, where above-grade walls meet foundations and similar intersections.
 - iii. Penetrations or attachments through the continuous *air barrier* in building envelope roofs, walls, and floors.
 - iv. Building assemblies used as ducts or plenums.
 - v. Changes in continuous *air barrier* materials and assemblies.
 - vi. Transition from one wall or roof assembly type to another such as, but not limited to, transition between opaque wall system and *glazed wall system*, and transition between a curtain wall *glazed wall system* and a storefront *glazed wall system*.
5. Identify where testing will or will not be performed in accordance with Section C402.5.2. Where testing will not be performed, a plan for field inspections required by C402.5.2.3 shall be provided that includes the following:
 - i. Schedule for periodic inspection(s),
 - ii. Continuous air barrier scope of work,
 - iii. List of critical inspection items,
 - iv. Inspection documentation requirements, and
 - v. Provisions for corrective actions where needed.

C402.5.1.2 *Renumber Section C402.5.1.1 as Section C402.5.1.2 and make the following changes:*

In Part 3, delete “Joints and seams associated with penetrations shall be sealed in the same manner or taped”

In Part 3, replace “from wind stack effect and mechanical ventilation” with “pressure”.

In Part 4, replace “C402.5.10” with “C402.5.1.2.1”.

C402.5.1.2.1 *Add Section C402.5.1.2.1 as follows:*

C402.5.1.2.1 Electrical and communication boxes. Electrical and communication boxes that penetrate the air barrier of the *building thermal envelope*, and that do not comply with C402.5.1.2.1.1, shall be caulked, taped, gasketed, or otherwise sealed to the air barrier element being penetrated. All openings on the concealed portion of the box shall be sealed. Where present, insulation shall rest against all concealed portions of the box.

C402.5.1.2.1.1 *Add Section C402.5.1.2.1.1 as follows:*

C402.5.1.2.1.1 Air-sealed boxes. Where air-sealed boxes are installed, they shall be marked in accordance with NEMA OS 4. Air-sealed boxes shall be installed in accordance with the manufacturer's instructions.

C402.5.1.3 Delete Section C402.5.1.3

C402.5.1.4 Delete Section C402.5.1.4

C402.5.1.5 Delete Section C402.5.1.5

C402.5.2 Replace Section C402.5.2 with the following:

C402.5.2 Air leakage compliance. *Air leakage* of the *building thermal envelope* shall be tested by an *approved* third party in accordance with C402.5.2.1. The measured *air leakage* shall not be greater than 0.35 cfm/ft² (1.8 L/s × m²) of the *building thermal envelope* area at a pressure differential of 0.3 inch water gauge (75 Pa) with the calculated *building thermal envelope* surface area being the sum of the above- and below-grade *building thermal envelope*.

Exceptions:

1. Where the measured *air leakage* rate is greater than 0.35 cfm/ft² (1.8 L/s × m²) but is not greater than 0.45 cfm/ft² (2.3 L/s × m²), the *approved* third party shall perform a diagnostic evaluation in accordance with ASTM E1186. All identified leaks shall be sealed where such sealing can be made without damaging existing building components. A report specifying the corrective actions taken to seal leaks shall be deemed to establish compliance with the requirements of this section where submitted to the code official and the building owner. Where the measured *air leakage* rate is greater than 0.45 cfm/ft² (2.3 L/s × m²), corrective actions must be made to the building and an additional test completed for which the results are 0.45 cfm/ft² (2.3 L/s × m²), or less.
2. As an alternative, buildings or portions of buildings, containing Group R and I occupancies, shall be permitted to be tested by an *approved* third party in accordance with C402.5.2.2. The reported *air leakage* of the *building thermal envelope* shall not be greater than 0.27 cfm/ft² (1.4 L/s × m²) of the *testing unit enclosure area* at a pressure differential of 0.2 inch water gauge (50 Pa).

C402.5.2.1 Add Section C402.5.2.1 as follows:

C402.5.2.1 Whole building test method and reporting. The *building thermal envelope* shall be tested for *air leakage* in accordance with ASTM E3158 or an equivalent *approved* method. A report that includes the tested surface area, floor area, air by volume, stories above grade, and leakage rates shall be submitted to the code official and the building owner.

Exceptions:

1. For buildings less than 10,000 ft² (1000 m²) the entire *building thermal envelope* shall be permitted to be tested in accordance with ASTM E779, ASTM E3158 or ASTM E1827 or an equivalent *approved* method.
2. For buildings greater than 50,000 ft² (4645 m²), portions of the building shall be permitted to be tested and the measured *air leakage* shall be area-weighted by the surface areas of the *building thermal envelope* in each portion. The weighted average tested *air leakage* shall not be greater than the whole building leakage limit. The following portions of the building shall be tested:

- i. The entire *building thermal envelope* area of stories that have any conditioned spaces directly under a roof.
- ii. The entire *building thermal envelope* area of stories that have a building entrance, a floor over unconditioned space, a loading dock, or that are below grade.
- iii. Representative above-grade portions of the building totaling not less than 25 percent of the wall area enclosing the remaining conditioned space.

C402.5.2.2 *Renumber Section C402.5.2 as new Section C402.5.2.2 and make the following changes:*

Add "ASTM E3158," after "ASTM E1827"

Replace "Units shall be tested separately with an unguarded blower door test as follows:" with "Units shall be tested without simultaneously pressurizing adjacent units and shall be separately tested as follows".

In part 2 add "a middle floor unit" between "including a top floor unit" and "a ground floor unit"

In part 2, replace "two units shall be tested" with "three units shall be tested"

Add new Part 3 as follows: "Enclosed spaces with not less than one exterior wall in the building thermal envelope shall be tested in accordance with C402.5.3."

Add the following exception "Exception: Corridors, stairwells, and enclosed spaces having a conditioned floor area not greater than 1,500 ft² shall be permitted to comply with Section C402.5.1.5 and either Section C402.5.1.3 or C402.5.1.4."

C402.5.2.3 *Renumber Section C402.5.1.5 as Section C402.5.2.3 and make the following changes:*

Add "In addition to the requirements of Sections C402.5.2.1 and C402.5.2.2" after "verification criteria" and before "the installation of the continuous air barrier".

In part 2, replace "components and assemblies" with "materials, assemblies, and systems"

In part 2, delete "while the air barrier is still accessible for inspection"

In part 2, replace "Sections C402.5.1.3 and C402.5.1.4" with "Sections C402.5.2.3.1 or C402.5.2.3.2" and add "The air barrier shall remain accessible for inspection and repair"

C402.5.2.3.1 *Renumber Section C402.5.1.3 as new Section C402.5.2.3.1.*

C402.5.2.3.2 *Renumber Section C402.5.1.4 as new Section C402.5.2.3.2.*

C402.5.3 *Renumber Section C402.5.4 as Section C402.5.3 and make the following changes:*

Replace "shall meet the provisions of Table C402.5.4" with "shall comply with Table C402.5.3".

Add "conducted by an accredited, independent testing laboratory" between "Testing shall be" and "in accordance with"

Replace “reference test standard in C402.5.4 by an accredited, independent testing laboratory” with “reference test standard in Table C402.5.3”.

In Exception 1, replace “C402.5.1” with “C402.5.1.2”

In Exception 2, replace “comply with the testing alternative of Section C402.5,” with “are tested for air leakage in accordance with Section C402.5.2”

In Exception 2, replace “Table C402.5.4” with “Table C402.5.3”

Relabel “Table C402.5.4” to “Table C402.5.3”

C402.5.4 Renumber Section C402.5.5 as Section C402.5.4 and make the following changes:

In Part 2.1, delete “Table C402.1.3 or”.

In Part 2.2 replace “Section C402.5.1.1” with “Section C402.5.1.2”.

In Part 2.4 replace “Water lines” with “Piping serving as part of a heating or cooling system”.

C402.5.5 Renumber Section C402.5.6 as Section C402.5.5 and make the following changes:

Replace “Section C402.5.4” with “Section C402.5.3”.

C402.5.6 Renumber Section C402.5.7 as Section C402.5.6.

C402.5.7 Renumber Section C402.5.8 as C402.5.7 and make the following changes:

Replace “infiltration” with “air leakage”.

C402.5.8 Renumber Section C402.5.9 as Section C402.5.8 and make the following changes:

C402.5.9 Renumber Section C402.5.10 as Section C402.5.9.

In part 2 replace “more” with “greater”

In part 2 replace “when” with “where”

C402.5.10 Renumber Section C402.5.11 as Section C402.5.10 and make the following changes:

Replace “and lower the heating setpoint to 55°F (13°C)” with “and lower the heating setpoint to 50°F (10°C)”

In Exception 1, add “operable openings into” before “separately-zoned areas”

In Exception 2, replace “warehouses” with “storage occupancies”

In Exception 3, revise to read: “Doors located in the exterior wall that are part of a vestibule system”.

Add new Exception 4, “Operable openings used as part of a designed system for natural ventilation.”

C402.5.10.1 Renumber Section C402.5.11.1 as Section C402.5.10.1

C402.6 Add Section C402.6 as follows:

C402.6 Approved calculation software tools. The following software tools are sufficient to demonstrate compliance with Sections C401.2.1 Prescriptive Compliance and C402.7.

1. COMcheck-Web available at: <https://www.energycodes.gov/comcheck>

C402.7 Add Section C402.7 and subsections as follows:

C402.7 Derating and Thermal Bridges

C402.7.1 General. In addition to pre-calculated assembly U-factors, C-factors, or F-factors outlined in Appendix A of ASHRAE 90.1 2019, vertical envelope performance shall also take into account effect of *thermal bridges* according to both C402.7.2 and C402.7.3. In addition, the thermal resistance of *spandrel sections* within *glazed wall systems* shall be according to C402.7.4. Together with Appendix A of ASHRAE 90.1 2019, these derated values and *spandrel section* values shall be used when showing compliance with Section C402.1.4 or Section C402.1.5, as applicable.

C402.7.2 Continuous Insulation for Vertical Walls. Installed vertical wall continuous insulation shall be derated using either C402.7.2.1, C402.7.2.2, or C402.7.2.3 to account for the effect of fasteners through the continuous insulation.

C402.7.2.1. Prescriptive Derating. Derate vertical wall continuous insulation using Equation C402.7.2.1 and Derating Factor from C402.7.2.1.1 for portions of wall having brick veneer systems and C402.7.2.1.2 or C402.7.2.1.3 for portions of wall having cladding systems.

(Equation C402.7.2.1)

$$R_{\text{derated}} = R_o \times \text{Derating Factor}$$

Where

R_{derated} :	R value after derating, to be used when showing compliance R402.7.2
R_o :	R value of the continuous insulation prior to derating
Derating Factor:	From C402.7.2.1.1, C402.7.2.1.2, or C402.7.2.1.3

C402.7.2.1.1 Brick Veneer Systems. Wall systems comprised of brick anchors fasteners supporting brick veneer shall use a Derating Factor of 0.7 to account for the *clear field thermal bridge* derating effect of the fasteners. In addition, brick shelf angles shall be derated according to Section C402.7.3 to account for the *linear thermal bridge* derating effect of any brick shelf angles.

C402.7.2.1.2 Cladding Systems. Wall systems comprised of cladding systems shall use Derating Factor per Table 402.7.2.1.2

Table 402.7.2.1.2

Thickness of R _o	Derating Factor
R _o is less than or equal to R-15	Derating Factor = 0.74 – 0.021 x R _o
R _o is greater than R-15	Derating Factor = 0.55 – 0.007 x R _o

C402.7.2.1.3 Cladding Systems with Qualifying Thermal Breaks. If plastic or fiberglass fasteners entirely comprised of material having thermal conductivity of 3 Btu-in/hr-ft²-F or less are used to support external cladding; or, if fasteners having thermal breaks which have a conductivity of 3 Btu-in/hr-ft²-F or less on both ends of the fastener are used to support external cladding, use Derating Factor of 0.8.

C402.7.2.2 Reference Derating. Use pre-solved, derated continuous insulation values contained in Building Envelope Thermal Bridging Guide, version 1.6 or higher, published by BC Hydro Power Smart.

C402.7.2.3. Modelled Derating. Use two or three-dimensional finite element analysis heat transfer model to calculate derated value. A three-dimensional model shall be used when there are *point thermal bridges* or thermal bridging in multiple planes.

C402.7.3. Linear Thermal Bridges. In addition to derating per Section C402.7.2, installed vertical wall insulation U values shall be further derated for *linear thermal bridges* where the vertical wall intersects the following: brick shelf angles, balconies, vertical interior walls, horizontal interior walls, windows, roof, other vertical walls on different plane, and grade_ using Equation C402.7.3.

(Equation C402.7.3)

$$U_{derated} = \frac{PSI * Length}{A_{total}} + U_o$$

Where

U _{derated}	Derated wall U value (Btu/hr-ft ² -F)
PSI	Value from Section C402.7.3.1, C402.7.3.2, or C402.7.3.3 (Btu/hr-ft-F)
Length	Length of linear <i>thermal bridge</i> (ft)
A _{total}	Area of derated wall (ft ²)
U _o	Wall or roof U value prior to <i>linear thermal bridge</i> derating

C402.7.3.1 Prescriptive PSI values. Use PSI values from Table C402.7.3.1

Table C402.7.3.1

Type of Linear Thermal Bridge	PSI-value (Btu/hr - ft – F)
Balcony to exterior vertical wall intersection	1.00
Intermediate floor to exterior vertical wall intersection	0.60
Interior vertical wall to exterior vertical wall intersection	0.50
Fenestration to exterior vertical wall intersection	0.32

Parapet (vertical wall to roof intersection)	0.60
Brick shelf angle	0.35
Vertical wall to grade intersection	0.52
Vertical wall plane transition (building corners and other changes in vertical wall plane)	0.25

C402.7.3.2. Reference PSI Values. Use pre-solved PSI values contained in Building Envelope Thermal Bridging Guide, version 1.6 or higher, published by BC Hydro Power Smart.

C402.7.3.3. Modelled PSI Values. Use a two or three-dimensional finite element analysis to calculate PSI values. A three-dimensional model shall be used when there are *point thermal bridges* or thermal bridging in multiple planes.

C402.7.4 Thermal Resistance of Spandrel Sections. R-factor of opaque *spandrel sections* within *curtain wall* systems shall be accordance with C402.7.4.1, C402.7.4.2, or C402.7.4.3.

C402.7.4.1 Prescriptive R value. Opaque *spandrel sections* within *glazed wall systems* shall at least R-12 insulation. For the purpose of calculating weighted U in accordance with Section C402.1.5, *spandrel sections* shall use default values in Table C402.7.4.1.

Table C402.7.4.1: Default R values for Spandrel Sections

Type	Default R-Value
Thermally broken	3.5
Non-thermally broken	2

C402.7.4.2. Reference R values. Use pre-solved opaque *spandrel sections* R values contained in Building Envelope Thermal Bridging Guide, version 1.6 or higher, published by BC Hydro Power Smart.

C402.7.4.3. Modelled R values. Use a two or three-dimensional finite element analysis to calculate R value of opaque *spandrel section*. A three-dimensional model shall be used when there are *point thermal bridges* or thermal bridging in multiple planes.

C403.5 Modify Section C403.5 as follows

Add "Dedicated outside air systems" as Item 4 of the list of where air or water economizers shall be provided.

Delete exception 5 and renumber subsequent exceptions to reflect deletion

Table C403.5(1). *Show only Climate Zone 5A.*

Table C403.5(2). *Delete this table*

C403.7.4 Replace C403.7.4 as follows

C403.7.4 Energy Recovery Systems. Energy recovery ventilation systems shall be provided as specified in Section C403.7.4.1, as applicable and C403.7.4.2.

C403.7.4.1 Modify Section C403.7.4.1 as follows:

Replace “not less than 60 percent at heating design condition.” with “not less than 75 percent at heating design condition. Outdoor air must be delivered directly to the dwelling unit. The building weighted average sensible energy recovery effectiveness must meet the requirements of C403.7.4.2.”

Delete all the exceptions (exceptions 1 through 4).

C403.7.4.2 *Modify Section C403.7.4.2 as follows:*

Replace “The energy recovery system shall provide an enthalpy recovery ratio of not less than 50% at design conditions” with “The energy recovery system shall result in either 1 or 2, as applicable”

Add 1 and 2 as follows

1. *A sensible recovery ratio of at least 50% at heating design conditions for systems that provide makeup for Class 3 or 4 exhaust. The requirement can be satisfied either for each fan system individually or based on a weighted average of the ventilation air flow for all applicable fan systems in the entire building per Equation C403.7.4.2(1).*

Equation C403.7.4.2(1)

Weighted average sensible energy recovery ratio = [sensible energy recovery ratio for fan system 1 x outside air flow for system 1 + sensible energy recovery ratio for fan system 2 x outside air flow for system 2 + ...]/[outside air flow for system 1 + outside air flow for system 2 + ...]

2. *An enthalpy recovery ratio of not less than 70% at heating and cooling design conditions for all other systems. The requirement can be satisfied either for each fan system individually or based on a weighted average of the ventilation air flow for all applicable fan systems in the entire building per Equation C403.7.4.2(2).*

Equation C403.7.4.2(2)

Weighted average enthalpy energy recovery ratio = [enthalpy recovery ratio for fan system 1 x outside air flow for system 1 + enthalpy recovery ratio for fan system 2 x outside air flow for system 2 + ...]/[outside air flow for system 1 + outside air flow for system 2 + ...]

Delete exceptions 2 (including 2.1 and 2.2), 4, 5, 6, 7, and 8

Renumber exception 3 as exception 2

Renumber exception 9 as exception 3 and change from “20 hours per week” to “10 hours per week”

Renumber exception 10 as exception 4

Renumber exception 11 as exception 5

Revise Tables C403.7.4.2(1) and C403.7.4.2(2) and show only Climate Zone 5A row, as follows:

Table C403.7.4.2(1)

ENERGY RECOVERY REQUIREMENT (Ventilation systems operating less than 8,000 hours per year)

Climate Zone	PERCENT (%) OUTDOOR AIR AT FULL DESIGN AIRFLOW RATE							
	>=10% and <20%	>=20% and < 30%	>=30% and < 40%	>=40% and <50%	>=50% and <60%	>=60% and <70%	>=70% and <80%	>=80%
	Design Supply Fan Airflow Rate (cfm)							
5A	10,000	8,000	2,750	0	0	0	0	0

Table C403.7.4.2(2)

ENERGY RECOVERY REQUIREMENT (Ventilation systems operating note less than 8,000 hours per year)

Climate Zone	PERCENT (%) OUTDOOR AIR AT FULL DESIGN AIRFLOW RATE							
	>=10% and <20%	>=20% and < 30%	>=30% and < 40%	>=40% and <50%	>=50% and <60%	>=60% and <70%	>=70% and <80%	>=80%
	Design Supply Fan Airflow Rate (cfm)							
5A	0	0	0	0	0	0	0	0

C405.2.4 Modify Section C405.2.4 as follows

In item 1, replace "150 watts" with "100 watts"

In item 3, replace "150 watts" with "100 watts"

C405.13 Add Section C405.13 as follows:

C405.13 Electric Vehicle Ready Parking Spaces ("EV Ready Spaces") (Mandatory). New parking spaces shall provide *EV Ready Spaces* in accordance with Table C405.13. Installed wiring suitable for 6.6kW or higher SAE J1772-2017 AC Level II EVSE shall be connected to the service panel and run to within 6 feet (1828mm) of any qualifying parking space. Conductors and outlets for *EVSE* shall be sized and installed in accordance with the MA electrical code.

TABLE C405.13 EV-READY SPACE REQUIREMENTS

Occupancy Classification	Minimum percentage of EV-Ready Spaces	EV Charging Performance Requirements
Group R and Group B	20%	40-amp dedicated branch circuit or larger branch circuit with ALMS in accordance with Table C405.13.1
All Other Occupancies	10%	40-amp dedicated branch circuit or larger branch circuit with ALMS in accordance with Table C405.13.1

Exceptions:

1. Parking spaces and garage spaces intended exclusively for storage of vehicles for retail sale or vehicle service are excluded from the EV-ready space percentage calculation.
2. Any parking facility with 4 or more spaces providing installed Direct Current fast charging EVSE with a minimum charging speed of 150 kW to each space.
3. One or more AC Level II spaces may be substituted with multiple AC Level I spaces provided with wiring for a minimum 20amp, 120-volt EVSE, with a ratio of at least 3 AC Level I spaces for each AC Level II space required.
4. Parking spaces specifically designated for medium or heavy-duty vehicles are excluded from the EV-ready space percentage calculation.

C405.13.1 Add Section C405.13.1 as follows:

C405.13.1 Minimum Charging Performance Requirements. *Automatic Load Management System (ALMS)* may be used to control *electric vehicle* loads for EV-Ready or EVSE-Installed Spaces with AC Level II or Level I charging, subject to the performance requirements in Table C405.13.1. The maximum number of parking spaces that may share a single branch circuit varies based on the percentage of all parking spaces to be provided with *EVSE*.

TABLE C405.13.1 EV-READY PERFORMANCE REQUIREMENTS

Circuit Breaker Amperage	Maximum Parking Spaces that May Share a Branch Circuit with 10%-60% EV Ready spaces	Maximum Parking Spaces that May Share a Branch Circuit with 61-100% EV Ready spaces
40A	1	2
50A	1	2
60A	2	4
70A	3	6
80A	4	8
90A	5	9
100A	6	10

C405.13.2 Add Section C405.13.2 as follows:

C405.13.2 Identification. *Construction documents* shall indicate the branch circuit termination point and proposed location of future EVSE. *Construction documents* shall also provide information on amperage of future EVSE, wiring schematics, *Automatic Load Management Systems*, and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site

distribution transformers, have sufficient capacity to simultaneously charge all EVs at all required *EV ready spaces*.

C406.1 Modify Section C406.1 as follows:

Replace “shall achieve a total of 10 credits” with “shall achieve a total of 15 credits”

Table C406.1(1) Modify Table C406.1(1) as follows:

Delete rows for C406.2.1 and C406.7.3

Replace row for option C406.2.3 with the following

<u>Section</u>	<u>Climate Zone 5A</u>
C406.2.3 Renewable space heating	<u>15</u>

Add the following row for option C406.12:

<u>Section</u>	<u>Climate Zone 5A</u>
C406.12 Heavy Timber Construction	<u>8</u>

Table C406.1(2) Modify Table C406.1(2) as follows:

Delete rows for C406.2.1 and C406.7.3

Replace row for option C406.2.3 with the following

<u>Section</u>	<u>Climate Zone 5A</u>
C406.2.3 Renewable space heating	<u>15</u>

Add the following row for option C406.12:

<u>Section</u>	<u>Climate Zone 5A</u>
C406.12 Heavy Timber Construction	<u>8</u>

Table C406.1(3) Modify Table C406.1(3) as follows:

Delete rows for C406.2.1 and C406.7.3

Replace row for option C406.2.3 with the following

<u>Section</u>	<u>Climate Zone 5A</u>
C406.2.3 Renewable space heating	<u>15</u>

Add the following row for option C406.12:

<u>Section</u>	<u>Climate Zone 5A</u>
C406.12 Heavy Timber Construction	<u>8</u>

Table C406.1(4) Modify Table C406.1(4) as follows:

Delete rows for C406.2.1 and C406.7.3

Replace row for option C406.2.3 with the following

<u>Section</u>	<u>Climate Zone 5A</u>
C406.2.3 Renewable space heating	15

Add the following row for option C406.12:

<u>Section</u>	<u>Climate Zone 5A</u>
C406.12 Heavy Timber Construction	8

Table C406.1(5) Modify Table C406.1(5) as follows:

Delete rows for C406.2.1 and C406.7.3

Replace row for option C406.2.3 with the following

<u>Section</u>	<u>Climate Zone 5A</u>
C406.2.3 Renewable space heating	15

Add the following row for option C406.12:

<u>Section</u>	<u>Climate Zone 5A</u>
C406.12 Heavy Timber Construction	8

C406.1.1 Modify Section C406.1.1 as follows:

Replace “minimum number of 5 credits” with “minimum number of 10 credits”

C406.2.1 Delete this section

C406.2.3 Replace Section C406.2.3 with the following:

C406.2.3. Renewable space heating. All space heating shall be provided with cold-climate air source heat pumps having rated coefficient of performance (COP) of at least 1.75 at 5 degrees Fahrenheit source air, or ground source heat pumps.

C406.7.3 Delete this section

C406.9 Replace Section C406.9 with the following:

C406.9 Reduced air leakage. *Air leakage* of the *building thermal envelope* shall be tested by an approved third party in accordance with Section C402.5.2.1. The measured *air leakage* shall not exceed 0.20 cfm/ft² (1.1 L/s × m²) of the *building thermal envelope* at a pressure differential of 0.3 inches water gauge (75 Pa), with the calculated surface area being the sum of the above- and below-grade *building thermal envelope*.

C406.12 Add Section C406.12 as follows:

C406.12 Heavy Timber construction. In buildings with 4 stories or more of Type IV heavy timber construction either above grade, or above a podium.

C407 Replace Section C407 in its entirety with the following:

C407.1 Targeted Performance

This option requires compliance with Section C407.1.1 through C407.1.2.

C407.1.1 Compliance

Building shall comply with Sections C407.1.1.1 through C407.1.1.6

C407.1.1.1 Building performance modeling

Building performance modeling shall be used to show compliance with C407.1.1.5. The simulation program shall be a computer-based program for the analysis of energy consumption in buildings. The simulation shall include calculation methodologies for the building components being modeled and meet the requirements in ANSI/ASHRAE/IESNA 90.1-2019 Section G2.2.1(a)-(d) and G2.2.4.

C407.1.1.2 Climatic Conditions

The simulation program shall perform the simulation using hourly values of climatic data using representative weather files prescribed by the Massachusetts Department of Energy Resources.

C407.1.1.3 Modeling Building Envelope Infiltration

The air leakage rate of the building envelope shall be modeled following ANSI/ASHRAE/IESNA 90.1-2019 Section G3.1.1.4.

C407.1.1.4 Internal loads, scheduling, and other modeling assumptions

Performance modeling shall use the internal load, scheduling, and other assumptions as prescribed by the Massachusetts Department of Energy Resources.

C407.1.1.5 Thermal energy demand intensity (TEDI) limits

Performance modeling shall show that the building's heating thermal energy demand intensity and cooling thermal energy demand intensity are less than or equal to the values in Table C407.1.5.

Table C407.1.5 Thermal Energy Demand Intensity (TEDI) Limits

Use Type	Heating TEDI (kBtu/sf-yr)	Cooling TEDI (kBtu/sf-yr)
Office, fire station, library, police station, post office, town hall $\geq 125,000$ -sf	1.5	23
Office, fire station, library, police station, post office, town hall between 75,000 and 125,000-sf	$4 - 0.00002 * \text{Area (sf)}$	$18 + 0.00004 * \text{Area (sf)}$
Office, fire station, library, police station, post office, town hall $\leq 75,000$ -sf	2.5	21

K-12 School $\geq$ 125,000-sf	2.2	12
K-12 School between 75,000 and 125,000-sf	$2.7 - 0.000004 * \text{Area (sf)}$	$32 - 0.00016 * \text{Area (sf)}$
K-12 School $\leq$ 75,000-sf	2.4	20
Residential multifamily and dormitory $\geq$ 125,000-sf	2.8	22
Residential multifamily and dormitory between 75,000 and 125,000-sf	$3.8 - 0.000008 * \text{Area (sf)}$	$4.5 + 0.00014 * \text{Area (sf)}$
Residential multifamily and dormitory $\leq$ 75,000-sf	3.2	15
All other $\geq$ 125,000-sf	1.5	23
All other between 75,000 and 125,000-sf	$4 - 0.00002 * \text{Area (sf)}$	$18 + 0.00004 * \text{Area (sf)}$
All other $\leq$ 75,000-sf	2.5	21

C407.1.1.6 Mixed use buildings

For buildings having more than one use type where any use type is more than 10% of the total space conditioned area, each separate use type having more than 10% of the total space conditioned area shall separately and individually show compliance with C407.1.1.5 for that respective use type. Use types having less than or equal to 10% of the total space conditioned area do not have to show separate, individual compliance with C407.1.1.5 but can be incorporated into and treated as the majority use type.

C407.1.2 Documentation

Simulated performance shall be documented, and documentation shall be submitted to rating authority. Documentation shall include all the assumptions used in the performance modeling such that the documentation can be used as a specification checklist for implementation during design and construction. The information shall be submitted in a report and shall include the items described in ANSI/ASHRAE/IESNA 90.1-2019 Appendix G Section G1.3.2 Parts b, g, h, i, j, k, l, n, o, and q, and Section G1.3.3.

C407.2 Relative Performance. This option requires compliance with Section C407.2.1 and C407.2.2

C407.2.1 Electrification and Documentation of Highly Ventilated Buildings. Buildings using the Relative Performance Pathway (C407.2) because average ventilation at full occupancy is greater than 0.5 cfm/sf shall have space heating electrified in accordance with Section C401.4.1 and shall submit design documents showing ventilation system design and air flow rates as required by Section C103.2 part 16.

C407.2.2 Compliance. Building shall comply with ANSI/ASHRAE/IESNA 90.1-2019 Section 4.2 using the Appendix G pathway as modified by C407.2.2.1 and C407.2.2.2.

C407.2.2.1 Modification to ANSI/ASHRAE/IESNA 90.1-2019 Section 4.2.

90.1-2019 Section 4.2 Replace 4.2.1.1 with following:

New buildings shall comply with 4.2.2 through 4.2.5 and normative Appendix G. When using Normative Appendix G, the Performance Energy Index (PEI) of new buildings, additions to existing buildings, and alterations to existing buildings shall be less than or equal to the Performance Energy Index Target (PEI_t) when calculated in accordance with the following:

$$PEI_t = [BBUE + (BPF \times BBRE)]/BBSE$$

- PEI = Performance Energy Index calculated in accordance with Section G1.2
BBUE = Baseline building unregulated site energy
BBRE = Baseline building regulated site energy
BPF = Building performance factor from Table 4.2.1.1 For building area types not listed in Table 4.2.1.1 use “All others”. Where a building has multiple area types, the required BPF shall be equal to the area-weighted average of the building area types.
BBSE = Baseline building site energy (sum of BBUE and BBRE)

90.1-2019 Section 4.2 Revise Table 4.2.1.1 to show only Climate Zone 5A; remove multifamily, office, and school; and adjust the BPFs as follows:

Table 4.2.1.1 Building Performance Factor (BPF)

Building Area Type	Climate Zone 5A
Health care/hospital	0.59
Hotel/motel	0.57
Restaurant	0.62
Retail	0.47
Warehouse	0.41
All others	0.51

C407.2.2.2 Modification to ANSI/ASHRAE/IESNA 90.1-2019 Appendix G

90.1-2019 Section G In all Sections of Appendix G, replace references to “baseline building performance” with “baseline building site energy”, replace “proposed building performance” with “proposed building site energy”, replace “energy cost savings” with “site energy savings”

90.1-2019 Section G Replace G1.2.2 with following, keeping the exception unchanged:

The site energy of the proposed design is calculated in accordance with the provisions of this appendix using the following formula:

$$\text{Performance energy index (PEI)} = \frac{\text{Proposed building site energy}}{\text{baseline building site energy (BBSE)}}$$

Both the proposed building site energy and the baseline building site energy shall include all end use load components within and associated with the building when calculating the performance energy index.

90.1-2019 Section G Delete G1.3.2 Part m and Part p

90.1-2019 Section G Delete G2.1 Part c

90.1-2019 Section G Revise G2.4.1 as follows

Site recovered energy shall be subtracted from the proposed building site energy when calculating performance. Energy used to recharge vehicles that are used for on-road and off-site transportation purposes, or energy losses from use of behind-the-meter energy storage, should not be included when calculating performance. On-site renewable energy shall not be subtracted from the proposed building site energy when calculating performance.

90.1-2019 Section G Delete G2.4.2

90.1-2019 Section G Add the following row to Section G Table G3.1.1-1.

**TABLE G3.1.1-1 BASELINE BUILDING VERTICAL FENESTRATION PERCENTAGE
OF GROSS ABOVE-GRADE-WALL AREA**

Building Area Types	Baseline Building Gross Above-Grade-Wall Area
Multifamily	24%

Section C407.3 Add Section C407.3 as follows:

C407.3 Passive House. This option requires compliance with Section C407.3.1 and C407.3.2.

C407.3.1 Compliance. Buildings shall be pre-certified as meeting the Phius CORE 2021 or Phius ZERO 2021 Passive Building Standard – North America, or newer, demonstrated using Phius approved software, where Phius Design-Certification is demonstrated by Phius and a Certified Passive House Consultant (CPHC); or, Projects pre-certified as meeting the Certified Passive House standard using the current software and program criteria by the Passive House Institute (PHI), where PHI certification is demonstrated by a Certified Passive House Designer and a Certified Passive House Certifier.

C407.3.2 Documentation. Compliance with Phius or PHI shall be in accordance with C407.3.3.1 or C407.3.3.2

C407.3.2.1 Phius Documentation. When using WUFI Passive or other Phius-approved software:

1. Prior to the issuance of a building permit, the following item(s) must be provided to the Building Official:

- a. A Phius 2021 (or newer) Verification Report which demonstrates project compliance with Phius 2021 (or newer) performance requirements.
- b. A statement from the CPHC that the verification report results accurately reflect the plans submitted.
- c. Evidence of project registration from Phius.

OR

- a. A Design Certification Letter from Phius.

2. Prior to the issuance of a certificate of occupancy, the following items must be provided to the building official:

- a. Design Certification Letter from Phius.
- b. An updated Verification Report by the CPHC which reflects “as-built” conditions and test results that demonstrate project compliance with Phius (blower door and ventilation results).
- c. A statement from the CPHC that the envelope meets the Phius hygrothermal requirements found in Appendix B of the Phius 2021 Certification guidebook
- d. A statement from the Phius Certified Verifier or Rater that the project test results and other Phius verification requirements are met.
- e. A copy of the Phius workbook listing all testing results and as-built conditions.

OR

- a. A Project Certificate demonstrating final certification awarded by Phius.

AND

- f. A statement from the Phius Verifier or Rater of compliance with C405.13: EV ready, and Appendix CB: Solar Ready Provisions.

C407.3.2.2 Passive House International (PHI) Documentation.

1. If using PHI Passive House software, prior to the issuance of a building permit, the following item(s) must be provided to the Building Official:

- a. A PHPP compliance report which demonstrates project compliance with current PHI performance requirements;
- b. A statement from the Certified Passive House Consultant/Designer (CPHC/D) that the PHPP results and compliance report accurately reflect the plans submitted;
- c. Evidence of project registration from a Certified Passive House Certifier.

OR

- a. A Design Certification Letter from a Certified Passive House Certifier.

2. Prior to the issuance of a certificate of occupancy, the following items must be provided to the building official:

- a. A Design Certification Letter from a Certified Passive House Certifier.
- b. An updated PHPP compliance report which reflects “as-built” conditions and test results (blower door and ventilation results) that demonstrates project compliance with PHI performance requirements;
- c. A copy of the Passive House Verifier’s or Rater’s test results;
- d. A statement from the CPHD that the project test results meet the model performance requirements, all the mandatory limits and any other mandatory requirements.

OR

- a. A Final Certification Letter from a Certified Passive House Certifier

AND

A statement from the Passive House Verifier or Rater of compliance with C405.13: EV ready, and Appendix CB: Solar Ready Provisions.

Section C407.4 Add Section C407.4 as follows:

C407.4 HERS Index (HERS) for multi-family buildings

This option requires compliance with Section C407.4.1, C407.4.2, C407.4.3

C407.4.1 Compliance

Each dwelling unit shall have a certified HERS Index (HERS) rating less than or equal to the appropriate value indicated in Table C407.4 when compared to the *HERS index reference design* for each dwelling unit prior to credit for onsite renewable electric generation. Buildings shall meet or exceed ENERGY STAR Multifamily New Construction (MFNC) program requirements. The Home Energy Rating Index (HERS) shall be determined in accordance with RESNET/ICC Standard 301-2019. Software tools used for determining HERS Index shall be Approved Software Rating Tools in accordance with RESNET/ICC 301. Where calculations require input values not specified by Sections R402, R403, R404 and R405, those input values shall be taken from RESNET/ ICC 301.

TABLE C407.4 MAXIMUM ENERGY RATING INDEX

Building Energy Sources	Maximum HERS Index score ^a		
	New construction permits until June 30, 2024	New construction permits after July 1, 2024	Major alterations, additions, or Change of use ^b
Mixed-fuel building	52	42	52
Solar Electric Generation	55	42	55
All-Electric building	55	45	55
Solar Electric & All-Electric building	58	45	58

^a Maximum HERS rating prior to onsite renewable electric generation in accordance with Section C407.4

^b Alterations, Additions or Change of use covered by Section R503.1.5 are subject to this maximum HERS rating.

C407.4.2 Documentation. Documentation verifying that the methods and accuracy of compliance software tools conform to the provisions of this section shall be provided to the *building official* in accordance with C407.4.3.1 and C407.4.3.2:

C407.4.2.1 Prior to issuance of building permit. Prior to the issuance if a building permit, the following items must be provided to the Building Official:

1. Building street address, or other building site identification.
2. Declare the HERS Index on title page and building plans.
3. The name of the individual performing the analysis and generating the compliance report.
4. The name and version of the compliance software tool.
5. Documentation of all inputs entered into the software used to produce the results for the reference design and/or the rated home.
6. A certificate indicating that the proposed design has a HERS Index less than or equal to the appropriate score indicated in Table C407.4 when compared to the ERI reference design. The certificate shall document the building component energy specifications that are included in the calculation, including: component level insulation R-values or U-factors; assumed duct system and building envelope air leakage testing results; and the type and rated efficiencies of proposed

heating, cooling, mechanical ventilation, and service water-heating equipment to be installed. If on-site renewable energy systems will be installed, the certificate shall report the type and production size of the proposed system.

7. When a site-specific report is not generated, the proposed design shall be based on the worst-case orientation and configuration of the rated home.

C407.4.2.2 Prior to issuance of certificate of occupancy. Prior to the issuance of a certificate of occupancy, the following items must be provided to the Building Official:

1. Building street address or other *building site* identification.
2. Declaration of the Final HERS Index on title page and on building plans.
3. The name of the individual performing the analysis and generating the report.
4. The name and version of the compliance software tool.
5. Documentation of all inputs entered into the software used to produce the results for the reference design and/or the rated home.
6. A final confirmed certificate indicating that the confirmed rated design of the built home complies with Sections C407.4. The certificate shall report the energy features that were confirmed to be in the home, including: component-level insulation R-values or U-factors; results from any required duct system and building envelope air leakage testing; and the type and rated efficiencies of the heating, cooling, mechanical ventilation, and service water-heating equipment installed.
7. Documentation that each unit meets or exceeds ENERGY STAR Multifamily New Construction (MFNC) program requirements.
8. Where on-site renewable energy systems have been installed on or in the home, the certificate shall report the type and production size of the installed system.
9. Compliance with C405.13, and either Appendix CB or Appendix CC as applicable

C407.4.3 Verification by approved agency. Verification of compliance shall be completed by a certified HERS rater.

CHAPTER 5 [CE] EXISTING BUILDINGS

C502.1 *Revise Section C502.1 as follows:*

Add the following first sentence “Additions to an existing building where the addition is up to 100% of the size of the existing building and less than 20,000-sf shall comply with Sections C401.3, C402 through C406, and Section C408. Additions which exceed either of these limits shall comply with the applicable pathway for new construction in C401.2.”

C502.2 *Revise Section C502.2 as follows:*

Remove both exceptions

C503.1 *Revise Section C503.1 as follows:*

Replace “the requirements of Section C503” with “the requirements of Sections C503, C402, C403, C404, and C405”

Replace Exception 3 with “Where the component performance alternative in Section 402.1.5 is used to comply with this section, the proposed UA shall not be greater than 110 percent of the target UA.”

C505.1 Revise Section C505.1 as follows:

Replace “this code” with “Sections C401.3, C402 through C406, and Section C408”

Appendix CB Adopt unamended

APPENDIX CB: SOLAR-READY ZONE – COMMERCIAL.

APPENDIX CC - MASSACHUSETTS MUNICIPAL OPT-IN SPECIALIZED ENERGY CODE 2023

COMMERCIAL BUILDING PROVISIONS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance. The provisions contained in this appendix together with referenced sections from the Stretch energy code constitute the Specialized opt-in code for commercial buildings, and may be adopted by a city or town together with the Residential Specialized code Appendix RC as their stretch energy code. When adopted by the local municipality, the provisions in this appendix are mandatory in combination with the IECC2021 with Massachusetts Stretch code amendments.

SECTION CC101 GENERAL

CC101.1 Replace Section CC101 as follows:

CC101.1 Purpose. The purpose of this appendix is to form the commercial building provisions of the Massachusetts Municipal Opt-in Specialized Code to supplement the Massachusetts Stretch Energy Code and to provide a compliance pathway for buildings that require renewable energy systems of adequate capacity to achieve net zero carbon.

CC101.2 Replace Section CC101.2 as follows:

CC101.2 Scope. This appendix applies to new buildings that are addressed by the Municipal Opt-in Specialized Code.

Residential buildings and *dwelling units* within mixed use buildings shall comply as follows:

- 1) New *dwelling units* over 4,000 square feet in conditioned floor area in *Mixed Fuel Buildings* shall comply with the Zero Energy pathway and Section CC103 or with residential code Section RC102.
- 2) New R-use buildings over 12,000 square feet in conditioned floor area shall comply in accordance with Table CC101.2.

TABLE CC101.2 MULTI-FAMILY AND R-USE COMPLIANCE

R-Use buildings over 12,000 sf, or R-Use portions over 12,000 sf in mixed-use buildings	Compliance Path options by permit submittal date		
	C407.3 Passive house	C407.1 Targeted Performance	C407.4 HERS Index
Up to 5 stories	Required from Jan 1, 2023		
6 stories and higher	Required from Jan 1, 2024	Optional until Jan 1, 2024	Optional until Jan 1, 2024

Exceptions:

1. Detached one- and two-family dwellings and townhouses as well as Group R-2 buildings three stories or less in height above grade plane, manufactured homes (mobile dwellings), and manufactured houses (modular dwellings). These buildings and dwelling units shall comply with Residential Appendix RC under the Specialized energy code.
2. Buildings that use neither electricity nor fossil fuel.

CC101.3 Add Section CC101.3 as follows:

CC101.3 Compliance. New buildings shall demonstrate compliance with Sections CC101.4, CC101.5 and one of the following pathways:

1. **Zero Energy pathway:** Buildings shall comply with Section CC103 and demonstrate that they are *Zero Energy Buildings* in accordance with Equation CC-1. *Mixed Fuel Buildings* with any capacity for on-site fossil fuel use shall be pre-wired for future electrification of all fuel uses in accordance with Section CC105.
2. **All-Electric pathway:** Buildings shall comply with Section CC104.
3. **Mixed Fuel pathway:** *Mixed Fuel Buildings* other than *Zero Energy Buildings* with any capacity for on-site fossil fuel use shall comply with CC105 and CC106. The following uses shall be excluded when determining whether new buildings will have on-site fossil fuel use:
 - 1) On-site back-up generators using fossil fuels
 - 2) On-site refuelling of vehicles or outdoor equipment using fossil fuels

CC101.4 Add Section CC101.4 as follows:

CC101.4 Minimum building energy efficiency. New buildings shall comply with Section C401.2.1 or C401.2.2. as prescribed in Section C401. Existing buildings shall comply with Chapter 5 as amended.

CC101.5 Add Section CC101.5 as follows:

CC101.5 Minimum electric vehicle ready parking requirements. New parking spaces shall provide *electric vehicle ready spaces* in accordance with Section C405.13 and Table C405.13.

SECTION CC102 DEFINITIONS

CC102 Add the following definitions:

NET ZERO EMISSIONS BUILDING. A building which is consistent with achievement of MA 2050 net zero emissions, through a combination of highly energy efficient design together with being either a *Zero Energy Building*, or an *All-Electric Building*, or where fossil fuels are utilized, the building is fully pre-wired for future electrification and generates solar power on-site from the available *Potential Solar Zone Area*.

POTENTIAL SOLAR ZONE AREA. The combined area of any low-sloped roofs and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Annual solar access is the ratio of “annual solar insolation with shade” to the “annual solar insolation without shade”. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

ZERO ENERGY BUILDING. A building which through a combination of highly energy efficiency design and onsite renewable energy generation is designed to result in net zero energy consumption over the course of a year as measured in MMBtus or KWh_{eq}, on a site energy basis, excluding energy use for charging vehicles.

CC102 Delete the definitions for: Adjusted off-site renewable energy, zero energy performance index (ZEPI PB/EE)

SECTION CC103 ZERO ENERGY PATHWAY MINIMUM RENEWABLE ENERGY

CC103.1 Modify Section CC103.1 as follows (keeping Table CC103.1 unchanged):

Delete “or off-site renewable energy shall be procured”

Equation CC-1 Replace Equation CC-1 with the following:

$$RE_{\text{onsite}} \geq E_{\text{building}} \text{ (Equation CC-1)}$$

where:

RE_{onsite} = Annual site energy production from on-site renewable energy systems (see Section CC103.2).

E_{building} = Building energy use without consideration of renewable energy systems, on-site energy storage, on-site back-up generators, or on-site refuelling of vehicles or outdoor equipment.

When Section C401.2.1(1) is used for compliance with the Section CC101.4, building energy shall be determined by multiplying the gross *conditioned floor area* plus the gross semi-heated floor area of the proposed building by an EUI selected from Table CC103.1.

Use a weighted average for mixed-use buildings.

When any compliance pathway other than Section C401.2.1 Part 1 is used for compliance with CC101.4, building site energy use shall be determined from energy simulations.

CC103.2 Modify Section CC103.2 as follows:

After “approved by the code official” add “Commercial R-use buildings may comply using the Zero Energy Buildings pathways in Appendix RC by certifying that all units meet HERS 0 or lower with on-site renewable generation or by following the on-site renewable energy calculation used in the Phius ZERO certification standard when following the Passive house compliance pathway.”

CC103.3 Delete this section

CC104 Add Section CC104 as follows:

SECTION CC104 ALL ELECTRIC PATHWAY

CC104.1 General. New all-electric buildings shall comply with Sections CC101.4, CC101.5 and with one of the following:

- 1) Section C401.2.1 and Section C401.4.3
- 2) Section C407.3 Passive House
- 3) Exclusively R-use buildings permitted prior to January 2024 may comply with Section C407.4 when all dwelling units have a HERS rating of 45 or less.

CC105 Add Section CC105 as follows:

SECTION CC105 MIXED-FUEL BUILDING PATHWAY

CC105.1 General. This section together with Section CC106 establishes additional minimum requirements for new *mixed-fuel buildings*.

CC105.1.1 Biomass heating. New buildings using *clean biomass heating systems* may comply with this section without meeting CC105.3.1 and CC105.3.2. Buildings with any *combustion equipment* using biomass that does not meet the performance standards of *clean biomass heating systems* shall be deemed *mixed-fuel buildings* and shall comply with this section in full.

CC105.2 On-site renewable energy. New mixed-fuel buildings shall have equipment installed for on-site renewable energy with a rated capacity of not less than 1.5 W/ft² (16.1 W/m²) multiplied by the sum of the gross conditioned floor area of the three largest floors.

Exception: Where the building site cannot meet the requirement in full with an on-site renewable energy system, the building site shall install a partial system designed to utilize not less than 75% of the *Potential Solar Zone Area*.

CC105.3 Additional efficiency requirements. Additional efficiency requirements for compliance with this Section are set forth in Sections RC104.3.1 through RC104.3.3

CC105.3.1 More efficient HVAC equipment performance. Primary heating and cooling *equipment* shall meet the following efficiencies as applicable:

1. Space heating *combustion equipment* shall be rated at greater than or equal to 95 AFUE.
2. All refrigerant-based air conditioning equipment shall be a heat pump with greater than or equal to 10 HSPF rated heating performance and greater than or equal to 16 SEER rated cooling performance.
3. Ground source heat pump systems shall be rated at greater than or equal to 3.5 COP at design temperature.

For multiple cooling systems, all systems shall meet or exceed the minimum efficiency requirements in this section and collectively shall be sized to serve 100 percent of the cooling design load. For multiple heating systems, all systems shall meet or exceed the minimum efficiency requirements in this section and collectively shall be sized to serve 100 percent of the heating design load.

Exception:

Clean biomass heating systems used as the primary heating system.

CC105.3.2 Reduced energy use in service water-heating option. The hot water system shall meet one of the following efficiencies:

1. Greater than or equal to 82 EF *combustion equipment* service water-heating system.
2. Greater than or equal to 2.0 UEF electric service water-heating system.
3. Greater than or equal to 0.4 solar fraction solar water-heating system.
4. *Clean biomass heating system* supplied water-heating system.

CC106 Add Section CC106 as follows:

SECTION CC106 WIRING FOR FUTURE ELECTRIFICATION

CC106.1 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section. Capacity for the future electric circuits required in this section shall be included in the load calculations of the original installation of electric service to the building, and each *dwelling unit* for R-use buildings or portions thereof.

CC106.1.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual *dwelling units* or *sleeping units* shall comply with Section RC104.4.

CC106.1.2 Combustion water heating equipment. Gas-fired or oil-fired water heaters with a capacity less than 300,000 Btu/h (88 kW) shall be installed in accordance with the following:

1. A dedicated 208/240-volt branch circuit with a minimum capacity of 30 amps shall terminate within 3 feet (914 mm) from the water heater and be accessible to the water heater with no obstructions. Both ends of the branch circuit shall be labeled with the words "For Future Heat Pump Water Heater" and be electrically isolated,
2. A condensate drain that is no more than 2 inches (51 mm) higher than the base of the installed water heater and allows natural draining without pump assistance shall be installed within 3 feet (914 mm) of the water heater,
3. The water heater shall be installed in a space with minimum dimensions of 3 feet (914 mm) by 3 feet (914 mm) by 7 feet (2134 mm) high, and
4. The water heater shall be installed in a space with a minimum volume of 700 cubic feet (20,000 L) or the equivalent of one 16-inch (406 mm) by 24-inch (610 mm) grill to a heated space and one 8-inch (203 mm) duct of no more than 10 feet (3048 mm) in length for cool exhaust air.

CC106.1.3 Cooking ranges, ovens and cooktops. An individual branch circuit outlet with a minimum rating of 250-volts, 40-amperes shall be installed within three feet of each gas or propane range or any permanently installed *combustion equipment* oven or cooktop.

Exception: Commercial kitchens for cafeteria, restaurant or commercial catering business use

CC106.1.4 Clothes Dryers. An individual branch circuit outlet with a minimum rating of 250-volts, 30-amperes shall be installed within three feet of each gas or propane clothes dryer.

Exception: commercial drying equipment used for manufacturing and process loads

CC106.1.5 Other combustion equipment. *Combustion equipment* not covered by Sections CC106.1.1 and CC106.1.4 and within buildings having average ventilation at full occupancy of 0.5 cfm/sf or less shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the *appliance* or *equipment* and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, "For future electric equipment".

CC106.1.6 Other combustion equipment, highly ventilated buildings. *Combustion equipment* not covered by Sections CC106.1.1 and CC106.1.4 and within buildings having average ventilation at full occupancy of greater than 0.5 cfm/sf shall comply with Section CC106.1.6.1 through CC106.1.6.5.

CC106.1.6.1 HVAC Design and Installed Associated Electric Service. An all-electric HVAC retrofit design shall be prepared by the HVAC engineer for approval by the authority having jurisdiction. The electric service installed with the building shall be sufficient to accommodate the all-electric HVAC retrofit design. The contract documents shall show future replacement of *combustion equipment* based HVAC system with an equivalent all-electric system. Contract documents shall show *combustion equipment* to be replaced, future electric equipment, supporting electric, structural, and architectural infrastructure to be installed during building construction, and space allotments for future equipment.

CC106.1.6.2 Heating, Ventilation, and Air Conditioning (HVAC) Compatibility. HVAC design shall ensure that air, water, or other systems serviced by *combustion equipment* can also be serviced by future electric retrofit equipment without having to upgrade, alter, or update such systems.

CC106.1.6.3 Equipment Efficiencies. Electric retrofit equipment used for space and water heating shall conform to Section C401.4.3.

CC106.1.6.4 Installed Infrastructure. Infrastructure shall be installed as part of building construction to accommodate future electric retrofit in order to minimize cost and disruption during retrofit. Infrastructure to be installed as part of building construction shall include, but is not limited to, power infrastructure to building to accommodate future electric retrofit system, electric service to future distributed equipment within building, conduits to accommodate controls to future distributed equipment within building, and structural and architectural elements to accommodate future retrofit equipment.

CC106.1.6.5 Space for Future Retrofit Equipment. Interior and exterior space shall be allotted to accommodate all future electric retrofit equipment. Where interior or exterior allotted space exceeds the space used for *combustion equipment* to be replaced, and/or does not correspond to the *combustion equipment* locations to be replaced, such space shall be set aside and may not be used for any other purpose. Signage, labels, and borders shall be used to prominently display areas and limits set aside for future equipment to prevent encroachment.

Summary of Proposed New 225 CMR 22.00 and 23.00 (Updated September 22, 2022)

2023 Stretch Energy Code Update and Municipal Opt-in Specialized Code

1. Background

The Stretch energy code (Stretch Code) regulations have since 2009 been published in MA 780CMR chapters 115.aa and previously 780 CMR 110.aa under the jurisdiction of the Board of Building Regulations and Standards. The climate act of 2021 moved the authority for the Stretch Code promulgation to the Department of Energy Resources (DOER) and at the same time required the development of a new Municipal Opt-in Specialized energy code (Specialized Code). These appear as new regulations in 225 CMR 22.00 and 225 CMR 23.00.

- CMR 22.00 covers Residential low-rise construction and
- CMR 23.00 covers Commercial and all other construction (including most multi-family).

This document provides an overview and explanation of these draft regulations. In the following sections, this document summarizes:

- **Section 1: Background and Timeline.**
- **Section 2: Structure.**
- **Section 3: Stretch Code.** The modifications to the Base Energy Code that form the Stretch Code amendments in Residential Low Rise (Section 3.A) and Commercial and all other buildings (Section 3.B).
- **Section 4: Specialized Opt-in Code.** The modifications to the Stretch Code that form the Specialized Code appendices in Residential Low Rise (Section 4.C) Commercial and all other buildings (Section 4.D).

1.1 Timeline for Stretch and Specialized Code adoption

The Stretch code has been available since late 2009 and has already been widely adopted by cities and towns in Massachusetts. As a result, the update to the Stretch code will not require an additional bylaw vote in those existing Stretch code municipalities, some of whom are on their 3rd update already. The Specialized code is a new option and is adopted as a municipal opt-in code similar to the Stretch code process. Cities and towns seeking to adopt will require an active vote by City council or Town meeting to opt-in to the Specialized Code.

1.2 Energy code options

The current energy code options in Massachusetts are as follows:

- **Current Base Energy Code** = IECC 2018 with MA amendments
- **Current Stretch Code** = IECC 2018 with MA amendments + Stretch Code amendments

The current Base Energy Code is being updated along with the rest of the BBRS regulated building codes to a 10th edition MA code that will be based on the International Code Council (ICC) 2021 edition. Combined with the Stretch Code update and new Specialized Code contained in DOER's proposed regulations, this results in a tiered set of 3 energy code options for municipalities as follows:

- **Updated Base Energy Code** = IECC 2021 with MA amendments
- **Updated Stretch Code** = IECC 2021 with MA amendments + Stretch Code amendments
- **Specialized Code** = IECC 2021 with MA amendments + Stretch Code amendments + Specialized Code appendices

2. Structure

The updated Stretch Code as newly incorporated into DOER regulations (225 CMR) is divided into 2 chapters, following the format of the IECC.

- A. 225 CMR 22 - Residential Low-rise Construction Stretch Energy Code
- B. 225 CMR 23 - Commercial (and all other) Construction Stretch Energy Code

The Specialized Code includes additional requirements that form an Appendix to each of the chapters of the Stretch Code.

- C. 225 CMR 22 Appendix RC – Residential Low-rise Construction Specialized Code
- D. 225 CMR 23 Appendix CC – Commercial (and all other) Construction Specialized Code

3. Stretch Code Summary

A. 225 CMR Chapter 22: Residential Low-Rise Construction Stretch Code

Code Compliance Pathways

The current Base Energy Code for residential low-rise construction allows 3 different pathways for code compliance. The current Stretch Code requires code compliance through 2 of those pathways:

- A1. Home Energy Rating Scores (HERS) index certification
- A2. Passive house certification

The updated Stretch Code maintains these 2 pathways for compliance, but amends certain requirements in the HERS (Section R406) and Passive house (Section R405)¹ pathways.

A1. HERS Pathway (Section R406)

The updated Stretch Code lowers the maximum allowable HERS ratings to reflect improvements in energy efficiency as shown in Table 1 below.

TABLE 1: CHANGES TO MAXIMUM HERS INDEX (SEE TABLE R406.5)

On-site Clean Energy Application	Maximum HERS Index score (before renewable energy credit)				
	New construction			Alterations, Additions and Change of use	
	Updated Stretch Code July 1, 2024	Updated Stretch Code (Same as base code)	Current Stretch Code	Updated Stretch Code	Current Stretch Code
None (Fossil fuels)	42	52	55	52	65
Solar		55	60	55	70
All-Electric	45	55	60	55	70
Solar & All-Electric		58	65	58	75

¹ Key sections of the Stretch Code and Specialized Code are referenced in parentheses based on their IECC section number. For example: Updated HERS ratings (Section R406).

As shown in Table 1, the current Stretch Code allows a 5-point higher HERS rating for homes using heat pumps for space and water heating compared to homes using fossil fuels (natural gas, propane or heating oil) for space heating.

The updated Stretch Code maintains differential HERS ratings, and after a phase-in period until July 1, 2024 requiring HERS 45 for all-electric homes and HERS 42 for homes with any use of fossil fuels (Section R406.5). The updated Stretch Code is simplified and emphasizes energy efficiency and electrification by dropping the 5 HERS point credit for rooftop solar and 2 HERS point credit for solar thermal in the current Stretch Code.

The updated Stretch Code also updates HERS requirements for alterations, additions and change of use for existing homes. Additional detail on alterations, additions and change of use can be found in A5 below (Section R503.1.5).

A2. Passive House Pathway (Section R405)

Passive House certification is an optional code compliance pathway in the Base Energy Code and the current Stretch Code. The current Base Energy Code and current Stretch Code allow certification through the Passive House Institute US (Phius) Phius+ 2018 standard or the Passive House International (PHI) standard. The updated Base Energy Code and updated Stretch Code will align with the most recent Phius standards, allowing the Phius CORE 2021 standard (efficiency) or the Phius ZERO 2021 standard (efficiency and renewables). The PHI standard remains unchanged as an option.

New Residential Stretch Code Requirements

A3. Energy or heat recovery ventilation (Section R403.6.1)

The updated Stretch Code adds ventilation requirements through either heat recovery or energy recovery to the HERS Pathway. There is no change to the Passive house Pathway because heat or energy recovery is already required.

A4. Wiring for Electric Vehicle (EV) charging (Section R404.4)

The proposed updated Base Energy Code requires at least 1 space per home or a minimum of 10% of spaces in a new multi-family parking lot be provided with electric wiring to allow for future EV charging. The updated Stretch Code requires the same 1 space per home and increases the requirement to a minimum of 20% of spaces in a new multi-family parking lot.

A5. Existing buildings: Alterations, Additions and Changes of use (Section R503.1.5)

The updated Stretch Code clarifies when alterations to existing homes trigger compliance with different requirements. The requirements are as follows:

- Additions over 1,000 square feet (sf) must follow the HERS Pathway and meet the HERS requirements for Additions in Table 1 above. Additions under 1,000 square feet will continue to follow Base Energy Code.

- Additions that exceed 100% of the conditioned floor area of the existing dwelling unit (ie. more than double the size of the house) must follow the HERS Pathway and meet the HERS requirements for Additions in Table 1 above.
- Level 3 Alterations (over 50% of the home is renovated and reconfigured) as defined in the International Existing Building Code (IEBC 2021) must meet the HERS requirements in Table 1 above. Level 1 and Level 2 alterations will continue to follow the Base Energy Code.

B. 225 CMR chapter 23: Commercial (all other) Stretch Code amendments

Code Compliance Pathways

The current Base Code for commercial construction has multiple code compliance pathways from the IECC as well as the ASHRAE 90.1 standard. The current Stretch Code requires a 10% improvement over the ASHRAE 90.1 Appendix G pathway for buildings over 100,000-sf (limit is 40,000-sf for labs, hospitals, supermarkets, refrigerated warehouses and data centers) but allows smaller commercial buildings to choose from the other Base Code IECC pathways.

The updated Stretch Code includes 5 code pathways for new construction. These new requirements will go into effect on the following schedule:

1. All non-residential commercial buildings: any building applying for permit on or after July 1, 2023 subject to updated stretch code provisions
2. Multi-family commercial buildings follow schedule below:

	Updated Stretch Code July 1, 2023 through June 30, 2024	Updated Stretch Code Beginning July 1, 2024
Targeted Performance	Optional	Optional
HERS	Optional HERS 52/55	Optional HERS 42/45
Passive House	Optional	Optional
Relative Performance	Optional	Not allowed

Allowable use of each pathway is based on the type of building, with 4 major categories of buildings:

B1. TEDI Pathway: Offices, residential, and schools over 20,000-sf are required to use a new Thermal Energy Demand Intensity (TEDI) Pathway. The updated Stretch Code sets forth specific TEDI limits by building type. This uses the same energy software tools as the current ASHRAE 90.1 Appendix G pathway but with significantly more focus on heating, cooling and the building envelope. Building uses adjacent to office and residential use, such as post offices, town hall, and other similar buildings are also covered under this pathway.

B2. 10% better than ASHRAE Appendix G: High ventilation buildings such as labs and hospitals can continue to use a 10% better than ASHRAE appendix G pathway or opt to use the TEDI pathway. Multi-family buildings may follow the ASHRAE appendix G pathway until July 1, 2024. The updated Base Code and updated Stretch Code change the underlying ASHRAE standard 90.1 to the more recent 2019 edition.

B3. Prescriptive pathway: Small commercial buildings (any building use except multi-family) under 20,000-sf will be able to continue to comply through an updated prescriptive pathway, or can opt to use the TEDI pathway. The prescriptive pathway is being updated in the Base Energy Code, and the updated Stretch Code includes additional amendments to improve efficiency beyond Base Energy Code for small buildings.

B4. HERS and Passive House: Multi-family buildings larger than those covered by the residential low-rise code can choose between HERS and Passive House pathways that contain the same energy efficiency requirements as the updated Residential low-rise Stretch Code. The Passive House certification options remain available as an option for all building types.

Mixed-use buildings can use a combination of code pathways as appropriate for different portions of the building, or choose a whole-building approach through the TEDI or Passive House pathways.

Additional Commercial energy efficiency requirements:

B5. Efficient electrification (Section C401.4)

The updated Stretch Code mandates partial electrification of space heating for highly ventilated buildings which follow the ASHRAE Appendix G compliance pathway. The updated Stretch Code mandates full electrification of space heating for buildings not following the ASHRAE pathway which choose to utilize the less stringent curtainwall envelope UA² performance option (See B6 below).

B6. Mandatory envelope “Area-weighted U value”² (Section C402.1.5) (btu/hr-sf-F) of an envelope section

The proposed Base Code and updated Stretch Code updates and simplifies the existing mandatory envelope UA provisions that are currently in the MA Base Code and Stretch Code. Mandatory area-weighted U value provisions replace UA provisions and are simplified and strengthened compared to existing provisions for all buildings not using curtain wall. Mandatory area-weighted U value provisions remain at the same stringency as existing provisions for curtain wall buildings. However, buildings which opt for the curtainwall U value limit are required to have full efficient electrification of space heating (see B5 above).

² ‘Area-weighted U value’ designates the average effective insulation level measured by the ‘U’ value across an exterior area ‘A’ of multiple elements (walls, windows, doors, etc).

B7. Air leakage (Section C402.5)

The updated Stretch Code strengthens the air leakage limit compared to the updated Base Energy Code. Code language of this section adopts proposed IECC 2024 language which clarifies requirements.

B8. Thermal bridges (Section C402.7)

Thermal bridge accounting is added to the updated Stretch Code to more accurately represent the insulation performance of a fully constructed wall or building envelope. Prescriptive and tailored accounting approaches are available.

B9. Economizers (Section 403.5)

Economizer requirements (which permit the use of outside air for free night-time cooling) are expanded in the updated Stretch Code compared to the updated Base Energy Code.

B10. Ventilation energy recovery (Section C403.7)

Ventilation energy recovery requirements are strengthened in the updated Stretch Code compared to the updated Base Energy Code. New provisions are also added to better accommodate high ventilation buildings and toxic exhaust requirements.

B11. Wiring for Electric Vehicle (EV) charging (Section C405.13)

The updated Base code requires wiring for future EV charging to 10% of new parking spaces. The updated Stretch Code raises the minimum number of spaces requiring EV wiring to 20% in Group R and B occupancies³, with 10% for all other occupancies. EV charging can be met with either dedicated electric branch circuits, or with an automatic load management service (ALMS) that allows multiple spaces to be served by a higher amperage circuit, thus improving overall charging capacity at a lower installed cost.

B12. Additional efficiency requirement (Section C406)

Section C406 in the base code mandates certain additional efficiency measures, allowing designers to choose from a number of equivalent efficiency options. The updated Stretch Code modifies the existing IECC 2021 language to further incentivize efficient electrification, primarily by removing fossil fuel options from contributing toward the C406 points system.

B13. Existing buildings**Additions (Section C502)**

The updated Stretch Code allows building additions which are less than 20,000-sf to continue to follow Base Energy Code. Additions greater than 20,000-sf will be required to meet applicable Stretch Code requirements for that building type and size.

³ Group R = Residential use, Group B = Business use – as defined in International Building Code (IBC) chapter 3

Alterations (Section C503)

The current Stretch Code requires commercial building alterations to meet Base Energy Code prescriptive requirements because there is no prescriptive commercial pathway in the current Stretch Code. The updated Stretch Code will require commercial building alterations to follow the new Stretch Code prescriptive pathway but allow for 10% reduced envelope requirement for alterations compared to true new construction.

The updated Stretch Code eliminates an existing exception in Base Energy Code which allows exterior walls which have any amount of insulation to remain non-code compliant, even when the alteration scope includes alterations to the exterior walls. The updated Stretch Code will require that any altered walls be brought up to prescriptive stretch code, although historic buildings remain exempt from these provisions.

Change of use Occupancy (Section C503)

The current Stretch Code requires buildings going through change of use or occupancy to meet Base Energy Code prescriptive requirements because there is no prescriptive commercial pathway in the current Stretch Code. The updated Stretch Code will require buildings of any size which undergo change of use or occupancy to follow the new Stretch Code prescriptive pathway, but allows for a 10% reduced envelope requirement for change of use compared to true new construction.

Historic Buildings (R501.6)

The Stretch Code will maintain R501.6 from Base Code: Provisions of this code relating to the construction, repair, alteration, restoration and movement of structures, and change of occupancy shall not be mandatory for historic buildings provided that a report has been submitted to the code official and signed by the owner, a registered design professional, or a representative of the State Historic Preservation Office or the historic preservation authority having jurisdiction, demonstrating that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the building.

4. Specialized Code Summary

Background

4.1 Timeline for Specialized Code adoption

Cities and towns will require an active vote by City council or Town meeting to opt-in to the Specialized Code. The Specialized Code must be available for adoption by December 24, 2022. When a municipality votes to adopt the Specialized Code, DOER recommends that the requirements take effect for new building permit applications beginning on the next January 1st or July 1st, whichever is a minimum of 6 months after the municipal vote. This phase-in period, also utilized by new Stretch Code municipalities, allows an orderly transition for developers, designers and builders as well as additional training time for municipal code officials.

4.2 Designed to achieve Massachusetts GHG emission limits and sub-limits

The Specialized Code is required by statute (*MGL Session Laws of 2021 Chapter 8: Section 31*) to be designed to achieve MA GHG emission limits and sub-limits set every five years from 2025 to 2050. As a result, all compliance pathways under the Specialized Code are designed to ensure new construction that is consistent with a net-zero Massachusetts economy in 2050, primarily through deep energy efficiency, reduced heating loads, and efficient electrification.

Regardless of the on-site renewable potential, the largest emissions impact for many buildings stems from the heating loads and choice of heating fuel for the building. Buildings reliant on fossil fuel combustion equipment have no clear path to zero emissions, while electrically heated buildings do due to the steady increase in renewable and clean energy sources on the ISO-NE electric grid. In drafting the Specialized Code, DOER recognizes that many building construction sites and high-rise building structures do not currently lend themselves to achieving net-zero energy or emissions on-site. For example, urban infill multi-family housing close to transit can greatly assist in achieving a net-zero economy in 2050 while not meeting a net-zero on-site building definition at the building level. Where on-site renewable energy generation is not practical, or is limited relative to the building load and available solar access, there is still potential for siting additional renewable energy in the community, however as renewable sites and procurements become distant from the building site it stretches the feasibility of local building officials to regulate them under the energy code. Accordingly, the Specialized Code requires all new buildings to be designed with electric service and wiring sufficient for future electrification of space and water heating as well as any combustion equipment appliance loads.

4.3 Definition of net-zero building and net-zero building performance standards

The statute stipulates that the specialized code must include both

- a) A definition of net-zero building
- b) net-zero building performance standards

The Specialized Code appendices are a set of **net-zero building performance standards** that adopts a broad **Net-zero Building** definition intended to cover all new buildings in the Specialized Code that is consistent with Executive Office of Energy and Environmental Affairs

2050 Roadmap Study and Buildings Technical Report, which utilized the following definition net zero new construction.

Net Zero new construction is defined as being consistent with the electrification and deep efficiency benchmarks described in the All Options pathway, discussed in the Energy Pathways Report – that is, that the new construction is compatible, as-built, with the Commonwealth’s net-zero emissions economy in 2050. Its focus is on-site emissions; it does not necessitate onsite or offsite renewables, nor the assumption that a building is net-zero energy...These assumptions include enhanced energy efficiency compared to current code and effective elimination of on-site emissions from space heating, domestic hot water, cooking and other process uses. (Buildings Technical Report, p. 39)

Therefore, the Specialized Code adopts a definition of **Net-zero Building** as follows:

A building which is consistent with achievement of MA 2050 net zero emissions, through a combination of highly energy efficient design together with being an all-electric or Zero Energy Building, or where fossil fuels are utilized, a building fully pre-wired for future electrification and that generates solar power on-site from the available Potential Solar Zone Area.

Appendix RC and Appendix CC, which together form the Specialized Code, are Net-zero building performance standards and are summarized in sections C and D below.

C. 225 CMR 22 Appendix RC: Residential low-rise Construction Specialized Code

C1. Requirements by residential building size and fuel.

The Residential low-rise Specialized Code offers 3 pathways to demonstrate energy code compliance with varying sets of additional requirements over and above the updated Stretch code:

- 1. Zero Energy pathway:** (Section RC102)
- 2. All-Electric pathway:** (Section RC103)
- 3. Mixed-Fuel pathway:** (Sections RC104 and RC105)

New homes up to 4,000 sf in size may follow any of the three pathways. New homes over 4,000 sf in size shall follow either pathway 1 or pathway 2. Table 2 below summarizes the low-rise residential Specialized Code requirements by home size and fuel use. All buildings are required to install wiring for electric vehicle (EV) charging in a minimum of 20% of new parking spaces, and one space per home in one and two family homes. Buildings with any combustion equipment designed for fossil fuel use are termed ‘mixed-fuel’ buildings.

TABLE 2: Residential Specialized code requirements summary by building/dwelling unit size

Building Size	Fuel Type	Minimum Efficiency	Electrification	Min. EV wiring	Renewable Generation
Dwelling units up to 4,000 sf	All Electric	HERS 45 or Phius CORE or PHI	Full	1 parking space	Optional
Dwelling units up to 4,000 sf	Mixed-fuel	HERS 42 or Phius CORE or PHI	Pre-wiring	1 parking space	Solar PV (except shaded sites)
Dwelling units > 4,000 sf	All Electric	HERS 45 or Phius CORE or PHI	Full	1 parking space	Optional
Dwelling units > 4,000 sf	Mixed-fuel	HERS 0 or Phius ZERO	Pre-wiring	1 parking space	Solar PV or other renewables
Multi-family >12,000 sf	All Electric	Phius CORE or PHI	Full	20% of spaces	Optional
Multi-family >12,000 sf	Mixed-fuel	Phius CORE or PHI	Pre-wiring	20% of spaces	Optional

C1.2 All Electric building performance standard (Section RC103)

All electric buildings are defined in the updated Stretch Code, and comply with the 2050 net-zero emissions performance standard by meeting the minimum efficiency standards of either HERS 45 or the Passive house pathway and using either air source or ground source heat pumps for primary space heating and heat pump or solar thermal water heating, as well as all electric appliances. All electric buildings are not required to install on-site solar panels but roofs must be solar-ready in accordance with the base and stretch code requirements. This pathway is laid out in Section RC103.

C1.3 Mixed-fuel building performance standard (Sections RC104 & RC105)

C.1.3a Homes and Units less than 4,000-sf

New low-rise buildings using fossil fuels for any on-site use including space heating, water heating, cooking or drying must meet minimum efficiency requirements of HER 42 or the Passive House pathway. In order to demonstrate alignment with the 2050 net-zero emissions mandate, all homes or units using fossil fuels for space heating, water heating, cooking, or drying must install sufficient electrical service, space and wiring to allow for future conversion to all electric buildings.

These mixed-fuel homes and buildings utilizing the HERS pathway are also required to install solar panels that provide no less than 4kw for single family and not less than 0.75 W/ft² for multi-family, to mitigate these near-term emissions, with an exemption for shaded sites. Homes

and buildings utilizing the Passive House pathway are exempt from additional solar install requirements, but must have solar-ready roofs consistent with both the stretch and base code provisions. These requirements are set forth in Sections RC104, and RC105.

C.1.3b Homes and Units greater than 4,000-sf

New low-rise buildings containing one or more dwelling units over 4,000 sf and using fossil fuels for any on-site use including space heating, water heating, cooking, or drying must meet HERS 0 or Phius ZERO requirements described in C1.4 below.

C1.4 Zero Energy Buildings

The Specialized Code also contains a definition of **Zero Energy Building** based on how this term is used in the IECC 2021 in the appendices for both residential and commercial chapters, as follows:

A building which through a combination of highly energy efficient design and onsite renewable energy generation is designed to result in net zero energy consumption over the course of a year as measured in MMBtus or KWh_{eq}, on a site energy basis, excluding energy use for charging vehicles.

This definition is intended to cover exemplary buildings, and building uses for which achieving zero energy on-site is feasible.

C1.4a HERS 0 performance standard (Section RC 102)

For the HERS index pathway, the Specialized Code adopts and modifies the definition of zero energy building published in the IECC 2021 Appendix RC – Residential building Provisions.

Appendix RC uses the HERS rating scale to set a zero energy building at HERS 0 or lower after on-site solar generation is factored in. The required minimum level of energy efficiency without solar in the IECC is currently HERS 47, the Specialized Code adjusts the required minimum energy efficiency level down to HERS 42. The gap between HERS 42 and HERS 0 is made up with renewable energy from on-site power production (OPP) typically with solar panels.

C1.4b Phius ZERO performance standard (Section RC 102)

For the Passive House pathway, the Specialized Code adopts the Phius ZERO building performance standard for zero energy buildings. Phius ZERO certification includes the Phius CORE efficiency requirements while adding a requirement to net out energy use on an annual basis with renewable energy. The Specialized Code excludes contracts for Renewable Energy Credits (RECs) or off-site Renewable Energy Sources which are otherwise allowed under the Phius ZERO certification.

D. 225 CMR 23 Appendix CC: Commercial Construction Specialized Code

D1.1 Energy Efficiency Requirements

The Specialized Code maintains the same energy efficiency requirements as the Updated Stretch Code for all building types except multi-family, including adoption of the ASHRAE 90.1-2019 pathway for high ventilation buildings, TEDI requirements for offices and schools, and a new prescriptive path for small buildings.

Multi-family buildings built to the Commercial Specialized Code must achieve precertification to Passive House standards (either from PHI or Phius). These requirements are phased-in for buildings up to 5 stories required to meet Passive House requirements if applying for permits after January 2023, and taller buildings 6 stories and above required to meet Passive House for permit applications beginning in January 2024.

D1.2. All Electric Building Performance Standard (Section CC104)

This is the simplest compliance pathway under the Specialized Code, requiring the energy efficiency requirements described in D1.1, and requiring that all space heating, water heating, cooking equipment and drying equipment is powered by electricity and meets minimum efficiency standards.

D1.3. Mixed-Fuel Building Performance Standard (Sections CC105 and CC106)

This pathway establishes minimum requirements for new buildings designed with any space heating systems, water heating systems or appliances capable of using fossil fuels such as natural gas, heating oil or propane fuel. While allowing these fossil-fired systems, the Specialized Code requires mitigation of these emissions with the following requirements:

- a) Minimum efficiency requirements for space and water heating, including both fossil fuel and clean biomass boilers and furnaces systems.
- b) Solar development of the available on-site solar potential, specifically through one of 2 options:
 - i. *Not less than 1.5W/ft² for each sq foot of the 3 largest floors (the threshold proposed in solar requirements in the forthcoming IECC2024),*
 - or
 - ii. *not less than 75% of the Potential Solar Zone Area*
- c) Pre-wiring and electrical service provision to the building to allow for future electrification of space and water heating and cooking and drying equipment.

D1.4 Zero Energy Building Performance Standard (Section CC103)

This is the most stringent of the 3 pathways in that it requires net zero energy on an annual basis from the 1st year of construction. The Specialized Code amends the IECC commercial appendix CC: Zero Energy Commercial Building Provisions by simplifying the allowable renewable options. As a result, zero energy may be demonstrated only with on-site generation (typically

solar PV), and all buildings must meet minimum energy efficiency requirements prior to renewable offsets.

The option to show compliance using HERS 0 or Plius ZERO certification as used in the low-rise residential Specialized Code is also eligible under the Zero Energy pathway for multi-family residential buildings.



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The new Stretch and Specialized Stretch Code 12/6/2022



Stretch Code History

2009 **Stretch Code Created**

Under Board of Building Regulations and Standards (BBRS)
Provides 20-35% greater efficiency over Base Code

2010 **Watertown becomes a Green Community, adopts the Stretch Code**

2021 **Act Creating a Next Generation Roadmap for Massachusetts Climate Policy**

Established Department of Energy Resources (DOER) as Stretch Code authority
Called for Opt-in Net Zero Stretch Code

2022 **Watertown Enacts the Climate and Energy Action Plan**

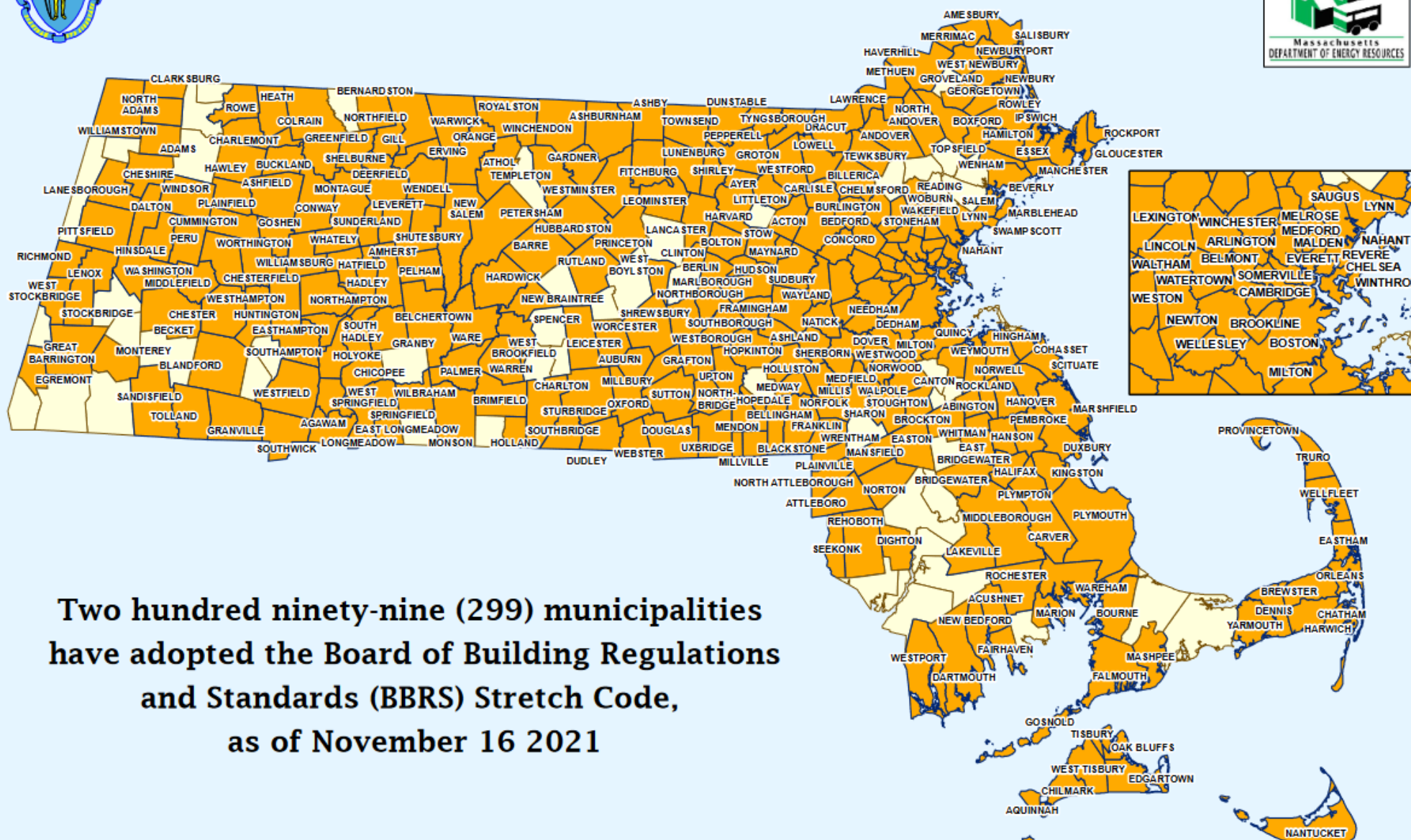
2022 **Act Creating the Massachusetts Clean Energy and Climate Plan**

Defines what Net Zero Economy looks like in 2050

2022 **DOER completes the Latest New Stretch Code and Specialized Stretch Code**



Stretch Code Adoption, by Community





Building Code Pathways for 2023

Base Code

- New and modified construction in cities and towns that have not adopted the Stretch Code
- 52 Communities
- BBRS update effective in 2023

New Stretch Code

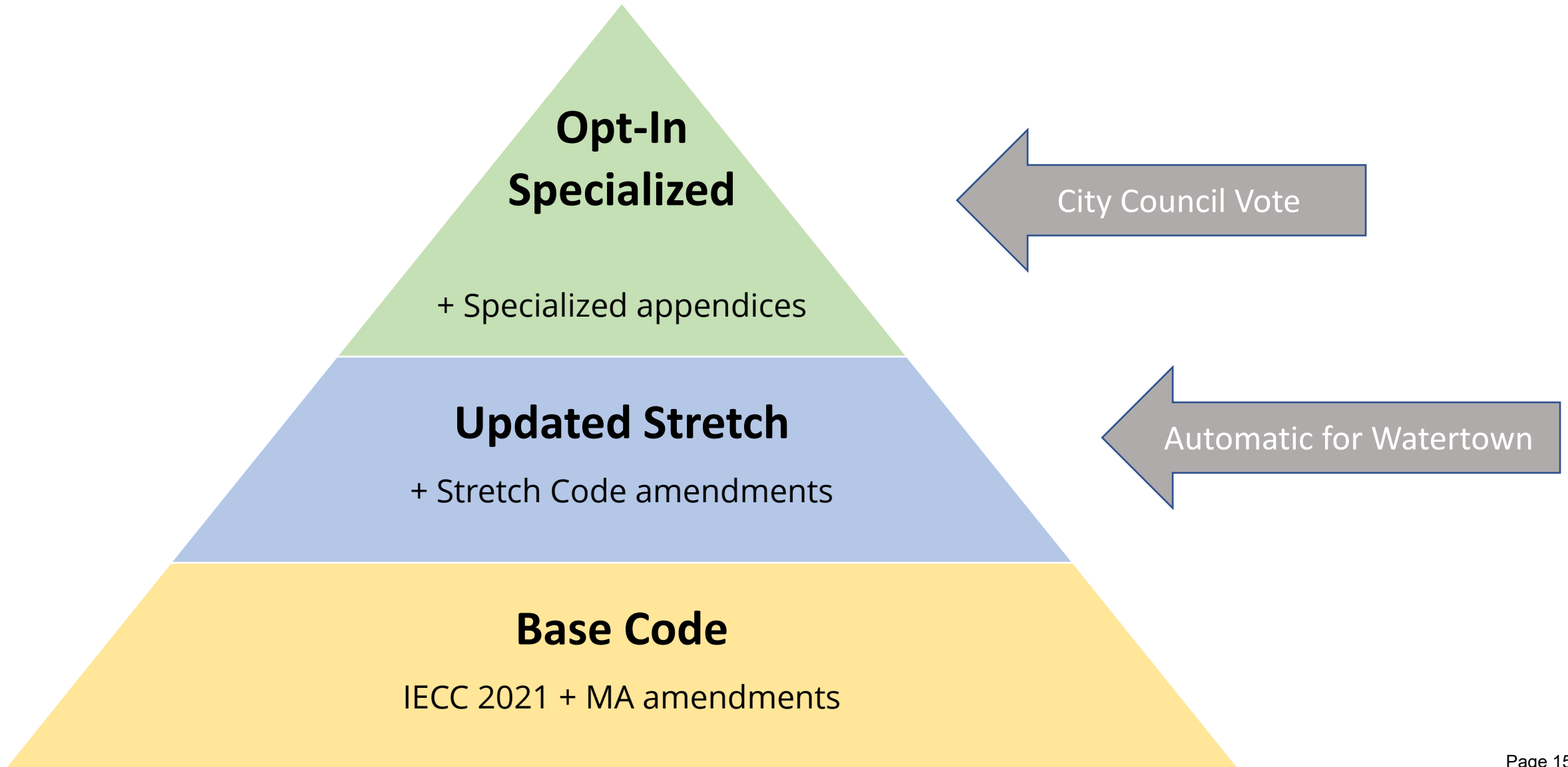
- New and modified construction in cities and towns that have adopted the Stretch Code
- 299 Communities
- DOER Update Phase in 2023 Effective 2024

New Specialized Opt-In

- New construction in cities or towns that choose to opt into Specialized Stretch Code
- Available in December 2022



How the Code Pathways Stack





What is the Specialized Stretch Code

“The Specialized Stretch Code ensures that new construction is consistent with a net-zero Massachusetts economy in 2050, primarily through deep energy efficiency, reduced heating loads, and efficient electrification.”

It accomplishes this by codifying new building construction as net zero buildings.

“A net zero building is consistent with achievement of MA 2050 net zero emissions, through a combination of highly energy efficient design together with being an all-electric or Zero Energy Building, or where fossil fuels are utilized, a building fully pre-wired for future electrification and that generates solar power on-site from the available Potential Solar Zone Area.”

Why



The Watertown Climate & Energy Action Plan section BE2.1: Adopt the State’s Net Zero Stretch Code as soon as permissible.

“We will be looking for continued improvement towards a truly net zero code in the coming years, informed by the upcoming pilot that will enable 10 communities to ban fossil fuels. At this time, we encourage the cities and towns in our region and across the Commonwealth to adopt the new Specialized Code as soon as possible,” says Julie Curti, Director for Clean Energy at MAPC.



How would adoption of the Specialized Stretch Code Effect Watertown?

Puts Watertown on the net-zero energy building path

Incorporates some of Watertown's lead by example ordinances / guidelines into the building code:

Solar Ordinance

- Will require solar on almost all mixed fuel residential units and small commercial buildings

LEED Silver Ordinance

- LEED is based off of ASHRAE 90.1–2016 and the Specialized Stretch is moving to ASHRAE 90.1–2019

Watertown EV Charger Guidelines

- Will enhance the city ordinance by requiring more EV chargers



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WATERTOWN
MASSACHUSETTS

Thank You

Questions





Comparison of updated Stretch Code and Opt-In Specialized Stretch Code - Residential

Building Size	Fuel Type	Minimum Efficiency		Electrification		Min EV Wiring	Renewable Generation	
		Stretch Code	Specialized Opt-in Code	Stretch Code	Specialized Opt-In Code		Stretch Code	Specialized Opt-in Code
Dwelling <= 4,000 sf	All-electric	HERS 45* or Passive House	HERS 45* or Passive House	Full	Full	1 parking space	Optional	Optional
Dwellings <= 4,000 sf	Mixed-fuels	HERS 42* or Passive House	HERS 42* or Passive House	Optional	Pre-wiring Required	1 parking space	Optional	Solar PV > 4kW for single family and > 0.75 W/sf for multi-family
Dwellings > 4,000 sf	All-electric	HERS 45* or Passive House	HERS 45* or Passive House	Full	Full	1 parking space	Optional	Optional
Dwellings > 4,000 sf	Mixed-fuels	HERS 42* or Passive House	HERS 0 or Phius ZERO	Optional	Pre-wiring Required	1 parking space	Optional	Solar PV or other renewable to meet Zero Energy Building



Comparison of updated Stretch Code and Opt-In Specialized Stretch Code – Commercial pg 1

Building Type	Fuel Type	Minimum Efficiency		Electrification		Minimum EV Wiring	Renewable Generation	
		Stretch Code	Specialized Opt-in Code	Stretch Code	Specialized Opt-In Code		Stretch Code	Specialized Opt-in Code
Offices and Schools >20,000 sf	All-electric	TEDI or Passive House	TEDI or Passive House	Full	Full	20% for business, 10% for other	Optional	Optional
Offices and Schools > 20,000 sf	Mixed-fuels	TEDI or Passive House	TEDI or Passive House	Optional [◊]	Pre wiring required	20% for business, 10% for other	Optional	On-site PV: Min of 1.5 W/sf for each sf of the 3 largest floors or 75% of potential solar
High Ventilation (Hospitals, Labs, etc.)	All-electric	TEDI, 10% better than 2019 ASHRAE Appendix G, or Passive House	TEDI, 10% better than 2019 ASHRAE Appendix G, of Passive House	Full	Full	20% for business, 10% for other	Optional	Optional
High Ventilation (Hospitals, Labs, etc.)	Mixed-fuels	TEDI, 10% better than 2019 ASHRAE Appendix G, or Passive House	TEDI, 10% better than 2019 ASHRAE Appendix G, of Passive House	Optional ^{‡◊}	Pre wiring required	20% for business, 10% for other	Optional	On-site PV: Min of 1.5 W/sf for each sf of the 3 largest floors or 75% of potential solar



Comparison of updated Stretch Code and Opt-In Specialized Stretch Code – Commercial pg 2

Building Type	Fuel Type	Minimum Efficiency		Electrification		Minimum EV Wiring	Renewable Generation	
		Stretch Code	Specialized Opt-in Code	Stretch Code	Specialized Opt-In Code		Stretch Code	Specialized Opt-in Code
Multi-family >12,000 sf	All-electric	TEDI, HERS 45*, Passive House, or (before 7/1/2024) 10% better than ASHRAE appendix G	Passive House or HERS 0 ^s	Full	Full	20% of parking spaces	Optional	Optional
Multi-family >12,000 sf	Mixed-fuels	TEDI, HERS 42*, Passive House, or (before 7/1/2024) 10% better than ASHRAE appendix G	Passive House or HERS 0 ^s	Optional ^o	Pre wiring required	20% of parking spaces	Optional	Optional
Small Commercaill (<20,000 sf)	All-electric	Perscriptive pathway plus Stretch Code ammendments	Perscriptive pathway plus Stretch Code ammendments	Full	Full	20% for residential and business uses, 10% for other uses	Optional	Optional
Small Commercial (<20,000 sf)	Mixed-fuels	Perscriptive pathway plus Stretch Code ammendments	Perscriptive pathway plus Stretch Code ammendments	Optional ^o	Pre wiring required	20% of spaces for residential and business uses, 10% for other uses	Optional	On-site PV: Min of 1.5 W/sf for each sf of the 3 largest floors or 75% of potential solar area



Definitions

TEDI

Thermal Energy Demand Intensity - only considers heating / cooling loads. Not lighting, plug loads, etc

Net Zero Building

A building which is consistent with achievement of MA 2050 net zero emissions, through a combination of highly energy efficient design together with being an all-electric or a Zero Energy Building, or where fossil fuels are utilized, a building fully pre-wired for future electrification and that generates solar power on-site from the available Potential Solar Zone Area.

Zero Energy Building

A building which through a combination of highly energy efficiency design and onsite renewable energy generation is designed to result in net zero energy consumption over the course of a year as measured in MMBtus or KWheq, on a site energy basis, excluding energy use for charging vehicles.

HERS

A Home Energy Rating is an estimated measurement of a home's energy efficiency based on normalized modified end-use loads. Similar to TEDI but for Homes

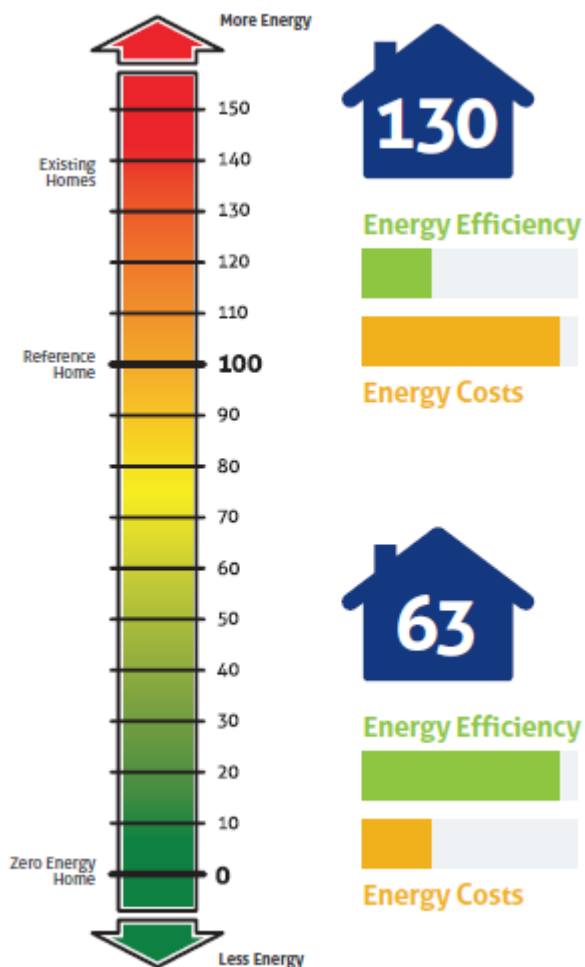
Passive House

A standard for energy efficiency in a building, which reduces the building's ecological footprint. It results in ultra-low energy buildings that require little energy for space heating or cooling.



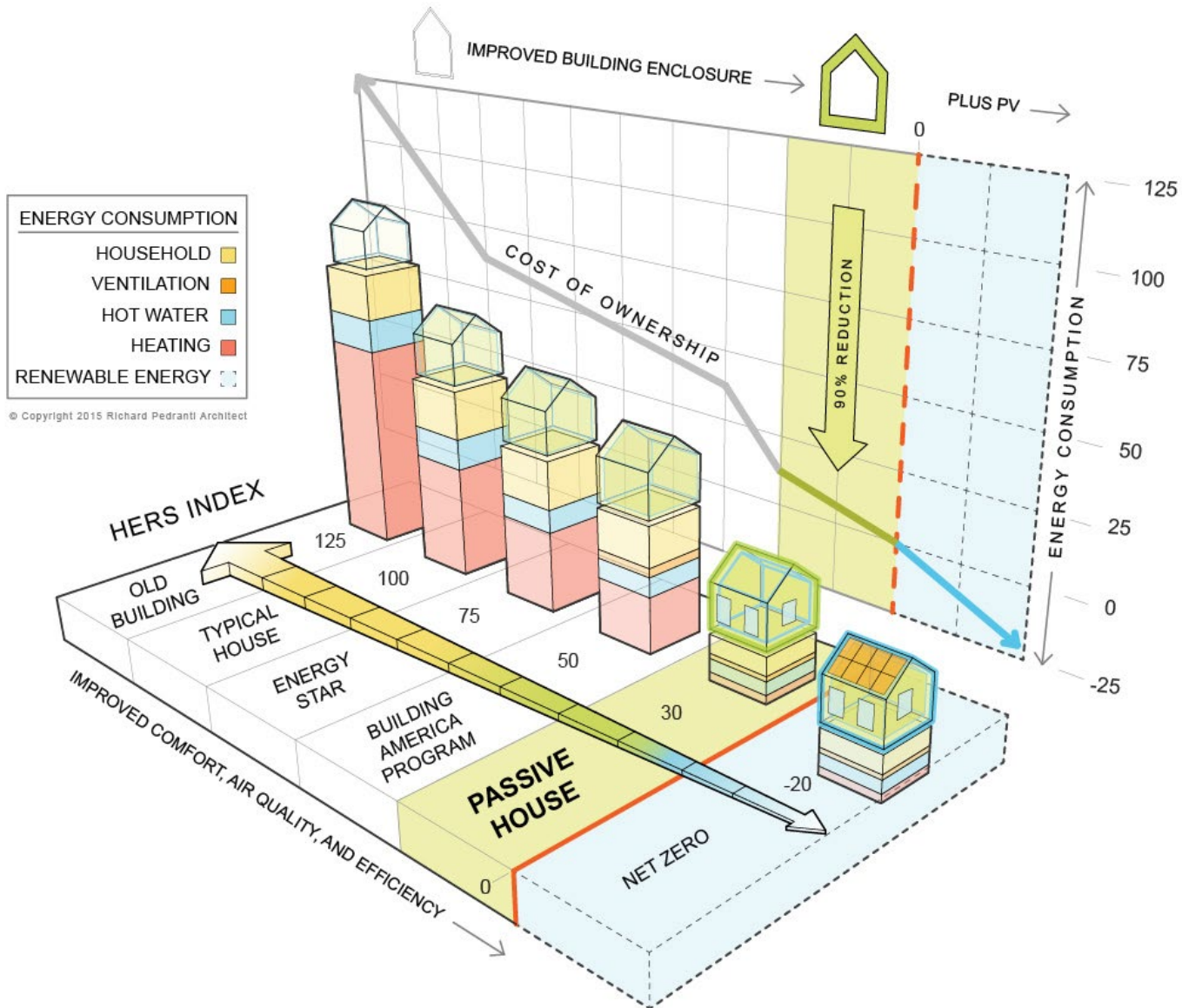
Rating Systems

HERS Rating



	Maximum HERS Index score (before renewable energy credit)					
	New construction			Alterations, Additions and Change of use		
	On-site Clean Energy Application	Updated Stretch Code July 1, 2024	Updated Stretch Code (Same as base code)	Current Stretch Code	Updated Stretch Code	Current Stretch Code
None (Fossil fuels)	42		52	55	52	65
Solar			55	60	55	70
All-Electric	45		55	60	55	70
Solar & All Electric			58	65	58	75

Rating System Comparison



For EDP update on the Opt-in Specialized Stretch Code

Silas Fyler <silas.fyler@watertown.k12.ma.us>

Sat 12/31/2022 8:18 AM

To: Piccirilli, Vincent J <vpiccirilli@watertown-ma.gov>; Gannon, John <jgannon@watertown-ma.gov>; Feltner, Lisa <lfeltner@watertown-ma.gov>

Cc: Lewis, Ed <Edward.lewis@watertown.k12.ma.us>; James Kane <james.kane@watertown.k12.ma.us>; Magoon, Steve <smagoon@watertown-ma.gov>

For EDP Members,

Below are the links for the submitted new Stretch Energy Code and the new Opt-in Specialized Stretch Code. It is not the official version as that can only be bought from the state house.

[225 CMR 23: Massachusetts front-end amendments to the International Energy Conservation Code 2021 Massachusetts Stretch energy code -- 2023 commercial amendments to IECC2021](#)

[225 CMR 22: Massachusetts Stretch code and specialized code for low-rise residential -- 2023 residential low-rise amendments to IECC2021 and IRC 2021 chapter 11: energy efficiency](#)

I have heard there were no significant changes made from the draft version that was presented at the Dec 6th 2022 meeting and the final recorded versions. In my own comparison of the Opt-in Specialized Stretch code sections between the versions previously given to the committee and ones linked above, there were some formatting changes and a small number of clarifications. Specifically:

- 1) In CMR 22 Residential appendix RC there were a number of wording clarification changes from "Energy Rating Index (ERI)" to "HERS".
 - 2) In CMR 23 Commercial appendix CC there was a clarification for Multi-Family residential buildings less than 12,000 sqft that these should fall under CMR 22 Residential appendix RC.
- I do not believe these clarifications are significant changes made from the draft version as presented at the 12/6/22 meeting.

DOER has also released [sample wording](#) for cities and towns to pass the specialized stretch code.

Should the City Council on January 10th vote to adopt the Specialized Stretch Code, and follow the DOER's recommended 6 months, it would go into effect on July 10th, 2023. From a pragmatic viewpoint the calendar is in our favor. July 1st falls on a Saturday, the 4th (holiday) is on a Tuesday and the 10th the next Monday. Thus, enacting the Specialized Stretch Code on July 10th means only four business days will lapse from July 1st when the updated Stretch Code automatically changes. Both Ed Lewis and myself do not believe the

four days during one of the busiest vacation weeks of the year presents a significant concern for developers and architects in Mass. that anticipate building code updates to happen on July 1st.

Thanks for moving this forward.

Silas Fyler
Energy Manager
Department of Public Buildings
Watertown, MA

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Offered by Councilor Ed Flynn, Ruthzee Louijeune, Julia Mejia Arroyo, Bok, Coletta, Fernandes Anderson, Flaherty, Lara, Murphy and Breadon

CITY OF BOSTON

AN ORDINANCE AMENDING THE CITY OF BOSTON CODE RELATED TO CLOSED CAPTIONING ON PUBLIC FACING TELEVISIONS

Be it ordained by the City Council of Boston, as follows:

WHEREAS: The lack of communication access to the audio content on TVs in public places has always existed as a barrier for individuals with certain disabilities; and

WHEREAS: During the COVID-19 pandemic TV programming played a critical role in conveying information from public health experts and government officials to the public during the state of emergency; and

WHEREAS: This new necessity of watching/listening to TV during the COVID-19 pandemic to receive critical public health information and guidance highlighted the striking inequity that exists in communication access for those in the disability community and beyond who have no access to audible TV content when they are in public places; and

WHEREAS: TVs audible content has not been accessible to persons with these types of disabilities: Deaf/deaf, Hard of Hearing, hearing loss due to age or illness, developmental disabilities, sensory disabilities, non-native English speakers, and others; and

WHEREAS: When businesses enable the “open captions” function on their TVs, a live transcript of the program’s audio content is shown scrolling across the bottom of the screen; and

WHEREAS: Visible captions would eliminate a significant communication barrier for people with hearing loss and other disabilities by providing access to the information being given by speakers on TV programming in all of Boston’s public places; and

WHEREAS: Visible captions would also increase access to information for the general public, because TVs are often located in crowded and noisy commercial spaces where everybody may have difficulty hearing;

NOW THEREFORE,

Be it Ordained by the City Council of Boston as follows:

City of Boston Code Chapter 12 subsection 4 is hereby amended by adding at the end thereof, the following new sections and subsections.

12-4.10 Closed Captioning Activation

a. *Purpose.* The purpose of this ordinance is to expand accessible communication in places of public accommodation.

b. *Definitions*

When used in this section, unless the context otherwise requires, the following terms shall have the following meanings:

1. “Closed captioning” means a transcript or dialog of the audio portion of a television program that is displayed on the bottom portion of a television receiver screen when the user activates the feature.
2. “Closed captioning television receiver” means a receiver of television programming that has the ability to display closed captioning, including but not limited to a television, digital set top box, and other technology capable of displaying closed captioning for television programming.
3. “Public area” means any part of a public facility that is open to the general public.
4. “Public facility” shall have the same meaning as “public accommodation and service”, as defined in CBC 12-9.2.
5. “Public entertainment venue” means a place that is open to the public for mass gathering for entertainment, regardless of whether or not a ticket or payment of any type is required for admission. The term includes, but is not limited to, cinemas, theaters, concert halls, sports centers, and festivals.
6. “Regular hours” means the hours of any day in which a Public Facility is generally open to members of the general public.

c. *Activating Closed Captioning*

1. Any person owning or managing a public facility in the City of Boston must activate closed captioning on closed captioned television receivers in use in any public area during regular hours.

2. Exception. -- This section does not require public entertainment venues to activate closed captioning on closed captioned television receivers.
3. This section does not require a public facility to make closed captioning available in a public area of the public facility if:
 - (a) no television receiver of any kind is available in the public area; or
 - (b) the only public television receiver available in the public area is not a closed-captioning television receiver.
4. Nothing in this ordinance shall be construed to imply an exemption from state and federal requirements, such as those for effective communication and reasonable accommodations required under the Americans with Disabilities Act.

d. Enforcement

1. If a violation of Section 12-4.10 occurs, individuals can file a complaint with the Mayor's Commission for Persons with Disabilities ('Disabilities Commission').
2. The Disabilities Commission shall have the authority to investigate complaints brought before it, including but not limited to conducting unscheduled inspections of public facilities, holding mediation sessions with public facilities and other interested parties, and providing guidance for bringing public facilities into compliance.

Filed in Council: November 9th, 2022



BOSTON CITY COUNCIL

Committee on Government Operations
Ricardo Arroyo, Chair

One City Hall Square ♦ 5th Floor ♦ Boston, MA 02201 ♦ Phone: (617) 635-3040 ♦ Fax: (617) 635-4203

REPORT OF COMMITTEE CHAIR

December 7, 2022

Dear Councilors:

Docket #1392, An Ordinance amending the City of Boston Code Related to Closed Captioning on Public Facing Televisions, was referred to Committee on November 9, 2022, and sponsored by Councilors Ed Flynn, Ruthzee Louijeune, and Julia Mejia. The Committee held a working session on December 2, 2022.

Summary of Legislation As Filed:

Docket #1392 would amend the City of Boston Code of Ordinances, by adding new sections and subsections regarding closed captioning activation. The purpose of the ordinance is to expand accessible communication in places of public accommodation. The ordinance requires public facilities in Boston to activate closed captioning on closed captioned television receivers in public areas during regular business hours. The ordinance does not apply to public entertainment venues. The Mayor's Commission for Person with Disabilities ("Disabilities Commission") has jurisdiction over this ordinance and the authority to investigate complaints of noncompliance. For purposes of this ordinance, "public area" is defined as any part of a public facility that is open to the public. "Public facility" has the same meaning as "public accommodation and service" as defined in CBC 12-9.2. "Public accommodation and service" shall mean any place, business, facility or other establishment of whatever kind, or agency, whether owned privately or by a public agency which caters or offers services, facilities or goods to or is intended for the use or convenience of the general public whether for a charge or fee or not. This ordinance does not provide exemptions from state or federal requirements such as effective communication and reasonable accommodations under the Americans with Disabilities Act.

Information Gathered at the December 2, 2022 Working Session:

The Chair convened the working session, provided opening remarks and summarized the legislation. Councilors provided opening remarks. Councilor Flynn stated that he filed this legislation in partnership with the Disabilities Commission in order to expand access to public facing TVs. Councilor Flynn explained that TVs have an important role in conveying critical information to the public such as breaking news, public health announcements, weather alerts and that enabling closed captioning functions will eliminate barriers to accessing information. Councilor Flynn stated that it is a civil rights issue and that the ordinance allows a complaint to be filed but not a fine. Councilor Louijeune stated that this ordinance will make spaces more inclusive.

The Committee was joined by the following individuals: Commissioner Kristen McCosh, Mayor's Commission for Persons with Disabilities, ADA Title II Coordinator; Wes Ireland, Chair, Disabilities Commission; Carl Richardson, Treasurer, Disabilities Commission and Disability Advisory Committee for the Federal Communications Commission which oversees federal regulations around captions; Darian Gambrell, Deaf Inc. Executive Director; and Cat Dvar, Director of Communication Access Services, Massachusetts Commission for the Deaf & Hard of Hearing. Mr. Richardson expressed his support of the ordinance and explained that it does not place an undue burden on businesses to increase access as it only requires the push of a button. Mr. Richardson also discussed FCC mandates.

The Committee reviewed the language of the ordinance section by section. The Committee discussed the purpose section and the definition section. Ms. Dvar inquired about the size and color contrast when activating closed captioning as that can also be an issue. Mr. Richardson explained that federal rules have been updated so that all newer TVs have the ability to display captions. Mr. Richardson stated that requiring color contrast may be an undue burden to enforce because not all TVs have that ability. Commissioner McCosh explained that the intent of the ordinance is not to make it onerous for small businesses to comply so that is why there is no language requiring that new TVs be purchased.

Councilor Louijeune inquired about the exclusion of entertainment venues and whether that defeated the purpose of the ordinance. Councilor Mejia inquired about diverse languages for closed captioning. Mr. Richardson inquired about the inclusion of cinemas in public entertainment venues because movies are required to have the ability to display captions under the rules of the Department of Justice. Mr. Richardson wanted to point out that the ordinance would not exempt the cinemas from other state and federal requirements. The Committee discussed that there is language in the ordinance that does not exempt facilities from state or federal requirements.

Commissioner McCosh explained the intent for leaving out larger entertainment venues and concert halls. Commissioner McCosh explained that the focus of the ordinance is on TVs. Commissioner McCosh explained that they did not want to include big venue centers in this ordinance because people have the ability to request other accommodations and the larger venues are subject to state and federal laws. Commissioner McCosh explained that the Disabilities Commission works with the Office of Language Access and Communications and that availability of other languages is on their radar and that they will work with businesses that may want to provide captioning in different languages. Mr. Richardson explained that the capability is there but that broadcasters do not have to provide closed captioning in other languages and it is done on a volunteer basis.

The Chair inquired about the enforcement section and asked if there was a plan for outreach. Commissioner McCosh explained that the focus is on voluntary compliance and that the Disabilities Commission is working on developing a toolkit to assist businesses with compliance. Ms. Dvar asked about standing for complaints. Commissioner McCosh explained that for purposes of this ordinance anyone can file a complaint but a legal complaint would be referred to MCAD. Councilor Mejia asked about fees or fines regarding enforcement. Commissioner McCosh explained that the Disabilities Commission will work with the Licensing Board but did not include fees or fines in the ordinance because the Disabilities Commission did not want to place additional burdens on businesses. Commissioner McCosh stated that Disabilities

Commission's objective is compliance of the ordinance through a collaborative effort with businesses and that it will be rolled out through partnering with businesses.

Rationale and Recommended Action:

Passage of this docket will increase accessibility to information for individuals with disabilities. The ordinance expands accessibility and participation to individuals with disabilities in public spaces and on public facing TVs. The provisions of this ordinance can be accomplished without imposing an undue burden on businesses.

By the Chair of the Committee on Government Operations, to which the following was referred:

Docket #1392, An Ordinance amending the City of Boston Code Related to Closed Captioning on Public Facing Televisions,

submits a report recommending that this docket ought to pass.

For the Chair:

A handwritten signature in blue ink, appearing to read "Ra", followed by a horizontal line.

Ricardo Arroyo, Chair
Committee on Government Operations



George J. Proakis
City Manager

CITY OF
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Office of the City Manager

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149 Main Street
Watertown, MA 02472
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To: Honorable City Council

From: George J. Proakis, City Manager

Date: January 6, 2023

RE: Deputy City Manager

Attached please find a Press Release regarding the Deputy City Manager.

I will bring this up under Communications from the City Manager at the January 10, 2023 City Council Meeting.

cc: Department Heads



George J. Proakis
City Manager

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PRESS RELEASE

FOR IMMEDIATE RELEASE

Date: January 6, 2023

City Manager George J. Proakis is pleased to announce the appointment of Ms. Emily Monea as Watertown's new Deputy City Manager.

Ms. Monea has most recently served as Acting Chief of Staff to Mayor Luengo-Koehn for the City of Medford, supporting the Mayor in daily leadership and management of the City, focusing on HR modernization, recruiting, complex employee matters, and labor relations.

Prior to that she was the Chief of Staff to Mayor Curtatone for the City of Somerville and later became the Transitional Director of the Mayor's Office of Innovation and Analytics (SomerStat) supporting the transition of Mayor Ballantyne into office. While serving as the chief administrative officer for a city employing over 1,000 employees and serving over 80,000 residents in four square miles, Ms. Monea managed day-to-day operations while leading medium- and long-term strategic planning and organizational change. Ms. Monea partnered with senior staff to effectuate the Mayor's legislative and policy agenda; to develop accompanying strategies for City Council and community engagement; and to align financial, legal, HR, and operational strategies, including oversight of the City's \$270+ million operating budget.

Ms. Monea has nearly a decade of experience working for a fast-paced, progressive municipality with over five years of which were in high-ranking management and leadership roles. Ms. Monea has a deep understanding of and respect for the work of municipal government. Most importantly, she learned how to effectuate successful and durable change. Ms. Monea guided and implemented significant organizational restructuring, advocated for and launching new departments; implemented new human resources policies and protocols; oversaw the annual operating budget; revamped the City of Somerville's approach to capital and infrastructure planning; served as an integral member of the team leading the City's expansive response to the COVID-19 public health emergency and oversaw the unprecedented reassignment of staff to support these efforts. Fundamental to Ms. Monea's success in these endeavors were her ability to develop deep and trusting professional relationships, build coalitions of diverse perspectives, and structure deliberative decision-making processes to strengthen organizational efficacy.

Ms. Monea holds a Master in Public Policy from the Kennedy School of Government at Harvard University and a Master of Arts & Bachelor of Arts in Economics, Boston University.

City Manager Proakis stated he is very excited to hire Ms. Monea. “Emily brings a breadth of experience on similar issues and opportunities that confront the City of Watertown. She has a proven track record in local government and values active listening and respectful dialogue.”

Ms. Monea will begin her employment with the City of Watertown on January 17th.

####



George J. Proakis
City Manager

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To: Honorable City Council

From: George J. Proakis, City Manager

Date: January 5, 2023

RE: Classification and Compensation Study

At the Fiscal Year 2024 Preliminary Budget Overview presented on October 11, 2022, one of the strategic priorities I discuss was building an effective organization strategy which includes a thorough review of the City's current classification and compensation plan for approximately 150 positions. The goal is to have a clearly defined compensation plan that will allow for efficient and effective classification processes, offer fair and competitive wages, comply with state and federal laws and confirm to accepted practices, and ensures the recruitment and retention of qualified workers.

As a follow-up to the above, I am pleased to announce GovHR has been hired to do the classification and compensation study. I will bring this up under Communications from the City Manager at the January 10, 2023 City Council Meeting.

cc: Steven Magoon, Acting Deputy City Manager/CD&P Director
Mark R. Reich, Esquire, KP Law



George J. Proakis
City Manager

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To: Honorable City Council
From: George J. Proakis, City Manager
Date: January 5, 2023
RE: Personnel Department Assessment Review

In accordance with Honorable City Council Fiscal Year 2023 Budget Policy Guideline IIG; and as discussed at the Fiscal Year 2024 Preliminary Budget Overview presented on October 11, 2022, one of the strategic priorities I discussed was building an effective organization strategy which includes hiring a professional consultant to assist with strategic municipal organizational design and assessment of the City's Personnel Department functions and processes to strengthen the way the City provides services. The goal of this engagement is to identify opportunities for improved efficiency and effectiveness of organization structure, operations, staffing, technology, processes and policies.

As a follow-up to the above, I am pleased to announce Raftelis has been hired to do the Personnel Department assessment review. I will bring this up under Communications from the City Manager at the January 10, 2023 City Council Meeting.

cc: Steven Magoon, Acting Deputy City Manager/CD&P Director
Mark R. Reich, Esquire, KP Law



George J. Proakis
City Manager

CITY OF
WATERTOWN
Office of the City Manager

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6465
www.watertown-ma.gov
citymgr@watertown-ma.gov

To: Honorable City Council
From: George J. Proakis, City Manager
Date: January 5, 2023
RE: Residents' Advisory Committee

Attached please find a Press Release regarding the Residents' Advisory Committee.

I will bring this up under Communications from the City Manager at the January 10, 2023 City Council Meeting.

cc: Department Heads



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PRESS RELEASE

City Manager announces his appointments to the Residents' Advisory Committee

December 29, 2022

City Manager George J. Proakis is pleased to announce the establishment of Watertown's first Residents' Advisory Committee. The Residents' Advisory Committee, as required by Section 3-7 of the new city charter, is designed to "assist with recruitment, evaluation and selection of candidates for appointment to multi-member bodies." As noted in the charter, the committee and the City Manager will work together to "actively encourage a diverse pool of applicants for (these) multiple-member bodies."

The City Manager has formed a five-member committee to serve in this role. He has appointed the following individuals to this committee. All members of the committee are residents of Watertown:

- J. Elizabeth Cremens: Ms. Cremens is a retired Associate Justice of the Massachusetts District Court. Ms. Cremens has served in a number of volunteer roles in non-profits and local government. She has served as president of the board of Medford's Community Housing, Inc., which provided housing services for low-income families, and was a member of Medford's Human Rights Commission from 2000-2010. She is currently a tutor for Watertown Project Literacy and a member of the Girl Scouts of Eastern Massachusetts Woman's Advisory Committee.
- Kathryn J. Madden: Ms. Madden is the founder and principle of Madden Planning Group, which has worked with cities and institutions to shape their future development for over 25 years. She has focused her efforts on including underrepresented populations in planning projects, as well as working with elected public official, industry, and civic leaders. Ms. Madden also teaches courses in community development and environmental planning at Clark University and previously taught at Harvard's Graduate School of Design.
- Sam Ling, Ph.D.: Dr. Ling is an Associate Professor in the Department of Psychological and Brain Sciences at Boston University. In addition to his academic expertise in the human brain and visual system, Dr. Ling has extensive administrative and service experience at the university level, including serving on numerous task forces and working with large teams to develop strategic plans.
- Theophilus Offei: Mr. Offei has served as a manager, founder and CEO of technology companies, and currently works for Shoobx, Inc, managing accounts for startup companies. Mr. Offei was born in Ghana and raised in Italy. He speaks Italian and Spanish.
- Thomas J. Tracy: Mr. Tracy, a lifelong resident of Watertown, has recently retired from a career in public service. He has served the City of Watertown for the past 29 years, as its City Auditor/Assistant City Manager, and served as the Acting City Manager from January until August of 2022. Mr. Tracy is a Member of the School Building Committee, and a member of the Watertown Contributory Retirement Board.

The first meeting of the newly formed committee will be held in mid-January 2023.



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To: Honorable City Council
From: George J. Proakis, City Manager
Date: January 5, 2023
RE: Moxley Park Court Improvements Project

Attached please find correspondence from Glenn Howard, RLA, PMP, Project Manager, CDM Smith regarding Moxley Park Court Improvements Project – Request for Authorization to Bid. This project was originally in the Fiscal Year 2016 Capital Improvement Plan.

To move forward with this important project, it is my intention to authorize the bid process and once the bids are received and vetted, we will return to the Honorable City Council for a bond authorization.

I will bring this up under Communications from the City Manager at the Tuesday, January 10, 2023, City Council Meeting.

cc: Thomas J. Tracy, City Auditor/Assistant City Manager for Finance
Steven Magoon, Acting Deputy City Manager/CD&P Director
Peter Centola, Recreation Director
Brian Wyncoop, Purchasing Agent
Mark R. Reich, Esquire, KP Law



Memorandum

To: Mr. George Proakis
City Manager, Watertown, MA

From: Glenn Howard, RLA, PMP, *GH*
Project Manager, CDM Smith Inc.

Date: January 4, 2023

Subject: Moxley Park Court Improvements Project
Request for Authorization to Bid

Dear Mr. Proakis,

We are requesting authorization to bid the Moxley Park Court Improvements Project. 90% bid documents were submitted to the Departments of Recreation, Public Works and Community Development and Planning on December 14th, 2022.

Over the next two weeks we will be incorporating any final comments and if authorized we will work with the purchasing agent to select the date that bid documents will be available for contractors and develop an advertisement to bid.

The general improvements of the project include:

- Prefabricated Multi-Purpose Rink
- Basketball Court
- Tennis Court
- 4 pole court lighting system
- Retaining Wall
- Gates and fencing improvements

Our Opinion of Probable Construction Costs for the project is: \$1,400,000

Estimated Construction Administration Costs for the project is: \$65,000

Estimated Total Project Cost: \$1,465,000

We anticipate a construction period of 4 months – 5 months from the date the Contractor is authorized to proceed.

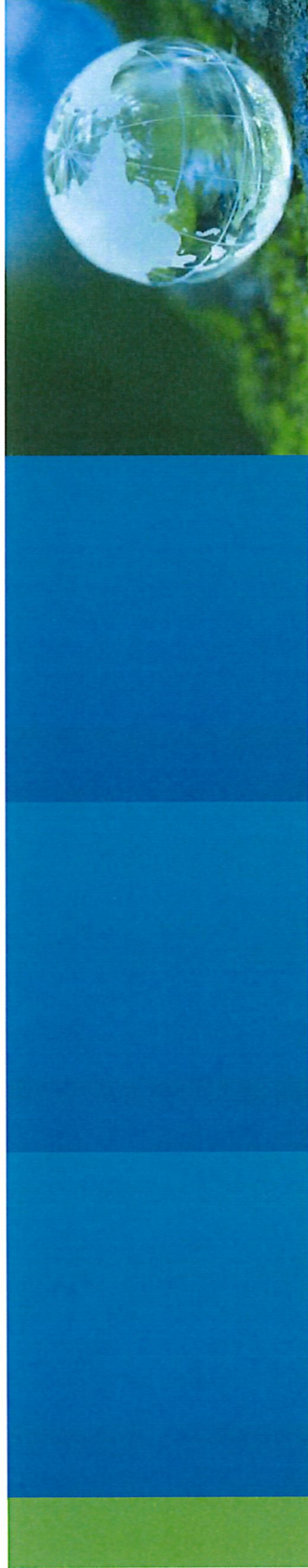
Moxley Park Court Improvements

Glenn Howard, RLA

City of Watertown, Massachusetts

January 10, 2023

**CDM
Smith®**



Moxley Park Court Renovation

2017 – CDM Smith completed a comprehensive conceptual design for Moxley Park Improvements.

Scope of work included:

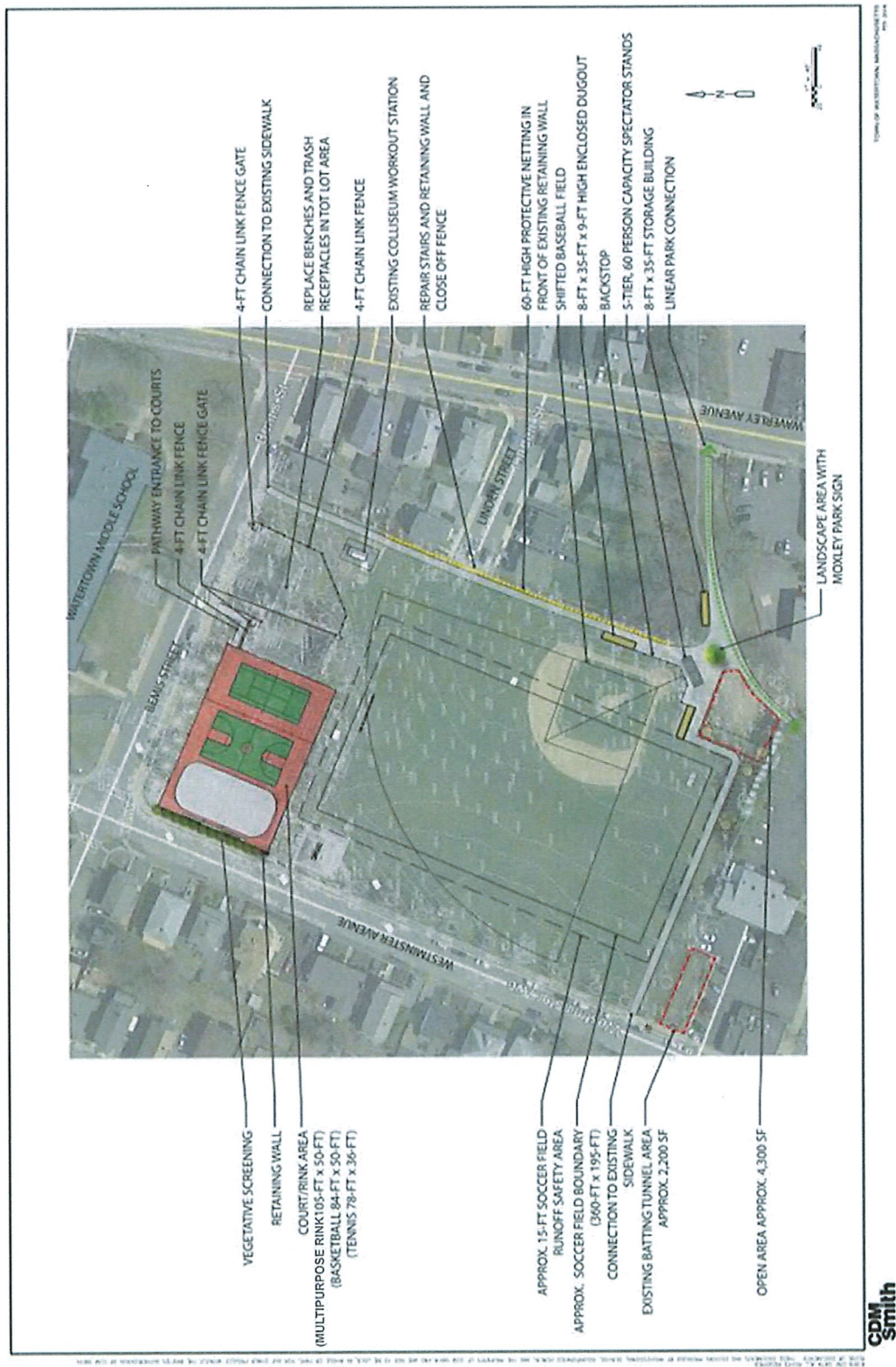
- Data collection and survey
- Develop conceptual alternatives
- Assist in public outreach and presentations
- Develop a preferred rendered concept plan
- Provide an estimate of probable construction costs
- Public meeting held November 2, 2017
- Public site visit held December 2, 2017

2018-2022, Project on hold due to Moxley Park site in consideration for the temporary high school.

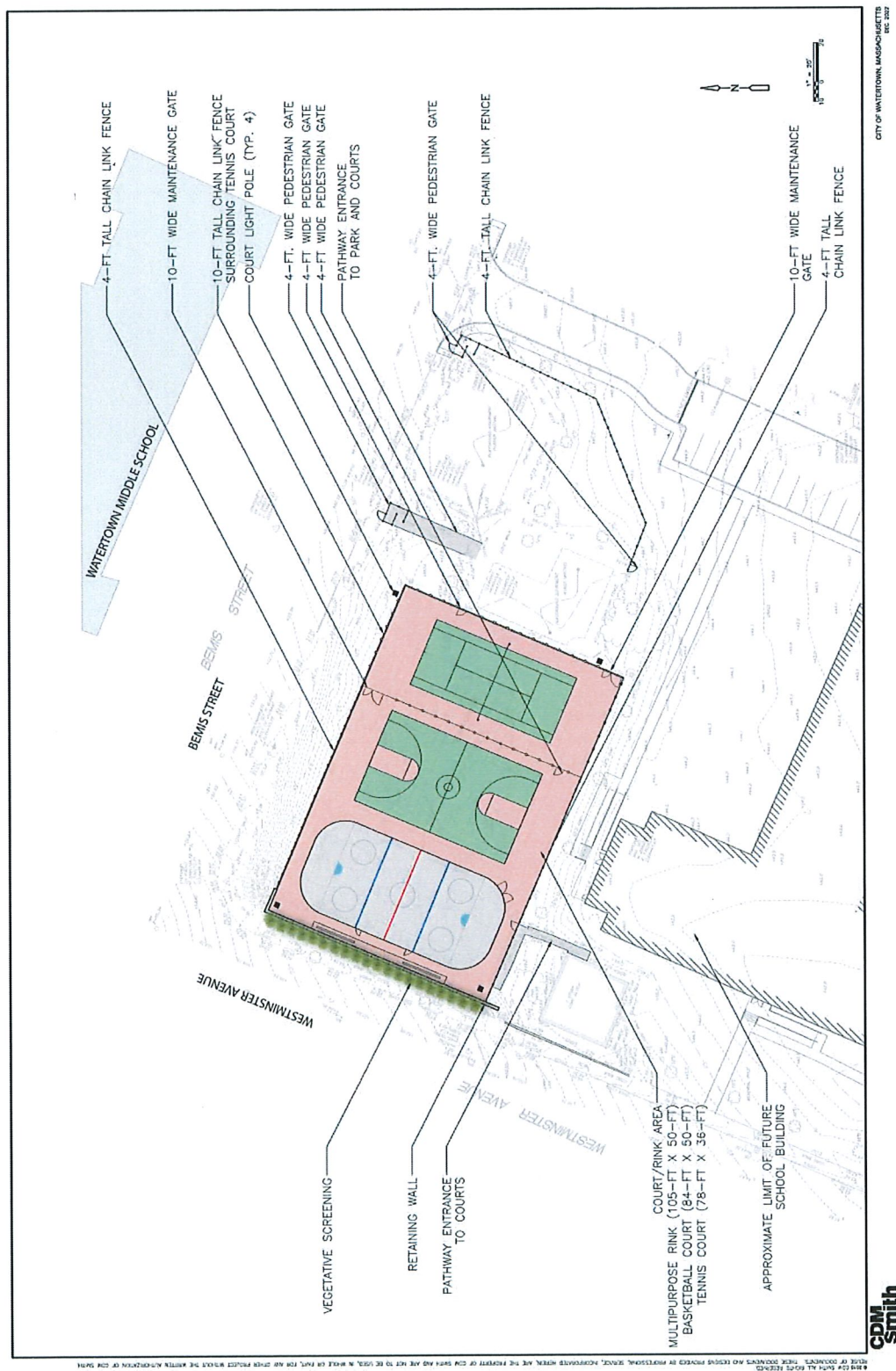
January 2022, City Council Presentation – Council approves final design for the renovation of the court area.

June 2022 to Present, CDM Smith completes final design and bid documents for the Moxley Park Court Improvements.

January 10, 2023, City Council Presentation – final design and opinion of probable construction costs



3 Moxley Park Comprehensive Conceptual Plan



Moxley Park Court Improvements Concept Plan

General and Detailed Improvements

General Improvements

- Prefabricated Multi-Purpose Rink
- Basketball Court
- Tennis Court
- 4 pole court lighting system
- Retaining Wall
- Gates and fencing improvements

Detailed Improvements

- Demolition, Removals and Disposal, Sediment and Erosion Controls
- Court Base
- Court Paving
- Court Acrylic Surfacing
- Tennis Posts and Nets
- Basketball Posts Backboards
- Multi-Purpose Rink Dasher Board System
- Outer backer panels with insulation for sound attenuation
- Multi-Purpose Rink Foundation
- Multi-Purpose Rink Netting System Behind Goals
- 4' PVC Coated Chain Link Fence
- 10' PVC Coated Chain Link Fence
- 6" Concrete Pathway
- Vegetative Screening
- Retaining Wall 125.5 LF' – 3 ft. high at front to 8 ft. high at back corner
- 4 Pole Court Lighting System
- Electrical Service Connection and Controls
- Benches With Foundations
- Loam and Seed Disturbed Areas
- Stormwater conveyance and infiltration system

Opinion of Probable Construction Costs

Sub Total Court Improvements	\$886,000
General Conditions @ 15%	
Subtotal with General Conditions	\$1,018,000
Permits, Insurance and Bonds @ 3.65% (as a % of the construction total)	
Overhead and Profit @15%	
Subtotal with permits, insurance, bonds and overhead and profit	\$1,230,000
Construction Contingency @10%	
Subtotal with Contingency	\$1,353,000
Escalation to mid point of construction Based on 7% per year Dec. 2022 – July 2023	
Construction Total	\$1,400,000
Engineering Construction Administration @ \$65,000	
TOTAL PROJECT	\$1,465,000

Potential Schedule

- City Council Presentation
January 10, 2023
- Bid Period
Early – Mid February 2023
- City Council Meetings
Late February and Early March
- Construction Contract by
April 1, 2023
- Construction Period
April – August 2023

WATERTOWN MIDDLE SCHOOL

4-FT TALL CHAIN LINK FENCE

10-FT WIDE MAINTENANCE GATE

10-FT TALL CHAIN LINK FENCE SURROUNDING TENNIS COURT

COURT LIGHT POLE (TYP. 4)

4-FT WIDE PEDESTRIAN GATE

4-FT WIDE PEDESTRIAN GATE

4-FT WIDE PEDESTRIAN GATE

PATHWAY ENTRANCE TO PARK AND COURTS

4-FT WIDE PEDESTRIAN GATE

4-FT TALL CHAIN LINK FENCE

10-FT WIDE MAINTENANCE GATE

4-FT TALL CHAIN LINK FENCE

BEMS STREET

WESTMINSTER AVENUE

VEGETATIVE SCREENING

RETAINING WALL

PATHWAY ENTRANCE TO COURTS

COURT/RINK AREA

MULTIPURPOSE RINK (105-FT X 50-FT)

BASKETBALL COURT (94-FT X 50-FT)

TENNIS COURT (78-FT X 36-FT)

APPROXIMATE LIMIT OF FUTURE SCHOOL BUILDING

1" = 30'

N

CITY OF WATERTOWN, MASSACHUSETTS

CDM Smith



George J. Proakis
City Manager

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To: Honorable City Council

From: George J. Proakis, City Manager

Date: January 5, 2023

RE: Filippello Park – Spray Park Renovation Project

Attached please find correspondence from Glenn Howard, RLA, PMP, Project Manager, CDM Smith regarding Filippello Park – Spray Park Renovation Project – Request for Authorization to Bid. This project was originally in the Fiscal Year 2021 Capital Improvement Plan.

To move forward with this important project, it is my intention to authorize the bid process and once the bids are received and vetted, we will return to the Honorable City Council for a bond authorization.

I will bring this up under Communications from the City Manager at the Tuesday, January 10, 2023, City Council Meeting.

cc: Thomas J. Tracy, City Auditor/Assistant City Manager for Finance
Steven Magoon, Acting Deputy City Manager/CD&P Director
Peter Centola, Recreation Director
Brian Wyncoop, Purchasing Agent
Mark R. Reich, Esquire, KP Law



Memorandum

To: Mr. George Proakis
City Manager, Watertown, MA

From: Glenn Howard, RLA, PMP *GH*
Project Manager, CDM Smith Inc.

Date: January 4, 2023

Subject: Filippello Park Spray Park Renovation Project
Request for Authorization to Bid

We are requesting authorization to bid the Filippello Park Spray Park Renovation Project. 90% bid documents were submitted to the Departments of Recreation, Public Works and Community Development and Planning on December 20th, 2022.

Over the next two weeks we will be incorporating any final comments and if authorized we will work with the purchasing agent to select the date that bid documents will be available for contractors and develop an advertisement to bid.

The general improvements of the project include:

- Replacement of an existing 2,500 square foot spray park with new concrete pad, rubber surfacing spray features and controls.
- Since the project is over a former landfill all work will be in accordance with the conditions of the Department of Environmental Protection Permit Authorization #SW45-0000164 received by the City on September 22, 2022.

Our Opinion of Probable Construction Costs for the project: \$678,000

Estimated Construction Administration Costs for the project: \$48,000

Estimated Total Project Cost: \$726,000

We anticipate a construction period of 2 months – 3 months from the date the Contractor is authorized to proceed.

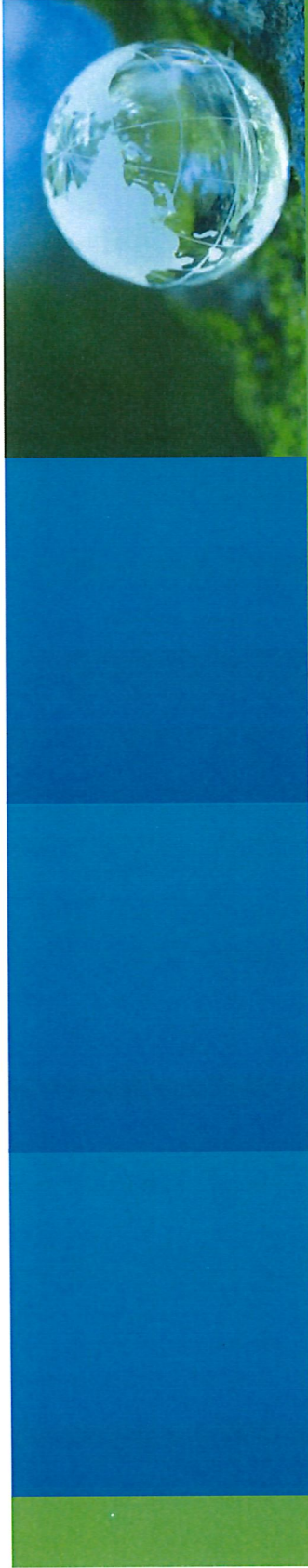
Filippello Park Spray Park Improvements

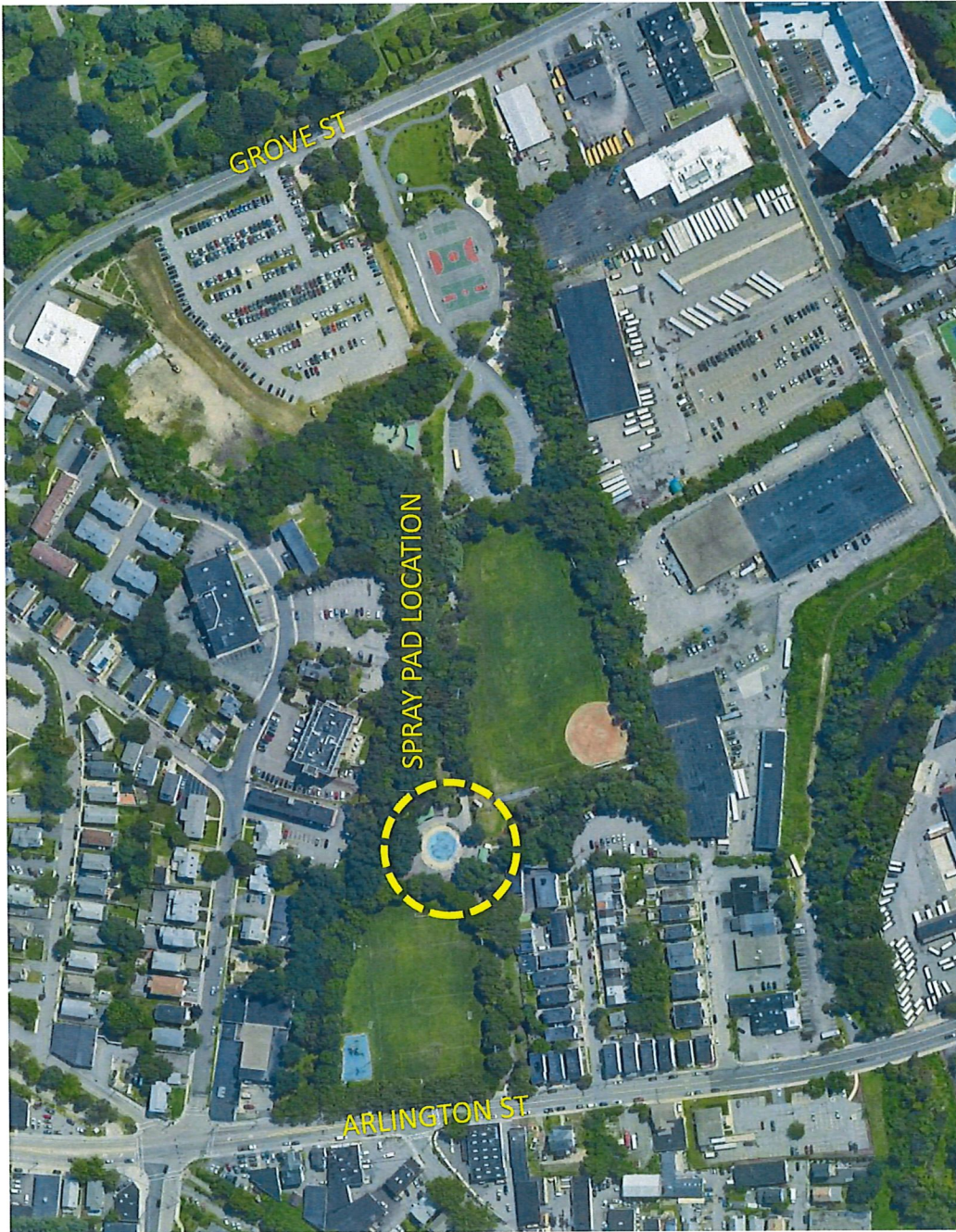
Glenn Howard, RLA

City of Watertown, Massachusetts

January 10, 2023

**CDM
smith**

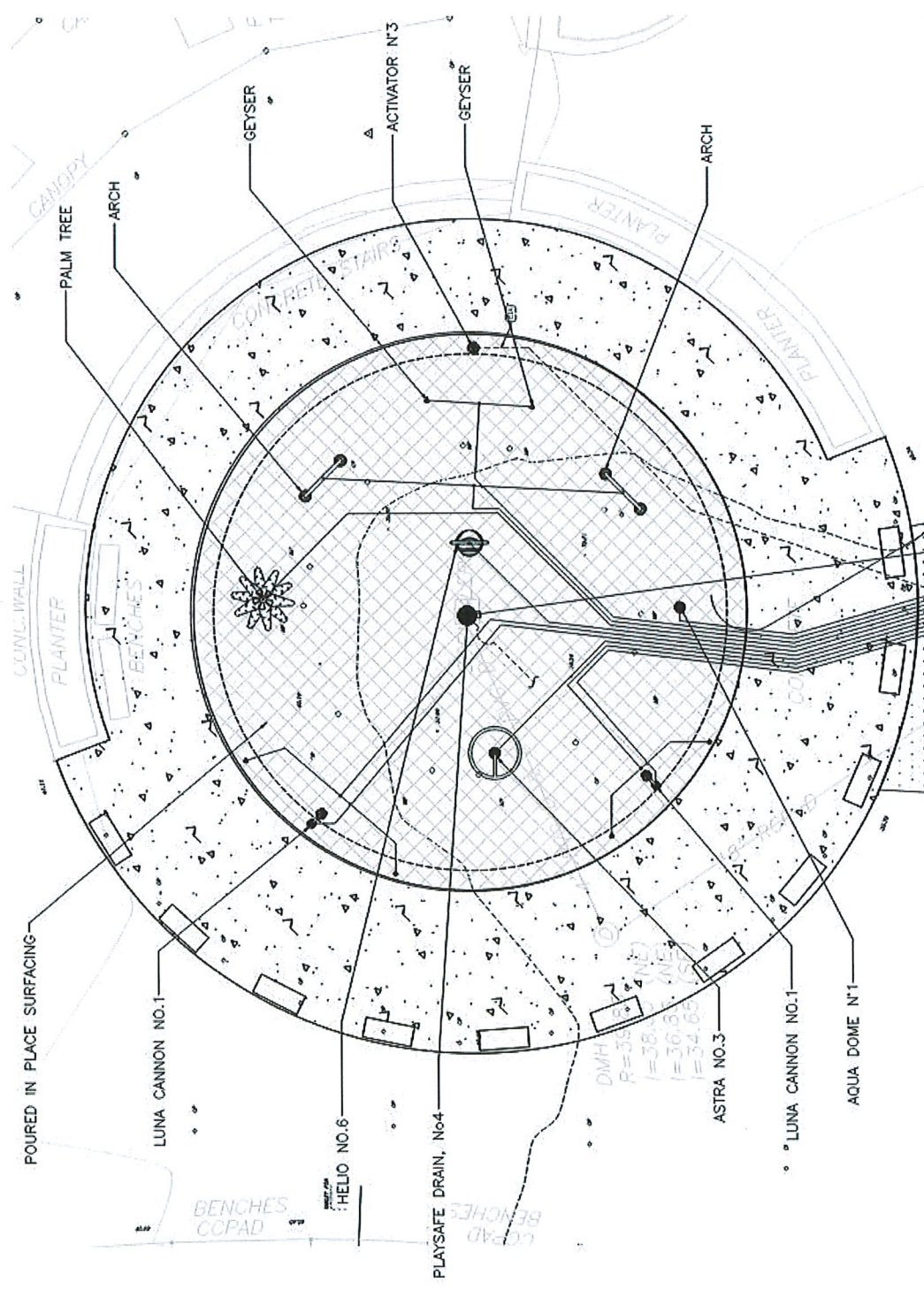




Existing Spray Features



Existing Spray Features





4 Filippello Park Spray Park Improvements Color Rendering of Spray Features

Spray Park Improvements

General Improvements

- 15 feature multi-zone spray features
- 2,500 sq. ft. non-porous rubber play surfacing
- Storm drain/sewer diverter structure
- Perimeter seating/viewing blocks

Opinion of Probable Construction Costs

<u>Sub Total Court Improvements</u>	<u>\$429,000</u>
General Conditions @ 15%	
<u>Subtotal with General Conditions</u>	<u>\$493,000</u>
Permits, Insurance and Bonds @ 3.65% (as a % of the construction total)	
Overhead and Profit @15%	
<u>Subtotal with permits, insurance, bonds and overhead and profit</u>	<u>\$596,000</u>
Construction Contingency @10%	
<u>Subtotal with Contingency</u>	<u>\$655,000</u>
Escalation to mid point of construction Based on 7% per year Dec. 2022 – July 2023	
<u>Construction Total</u>	<u>\$678,000</u>
Engineering Construction Administration @ \$48,000	
<u>TOTAL PROJECT</u>	<u>\$726,000</u>

Potential Schedule

- City Council Meeting
January 10, 2023
- Bid Period
Early – Mid February 2023
- City Council Meetings
Late February and Early March
- Construction Contract by
April 1, 2023
- Construction Period
April – July 2023

Questions

