Dover to Needham Underground Electric Transmission Cable Replacement Project

Underground Cable Modernization Program | EVERSOURCE

This project relates to Transmission Cable Replacement and not Gas or Distribution work.

Towns of Dover, Needham & Westwood

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Underground Cable Modernization Program (UCMP)

The Eversource UCMP is designed to modernize and increase the capacity of the existing underground transmission cable systems by replacing existing fluid-filled cable with cross-linked polyethylene cable wherever possible. Benefits of the program include but are not limited to:

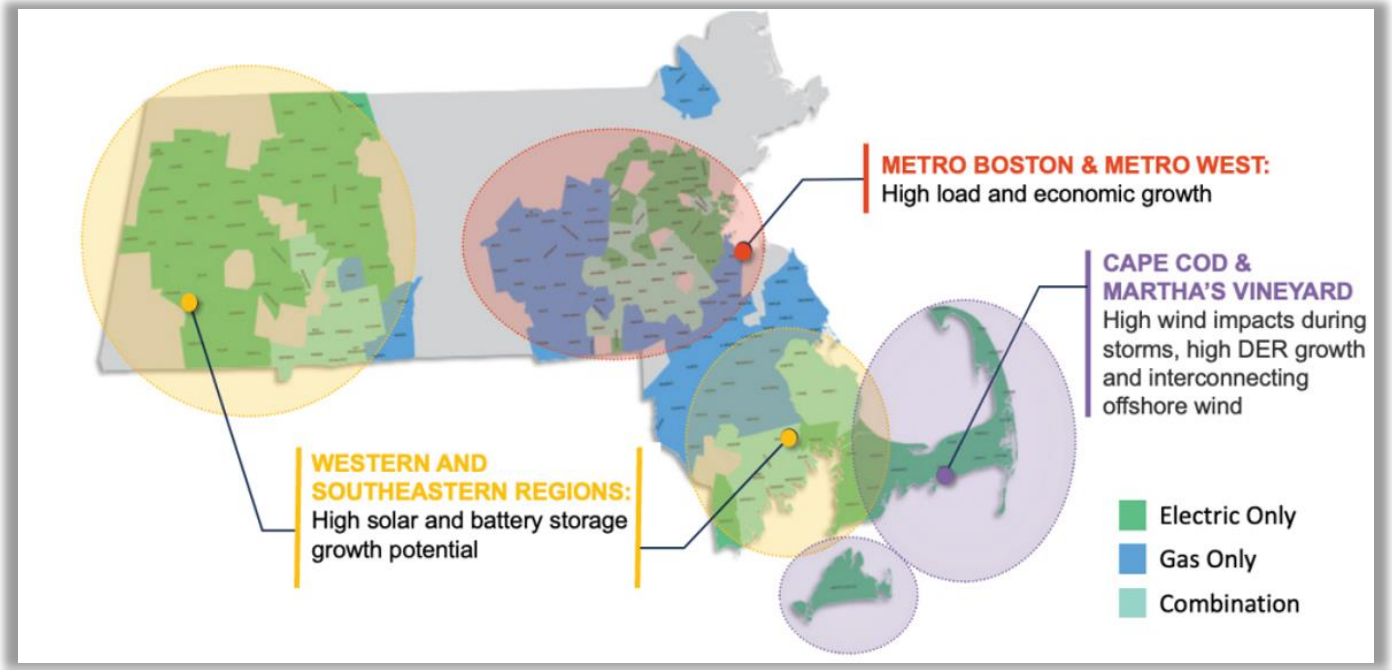
Environmental improvements: preventing future leaks
- Replace high pressure fluid-filled pipes (HPFF) with solid dielectric (XLPE) cables

Reliability improvements: replacing aging Pipe Type Cable (PTC) technology
- Limited market availability of current cable manufacturing
- Reduce failure risk in densely populated areas
- Improve speeds for restoration

Capacity improvements: meeting future demand for increased electrification and decarbonization
- XLPE cables hold capability to distribute more energy than current HPFF lines

Electrification of the Grid

Infrastructure Investment Needed Across Massachusetts



Eversource's Plan ENHANCES THE GRID & ENABLES CLEAN ENERGY

Increases available electrification hosting capacity by 180% over the next decade

Supports the **adoption of 2.5 million electric vehicles statewide,** 60% of the state's 2050 goals

Allows for the **adoption of 1 million heat pumps,** 70% state's 2050 goal in the Company's service territory

Enables **5.8 GW of solar, exceeding the state's 2040 goals,** and reaching over 60% of the state's 2050 goals

Highlights

- Eversource Plan released in early 2024 looks 10 years out with upgrades to the grid across Mass. to meet growing demands & state climate goals of net zero by 2050.
- By 2050, the average household will use almost **three & a half times** the amount of electricity on average vs. in 2023.
- A typical household currently run on 700 kilowatt-hour (kWh) per month. A future household is expected to use 1400-2400 kWh per month.
- **To meet electrification goals requires significant infrastructure upgrade and investment**

Project Need and Scope

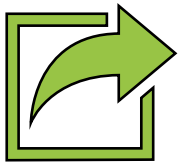
Eversource is seeking to coordinate with other potential area projects and garner input from community stakeholders

PROJECT NECESSITY

Line replacement required to:

- Replace high pressure fluid filled (HPFF) lines with cross-linked polyethylene (XLPE) technology
- Safeguard system reliability
- Plan for future energy demand

SOLUTION



Replace HPFF Lines with XLPE technology benefits:

- Ensure system reliability as XLPE technology is more widely available on the market
- XLPE wider diameter cables can handle larger loads of electricity to assist with electrification efforts aligning with the Commonwealth's net zero greenhouse gas emissions goals
- Improve restoration times

PROJECT AREA

Work Area:

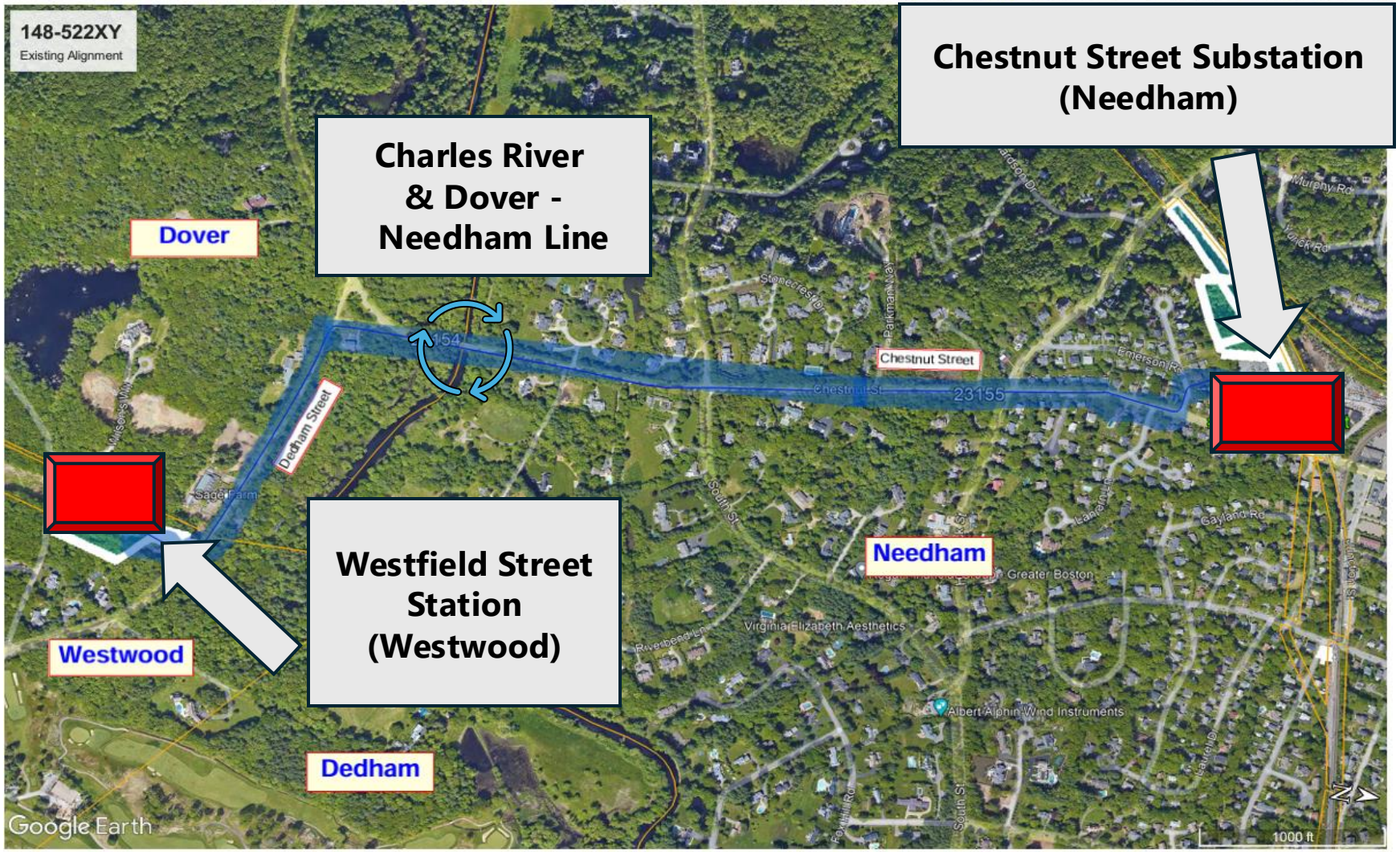
- The proposed route runs between Eversource substations in Westwood off Westfield Street and off Chestnut Street in Needham. Most of the work will be along Chestnut Street in Needham, which includes a Charles River crossing near the Dover/Needham town lines.
- XLPE replacement cable work will follow similar route as current HPFF lines when feasible
- **There are no plans to interrupt regular electrical service.**

TIMELINE

Schedule: **Subject to change, pending necessary approvals*

- Filing: Q2 2025 (72D filing)
- Start of Construction: Q4 2026
- In Service Date: Q3 2029 (*Restoration will occur toward the end of the construction phase of the project)*

Dover to Needham Project Map



Map depicts existing line route

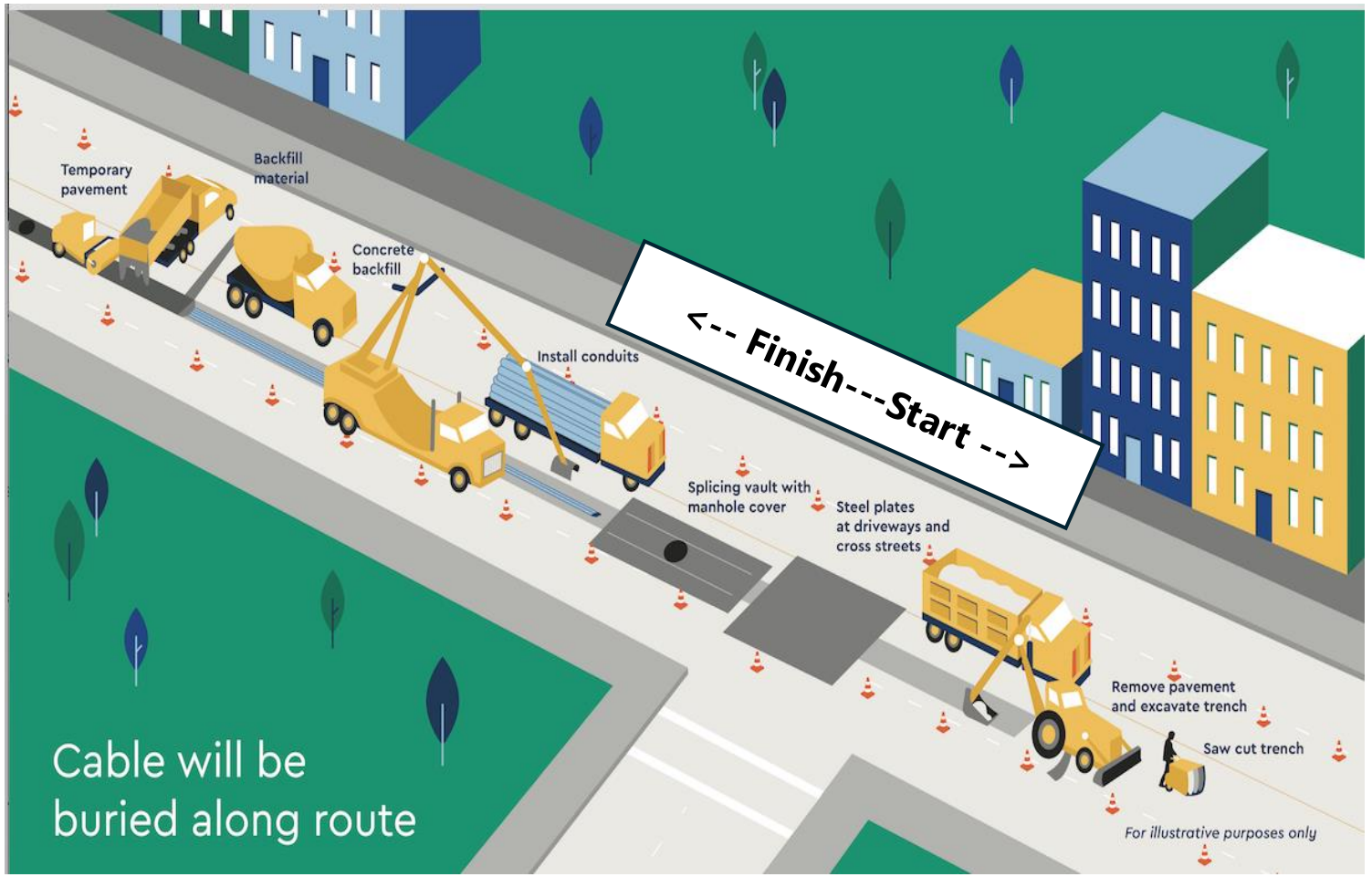
Typical Construction Sequence to Expect

Vault installation, trench digging, cable installation, cable pulling, cable splicing and restoration

Our work crews will be working in local streets for each phase of the Project:

<u>Typical Construction Sequence</u>:

- Saw Cut Pavement
- Excavate Trench
- Install Conduit for Cable
- Backfill Trench
- Install Vaults.
- Temporary Restoration of Areas over Trench and Vaults
- Cable Pulling
- Cable Splicing and Testing
- Permanent Restoration



This image is for illustrative purposes only. It is not drawn to scale and does not represent any actual streets.

Underground Cable Modernization Program (UCMP) Construction Sequence

Manhole and Duct Bank Installation

1

Before we begin construction, the underground cable location will be surveyed and existing utilities will be marked. We may also do testing to determine what the soil is like below the surface.

After surveys are complete, manholes will be installed along the route. Manholes are concrete vaults that are installed to allow crews to pull and connect the new cable.

After restoration, there will be no visible evidence that a manhole is installed at the location other than the manhole lids within the power line corridor.

A duct bank—protective casing for pipes—will be installed between the manhole and the transition structures to install the cables.

After the duct bank is installed in a trench, the area is backfilled to ground level, using excavated materials, and restored.

We are in this phase of work

Cable Installation

2

Cable installation takes place after the duct bank and manholes are installed. The cable is pulled from a reel between manholes and structures along the route.

Next, the cables are connected together within the manholes. Connecting the cable is a complex procedure and a continuous operation performed by qualified technicians.

This phase of construction typically lasts three to five days at each manhole or transition structure. It involves equipment such as pumps, lifts, and generators.

We are in this phase of work

Restoration

3

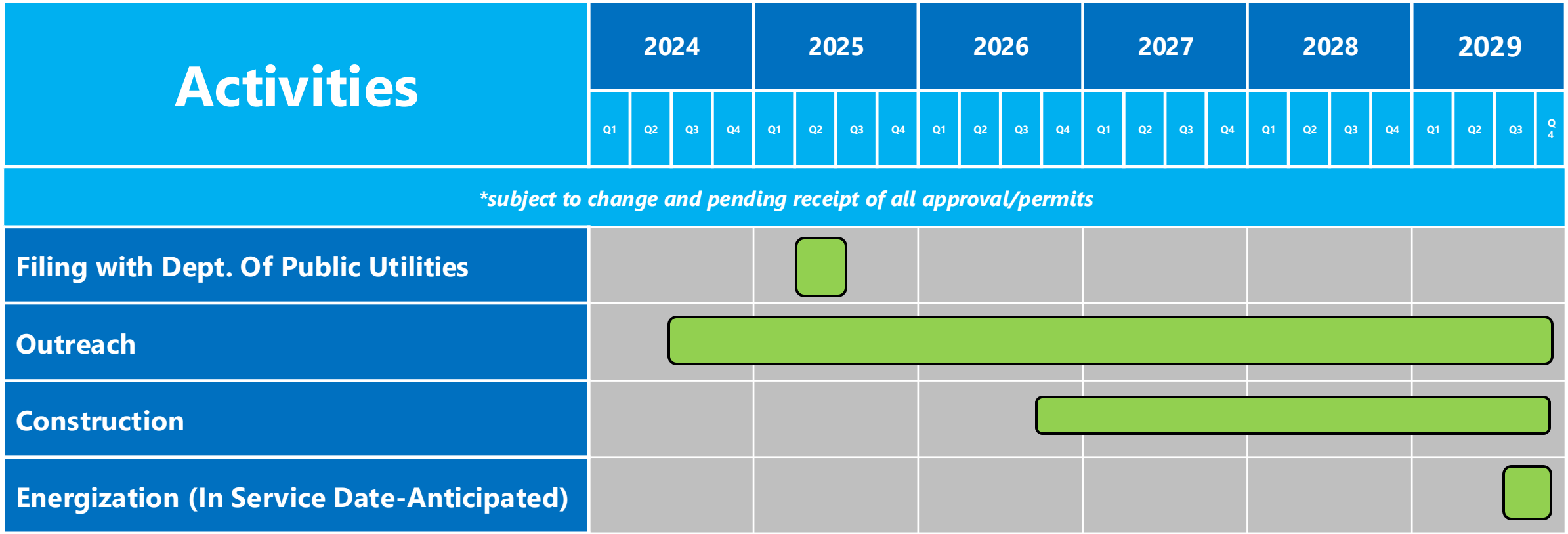
When all underground construction work is completed, we will restore the affected areas. In general, surface restoration is done to meet the pre-construction conditions. For in-road construction, typically, a section of the pavement will be milled and paved during this process.

Eversource will work directly with the affected municipalities on restoration of road surfaces. Where construction occurred in the shoulders of the roads or in off-road areas, the surface will be covered in a layer of topsoil and grass seed.

We are in this phase of work

Photos show previous projects. Future work and equipment may vary.

Dover to Needham Project Timeline



*Restoration will occur toward the end of the construction phase of the project

Stay Informed / Contact Information

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