

**PARK AND RECREATION COMMISSION
TOWN OF NEEDHAM, MASSACHUSETTS**

**Minutes of Meeting
January 23, 2017**

PRESENT: Christopher J. Gerstel, Vice Chairman
Cynthia J. Chaston, Member
David C. DiCicco, Member
Michelle S. Geddes, Member
Patricia M. Carey, Director

ABSENT: Matthew M. Toolan, Chairman
Robyn G. Fink, Assistant Director

Mr. Gerstel called the meeting to order at 7:02 PM at the Broadmeadow School Performance Center.

- 1. Joint Public Hearing with Board of Selectmen – Eversource West Roxbury to Needham Reliability Project:** Mr. Gerstel welcomed from the Board of Selectmen Chairman Matthew Borrelli, Vice Chairman Marianne Cooley, Dan Matthews, John Bulian and Moe Handel. Mr. Borrelli welcomed all who attended the meeting, explaining that the project is a federal mandate and that the Town of Needham would not make the final decision on the project route. The Board of Selectmen asked Eversource to pursue an underground route in Needham. Jack Lopes, in Community Relations, Dominic Nicotera, Project Manager, John McLaughlin, Systems Planning Group, Maya Benjamins, Project Siting, and Terry Forsenga, Transmissions, Rights and Survey, all from Eversource, presented information on the project, as seen in Appendix A. Mike Howard from Epsilon Associates, Environmental Consulting also presented with Eversource. The decision on the route will be made by the Siting Board, who is currently requesting information from Eversource and preparing for the public hearing process in March. Three volumes of information were submitted as part of the petition, or application. Volume One has the most detailed information on routes, and can be found on the Town's website, and all information on Department of Public Utility's (DPU) website. The preferred route, with variations, and the noticed alternative route can all be constructed. An overview was provided on the current right of way, and challenges for using it for either an underground or above ground option. The estimated construction time schedule in Needham would be 8 months. Temporary pavement would initially be placed, but the final road repair will be done at a later time, under an agreement with Town officials. A traffic management consultant would create a plan with the Town, including Police, Fire, DPW and Schools, as part of determining the construction schedule.

Mr. Borrelli opened the meeting up for questions.

JB Royal (Broadmeadow Road) has used a meter to check radiation levels at various locations in and out of his home, and in areas along the proposed route, indicating that the levels of EMF are likely lower than in other locations people interact with daily.

Steven Brunelli (School Street) outlined his background as a physician and in public health. Studies of EMF are still not conclusive and have unanswered questions. The risk needs to be weighed.

Claire Fialkov (Warren Street) raised concern that the Town has not done its due diligence in researching the project and possible health issues. She has researched the health consultant (Gradient) providing input to Eversource and does not support their findings. Dr. Fialkov requested Board of Health to review the November 14, 2016 Board of Health memo that there is no threat to health and wellness of the community.

Chris Cox (Kimball Street) noted that the Town of Winchester has hired a consultant to do an independent analysis on a similar project. The analysis has shown that the proposed methodology for insulating the wires, called XLPE, is not proven and there are other options, called HPFF that are less expensive that reduce EMF levels. He also noted that the methodology for studying and rating the routes is flawed and missing important components.

Ed Cosgrove, Chairman of the Board of Health, explained the process the Board went through to read and review extensive amounts of informational materials, including studies of EMF. Based on the data, the Board presented a two page review to the Board of Selectmen.

John Bergeron (Grant Street) questioned the scoring of the preferred route vs. the noticed alternative route. Using South Street as an example, why were there concerns for commuters when it appears most using it are not from Needham? How is the commuter route determined? The scenic road designation doesn't appear to impact South Street, as work would be done within the road. Nursing homes and the hospital are not mentioned in the scoring materials. He questioned why the MBTA would support the preferred route rather than the alternate route that appears to have less impact on the commuter rail stations. There appears to be a bias towards protecting South Street. Mr. Bergeron also questioned why the Board of Health's letter to the Selectmen about the health effects of EMF included a quote from Dr. Valberg's report that focused upon the health effects of EMF.

Ted Villa (Kenney Street) stated that he felt more concern was raised for MBTA, Golf Course, and for Chapter 40B projects than for students at schools or in neighborhoods. He requested that East Needham be protected from more construction and more loss of trees. He asked that the Selectmen seek a waiver from the federal and state governments to keep the project from moving forward. He asked why South Street would get preferential treatment.

John Curtis (Greendale Avenue) and a trustee for the condominium association spoke on behalf of the 20 homeowners. They are concerned that 52 trees will be removed from their buffer. Construction is temporary, but damage to the environment is permanent. The preference is to move forward with the no-build option. He asked that a full study be undertaken and a rush to a decision not be made.

Ilan Barzilay (Thornton Road) asked how the scoring of each route was done, and whether information on the scoring was available. Mr. Borrelli noted that it is on the Town's website, as well as the DPU website.

David Moseley (Greendale Avenue) stated that he has Parkinson's Disease and worries about the impact from EMF on his implantable devices.

Sally Theran (Grant Street) noted that written information from Eversource was contradictory related to EMF.

Bob DeNoble (Webster Street at Harris Avenue) asked if there would be financial penalties if the estimated construction timeline was not met, and how residents would be compensated for the delay. He asked how to insure the temporary asphalt patches on the roadways would be replaced with permanent, and would it be done within 30-60 days? Mr. Borrelli said that the written agreement would be negotiated with the town and would look at these types of terms.

Jimmy Phelan (Greendale Avenue) explained that his home was impacted with the building of the 40B units, and the access from Greendale Avenue to the former gravel pit would go past his home. The 40B units damaged his trees, and this project would damage more of them, plus the addition of shrubs between the 40B and his home had never been done. He noted the amount of construction and growth on Greendale Avenue, changing the long-time character.

Katie Buchheit (Grant Street) noted references to safe levels of EMF, but that there was not a scientific level that had been noted as safe. She felt that information provided was misleading. With children walking to school, any level is too high.

Allison McCarthy (Harris Avenue) had heard one projection for 18 months of construction, and another for 8 months, and asked for a clarification. Eversource responded that the Needham portion was estimated at 8 months, but that the full project from West Roxbury through Dedham to the Chestnut Street connection was 18 months. Ms. McCarthy asked if additional discussion would be held on placing the line on the current right of way, as it appeared to be the easiest method.

David Minard (Warren Street) asked why the Town would place permanent transmission lines underground in front of two schools. He stated that the Town had to spend money at

other schools to correct unsafe conditions, and that this project would create unsafe conditions at two schools.

Samuel Chartier (Grant Street) asked why a more rural route was being protected, when the preferred route impacted two schools and two commuter rail stations. A petition is being circulated to state a preference for the noticed alternative route.

Daryn Berger resident (Stevens Road) asked about the environmental impact on South Street and the ability to recoup costs for mitigation. What is the process for approval? Mr. Borrelli noted that the Town, through Town Meeting, needed to approve an easement across Town property, but that the approval for the route would be made by the Siting Board.

Steve Horan (Grant Street) asked for further explanation on why the Right of Way would not be used, asking if it was a cost issue vs. a health issue?

Tracy Bienen (Grosvenor Road) noted that the Broadmeadow neighborhood was densely populated and that the noticed alternative route passed by less homes.

Tammy Ghizzoni (Hillcrest Road) works at Pollard and feels the health and safety of students is the highest priority. Though they don't all walk to school, there are about 900 students at Pollard and 500 at Broadmeadow. Many other residents walk on these streets, too.

Laura Quinlan (Warren Street) asked for Needham to follow the Winchester model, by slowing down the review and asking for input from independent consultants.

A resident spoke about the amount of construction that has occurred at the hospital, and upcoming construction. She felt that the project was related to companies making a profit.

Mr. Borrelli thanked all the participants for their input, and opened the discussion up to the members of the boards. Mr. Bulian stated that he lived on the noticed alternative route, and has written a letter to Town Counsel to seek guidance on whether he has a conflict which will be reviewed by the state. He contacted a colleague in Winchester who explained that the project is for a larger transmission line to go through Winchester to service Woburn. He also stated that the Board of Selectmen is in the process of hiring a consultant to do a peer review. Mr. Matthews stated that he rose to speak, not to change people's minds, but to state that the project is a federal mandate. He said that the Selectmen heard all the concerns raised in the public hearing, and that all solutions would impact someone, especially as all are dependent on electricity. Mr. Borrelli thanked all those who had shared their comments and concerns. The peer review will be undertaken, while the Selectmen and Rep. Garlick look into confirming the mandate for the project.

Mr. Gerstel closed the public hearing at 9:17 PM and the Park and Recreation Commission went into a brief recess before returning to finish their meeting.

Mr. Gerstel called the Park and Recreation Commission meeting back into order at 9:23 PM.

2. Action Items

- A. **Soccer Club – Light Waiver Request:** Mrs. Geddes made a motion to approve the request of the Soccer Club to extend the athletic field lights up to 10:00 PM on Friday, May 26 and Saturday, May 27, 2017 at DeFazio Brock and Founders fields for the Memorial Day Weekend Soccer Tournament. The motion was seconded by Mrs. Chaston and approved unanimously.
- B. **Special Event Request – Bay State Football Clinic:** Mr. DiCicco made a motion to approve the request of Bay State Football to host a clinic on Monday, August 14 – Wednesday, August 16, 2017 from 9 AM – 2 PM at DeFazio Park using Brock, Founders, and Conroy Fields. The motion was seconded by Mrs. Geddes and approved unanimously.
- C. **Special Event Request – Soccer Club Summer Clinics:** Mrs. Geddes made a motion to approve the request of the Needham Soccer Club to host two summer clinics: August 7 – 10, 2017 from 8 AM – 7:30 PM and August 14-17 from 3 PM – 8 PM at DeFazio Park using Brock, Founders, Conroy and Healy fields. The motion was seconded by Mr. DiCicco and passed unanimously. Mrs. Chaston asked for an update on clinic fees from last year.
- D. **Special Event Request – 128 Lacrosse Summer Clinic:** Ms. Carey noted that this June clinic was formerly run by Rocket Lacrosse, which disbanded. The same coaching staff from Rocket Lacrosse is part of 128 Lacrosse, so they will continue the program. Mr. DiCicco made a motion to approve the request of 128 Lacrosse to host a summer clinic on June 21-23, 2017 with an alternate date of June 28-30, 2017 if school was in session for the original date; the clinic to be held at DeFazio Brock and Founder fields from 8:30 AM – 3 PM. The motion was seconded by Mrs. Geddes and approved unanimously. 128 Lacrosse is also requesting use of Memorial Park for this clinic, and that request has gone to the Trustees of Memorial Park for review and vote. **128 Lacrosse Practice Clinic:** Ms. Carey noted that organizations using fields just for practices and not for games are under the definition of a clinic and pay the fees related to clinics. Ms. Carey will coordinate the actual dates around the Track Club schedule to avoid conflicts, but the dates will primarily be on Tuesdays and Thursdays. Mr. DiCicco commented that the fee charged to participants was high and that it would be helpful to understand more about the program. Mrs. Geddes made a motion to approve the request from 128 Lacrosse to hold practices on DeFazio Brock and Founders on dates in June/July from 4 PM – 8 PM. The motion was seconded by Mr. DiCicco and passed unanimously.

- E. **Special Event Request – Track Club Youth Classic:** Mr. DiCicco made a motion to approve the request of the Needham Track Club to host the annual Needham Youth Classic on Friday, July 14 from 12 Noon – 8:30 PM and Saturday, July 15 from 7 AM – 8 PM using DeFazio Park track, Conroy Field and Founders Field. The motion was seconded by Mrs. Chaston and approved unanimously.
- F. **Special Event Request – Cub Scout Rocket Day:** Mr. DiCicco made a motion to approve the request of Needham Pack 4 Cub Scouts to host a Rocket Day at Claxton Field on Saturday, April 1 from 12 Noon – 4:30 PM with a raindate of Saturday, April 8th. The motion was seconded by Mrs. Chaston and approved unanimously.
- G. **Special Event Request – Cub Scout Pack 4 Family BBQ:** Mrs. Chaston asked if there would be a parking issue with this event and other uses at Claxton. Ms. Carey stated that both groups needed to use the Claxton parking lot and send additional vehicles to the adjacent Town Forest parking lot. Mrs. Chaston made a motion to approve the request of Needham Pack 4 Cub Scouts to hold a family barbeque at Claxton tot-lot and Claxton # 2 diamond on Sunday, June 4, 2017 with a raindate of Sunday, June 11, 2017, from 3 PM – 6:30 PM. The motion was seconded by Mrs. Geddes and passed unanimously.
- H. **Special Event Request – Parent Talk Barn Babies:** Mrs. Geddes made a motion to approve the request from Parent Talk to host the Barn Babies traveling farm animal event at the DeFazio Tot-Lot on Sunday, May 21, 2017 from 9:30 AM – 12:30 PM. The motion was seconded by Mrs. Chaston and passed unanimously.
- I. **Special Event Request – Needham Baseball and Softball Opening Day:** The Commission is requesting that representatives from Needham Baseball and Softball attend an upcoming meeting to discuss the request prior to voting. They would like to discuss the morning set-up and the ability to have regular morning uses continue up to 10:30 AM or 11 AM without impacting set-up.
- J. **Special Event Request – Needham Baseball and Softball Williamsport Games:** Ms. Carey noted that locations and dates will be chosen later, but that the potential dates would fall within the summer permit of Needham Baseball and Softball. Mrs. Chaston made a motion to approve the request from Needham Baseball and Softball to use Asa Small Diamond at DeFazio Park and the Mills Field Diamond to host Little League Williamsport games between the dates of June 26-July 9, 2017. The motion was seconded by Mrs. Geddes and approved unanimously.
- K. **Special Event Request – Needham Baseball and Softball Spring Clinics:** Mrs. Chaston made a motion to approve the request from Needham Baseball and Softball to host spring clinics for training for the softball and baseball divisions (K, 1st, AA, AAA, Majors) at the two Mitchell diamonds and two Broadmeadow diamonds on specific dates

as listed on their request dated January 14, 2017. The motion was seconded by Mr. DiCicco and approved unanimously.

- L. **Special Event Request – Needham Baseball and Softball Summer Baseball Clinic:** Mr. DiCicco made a motion to approve the request from Needham Baseball and Softball to host a summer clinic at DeFazio Asa Small, Warner, McLeod diamonds July 10-13, with a raindate of July 14, from 8 AM – 12:30 PM. The motion was seconded by Mrs. Geddes. Ms. Carey noted that the raindate was the same date that the Track Club would be hosting their big meet, so Needham Baseball and Softball would need to be finished by noon time. The motion was approved unanimously. **Needham Baseball and Softball Summer Softball Clinic:** Ms. Carey noted that this request was for two individual clinics. The second week conflicted with the start of school, so she'd like the group to review their request for the second week. Mr. DiCicco made a motion to approve the request of Needham Baseball and Softball to host a softball clinic at Claxton # 1 and Claxton # 2 on August 21-24 with a raindate of August 25, from 8 AM – 3 PM. The motion was seconded by Mrs. Geddes and approved unanimously. Ms. Carey will report back on the status of the second week request.
- M. **Special Event Request – Needham Baseball and Softball Round Robin for Softball:** As this is a new request, the Commission asked for representatives to attend an upcoming meeting to explain how it will be run, and the impact on the requested fields, including Pollard.
- N. **Special Event Request – Needham Baseball and Softball Coaches Challenge:** Mr. Gerstel asked if the group had considered requesting use of Memorial Park 90' diamond on a Friday night under the lights for this event. Ms. Carey will ask the group. Mr. DiCicco made a motion to approve the request from Needham Baseball and Softball to host a Coaches Challenge at Walker-Gordon diamond on Saturday, May 20, 2017 from 3:30 PM – 7:30 PM, with a raindate of Saturday, June 3, 2017. The motion was seconded by Mrs. Geddes and approved unanimously.
- O. **Special Event Request – Boys Lacrosse Friday Night Lights:** Mrs. Geddes made a motion to approve the request from Needham Boys Lacrosse to host the Friday Night Lights games on Fridays, April 7 – June 9, 2017 (except Friday, May 26) from 6 PM – 8:45 PM at DeFazio Founders Field. The motion was seconded by Mr. DiCicco and approved unanimously.

3. **Adjournment of Meeting:** Mrs. Chaston made a motion to adjourn the meeting at 10:06 PM.
The motion was seconded by Mr. DiCicco and the meeting adjourned at 10:06 PM.

Respectfully submitted,

Patricia M. Carey, CPRP
Director

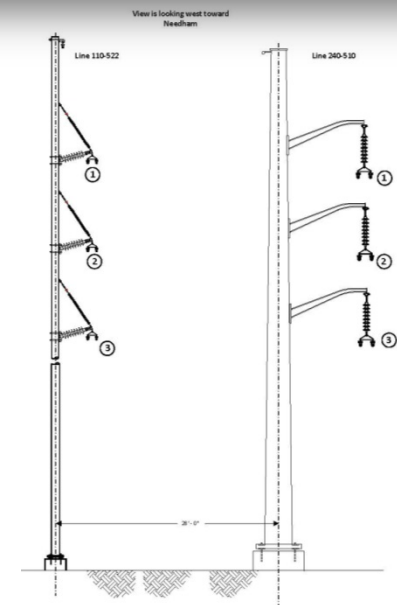
West Roxbury to Needham Reliability Project

Needham Board of Selectmen
Public Meeting

January 23, 2017

- Introductions
- Overview
- Project Need
- Project Alternatives
- Route Selection Process
- Construction & Traffic Management Plans
- EMF Analysis
- Next Steps

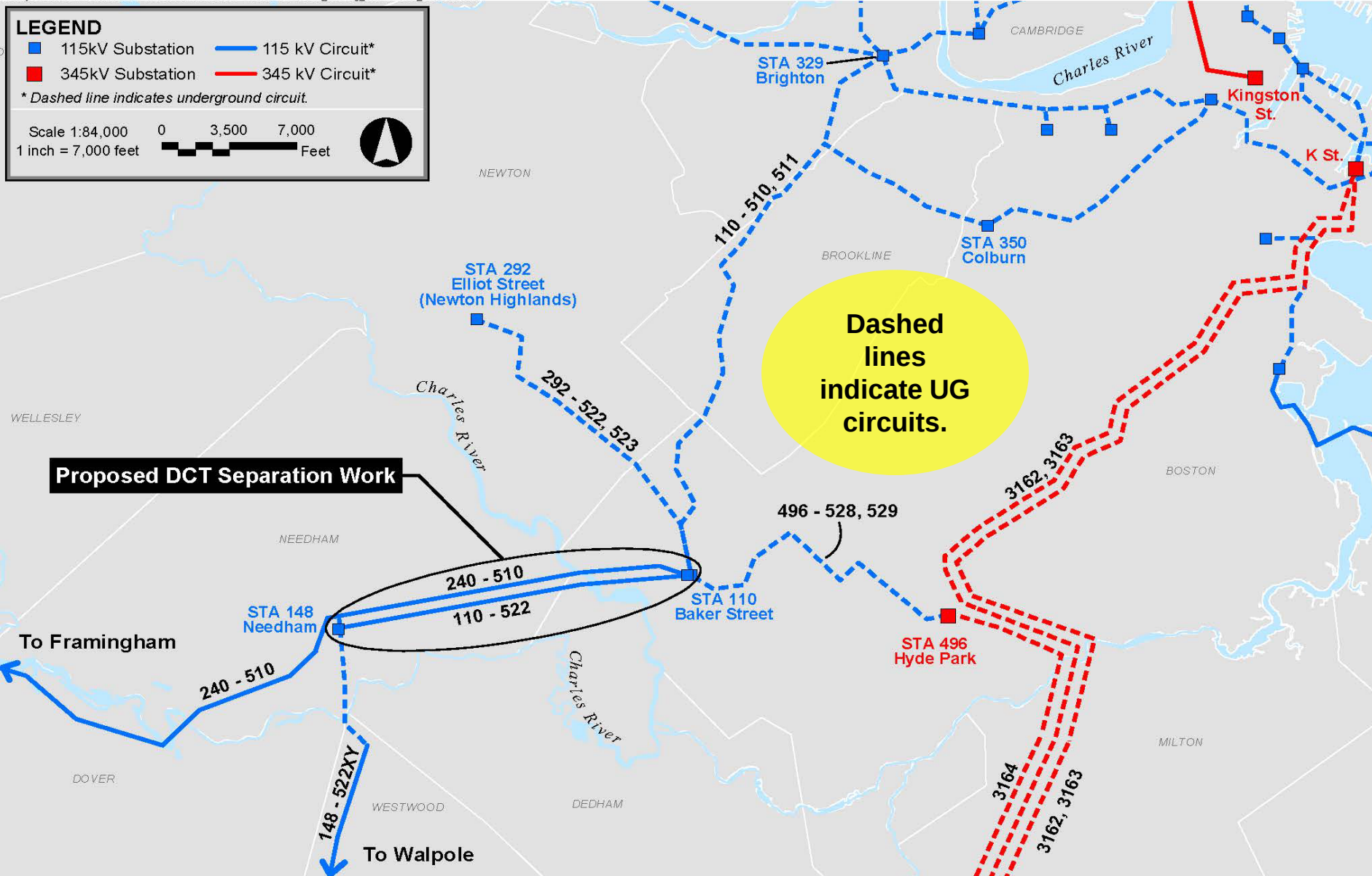
- Currently, Eversource has two overhead lines on one set of structures, called Double Circuit Towers (DCT) between the West Roxbury Substation and Needham Substation.
- The West Roxbury to Needham Reliability Project proposes to separate those existing lines thereby improving system reliability.
- The line separation work will occur by:
 - Relocating one set of existing lines to a new set of poles installed within the existing right-of-way.
 - In Needham, the separated line will exit the right-of-way and transition from an overhead design to an underground design located primarily in town streets into the Needham Substation on Chestnut Street.
 - Once the line is separated, the existing structures will remain with one less overhead line and set of arms.



West Roxbury to Needham Reliability Project

Locations of Other UG Transmission Lines in Vicinity of Project

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Federal and regional electric system planning criteria require that electric transmission systems are able to reliably deliver power to the region under a number of different operating conditions, including emergency conditions.

- The Federal Energy Regulatory Commission (FERC) is the independent agency that regulates the interstate transmission of electricity and protects the reliability of the interstate transmission system through mandatory reliability standards.
- FERC established the North American Electric Reliability Corporation (NERC) to develop mandatory North American Reliability Standards that all electric utilities must follow.
- Northeast Power Coordinating Council (NPCC) has been delegated by NERC to establish a set of rules and criteria that are particular to the northeast, and encompass more general NERC standards.
- ISO-NE (Independent System Operator – New England) is the independent entity authorized by FERC to:
 - Maintain a reliable flow of power over the transmissions system across all 6 New England states
 - Design, run, and oversee the billion-dollar markets where wholesale electricity is bought and sold
 - Conduct studies, analyses, and system planning to ensure that New England's electricity needs will be met now and into the future.
- The standards established by NERC, NPCC and ISO-NE have been developed to ensure that the electric power transmission system serving New England is designed, constructed and maintained to provide adequate and reliable electric power delivery to meet customer demand.

- The ISO-NE has a robust stakeholder process for analyzing and planning the bulk power system. Some of those stakeholders include:
 - consumer advocates and Attorney General(s)
 - market participants (generators, transmission providers, etc.)
 - Public Utility Commissions
 - environmental regulators
 - and other interested parties

- For major transmission upgrades, the regional transmission planning process includes:
 1. System needs are identified;
 2. The market is given the opportunity to propose solutions to meet the identified system need;
 3. If market responses are not forthcoming or adequate to meet the identified need, the host transmission utility(ies) is obligated to propose transmission solutions to meet the need;
 4. ISO-NE then selects the preferred solution to address the identified system reliability need essential for maintaining power system reliability

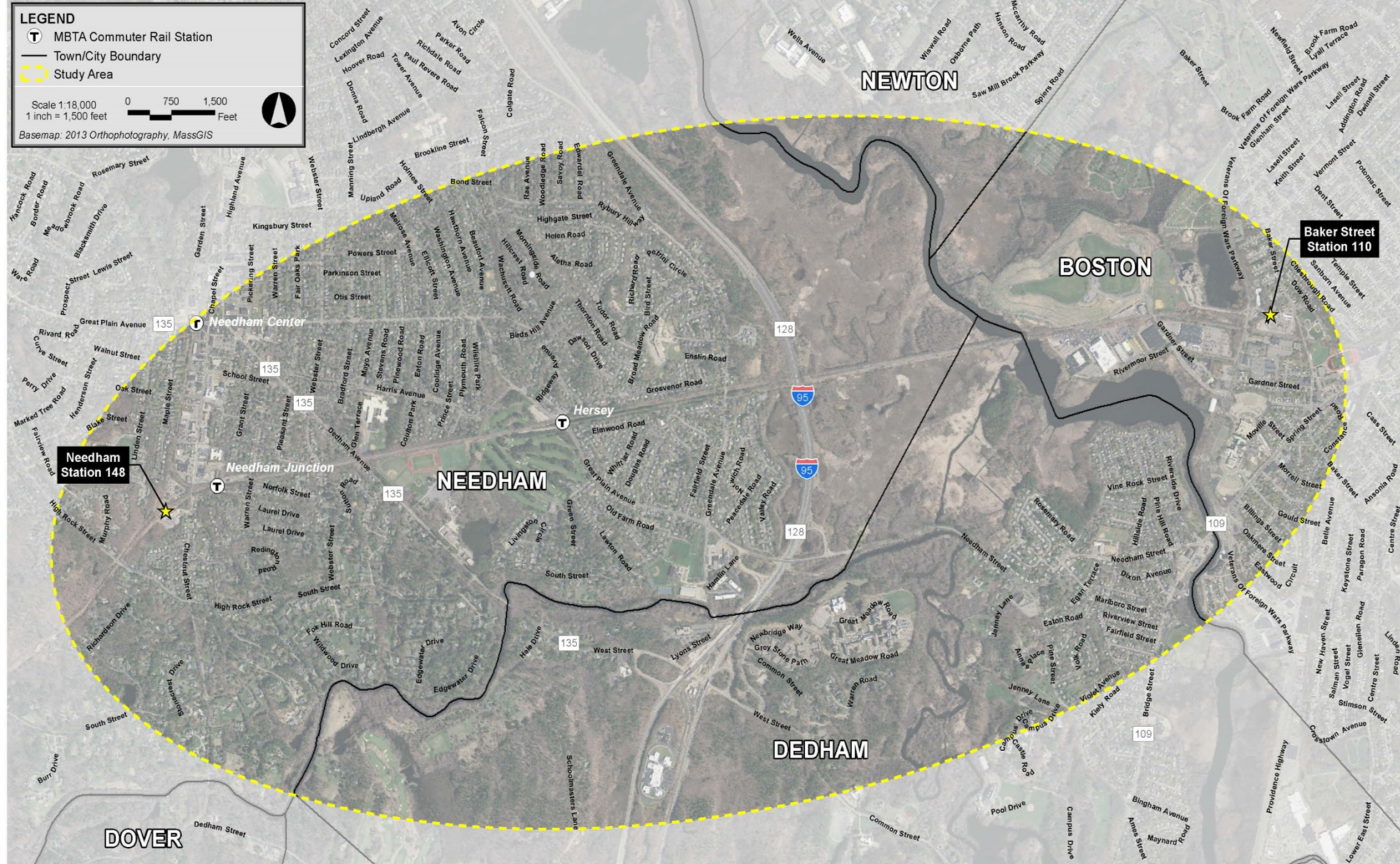
- A strong electrical transmission grid is vital to the safety, security and economic prosperity of the region. The transmission system serves a critical role to ensure that electricity flows with a high degree of reliability from wherever the power is generated to where power is needed.
- In a recent study, ISO-New England, the independent system operator for New England, concluded that there are inadequate transmission resources to reliably serve the electricity needs in the Greater Boston and surrounding area.
- To proactively address these deficiencies and the growing customer demands on the electric system, Eversource is implementing a series of transmission projects called the “Greater Boston and Southern New Hampshire Solution.”
- One of the selected projects to solve the identified system reliability problems, over other transmission solutions, and non-transmission solutions, is the *West Roxbury to Needham Reliability Project*.

- ISO-NE has determined that certain contingency events, e.g., loss of line, piece of equipment, etc., would result in equipment overload and loss of power to as many as 24,000 customers in the immediate Project area and potentially up to 65,000 in the western Boston suburbs.
- The proposed line separation between West Roxbury and Needham will mitigate risk to the existing transmission system by correcting identified thermal overload problems in the area.
- Non-transmission alternatives, such as solar, wind, fuel cells, energy efficiency and demand response programs cannot adequately address the identified system need, either alone or in combination.
- This Project was selected as the preferred solution over other potential transmission solutions.
- The Project will improve the reliable delivery of power to Needham and the surrounding area.

Transmission Line Routing: Area Reviewed for Potential Routes

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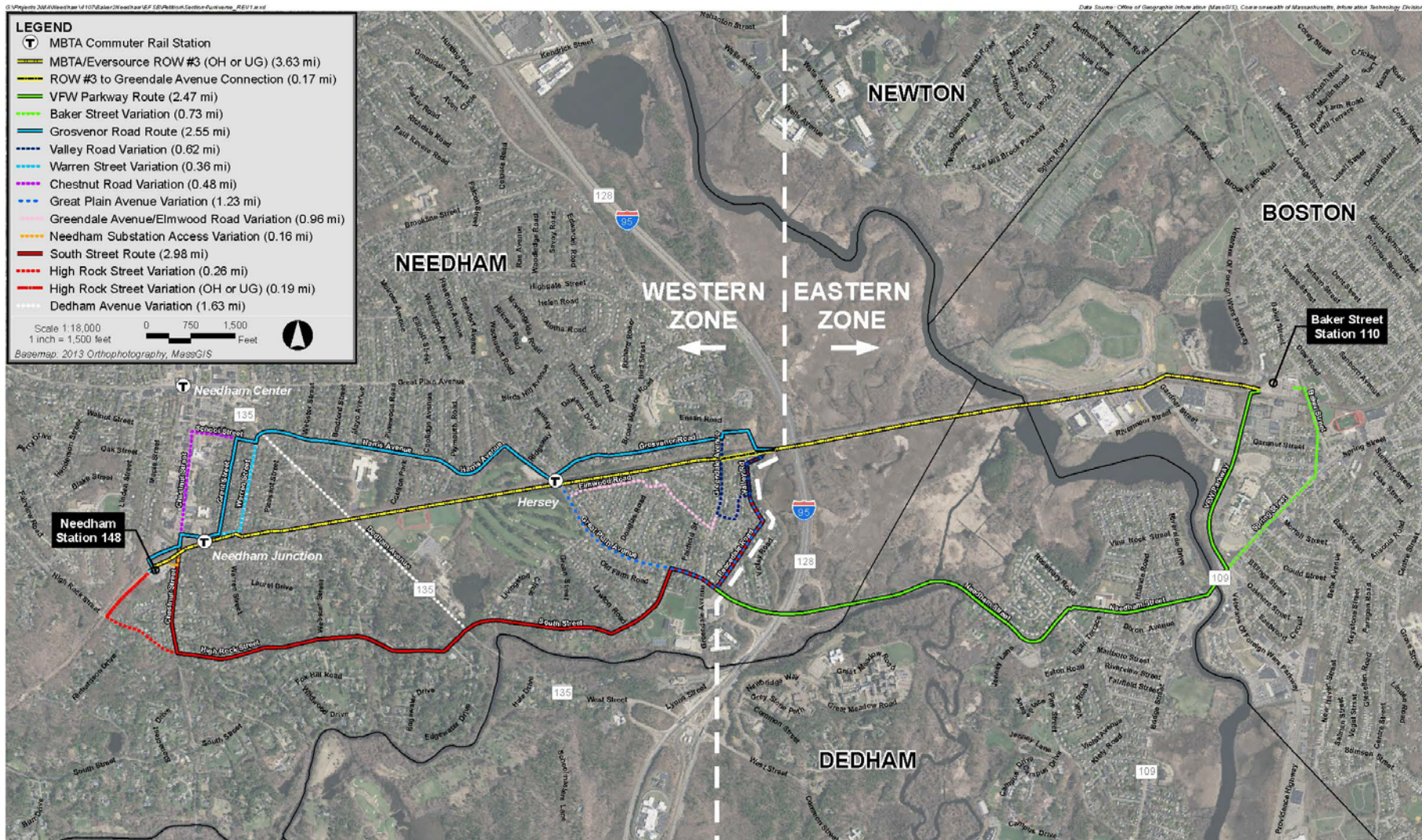
Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, Information Technology Division



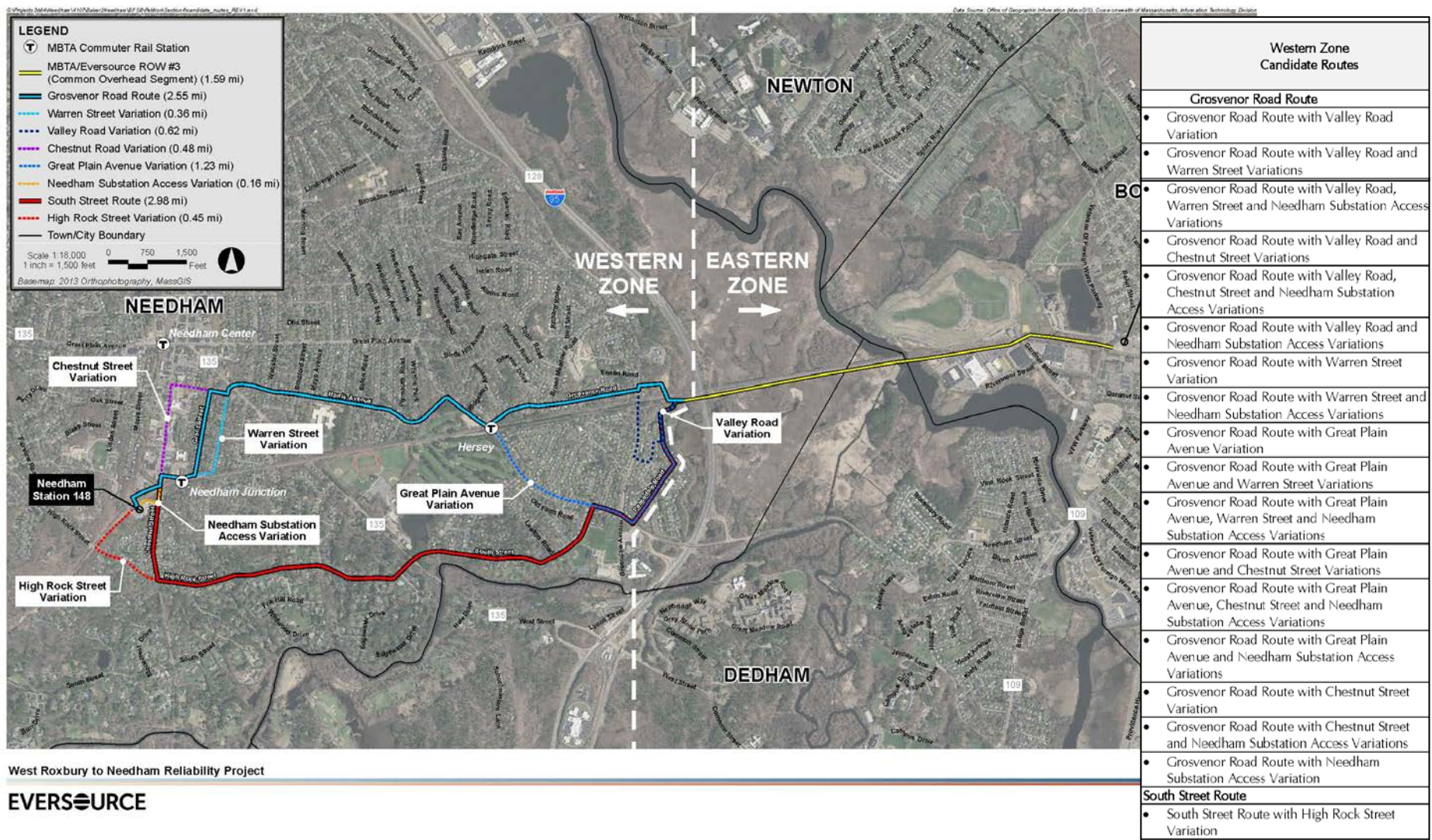
- The routing and design evaluations were performed using established guidelines to identify a comprehensive set of feasible routes between the West Roxbury and Needham substations.
- To date, the Company considered a total of 28 project options (including design options). All potential routes were screened and obviously flawed routes were eliminated from further consideration.
- The 20 remaining candidate routes were evaluated by applying detailed environmental, constructability, community impact, and conceptual cost estimate criteria. The criteria included, but was not limited to, the following:
 - Residential land use
 - Industrial and commercial land use
 - Public transit facilities
 - Historic resources
 - Potential for traffic congestion
 - High impact crossings
 - Wetlands
 - Environmental and water resources
 - Potential for subsurface contamination
 - Length
 - Street Width
 - Utility density
- Eversource used this evaluation process to select a “Preferred” Route and “Noticed Alternative” route.

West Roxbury to Needham Reliability Project

Universe of Routes (28 potential combinations)



EVERSOURCE
ENERGY



West Roxbury to Needham Reliability Project

Preferred and Noticed Alternative Route

Preferred UG Route (~2.6 miles)

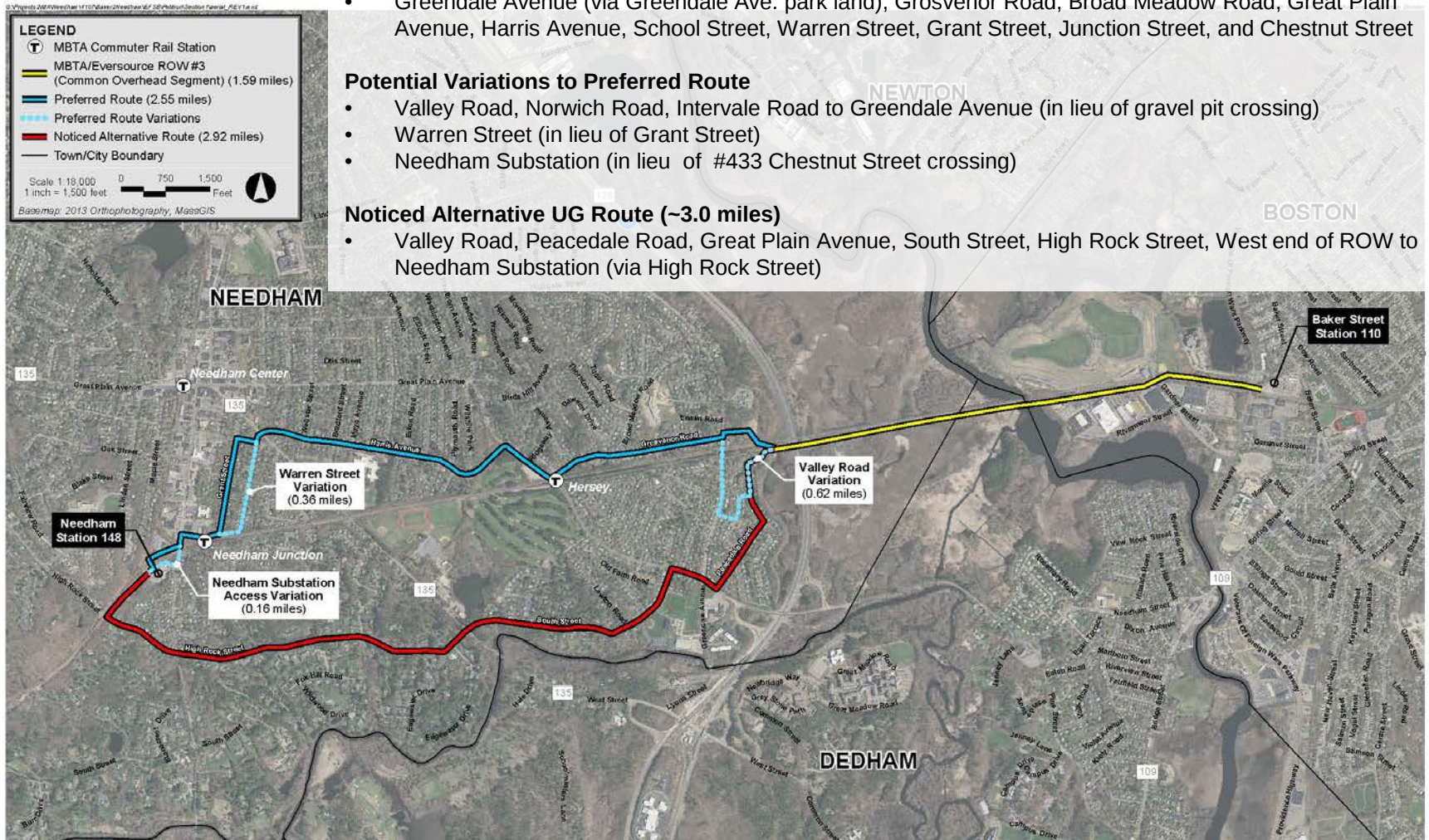
- Greendale Avenue (via Greendale Ave. park land), Grosvenor Road, Broad Meadow Road, Great Plain Avenue, Harris Avenue, School Street, Warren Street, Grant Street, Junction Street, and Chestnut Street

Potential Variations to Preferred Route

- Valley Road, Norwich Road, Intervale Road to Greendale Avenue (in lieu of gravel pit crossing)
- Warren Street (in lieu of Grant Street)
- Needham Substation (in lieu of #433 Chestnut Street crossing)

Noticed Alternative UG Route (~3.0 miles)

- Valley Road, Peacedale Road, Great Plain Avenue, South Street, High Rock Street, West end of ROW to Needham Substation (via High Rock Street)



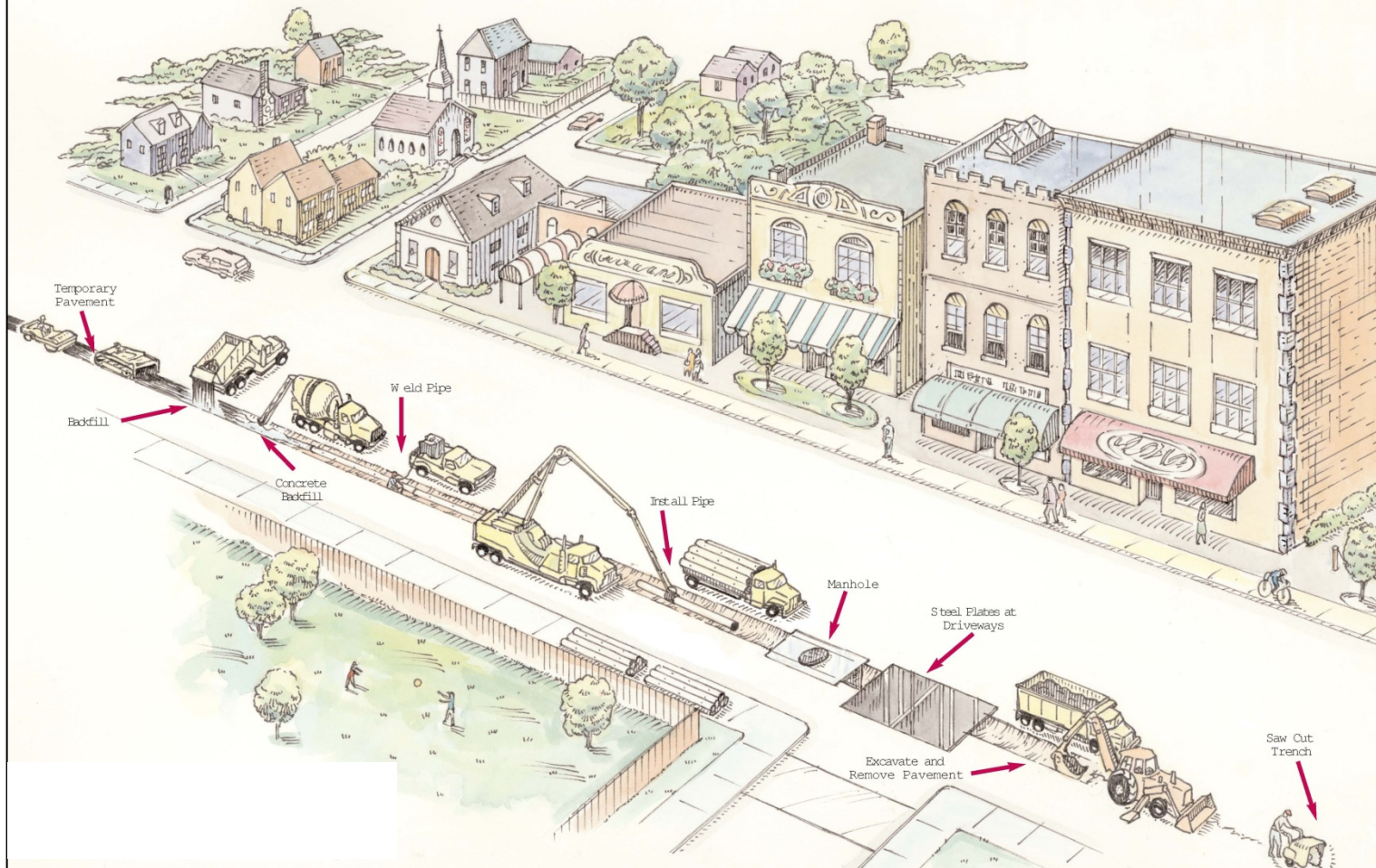
West Roxbury to Needham Reliability Project Overhead to Underground Transition Point



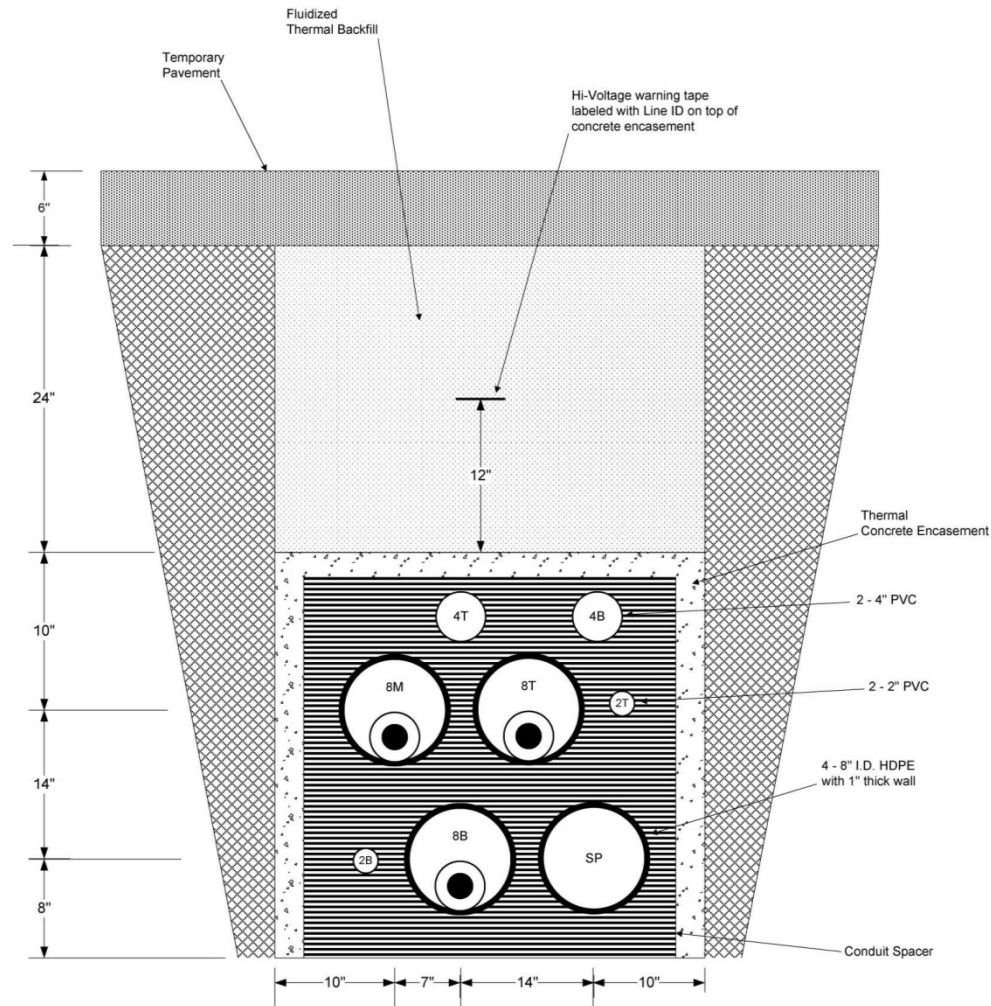
Proposed transition structure for preferred route

Typical Construction Schedule & Duration for UG Transmission Line Work in Public Roads

Installation of Underground Electric Transmission Lines



Construction Overview: Underground Duct Bank





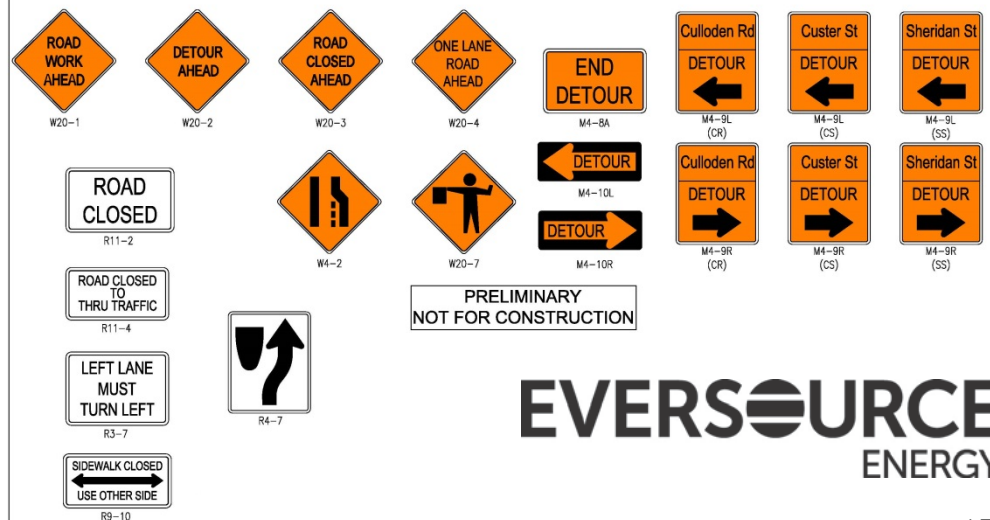
- Splice Vault/Manhole installation
- Trench excavation, conduit installation, backfill and temporary paving.
- Install cables between each manhole.
- Cable splicing and testing in manholes.
- Final pavement and other Project restorations completed per municipal town agreements.

Managing Traffic Impacts During Construction

- Traffic Management Plan
 - ✓ Developed jointly with Municipalities, MBTA, Schools and Public Safety Officials
 - ✓ Police details paid by Project
 - ✓ Maintain access to homes and businesses at all times
 - ✓ Hours of Construction as agreed upon with the Town
 - ✓ Maintain pedestrian safety
- Communicate and with neighbors and communities throughout the process by providing:
 - ✓ Door-to-door outreach
 - ✓ Informational mailings to abutting property owners, residents, and businesses
 - ✓ Project hotline and e-mail



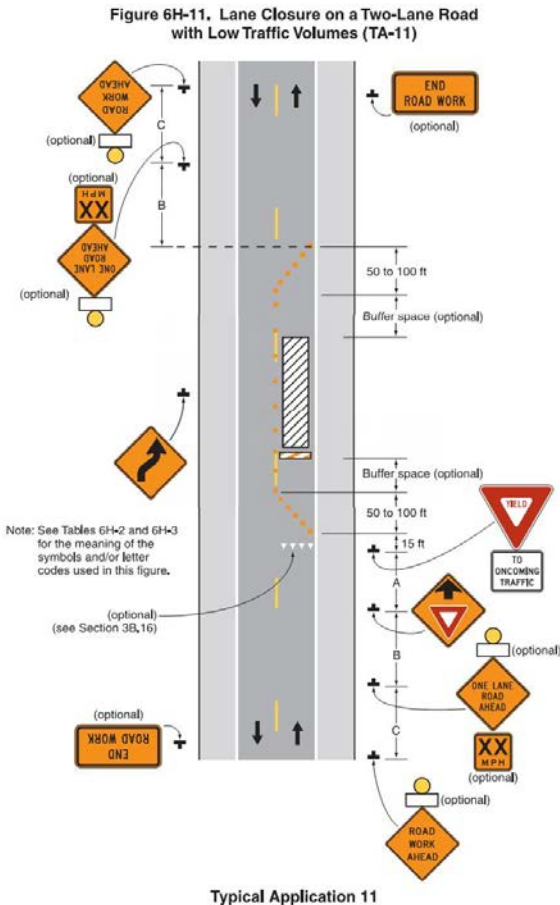
MUTCD TEMPORARY TRAFFIC CONTROL ROAD SIGNS



Eversource will work closely with the Town on detailed Traffic Management Plans (TMPs)

2009 Edition

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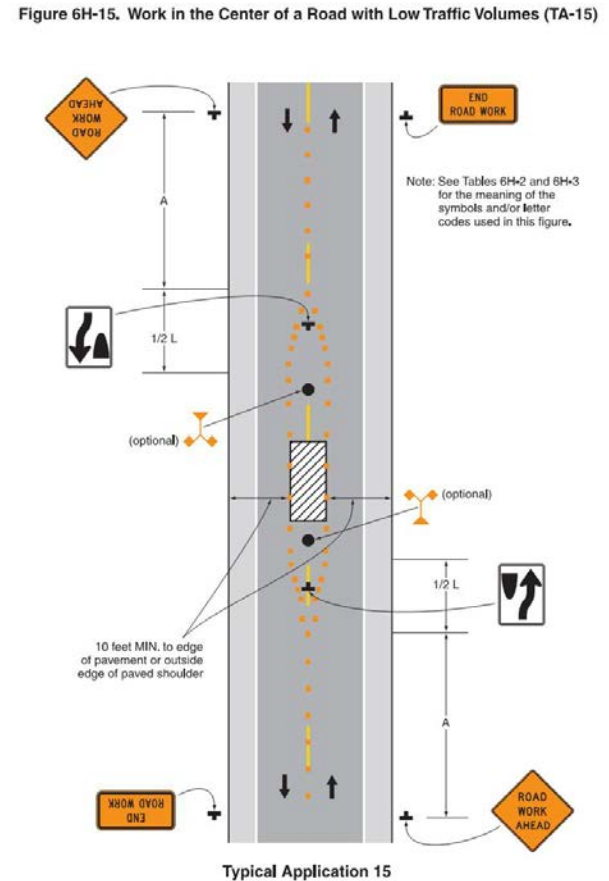


December 2009

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2009 Edition

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December 2009

Sect. 6H.01

- Gradient conducted an independent analysis of the EMF created by the transmission lines.
- EMFs were modeled for overhead and underground line cross-sections:
 - non-emergency summer peak; and
 - average transmission line loadings.
- Both current and projected magnetic field values in all locations are well below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) health-based guidelines for the public exposure to EMF (2,000 mG).
- EMF results are typical and consistent with any similar technology in use or approved to be constructed elsewhere in Massachusetts or throughout the U.S.
- There will be a reduction in the existing EMF values near the overhead lines between Valley Road and Needham Substation (because 1 set of overhead lines are being removed (separated) and buried in the ground as part of the Project).

**Electric and Magnetic Field (EMF) Modeling Analysis
for the West Roxbury to Needham Reliability Project**

Prepared for

Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

Eversource
1 NSTAR Way
Westwood, MA 02090

March 18, 2016

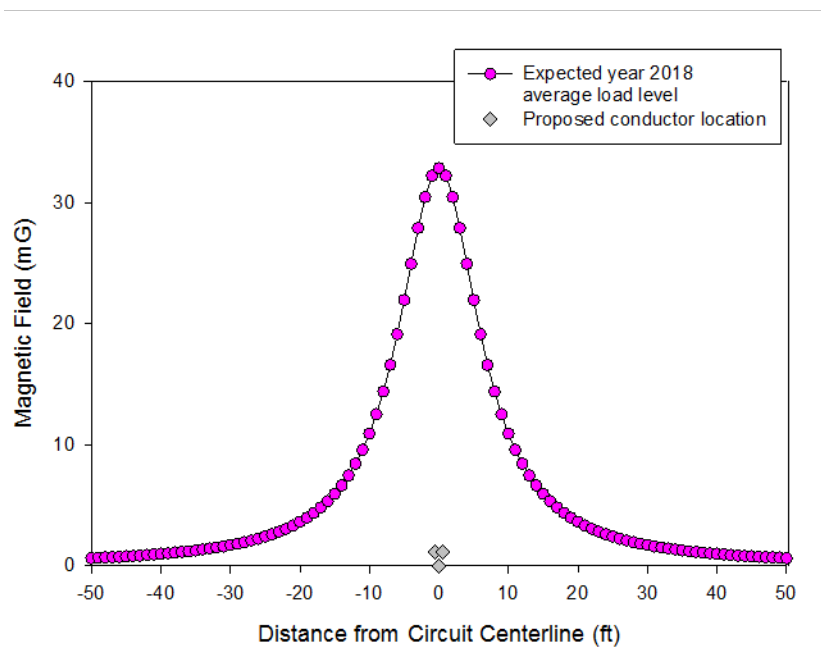


- EMF are present wherever electricity is used.
- EMF is common to all electric devices and power transmission, with motorized devices producing large magnetic fields.
- EMF from some of these sources can be much higher than what might be associated with a transmission line.
- EMF drops off rapidly with distance from any source.
- National and international public health organizations have periodically reviewed the data (now 40 years of scientific research) and have concluded that EMF from use of electric power is not an established health risk.

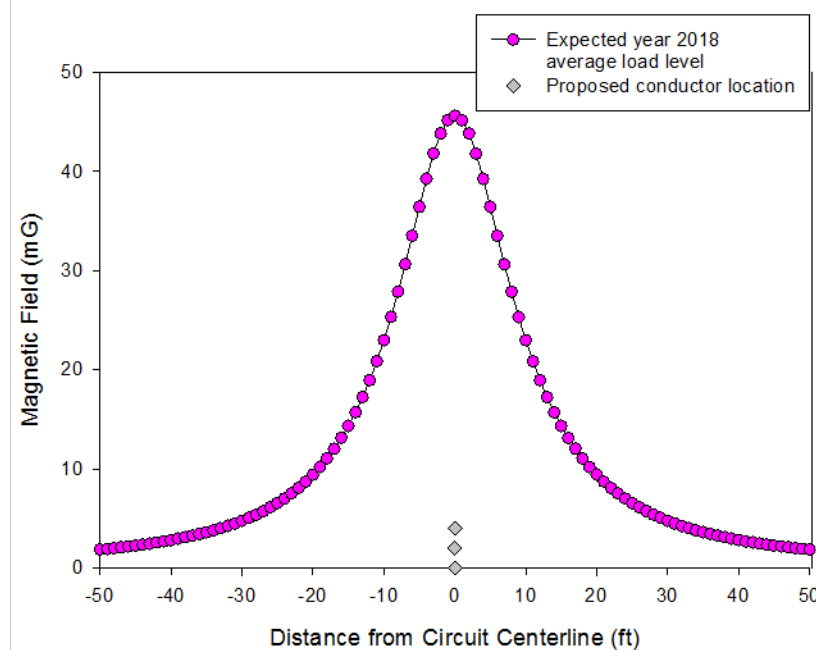
Source	Distance from Source	
	6 inches (mG)	1 foot (mG)
Can opener	600	150
Vacuum cleaner	300	60
Hair dryer	300	1
Electric pencil sharpener	200	70
Power saw	200	40
Microwave	200	4
Electric shaver	100	20
Portable heater	100	20
Kitchen mixer	100	10
Blender	70	10
Electric range	30	8
Dishwasher	20	10

Source: NIEHS (2002)
Numbers shown are median values.

Typical UG Conductor Configuration

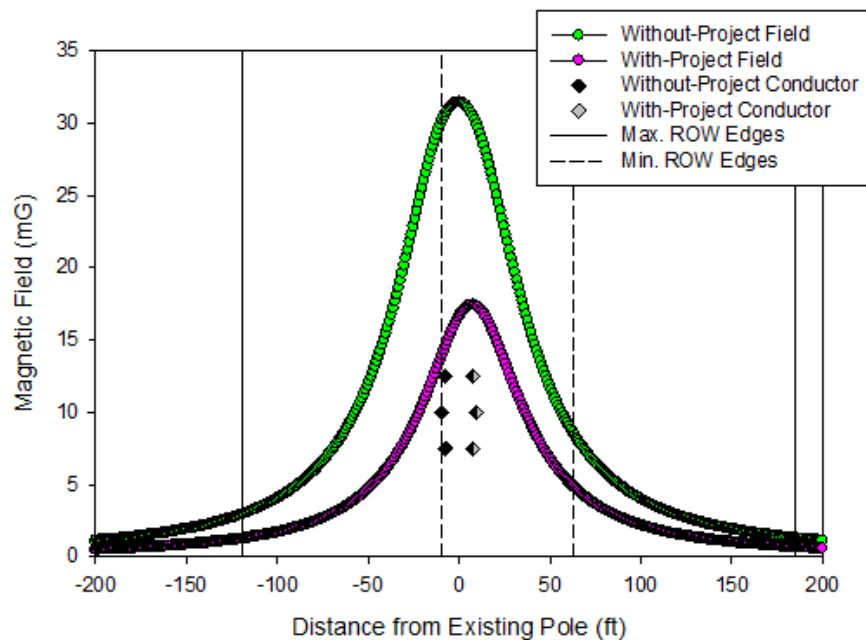


Manhole UG Conductor Configuration

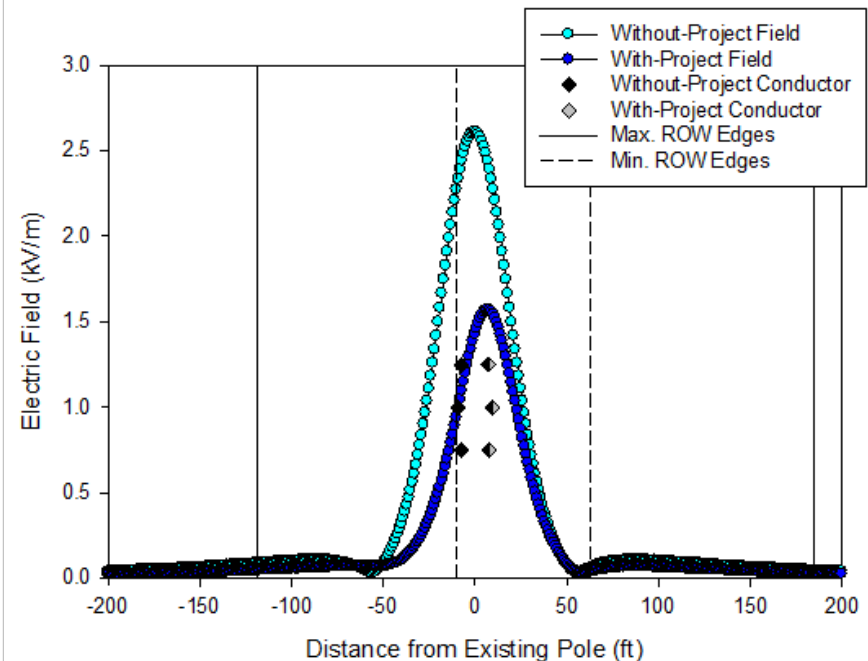


Overhead Line Modeling Results for ROW Portion in Needham West of Valley Road

Predicted magnetic fields for
expected year 2018 average
load levels



Predicted electric fields for
expected year 2018 average
load levels



Stakeholders

- Municipal officials
- State and federal elected officials and regulators
- Property owners & tenants
- Businesses

Project Communication for Municipalities

- Briefings & Presentations
- E-mail updates

Project Communication for the Public

- Releases/Media Advisories
- Door to door outreach, including door hangers
- Project Hotline: 1-800-793-2202
- E-Mail: TransmissionInfo@Eversource.com



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