Appendix 6-1

MEPA Environmental Notification Form

ENVIRONMENTAL NOTIFICATION FORM

Greater Cambridge Energy Program

Cambridge, Somerville & Boston

EVERSOURCE

Submitted to:
Executive Office of Energy and Environmental Affairs
MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Submitted by:
NSTAR Electric Company d/b/a Eversource Energy
247 Station Drive
Westwood, MA 02090

Prepared by:
Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, Massachusetts 01754

December 15, 2021

Epsilon ASSOCIATES INC.

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December 15, 2021

Secretary Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: MEPA ENVIRONMENTAL NOTIFICATION FROM
NSTAR Electric Company d/b/a/ Eversource Energy
Greater Cambridge Energy Program, Cambridge, Somerville & Boston, MA

Dear Secretary Theoharides:

On behalf of NSTAR Electric Company, d/b/a Eversource Energy ("Eversource"), Epsilon Associates, Inc. ("Epsilon") is pleased to submit the enclosed Environmental Notification Form ("ENF") for the proposed Greater Cambridge Energy Program (the "Project"). The proposed Project involves the construction of approximately 8.3 miles of new underground electric transmission lines located primarily in public roadways in Cambridge, Somerville, and the Allston/Brighton section of Boston.

In addition to the proposed transmission lines, the Project also proposes construction of a new underground substation in the Kendall Square area of Cambridge, and modifications to five existing substation facilities located in Cambridge, Boston, and Somerville. All improvements to the existing substation facilities will occur within the existing fence lines.

The Project requires the filing of an ENF because certain state permits are required including review by the Energy Facilities Siting Board, and two related MEPA ENF review thresholds are triggered. Specifically, the Project requires Article 97 approval, as per 310 CMR 11.03(1)(b)(3), to install a segment of the underground transmission line duct bank beneath the Massachusetts Department of Conservation and Recreation's Magazine Beach property and Dr. Paul Dudley White Bike Path in Cambridge and Boston. The project also involves construction of new electric transmission lines with a capacity of 69 or more kV, one or more miles in length along new right of way/easement areas, as per 310 CMR 11.03(7)(b)4. No mandatory EIR review thresholds are triggered by the proposed Project.

Please notice the ENF in the Environmental Monitor to be published on December 22, 2021. According to the current Environmental Monitor publication schedule, the public comment period will extend through January 11, 2022, and the Certificate on the ENF will be issued on January 21, 2022.

By copy of this letter, the Proponent advises recipients of the ENF that comments may be filed with the MEPA Office during the referenced comment period. Comments can be submitted online via the Public Comments Portal at:

https://eeaonline.eea.state.ma.us/EEA/PublicComment/Landing/

or sent to:

Secretary Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Comments can also be e-mailed directly to the Environmental Analyst reviewing the project (see https://www.mass.gov/service-details/submitting-comments for additional information).

Copies of the ENF may be obtained from Ms. Corinne Snowdon at (978) 897-7100 or via email at csnowdon@epsilonassociates.com.

Thank you.

Sincerely,
EPSILON ASSOCIATES, INC.

Michael Howard
Managing Principal

Encl.
CC: Christopher Newhall, Senior Environmental Specialist, Eversource Energy

ENVIRONMENTAL NOTIFICATION FORM

Greater Cambridge Energy Program

Cambridge, Somerville & Boston, Massachusetts

Submitted to:

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Submitted by:

NSTAR ELECTRIC COMPANY D/B/A EVERSOURCE ENERGY
247 Station Drive
Westwood, MA 02090

Prepared by:

EPSILON ASSOCIATES, INC.
3 Mill & Main Place, Suite 250
Maynard, MA 01754

December 15, 2021

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ATTACHMENT B – FIGURES (CONTINUED)

Environmental Notification Form

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **Greater Cambridge Energy Program**		
Street Address: **Underground transmission lines predominantly in public roads and new underground substation facility located at 290 Binney Street, Cambridge (Kendall Blue Garage Site).**		
Municipality: **Cambridge, Somerville, Boston**	Watershed: Charles River	
Universal Transverse Mercator Coordinates: **42°21'55.46.8''N, 71°05'16.03''W (new substation site in Kendall Square)**	Latitude: **N 42°21.917417'** Longitude: **W 71°5.257923' (new substation site in Kendall Square)**	
Estimated commencement date: **Q3 2024**	Estimated completion date: **Q4 2028**	
Project Type: **Utility**	Status of project design: **70% complete**	
Proponent: **NSTAR Electric Company d/b/a Eversource Energy**		
Street Address: **247 Station Drive**		
Municipality: **Westwood**	State: **MA**	Zip Code: **02090**
Name of Contact Person: **Michael Howard**		
Firm/Agency: **Epsilon Associates, Inc.**	Street Address: **3 Mill & Main, Suite 250**	
Municipality: **Maynard**	State: **MA**	Zip Code: **01754**
Phone: **(978) 897-7100**	Fax: **(978) 897-0099**	E-mail**: mhoward@epsilonassociates.com**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting: **N/A**

a Single EIR? (see 301 CMR 11.06(8)) ☐Yes ☐No
a Special Review Procedure? (see 301CMR 11.09) ☐Yes ☐No
a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐Yes ☐No
a Phase I Waiver? (see 301 CMR 11.11) ☐Yes ☐No
(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

301 CMR 11.03(1)(b)3 - Conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97. This threshold applies to MassDCR properties crossed by the transmission line including Magazine Beach in Cambridge and the Dr. Paul Dudley White Bike Path in Cambridge and Boston.

301 CMR 11.03(7)(b)4 - Construction of electric transmission lines with a Capacity of 69 or more kV, provided the transmission lines are one or more miles in length along New, unused, or abandoned right of way. This threshold applies to those portions of the transmission lines not located on roads or railroad corridors (e.g., Magazine Beach and the trenchless crossing of Charles River, crossing through the MassDOT Allston Multimodal Project Site, other private properties, etc.). Collectively, these areas total approximately 1.15 miles.

Which State Agency Permits will the project require?

The Project will require the following permits and approvals. Eversource does not intend to seek permits for the Noticed Alternative, at this time.

Department of Public Utilities ("DPU"): Approval to Construct under G.L. c. 164, § 72.

Energy Facilities Siting Board ("EFSB"): Approval to Construct under G.L. c. 164, § 69J.

Massachusetts State Legislature: Article 97 Land Disposition.

Massachusetts Department of Environmental Protection ("MassDEP"): Chapter 91 Waterways License, Individual 401 Water Quality Certificate, Utility Related Abatement Measure Notification.

Massachusetts Department of Transportation – Highway Division ("MassDOT"): State Highway Access Permit, G.L. c. 81, § 21/G.L. c. 85, §2.

Massachusetts Bay Transit Authority ("MBTA"): Rail Crossing Permit(s) / Easements (MGL c.40 § 56a).

Massachusetts Water Resources Authority ("MWRA"): Section 8(M) Permit of Chapter 272 of the Acts of 1984.

Massachusetts Department of Conservation and Recreation ("MassDCR"): Construction Access Permit (MGL c.132A § 7 and c.92 § 33).

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres: **A portion of the Project (specifically, the preferred underground transmission line Route B2A) crosses MassDCR's Magazine Beach property in Cambridge and the Dr. Paul Dudley White Bike Path in Cambridge and Boston. These recreational facilities are under the care and custody of MassDCR. The installation of the new underground transmission line in these locations will require Article 97 authorization from the Massachusetts Legislature, consistent with the provisions of EEA's Article 97 Land Disposition Policy, for the disposition of new easement rights. While the size of the permanent easement has not yet been finalized with MassDCR, for planning purposes it is estimated to be between 0.5 acres and 1 acre. For additional detail, including information demonstrating compliance with EEA's Article 97 Land Disposition Policy, please refer to the narrative provided in Attachment A, Section 9.0 of this ENF.**

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	**~4.5 ac**[1]		
New acres of land altered		**~1.1 ac**[2]	
Acres of impervious area	**~3.9 ac**[3]	**0 ac**	**~3.9 ac**
Square feet of new bordering vegetated wetlands alteration		**0**	
Square feet of new other wetland alteration		**~3,200 sf**[4] **(land under water)**	
Acres of new non-water dependent use of tidelands or waterways		**0**[5]	
STRUCTURES			
Gross square footage	**0 s.f.**	**~35,000 s.f.**[6] **(new underground substation)**	**~35,000 s.f.**
Number of housing units	**N/A**	**N/A**	**N/A**
Maximum height (feet)	**0 ft**	**~30 ft (substation vent)**	**~30 ft**
TRANSPORTATION			
Vehicle trips per day	**N/A**	**N/A**	**N/A**
Parking spaces	**N/A**	**N/A**	**N/A**
WASTEWATER			
Water Use (Gallons per day)	**N/A**	**N/A**	**N/A**
Water withdrawal (GPD)	**N/A**	**N/A**	**N/A**
Wastewater generation/treatment (GPD)	**N/A**	**N/A**	**N/A**
Length of water mains (miles)	**N/A**	**N/A**	**N/A**
Length of sewer mains (miles)	**N/A**	**N/A**	**N/A**

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☒ Yes **EEA #1891 (KSURP), EEA #15278 (MassDOT Allston Multimodal Interchange Project), EEA #15889 (Union Square Redevelopment), EEA #16468 (Volpe Center Site)** ☐ No

NOTES:

(1) Refers to existing public roads that would be occupied by the proposed 4-foot-wide transmission line duct bank, and other off-road areas including the trenchless crossing of the Charles River. Collectively, these areas total ~3.7 acres. The new underground substation facility occupies an additional area of ~0.8 acres.

(2) This estimate refers to potential temporary workspace areas associated with the HDD crossing of the Charles River and transmission line installation work located in other undeveloped areas. Trenching and new substation work in currently altered areas comprised of pavement or developed areas totals approximately 4.2 acres.

(3) This estimate includes portions of existing public roadways occupied by the proposed transmission line duct bank and existing developed areas where the new underground substation will be built (Kendall Blue Garage).
(4) This estimate refers to the trenchless crossing beneath the Charles River. Assumes an ~4-foot diameter pipe and an ~800 linear foot crossing of the Charles River.
(5) See Wetlands, Waterways and Tidelands section for additional detail.
(6) The new substation site will occupy roughly one third of the subject parcel, or ~0.8 acres. The total footprint of the new underground substation is ~35,000 s.f.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:

Figure 1, USGS Locus Map and Figure 2, Aerial Locus Map in Attachment B, depict the limits of the proposed Project area, including the proposed underground transmission line routes, the location of the New Substation in Kendall Square and the existing remote substations. Figures 3 and 4 in Attachment B depict the Noticed Alternative Routes and the referenced substation facilities. The Noticed Alternative Route is described in further detail in the routing analysis materials provided in Attachment K of this ENF to provide a comprehensive description of the overall Project and an assessment of potential impacts leading up to the identification of the Project; however, Eversource does not intend to seek environmental permits and approvals for the Noticed Alternative Route at this time. Accordingly, the balance of this ENF focuses predominantly on the proposed Project.

The Project area encompasses portions of the cities of Boston, Cambridge, and Somerville. Overall, the Project area generally consists of densely developed, urban neighborhoods that include residential, commercial and pockets of industrial areas. Eversource customers exist across all or some of the following City of Cambridge neighborhoods: East Cambridge, Area 2/MIT, Cambridgeport, Riverside, West Cambridge, Mid-Cambridge, Wellington-Harrington, and the Port. The Eversource's customers include many large biotechnology and laboratory facilities, a multitude of retail, hospitality and office customers, educational institutions, medical facilities, and residences. As an example, Kendall Square, which straddles several of the City's neighborhoods, has been transformed from a former industrial district to one of the world's leading centers for biotech research and innovation. Attendant with this growth, Kendall Square has seen the proliferation of hotels, restaurants, shops, and housing that serve the area's cluster of life science and technology firms, the MIT community, and surrounding neighborhoods. Major new developments include Cambridge Center, Cambridge Research Park, Technology Square, and One Kendall Square, as well as several large lab and office buildings along Binney Street. The Project Area is home to some of the largest employers in Cambridge, including MIT, Biogen, Novartis, Sanofi Aventis, Takeda Pharmaceuticals, the Cambridge Innovation Center, the U.S. Department of Transportation, Google, Hubspot, the Broad Institute, Akamai Technologies, Moderna, and Pfizer.

In addition to the above, the primary campuses and athletic facilities of Harvard and MIT are located within the Project area, on both sides of the Charles River. There are several MBTA commuter rail routes (Fitchburg Line, Framingham/Worcester Line), subway routes (Red Line and Green Line), public transportation bus routes and multimodal travel ways (e.g., multiuse pathways and bicycle lanes). Sensitive receptors including schools, daycare facilities and places of worship are present throughout the Project area. The Charles River and its associated wetlands, Riverfront Area, and floodplain are the predominant environmental resource areas located within the Project area, along with filled and flowed tidelands regulated under the Massachusetts Public Waterfront Act ("Chapter 91"). There are areas of protected public open space (land protected by Article 97 of the Massachusetts Constitution) within the Project area, including the Massachusetts's Department of Conservation and Recreation's ("MassDCR") Charles River Reservation, Christian A. Herter Park ("Herter Park"), Magazine Beach,

Longfellow (Riverbend) Park, other municipal properties (e.g., Riverside Press Park) and multi-use pathways (Dr. Paul Dudley White Path, Grand Junction Railroad). With few exceptions, most of the Project area contains Environmental Justice ("EJ") Populations, as such term is defined under Massachusetts law. Please refer to the narrative provided in Attachment A, Section 8.0 for a description of the outreach activities and analysis conducted to date by Eversource within these EJ communities.

Describe the proposed project and its programmatic and physical elements:

The proposed Project will ensure the reliability of Eversource's transmission system in Cambridge. The proposed reinforcements consist of five projects, which together constitute the Greater Cambridge Energy Program. The five projects are:

1. **The Transmission Lines Project: the construction of eight new 115-kilovolt ("kV") underground transmission circuits that will be housed in a total of five new duct banks (the "New Lines"), totaling approximately 8.3 miles.**

2. **The Transmission Substation and (3) the Distribution Station Projects: a new 115kV transmission substation and a new 14 kV distribution substation, which will be collocated in an underground vault on a property between Broadway and Binney Streets in Cambridge ((2) and (3), collectively, the "New Substation" or "Station 8025").**

4. **The Remote Stations Modifications Project: ancillary modifications to existing substation facilities in the Cambridge, Somerville, and the Allston/Brighton section of Boston (together with (1), (2) and (3) the "Project").**

5. **The Distribution Lines Project: a set of 36 distribution feeders and associated duct banks and other equipment that connects the New Substation to the existing distribution network in the public ways immediately adjacent to the New Substation.**

Construction of the Project will serve the public interest because it is designed to address both the need for additional capacity to reliably supply customers in the Project area, as well as the reliability issues surrounding the potential for existing transmission line overloads that would result in a loss of service to customers in the Project area. Specifically, the proposed Project will result in an integrated, long-term solution that will provide the infrastructure needed to support the rapidly growing current and projected load requirements and to maintain reliable energy supply to customers, including many large office and laboratory uses.

As noted above, the proposed Project entails the construction of approximately 8.3 miles of new underground transmission line duct banks located primarily in public roadways and all beginning at the New Substation in Cambridge.[1] Two new transmission duct banks will connect to the Eversource Brighton Substation #329 located in the Allston/Brighton area of Boston, for a total of 5.9 miles, with one duct bank crossing the Charles River using an existing bridge (River Street Bridge) and the other using a Horizontal Directional Drill ("HDD") trenchless crossing technique. One new transmission line duct bank, 1.3 miles in length, will connect to Eversource Somerville Substation #402, while another new transmission line duct bank, 0.6 miles in length, will connect to Eversource East Cambridge Substation #875. The final new transmission line duct bank, a total of 0.5 miles, will tie into the existing Eversource East Cambridge to Putnam 115-kV transmission line located in Memorial Drive.

In addition to the proposed transmission lines, the Project also proposes construction of the New Substation (to be built underground) and modifications to five existing substation facilities located in Cambridge, Boston, and Somerville. To minimize the size and footprint of the New Substation, 115-kV gas-insulated switchgear ("GIS") will be used in a breaker-and-a-half

1 Three of the five duct banks house double circuit transmission circuits, totaling eight circuits.

configuration totaling twenty-two 115-kV breakers that would provide both fault isolation and switching capability, connecting the new 115-kV transmission lines to the station. The New Substation would include three 90 MVA 115/14-kV transformers and associated switchgear, with the option to add a fourth transformer and associated switchgear for use in the future when the substation load is projected to exceed 90% of the substation's 180 MVA of firm capacity. At full build out, the firm capacity of the New Substation would be 180 MVA, expandable to 270 MVA.

A locus map showing all elements of the proposed Project is provided on Figures 1 and 2 in Attachment B. For additional detail regarding these project activities, please refer to the narrative provided in Attachment A.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

In accordance with EFSB precedent, Eversource evaluated various Project alternatives to address the reliability and capacity needs within the Project area to determine the approach that best balance's reliability, cost, and environmental impact. Section 4.0 in Attachment A contains the detailed evaluation used by Eversource to identify and evaluate alternative means of meeting the identified needs. These include a no-build alternative, wires alternatives, and non-wires alternatives ("NWAs"). As described therein, Eversource dismissed the no-build alternative because it would not address the identified need for the Project. Similarly, no feasible or practical NWAs were identified that could reliably and economically satisfy the need. Eversource's analysis showed that new generation (either solar PV or conventional), with or without a contribution from energy efficiency ("EE") and demand response ("DR") and battery storage, would be impractical and infeasible to meet the identified need. Regarding the wire alternative to the Project, Eversource determined that such an alternative is inferior from a reliability, cost, and environmental-impact perspective.

As described in the narrative provided in Attachment A, Section 4.0, Eversource's analyses show that construction of the Project is the best approach to meeting the identified need based on a balancing of reliability, cost, and environmental-impact considerations.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

As part of construction activities, temporary impacts (e.g., traffic congestion during construction, construction stormwater runoff, fugitive dust, noise, etc.) will likely occur. Once constructed, the Project will have no ongoing impacts. Eversource has identified several mitigation measures that will minimize construction related impacts. These mitigation measures are summarized as follows:

- **Eversource will develop and maintain a Stormwater Pollution Prevention Plan ("SWPPP") for the Project that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction.**

- **Fugitive dust will be controlled at the construction sites by use of appropriate methods, including the use of covered dump trucks to move soil out of the construction zone, and by covering temporary soil stockpiles at offsite staging and laydown areas, as applicable. There also will be installation of anti-tracking pads and regular sweeping of the pavement of adjacent roadway surfaces during the construction period to minimize the potential for construction traffic to kick up dust and particulate matter.**

- **Eversource and its contractors will comply with MassDEP's Diesel Retrofit Program and vehicle idling will be limited to the extent practicable.**

- **Waste materials excavated along the routes during installation of the transmission line duct banks and manholes will be promptly removed and re-used or properly managed at a suitable permitted facility.**

- **Eversource will implement appropriate dewatering protocols based on site specific factors at the time of construction to ensure no adverse impacts to groundwater and surface waters.**

- **The construction equipment used with underground transmission line construction is like that used during typical public works projects (e.g., road resurfacing, storm sewer installation, water line installation). The timing and sequencing of the work will be coordinated to minimize potential noise impacts consistent with applicable local regulations and ordinances.**

- **Eversource will take measures during construction to minimize and mitigate potential impacts to traffic during construction, including specifically multimodal forms of transportation (bikes, pedestrian access, public transit, etc.). Eversource will implement Traffic Management Plans ("TMPs") that consider the routing and protection of pedestrian, vehicular, and bicycle traffic; maintaining public transit services (MBTA buses, Transportation Management Association ("TMA") shuttles, etc.); adherence to reasonable work hours; maintaining access to homes and businesses throughout construction; limiting the occupancy of the street layout and on-street parking, always maintaining emergency access; avoiding impacts to school bus routes; and clear and regular communications to the community during construction.**

In addition to the above, specific discussions of mitigation measures for other potential environmental impacts, such as Article 97 and project activities near EJ populations, are described in the narrative provided in Attachment A, Sections 8.0 and 9.0.

If the project is proposed to be constructed in phases, please describe each phase:

Assuming timely receipt of all necessary permits and authorizations, construction of the proposed transmission lines and New Substation is anticipated to commence in 2024. Construction is anticipated to occur over a five-year period, with completion on a rolling basis beginning 2028 through 2029. Due to the complexities of managing traffic control in an urban environment, the sequence of when each route is constructed is somewhat dependent on the other transmission line routes. For example, it is anticipated that the shorter and more direct Kendall and Putnam Routes will likely need to be constructed in series due to their proximity to each other and the New Substation construction in Kendall Square. The longer and more complex Brighton and Somerville routes will take approximately 36 to 42 months to construct. The proposed schedule assumes that the selected site contractor(s) will simultaneously employ several active work zones associated with each of the routes, in consultation with the affected municipalities.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

☐ Yes (Specify_____)

☒ No

if yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan.

Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes ___ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☒Yes (Specify (see below)_____) ☐No

The Project site including the Preferred Routes and Noticed Alternative Routes intersect the following historic properties: MIT Campus (CAM.P); Charles River Basin Historic District (CAM.AJ); Memorial Drive (CAM.930); River Street Bridge (CAM.923); Volpe Center (CAM.BH); Boston Woven Hose and Rubber Complex (CAM.AK); Bennett Street Industrial Area (SMV.CC); Union Square Commercial District (SMV.G); Lars Anderson Bridge (CAM.926); Harvard Business School (BOS.JL); Saint Anthony's Area (BOS.JM); Franklin Street (BOS.LB); Central Square Historic District (CAM.BC); and Harvard Square Historic District (CAM.AB). Because Eversource is proposing an underground transmission line, predominantly within existing roadways and previously disturbed areas, there will be no visual impact to historic properties.

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☒Yes (Specify 19-MD-172 and 19-MD-173) ☐No

While the routes proceed through the mapped boundaries of two archaeological sites, the Project will be within existing roadways and previously disturbed areas, therefore no significant impacts to archaeological resources are anticipated.

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? __Yes X No; if yes, identify the ORW and its location.

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? X **Yes** ___No; if yes, identify the water body and pollutant(s) causing the impairment: **Charles River (MA72-38): fish passage barrier, flow regime modification, non-native fish/shellfish/zooplankton, water chestnut, chlorophyll-a, DDT in fish tissue, DO, E. Coli, fish bioassessments, harmful algal blooms, nutrient/eutrophication, oil and grease, PCBs in fish tissue, high pH, total phosphorous, sediment bioassay (acute toxicity freshwater), transparency/clarity, unspecified metals in sediment.**

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? __ Yes X No

STORMWATER MANAGEMENT:

Generally, describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

No new impervious surfaces are proposed. Eversource will develop and maintain a SWPPP for the project that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction. The SWPPP will be adhered to by the contractor during all phases of project construction in accordance with the general conditions prescribed in the project's USEPA Stormwater Construction General Permit.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? X Yes ___No if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification): **See Figures 4-29A through 4-29D in Attachment K for the locations of MassDEP Tier Classified Hazardous Materials Sites RTN's in the Project area. If contaminated soils and/or groundwater are encountered, they will be managed pursuant to URAM provisions of the MCP. Eversource will prepare a soil and groundwater management plan, and will contract with a Licensed Site Professional ("LSP") as necessitated by conditions encountered along the underground transmission line alignment, consistent with the requirements of the MCP at 310 C.M.R. 40.0460 et seq. All excess soil and groundwater will be managed in accordance with local, State and Federal regulations.**

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes X No ___; if yes, describe which portion of the site and how the project will be consistent with the AUL: **See Figures 4-29A through 4-29D in Attachment K for locations of AUL sites in the Project area. The proposed construction activity will be completed in accordance with the AUL(s) and the MCP, which will include submittal of a URAM plan and management of excess soils with disposal at an appropriate facility.**

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ No X; if yes, please describe:

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

Following saw cutting, the existing pavement will be removed by pneumatic hammers and loaded into a dump truck with a backhoe. Pavement will be handled separately from soil and will be recycled at an asphalt batching plant.

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ No X; if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:

Eversource and its contractors will comply with MassDEP's Diesel Retrofit Program and vehicle idling will be limited to the extent practicable.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No X;
if yes, specify name of river and designation: _____;

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? Yes ___ No ___;
if yes, specify name of river and designation: _____; if yes, will the project result in any impacts to any of the designated "outstandingly remarkable resources of the Wild and Scenic River or the stated purposes of a Scenic River. Yes ___ No ___; if yes, describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document. **Please see the Table of Contents**
2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries. **See Attachment B, Figure 1.**
3. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities. **See figures provided in Attachment B and map set provided in Attachment C.**
4. Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts. **See Attachments B and C.**
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing condition upon the completion of each phase). **See Attachments B and C.**
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). **See Attachment G.**
7. List of municipal and federal permits and reviews required by the project, as applicable. **See Attachment A, Section 10.**
8. Printout of output report from RMAT Climate Resilience Design Standards Tool. **See Attachment H.**

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1) X Yes __ No; if yes, specify each threshold: **310 CMR 11.03(1)(b)(3) – Conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97.**

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	**N/A**	**N/A**	**N/A**
Internal roadways	**N/A**	**N/A**	**N/A**
Parking and other paved areas	**3.9**	**0**	**3.9**
Other altered areas	**0.32**	**0**	**0.32**
Undeveloped areas	**0.21**	**0**	**0.21**
Total: Project Site Acreage	**4.5**	**0**	**4.5**

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes X No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes X No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? X Yes ___ No; if yes, describe:

A portion of the Project (specifically, the preferred underground transmission line Route B2A) crosses MassDCR's Magazine Beach property in Cambridge and the Dr. Paul Dudley White Bike Path in Cambridge and Boston. These recreational facilities are under the care and custody of MassDCR. The installation of the new underground transmission line in these locations will require Article 97 authorization from the Massachusetts Legislature, consistent with the provisions of EEA's Article 97 Land Disposition Policy, for the disposition of new easement rights. While the size of the permanent easement has not yet been finalized with MassDCR, for planning purposes it is estimated to be between 0.5 acres and 1 acre. For additional detail, including information demonstrating compliance with EEA's Article 97 Land Disposition Policy, please refer to the narrative provided in Attachment A, Section 9.0.

D. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?
___ Yes X No; if yes, does the project involve the release or modification of such restriction?
___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes X No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No X ; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan(s):
BOSTON: Imagine Boston 2030 (dated 2017)
CAMBRIDGE: Envision Cambridge (dated 2019)
SOMERVILLE: SomerVision 2040 (dated 2020)

B. Describe the project's consistency with the plan(s) with regard to:

1) economic development

The Project is consistent with the economic goals set forth in the Plan(s) in that it will enhance the region's electric transmission reliability and support economic growth and development. The new substation and associated transmission and distribution lines, also helps ensure the region has a flexible electric grid that can accommodate clean electric generation sources now and in the future. For example,

- **A resilient transmission network provides redundancy to help ensure system reliability and bring green energy from the generation source to where and when it is needed.**
- **Flexible distribution networks help manage changing levels of local distributed generation helping to reduce the risk of overloading distribution equipment.**
- **Energy efficiency and demand response efforts help existing users contribute to the overall effort.**

2) adequacy of infrastructure

The Project is consistent with this goal because it maintains and improves the local electrical infrastructure. A strong electrical transmission grid is vital to the safety, security, and economic prosperity of the region. The transmission system serves a critical role to ensure that electricity flows with a high degree of reliability from wherever the power is generated to where it is needed. The Project will provide additional electric supply to meet the growing needs of the area and will also serve to reinforce the transmission system serving the region.

3) open space impacts

The proposed transmission line installation work is located underground, predominantly in public roadways and other developed areas in Boston and Somerville and does not result in open space impacts.

Impacts to MassDCR's Magazine Beach property in Cambridge have been avoided and minimized to the maximum extent practicable. Adding the new underground transmission line does not change the characteristics nor the use of this recreational property. Further, there are already existing utilities present throughout the Magazine Beach property (water, sewer, electric, etc.). Proposed temporary alterations during construction of transmission line Route B2A are generally limited to temporary workspace area oriented around the HDD entry site. The balance of the HDD installation will be sufficiently deep and will not otherwise affect the surface of the Magazine Beach property. Upon completion of the work, Eversource will restore the altered area to its preexisting conditions. Where the transmission line duct bank transitions from Memorial Drive onto Magazine Beach, the adjacent Paul Dudley White Path (bituminous pavement), sidewalk, lighting, and grassed shoulder areas will also be restored to their preexisting condition or better in consultation with MassDCR.

In addition to the above, the surface above the new underground substation in Cambridge will be developed by Boston Properties, Inc. ("BXP") as a public park,

thus improving open space areas in Cambridge. The open space program has not been finalized but is expected to consist of hardscape, landscape, public amenities such as benches, and light recreation.[2] The City of Cambridge Redevelopment Authority and Planning Board will ultimately be responsible for reviewing and approving the final public park design details and surface treatments as part of BXP's separate local permit application process.

4) compatibility with adjacent land uses
The Project will not permanently affect adjacent land uses as the transmission line will be installed entirely underground. Temporary impacts to residences, businesses and sensitive receptors during construction may include traffic disruption, including road closings and construction noise. These types of impacts will be minimized with proper construction BMP's, TMP's, and restricted work hours to reduce noise, traffic, and air quality impacts during construction.

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)
RPA: **Boston Region Metropolitan Planning Organization**
Title: **MetroFuture**
Date: **2008**

D. Describe the project's consistency with that plan with regard to:
1) economic development
The economic goal of the MetroFuture Regional Plan is to promote the development of sustainable growth where people's homes and work are in proximity to one another and where infrastructure already exists. The Project is intended to improve the reliability of electric transmission in the region to better serve existing customers. The Project will provide additional electric supply to meet the growing needs of the area and will also serve to reinforce the transmission system serving the region.

2) adequacy of infrastructure
The Project is consistent with this goal because it maintains and improves the local electrical infrastructure. A strong electrical transmission grid is vital to the safety, security, and economic prosperity of the region. The transmission system serves a critical role to ensure that electricity flows with a high degree of reliability from wherever the power is generated to where it is needed.

3) open space impacts

2 On September 22, 2021, the Secretary of Energy and Environmental Affairs issued a Certificate to the Cambridge Redevelopment Authority on its Third Notice of Project Change for the Kendall Square Urban Redevelopment Plan ("KSURP") Amendment #11, finding that the referenced BXP redevelopment proposal does not require an Environmental Impact Report (see EEA No. 1891).

The Plan aims to have access to safe and well-maintained parks, community gardens, and appropriate play spaces for children and youth. As described above, the proposed transmission line installation work is located underground, predominantly in public roadways and other developed areas in Boston and Somerville and does not result in open space impacts.

Impacts to MassDCR's Magazine Beach property in Cambridge have been avoided and minimized to the maximum extent practicable. Adding the new underground transmission line does not change the characteristics nor the use of this recreational property. Further, there are already existing utilities present throughout the Magazine Beach property (water, sewer, electric, etc.). Proposed temporary alterations during construction of transmission line Route B2A are generally limited to temporary workspace areas oriented around the HDD pit. The balance of the HDD installation will be sufficiently deep and will not otherwise affect the surface of the Magazine Beach property. Upon completion of the work, Eversource will restore the altered area to its preexisting condition. Where the transmission line duct bank transitions from Memorial Drive onto Magazine Beach, the adjacent Paul Dudley White Path (bituminous pavement), sidewalk, lighting, and grassed shoulder areas will also be restored to their preexisting condition in consultation with MassDCR.

In addition to the above, the area above the new underground substation in Cambridge will be developed by BXP as a public park, thus improving open space areas in Cambridge.

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes X No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes X No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes X No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? __Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? _X_ Yes ___ No; if yes, specify which permit: **Order of Conditions from Cambridge and Boston Conservation Commissions, Chapter 91 Waterways License, Chapter 91 Minor Project Modification(s), and an Individual 401 Water Quality Certificate for the HDD crossing of the Charles River.**

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? _X_ Yes ___ No; if yes, has a Notice of Intent been filed? ___Yes X No; if yes, list the date and MassDEP file number ___ ; if yes, has a local Order of Conditions been issued? ___ Yes __ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes _X_ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site: **Most of the Project does not involve work in wetland resource areas or Buffer Zones and is otherwise located within paved roadways. Activities in or near jurisdictional wetland resource areas are associated with the Charles River HDD crossing. The HDD method is a common alternative to open-cut trenching to reduce surface disturbance in environmentally sensitive areas, including wetlands and waterbodies. The proposed HDD alignment avoids impacts to the Buffer Zone, Bordering Land Subject to Flooding, Riverfront Area, Inland Bank and Bordering Vegetated Wetlands associated with the Charles River. At its deepest point, the new transmission line could be as much as 30-feet below the bed of the Charles River following its installation. Approximately 3,200 s.f. of Land Under Water would be altered by this work.**

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	_____	_____
Designated Port Areas	_____	_____
Coastal Beaches	_____	_____
Coastal Dunes	_____	_____
Barrier Beaches	_____	_____
Coastal Banks	_____	_____
Rocky Intertidal Shores	_____	_____
Salt Marshes	_____	_____
Land Under Salt Ponds	_____	_____
Land Containing Shellfish	_____	_____
Fish Runs	_____	_____
Land Subject to Coastal Storm Flowage		

Inland Wetlands		
Bank (lf)	_____	_____
Bordering Vegetated Wetlands	_____	_____
Isolated Vegetated Wetlands	_____	_____
Land under Water	3,200 s.f.*	Permanent
Isolated Land Subject to Flooding	_____	_____
Bordering Land Subject to Flooding	_____	_____
Riverfront Area	_____	_____

***While the alterations identified above pertain to the HDD trenchless crossing work beneath the river, the Charles River is also an anadromous/catadromous fish run.**

D. Is any part of the project:

1. proposed as a **limited project**? X Yes ___ No; if yes, what is the area (in sf)? **~3,200**
2. the construction or alteration of a **dam**? ___ Yes X No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? __ Yes X No
4. dredging or disposal of dredged material? ___ Yes X No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an Outstanding Resource Water (ORW) or an Area of Critical Environmental Concern (ACEC)? ___ Yes X No
6. subject to a wetland's restriction order? ___ Yes X No; if yes, identify the area (in sf):
7. located in buffer zones? X Yes ___No; if yes, how much: **~0.73 ac (paved roads)**

E. Will the project:

1. be subject to a local wetland's ordinance or bylaw? X Yes **(Boston)** ___ No
2. alter any federally protected wetlands not regulated under state law? __Yes X No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits-

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? _X_ Yes __ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? _X_ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands: **See Attachment F.**

B. Does the project require a new or modified license or permit under M.G.L.c.91? X Yes __ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current **0.8 ac*** Change **0** Total **0.8 ac**

Refers to area of work in previously authorized filled tidelands predominantly within existing public roadways for which a license or license amendment is not required. All activities for which a new waterways license is required are Water-dependent as such term is defined at 310 CMR 9.12. See below for additional detail.

Portions of the proposed underground transmission line duct bank installations will occur predominantly in existing roads where utility infrastructure presently exists within previously authorized filled tidelands. These areas total approximately 0.8 acres, assuming an approximately 4-foot-wide duct bank. Within Chapter 91 jurisdiction, these transmission line installation activities represent a Minor Project Modification pursuant to 310 CMR 9.22, and do not require an application for a license or license amendment. For these activities, the Proponent anticipates submitting a notification of Minor Project Modification to the MassDEP Waterways Regulation Program.

Installation of the underground transmission line duct bank across MassDCR's Magazine Beach property and beneath the Charles River using a trenchless crossing

technique, pursuant to 310 CMR 9.05(1), are activities requiring a Waterways License, for which the Proponent will submit a Water-dependent license application to MassDEP Waterways Regulation Program. The extent of this activity within Chapter 91 jurisdiction, total approximately .08 acre.

If yes, how many square feet of solid fill or pile-supported structures (in sf)? **No new fill or pile-supported structures are proposed within Chapter 91 jurisdiction.**

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:_____
Area of filled tidelands covered by buildings:
For portions of site on filled tidelands, list ground floor uses and area of each use:
Does the project include new non-water-dependent uses located over flowed tidelands? Yes ___ No __
Height of building on filled tidelands:

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks. **N/A (underground transmission line)**

D. Is the project located on landlocked tidelands? X Yes __ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize, or mitigate any adverse impact:

The Project consists of a transmission line that will be installed entirely underground, predominantly in public roads where dense utilities presently exist. Portions of the transmission line will be installed in landlocked tidelands. The altered areas will be restored to their preexisting condition following construction. Adding the new underground transmission line(s) does not change the characteristics nor the use of these areas. Therefore, there will be no impact on the public's right to access, use and enjoy jurisdictional tidelands.

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes _X_ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize, or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? Yes __ No X; *(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)*

G. Does the project include dredging? ___ Yes X No **(HDD beneath the Charles River)**; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both ____
What is the proposed dredge volume, in cubic yards (cys) _____
What is the proposed dredge footprint ____length (ft) ___width (ft)____depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No__; if yes, ___ sq ft
Outstanding Resource Waters Yes__ No__; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes__ No__; if yes __ sq ft

If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?

If no to any of the above, what information or documentation was used to support this determination?

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

Sediment Characterization

Existing gradation analysis results? __Yes ___No: if yes, provide results.

Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___Yes ____No; if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___

Unconfined Ocean Disposal ___

Confined Disposal:

Confined Aquatic Disposal (CAD) ___

Confined Disposal Facility (CDF) ___

Landfill Reuse in accordance with COMM-97-001 ___

Shoreline Placement ___

Upland Material Reuse____

In-State landfill disposal____

Out-of-state landfill disposal ____

(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___Yes X No **(the Project is located outside the Coastal Zone)**; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? __ Yes _X_ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____Will the project require an increase in that withdrawal? ___Yes ___No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___No. If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)	_____	_____	____	____
Capacity of water treatment plant (gpd)	_____	_____	____	____

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?

3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities, and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____

	Existing	Change	Total
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))?__Yes X No; if yes, specify, in quantitative terms:

C. Does the project require any state permits related to **state-controlled roadways**? X Yes __ No; if yes, specify which permit: **MassDOT Permit(s) to Access State Highway, MassDCR Construction Access Permit(s).**

D. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	**N/A**	**N/A**	**N/A**
Number of vehicle trips per day	**N/A**	**N/A**	**N/A**
ITE Land Use Code(s):*	**N/A**	**N/A**	**N/A**

***The Project involves underground electric infrastructure and will not result in increased traffic.**

B. What is the estimated average daily traffic on roadways serving the site? **N/A**

	Roadway	Existing	Change	Total
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

E. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement: **The Project will not permanently impact traffic, transit, or transportation facilities. Temporary impacts will occur during construction but will be mitigated through implementation of TMPs and other requirements that may be prescribed by MassDOT, MassDCR and the municipalities during permitting. The altered roadways will be restored to their preexisting condition or better in consultation with the municipalities and state agencies having jurisdiction.**

F. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site? **N/A; the Project involves underground electric infrastructure and will not result in increased traffic.**

G. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? X Yes __No; if yes, describe if and how the project will participate in the TMA: **N/A**

H. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? X Yes ____ No; if yes, generally describe: **The proposed transmission lines will cross MBTA rail facilities in Somerville, Cambridge and Boston including the Grand Junction Railroad Corridor between Vassar Street and Waverly Road in Cambridge and Broadway in Cambridge, Red Line Subway Tunnel on Main Street in Cambridge, and the Green Line Extension next to Prospect Street in Somerville (private development**

site). The transmission line installation work in these areas will be conducted using trenchless construction techniques; regarding the Red Line Subway Tunnel, the transmission line will be installed above this MBTA facility in the existing roads using conventional open cut trenching techniques.

I. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)? **N/A**

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

The Project will not permanently impact traffic, transit, or transportation facilities. Eversource will work closely with the affected municipalities and state agencies to develop TMPs during construction. Temporary Traffic Control Plans ("TTCP's") will also be developed consistent with the Federal Highway Administration ("FHWA") Manual of Uniform Traffic Control Devices for Streets and Highways and the MassDOT "Work Zone Safety" publication for Temporary Traffic Control Standards. Eversource will also closely coordinate with local officials and abutting property owners and businesses. Topics to be addressed in the TMP will likely include:

- **Width and location of the work zone to minimize impacts to all roadway users;**
- **Work schedule and duration of lane closures, road closures, or detours (where applicable) and details of notification to abutters, including posting on the Project website and use of fliers to notify local abutter of traffic routes and the expected duration;**
- **The use of traffic-control devices such as advance warning signs, traffic regulation signs, reflectorized drums and cones, sequential flashers, detour signs, and other protective devices to be placed as shown on plans and as approved by municipalities and state agencies;**
- **Locations where temporary provisions may be made to maintain access to homes and businesses, including specific arrangements made to avoid affecting abutter activities;**
- **Routing and protection of pedestrian and bicycle traffic;**
- **Maintenance of public transit service (MBTA buses, TMA shuttles etc.);**
- **Communication with adjacent businesses and property owners, to limit impacts such as critical product deliveries or access;**
- **Notification to municipal officials, state agencies, local businesses, and the public of the timing and duration of closed curbside parking spaces and travel way restrictions; and**
- **Coordination between Eversource and police and fire departments to ensure that emergency access through the route is always provided.**

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? X Yes ___ No; if yes, specify which permit: **MassDOT and MassDCR Access Permits, MBTA License**

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site: **Existing transportation facilities include state roadways (Memorial Drive, Soldiers Field Road, I-90 ramps, River Street Bridge, Anderson Bridge, Prospect Street Bridge in Somerville), and MBTA bus, subway, and rail facilities. The Project does not propose any transportation facilities.**

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____
2. Cutting of living public shade trees (number)?**To be determined during detailed engineering design and in consultation with municipalities and local Tree Wardens.**
3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

Temporary impacts will occur during construction but will be mitigated through implementation of TMPs. Topics to be addressed in the TMP are as described in the preceding section.

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? X Yes ____No; if yes, specify, in quantitative terms:**301 CMR 11.03(7)(b)4 - Construction of electric transmission lines with a Capacity of 69 or more kV, provided the transmission lines are one or more miles in length along New, unused, or abandoned right of way. This threshold applies to those portions of the transmission lines not located on roads or railroad corridors (e.g., Magazine Beach and the trenchless crossing of Charles River, crossing through the MassDOT Allston Multimodal Project Site, other private properties, etc.). Collectively, these areas total approximately 1.15 miles.**

B. Does the project require any state permits related to **energy**? X Yes ___ No; if yes, specify which permit: **DPU and EFSB approval under M.G.L. C. 164 Secs. 72 and 69J.**

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	**N/A**	**N/A**	**N/A**
Length of fuel line (in miles)	**N/A**	**N/A**	**N/A**
Length of transmission lines (in miles)	**0**	**~8.3**	**~8.3**
Capacity of transmission lines (in kilovolts)	**115**	**115**	**115**

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? X Yes ___No; if yes, please describe: **Approximately 8.3 miles of new underground 115-kV transmission line will be installed predominantly within existing right of ways comprised of public roadways or MBTA railroad corridors. New right of ways/easements are limited to the HDD crossing of the Charles River, Magazine Beach area, the MassDOT Allston Multimodal Project Site, Volpe Center Site and certain private properties in Cambridge and Somerville. Collectively these areas total approximately 1.15 miles.**

D. Describe the project's other impacts on energy facilities and services: **See narrative provided in Attachment A, Section 3.0.**

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans, and policies for enhancing energy facilities and services: **Please refer to the Project Purpose and Need analysis provided in Attachment A, Section 3.0.**

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ___ Yes X No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? __Yes X No; if yes, attach correspondence. **A copy of this ENF has been forwarded to the MHC and BUAR for review and comment.**

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? X Yes ___ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes X No; if yes, please describe: **See discussion below and Attachment I.**

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? X Yes __ No; if yes, does the project involve the destruction of all or any part of such archaeological site? X Yes __ No; if yes, please describe:

The proposed transmission line routes associated with the Project cross through the mapped boundaries of two archaeological sites. More specifically, the Preferred Routes associated with the Project will cross through 19-MD-172 and the Noticed Alternative Routes will proceed through 19-MD-173. As previously noted, Eversource does not intend to seek permits for the Notice Alternative Routes, at this time. See Attachment I for additional information.

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

The Preferred Routes will cross through the following historic properties:

MIT Campus (CAM.P)
Charles River Basin Historic District (CAM.AJ)
Memorial Drive (CAM.930)
19-MD-172
River Street Bridge (CAM.923)
Volpe Center (CAM.BH)
Boston Woven Hose and Rubber Complex (CAM.AK)
Bennett Street Industrial Area (SMV.CC)

The Noticed Alternative Routes will proceed through the following historic properties:

Central Square Historic District (CAM. BC)
Harvard Square Historic District (CAM.AB)
Charles River Basin Historic District (CAM.AJ)
Memorial Drive (CAM.930)
Lars Anderson Bridge (CAM.926)

Harvard Business School (BOS.JL)
Saint Anthony's Area (BOS.JM)
Franklin Street (BOS.LB)
19-MD-173
19-MD-172
MIT Campus (CAM.P)
River Street Bridge (CAM.923
Volpe Center CAM.BH)
Union Square Commercial District (SMV.G)

Additional historic properties are along the proposed transmission line routes, but not intersected by the proposed routes. All historic properties along or intersected by the proposed routes are listed in Tables 1 and 2 in Attachment I.

Regarding potential affects to archaeological resources, the Project will be within existing roadways and previously disturbed areas. An archaeological investigation with soil cores was performed and noted previous disturbance and fill and concluded no significant impacts to archaeological resources are anticipated. A report on archaeological investigations of the proposed routes has been provided under separate cover along with this ENF to the Massachusetts Historical Commission, due to confidentiality requirements associated with such information and data.

Regarding potential visual effects to historic properties, because Eversource is proposing an underground transmission line within existing roadways and previously disturbed areas, there will be no visual impact to historic properties. Further, where there are river crossings, the lines will either be buried within the roadway deck on the existing bridges (e.g., River Street Bridge) or via a trenchless crossing below the bed of the Charles River. In no circumstances are lines proposed to be attached to the sides or bottom of bridges. The New Substation site in Kendall Square will also be installed predominantly underground and within the development footprint of the separate BXP redevelopment project. Equipment modifications to existing substation facilities in Boston, Somerville and Cambridge is limited to areas within the existing substation fence lines and will not result in any visual effects to historic properties.

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

Given the Project's installation underground and predominantly within roadways (including within existing paved roadway deck of the River Street Bridge) and previously developed areas, there is unlikely to be any adverse impacts on listed or eligible historic sites. Nevertheless, the Project will undergo review by the MHC under 950 CMR 71. This process is being initiated with the filing of this ENF with the MHC. Potential effects, if any, to listed or eligible historic and archaeological resources will be avoided or mitigated in compliance with MHC regulations and policies.

CLIMATE CHANGE ADAPTATION AND RESILIENCY SECTION

This section of the Environmental Notification Form (ENF) solicits information and disclosures related to climate change adaptation and resiliency, in accordance with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency (the "MEPA Interim Protocol"), effective October 1, 2021. The Interim Protocol builds on the analysis and recommendations of the 2018 Massachusetts Integrated State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), and incorporates the efforts of the Resilient Massachusetts Action Team (RMAT), the inter-agency steering committee responsible for implementation, monitoring, and maintenance of the SHMCAP, including the "Climate Resilience Design Standards and Guidelines" project. The RMAT team recently released the RMAT Climate Resilience Design Standards Tool, which is available here.

The MEPA Interim Protocol is intended to gather project-level data in a standardized manner that will both inform the MEPA review process and assist the RMAT team in evaluating the accuracy and effectiveness of the RMAT Climate Resilience Design Standards Tool. Once this testing process is completed, the MEPA Office anticipates developing a formal Climate Change Adaptation and Resiliency Policy through a public stakeholder process. Questions about the RMAT Climate Resilience Design Standards Tool can be directed to rmat@mass.gov.

All Proponents must complete the following section, referencing as appropriate the results of the output report generated by the RMAT Climate Resilience Design Standards Tool and attached to the ENF. In completing this section, Proponents are encouraged, but not required at this time, to utilize the recommended design standards and associated Tier 1/2/3 methodologies outlined in the RMAT Climate Resilience Design Standards Tool to analyze the project design. However, Proponents are requested to respond to a user feedback survey on the RMAT website or to provide feedback to rmat@mass.gov, which will be used by the RMAT team to further refine the tool. Proponents are also encouraged to consult general guidance and best practices as described in the RMAT Climate Resilience Design Guidelines.

Climate Change Adaptation and Resiliency Strategies

I. Has the project taken measures to adapt to climate change for all of the climate parameters analyzed in the RMAT Climate Resilience Design Standards Tool (sea level rise/storm surge, extreme precipitation (urban or riverine flooding), extreme heat)? X Yes __ No

Note: Climate adaptation and resiliency strategies include actions that seek to reduce vulnerability to anticipated climate risks and improve resiliency for future climate conditions. Examples of climate adaptation and resiliency strategies include flood barriers, increased stormwater infiltration, living shorelines, elevated infrastructure, increased tree canopy, etc. Projects should address any planning priorities identified by the affected municipality through the Municipal Vulnerability Preparedness (MVP) program or other planning efforts, and should consider a flexible adaptive pathways approach, an adaptation best practice that encourages design strategies that adapt over time to respond to changing climate conditions. General guidance and best practices for designing for climate risk are described in the RMAT Climate Resilience Design Guidelines.

A. If no, explain why.

B. If yes, describe the measures the project will take, including identifying the planning horizon and climate data used in designing project components. If applicable, specify the return period and design storm used (e.g., 100-year, 24-hour storm). **Please refer to the narrative provided in Attachment A, Section 7.0 for a discussion of climate change adaptation and resiliency measures implemented by Eversource for the Project.**

C. Is the project contributing to regional adaptation strategies? X Yes __ No; If yes, describe.

The New Substation and associated underground transmission and distribution lines, helps ensure the region has a flexible electric grid that can accommodate clean electric generation sources now and in the future. For example:

- **A resilient transmission network provides redundancy to help ensure system reliability and bring green energy from the generation source to where and when it is needed.**
- **Flexible distribution networks help manage changing levels of local distributed generation helping to reduce the risk of overloading distribution equipment.**
- **Energy efficiency and demand response efforts help existing users contribute to the overall effort.**

A strong electrical transmission grid is also vital to the safety, security, and economic prosperity of the region. The transmission system serves a critical role to ensure that electricity flows with a high degree of reliability from wherever the power is generated to where it is needed. The Project will provide additional electric supply to meet the growing needs of the area and will also serve to reinforce the transmission system serving the region.

II. Has the Proponent considered alternative locations for the project in light of climate change risks? X Yes ___ No

A. If no, explain why.

B. If yes, describe alternatives considered. **Please refer to the narrative provided in Attachment A, Section 4.0.**

III. Is the project located in Land Subject to Coastal Storm Flowage (LSCSF) or Bordering Land Subject to Flooding (BLSF) as defined in the Wetlands Protection Act? X Yes ___ No

If yes, describe how/whether proposed changes to the site's topography (including the addition of fill) will result in changes to floodwater flow paths and/or velocities that could impact adjacent properties or the functioning of the floodplain. General guidance on providing this analysis can be found in the CZM/MassDEP Coastal Wetlands Manual, available here.

There is an area of Bordering Land Subject to Flooding ("BLSF") along the Charles River at the Magazine Beach HDD crossing. During the 100-year flood event, the Charles River dam operates pumps which maintain the water elevation at 3.5 feet, approximately 0.5 feet below the 100-year flood and 0.3 feet below the elevation which could cause potential damage to adjacent properties. The extent of the 100-year flood zone is largely confined within the riverbanks and does not extend onto adjacent areas, except for lower elevations on and adjacent to MassDCR's Magazine Beach property. The balance of the Project area is not located in the 100-year floodplain.

Regarding the Magazine Beach area, the proposed transmission line will be installed several feet below the surface of the land and potentially up to 30-feet below the bed of the Charles River. The surface topography within the BLSF will not be altered or otherwise re-graded or filled because of this activity. Moreover, the below-grade installation will also not cause any changes to floodwater flow paths that could impact adjacent properties.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   Boston Globe
   Boston Herald
   Cambridge Chronicle
   Somerville Times

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

12/10/21	Chris Newhall	12/10/21	M. D. Hf
Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)

Christopher Newhall
NSTAR Electric Company d/b/a Eversource Energy
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Attachment A

Project Description

ATTACHMENT A – PROJECT DESCRIPTION

1.0 Introduction

This Environmental Notification Form ("ENF") is being submitted on behalf of NSTAR Electric Company d/b/a Eversource Energy ("Eversource") for the proposed Greater Cambridge Energy Program (the "Project"). The proposed Project will ensure the reliability of Eversource's transmission system in Cambridge. The proposed reinforcements consist of five projects, which together constitute the Greater Cambridge Energy Program. The five projects are:

(1) The Transmission Lines Project: the construction of eight new 115-kilovolt ("kV") underground transmission lines that will be housed in a total of five new duct banks (the "New Lines"), totaling approximately 8.3 miles.

(2) The Transmission Substation and **(3)** the Distribution Station Projects: a new 115-kV transmission substation and a new 14 kV distribution substation, which will be collocated in an underground vault between Broadway and Binney Streets in Cambridge ((2) and (3), collectively, the "New Substation" or "Station 8025").

(4) The Remote Stations Modifications Project: ancillary modifications to existing substation facilities in the Cambridge, Somerville, and the Allston/Brighton section of Boston (together with (1), (2) and (3) the "Project").

(5) The Distribution Lines Project: a set of 36 distribution feeders and associated duct banks and other equipment that connects the New Substation to the existing distribution network in the public ways immediately adjacent to the New Substation.

Construction of the Project will serve the public interest because it is designed to address both the need for additional capacity to reliably supply customers in the Project area, as well as the reliability issues surrounding the potential for existing transmission line overloads that would result in a loss of service to customers in the Project area. Specifically, the proposed Project will result in an integrated, long-term solution that will provide the infrastructure needed to support the rapidly growing current and projected load requirements and will maintain reliable energy supply to customers in the area, including many large office and laboratory uses.

As noted above, the proposed Project entails the construction of approximately 8.3 miles of new underground transmission line duct banks located primarily in public roadways and all beginning at the New Substation in Cambridge. Two new transmission line duct banks will connect to the Eversource Brighton Substation #329 located in the Allston/Brighton area of Boston, for a total of 5.9 miles, with one duct bank crossing the Charles River using an existing bridge (River Street Bridge) and the other using a Horizontal Directional Drill ("HDD") trenchless crossing technique. One new transmission line duct bank, 1.3 miles in length, will connect to the Eversource Somerville Substation #402, while another new transmission line duct bank, 0.6 miles in length,

will connect to the Eversource East Cambridge Substation #875. The final new transmission line duct bank, a total of 0.5 miles, will tie into the existing Eversource East Cambridge to Putnam 115-kV underground transmission line located in Memorial Drive.

The Project also includes construction of the New Substation and modifications to five existing substation facilities located in Cambridge, Boston, and Somerville. All improvements to the existing substation facilities will occur within the existing fence lines. To minimize the size and footprint of the New Substation, 115-kV gas-insulated switchgear ("GIS") will be used in a breaker-and-a-half configuration totaling twenty-two 115-kV breakers that would provide both fault isolation and switching capability, connecting the new 115-kV transmission lines to the station. The New Substation would include three 90 MVA 115/14-kV transformers and associated switchgear, with the option to add a fourth transformer and associated switchgear for use in the future when the substation load is projected to exceed 90% of the substation's 180 MVA of firm capacity. At full build out, the firm capacity of the New Substation would be 180 MVA, expandable to 270 MVA.

Figure 1, USGS Locus Map and Figure 2, Aerial Locus Map in Attachment B, depict the limits of the proposed Project, including the proposed underground transmission line routes, the location of the New Substation in Kendall Square and the existing remote substations.

2.0 Existing Conditions in Project Area

The Project area encompasses portions of the cities of Boston, Cambridge, and Somerville. Overall, the Project area generally consists of densely developed, urban neighborhoods that include residential, commercial and pockets of industrial areas. Eversource customers exist across all or some of the following City of Cambridge neighborhoods: East Cambridge, Area 2/MIT, Cambridgeport, Riverside, West Cambridge, Mid-Cambridge, Wellington-Harrington, and the Port. Eversource's customers include many large biotechnology and laboratory facilities, a multitude of retail, hospitality and office customers, educational institutions, medical facilities, and residences. As an example, Kendall Square, which straddles several of the City's neighborhoods, has been transformed from a former industrial district to one of the world's leading centers for biotech research and innovation. Attendant with this growth, Kendall Square has seen the proliferation of hotels, restaurants, shops, and housing that serve the area's cluster of life science and technology firms, the MIT community, and surrounding neighborhoods. Major new developments include Cambridge Center, Cambridge Research Park, Technology Square, and One Kendall Square, as well as several large lab and office buildings along Binney Street. The Project Area is home to some of the largest employers in Cambridge, including MIT, Biogen, Novartis, Sanofi Aventis, Takeda Pharmaceuticals, the Cambridge Innovation Center, the U.S. Department of Transportation, Google, Hubspot, the Broad Institute, Akamai Technologies, Moderna, and Pfizer.

In addition to the above, the primary campuses and athletic facilities of Harvard and MIT are located within the Project area, on both sides of the Charles River. There are several MBTA commuter rail routes (Fitchburg Line, Framingham/Worcester Line), subway routes (Red Line and

Green Line), public transportation bus routes and multimodal travel ways (e.g., multiuse pathways and bicycle lanes). Sensitive receptors including schools, daycare facilities, places of worship, and so forth are present throughout the Project area. The Charles River and its associated wetlands, Riverfront Area, and floodplain are the predominant environmental resource areas located within the Project area, along with filled and flowed tidelands regulated under the Massachusetts Public Waterfront Act ("Chapter 91"). There are areas of protected public open space (land protected by Article 97 of the Massachusetts Constitution) within the Project area, including the Massachusetts's Department of Conservation and Recreation's ("MassDCR") Charles River Reservation, Christian A. Herter Park ("Herter Park"), Magazine Beach, Longfellow (Riverbend) Park, other municipal properties (e.g., Riverside Press Park) and multi-use pathways (Dr. Paul Dudley White Path, Grand Junction Railroad). With few exceptions, most of the Project area contains Environmental Justice ("EJ") Populations, as such term is defined under Massachusetts law.

3.0 Project Purpose and Need

The Project is designed to be an integrated, long-term solution to address reliability needs in areas of the City of Cambridge that are experiencing rapid economic development and sustained load growth. Eversource must address the deficiency in the East Cambridge Substation firm capacity, mitigate the potential for existing transmission line contingencies to cause outages to the entire Project area for prolonged periods, and resolve transmission line overloads that would require customer load shedding in the Project area under certain foreseeable contingencies. While the loss of service risks from certain N-1-1 transmission contingencies are a current reliability concern, transmission line overloads from certain N-1 transmission contingencies also emerge as early as 2022. These projected overloads and associated loss of service risks increase over the ten-year forecast period. At the distribution stations, given the current load and expected load growth, there is an elevated risk of substation failure during emergency conditions due to transformer overloads beginning in 2022. These system reliability needs are significant, and have already required near-term interim measures, while still requiring the immediate resolution of a long-term solution to address reliability.

4.0 Alternatives Analyses

4.1 Project Alternatives

In accordance with EFSB precedent, Eversource evaluated various Project alternatives to address the reliability and capacity needs within the Project area to determine the approach that best balance's reliability, cost, and environmental impact. These include a no-build alternative, wires alternatives, and non-wires alternatives ("NWAs"). Eversource dismissed the no-build alternative because it would not address the identified need for the Project. Similarly, no feasible or practical NWAs were identified that could reliably and economically satisfy the need. Eversource's analysis showed that new generation (either photovoltaic ("PV") or conventional), with or without a contribution from energy efficiency ("EE"), demand response ("DR") and battery storage, would be impractical and infeasible to meet the identified need. Regarding the wire alternative to the

Project, Eversource determined that such an alternative is inferior from a reliability, cost, and environmental-impact perspective. Other wires options were not considered because they did not result in sufficient substation firm capacity close to the Load Pocket (see below).

4.1.1 No-Build Alternative

Under the no-build alternative, Eversource evaluated certain interim operational measures (e.g., adding transformer capacity and other related ancillary work at Putnam Substation #831 and Somerville Substation #402). However, these interim solutions are limited in their ability to negate the need during the planning horizon and thereafter. The interim solutions merely defer the above-described need, and the underlying need would still require addressing by 2028. Beyond those interim measures, Eversource would not pursue any new facilities or resources in the Project area, but instead would continue to rely upon the existing system configuration, while maintaining and operating it in a prudent manner.

In addition to insufficiently addressing the distribution need, this approach was dismissed from consideration because it would not address the critical transmission reliability and substation capacity needs. If these needs are left unaddressed, there would be no capacity to serve known new customer loads and, in fact, customer load in Cambridge would need to be shed under certain contingencies to eliminate equipment overloads. The result is that Eversource would be non-compliant with established industry and internal reliability standards.

4.1.2 Wires Alternatives

Eversource assessed several wires alternatives to address the identified transmission reliability and substation capacity needs. From these analyses, Eversource selected Alternative 1 (the Project) and Alternative 2 for further analysis. Other wires options were not considered further because they did not, in part, result in sufficient substation firm capacity close to the Load Pocket and/or required substantially more distribution infrastructure, and imposed greater community and other impacts as compared to Alternatives 1 and 2.

As previously described, the Project involves construction of: (1) a new substation in East Cambridge; (2) 8.3 miles of new underground transmission line duct banks; and (3) related upgrades at five existing substations (Putnam, East Cambridge, Brighton, North Cambridge, and Somerville). This alternative requires a bridge crossing and an HDD waterway crossing of the Charles River in Cambridge and Boston. The proposed transmission line routes associated with this alternative are consistent with those selected as the Preferred Routes for the Project.

Alternative 2 involves construction of approximately 17.6 miles of new underground transmission line duct banks and related upgrades at the same five substations referenced above, as shown on Figure 5. Alternative 2 requires construction of two new substation facilities, one adjacent to the existing Prospect Substation #819 in Cambridge and the other within existing Company-owned property on Linwood Street in Somerville. This alternative requires a bridge crossing and an HDD waterway crossing of the Charles River in the same location referenced above for the Project, plus

an HDD crossing of the Mystic River in Everett and Somerville. The proposed transmission line routes associated with this alternative were identified using a combination of desktop analysis, field reconnaissance and preliminary constructability assessments of complex crossings (e.g., waterways, rail, etc.). Wherever possible, Eversource relied upon the Preferred Route segments that are associated with the Project to route Alternative 2 between the common substation facilities where connections would occur.

Eversource compared the Project and Alternative 2 with respect to reliability, environmental impact, and cost.

Reliability Comparison

The Project has several advantages over Alternative 2 from a reliability perspective:

- The Project provides solutions to the transmission system violations that must be addressed and permanently eliminates the radial configuration of the transmission supply into East Cambridge. Specifically, the Project mitigates the potential loss of load during an N-1-1 contingency, upwards of 367 MVA in 2030. The Project provides the needed capacity and is strategically located near the load center. The Project also allows for easier expansion to accommodate long-term load growth. In comparison, while Alternative 2 provides similar increase in substation capacity to the Project, it requires construction of two distribution substations instead of one, with one of the substations far from the load center and is therefore less beneficial in terms of community and environmental disruptions, which makes system expansion more complex.

- Alternative 2 results in higher loadings on several 115-kV lines and requires additional transmission line upgrades to address all the transmission overload issues. Alternative 2 does not provide a transmission supply from additional sources and the Putnam and East Cambridge Load Pocket would continue to be radially served. Alternative 2 also limits the loading at Putnam and East Cambridge to 290 MVA, which is below their firm capacity of 360 MVA, due to cable capacity limits between North Cambridge and Putnam under N-1-1 conditions.

- The Project improves the distribution reliability by reducing distribution feeder lengths. There is an approximately 69% reduction in the length of the distribution conduit and approximately 81% less cable associated with the Project as compared to the amount of distribution cables needed for Alternative 2. Comparatively, the Project would result in fewer line losses, less exposure to dig-ins and faults. In addition, the second substation in Alternative 2, at Linwood Street in the City of Somerville, is further away from the load center, which will make it challenging for Alternative 2 to match the capacity supply capabilities of the Project at a comparable cost because the distance requires more expensive underground distribution facilities and the path from the Linwood Street site to the Project Area is more constrained than from the Project proposed site (which is within the Load Pocket).

- Alternative 2 has a risk of more severe customer outages during construction because part of the alternative requires construction at an existing substation. The Prospect Street 115/14-kV Substation will add up to 150 MVA of station capacity to the Mystic-Brighton 115-kV lines 329-510 and 329-511. To support both the new Prospect Street 115/14-kV Station and the existing Prospect Street Substation #402, it would be necessary to replace the Brighton to Somerville 329-510/511 lines with new cross-linked polyethylene ("XLPE") cables.

- The Project also establishes a network for the East Cambridge area substations that provides more diverse paths for the Kendall generation's output to get on the area transmission network. For Alternative 2, Kendall generation would remain radial through East Cambridge and Putnam Substations. Under outage conditions of the North Cambridge – Putman lines or Putman – East Cambridge lines, the Kendall generation can supply its output to the transmission network in the Project, whereas the Kendall generation would need to be offline during these outage conditions in Alternative 2.

- Alternative 2 establishes a 115-kV substation at Prospect Street in Cambridge and a new 115-kV substation at Linwood Street in Somerville. The 115-kV lines 329-510/511 between Mystic and Somerville need to be tied into the Linwood Station so that the Linwood Station is not radial. These lines were found to overload under N-1-1 conditions and need to be rebuilt with new XLPE cables with higher ratings. In addition, the 115-kV lines between the Brighton Station and the Prospect Street Station were found to overload under N-1-1 conditions if the same ratings of the new Brighton – Station #8025 lines in the Project were assumed. As a result, higher ratings are required for the new Brighton - Prospect Street lines.

For the foregoing reasons, Eversource determined that the Project is superior to Alternative 2 from a reliability perspective.

Environmental Impacts Comparison

A desktop analysis of key environmental elements for both wires alternatives was conducted to compare the potential environmental impacts of each. Table 4-1 presents a desktop analysis of key environmental elements for both wire alternatives.

Table 4-1 Wires Alternatives Potential Environmental Impact Comparison Summary

Analyzed Criteria	Wires Alternative 1 (Project)	Wires Alternative 2
Affected Municipalities	3 (Cambridge, Somerville, Boston)	4 (Cambridge, Somerville, Boston, Everett)
Total Length of Route (miles)	8.3	17.6
Number of Residential Units Along Route	2,592	6,159
Number of Commercial / Industrial Units Along Route	396	1,217
Number of Sensitive Receptors Along Route	17	52
Number of Historic Resources Along Route	44	60
Wetland Resource Areas, Buffer Zones and Tidelands Crossed by the Route (linear feet)	10,364	37,891
Number of MassDEP Listed Contamination Sites Along Route	88	73
Length of Article 97 Lands Crossed by the Route (linear feet)	885	2,367
Number of Public Shade Trees Along Route	1,403	2,584
Number of Complex Crossings (e.g., railroad, waterway, highway)	10	15

As shown in Table 4-1, the Project has less potential environmental impacts for all but one of the environmental parameters that were compared (Number of MassDEP Listed Contaminated Sites Along Route). This is not surprising because Alternative 2 requires the installation of more than 9 miles of additional underground transmission line duct bank relative to the Project, two major waterway crossings, construction of two new substations (as opposed to the one for the Project), and work in an additional community (Everett), among other factors. Based on this comparison, Eversource concluded that the Project is superior to Alternative 2 regarding the potential for minimizing environmental impacts.

Cost Comparison

Eversource prepared cost estimates for the wires alternatives using a process consistent with ISO-NE procedures. The planning grade estimate (-25%/+25%) for the Project is $1,407.1 million; an order of magnitude estimate (-50%/+200%) for Alternative 2 is $1,884.4 million. The higher cost anticipated by Eversource for Alternative 2 is due principally to this additional transmission line infrastructure. The Project was therefore found to be superior to Alternative 2 in terms of cost.

Conclusion on Wires Alternatives

The Project is superior to Alternative 2 because it is a more reliable solution, has fewer environmental impacts, and is less costly. The Project is more reliable because it is closer to the Load Pocket that drives the need for the Project and is a more robust solution that provides additional capacity to address the identified need and is expandable to accommodate future growth and reliability needs outside the forecast horizon. The Project is better in minimizing environmental impacts because Alternative 2 requires the installation of nearly 18 miles of underground transmission line duct banks, with the associated community disruption, relative to the Project which requires only 8.3 miles of underground line duct banks, and it requires three major waterway crossings (the Project only has 2), construction of two new substations (as compared to only one for the Project), and construction work in an additional community (Everett), among other factors. Lastly, the Project is substantially more cost-effective because it is almost $500 million (or 25%) less expensive than Alternative 2.

4.1.3 Non-Wires Alternatives

Eversource considered four (4) technologies for the NWA analysis: (1) distributed generation ("DG"), (2) battery energy storage systems ("BESS"), (3) EE/DR, and (4) PV installations. A technically feasible NWA technology is defined as one that could effectively resolve the need with comparable reliability performance and response time as the Project. The fundamental requirement of an NWA solution is that the NWA resource(s) must be able to continue to operate until the failed system element is repaired or until loads decline. Depending on the contingency and the difficulty of addressing it, the time period of an outage for which an NWA would need to be able to address the needs could be several days- or multiple weeks-long (e.g., 30 days).

In summary, demand reducing programs, such as EE and DR, are not deployable to the scale necessary to mitigate the needs addressed by the Project on their own. Neither solar PV nor energy storage alone is feasible due to technical limitations. While demand reducing programs when combined with conventional generation and distributed solar PV could theoretically resolve the East Cambridge Distribution Contingency Case, an additional utility-scale NWA would be required to meet the full NWA injection requirements. However, conventional generation would need to overcome numerous significant challenges, including the necessary development time, land requirements, fuel supply availability, permitting difficulties and infrastructure requirements and therefore would not be practical.

Given their technical and practical inability to solve the identified transmission and distribution contingencies, all NWA solutions were deemed inferior to a wires solution and eliminated from further consideration.

4.2 Transmission Line Route Alternatives

The transmission line routing analysis and procedures used to select the Project depicted on Figures 1 and 2 in Attachment B, is the subject of a Petition to be filed with the EFSB. The EFSB analyses requires a comprehensive routing analysis and detailed comparison of the environmental considerations, cost, and reliability associated with the construction and operation of the Project and Noticed Alternative. A summary of the routing analysis and route comparison conducted by Eversource is provided below. For additional detail please refer to the relevant excerpted sections of the EFSB Petition, including related graphics and supporting data, provided in Attachment K of this ENF. The Noticed Alternative transmission line routes are depicted on Figures 3 and 4 in Attachment B. As previously noted, Eversource does not intend to seek environmental permits and approvals for the Noticed Alternative at this time.

4.2.1 Overview

Eversource's methodology for siting new electric transmission lines, referred to as a "routing analysis," is an adaptive and iterative approach to identify and evaluate possible routes for the proposed Project. The routing analysis identified the top transmission line routes for the Project as the options that best balance the minimization of environmental impacts (including developed and natural environment impacts, and constructability constraints), reliability and cost.

In initiating the routing analysis, Eversource first established routing objectives, which are described in more detail below. The routing analysis methodology presented herein uses previously established approaches for evaluating electric transmission routing options and is a consistent and standard process implemented by Eversource and historically approved by the EFSB.

4.2.2 Routing Analysis Objectives

The goal of Eversource's routing analysis was to identify a cost-effective and technically feasible design that achieved the required transmission system load growth and reliability improvements by interconnecting the specified substations while meeting certain design objectives. These objectives are to:

- Comply with all applicable federal and state statutory requirements, regulations, and policies.
- Achieve a reliable, operable, and cost-effective solution.
- Maximize the reasonable, practical, and feasible use of existing linear corridors (e.g., roadways, railroad) to the extent possible.
- Minimize/avoid potential impacts to the developed and natural environment.
- Minimize/avoid the need to acquire property rights wherever practicable; and
- Maximize the potential for direct routing options over circuitous routes.

4.2.3 Routing Analysis Methodology

Consistent with Eversource's standard methodology, the routing analysis for the Project consisted of the following steps:

- **Identification of Project Study Area:** Focused the routing analysis within the region of the New Substation Site that is located between Broadway and Binney Street at the Kendall Center Blue Garage site in East Cambridge, and existing substation facilities located in the East Somerville neighborhood and the Allston neighborhood of Boston, as well as the Riverside neighborhood of Cambridge. For ease of review and analysis, the overall Project Study Area was then divided into smaller individual Study Areas between specific substation facilities where proposed transmission line interconnections would potentially occur. As described in further detail below, a total of four individual Study Areas were delineated, including: Brighton, Putnam, Kendall, and Somerville.

- **Development of Universe of Routes:** Identified numerous routing options within each individual Study Area between substation facilities including the evaluation of existing linear corridors (e.g., MBTA Grand Junction Railroad, roadways) to develop an initial set of potential routes ("Universe of Routes").

- **Identification of Candidate Routes:** From the Universe of Routes, determined the most viable routes (collectively referred to herein as "Candidate Routes") within each individual Study Area that met the need parameters for the Project and were consistent with the objectives of Eversource's routing analysis.

- **Environmental Analysis:** Compared the potential for environmental (developed and natural) impacts and constructability constraints along the Candidate Routes within each Study Area.

- **Cost Analysis:** Compared the estimated costs for the Candidate Routes.

- **Reliability Analysis:** Compared the reliability of the Candidate Routes.

- **Selection of Routes:** Evaluated the results of the above analyses and identified the top routes and potential route variations within each individual Study Area that best balanced reliability, minimization of environmental impacts, constructability constraints, and cost.

4.2.4 Identification of Transmission Line Routing Study Area

Following the establishment of the routing objectives, Eversource reviewed the geographic area between the New Substation Site proposed in East Cambridge and certain existing Eversource substation facilities where transmission line interconnections would be made, including Prospect Substation #402 in East Somerville, East Cambridge Substations #875 and #800/#850 in the Kendall Square region of Cambridge, Putnam Bulk Substation #381 near the Charles River in the Riverside neighborhood of Cambridge and Brighton Substation #329 on the west side of the

Charles River in the Lower Allston neighborhood of Boston. Collectively, these facilities resulted in a geographic "Project Study Area", as depicted in Figure 6, within which to concentrate the investigation of potential transmission line routes.

The Project Study Area encompasses portions of the cities of Boston, Cambridge, and Somerville. The Project Study Area generally consists of densely developed, urban neighborhoods that include residential, commercial and pockets of industrial areas. The primary campuses and athletic facilities of Harvard and MIT are located within the Project Study Area, on both sides of the Charles River. There are several Massachusetts Bay Transit Authority ("MBTA") commuter rail routes (Fitchburg Line, Framingham/Worcester Line), subway routes (Red Line and Green Line), public transportation bus routes and multimodal travel ways (e.g., multiuse pathways and bicycle lanes). Sensitive receptors including schools, daycare facilities, places of worship, and so forth are present throughout the Project Study Area. The Charles River and its associated wetlands, Riverfront Area, and floodplain are the predominant environmental resource areas located within the Project Study Area, along with filled and flowed tidelands regulated under the Massachusetts Public Waterfront Act ("Chapter 91"). There are areas of protected public open space (land protected by Article 97 of the Massachusetts Constitution) within the Project Study Area, including MassDCR's Charles River Reservation, Christian A. Herter Park ("Herter Park"), Magazine Beach, Longfellow (Riverbend) Park, other municipal properties (e.g., Riverside Press Park) and multi-use pathways (Dr. Paul Dudley White Path, Grand Junction Railroad). With few exceptions, most of the Project Study Area contains EJ Populations, as such term is defined under Massachusetts law. See Section 8.0 below regarding interactions with these EJ communities.

Within each individual Study Area (Brighton, Putnam, Kendall, and Somerville), Eversource looked for existing linear corridors (e.g., existing rail, and roadway corridors) that could potentially facilitate construction of the new underground transmission lines and provide a reasonably direct route between each of the referenced substation facilities, as appropriate. A more detailed description of each individual Study Area is provided in Attachment K.

4.2.5 Transmission Line Route Selection

In accordance with the EFSB's standard of review, Eversource objectively and comprehensively assessed a wide array of potential routes and route variations within the bounds of the Project Study Area and with extensive stakeholder input. Using the routing objectives identified in Section 4.2.2 above, Eversource reviewed U.S. Geological Survey ("USGS") maps, utility and roadway survey data, Massachusetts Geographic Information System ("MassGIS") data and aerial photography, as well as field reconnaissance to identify a Universe of Routes that could potentially support new underground transmission lines between the New Substation facility and the four aforementioned existing substation facilities, including the utilization of existing linear corridors. Notably, the common gateway for all the proposed transmission line routes begins at the entrance to the New Substation facility on Broadway Avenue in Cambridge, with potential routes heading east or west from the New Substation depending on the locations of existing

substation facilities to which the New Lines propose to interconnect. From a routing perspective, bringing five new underground transmission line duct banks to a single interconnection point presents several challenges, as is described in further detail in Attachment K.

A total of 79 route combinations were considered, including 42 routes within the Brighton Study Area, 5 routes within the Putnam Study Area, 14 routes within the Kendall Study Area, and 18 routes within the Somerville Study Area, including several discrete route variations across certain parcels of land. By means of a screening process described in further detail in Attachment K, Eversource determined that 57 of the original 79 routes were inappropriate for further consideration. The remaining 22 routes were retained for scoring/ranking and more detailed analysis as Candidate Routes. At the conclusion of this process, the Company identified the top two routes within the Putnam, Kendall, and Somerville Study Areas and the top four routes within the Brighton Study Area that best balance environmental impacts, costs and reliability and enable Eversource to meet the identified need. A more detailed examination and comparison of these top routes was then conducted. Following that more detailed examination, the Company identified and confirmed the Preferred Routes within each Study Area. Collectively, the Preferred Routes will best balance the applied route selection criteria, along with considerations of reliability and cost. The Preferred Routes are summarized on the following table and depicted on Figures 1 and 2. For ease of review, the Preferred Routes are also depicted individually on Figures 7 through 11 in Attachment B.

Table 4-2 Preferred Routes

Study Area	Preferred Route Name	Communities Crossed by Routes
Putnam	P13 (Ames Street)	Cambridge
Kendall	K5A (Linskey Way)	Cambridge
Somerville	S1A (Hampshire Street/D2 Site)	Cambridge, Somerville
Brighton (East)	B2A (Magazine Beach HDD)	Cambridge, Boston
Brighton (West)	B29F (River Street Bridge)	Cambridge, Boston

In addition to the Preferred Routes noted above, Eversource also analyzed minor route variations to Preferred Routes S1A and B2A. Route Variation S1 provides an alternate route across the D-2 Block-Union Square Project development site ("D2 Site") in Somerville as it approaches the Somerville Substation. Route Variation B2AN is a variation of route B2A to address the current options for the Massachusetts Department of Transportation ("MassDOT") Allston Multimodal

Project Site (the "N" stands for "no-build"). Route Variation B2AN was designed with input from the present landowner (Harvard) to accommodate future development of the property. These route variations are depicted on Figures 1 and 2 in Attachment B.

Geographically distinct routing alternatives were also selected from each study area. Collectively, these routes comprise the "Noticed Alternative." The Noticed Alternative Routes are described in further detail in Attachment K and depicted on Figures 3 and 4 in Attachment B.

4.3 New Substation in East Cambridge

4.3.1 Overview

The New Substation will provide both a new interconnection to the existing 115-kV electric transmission system and a new location at which the high voltage power from the transmission system can be "stepped down" (i.e., the voltage will be decreased) for distribution to Eversource's customers. The New Substation will consist of 22 115-kV circuit breakers in a breaker-and-a-half configuration, three control rooms that will contain protective relay and control equipment, communication equipment and control batteries, three 90-megavolt amps ("MVA") 115/14-kV transformers, six 14-kV, 9.6-MVAR capacitor banks, and sections of distribution switchgear that will interconnect through the new transmission lines and distribution lines. There will be room reserved within the New Substation for an additional future transformer, switchgear, capacitor bank and shunt reactor.

4.3.2 Site Selection Objectives for New Substation

The primary objectives of Eversource's site selection evaluation for the New Substation were to:

(1) Identify and assess locations of suitable size in proximity to relevant load centers that can accommodate the infrastructure required to meet the identified transmission and distribution system needs.

(2) Evaluate potential substation sites based on a multitude of additional factors, including: (a) ownership status of potential sites; (b) applicable local zoning; (c) community input; (d) engineering and planning design considerations; (e) constructability; (f) environmental impacts; and (g) cost considerations.

4.3.3 Proposed Site of the New Substation

The availability of parcels of land to accommodate a new substation in densely developed urban areas like Cambridge, Boston, and Somerville, is limited. However, given the Project area's concentrated loads, constructing the New Substation facility in the East Cambridge area was the critical siting criterion.

Eversource first identified a need for a reliability solution in East Cambridge in 2014. Eversource initially hoped to address the then-identified need through significant expansion of the Prospect Street Substation in Cambridge. That solution ultimately was determined to be infeasible because of community opposition. Eversource then identified an approximately 0.85-acre parcel of land at #135 Fulkerson Street in East Cambridge and acquired it in 2017 as a potential site for a reliability solution (see Figure 12). The parcel is occupied by a single-story concrete block building that would have been demolished to facilitate construction of the identified solution facilities. While this site could accommodate construction of a new substation or other infrastructure, use of this site was strongly opposed by local officials and Cambridge residents because of its location in a residential neighborhood and its proximity to the Kennedy Longfellow School and John A. Ahern playing fields. Based on feedback from local officials and the community, Eversource began to engage local property owners and real estate developers to determine if there was a more desirable site in the Project area.

After a series of discussions and meetings with several parties, including the Cambridge City Manager, Cambridge City Councilors, Cambridge Redevelopment Authority, private landowners, and community stakeholders, Eversource identified an alternate site on a parcel of land currently owned by Boston Properties, Inc ("BXP") within the Kendall Square Mixed Use ("MXD") Zoning District (see Figure 13). In 2019, Eversource and BXP entered into an arrangement to reserve rights for a potential reliability solution on that parcel of land in Kendall Square being redeveloped by BXP. The parcel is currently occupied by the six-story Kendall Center Blue Garage at #290 Binney Street in East Cambridge. To accommodate construction of the proposed substation, BXP will demolish the existing Blue Garage and replace it with underground parking in roughly the same location. Following demolition of the existing parking garage facility, the New Substation will be constructed predominantly underground. The total footprint of the New Substation facility is approximately 35,000 s.f. The balance of the property is being re-developed by BXP with a mix of residential, commercial, and public open space.[1] The design plans include adequate space within the parcel to install all the Eversource electrical substation infrastructure and associated electric line duct banks and to ensure the ongoing safe operation and maintenance of such equipment.

The Kendall Center Blue Garage site meets Eversource's selection criteria for the location of the New Substation as it is located proximate to the load center, meets engineering, constructability and environmental considerations, having been incorporated into the development plans for the site utilizing an innovative design in a highly urbanized environment to address the electricity demand and reliability needs identified, and has received positive input from the municipality and other stakeholders.

[1] On September 22, 2021, the Secretary of Energy and Environmental Affairs issued a Certificate to the Cambridge Redevelopment Authority on its Third Notice of Project Change for the Kendall Square Urban Redevelopment Plan ("KSURP") Amendment #11, finding that the referenced BXP redevelopment proposal does not require an Environmental Impact Report (see EEA No. 1891).

5.0 Proposed Project

5.1 Underground Transmission Line Construction

The construction sequence for the underground transmission lines includes the following general steps, each of which is described in further detail below:

- Installation of erosion and sediment controls,
- Installation of manholes/splice vaults,
- Trenching and duct bank installation,
- Cable pulling, splicing, and testing, and
- Restoration.

5.1.1 Installation of Erosion and Sediment Controls

To minimize the potential for erosion and sediment migration during construction, temporary erosion and sediment control measures will be installed prior to the initiation of soil disturbing activities and will be inspected regularly and maintained during construction. Erosion and sediment controls such as straw bales, silt fence, compost filter tubes and/or straw wattles, and catch basin inlet protection will be installed in accordance with Eversource's Best Management Practices Manual for Massachusetts and Connecticut ("BMP manual") and any applicable environmental permit requirements. These controls will be installed between the work areas and environmentally sensitive areas, including wetlands and waterbodies associated with the Charles River. Additionally, inlet protection will be installed in stormwater catch basins along the Project routes in the immediate vicinity of active trenching, excavation or other construction activities involving sediment disturbance.

5.1.2 Installation of Manholes/Splice Vaults

Pre-cast or cast-in-place concrete splice vaults (also referred to as manholes), will be installed prior to or in parallel with trenching and installation of the duct bank. Splice vaults facilitate cable installation and splicing and provide access for future maintenance. Each splice vault is approximately 9-feet wide by 9-feet high by 24-feet long (outside diameter dimensions). The depth of the splice vault would vary by location and be located entirely underground with only the manhole cover and frame visible at ground level. A precast communication handhole measuring 5-feet by 5-feet by 5-feet (outside diameter dimensions) will typically be located at each splice vault.

Splice vaults are spaced approximately 1,500 to 1,800 feet apart, but sometimes could be closer, depending upon the physical aspects of the route and location of the duct bank. The factors contributing to final placement of the splice vaults include the maximum length of a cable that

can be transported on the reel; allowable pulling tensions for the specific location; sidewall pressure on the cables as they are pulled around a bend; and accessibility. On average, each splice vault takes approximately seven to ten days to install.

Existing utilities may need to be relocated to create space for the new splice vaults (this would be determined during detailed design). Eversource would work with the local municipal officials and utility owners regarding these relocations on a case-by-case basis.

In the event contaminated soils, contaminated groundwater or other regulated materials are encountered during excavation of the splice vaults, soils/materials would be managed pursuant to the Utility-Related Abatement Measure ("URAM") provisions of the Massachusetts Contingency Plan ("MCP"). Eversource would also contract with a Licensed Site Professional ("LSP") as necessitated by conditions encountered along the Project alignment, consistent with the requirements of the MCP at 310 C.M.R. 40.0460 et seq.

5.1.3 Trenching and Duct Bank Installation

Following or in parallel with installation of the splice vaults, the underground duct bank construction will begin. The underground line segment will consist of six (6) cross-linked XLPE insulated cables. The duct bank will contain a total of fourteen (14) conduits: six (6) polyvinyl chloride ("PVC") 8-inch-diameter conduits for the insulated XLPE cables, four (4) 2-inch-diameter PVC conduits for relay and communication cables and four 2-inch-diameter PVC conduits (two for ground continuity conductors (one per circuit) and two for possible future temperature-monitoring of each circuit). A common thermal concrete envelope encases the conduits to form the "duct bank."

The primary method for underground duct bank construction in roadways is open cut trenching. The trench will be approximately four feet wide and generally five and a half to eight feet deep, though on occasion it may need to be wider and/or deeper to avoid utilities or other obstacles, depending on the final design profile of the duct bank. For installation of the transmission line within roadways, the width of the trench would be marked on the street, Dig-Safe would be contacted, the location of existing utilities would be marked, and the pavement would be saw-cut. Saw cutting provides a clean break in the pavement and defines the parameters of the trench for asphalt removal and trench excavation.

Following saw cutting, the pavement would be removed with a backhoe/excavator and loaded into a dump truck and removed from the site. Pavement material would be handled separately from excavated soil and would be recycled at an asphalt batching plant. Subsequently, a backhoe/excavator would excavate the trench to the required depth. In some areas, excavation may be done by hand or vacuum excavation to avoid disturbing existing utility lines and/or service connections. Soil removal would likely be a "clean trench" or "live loading" method in which soil would be loaded directly into a dump truck and transported to an off-site facility for recycling, reuse, or disposal. Soil would not typically be stockpiled along the edge of the roadway, thus

reducing the size of the required work area and the potential for sedimentation or the creation of nuisance dust. Any rock encountered during excavation would be removed by mechanical means and brought to an off-site facility for recycling, reuse, or disposal.

As with the splice vault excavation described above, if contaminated soils, contaminated groundwater, or other regulated materials are encountered during trenching for the duct banks, the contaminated soils/groundwater/materials would be managed pursuant to the URAM provisions of the MCP. Eversource would also contract with a LSP as necessitated by conditions, consistent with the requirements of the MCP at 310 C.M.R. 40.0460 et seq.

Once a section of the trench is prepared, each of the conduit sections would be assembled inside the trench or pre-assembled at the ground surface and then lowered into the trench. The area around the conduit sections would be filled and protected with high-strength thermal concrete (3,000 pounds per square inch ("psi") at 28 days cured) to create a duct bank around the conduits. The trench would then be backfilled with fluidized thermal backfill.

The pace of trench construction may be slower in areas of higher existing utility density or where unanticipated obstructions exist (such as greater than anticipated ledge or rock), where an increase in the trench depth is needed, or where a roadway experiences higher traffic volume.

5.1.4 Trenchless Crossings

Trenchless crossing techniques are often required at crossing locations where there is some obstruction to open trenching such as a railroad, wetland, or waterbody. For purposes of this project, there are two types of trenchless construction techniques considered, HDD and pipe jacking. During the test pitting or during construction, Eversource may encounter existing unmapped utilities at depths that require the proposed transmission line to be placed underneath them; in such cases, a trenchless crossing may also be considered. The HDD and pipe jacking methods are described in further detail below. The map set provided in Attachment C depicts the approximate locations of the currently known and proposed trenchless crossings.

Horizontal Directional Drill Method

The HDD method is a common alternative to open-cut trenching to reduce surface disturbance in environmentally sensitive areas (e.g., protected cultural and natural resource areas, waterways, and wetlands), to avoid other existing infrastructure (e.g., roadways, railroads, and utilities), or when deep burial depths are required (for example, under federal navigation channels). Although land around the drill entry and exit locations is disturbed during HDD activities, it is restored to its pre-construction condition. Eversource will use the HDD method for a segment of the Preferred Route B2A East (Magazine Beach) to avoid and minimize impacts that would occur from conventional open-cut trench installation across Magazine Beach, the Charles River, and areas that border the river, including the Massachusetts Turnpike (I-90), Soldiers Field Road, Dr. Paul

Dudley White Bike Path and MassDCR's Magazine Beach property. For perspective, at its maximum depth, the new transmission line could be as much as 30-feet below the bed of the Charles River (see Figure 14).

The HDD cable installation method is comprised of five primary stages including establishment of temporary workspace areas (entry and exit sites), pilot bore, reaming, casing installation and demobilization/site restoration. With proper design and good HDD construction practices, the HDD method allows for the installation of underground utilities with no impacts to the crossing features. Construction stages associated with the HDD activity are described in more detail below.

Establishment of Temporary Workspace Areas (Entry and Exit Sites)

The HDD method requires the establishment of temporary workspace areas on either side of the crossing location. The entry site contains the drilling equipment and related ancillary facilities such as excavators, drill pipe skids, roll-off containers for soil storage, fractionization ("frac") tanks for decant water, pumps, generators, power supply, cutting bins, bentonite clay[2] stockpiles, and tool trailers. The exit site typically requires larger workspace to accommodate the drill pipe stringing process and other ancillary equipment. Both workspace areas would be sized appropriately to accommodate the equipment and surrounded by sediment control devices and construction fencing.

The limits of work on the northeast end of the HDD will be located on the edge of the Magazine Beach property as close to Memorial Drive as practicable to avoid impacts to existing trees and minimize impacts to athletic fields, public pathways, and the existing outdoor gym space. Please see Figure 15, which depicts the proposed extent of trenchless HDD workspace and a small section of open cut trenching on the Magazine Beach property by Memorial Drive. The total length of transmission line across Magazine Beach is about 728 feet, of which 646 feet would be installed via trenchless HDD and the balance (about 82 feet) would be installed via open cut trenching. Eversource is in the process of finalizing the temporary workspace to avoid or minimize impacts to any existing trees on Magazine Beach. In addition, altered grassed or paved areas would be restored to their preexisting condition following construction, as would the Dr. Paul Dudley White Bike Path and sidewalk along Memorial Drive.

On the southwest end of the HDD, the MassDOT Allston Multimodal Project Site presents an ideal work environment given its expansive open disturbed areas and space to not only support the drilling operation but for pre-assembly of the casing and conduits for pullback operations.

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[2] Bentonite is a naturally occurring, nontoxic, colloidal clay. Bentonite swells in water by absorbing the water, thus providing a viscous fluid that facilitates the HDD drilling operation by maintaining the drill path integrity by filling the bore hole void while also transporting the drill cuttings back to the surface through the bore hole. While bentonite is non-toxic, if released to the environment it has the potential to cause water quality impacts related to turbidity.

The drilling operations and pipe pullback would initiate on the Magazine Beach property, with pre-assembly of the pullback casing and conduits occurring on the exit site located on the MassDOT Allston Multimodal Project Site. To minimize impacts to the recreational fields on Magazine Beach, Eversource is proposing to split the temporary workspace areas on either side of the Magazine Beach entrance driveway. A shallow trench could be excavated across the entrance driveway to place conduits for power and drilling fluid transfer between the workspace areas, if needed, while maintaining access to the Massachusetts Water Resources Authority ("MWRA") treatment facility and MassDCR parking lot. The final configurations of the HDD operations will be developed in consultation with MassDCR, MWRA, Harvard, MassDOT, environmental permitting agencies and the selected HDD contractor. Work areas will be sized for flexibility to reposition location and orientation of equipment as needed during operations.

Pilot Bore

After the workspace areas are prepared, a temporary drill rig, likely mounted on a trailer, would be brought to the entry site, and positioned to drill at the desired angle. Drilling of the pilot bore(s) commences by pushing and rotating the drill pipe connected to the drill bit along a pre-determined path from the drill rig entry location towards the exit location. A tracking system is used to locate the position and orientation of the drill bit cutting head through the design alignment and crossing trajectory. A mixture of water and bentonite clay, referred to as drilling fluid, is continuously pumped through the drill pipe to the cutting head where it lubricates the cutting head and mixes with the soil or bedrock cuttings. This mixture flows back to the drill rig location carrying the cuttings where it is transferred to the separation equipment to remove the cuttings and recycle the fluid component for reuse downhole. The drilling fluid also serves to stabilize the bore(s), cool the cutting head, and lubricate the pipe string. When the drill bit exits the ground surface at the exit point for the HDD, the pilot bore stage of the installation process is complete.

Reaming

The pilot bore is then enlarged by pulling reaming tools of successively larger diameter from the exit location towards the entry site location on Magazine Beach. The purpose of the reaming passes is to enlarge the pilot hole to a diameter suitable for installation of the pullback casing carrying the bundled electric transmission and auxiliary ducts.

Upon completion of the reaming passes, the bore is swabbed with a smaller diameter reamer to stabilize the hole, help remove excess cuttings, and to confirm the hole is in a condition to accept the pipe casing.

Casing Installation

When the bore hole has reached the required size, the casing installation is accomplished by attaching the prefabricated bundle of high-density polyethylene ("HDPE") pipes, commonly referred to as the "pullback section", behind the reaming assembly at the exit site, then pulling

the reaming assembly through the reamed hole to the drilling rig located at the entry site. To minimize the risk of collapsing the borehole and/or losing momentum, the "pullback process" typically occurs without stopping.

Demobilization and Restoration

Upon completion of the HDD installation, the drilling equipment will be demobilized and the entry and exit sites will be restored to their preexisting condition, in consultation with the landowners. See Section 5.1.5 below for additional detail regarding restoration activities at Magazine Beach.

Inadvertent Returns Contingency Plan

Normally, the drilling mixture of water and bentonite clay remains within the bore hole, including the surface entry and exit points, as it circulates during drilling. As noted above, this maintains the bore hole's shape. However, the drilling fluid can sometimes surface elsewhere through natural cracks or voids in subsurface soils. This is an unintended release of drilling mud referred to as an inadvertent return. The drilling fluid itself is not considered toxic but if released to the surface or other sensitive environmental resource areas, the mud-like fluid can impact plants and less mobile benthic organisms, particularly in an aquatic environment like the Charles River. To address this issue, Eversource has prepared a "Preliminary Inadvertent Return Contingency Plan" ("IRCP") in the event this situation is encountered during construction (see Attachment E). The general information within this document covers BMPs and a contingency and response plan for inadvertent returns for use during the installation of the HDD pipe. The IRCP is provided for information purposes only and will be updated upon selection of the HDD contractor and in consultation with the environmental permitting agencies.

Pipe Jacking Method

The pipe jacking method is used to install a casing horizontally under a conflicting object where trenching cannot be easily accommodated.

This method is typically used for crossings of less than 200 feet such as for crossings under railroads, ditches, streams, streets and for crossing under shallower existing underground facilities. When crossing MBTA railroad facilities, such as the Grand Junction Railroad or commuter rail, the MBTA will likely require a casing due to concerns with potential settling.

In general, a pipe jacking installation is accomplished by digging a bore pit on one side of the feature to be crossed and a receiving pit on the other side. The bore pit houses the casing pipe, auger, or other equipment to remove the spoils from within the pipe, and jacking equipment, while the receiving pit receives the pipe on the other side of the feature being crossed.

The casing is then jacked (pushed) in the bore hole as it is being drilled under the feature. Once in place, the casing is cleaned out, and smaller HDPE or PVC pipes are installed inside the casing to contain the cables. When completed, the duct bank will mate up with the casing on each side of the crossing. Prior to cable installation, the casing is filled with thermally designed fluidized fill.

Table 5-1 identifies the currently anticipated pipe jacking locations for the Project. The timing of the railroad crossing work would be coordinated with the MBTA, MassDOT, municipal officials and landowners relative to access, traffic management during construction, and rail schedules.

Table 5-1 Project Routes - Anticipated Pipe Jacking Crossing Locations

Study Area	Preferred Route Name	Pipe Jacking Crossing Locations
Putnam	P13 (Ames Street)	• None Anticipated
Kendall	K5A (Linskey Way)	• None Anticipated
Brighton East	B2A (Magazine Beach HDD)	• Grand Junction Railroad crossing on Memorial Drive (Cambridge)
Brighton West	B29F (River Street Bridge)	• Grand Junction Railroad crossing between Vassar Street and Waverly Street (Cambridge)
Somerville	S1A (Hampshire Street/D2 site)	• Grand Junction Railroad crossing at intersection of Broadway and Galileo Galilei Way (Cambridge) • MBTA Commuter rail line to D2 Site (Somerville)

5.1.5 Cable Installation and Testing

Each conduit is tested and cleaned by pulling a mandrel (a close-fitting cylinder designed to confirm a conduit's concentricity) and swab through each of the ducts, prior to cable installation. The cables are installed in sections between two sequential splice vaults. A cable reel is set up at the "pull-in" splice vault and a cable puller is set up at the "pull-out" splice vault. Once the mandrel and pulling line are pulled through each duct, a hydraulic cable winch and tensioner is used to pull cables individually between the pull-in and pull-out splice vaults. Installation of transmission cable sections typically takes three 8-hour days for each set of three cables and is repeated until all cables are installed.

Adjacent cable sections are then spliced together inside the vaults over the course of several extended workdays. Splicing high-voltage solid-dielectric transmission cable is a time consuming, complex operation that typically requires 48 to 60 hours to splice all three cables at each vault. The splicing activities may be a continuous 24-hour process depending on location and other site-specific factors, but typically require four or five extended (12-hour) workdays at each splice vault location to complete the work. The splicing operation requires a specialized splicing van and a generator. The splicing van will contain all the equipment and material needed to make a complete splice. An air conditioning unit may be used to control the moisture content in the splice vaults during the splicing activity. A portable generator will provide the electrical power for the splicing van and air conditioning unit and will be muffled to minimize noise. Typically, the splicing van will be located over one splice vault access cover. The air conditioner will be located near the second splice vault access cover and the generator will be in a convenient area nearby out of the immediate work zone.

Once the cable is installed and the splicing completed, the communications fiber cable will be pulled and spliced in the communications handholes.

Since the communications fiber cable is a single cable and is much smaller than the electric cable, pulling it is a much faster operation. Up to three sections can be pulled per day.

After all the communications fiber cable sections are in place, they will be spliced together inside the communications handholes. Splicing the communications fiber cable typically requires three (10-hour) workdays to complete at each of the handholes.

Once the cable system installation is complete, the cables will be field-tested from the substations. At the completion of successful testing, the line is then capable of being energized.

5.1.6 Restoration

Upon Project completion, the affected roads will be restored in accordance with the Department's "Standards to be Employed by Public Utility Operators When Restoring and of the Streets, Lanes and Highways in Municipalities" (D.T.E. 98-22) ("Repaving Standards") and municipal standards. Off-road areas (e.g., Magazine Beach property, other public and private lands) will be restored to pre-construction conditions or better, in compliance with applicable state and local standards, permit requirements and landowner agreements. Additional information describing restoration plans for the off-road areas crossed by the Project are provided below. Eversource will work in close consultation with these landowners to ensure construction and restoration efforts meet their needs. Eversource will make every effort to minimize impacts by limiting the duration of construction, timing the construction in a manner that is least impactful to the landowner and users of the properties, and restoring the disturbed areas to their preexisting condition or better as soon as practicable following construction. Eversource will also work closely with these landowners to refine the schedule, develop construction management plans, and prepare site specific restoration details prior to the start of construction.

Magazine Beach Site

Alterations at Magazine Beach from construction of Preferred Route B2A are generally limited to the temporary staging and laydown areas oriented around the HDD entry site (see Figure 15). The balance of the HDD installation will be sufficiently deep and will not otherwise affect the surface of the Magazine Beach property. The temporary workspace area is presently flat and comprised of turfgrass. Upon completion of the work, Eversource will restore the altered areas to their preexisting conditions with loam and an appropriate seed mix as approved by MassDCR. Where the transmission line duct bank transitions from Memorial Drive onto Magazine Beach, the adjacent Dr. Paul Dudley White Path (bituminous pavement), sidewalk, lighting, and grassed shoulder areas will also be restored to their preexisting condition in consultation with MassDCR. Please see Attachment D, for representative photographs of these areas. The final restoration details will be advanced in consultation with MassDCR as part of the Construction Access Permit review process.

D2 Site

Approximately 700 linear feet of transmission line associated with Preferred Route S1A will cross the D2 Site (see Figure 8). The D2 Site and adjacent MBTA Green Line extension Union Square Station train platform are presently under construction. The proposed restoration plans will be dictated, in part, by the status of work associated with these other projects at the time of installation. That said, Eversource will restore the affected areas to pre-construction conditions or better. The proposed restoration measures will likely include some combination of pavement and curbing restoration, landscaping, loam and seed, lighting, fencing, plaza hardscape restoration and pedestrian walkway restoration. The final restoration details will be advanced in consultation with the landowner and/or the MTBA, as appropriate, as part of the licensing process and written access agreements with the landowner.

Volpe Center Site

Approximately 423 linear feet of transmission line associated with Preferred Route K5A will cross the Volpe Center Site that is proposed to be redeveloped by MIT (see Figure 9). The proposed restoration plans will be dictated, in part, by the status of work associated with the Volpe Center Site at the time of installation. The proposed crossing area depicted on the referenced figure was developed in close consultation with MIT and Cambridge officials, with the goal of minimizing impacts to existing public shade trees, utility infrastructure and not constraining future development plans for the site. The proposed crossing area is presently comprised of grass, paved parking areas and shade trees bordering the eastern property line. While the Volpe Center Site design details have not yet been finalized by the owner of the development rights and the City of Cambridge, a portion of the proposed crossing area will ultimately be turned into public open space ("Third Street Park") and will be comprised primarily of manicured lawn areas with pedestrian walkways, seating areas and landscape plantings. Several of the trees within the property line will be removed to facilitate the proposed re-development project. Most of the public shade trees will remain, except those that have been determined to be in poor health. North of the proposed Third Street Park area approaching Potter Street, the Volpe Center Site development currently anticipates widening the existing sidewalk. The balance of the transmission route alignment proposed by Eversource will follow this sidewalk area for a short stretch towards Potter Street, before turning onto Third Street. As noted, the proposed restoration plans will be dictated, in part, by the status of work associated with these other Volpe Center Site project activities at the time of installation. Depending on the status of construction on the Volpe Center Site at the time of transmission line installation, the proposed restoration measures could include some combination of pavement, sidewalk and curbing restoration, landscaping, tree plantings, loam and seed, and pedestrian walkway restoration. The final restoration details will be advanced in consultation with the owner of the development rights and the City.

5.2 Substation Facilities

In addition to the proposed transmission lines, the Project also involves construction of a New Substation facility in East Cambridge and modifications to five existing substation facilities located in Cambridge, Boston, and Somerville. The New Substation facility provides for both a new interconnection to the existing 115-kV electric transmission system and provides for the high voltage power from the transmission system to be "stepped down" (i.e., the voltage will be decreased) for distribution to Eversource's residential, commercial, institutional, and industrial customers. A description of the work that is necessary to construct the New Substation and the work that is necessary to implement the improvements at the existing substation facilities is provided below. All improvements to the existing substation facilities will occur within the existing fence lines.

5.2.1 New Substation

The New Substation will be constructed underground on a parcel of land that is currently occupied by the Kendall Center Blue Garage at #290 Binney Street in East Cambridge (see locus map provided in Figure 13). The New Substation site is bordered by Binney Street to the north; to the east exists the access driveway into the existing garage facility; Broadway borders the site to the south; and Galileo Galilei Way borders the site to the west.

Land use adjacent to the New Substation site includes predominantly pharmaceutical companies, biotechnology laboratories and office space. A hotel (Residence Inn by Marriot) is located to the south on the opposite side of Broadway, along with a small public park (Danny Lewin Park) and two parking garages (Kendall Center Yellow and Green Garages). The Loughrey Walkway and Bike Path exists east of the site between Broadway and Binney Street.

For the site to be developed for the New Substation, the landowner (BXP) will demolish the existing Blue Garage and replace it with underground parking in roughly the same location. Following demolition of the existing parking garage facility, the New Substation Site will occupy roughly one-third of the parcel, or approximately 0.8 acres. The total footprint of the New Substation facility is approximately 35,000 s.f. The balance of the site will ultimately be re-developed by BXP. The developer's plans include adequate space within the parcel to install all the Eversource electrical substation infrastructure and associated power line duct banks to their property line and to ensure the ongoing safe operation and maintenance of such equipment.

The New Substation will be constructed to a depth of approximately 110-feet below grade. Except for vent stacks, freight elevator headhouse and stair access headhouse, after construction the New Substation will be completely underground and the above ground space will be designed and finished as public open space, integrated into the larger BXP development project.

To minimize the size and footprint of the New Substation, GIS switchgear[3] will be used. GIS technology allows the placement of the New Substation using a fraction of the land area that would ordinarily be required for a conventional open-air substation. The design includes twenty-two 115-kV circuit breakers in a breaker-and-a-half configuration; six 115-kV series reactors, control rooms that will contain protective relay and control equipment, communication equipment and control batteries; three 90-MVA, 115/14-kV transformers; distribution switchgear; and six 14-kV, 9.6-MVAR capacitor banks. There will be room reserved for an additional future transformer, switchgear, capacitor bank, and shunt reactor.

The general construction sequence for the underground enclosure and associated infrastructure that will contain the New Substation is as follows:[4]

- Following site preparation work by BXP, BXP will construct an underground structure consisting of concrete slurry walls, floors, stairwells, elevator, fire suppression system infrastructure, and minimal lighting systems. That underground structure will form part of BXP's redevelopment project.

- Upon receipt of all necessary approvals from the EFSB and other regulatory agencies specific to the Project, Eversource has an agreement with BXP that grants Eversource the option to purchase the underground vault and associated easements. If Eversource does not exercise its option, the vault will be utilized by BXP for its own purposes.

If Eversource has exercised its option and purchased the underground structures and associated easements it will then construct the substation, including the building support systems inclusive of ventilation, fire protection systems, oil spill containment systems for the transformers, circuit breakers, relay and control equipment, communication equipment and batteries, switchgear, and any necessary grounding equipment and lighting. The New Substation will take approximately 5 years to construct after purchase of the underground structures and associated easements.

5.2.2 Putnam Bulk Substation #831 Improvements

The 115-kV lines supplying the Putman Bulk Substation #831 (Preferred Route P13) are proposed to be reconfigured at a location outside of the station footprint on Memorial Drive. Work at this facility will consist of protection and control changes. All work will be confined to the interior of the 115-kV relay room.

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[3] With GIS, the switchgear is enclosed in an inert gas, called sulfur hexafluoride (SF6), which allows the phase spacing of the electronic components to be very close and protects the components from outside contamination.

[4] Demolition and initial site preparation work of a vault to accommodate the later construction of the New Substation is the responsibility of BXP as part of its overall redevelopment project.

5.2.3 East Cambridge Substation #875 Improvements

The 115-kV bus at the East Substation #875 is the terminal for the output cable of the adjacent Vicinity Energy Generating Unit and two supply cables that connect to the existing transmission system. To integrate the New Substation into the transmission system, the output cable of the Vicinity Energy Generating Unit will be disconnected from the 115-kV bus and connected to a proposed new line connecting directly to the New Substation. A new 115-kV line proposed from the New Substation (Preferred Route K5A) will be connected to the switching position formerly utilized by the Vicinity Energy Generating Unit. Work will consist of reconfiguring duct banks in the station yard, cable pulling/termination and control, and protection changes.

5.2.4 Brighton Substation #329 Improvements

The existing Brighton – Mystic lines are proposed to be connected to the New Substation. As part of the Project, a segment of the existing high-pressure fluid-filled ("HPFF") lines will be replaced with solid dielectric lines with two cables per phase (Preferred Routes B2A East and B29F West). Work at the Brighton Substation #329 will consist of installing new below-grade duct banks, above-grade cable terminations (in the location of the existing terminators), cable pulling/termination, and control and protection changes.

5.2.5 Somerville Substation #402 Improvements

The existing Brighton – Mystic lines routes through Station #402. As part of the Project, the Somerville – New Substation segment of the existing HPFF lines will be replaced with solid dielectric lines (Preferred Route S1A). Work at Station #402 will consist of installing new below-grade duct banks, above-grade cable terminations (in the location of the existing terminators), cable pulling/termination, and control and protection changes.

5.2.6 North Cambridge Substation #509 Improvements

The 115-kV bus at North Cambridge Substation #509 is the source of the two 115-kV supply lines to Putnam Bulk Substation #831.To balance flows on the transmission system, air-core current limiting reactors ("CLRs") will be installed at Station #509 near the location of the existing line terminations towards the center of the site. In addition to the installation of the CLRs and their associated foundations, a small section of air-insulated bus will be replaced with gas-insulated bus to achieve required electrical clearances. There will also be work associated with required modifications to protection and control equipment. The substation is bordered on all sides by developed areas including the MBTA railroad tracks to the north; Alewife Brook Parkway to the east; a shopping center and medical offices to the south; and residential apartments to the west. Given the developed nature and current use of the property and adjacent properties, the equipment modifications described above should not result in significant environmental impacts. CLRs have the potential to create sound during operation. However, in this instance the CLRs will be located within the boundaries of the existing station and obscured by existing equipment. As a result, the installation and operation of the CLRs is not expected to have a significant effect on existing sound levels emanating from Station #509.

5.3 Underground Distribution Feeders

In addition to the Siting Board jurisdictional components of the Project, Eversource proposes to install 36 new distribution feeders (circuits) from the New Substation to manholes located on Binney Street. From these manholes, the distribution feeders will be connected to the existing distribution infrastructure in the public roads in the Kendall Square area.

Eversource will install the distribution feeders in concrete duct banks. The duct banks will be sized to accommodate conduits of up to 6-inches in diameter.

The underground construction process for the distribution feeders is not dissimilar from underground transmission line work, although the work zones are generally more compact, and the concrete duct banks and manholes are smaller. Prior to the start of work, catch basin inlets would be protected with silt sacks to prevent silt and sediment from entering the municipal drainage system. Pre-cast or cast-in-place concrete manholes would then be installed prior to or in parallel with trenching and installation of the distribution duct banks. Like transmission line work, the distribution manholes facilitate cable installation and splicing and provide access for future maintenance. The primary method for underground distribution duct bank construction in roadways is open cut trenching. Once a section of the trench is prepared, each of the conduits would be assembled inside the trench or pre-assembled at the ground surface and then lowered into the trench. The area around the conduit sections would be filled and protected with high-strength thermal concrete that creates a duct bank around the conduits. The trench would then be backfilled with fluidized thermal backfill. Like transmission line work, cable pulling activities typically occur at manhole locations and the line terminals. Splicing will occur only at the manhole and line terminal locations. When the work is complete, the road will be restored in accordance with the DPU's Road Restoration Standards and municipal standards.

6.0 Construction Mitigation, Compliance and Monitoring

Construction mitigation measures will help minimize the potential for temporary impacts to the human and natural environments. Typical mitigation for stormwater runoff and associated erosion and sedimentation, fugitive dust, construction vehicle emissions and soils and solid waste management are discussed below for underground transmission line construction. Specific discussions of mitigation measures for other environmental impacts, such as Article 97, are provided in subsequent subsections.

6.1 Stormwater Runoff, Erosion Prevention Measures, and Sediment Controls

Eversource will develop and maintain a Stormwater Pollution Prevention Plan ("SWPPP") for the Project that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction. The SWPPP will include a construction personnel contact list, a description of the proposed work, stormwater controls and spill prevention measures, and inspection practices to be implemented for the management of construction-related storm water discharges from the Project. The SWPPP will be adhered to by

the contractor during all phases of Project construction in accordance with the general conditions prescribed in the Project's U.S. Environmental Protection Agency ("USEPA") Stormwater Construction General Permit ("CGP").

Eversource will require that the construction contractor designate construction supervisor(s) or equivalent to conduct daily inspections, as well as coordinate with Eversource's environmental monitor(s), and be responsible for compliance with permit requirements. The construction contractor(s) designee will be responsible for providing appropriate training and direction to the other members of the construction crew regarding any aspect of the work as it relates to compliance with Project permits and approvals and construction mitigation commitments.

Additionally, construction personnel will undergo pre-construction training on appropriate environmental protection and compliance obligations prior to the start of construction of the Project. Regular construction progress meetings will be held to reinforce contractor awareness of these mitigation measures.

Periodically, an Eversource environmental monitor(s) will independently conduct inspections of erosion prevention measures and sediment controls and ensure compliance with federal, state, and local permit requirements and conditions and with Eversource's construction procedures and environmental policies. Documentation identifying deficiencies of erosion control measures and other permit compliance matters will be immediately brought to the attention of the contractor for implementation of corrective measures.

Copies of all permits and approvals, will be provided to and reviewed by Eversource's project managers and construction supervisors. These documents will also be provided to all contractors prior to construction as part of the contract documents. Contractors are required, through their contracts with Eversource, to understand and comply with requirements for all applicable Project permits and approvals. Eversource also requires contractors to keep copies of these documents on site and available to all Project personnel during construction. These documents and associated conditions applicable to the work will also be reviewed during the construction kick-off meeting between Eversource representatives and contractor personnel and thereafter again in project meetings, as appropriate, for upcoming scheduled work activities subject to the conditions.

In roads where work is to be performed adjacent to storm drains, Eversource will install and maintain catch basin inlet protection (typically silt sacks) to prevent sediment from entering the storm drain system. The silt sacks will be installed beneath the catch basin grates, with about 6-inches of the sack outside the frame to accommodate the lifting straps. The grates will hold the silt sacks in place. The silt sacks or other catch basin inlet protection measures will be inspected for sediment build up and replaced or cleaned out as necessary. When construction is complete at each location, the catch basin inlet protection will be removed.

Other measures to mitigate soil erosion will include the prompt removal of soils from the excavated trench. Soils will not be stockpiled along the road(s) but instead will be loaded directly into trucks to be hauled to an offsite disposal/re-use area, or to a temporary construction laydown area. This construction method will also limit nuisance dust and the potential for soils to be washed with stormwater into nearby storm drains.

In addition to the measures discussed above, the applicable conditions and provisions of the Final Order and other permits and approvals will be reviewed during Project meetings and will be discussed as needed during tailboard meetings, where construction personnel are briefed by their construction supervisor on the upcoming day's work and at that time will be reminded by Eversource representatives and the supervisor of any related specific compliance conditions.

6.2 Air Quality

Fugitive dust will be controlled at the construction sites by use of appropriate methods, including the use of covered dump trucks to move soil out of the construction zone, and by covering temporary soil stockpiles at offsite staging and laydown areas, as applicable.

There also will be installation of anti-tracking pads and regular sweeping of the pavement of adjacent roadway surfaces during the construction period to minimize the potential for construction traffic to kick up dust and particulate matter. The anti-tracking pads would typically be installed at all points of egress to public roads such as off-road work zones with disturbed or exposed soils including Magazine Beach, Volpe Center Site, D2 Site, MassDOT Allston Multimodal Project Site, and the New Substation Site. Water trucks may also be used to reduce fugitive dust in combination with regular sweeping within the roadway construction areas affected by the Project.

In addition, Eversource will direct its contractors to retrofit any diesel-powered non-road construction equipment rated 50 horsepower or above to be used for 30 or more days over the course of the Project with USEPA-verified (or equivalent) emission control devices (e.g., oxidation catalysts or other comparable technologies). Eversource uses ultra-low sulfur diesel ("ULSD") fuel in its own diesel-powered construction equipment. ULSD has a maximum sulfur content of 15 parts per million as opposed to low sulfur diesel fuel, which has a maximum sulfur content of 500 parts per million. By using ULSD fuel, there is a 97 percent reduction in the sulfur content as compared to low sulfur diesel fuel.

Eversource and its contractors will also comply with state law (G.L. c. 90, § 16A) and MassDEP regulations (310 C.M.R. 7.11(1)(b)), which limit vehicle idling to no more than five minutes. There are exceptions for vehicles being serviced, vehicles making deliveries that need to keep their engines running and vehicles that need to run their engines to operate accessory equipment. There may be other times when idling is permitted if the idling is necessary (e.g., as a matter of safety).

With respect to enforcement of the idling restrictions, it is the responsibility of every person on a job site to be in full compliance with all safety and environmental rules and policies. Supervisors and foremen at job sites are responsible for enforcement of these rules on a continuous basis.

6.3 Construction Wastes

Waste materials excavated along the routes during installation of the transmission duct banks and manholes will be promptly removed and re-used or properly managed at a suitable permitted facility. The largest quantity of construction waste will likely be from soils excavated from the trench and locations where manholes are installed. This material will be removed from the trench and hauled to an appropriate off-site disposal/re-use location or to a temporary construction laydown area for on-site re-use. Concrete and asphalt will be recycled at a local asphalt plant.

As previously noted, in the event there are contaminated soil, contaminated groundwater or other regulated materials encountered along the route, soils/groundwater will be managed pursuant to the URAM provisions of the MCP. Eversource will contract with a LSP as necessitated by conditions encountered along the Project alignment, consistent with the requirements of the MCP at 310 C.M.R. 40.0460 et seq.

6.4 Dewatering Protocols

Groundwater can be encountered when constructing underground utility facilities. If feasible, based on site-specific conditions, the least costly method when dewatering will typically be to recharge the groundwater back into the adjacent subsurface. This can be done either by discharging back within the open excavation/trench associated with the project/pipe installation or discharging to the nearby ground surface via a filter bag or dewatering corral (if necessary), allowing groundwater to infiltrate back into the subsurface.

At locations where on-site recharge of groundwater is not an option and manageable amounts of groundwater (<50,000 gallons per day) are expected to be generated, a vacuum truck can be used to pump out and appropriately dispose/recycle groundwater encountered. The water would be tested to ensure proper disposal/recycling.

At locations where larger amounts of groundwater (>50,000 gallons per day) are encountered and on-site recharge and off-site disposal are not feasible options, discharging into the municipal stormwater and/or sewerage systems may be used. However, this activity must be coordinated with the municipality, the MWRA and the USEPA beforehand and would not occur without written consent from the municipality, the MWRA and the USEPA.

For discharges of uncontaminated groundwater to surface water, coverage under the USEPA NPDES CGP will be obtained.

Coverage under the USEPA General Permit for Remediation Activity Discharges ("Remediation General Permit" or "RGP") will be required for discharge of contaminated groundwater to surface water. Permits will also be required for discharges to either municipal separate storm sewer systems ("MS4s"), or sanitary/combined sewers (such as municipality and/or MWRA territory).

6.5 Traffic Management

The Project will not permanently impact traffic, transit, or transportation facilities. Eversource will work closely with the affected municipalities and state agencies to develop TMPs during construction. Temporary Traffic Control Plans ("TTCP's") will also be developed consistent with the Federal Highway Administration ("FHWA") Manual of Uniform Traffic Control Devices for Streets and Highways and the MassDOT "Work Zone Safety" publication for Temporary Traffic Control Standards. Eversource will also closely coordinate with local officials and abutting property owners and businesses. Topics to be addressed in the TMP will likely include:

- Width and location of the work zone to minimize impacts to all roadway users,
- Work schedule and duration of lane closures, road closures, or detours (where applicable) and details of notification to abutters, including posting on the Project website and use of fliers to notify local abutters of traffic routes and the expected duration,
- The use of traffic-control devices such as advance warning signs, traffic regulation signs, reflectorized drums and cones, sequential flashers, detour signs, and other protective devices to be placed as shown on plans and as approved by municipalities and state agencies,
- Locations where temporary provisions may be made to maintain access to homes and businesses, including specific arrangements made to avoid affecting abutter activities,
- Routing and protection of pedestrian and bicycle traffic,
- Maintenance of public transit service (MBTA buses, TMA shuttles etc.),
- Communication with adjacent businesses and property owners, to limit impacts such as critical product deliveries or access,
- Notification to municipal officials, state agencies, local businesses, and the public of the timing and duration of closed curbside parking spaces and travel way restrictions, and
- Coordination between Eversource and police and fire departments to ensure that emergency access through the route is always provided.

6.6 Construction Sound

The construction equipment used with underground transmission line construction is like that used during typical public works projects (e.g., road resurfacing, storm sewer installation, water line installation). The equipment typically involves jackhammers, excavators, dump trucks, pavement saws, and road resurfacing vehicles. Construction activities will result in localized, short-term increases in ambient noise levels near the work sites. Manhole/splice vault installation, trench excavation and final pavement restoration typically are the loudest activities associated with underground transmission line construction. If ledge is encountered during construction, equipment such as a hoe ram will be used, which would temporarily increase noise levels and potentially prolong the activity at any specific location. Generators, portable HVAC units and cable pulling motors associated with the splicing van are often the loudest noise sources for cable pulling and splicing work.

In general, the sound levels from construction activity will be dominated by the loudest piece of equipment operating at the time. Therefore, at any given construction site, the loudest piece of equipment will be the most representative of the expected sound levels in the area. However, construction equipment is generally not operated continuously, with significant variation in power and usage. Sound levels would fluctuate, depending on the construction activity, equipment type, and separation distances between source and receiver. Other factors, such as vegetation, terrain, and noise attenuating features, such as buildings, will act to further reduce construction noise impacts.

The timing and sequencing of the work will be coordinated with local and state officials and other stakeholders to minimize potential noise impacts consistent with applicable local regulations and ordinances. Noise from cable splicing operations would be minimized through use of specialized low-sound equipment such as low-noise generators, and by reducing or eliminating the use of motorized equipment during evening and overnight work. Other potential mitigation measures include working with the Cambridge municipal officials and state agencies to coordinate work, use of a low noise/muffled generator, and portable sound walls (temporary noise barriers) as needed, blocking the path of generators. However, the use of physical noise barriers is not typically Eversource's first response to addressing a claim of excessive noise. Eversource would first explore other opportunities to reduce noise, including requiring the use of newer, lower noise equipment.

7.0 Climate Change Adaptation and Resiliency Considerations

As required by MEPA's *Interim Protocol on Climate Change Adaptation and Resiliency* (dated October 1, 2021), Attachment H of this ENF includes a copy of the output report generated from the Resilient Massachusetts Action Team ("RMAT") Climate Resilience Design Standards Tool.

As described in further detail below, the proposed improvements to the transmission system in the Project area will have no adverse climate change impacts or negative effects on sea levels. Eversource has also taken steps to ensure that the New Substation and the improvements and upgrades to the existing substation facilities are resistant to the potential effects from sea level rise and climate change.

7.1 Transmission Lines

The field of climate change study is constantly evolving, and the Massachusetts State Hazard Mitigation and Climate Adaptation Plan (https://resilientma.org/shmcap-portal/#/) currently identifies the following four primary climate change interactions: changes in precipitation, sea level rise, extreme weather, and rising temperatures.

Potential climate related impacts are particularly relevant to communities located near the coast, such as Boston, Somerville, and Cambridge, and specifically to the Project area, which includes work near the Charles River. Eversource focused its assessment of potential vulnerabilities to the transmission line infrastructure on changes in precipitation and extreme weather events, including the potential exposure of the Project area to flooding due to the changing climate conditions.

Generally, climate change research indicates an expectation of more frequent and intense storm events. Within the Project Area, climate models suggest there will be an increase in precipitation, with an estimated 2 to 5-inch increase in total annual precipitation between the 2030s and 2090s (https://resilientma.org/map/). More frequent and intense storm events, and increased annual precipitation, could result in more localized flooding in the Project area. For perspective, the Charles River occasionally experiences flooding from intense weather events producing heavy rains. River flooding occurs when river levels rise and overflow their banks and inundate areas that are normally dry. The Charles River dam, located east of the Project Area near the North Washington Street Bridge in Cambridge and Boston, releases water in a controlled manner from the Charles River into Boston Harbor. The operation of the dam during severe weather events provides flood protection as it lowers the elevation of the river by pumping water through to the Boston Harbor.

The Federal Emergency Management Agency ("FEMA") mapped flood zone is defined as the 100-year flood event which represents a flood event that has a 1% probability of occurring in any given year. FEMA has determined that the Charles River in the Project vicinity will rise to elevation 4.0 feet, North American Vertical Datum 1988 (NAVD88) during the 100-year event. According to the FEMA Flood Insurance Study for Suffolk County, flood damage along the Charles River occurs when the water elevation approaches 3.8 feet. During the 100-year flood event, the Charles River dam operates pumps which maintain the water elevation at 3.5 feet, approximately 0.5 feet below the 100-year flood and 0.3 feet below the elevation which could cause potential damage

to adjacent properties. The extent of the 100-year flood zone is largely confined within the riverbanks and does not extend onto adjacent areas, except for lower elevations on and adjacent to MassDCR's Magazine Beach property. The balance of the Project area is not located in the 100-year floodplain. Please see Figure 16 for additional detail.

In addition to the above, Eversource also reviewed the following sources of data to assess the potential future effects of flooding (due to sea level rise and increased precipitation) to the Project:

- Cambridge Flood Viewer Tool;[5]
- Somerville Flood Risk Explorer Tool;[6]
- Climate Ready Boston Map Explorer;[7]
- Massachusetts Office of Coastal Zone Management ("CZM") Sea Level Rise and Coastal Flooding Viewer;[8]
- Resilient MA Climate Change Clearinghouse for the Commonwealth.[9]

These educational tools provide interactive mapping applications that allow users to explore the potential impacts of several different design storms and the potential effects of flooding and sea level rise.[10] These tools have been developed as an information and planning tool for municipalities to assess climate change threats and vulnerabilities from flooding and to prepare for it by implementing specific strategies. Please see Figures 17 through 19 for additional detail.

These educational tools consider different factors and assumptions but in general they predict that portions of the Project area (particularly in Cambridge and Somerville) could experience greater frequency and duration of flooding because of climate change and sea level rise under certain scenarios, depending on the extent of sea level rise over time.

That said, underground transmission line design and installation is inherently adaptive and resilient to the potential effects of climate change. For example, most of the adverse weather conditions that traditional overhead transmission line infrastructures are exposed to above-ground can be avoided (e.g., wind and precipitation). While an overhead line typically takes less

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5 See https://www.arcgis.com/apps/webappviewer/index.html?id=1d30c73456d246f48daf8489405c6629

6 See https://floodfactor.com/city/somerville-massachusetts/2562535_fsid#flood_risk_explorer

7 See https://www.boston.gov/departments/environment/climate-ready-boston-map-explorer

8 See https://www.mass.gov/service-details/massachusetts-sea-level-rise-and-coastal-flooding-viewer

9 See https://resilientma.org/map/

10 Sea level rise refers to the increase in mean sea level over time.

time to repair than an underground line in the event of an outage (days rather than weeks), an underground transmission line generally alleviates the need for more frequent investments in transmission infrastructure maintenance and repairs. The expected benefits would include a more secure energy supply with fewer instances of weather-related power outages.

In addition to the above, the underground transmission line facilities are not affected by flooding and will not cause flooding or exacerbate any existing flooding situations. The Project does not involve any fill or permanent aboveground structures in the 100-year floodplain, and the use of HDD technology to install the transmission line beneath the Charles River and most of Magazine Beach (including the mapped 100-year floodplain limits) avoids changes to surface grades where flood storage is presently provided. Further, the splice vaults (manholes) will include damp-proofing on the exterior surfaces and sealant will be placed between precast concrete joints. However, these measures will not fully waterproof the splice vaults. It is expected that water will be able to enter the splice vaults especially rainwater via the covers during the life of these structures. In the event a splice vault becomes filled with water, before any maintenance or routine inspection of the splice vault can be completed, the splice vault would have to be drained prior to entering, which is a typical practice. Further, all the equipment to be installed inside the splice vaults is designed to operate and withstand being fully submersed in water, including salt water. Corrosion control measures will be included in the splice vaults to mitigate corrosion of any exposed metal structures.

7.2 New Substation

Risk to electrical infrastructure facilities can be minimized through careful substation design. To evaluate the potential for future flood risk at the New Substation Site, Eversource considered existing conditions based on FEMA data. The projected extent of future coastal flooding in the area around the New Substation Site was studied using the Cambridge Flood Viewer Tool v2.1 and MassCZM's Sea Level Rise and Coastal Flooding Viewer. The Cambridge Flood Viewer Tool assesses potential flooding under several scenarios, including present day precipitation flooding from the 10-year and 100-year storm events, precipitation flooding from the Year 2030 10-year and 100-year storm events, precipitation flooding from the Year 2070 10-year and 100-year storm events, and Sea Level Rise and Storm Surge Flooding from the Year 2070 10-year and 100-year storm events. According to this data set, the New Substation would not experience precipitation flooding under the present-day modeling scenarios. The New Substation site is also not presently located in the 100-year floodplain, as mapped by FEMA. Regarding future conditions, discrete portions of the BXP development site, but not specifically the location of the New Substation, are within areas modeled as having flooding potential from precipitation events under the 2030 and 2070 100-year storm events and flooding from sea level rise/storm surge flooding in the 2070 100-year storm event.

According to MassCZM's Sea Level Rise and Coastal Flooding Viewer, the New Substation site could potentially experience coastal flooding above mean higher high water (the average height of daily highest tide) from the most extreme predictions (year 2100) of sea level rise (5-foot to 6-foot increases above mean higher high water). This projection does not account for storm surge, waves, erosion, and other dynamic factors.

Please see Figures 20 and 21 for additional detail.

In consideration of the above potential sea level rise and coastal flooding scenarios, Eversource has incorporated several resiliency measures into the design of the New Substation to mitigate impacts due to the potential for more frequent flooding and adverse consequences associated with increasing sea level rise. The below grade substation will be protected such that flood waters cannot penetrate to critical areas. These protective measures include placing all openings to the surface above projected flood levels, sealing conduits with plugs intended to withstand projected hydrostatic pressures and directing storm water flows from the open space above the station away from the station. Furthermore, there will be nothing in the design that will prevent the use of deployable flood barriers in the future should they become necessary.

8.0 Environmental Justice Considerations

Eversource is committed to being a strong environmental partner with and a responsible steward in the communities it serves. This commitment requires Eversource to provide meaningful opportunities for members of EJ communities to be informed about and participate in community discussions of Eversource projects, especially where those members are burdened with existing negative environmental circumstances and justice disparities. Eversource also understands that reliable electric service is vital to public safety, the health and welfare of the Commonwealth's citizens, and sustainable economic development opportunities. Eversource believes these justice and reliability goals can be accomplished simultaneously. To promote a more robust transmission system and to properly plan for and address the Commonwealth's energy needs, including further integration of clean energy supply sources, in a timely way, Eversource is developing and implementing this Project consistent with the Commonwealth's environmental and resource use laws and policies, including recent Commonwealth enactments of laws and promulgation of regulations aimed at supporting EJ communities. Eversource has taken proactive steps to promote community involvement during the planning of the Project, including:

- Inclusive outreach expanded to specifically provide information to and gather feedback from EJ communities affected by the Project;
- Appropriate mitigation planning; and
- Detailed analyses and action plans to ensure that the proposed Project appropriately avoids and minimizes impacts.

8.1 Background

On March 26, 2021, Governor Baker signed bill S.9., "An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy" (c.8 of the Acts of 2021) (the "Climate Act"). Among other things, the Climate Act defines EJ populations, environmental burdens and, environmental benefits, and directed Commonwealth agencies to develop processes and standards that would ensure participation by members of EJ communities and agency consideration of concerns related to EJ communities.[11] The Climate Act is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. This legislation expands and builds upon prior EJ policies, state agency transition rules and interim protocols, and initiatives including the "Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs," dated January 31, 2017, as applicable. The legislation specifically directs the Secretary of the Executive Office of Energy and Environmental Affairs ("EEA") to provide opportunities for meaningful public involvement by EJ populations during certain review processes, including the Massachusetts Environmental Policy Act ("MEPA").

As depicted on Figure 22 in Attachment B, most of the Project Area in which the new underground transmission lines are proposed to be located is within neighborhoods inhabited by EJ populations as defined under the Climate Act by minority status, English isolation, income status, and/or combinations thereof. The data depicted on Figure 22 are derived from the EEA "EJ Mapping Tool" (see https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=1d6f63e7762a48e5930de84ed4849212)[12]. The following table provides a description of the referenced EJ block groups located in the Project area and communities surrounding the transmission line routes. The map in Figure 22 graphically depicts the EJ populations within a one-mile radius of the transmission substation and transmission lines.

[11] Section 56 of the Climate Act defines an "Environmental Justice Population" as a neighborhood that meets one or more of the following criteria: (i) the annual median household income is not more than 65% of the statewide annual median household income; (ii) minorities comprise 40% or more of the population; (iii) 25% or more of households lack English language proficiency; or (iv) minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income.

[12] The EJ Mapping Tool includes relevant Federal block group census data.

Table 8-1 Massachusetts Environmental Justice Block Groups Potentially Impacted by Project Infrastructure

EJ Block Group	Description
Minority	Refers to individuals who identify themselves Latino/Hispanic, Black/African American, Asian, Indigenous people, and people who otherwise identify as non-white.
Minority & Income	Minority is as described above. Income means median annual household income at or below 65% of the statewide median income for Massachusetts, $85,843 according to current federal census data integrated into the EJ Mapping Tool.
Minority & English Isolation	Minority is as described above. English Isolation refers to households that are English Language Isolated[13] according to federal census forms, or do not have an adult over the age of 14 that speaks only English or English very well.
Minority, Income & English Isolation	See above descriptions for Minority, Income and English Isolation.

As described below, Eversource's analyses of Project impacts, and approach to mitigation of such impacts, conform with the Commonwealth's EJ requirements and demonstrate the means to minimize the Project's impacts to all populations, including EJ populations. In determining the needed mitigation measures, Eversource has engaged in extensive outreach to community, civic, municipal, governmental, and other stakeholders that has created the opportunity for public involvement by EJ communities throughout the Project planning process. Eversource will continue and expand its outreach to EJ community members during the permitting and development phases of the Project to ensure participation by EJ community members in discussions of the Project, its impacts, and appropriate mitigation measures.

8.2 Public Participation

From the outset Eversource recognized that most of the Project would potentially impact EJ neighborhoods with sizable Spanish, Portuguese, Mandarin, and Haitian Creole speaking populations and took several early steps to request community involvement, consistent with the Commonwealth and Siting Board public participation requirements and recommendations. To facilitate the meaningful participation of residents of the proximate EJ communities, Eversource employed additional outreach strategies including providing notifications of the Project and Project open houses in the following five (5) languages: English, Spanish, Mandarin, Portuguese, and Haitian Creole. Eversource has to date held several in-person and virtual community events to encourage participation by members of EJ communities in and adjacent to the Project area, to solicit feedback from a diverse cross-section of the neighborhoods the Project will traverse. At these events, Eversource had a table and/or tent with Company representatives and live

[13] U.S. Census Bureau. Census 2000 summary file technical documentation. Washington (DC): U.S. Census Bureau; 2004.

interpreters present to respond to questions, provide updates regarding the Project, distribute Project Fact Sheets, and enable people to scan a QR code to keep apprised of upcoming meetings. Additionally, a total of ten (10) print ads ran in the weeks prior to the open houses in English (6 ads), Portuguese (2 ads) and Spanish (2 ads) languages. Public Open Houses were conducted virtually via Zoom™ and held at various days of the week and times of day (evening and lunch hours) to offer residents multiple opportunities to participate including October 4, 2021 (Cambridge), October 5, 2021 (Somerville), October 7, 2021 (Allston/Brighton), October 12, 2021 (Allston/Brighton), October 13, 2021 (Cambridge), and October 14, 2021 (Somerville). At the Open Houses, Eversource provided information on the need for and benefits of the Project, described the siting process and how interested persons could participate, explained the route selection process, and provided detail on Project design and location, schedule, and construction activities. The presentation material was narrated in English with live, simultaneous interpretation being available at each open house in the four (4) other languages. The presentation print material was also made available via Eversource's website as well as the presentation print material available via the Company website were similarly provided in English and the four (4) non-English languages.

Regarding the necessary substation improvements, early discussions with municipal stakeholders eliminated a potential substation expansion location at Prospect Street in Cambridge as a viable option. Similarly, municipal and community conversations at the original New Substation Site on Fulkerson Street indicated substantial opposition to such use of this parcel. Ensuing discussions with Cambridge officials, community stakeholders, private parcel owners, and area developers led the Company to the proposed location of the New Substation on Binney Street at the Blue Garage parcel.

Eversource also engaged stakeholders on the transmission line routes; those stakeholder inputs led to the identification of the Preferred Routes and Noticed Alternative Routes presented in this ENF. Extensive iterative discussions were held with municipal, agency and stakeholders to craft constructable solutions which that were further vetted by community representatives.

In addition to the above, both the substation location and top transmission line routes were presented publicly in local community events (described more fully in Section 1.7) to ensure the public was aware of the Project, the location of the proposed line routes, and to introduce Project website, hotline and other communication tools to community members that would facilitate continued community engagement.

Eversource will continue its commitment to engaging EJ communities through proactive and sustained outreach throughout the siting, permitting and construction processes. Efforts are underway to establish a multi-faceted, multi-channel Communications Plan to reach and further engage local EJ communities. This Plan will be designed to complement Eversource's existing robust community-based, grassroots outreach efforts, ensuring that the EJ community residents are heard, their questions answered, and their concerns mitigated.

A summary of the public participation activities conducted to date is listed below, and the details are set forth in Attachment J.

Municipal and Stakeholder Briefings: The Company met regularly with municipal staff, agency organizations and other stakeholders in Boston, Cambridge, and Somerville about line routing options, navigation around existing infrastructure, future development plans, and how they might affect proposed project activities, and other issues where collaboration and coordination would be helpful. This iterative discussion, feedback, and project design modification process has resulted in a well-vetted project.

Community and Focus Group Meetings: The Company also met regularly with key community stakeholders, including Boston's Office of Neighborhood Services, and relevant neighborhood and civic associations, such as the Kendall Residents Association, the East Cambridge Planning Team, Allston Civic Association, and the Somerville Main Streets Association. In total, 47 community-focused outreach meetings were held to provide iterative updates and solicit feedback on the Project.

Additionally, BXP (the owner of the parcel upon which the New Substation will be located in Cambridge), participated in numerous meetings specific to their redevelopment plans that indirectly included discussions on aspects of the Project. These additional meetings were typically in an open meeting forum and served to provide additional details and information for the community about the Project.

In-Community Pop Up Events and Open Houses: As noted above, the Company held a series of local outreach events aimed at engaging with the community at locations where they live, work, and play in addition to a series of more traditional public open house events (which were held virtually). These events, specifically geared to reach members of EJ communities, were in addition to the Company's previous outreach practices. Discussions included Project basics, soliciting feedback about line routes, opting in for future project notifications, and encouraging participation in upcoming open houses. Additional events are scheduled through the end of 2021 and will be continued throughout the siting process to the start of construction. During construction, outreach will focus on neighbors, abutting property owners, and local businesses where construction work is being conducted. These events will be continuing at least through the end of Q2 2022; additional outreach activities will be ongoing throughout Project permitting and construction.

Eversource also conducted door-to-door outreach at properties adjacent to the top routes, targeting locations where tenants might reside to ensure they received notification and to personally invite them to learn more about the proposed Project. Newspaper advertisements for the Open Houses were published in English in the Cambridge Chronicle & Tab, the Somerville Times, and the Transcript Tab; Spanish-language ads were placed in El Mundo; and Portuguese-language ads were placed in O Journal Newspaper and The Portuguese Journal in advance of the events.

Website: A website has been developed for the Project. The website provides basic Project information, maps, regular updates, and contact resources. This website will be kept up to date for the duration of the Project. For more information about the Project, visit www.eversource.com/greater-cambridge-energy-project.

Project Hotline: A toll free number has been created as the Project Hotline. The Project Hotline number is listed in all Project outreach materials, including fact sheets, mailings, the website and at all community events. Eversource is committed to responding promptly to all inquiries. For more information about the Project, call 800-793-2202.

Project E-mail: An email address has been created and listed in all Project outreach materials, including fact sheets, mailings, the website and at all community events. Like the Hotline, Eversource is committed to responding promptly to all inquiries. For more information about the Project, send an email to ProjectInfo@eversource.com.

Construction Community Outreach Plan: Eversource will execute a comprehensive construction community outreach plan to keep property owners, businesses and municipal officials including fire, police, and emergency personnel, up to date on planned construction activities. Eversource will notify abutting property owners and municipal officials of its planned construction start and work schedule prior to commencing construction and will work closely with both to limit construction impacts. Once the construction schedule is finalized, Eversource will notify direct abutters of the hours of construction and address any concerns raised. All notifications will occur as soon as it is practicable. Typically, notification one to two weeks in advance of construction has proven to be sufficient on previous projects.

In consultation with property owners and local officials, Eversource will also develop TMPs and ensure safety is maintained along the construction route. Eversource will provide a construction schedule to the municipalities for publication on their webpages (and/or provide a link to the Project webpage). Additionally, the Company will work with the local chamber(s) of commerce, neighborhood services, neighborhood groups and local business groups to ensure that Project updates and information will be available throughout the Project's duration. As needed, Project personnel will arrange for specific notifications to route abutters that might be adversely affected or have need for advice of specific Project activities. The Company will distribute fliers directly to abutter addresses, as needed.

8.3 Assessment of Potential Impacts to EJ Populations

In practical terms, the Commonwealth's EJ Policies have historically focused on certain types of projects (e.g., power plants and other large sources of air emissions, solid waste facilities, etc.), and not the type of underground transmission line projects, such as the proposed Project, that are ubiquitous throughout the Commonwealth. These kinds of underground transmission line projects exist in essentially every city and town in the state (including specifically within the Project Area). Further, as previously noted, reliable electric service is vital to public safety, the health, and welfare of the Commonwealth's citizens and to orderly and sustainable economic

development. The increased capacity and reliable power supply provided by the Project would support future development opportunities and will result in long-term economic benefits to the area. Additionally, the new substation and transmission lines will permit the further integration of clean energy generating sources and support electrification through the Greater Cambridge Area, all of which will benefit the communities, including EJ Communities. As Eversource continues and broadens its outreach and communications with EJ communities, to the extent those conversations result in new ideas regarding EJ Community-specific mitigations, or changes to Eversource's approach to mitigation (described below), Eversource will respond accordingly.

The Project is not generating any energy, nor is it manufacturing any products or emitting any industrial discharges that could potentially be point sources of pollution. Nonetheless, Eversource is mindful of the potential impacts caused by the Project to all abutters, including EJ populations, particularly during construction of the underground transmission lines and related ancillary work (e.g., the remote substation work). Eversource accordingly considered such potential impacts as part of its overall analyses. For example:

- Construction Air Emissions - As described in Section 6.3 above, Eversource will take measures to minimize and mitigate temporary influences on air quality from construction vehicles and equipment exhaust, and dust generated by construction activities. Given the limited duration of these activities at any one location, influences on overall air quality will be minimized.

- Construction Sound – As described in further detail in Section 6.7 above, the construction equipment used with underground transmission line construction is like that used during typical public works projects (e.g., road resurfacing, storm sewer installation, water line installation). The timing and sequencing of the work will be coordinated to minimize potential noise impacts consistent with applicable local regulations and ordinances. Noise from cable splicing operations would be minimized through use of specialized low-sound equipment such as low-noise generators, and by reducing or eliminating the use of motorized equipment during evening and overnight work. Other potential mitigation measures include working with the municipalities and state agencies to coordinate work, use of a low noise/muffled generator, and portable sound walls (temporary noise barriers) as needed, blocking the path of generators. Please see Section 6.7 for additional information.

- Construction Traffic Management - As described in further detail in Section 6.6 above, Eversource will take measures during construction to minimize and mitigate potential impacts to traffic during construction, including specifically multimodal forms of transportation (bikes, pedestrian access, public transit, etc.). Eversource will implement TMPs that consider the routing and protection of pedestrian, vehicular, and bicycle traffic; maintaining public transit services (MBTA buses, TMA shuttles, etc.); adherence to reasonable work hours; maintaining access to homes and businesses throughout

construction; limiting the occupancy of the street layout and on-street parking, always maintaining emergency access; avoiding impacts to school bus routes; and clear and regular communications to the community during construction.

- Land Use - No displacement of residences or businesses would occur because of construction or operation of the Project. Additionally, locating the New Substation underground will permit the property developer to construct a public use park above the roof of the substation.

- Visual Impacts - Installing the New Substation underground within the separate BXP development project avoids potential visual impacts that might be experienced with above ground substation construction.

- Public Recreational Areas - Eversource minimizes impacts to important urban recreational land like MassDCR's Magazine Beach property by using specialized trenchless construction techniques and coordinating the work during periods of time when user activities within the park are expected to be low. Temporarily altered areas would be restored to their current condition or better following construction.

- Collocation Opportunities - Both the Preferred Route S1A and Noticed Alternative Route S11C present opportunities to partner with and/or facilitate construction of multimodal transportation projects in Cambridge. For example, the Hampshire Street segment of Preferred Route S1A between Broadway and Columbia Street would be restored by Eversource following construction to accommodate greater separation of bicycle facilities as outlined in the City of Cambridge Bicycle Network Vision,[14] and related improvements to sidewalks and on-street parking areas. The Noticed Alternative Route S11C would collocate with a future multi-use pathway to be constructed by the City of Cambridge along the Grand Junction Railroad Corridor. The detailed design details for either of these routes would be advanced in consultation with the Cambridge officials.

- Existing Substation Facilities - Eversource is scheduling community conversations for 2022 to determine what mitigation for existing substation construction activities associated with the Project might be desired by community members and is committed to working collaboratively with communities to mitigate the impact of such activities.

- Underground Transmission Line Routing - Apart from a few discrete residential neighborhood pockets or street segments, most of the Project area is in or abuts EJ neighborhoods. Given the extent of the EJ neighborhoods in the Project Area, it is not possible to locate the proposed electric infrastructure entirely outside of these areas. The

[14] See https://www.cambridgema.gov/Departments/communitydevelopment/2020bikeplanupdate/2020bicyclenetworkvision

need and the location of the proposed electric infrastructure is driven, in part, by the rapid expansion and economic growth in the immediate Project area, including from Cambridge's robust electrification programs designed to minimize use of fossil fuels. Eversource's transmission line routing criteria were designed not only to identify and weigh impacts, but also to do so in a manner that was even handed and non-discriminatory toward EJ populations. For example, Eversource assigned the highest weights to certain routing criteria like residential land use, sensitive receptors (churches, schools, hospitals, libraries), Article 97 lands, and multimodal transportation. The effect of this weighting is to route the Project towards the existing and future non-residential uses that are partially driving the project need and away from these other areas.

In summary, there will be no disparate impacts to EJ populations because of the Project. Any potential impacts associated with the Project for both EJ and non-EJ populations are anticipated to be minimal and predominantly limited to temporary impacts associated with construction activities. Eversource has identified mitigation measures for unavoidable impacts during construction. All persons, regardless of race or income, would experience these same impacts associated with the Project. The type of underground transmission lines proposed by Eversource exist in virtually every community in the state, including within the Project area. For these reasons, none of the impacts of the Project will result in disproportionately high and adverse human health or environmental effects to EJ populations in the area.

9.0 Compliance with the Executive Office of Energy and Environmental Affairs Article 97 of the Amendments to the Constitution of the Commonwealth Land Disposition Policy

A portion of the Project (Preferred Route B2A) crosses MassDCR's Magazine Beach property in Cambridge and the Dr. Paul Dudley White Bike Path in Boston. These recreational facilities are under the care and custody of the MassDCR. The installation of the new underground transmission line in these locations will require Article 97 authorization from the Massachusetts Legislature, consistent with the EEA's Article 97 of the Amendments to the Constitution of the Commonwealth Land Disposition Policy (the "Policy"), for the disposition of new easement rights. The goal of the Policy is to ensure "no net loss" of Article 97 lands under the ownership and control of the Commonwealth and its political subdivisions. As outlined in the Policy, six conditions must be met for a determination of "exceptional circumstances" to support an Article 97 land disposition. The following analysis addresses each of the six conditions that will be satisfied by the Project in support of the Article 97 land disposition.

CONDITION #1 *- All other options to avoid the Article 97 disposition have been explored and no feasible and substantially equivalent alternatives exist (monetary considerations notwithstanding).*

In accordance with the EFSB's standard of review, Eversource objectively and comprehensively developed a phased approach to assess a wide array of potential routes and route variations within the bounds of the Project study area. At the conclusion of this process, Eversource identified the Project and a Noticed Alternative that enable Eversource to meet the identified

need while best balancing environmental impacts, costs, and reliability. While the Noticed Alternative does not require Article 97 authorization, because of this detailed analysis, Eversource determined that the Project (including Preferred Route B2A that does require Article 97 approval) is superior to the Noticed Alternative based upon a detailed side-by-side comparison of the transmission line routes comprising each based on a variety of relevant factors.

CONDITION #2 *– The disposition of the subject parcel and its proposed use may not destroy or threaten a unique or significant resource (e.g., significant habitat, rare or unusual terrain, or areas of significant public recreation).*

The Article 97 land crossed by the proposed underground transmission line is comprised of grassed athletic fields, paved bike paths and vegetated areas along the shoreline of the Charles River. Except for a short segment of proposed open excavation where the transmission line will transition from Memorial Drive and onto the Magazine Beach property, the new transmission line across Magazine Beach and the Dr. Paul Dudley White Bike Path will be installed using HDD to minimize construction impacts. Adding the new underground transmission line will not change the characteristics nor the use of these areas. Further, there are already existing underground utilities present throughout the Magazine Beach property and beneath portions of the Dr. Paul Dudley White Bike Path (e.g., water, drainage, electric, sewer, etc.) (see Figure 23). The timing and schedule of the installation will be coordinated with MassDCR to ensure that impacts to users of these recreational facilities are minimized to the extent practicable.

Alterations at Magazine Beach from construction of Preferred Route B2A are generally limited to the temporary staging and laydown areas oriented around the HDD entry site (see Figure 15). The balance of the HDD installation will be sufficiently deep and will not otherwise affect the surface of the Magazine Beach property. The temporary workspace area is presently flat and comprised of turfgrass. Upon completion of the work, Eversource will restore the altered areas to their preexisting conditions or better with loam and an appropriate seed mix as approved by MassDCR. Where the transmission line duct bank transitions from Memorial Drive onto Magazine Beach, the adjacent Dr. Paul Dudley White Path (bituminous pavement), sidewalk, lighting, and grassed shoulder areas will also be restored to their preexisting condition in consultation with MassDCR. Please see Attachment D, for representative photographs of these areas. The final restoration details will be advanced in consultation with MassDCR as part of the Construction Access Permit review process.

CONDITION #3 *- As part of the disposition, real estate of equal or greater fair market value or value in use of proposed use, whichever is greater, and significantly greater resource value as determined by EEA and its agencies, are granted to the disposing agency or its designee, so that the mission and legal mandate of EEA and its agencies and the constitutional rights of the citizens of Massachusetts are protected and enhanced.*

While the size of the easement has not yet been finalized with MassDCR, for planning purposes it is estimated to be between 0.5 acre and 1 acre based on Eversource's minimum requirements to install and maintain the underground transmission line. Eversource anticipates addressing this

criterion and the "no-net loss" goal of the Policy through providing MassDCR with compensatory land of equal value.[15] Eversource thoroughly researched and investigated the Project vicinity to identify land for an exchange. Unfortunately, there is no readily available land currently owned or available for purchase by Eversource in the Project vicinity. However, Eversource has identified seven parcels of land that it owns adjacent to MassDCR properties in the western part of Massachusetts that could potentially be exchanged with MassDCR. Each of these parcels are described in further detail below and identified on Figure 24. MassDCR's review of these parcels is ongoing, as well as other potentially suitable parcels not yet identified by Eversource or MassDCR. That said, MassDCR has preliminarily indicated to Eversource that it is potentially interested in Exchange Parcels #1, #3, #5 and #7 below.

Potential Exchange Parcel #1 - 0 Mohawk Trail, Shelburne

This option is comprised of three Eversource properties totaling approximately 9 acres bordering Shelburne State Forest. The largest of the Eversource parcels is about 8 acres. The parcels are undeveloped, generally consisting of mixed deciduous forest located between Route 2 and the Deerfield River. As depicted on the figure, a distribution line right of way crosses through one of the parcels.

Potential Exchange Parcel #2 - 0 Broad Street, Weymouth

This option consists of one Eversource parcel, totaling approximately 10 acres. The Eversource parcel borders MassDCR's William A. Connell Sr. Recreation Center. The recreational facility includes a skating rink and swimming pool. The Eversource parcel is undeveloped consisting of maintained electric transmission line right of way and wooded uplands.

Potential Exchange Parcel #3 - 0 North Quincy Street, Brockton

This option consists of one Eversource parcel, totaling approximately 29 acres. The Eversource parcel borders MassDCR's Ames Nowell State Park. This park is open year-round for daytime recreation, including hiking, biking, boating, picnicking, and fishing among other uses. The Eversource parcel is undeveloped consisting of maintained electric transmission line right of way and wooded uplands bordering Cleveland Pond.

Potential Exchange Parcel #4 - 0 Gulf Road, Northfield

This option consists of one Eversource parcel, totaling approximately 128 acres. The Eversource parcel borders MassDCR's Northfield State Forest. The State Forest is approximately 3,600 acres and includes nearly 17 miles of public trails. The adjoining Eversource parcel is undeveloped consisting of maintained electric transmission line right of way and wooded uplands.

[15] Alternatively, if MassDCR prefers, Eversource will work with MassDCR to determine appropriate compensation based on fair market value determined by an appraisal.

Potential Exchange Parcel #5 - 0 Thompson Road, Wendell

This option consists of one Eversource parcel, totaling approximately 52 acres. The Eversource parcel borders MassDCR's Wendell State Forest. The State Forest is approximately 7,600 acres and includes hiking trails, cross country skiing, picnic areas, fishing and boating opportunities and recreational facilities (baseball diamond). The Eversource land is an undeveloped out parcel within the center of the State Forest consisting of wooded uplands.

Potential Exchange Parcel #6 - Rear E. Chestnut Hill Road, Montague

This option consists of one Eversource parcel, totaling approximately 27 acres. The Eversource parcel borders MassDCR's Montague State Forest. The State Forest is approximately 645 acres and includes nearly 5 acres of hiking trails, bordering the Montague Wildlife Management Area. The Eversource land is undeveloped consisting of maintained electric transmission line right of way and wooded uplands.

Potential Exchange Parcel #7 – 0 Barrows Road, Falmouth, MA

This option consists of one Eversource parcel, totaling approximately 3.58 acres. The Eversource parcel is presently comprised of woodlands. The Eversource parcel borders an undeveloped parcel of land owned by the Town of Falmouth adjacent to the Waquoit Bay National Estuarine Research Reserve. The Reserve is part of the Massachusetts State Parks system and is one of 28 sites in the U.S. that comprise the National Estuarine Research Reserve System ("NERRS"). The Waquoit Bay Reserve is administered by MassDCR in partnership with the National Oceanic and Atmospheric Administration ("NOAA"). In addition to being a center for research and education, the Reserve is a State Park.

CONDITION #4 *- The minimum acreage necessary for the proposed use is proposed for disposition and, to the maximum extent possible, the resources of the parcel proposed for disposition continue to be protected;*

As noted above, while the size of the easement has not yet been finalized with MassDCR, for planning purposes it is estimated to be between 0.5 acre and 1 acre based on Eversource's minimum requirements to install and maintain the underground transmission line. The existing resources will not be affected because the transmission line will be installed underground in an area that already contains several underground utilities (e.g., water, drainage, electric, sewer, etc.).

Eversource and MassDCR have also had preliminary discussions regarding other mitigation opportunities that could potentially be implemented at Magazine Beach, including but not limited proposed improvements to the recreational facilities (athletic fields, pool area, spray deck, bike path, etc.). Eversource is committed to working with the MassDCR to identify and implement a meaningful mitigation package in exchange for the easement rights and to comply with the no-net loss goal of the Policy.

CONDITION #5 *- The disposition serves an Article 97 purpose or another public purpose without detracting from the mission, plans, policies and mandates of EEA and its appropriate department or division.*

The disposition clearly serves a public purpose. As described in Section 3.0, the Project is designed to be an integrated, long-term solution to address reliability needs in areas of the City of Cambridge that are experiencing rapid economic development and sustained load growth. Eversource must address the deficiency in East Cambridge Substation firm capacity, mitigate the potential for existing transmission line contingencies to cause outages to the entire Project Area for prolonged periods, and resolve transmission line overloads that would require customer load shedding in the Project Area under certain foreseeable contingencies. While the loss of service risks from certain N-1-1 transmission contingencies are a current reliability concern, transmission line overloads from certain N-1 transmission contingencies also emerge as early as 2022. These projected overloads and associated loss of service risks increase over the ten-year forecast period. At the distribution stations, given the current load and expected load growth, there is an elevated risk of substation failure during emergency conditions due to transformer overloads beginning in 2022. These system reliability needs are significant, resulting in the need for near term interim solutions, therefore requiring immediate resolution to maintain a reliable system.

Further, the proposed disposition will not detract from the mission, plans, policies and mandates of EEA and its agencies.

CONDITION #6 *- The disposition of a parcel is not contrary to the express wishes of the person(s) who donated or sold the parcel or interests therein to the Commonwealth.*

There are currently numerous underground utilities located beneath Magazine Beach and the Dr. Paul Dudley White Bike Path, including water, sewer, drainage, and electric lines (see Figure 23). The addition of the proposed underground electric transmission line will not alter the use or the characteristics of these areas.

Conclusion

As described above, the Project is consistent with the Article 97 Land Disposition Policy and will not result in the net loss of Article 97 lands under the ownership and control of the Commonwealth and its political subdivisions.

10.0 Summary of Local, State and Federal Permits and Approvals

In addition to MEPA review, the Project requires several permits and approvals from local, state, and federal agencies. These regulatory review processes are summarized below.

10.1 Federal

10.1.1 USEPA NPDES Stormwater Construction General Permit and Remediation General Permit

The USEPA has issued a CGP for stormwater discharges associated with construction activities under the NPDES program. The CGP authorizes storm water discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the United States or a municipal separate storm sewer system ("MS4") leading to surface waters of the United States.

Compliance with the CGP is achieved by (1) completing, certifying, and submitting to EPA a NOI, (2) developing and implementing a SWPPP, and (3) reading and complying with the requirements and standard conditions contained in the CGP.

Prior to the start of construction, a NOI will be submitted to the EPA using their online filing system for coverage under the NPDES CGP, and a SWPPP will be developed for the Project. If necessary, Eversource will also apply for coverage under EPA's Remediation General Permit governing certain dewatering activities during construction.

10.1.2 Section 10 of the River and Harbors Act

The Corps of Engineers General Permit for Massachusetts authorizes certain activities in "waters of the United States" and "navigable waterways", including wetlands, under Section 404 of the U.S. Clean Water Act and Section 10 of the Rivers and Harbors Act, that have minimal individual and cumulative adverse effects on the aquatic environment within Massachusetts.

The construction of any structure in, over or under any navigable water of the U.S., are regulated under Section 10 of the Rivers and Harbors Act of 1899. The HDD crossing of the Charles River will require a Preconstruction Notification ("PCN") filing (as per current General Permit #9) with the Corps of Engineers under Section 10. The HDD method is a common alternative to open-cut trenching to reduce surface disturbance in environmentally sensitive areas (e.g., wetlands and waterways) and to avoid other existing infrastructure (e.g., roadways, railroads, and utilities) and when deep burial depths are required (for example, under federal navigation channels). The HDD method results in minimal surface disruption and will avoid and minimize impacts that would occur from conventional open-cut trench installation across the Charles River and adjacent wetland resource areas. It is estimated that an area of about 3,200 s.f. will be altered through the installation of the HDD pipe beneath the Charles River. No other alterations to wetlands or other waters of the U.S. are proposed. For perspective, at its deepest point, the new transmission line could be as much as 30 feet below the bed of the Charles River.

A PCN will be prepared by Eversource and submitted to the Corps of Engineers in accordance with the current General Permit, and will be concurrently reviewed by other federal agencies, including the USEPA, the Office of Coastal Zone Management, the National Oceanic and Atmospheric Administration/National Marine Fisheries Service, and the U.S. Fish & Wildlife Service, as appropriate.

Additionally, the Massachusetts General Permit requires notification to the State Historic Preservation Officer ("SHPO") and Tribal Historic Preservation Officer ("THPO") in accordance with Section 106 of the National Historic Preservation Act. Eversource will coordinate with these parties through the MEPA review process and follow on state and federal permitting processes, as appropriate.

10.2 State

10.2.1 Energy Facilities Siting Board and Department of Public Utilities

In conjunction with the MEPA ENF filing, the Project requires submittal of a petition to the Department of Public Utilities ("DPU") and EFSB pursuant to G.L. c. 164, § 69J and G.L. c. 164, § 72, for authority to construct, operate and maintain the proposed underground transmission line, the New Substation facility, and ancillary modifications to existing substation facilities in Cambridge, Somerville, and Boston.

10.2.2 MassDEP Chapter 91

The Public Waterfront Act, M.G.L. Chapter 91 and its implementing regulations at 310 CMR 9.00 regulate activities located in, under, or over flowed tidelands, filled tidelands, Great Ponds and certain non-tidal rivers and streams on which public funds have been expended. These activities are broadly defined to include the placement or construction of new fill and/or structures, the demolition or removal of existing fill and/or structures, and/or the change in use of such fill or structures.

Segments of the proposed underground transmission lines in Cambridge and Boston, predominantly along Memorial Drive and the Charles River, are located on previously authorized filled tidelands[16] and flowed tidelands[17] (HDD crossing of the Charles River). Other segments of the transmission lines are located on landlocked tidelands.[18]

Some of the activities described above qualifies as Minor Project Modifications while others, like the HDD crossing of the Charles River, will require a new Chapter 91 License. Eversource will consult with MassDOT Waterways staff and file the requisite applications.

In addition, construction of the Project will serve the public interest because it is designed to address both the need for additional capacity to reliably supply customers in the Project area, as well as the reliability issues surrounding the potential for existing transmission line overloads that would result in a loss of service to customers in the Project area. Specifically, the proposed Project will result in an integrated, long-term solution that will provide the infrastructure needed to support the rapidly growing current and projected load requirements and to maintain reliable energy supply to customers, including many large office and laboratory uses.

10.2.3 MassDEP 401 Water Quality Certificate

The 401 Water Quality Certification ("WQC") program is a Federal statute administered through state regulations (310 CMR 9.00) by MassDEP to ensure that a project complies with state water quality standards (314 CMR 4.00). A 401 Water Quality Certificate ("WQC") is required under the U.S. Clean Water Act for activities resulting in a discharge of dredged or fill material into wetlands and waterways.

Eversource will apply for an individual 401 WQC with the MassDEP for the HDD crossing of the Charles River, unless the MassDEP determines that the Order of Conditions issued by the Boston and Cambridge Conservation Commission(s) serves as the 401 WQC as outlined in its regulations. Eversource will consult accordingly with MassDEP and make the necessary application submittals.

As noted above under the Corps of Engineers Section 10 description, the HDD method is a common alternative to open-cut trenching to reduce surface disturbance in environmentally sensitive areas (e.g., wetlands and waterways). The HDD method results in minimal surface

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[16] Filled Tidelands means former submerged lands and tidal flats which are no longer subject to tidal action due to the presence of fill.

[17] Flowed Tidelands means present submerged lands and tidal flats which are subject to tidal action. While the Charles River is presently dam-controlled and not subject to tidal action, the Department treats the Charles River in the Project area as flowed tidelands for purposes of Chapter 91 review.

[18] Landlocked Tidelands means any filled tidelands which on January 1, 1984, were entirely separated by a public way or interconnected public ways from any flowed tidelands, except for that portion of such filled tidelands which are presently located: (a) within 250 feet of the high-water mark, or (b) within any Designated Port Area. Said public way or ways shall also be defined as landlocked tidelands, except for any portion thereof which is presently within 250 feet of the high-water mark.

disruption and will avoid and minimize impacts that would occur from conventional open-cut trench installation across the Charles River and adjacent wetland resource areas. As noted, it is estimated that about 3,200 s.f. of Land Under Water[19] will be altered through the installation of the HDD pipe beneath the Charles River. No other alterations to wetlands or other waters of the U.S. are proposed. For perspective, at its deepest point, the new transmission line could be as much as 30 feet below the bed of the Charles River.

10.2.4 MassDOT Highway Access Permit

Certain roads within the Project are controlled by MassDOT including the River Street and Anderson Bridges and I-90 in Cambridge and Boston, and the Prospect Street Bridge and McGrath Highway in Somerville. Any crossings of these facilities or work within the State Highway Layout(s) will require a State Highway Access Permit ("SHAP") from MassDOT.

10.2.5 MassDCR Access Permit

Certain roads and public recreational facilities within the Project are controlled by MassDCR including Memorial Drive, Magazine Beach and the Dr. Paul Dudley White Bike Path in Cambridge, and Soldiers Field Road in Boston. Any crossings of these facilities will require a Construction Access Permit from MassDCR.

10.2.6 MWRA 8(M) Permit

Section 8(m) of chapter 372 of the Acts of 1984 enables the Massachusetts Water Resources Authority ("MWRA") to issue permits to other entities to build, construct, excavate, or cross within an easement or other property interest held by the Authority. MWRA water and sewer infrastructure and related easements existing in several locations beneath public roads, bridges, the Charles River, Magazine Beach, and the MassDOT Allston Multimodal Project site. Eversource will obtain 8(m) permit(s) for those portions of the proposed transmission lines that cross these MWRA facilities.

10.2.7 MBTA Rail Crossing Permit / License

The MBTA has several properties within the Project area, including the Red Line subway tunnel beneath Main Street in Cambridge and Somerville, the Grand Junction Railroad in Boston, Cambridge and Somerville, the commuter rail and Green Line Extension in Somerville, and rail facilities within the Allston Multimodal Project site in Boston. Eversource will obtain MBTA licenses and approvals for those portions of the proposed transmission lines that cross these MBTA facilities.

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[19] According to 310 CMR 10.56, Land Under Water is the land beneath any creek, river, stream, pond, or lake. Said land may be composed of organic muck or peat, fine sediments, rocks, or bedrock.

10.3 Local

10.3.1 Wetlands Protection Act and Wetlands Ordinance

The Massachusetts Wetlands Protection Act (G.L. c. 131 § 40) and implementing regulations (310 CMR 10.00) is a state statute administered locally by Conservation Commissions. In addition to administering the WPA, certain communities such as Boston also administer a Wetland Ordinance. The WPA and Ordinance require the preparation of a Notice of Intent ("NOI") for certain activities within a wetland resource area and/or work within 100 feet of certain wetland resource areas (i.e., the 100-foot Buffer Zone). The general performance standards for work or activities occurring within wetland resource areas are identified in the WPA and Ordinance.

Eversource will submit NOIs and obtain Orders of Conditions from the Cambridge and Boston Conservation Commissions for work associated with the HDD crossing of the Charles River. The Project does not involve any work in wetland resource areas or Buffer Zones in the City of Somerville. As noted above, approximately 3,200 s.f. of Land Under Water will be altered through the installation of the HDD pipe beneath the Charles River. No other alterations to wetland resource areas are anticipated (including but not limited to Riverfront Area and Bordering Land Subject to Flooding). Further, the construction of underground transmission lines within existing paved roadways within the 100-foot buffer zone or Riverfront Area is exempt from the Massachusetts WPA per 310 CMR 10.02(2)(b)(2)(i) and 310 CMR 10.58(6)(b) provided that all work is conducted within the roadway and that all trenches are closed at the completion of each workday.

10.3.2 Street Opening Permits

Street Opening Permits are required for construction activities located on or under the public right of way, either sidewalk and/or roadway. Prior to construction, Eversource will obtain Street Opening Permits from Cambridge, Somerville, and Boston to install the underground electric transmission lines.

10.3.3 Grants of Location

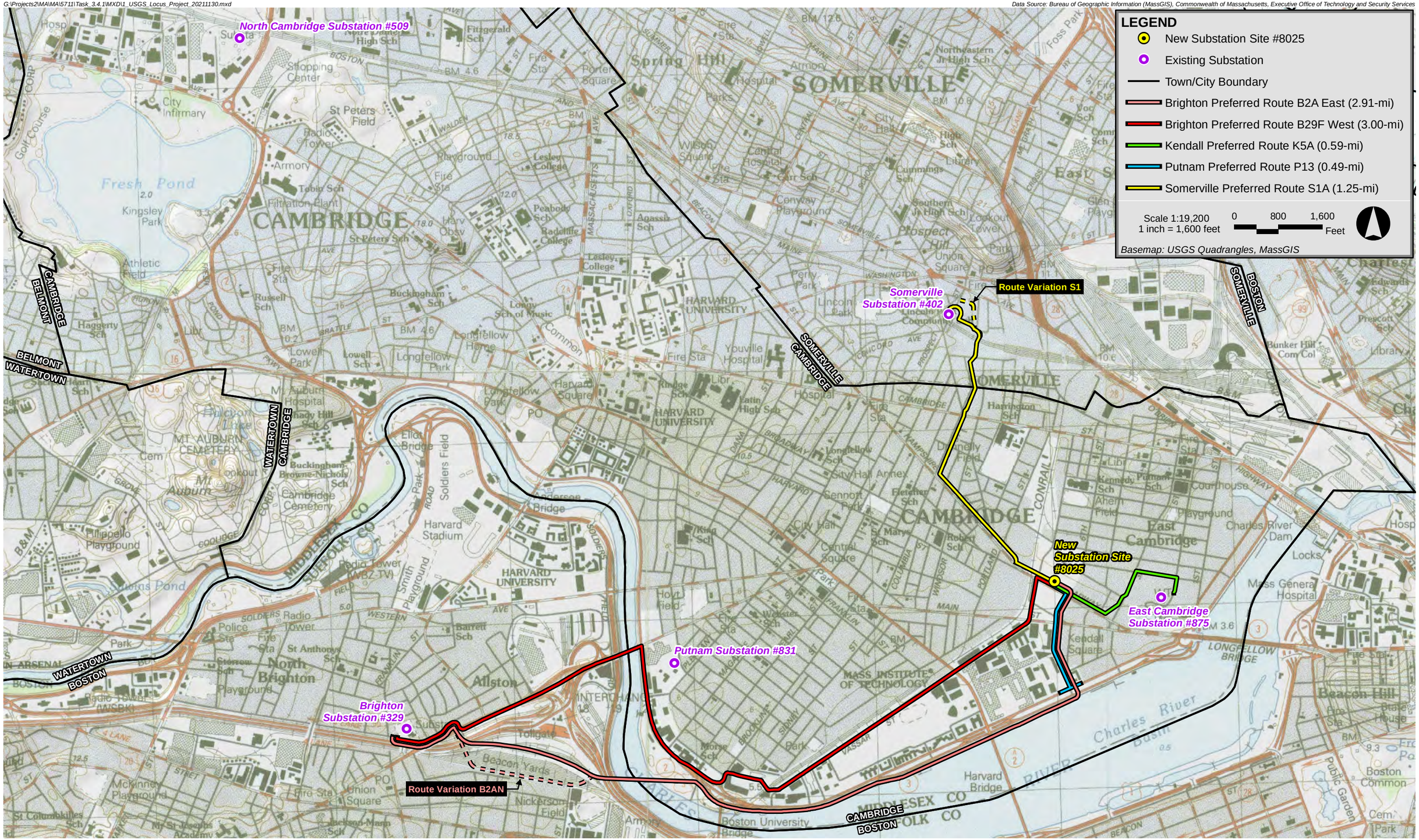
Like Street Opening Permits, Grants of Locations are required whenever a petitioner wishes to locate infrastructure upon, along, under or across that public way. Prior to construction, Eversource will obtain Grants of Location from Cambridge, Somerville, and Boston to install the underground electric transmission lines.

Attachment B

Figures

G:\Projects2\MA\MA\5711\Task_3.4.1\MXD\1_USGS_Locus_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

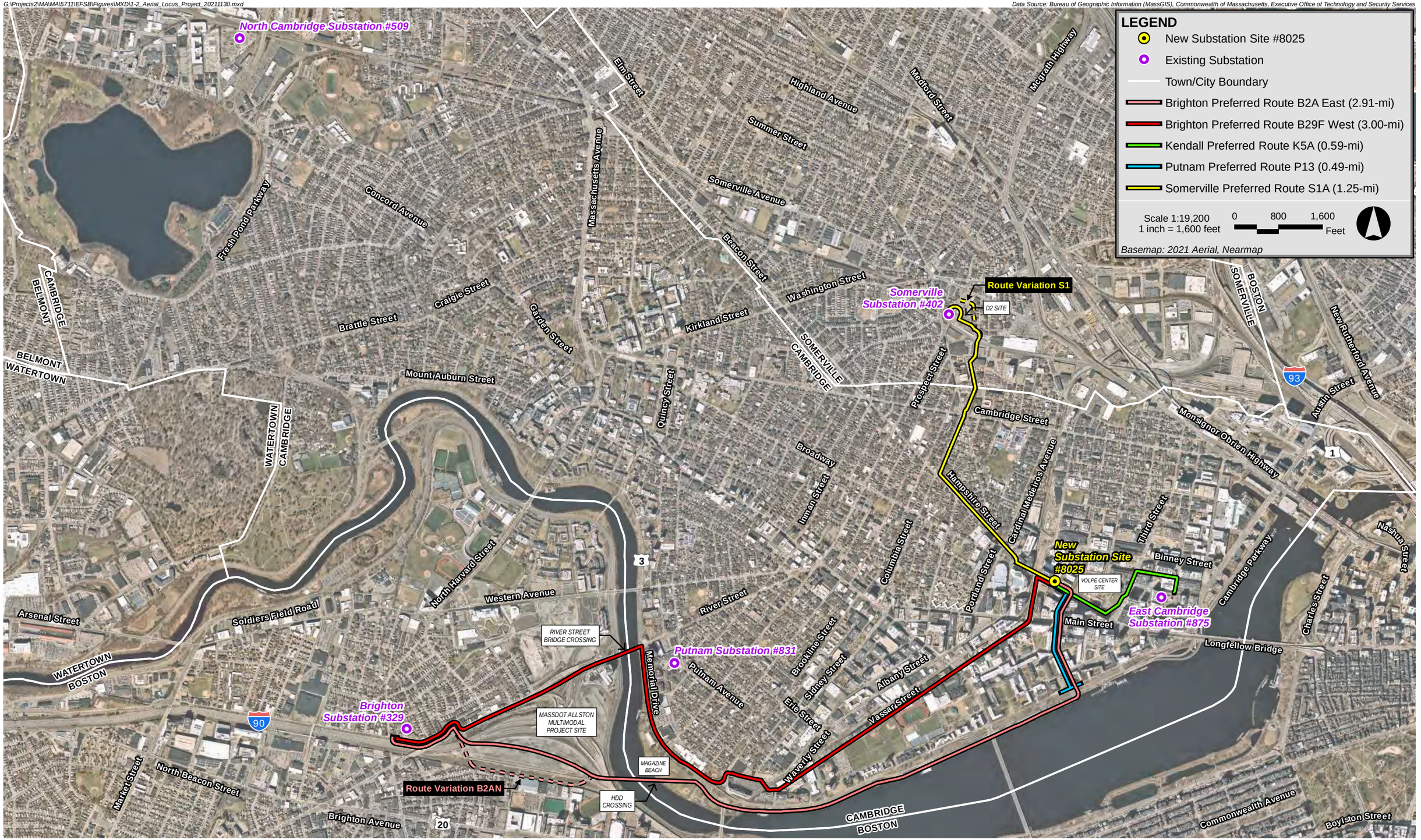
EVERSOURCE

Figure 1

Locus Map (Project)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\1-2_Aerial_Locus_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

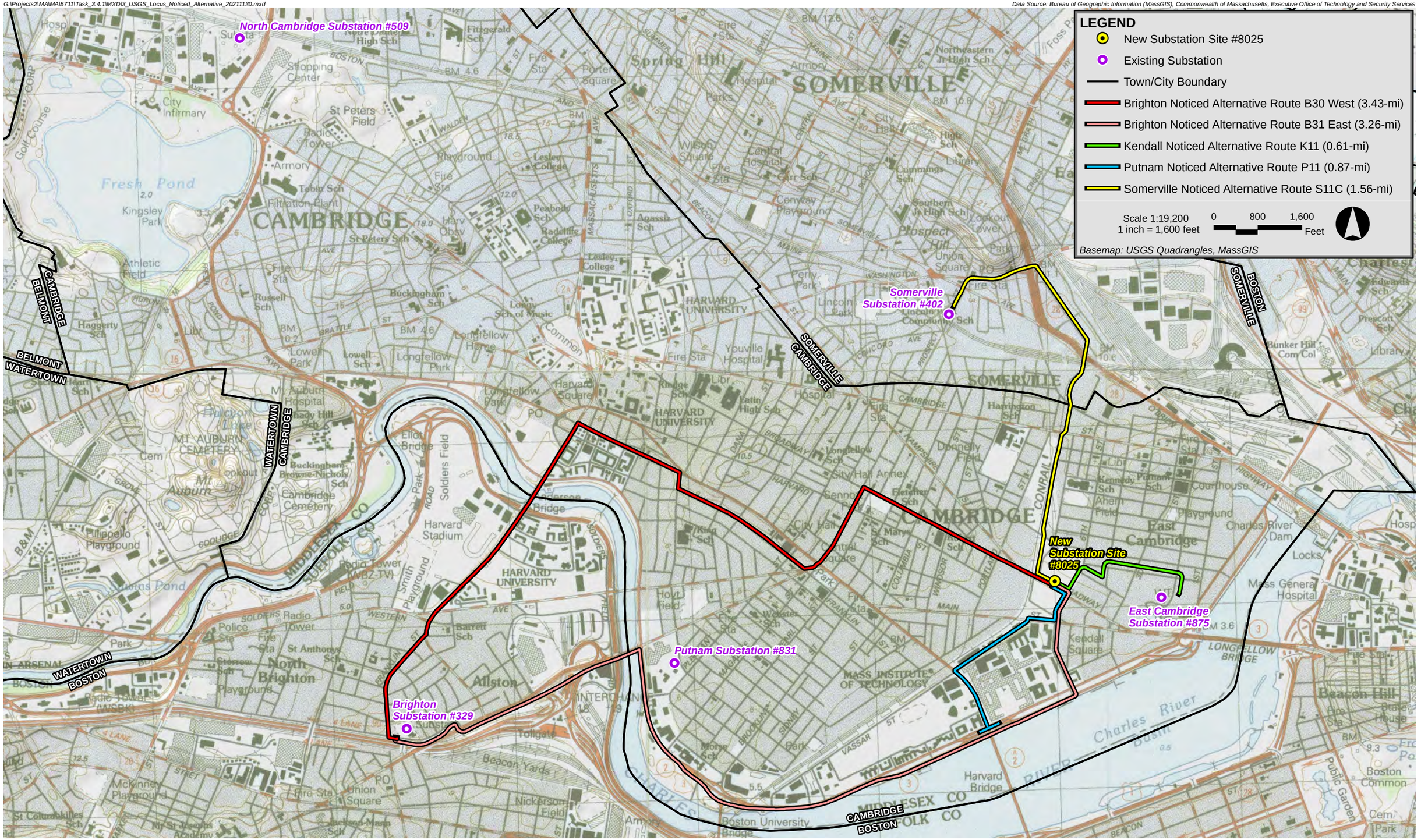
EVERSOURCE

Figure 2

Aerial Locus Map (Project)

G:\Projects2\MA\MA\5711\Task_3.4.1\MXD\3_USGS_Locus_Noticed_Alternative_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

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Figure 3

Locus Map (Noticed Alternative)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-2_Noticed_Alternative_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

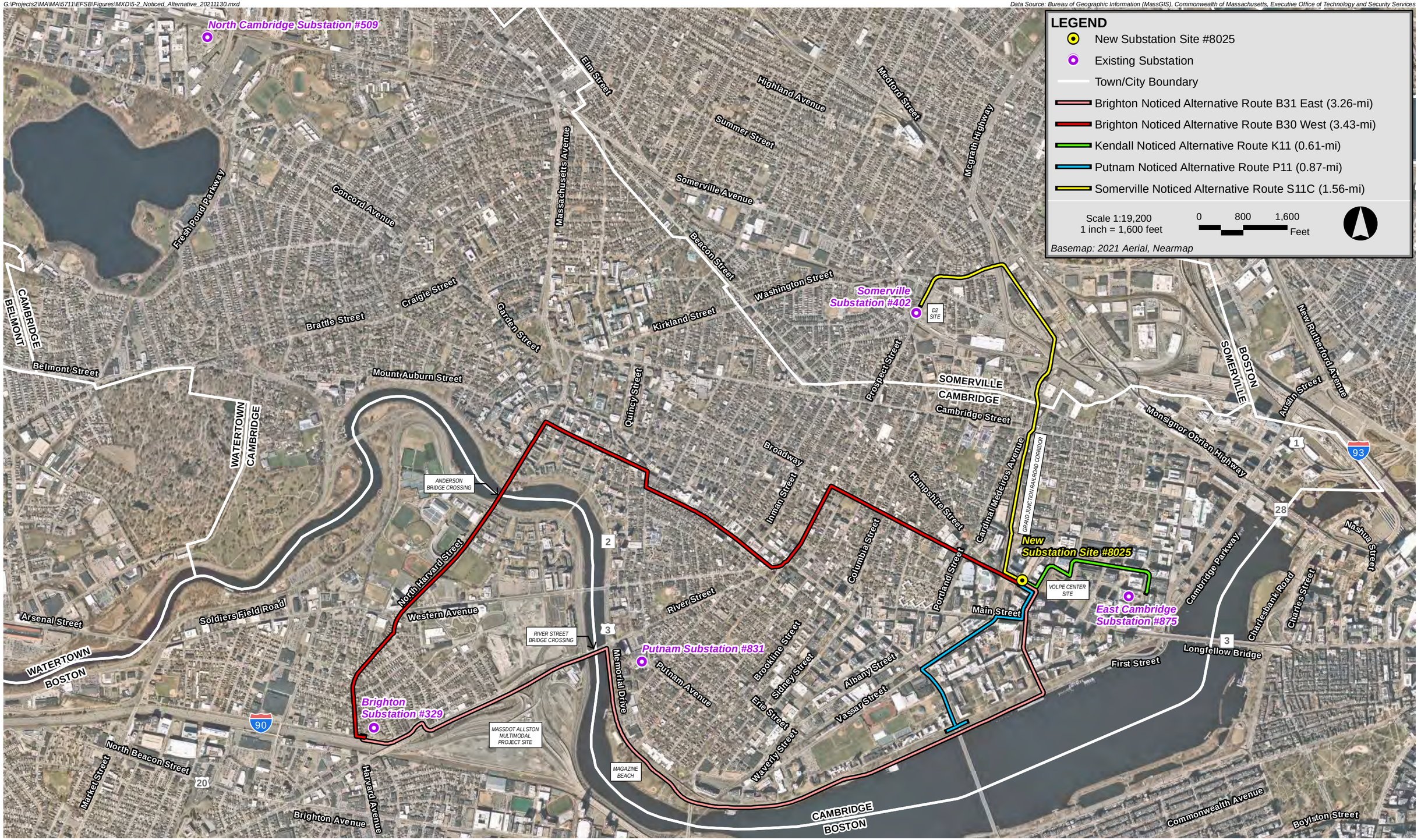

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Figure 4

Aerial Locus Map (Noticed Alternative)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\3-3_Street_Locus_Transmission_Alternative2_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

North Cambridge Substation #509

Somerville Substation #402

Potential Linwood Substation Site

Potential Linwood Substation Site (alternate)

Prospect Street Substation #819

Mystic Substation #250

New Substation Site #8025

East Cambridge Substation #875

Putnam Substation #831

Brighton Substation #329

ARLINGTON
CAMBRIDGE

MEDFORD
SOMERVILLE

EVERETT
CHELSEA

CAMBRIDGE
BELMONT

BELMONT
WATERTOWN

CAMBRIDGE
WATERTOWN

SOMERVILLE
CAMBRIDGE

BOSTON
SOMERVILLE

WATERTOWN
BOSTON

CAMBRIDGE
BOSTON

LEGEND

- New Substation Site #8025
- Existing Substation
- Potential Substation
- Town/City Boundary
- Transmission Alternative 2 (17.56-mi)

Scale 1:24,000
1 inch = 2,000 feet

0 1,000 2,000 Feet

Basemap: World Street Map, Esri

Greater Cambridge Energy Program

EVERSOURCE

Figure 5

Transmission Alternative 2

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\4-3A_Project_Study_Area_20211112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

LEGEND

Project Study Area

Town/City Boundary

Scale 1:18,000
1 inch = 1,500 feet

0 750 1,500 Feet

Basemap: National Geographic Map, Esri

Somerville Substation #402

New Substation Site #8025

East Cambridge Substation #875

Putnam Substation #831

Brighton Substation #329

CAMBRIDGE
WATERTOWN

SOMERVILLE
CAMBRIDGE

BOSTON
SOMERVILLE

CAMBRIDGE
BOSTON

WATERTOWN
BOSTON

BOSTON
BROOKLINE

Cambridge

Allston

Harvard University The Quad

Soldiers Field Athletic Area

Harvard University

Mt Auburn Cemetery

Cambridge Cemetery

Mount Auburn Hospital

Bunker Hill Community College

Massachusetts Institute Of Tech

Massachusetts General Hospital

Boston University

Boston Common

Public Garden

Prudential Center

Copley Place

Fenway

North Point Park

Charles River

Somerville Ave

Garfield St

Wendell St

Mellen St

Highland St

Parker St

Concord Ave

Follen St

Jarvis St

Oxford St

Francis Ave

St Johns Rd

Foster St

Garden St

Story St

Hawthorn St

Ash St

Brown St

Trail St

Channing St

Elliot Brg

Ross St

Winthrop St

Arrow St

Prescott St

Ware St

Trowbridge St

Ellery St

Roberts Rd

Ellsworth Ave

Highland Ave

Antrim St

Hampshire St

Mill St

Banks St

Flagg St

Magee St

Soldiers Field Rd

Harvard Way

N Harvard St

River St

Western Ave

Memorial Dr

Granite St

Henry St

Putnam Ave

Cherry St

Pine St

Cedar Ave

Meadow Ave

Prospect St

Crystal Ave

Larch Rd

Fresh Pond Pkwy

Concord Turnpike

Broadway

Harvard St

Beacon St

Commonwealth Ave

Massachusetts Ave

Bishop Allen Dr

Cottage St

Brookline St

Pearl St

Putnam St

Magazine St

Chestnut St

Erie St

Purrington St

Osborn St

Vassar St

Amherst St

Amherst Aly

Audrey St

Ames St

Main St

State St

Portland St

Galileo Galilei Way

Wadsworth St

Carleton St

Windsor St

Columbia St

Norfolk St

Hancock St

Lee St

Bigelow St

Essex St

Bay St

Kinnaird St

Jay St

Washington St

Bishop Allen Dr

Tremont St

Elm St

Lincoln St

West St

York St

Bristol St

Cardinal Medeiros Ave

Fulkerson St

Berkshire St

Otis St

Bent St

Rogers St

Jefferson St

Winter St

Ward St

Earle St

Oak St

Washington St

New Washington St

Somerville Ave

Broadway

Medford St

Lowell St

Linwood St

Marshall St

Perkins St

Dimick St

Beacon St

Tyler St

Bow St

Park St

Laurel St

Preston Rd

Vinal Ave

Hamlet St

Florence St

Cresent St

Brighton St

Roland St

3rd Ave

Innerbelt Rd

Mead St

Cook St

Sullivan St

W School St

Austin St

Lynde St

Gilmore Brg

Northpoint Blvd

Industrial Park Rd

Lechmere Canal

Nashua St

Charles River

Fruit St

Blossom St

Revere St

Longfellow Brg

Brimmer St

River St

Branch St

Charles St

Beacon St

Back St

Marlborough St

Storrow Dr

Stanford St

Joy St

Cambridge St

Stuart St

St James Ave

Trinity Pl

Clarendon St

Dartmouth St

Exeter St

Gloucester St

Hereford St

Fairfield St

Silber Way

Deerfield St

Mountfort St

Buswell St

Ipswich St

Boylston St

Lansdowne St

Ivy St

Carlton St

Amory St

Kirkland St

Quint Ave

Linden St

Gardner St

Malvern St

Alcorn St

Crowninshield Rd

Naples Rd

Lawton St

Vernedale St

Braintree St

Adamson St

Easton St

Everett St

Holmes St

Travis St

Seattle St

Rugby Rd

Harvard St

Guest St

Ridgemont St

Sparhawk St

Camelot Ct

Imrie Rd

Stanley A Ringer Playground

Gardena St

Glendale St

Arthur St

Dustin St

Cottage St

Coolidge Ave

Meadow Rd

Field Rd

Story Rd

Crystal Ave

Larch Rd

Cedar Ave

Pine St

Central Ave

Maple St

Coolidge Hl

Mt Auburn St

Homer Ave

Holworthy St

Meadow Way

Hilliard St

Cambridge Pkwy

Ireland St

Mt Auburn Hospital

St Elizabeth's Med Ctr

Harvard University The Quad

Harvard Square

Kendall Square

Central Square

Cambridge Cemetery

Mt Auburn Cemetery

Soldiers Field Athletic Area

Stanley A Ringer Playground

Bunker Hill Community College

Massachusetts General Hospital

Boston Common

Public Garden

Prudential Center

Copley Place

Fenway

North Point Park

Charles River

Greater Cambridge Energy Program

EVERSOURCE

Figure 6

Routing Study Area

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\4-15_Route_P13_20211112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

Figure 7

Project Route P13 (Ames Street)

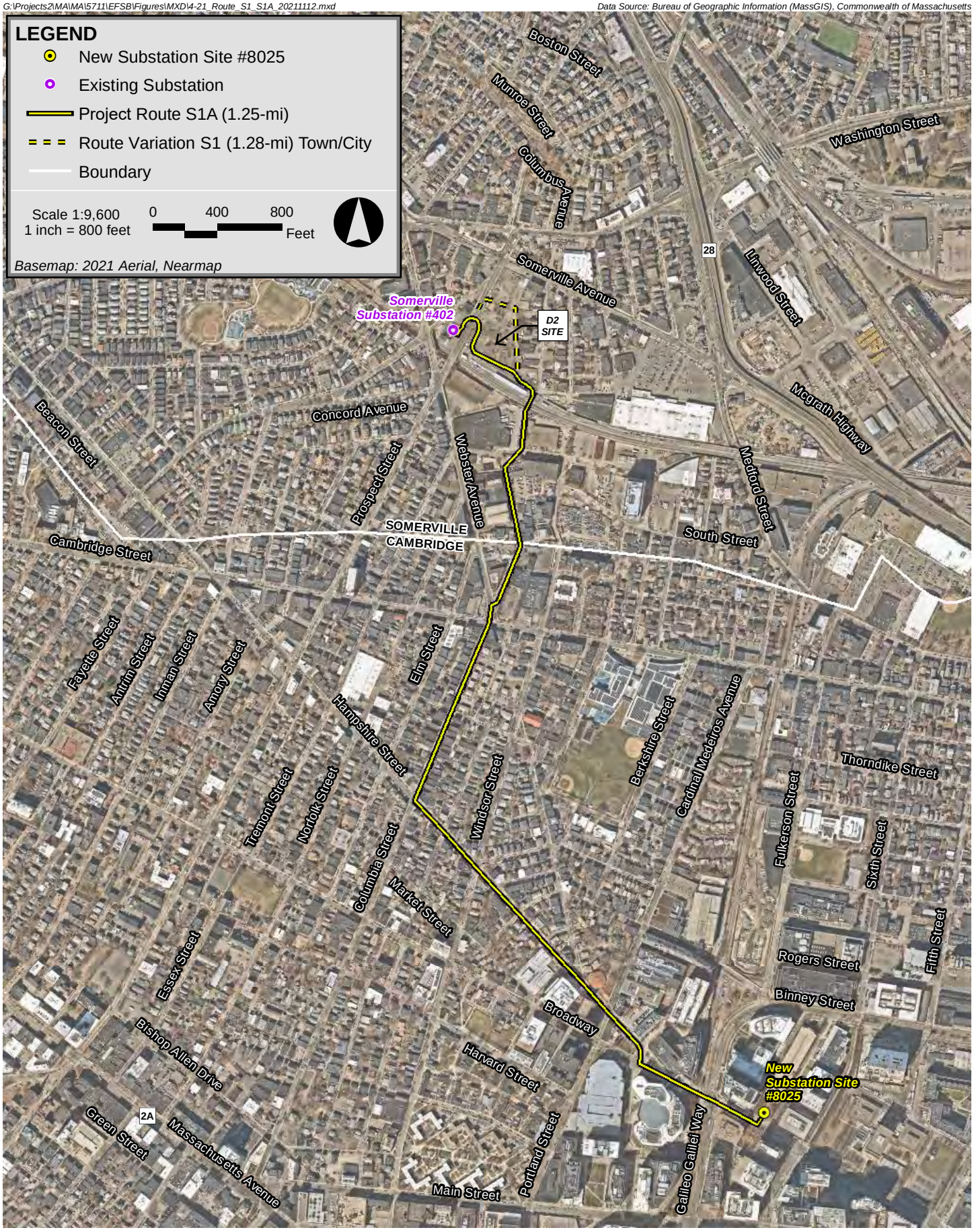

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Figure 8

Project Route S1A and Route Variation S1 (Hampshire Street and D2 Site)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\4-16_Route_K5A_20211112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

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Figure 9

Project Route K5A (Linskey Way)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\4-5_Route_B2A_B2AN_East_20211112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

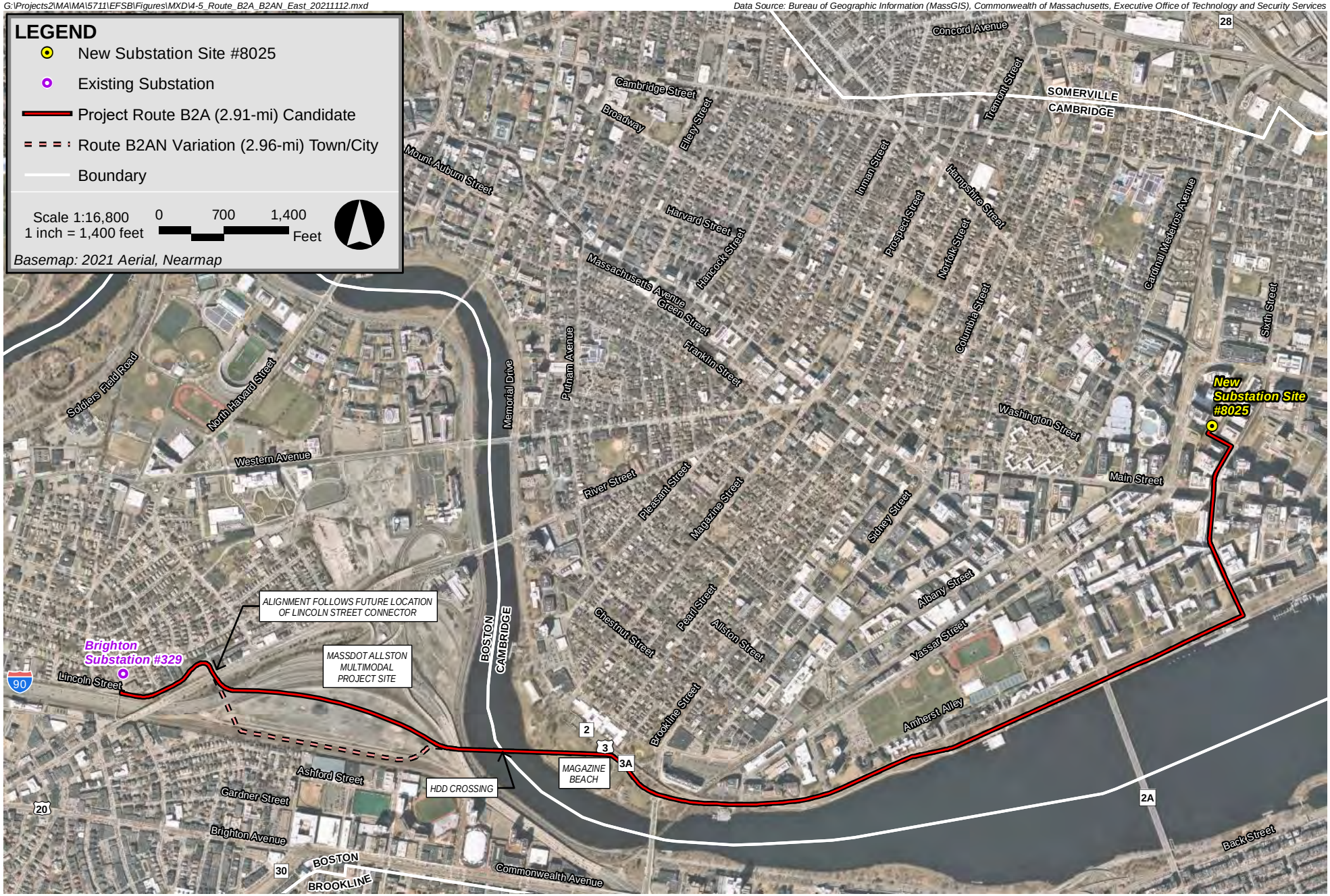

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Figure 10

Project Route B2A/B2AN East (Magazine Beach HDD)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\4-11_Route_B29F_West_20211112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

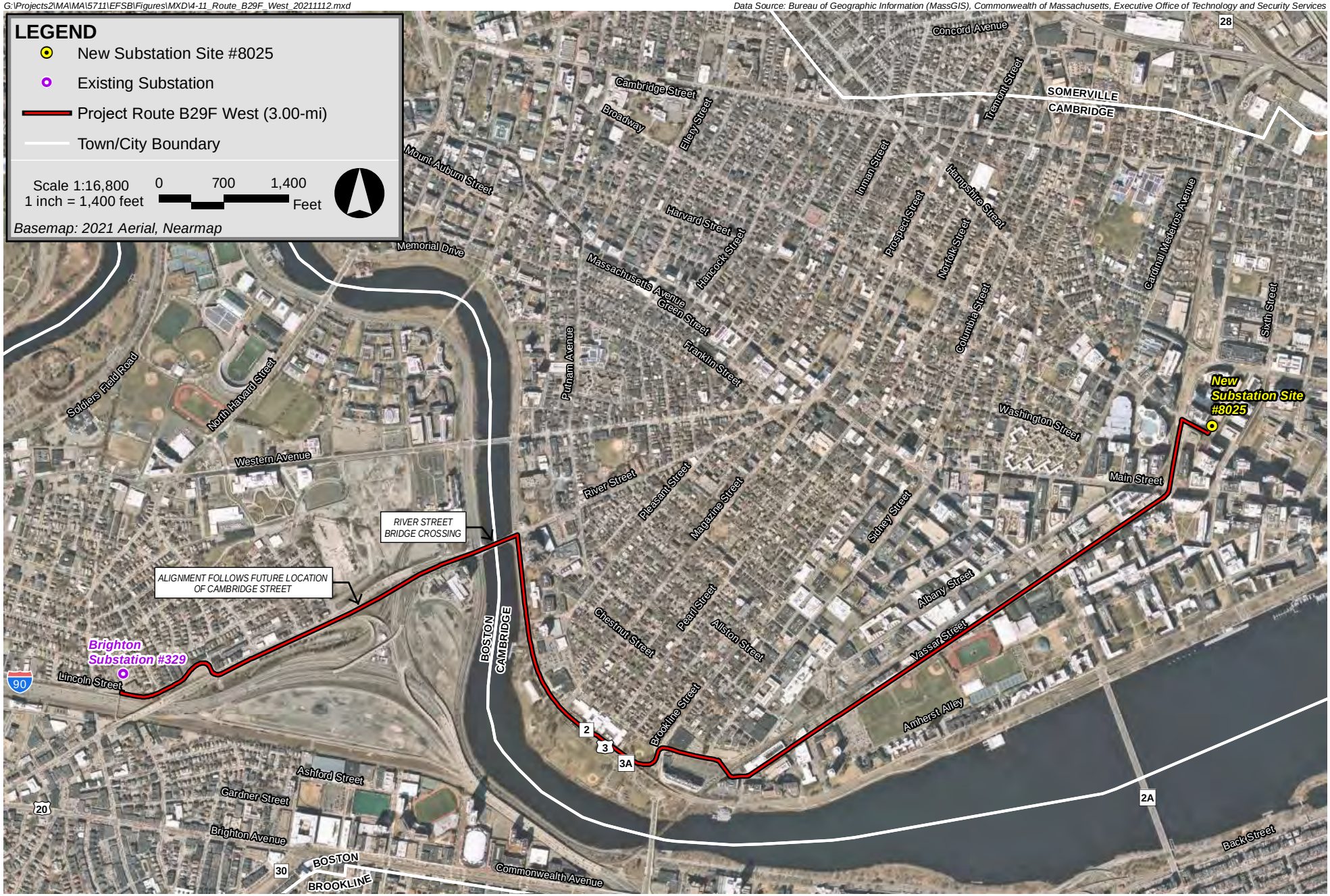

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Figure 11

Project Route B29F West (River Street Bridge)

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Figure 12

135 Fulkerson Street Substation Site

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Figure 13

Proposed New Substation Site

BRIGHTON SUBSTATION

EAST CAMBRIDGE SUBSTATION

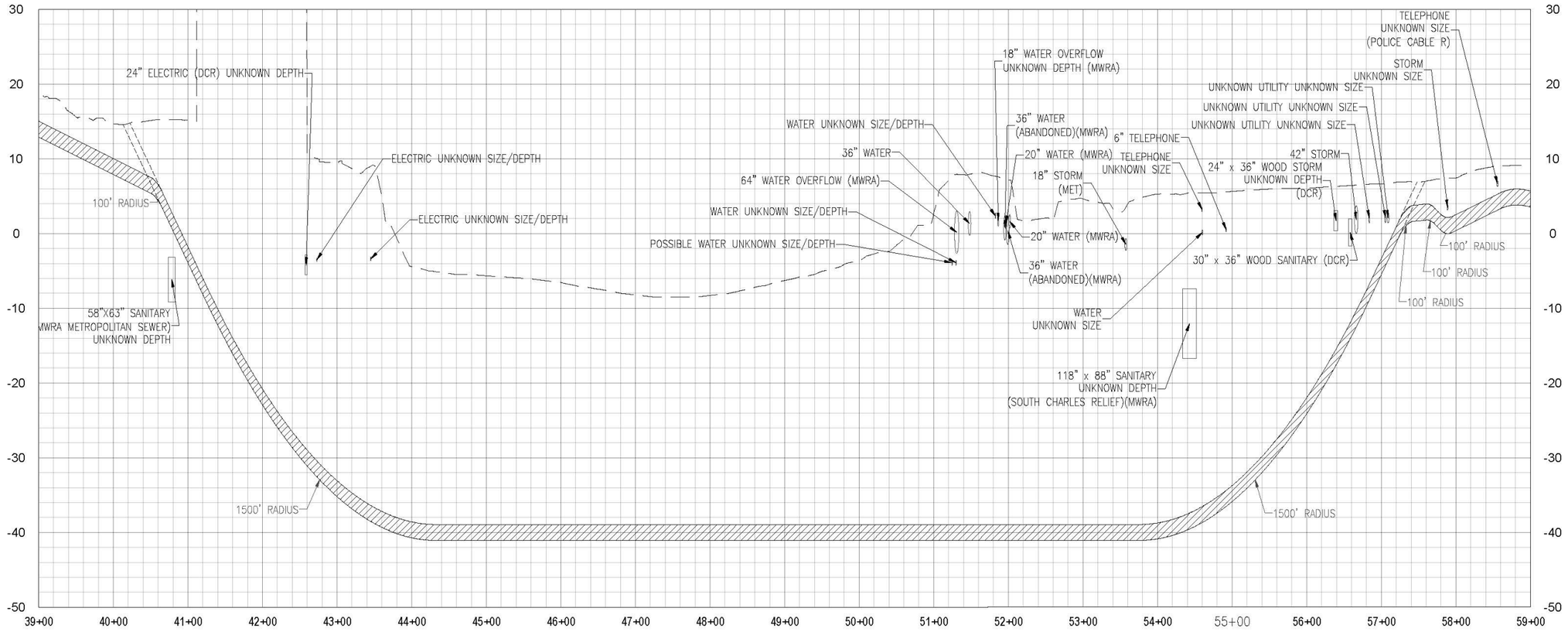

Figure 14

Conceptual HDD Profile of Charles River Crossing

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-7_HDD_Overview_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

LEGEND

Brighton Preferred Route B2A East (2.91-mi)

- Open Trench Segment
- Trenchless Segment
- 30' Permanent Easement
- Temporary Workspace and Laydown Area
- Constructed Stormwater Wetlands (Non-Jurisdictional)
- Bordering Vegetated Wetland
- Land Under Water
- 25-ft Riverfront Area
- 100-ft Wetland Buffer Zone
- Chapter 91 Jurisdiction
- Bordering Land Subject to Flooding

Scale 1:1,800
1 inch = 150 feet

0 75 150 Feet

Basemap: Nearmap Aerial, 2021

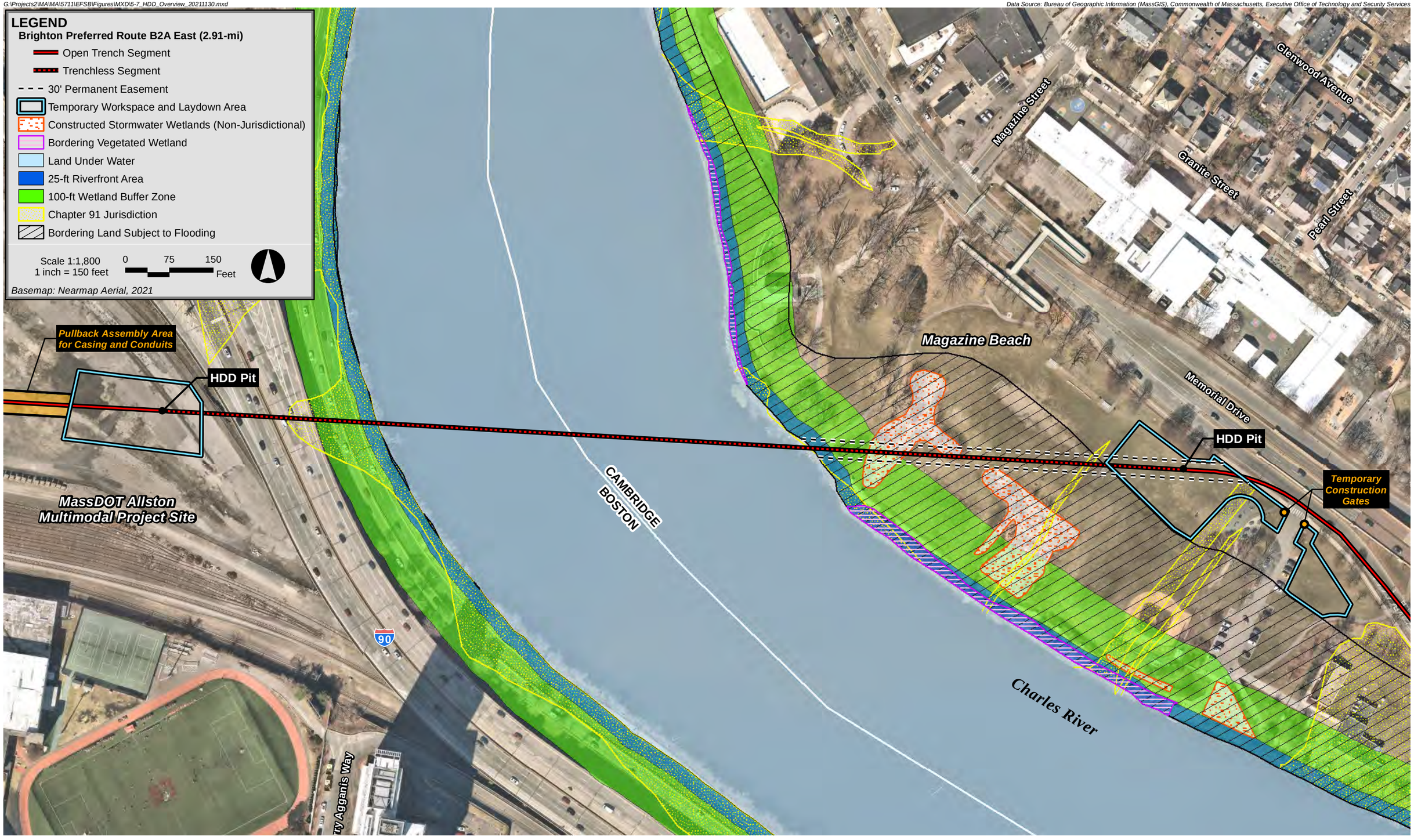

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Figure 15
HDD Overview

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-8A_Floodplain_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

LEGEND

- New Substation Site #8025
- Existing Substation
- Town/City Boundary
- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Limits of 100-year Floodplain

Scale 1:19,200
1 inch = 1,600 feet

0 800 1,600 Feet

Basemap: 2021 Aerial, Nearmap

North Cambridge Substation #509
Somerville Substation #402
Route Variation S1
D2 SITE
New Substation Site #8025
VOLPE CENTER SITE
East Cambridge Substation #875
Putnam Substation #831
Brighton Substation #329
Route Variation B2AN
RIVER STREET BRIDGE CROSSING
MASSDOT ALLSTON MULTIMODAL PROJECT SITE
MAGAZINE BEACH
HDD CROSSING
Fresh Pond Parkway
Concord Avenue
Massachusetts Avenue
Elm Street
Highland Avenue
Summer Street
Somerville Avenue
Medford Street
McGrath Highway
Beacon Street
Washington Street
Craigie Street
Brattle Street
Garden Street
Kirkland Street
Quincy Street
Mount Auburn Street
Belmont Street
Cambridge Street
Prospect Street
Hampshire Street
Broadway
Inman Street
Cardinal Medeiros Avenue
Columbia Street
Portland Street
Third Street
Binney Street
Main Street
First Street
Longfellow Bridge
Memorial Drive
River Street
Western Avenue
North Harvard Street
Soldiers Field Road
Arsenal Street
North Beacon Street
Market Street
Harvard Avenue
Brighton Avenue
Brookline Street
Sidney Street
Erie Street
Albany Street
Vassar Street
Waverly Street
Putnam Avenue
Monsignor Obrien Highway
New Rutherford Avenue
Cambridge Parkway
Charles Street
Charlesbank Road
Nashua Street
Commonwealth Avenue
Boylston Street
CAMBRIDGE
BELMONT
WATERTOWN
BOSTON
SOMERVILLE
28
2
3
90
20
93
1

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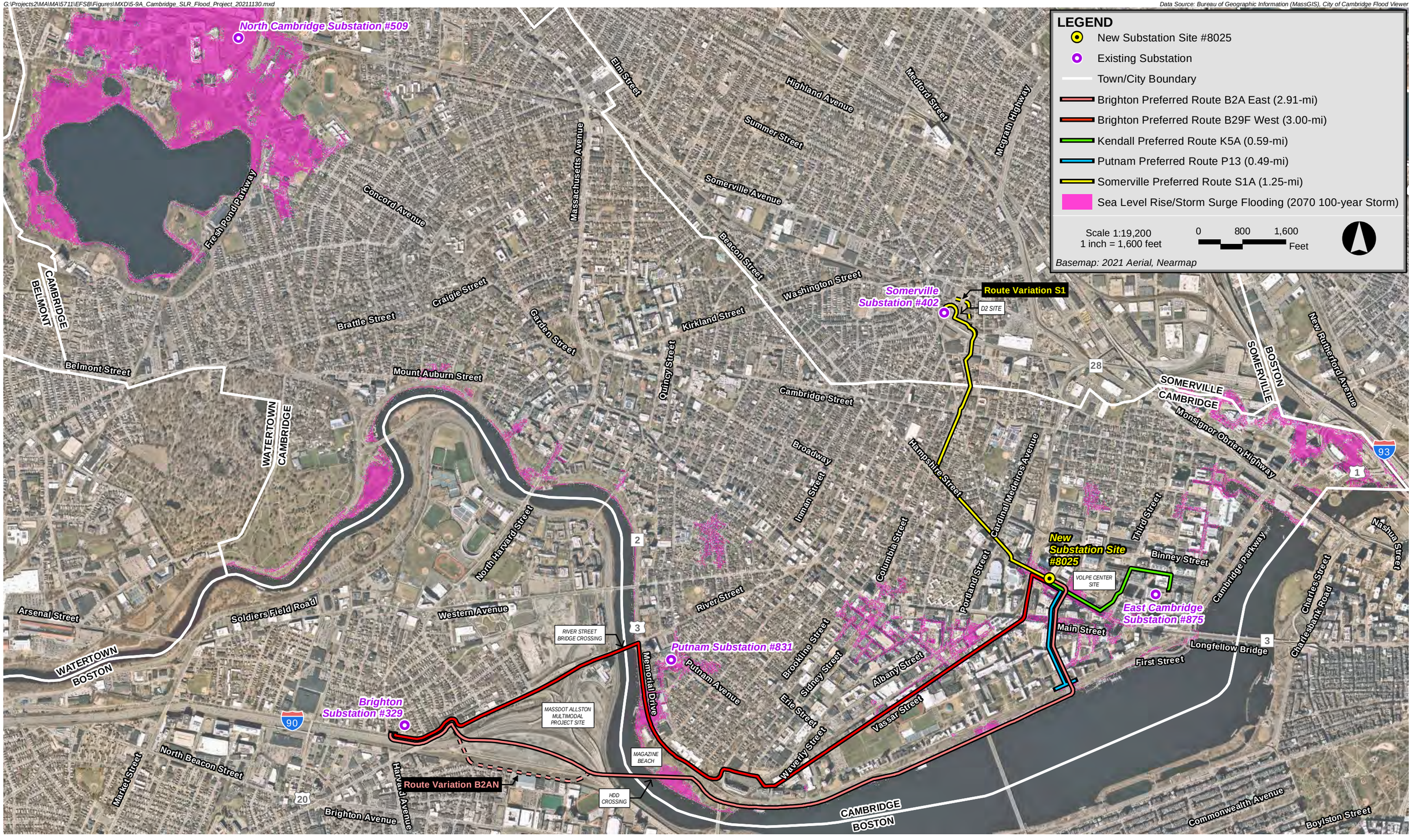
Figure 16

Limits of 100-year Floodplain (Project)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-9A_Cambridge_SLR_Flood_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), City of Cambridge Flood Viewer



LEGEND

- New Substation Site #8025
- Existing Substation
- Town/City Boundary
- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Sea Level Rise/Storm Surge Flooding (2070 100-year Storm)

Scale 1:19,200
1 inch = 1,600 feet

0 800 1,600 Feet

Basemap: 2021 Aerial, Nearmap

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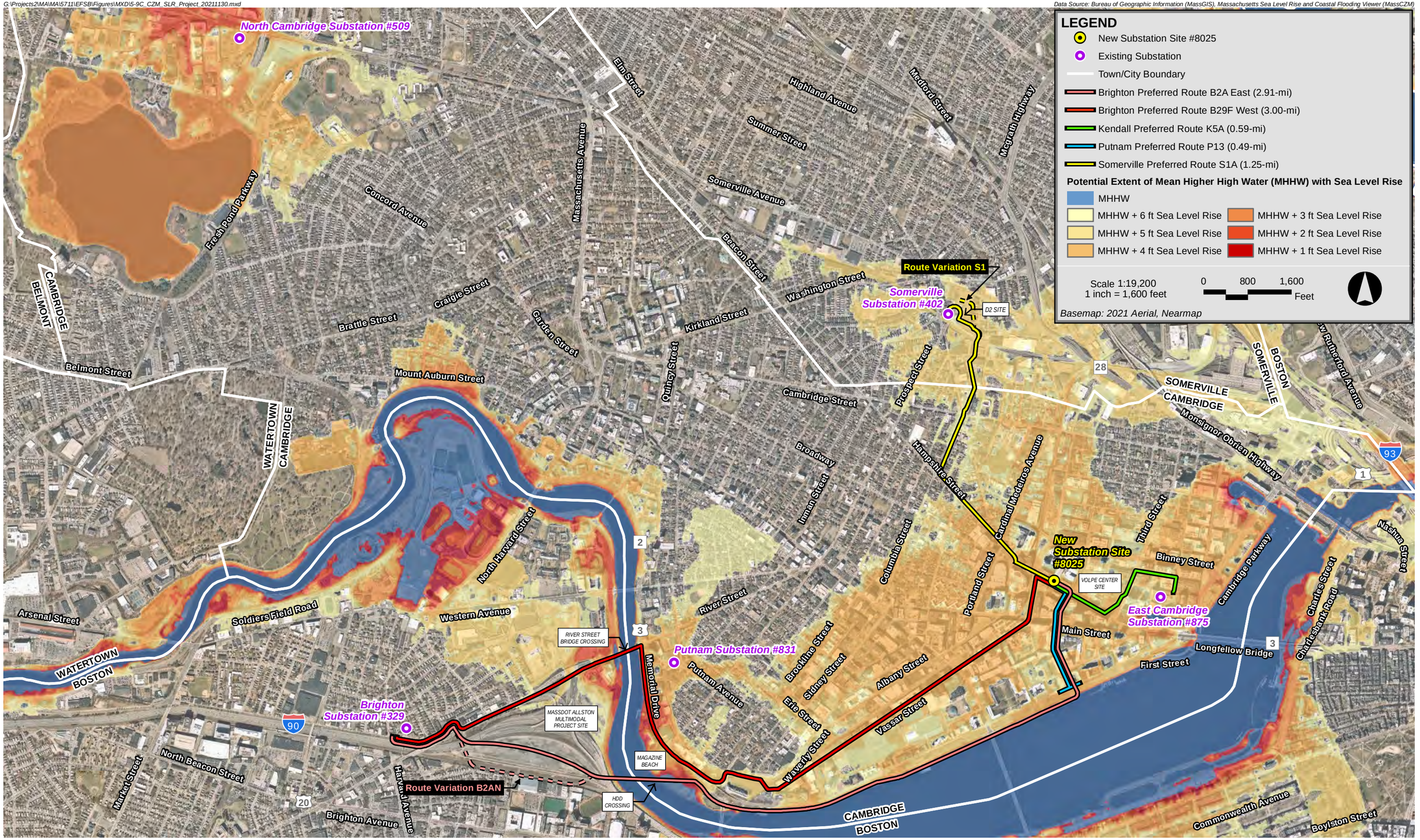
Figure 17

Cambridge Flood Viewer Maps (Project) - Sea Level Rise/Storm Surge Flooding (2070 100-year Storm)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-9C_CZM_SLR_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Massachusetts Sea Level Rise and Coastal Flooding Viewer (MassCZM)



LEGEND

- New Substation Site #8025
- Existing Substation
- Town/City Boundary
- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)

Potential Extent of Mean Higher High Water (MHHW) with Sea Level Rise

- MHHW
- MHHW + 6 ft Sea Level Rise
- MHHW + 5 ft Sea Level Rise
- MHHW + 4 ft Sea Level Rise
- MHHW + 3 ft Sea Level Rise
- MHHW + 2 ft Sea Level Rise
- MHHW + 1 ft Sea Level Rise

Scale 1:19,200
1 inch = 1,600 feet

0 800 1,600 Feet

Basemap: 2021 Aerial, Nearmap

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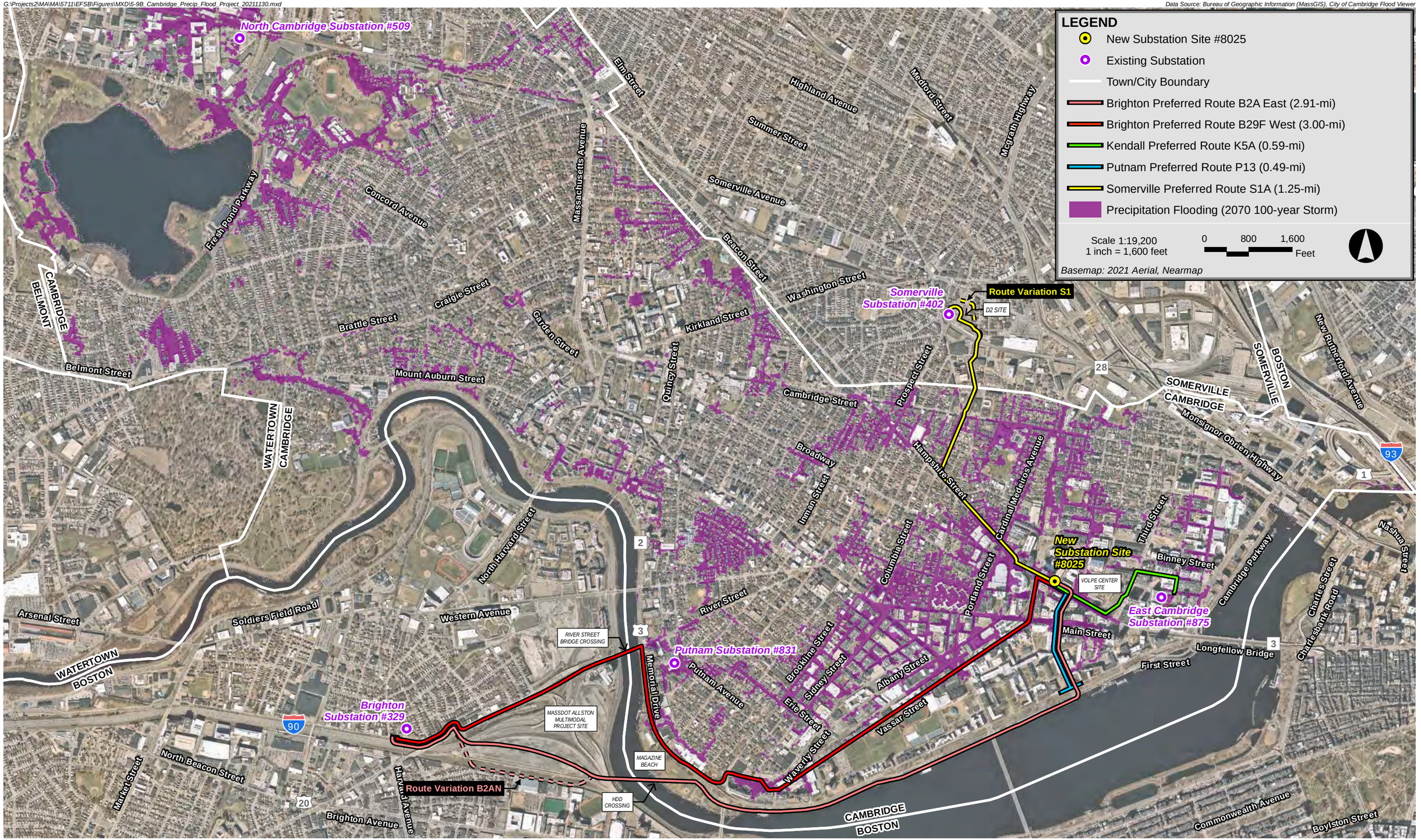
Figure 18

MassCZM Sea Level Rise and Coastal Flooding Viewer Maps (Project)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-9B_Cambridge_Precip_Flood_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), City of Cambridge Flood Viewer



LEGEND

- New Substation Site #8025
- Existing Substation
- Town/City Boundary
- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Precipitation Flooding (2070 100-year Storm)

Scale 1:19,200
1 inch = 1,600 feet

0 800 1,600 Feet

Basemap: 2021 Aerial, Nearmap

Greater Cambridge Energy Program

EVERSOURCE

Figure 19

Cambridge Flood Viewer Maps (Project) - Precipitation Flooding (2070 100-year Storm)

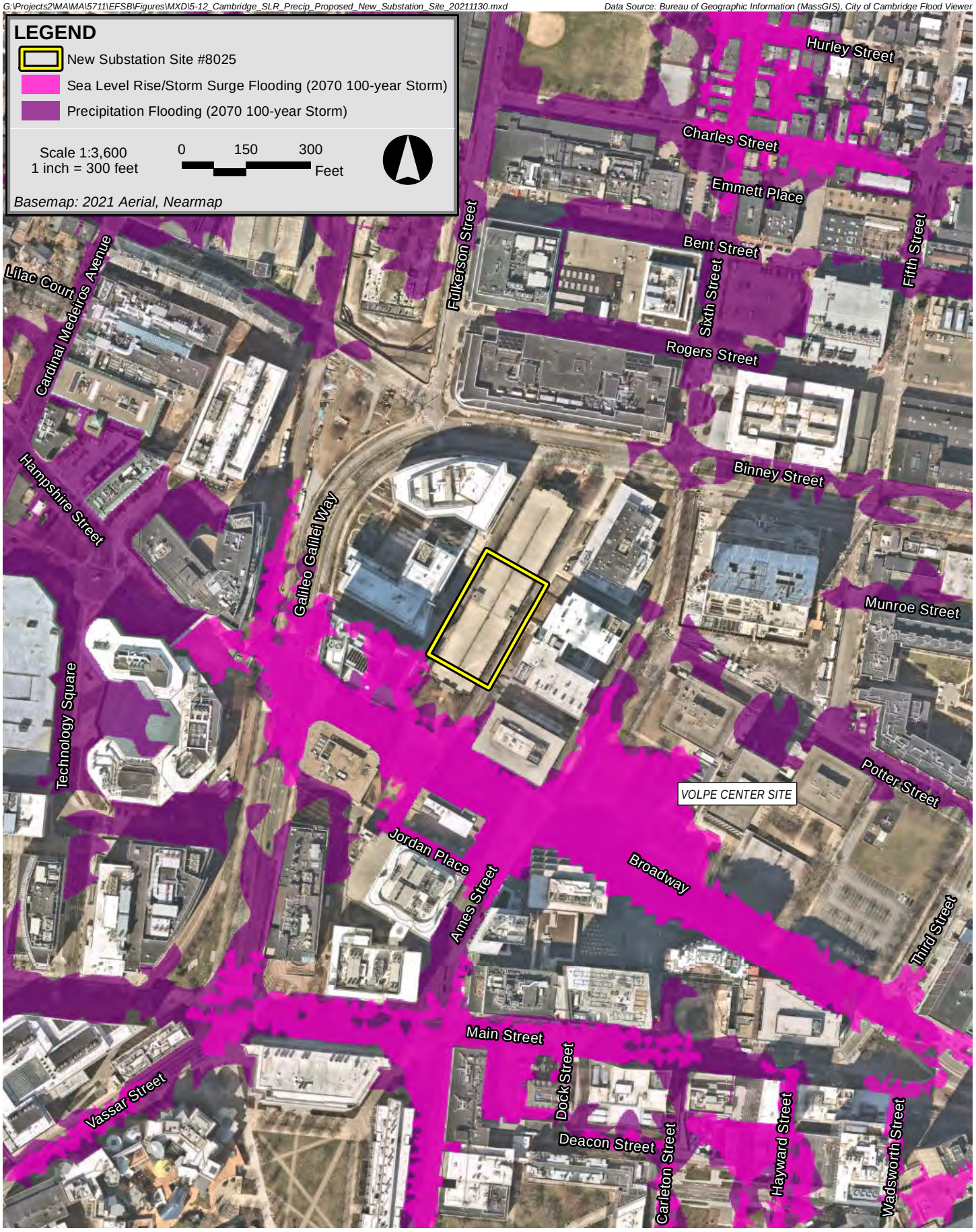


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Figure 20

Cambridge Flood Viewer Map (New Substation Site)
Sea Level Rise/Storm Surge Flooding and Precipitation Flooding (2070 100-year Storm)

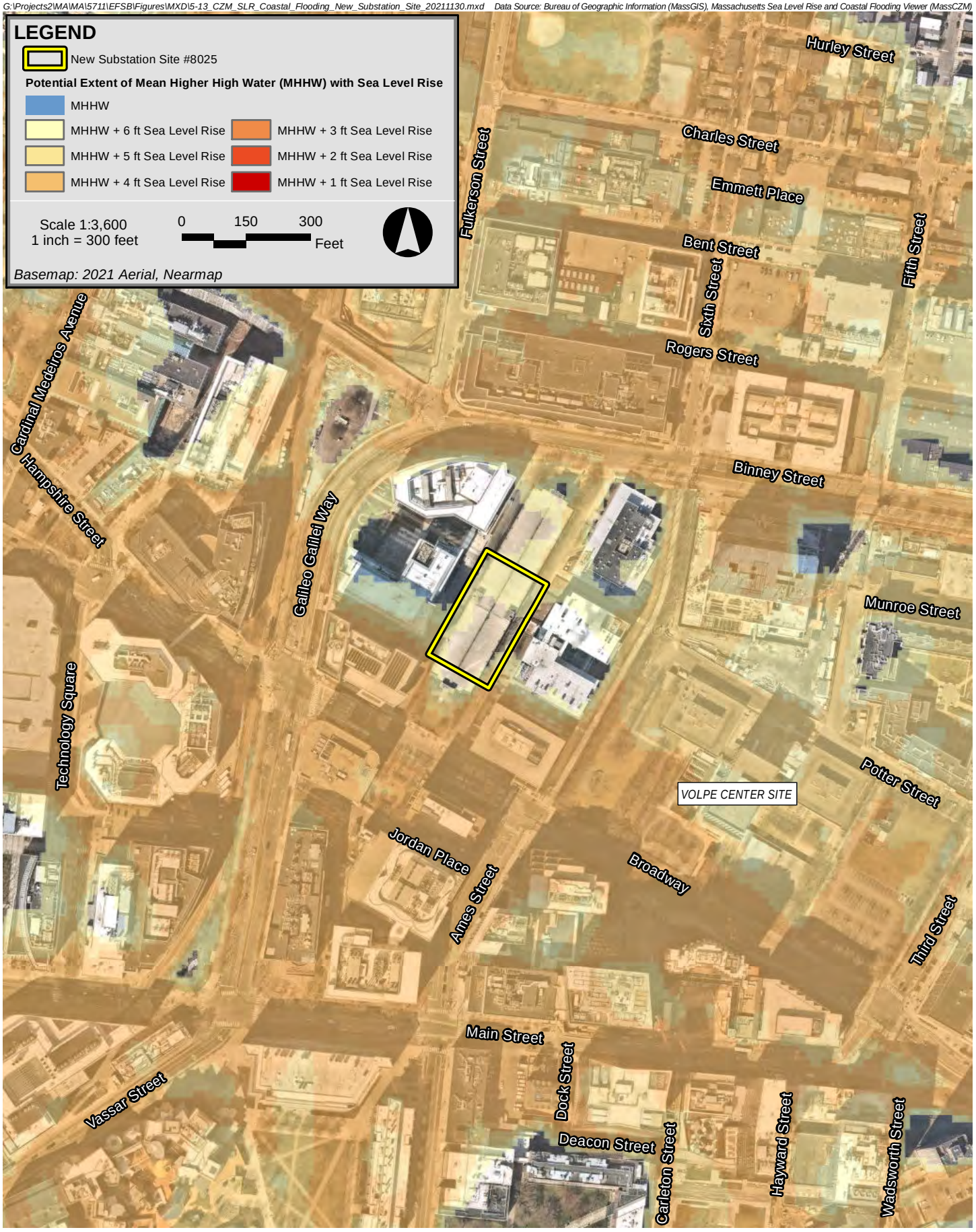

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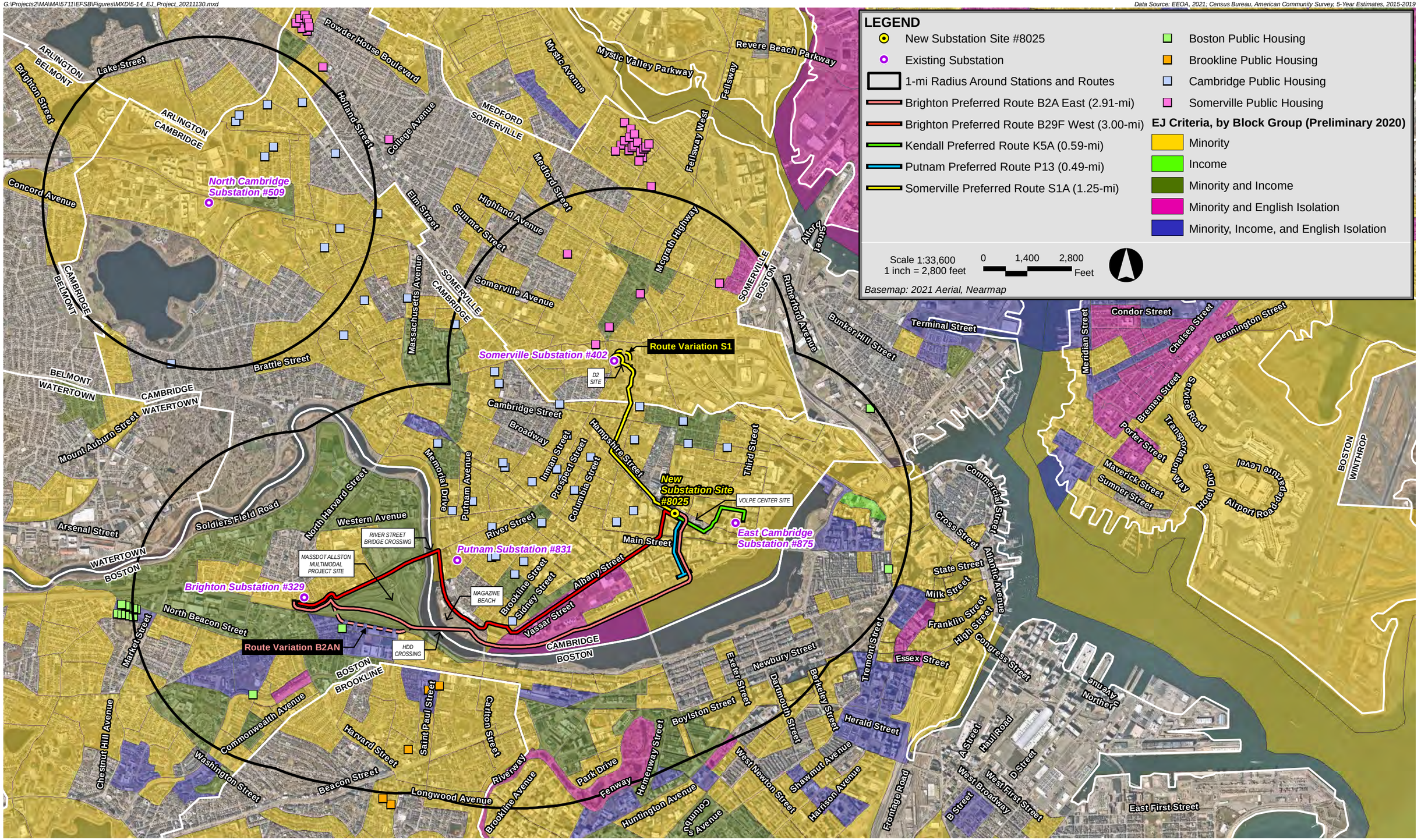
Figure 21

MassCZM Sea Level Rise and Coastal Flooding Viewer Maps (New Substation Site)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-14_EJ_Project_20211130.mxd

Data Source: EEOA, 2021; Census Bureau, American Community Survey, 5-Year Estimates, 2015-2019



Greater Cambridge Energy Program

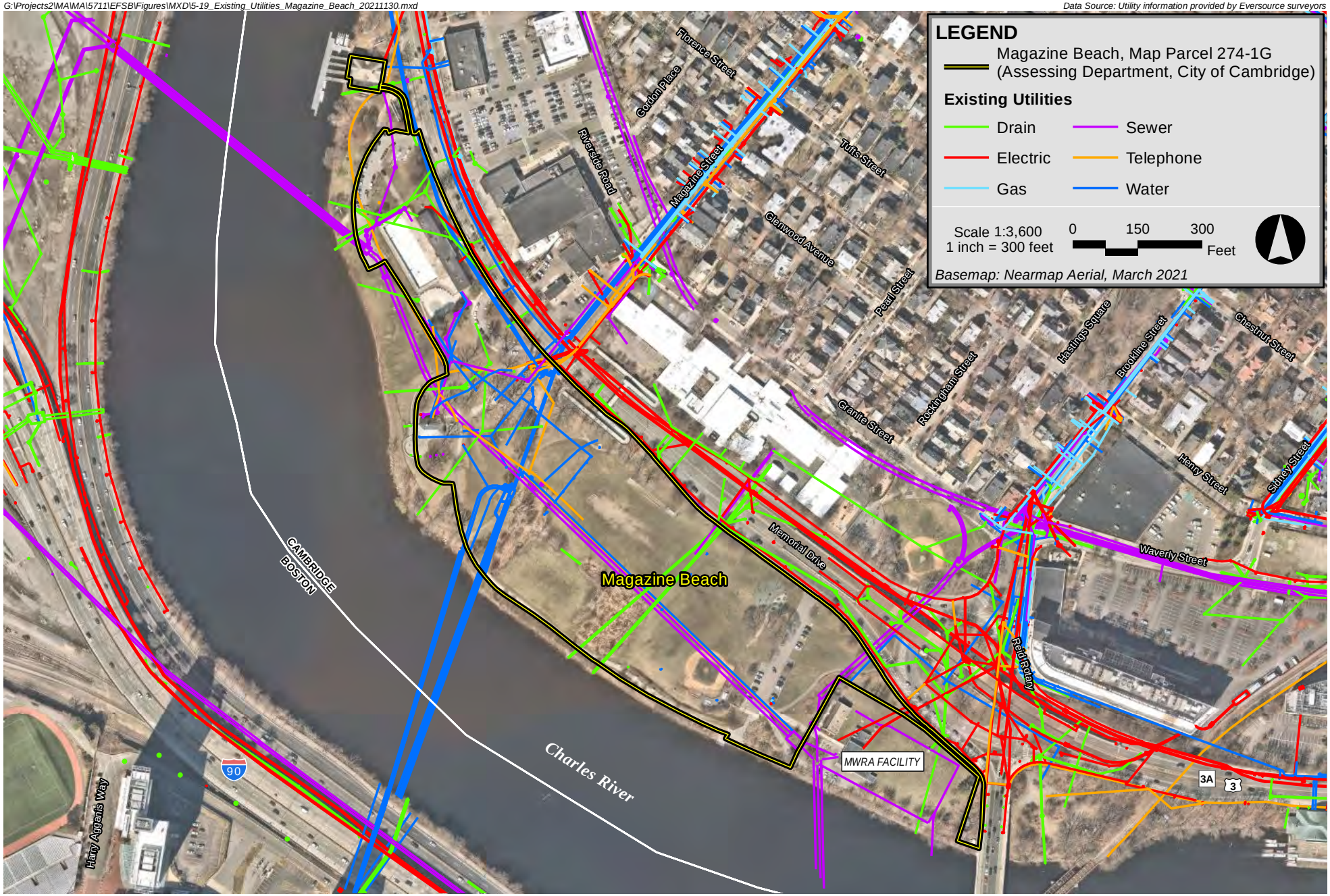
EVERSOURCE

Figure 22

Environmental Justice Populations (Project)

G:\Projects2\MA\MA\5711\EFSB\Figures\MXD\5-19_Existing_Utilities_Magazine_Beach_20211130.mxd

Data Source: Utility information provided by Eversource surveyors



Greater Cambridge Energy Program

EVERSOURCE

Figure 23

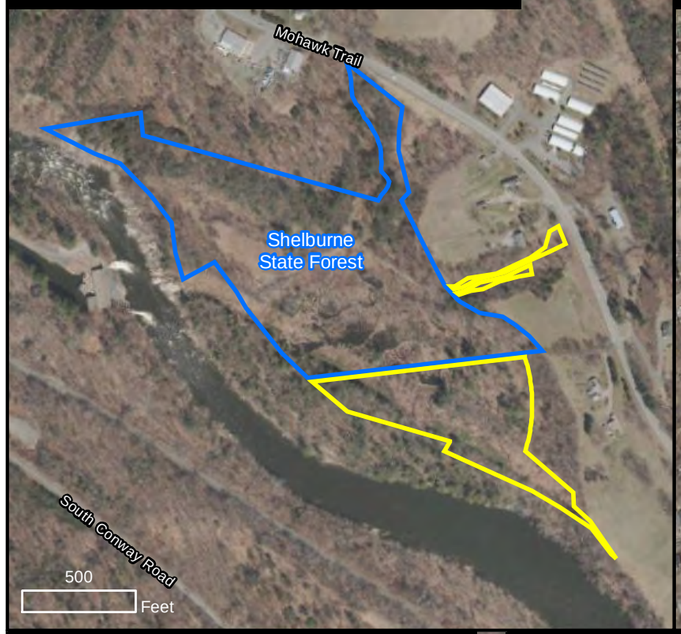
Existing Utilities - Magazine Beach

G:\Projects2\MA\MA\5711\EESB\Figures\MXD\5-20_Potential_Land_Exchange_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Potential Land Exchange Parcel 1

Eversource parcels (9.06 acres):
0 Mohawk Trail, Shelburne, MA 01370
DCR parcel (28.75 acres):
Shelburne State Forest



Potential Land Exchange Parcel 2

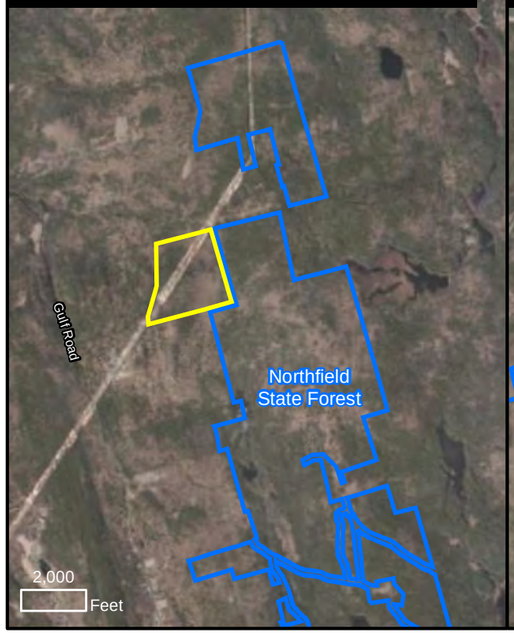
Eversource parcel (9.8 acres):
0 Broad Street, Weymouth, MA 02188
DCR parcel (6.49 acres):
William A. Connell Sr. Recreation Center

Potential Land Exchange Parcel 3

Eversource parcel (28.76 acres):
0 N. Quincy Street, Brockton, MA 02031
DCR parcel (556.88 acres):
Ames Nowell State Park

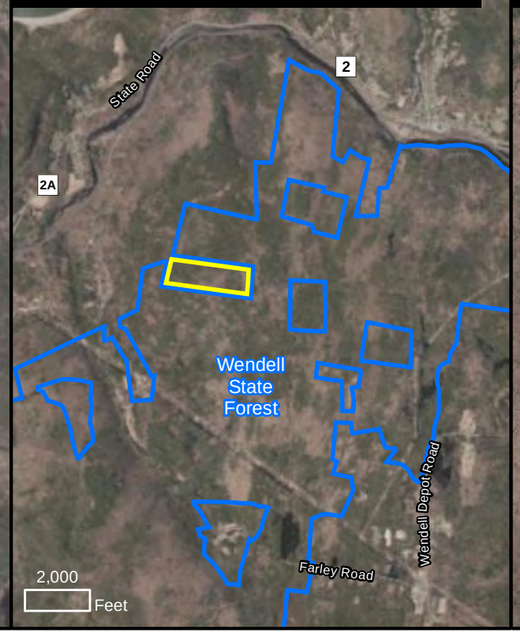
Potential Land Exchange Parcel 4

Eversource parcel (127.94 acres):
0 Gulf Road, Northfield, MA 01360
DCR parcel (909 acres):
Northfield State Forest



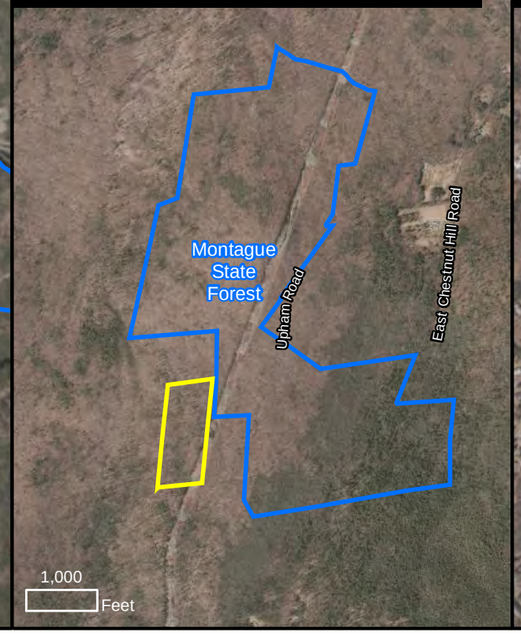
Potential Land Exchange Parcel 5

Eversource parcel (51.25 acres):
0 Thompson Road, Wendell, MA 01379
DCR parcel (6571 acres):
Wendell State Forest



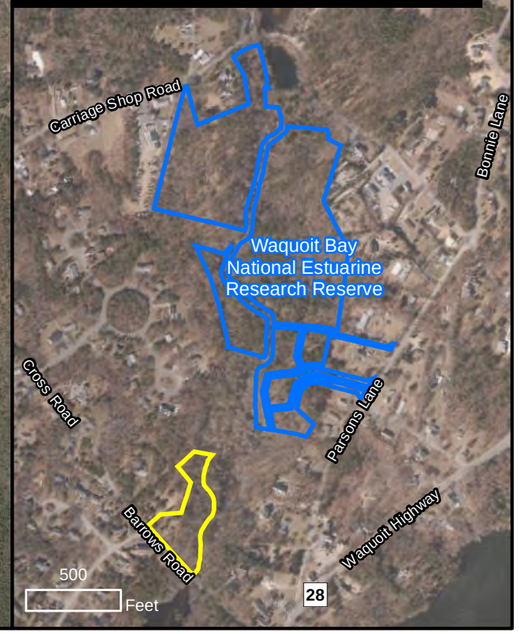
Potential Land Exchange Parcel 6

Eversource parcel (26.91 acres):
Rear E. Chestnut Hill Road, Montague, MA 01376
DCR parcel (342.42 acres):
Montague State Forest



Potential Land Exchange Parcel 7

Eversource parcel (3.58 acres):
0 Barrows Road, Falmouth, MA 02536
DCR parcel (27.14 acres):
Waquoit Bay National Estuarine Research Reserve



Greater Cambridge Energy Program

EVERSOURCE

LOCUS

LEGEND

- Eversource Parcel
- DCR Parcel

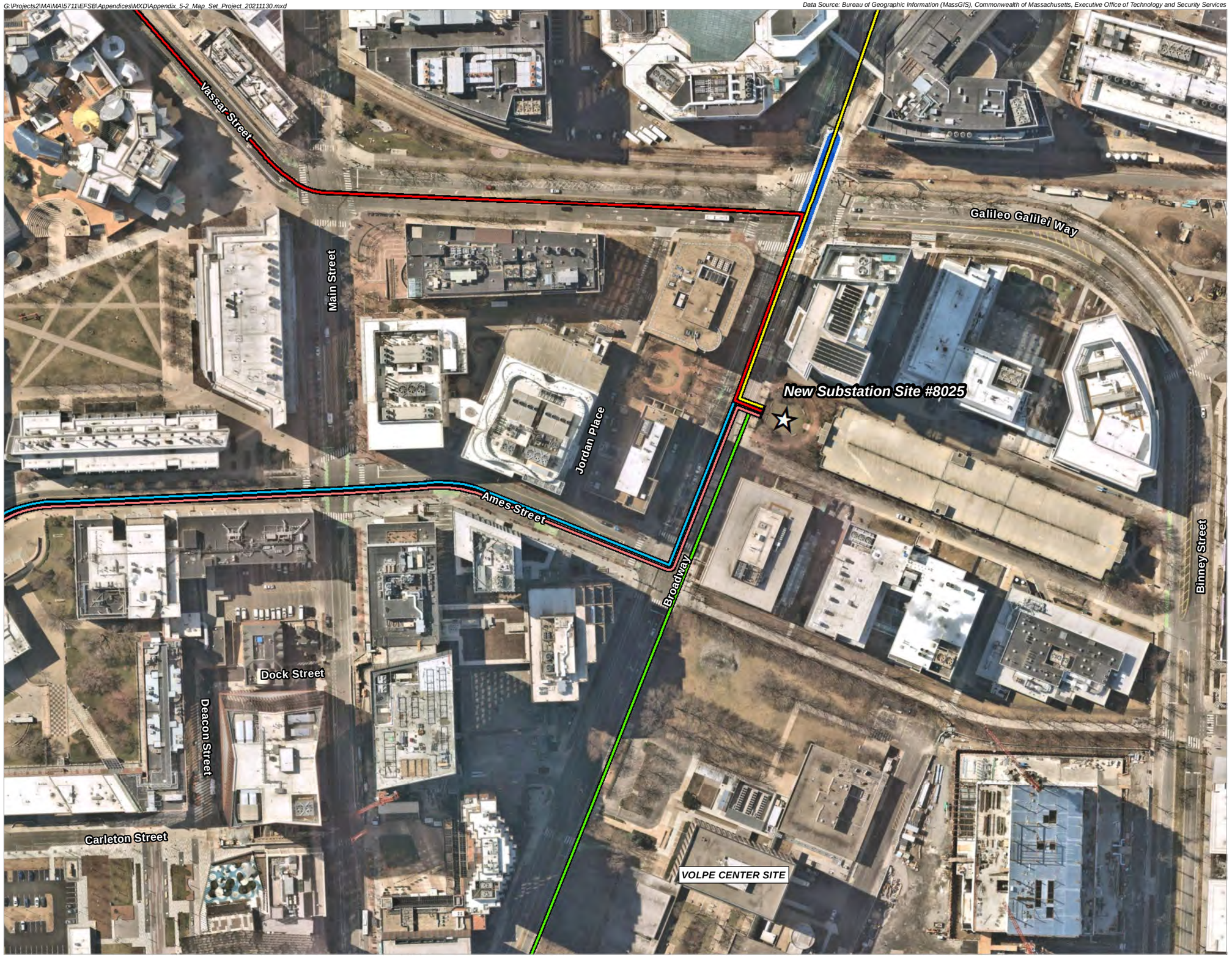
Figure 5-24
Potential Article 97 Land Swap Parcels

Attachment C

Map Set of Project Route

G:\Projects2\MA\MA5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

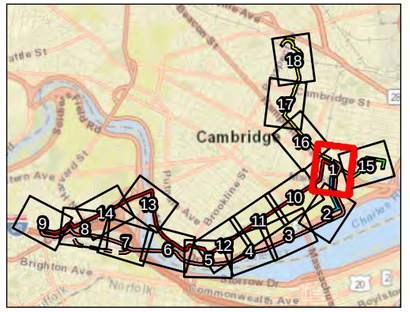
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

Appendix 5-2

Project Map Set

Sheet 1 of 18

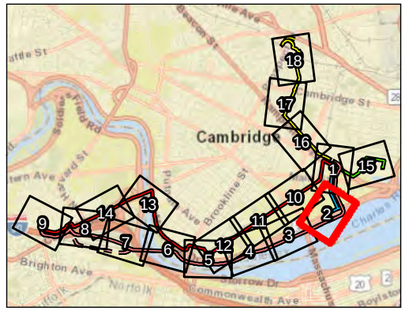
G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

Appendix 5-2

Project Map Set

Sheet 2 of 18

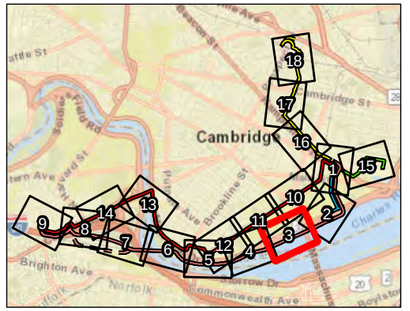
G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

Appendix 5-2

Project Map Set

Sheet 3 of 18

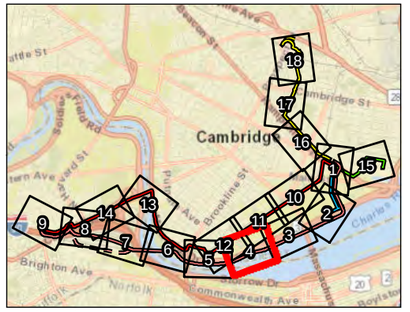
G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

Appendix 5-2

Project Map Set

Sheet 4 of 18

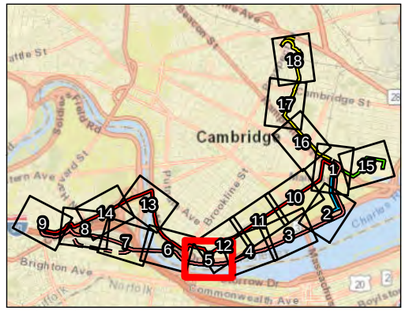
G:\Projects2\MA\MA5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

N

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

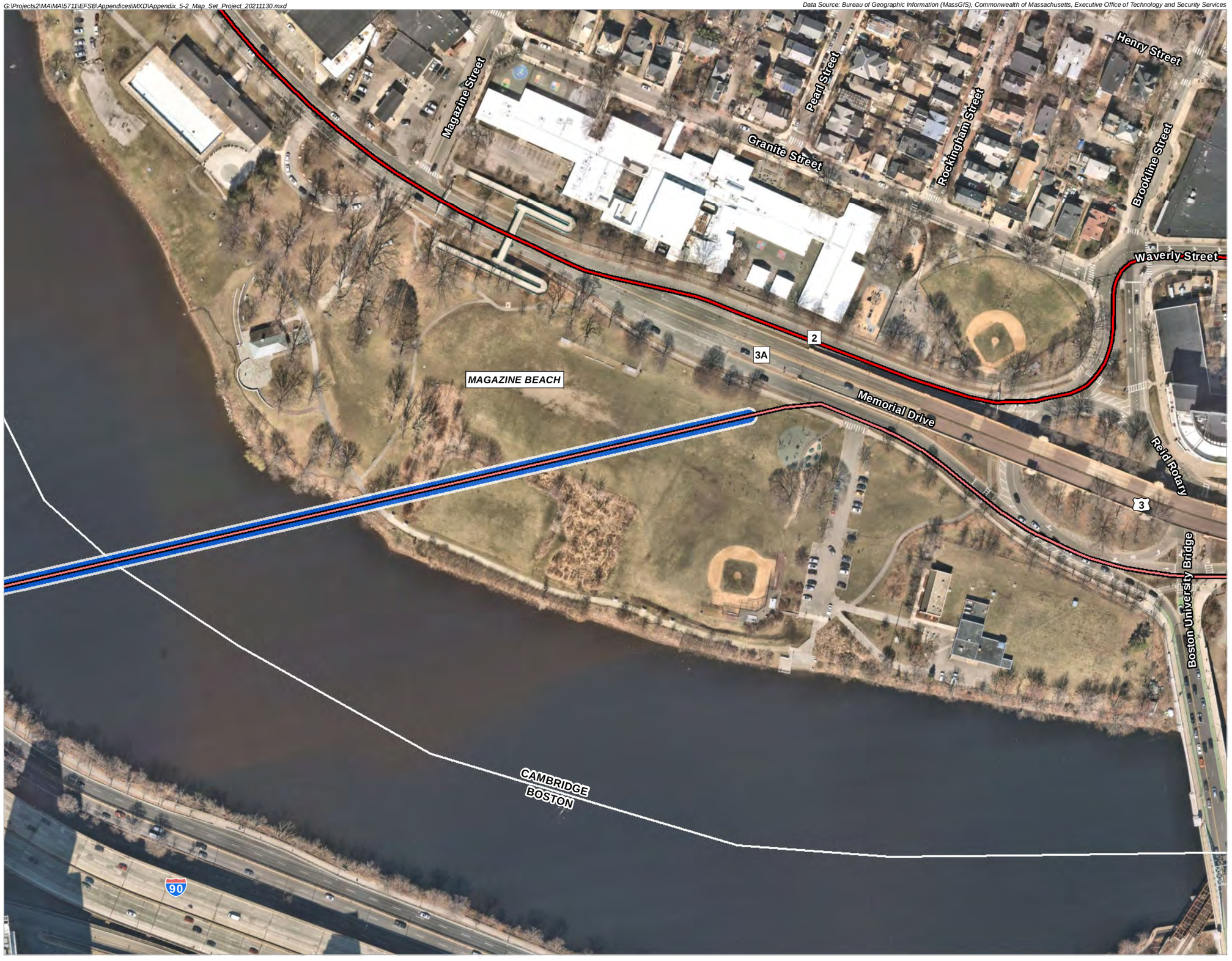
Appendix 5-2

Project Map Set

Sheet 5 of 18

G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

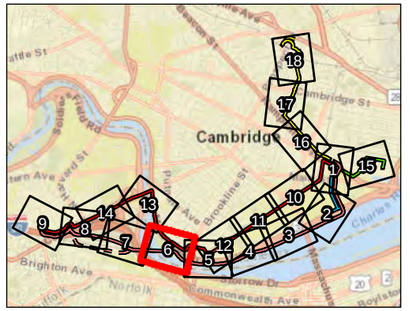
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

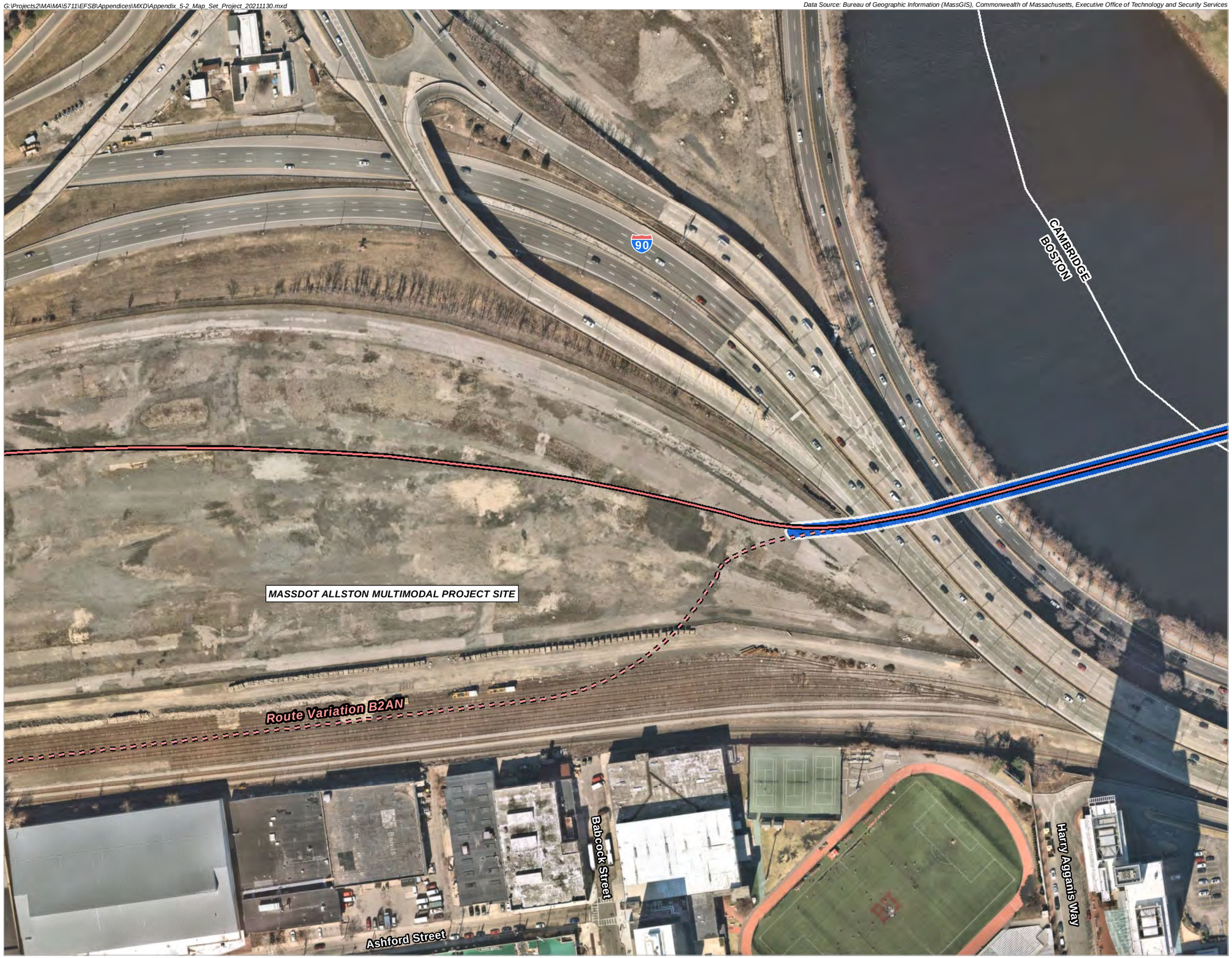
Appendix 5-2

Project Map Set

Sheet 6 of 18

G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

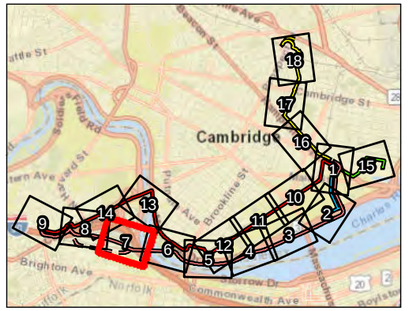
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150 Feet

LEGEND

- Brighton Preferred Route B2A East (2.91-mi)
- Brighton Preferred Route B29F West (3.00-mi)
- Kendall Preferred Route K5A (0.59-mi)
- Putnam Preferred Route P13 (0.49-mi)
- Somerville Preferred Route S1A (1.25-mi)
- Trenchless Crossing (Approximate)

Appendix 5-2

Project Map Set
Sheet 7 of 18

G:\Projects2\MA\MA\5711\EFSB\Appendices\MXD\Appendix_5-2_Map_Set_Project_20211130.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Arden Street
Haskell Street
North Harvard Street
Sorrento Street
Holman Street
Hooker Street
Empire Street
Cambridge Street
Royal Street
Lincoln Street
90

NOTE
ALIGNMENT FOLLOWS FUTURE LOCATION OF LINCOLN STREET CONNECTOR.

MASSDOT ALLSTON MULTIMODAL PROJECT SITE

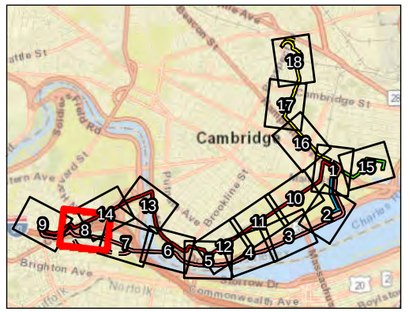
Route Variation B2AN

Pratt Street
Wadsworth Street

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



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Appendix 5-2

Project Map Set
Sheet 8 of 18

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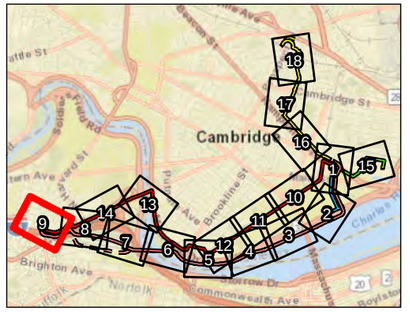
Greater Cambridge Energy Program

EVERSOURCE

LOCUS



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Appendix 5-2

Project Map Set

Sheet 9 of 18

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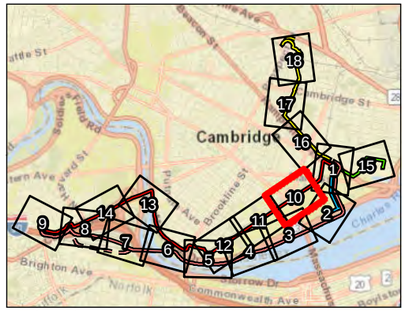
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



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Appendix 5-2

Project Map Set

Sheet 10 of 18

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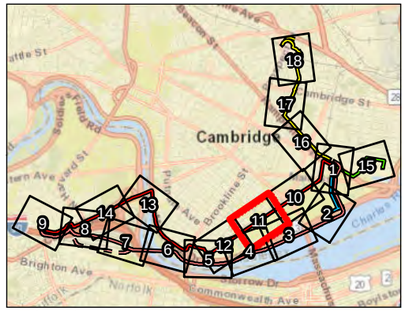
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



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0 75 150 Feet

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Appendix 5-2

Project Map Set

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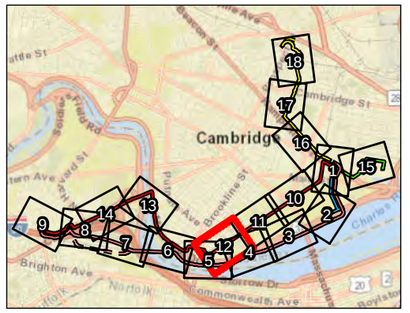
Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

Greater Cambridge Energy Program

EVERSOURCE

LOCUS



SCALE

1:1,800
1 inch = 150 feet

0 75 150
Feet

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Appendix 5-2

Project Map Set

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