

# Sudbury to Hudson Transmission Reliability Project

**Hudson, Massachusetts**  
**Board of Selectmen Presentation**

**February 22, 2016**

## **Revised 3-24-16**

- Page 4 – revised last bullet on Route Analysis Process.
- Page 9 – revised preferred route (overhead) visual simulation (panned to the right to include the house)
- Page 10 – revised noticed variation design (underground) visual simulation (panned to the right to include the house)



# Agenda

- Greater Boston and New Hampshire Energy Solutions
- Sudbury to Hudson Transmission Reliability Project
  - ✓ Energy Solutions
  - ✓ Project Need and Benefits
  - ✓ Route Analysis Process
  - ✓ Candidate Routes Selected for Scoring
  - ✓ Proposed Project Summary
  - ✓ Proposed Route Maps (Overall Project and Sudbury)
  - ✓ MBTA Multi-Use Path & Photo Simulation
  - ✓ Environmental Permitting
- Next Steps
- Proactive Municipal and Community Outreach throughout Project Duration
- Contact Information

- 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 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 serve the electricity needs in the Greater Boston and Southern New Hampshire area.
- To proactively address these deficiencies and the growing customer demands on the electric system, ISO-New England has directed utilities to implement a series of transmission projects as needed.
- One of the projects to come out of the solution to solve the identified system reliability problems is a new power line between existing substations in Sudbury and Hudson.

# Sudbury to Hudson Transmission Reliability Project

## Project Need & Benefits



The new 115-kV power line between Sudbury and Hudson will provide a separate transmission path to supplement the existing system and address the identified thermal and voltage problems in the area:

- ✓ Hudson Light & Power is currently supplied by two transmission lines from the same substation (National Grid's Northboro Road Substation in Southborough). Adding a 3rd line from a different substation, would provide redundancy to their current transmission supply.
- ✓ Currently, a contingency involving the loss of a double circuit tower would result in loss of power to the Hudson substation.
- ✓ Under other contingencies, the Hudson substation would lose power due to voltage collapse and approximately 550 MW of load would be lost throughout the area.

# Sudbury to Hudson Transmission Reliability Project

## Route Analysis Process

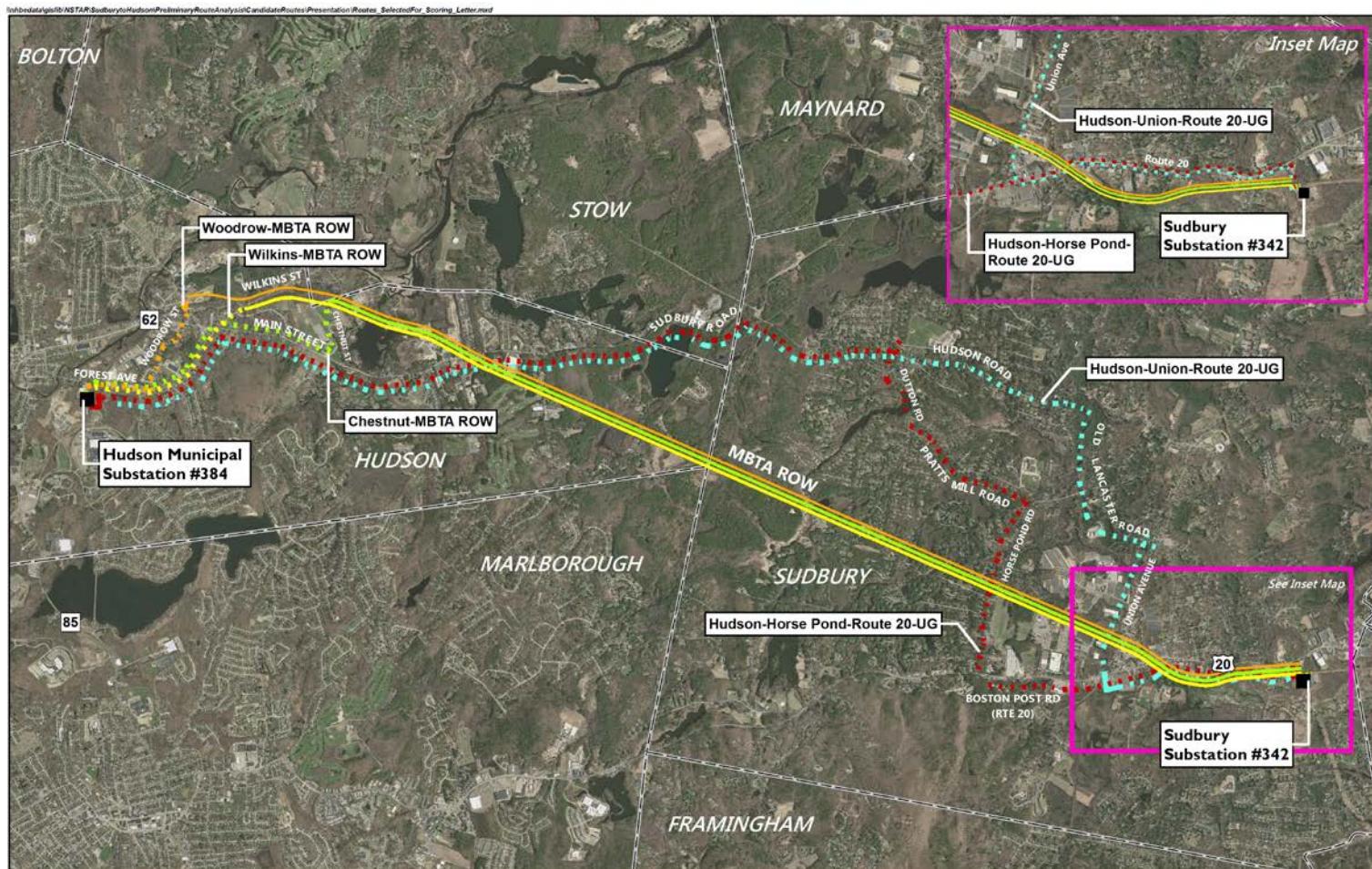


- Evaluations were performed to determine the Preferred and potential Alternative routes.
- Eversource, with environmental consultant VHB, Inc. established route selection guidelines to identify all potentially feasible routes between the Sudbury and Hudson substations.
- Routes with obvious flaws were eliminated.
- The candidate routes were evaluated, scored and ranked by applying detailed environmental, constructability, community impact, and conceptual cost estimate criteria.
- Eversource used the scoring and ranking system to select a Preferred Route and a potential Alternative Route, as previously included in Energy Facilities Siting Board (EFSB) petitions.
- At the November 15, 2015 meeting with the towns of Hudson and Sudbury, it was requested that Eversource evaluate an underground MBTA route.
- Eversource continues to consider alternative routes, including potential Noticed Alternative routes, to ensure that its route selection process is complete and consistent with Siting Board standards.

# Sudbury to Hudson Transmission Reliability Project

## Candidate Routes Selected For Scoring

EVERSOURCE  
ENERGY



### Candidate Routes/Design Options Selected for Scoring

- Wilkins-MBTA ROW-UG
- Wilkins-MBTA ROW-OH
- Woodrow-MBTA ROW-UG
- Woodrow-MBTA ROW-OH
- Chestnut-MBTA ROW-UG
- Chestnut-MBTA ROW-OH
- Hudson-Horse Pond-Route 20-UG
- Hudson-Union-Route 20-UG

NOTE: Not to scale. Alignments shown are for graphical purposes only.  
Lines that appear immediately adjacent to each other should be assumed to follow the same alignment.

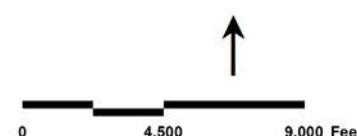
Source:  
MassGIS, VHB

**DRAFT**

EVERSOURCE  
ENERGY

Proposed 115 kV Line Sudbury Substation 342  
to Hudson Municipal Substation 384

Candidate Routes/Design Options Selected for Scoring



**DRAFT subject to change**



# Sudbury to Hudson Transmission Reliability Project

## Proposed Project Summary



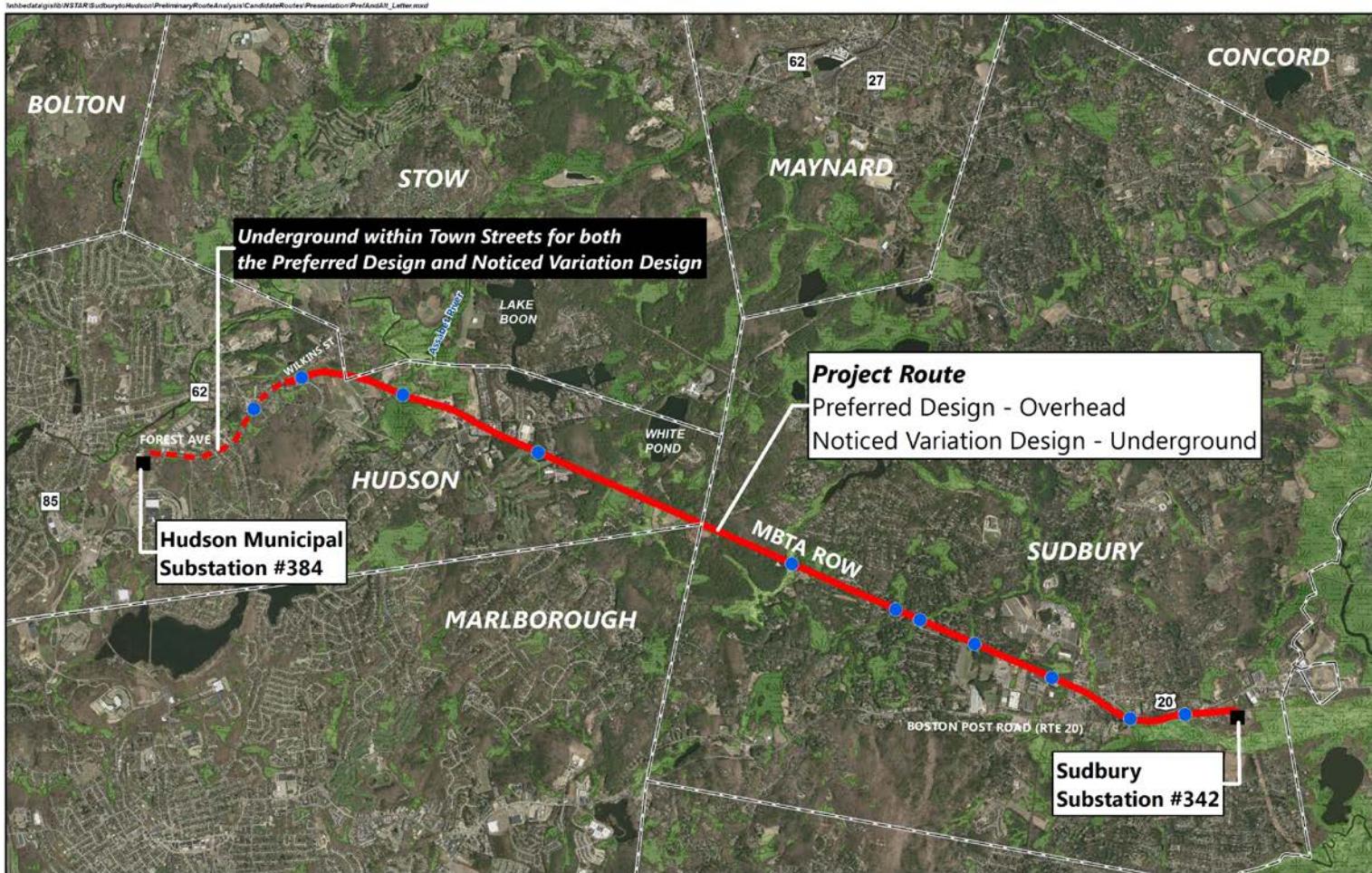
Install a new 115-kV transmission line between Station 342, Sudbury, MA and the Hudson Light and Power substation in Hudson, MA between the towns of Sudbury, Hudson and Stow, and the City of Marlborough.

- **Preferred Route :**
  - ✓ New overhead line utilizes an existing abandoned MBTA railroad bed (MBTA owned property) which runs adjacent to the Sudbury substation for approximately 7.6 miles into the town of Hudson. The remaining 1.3 miles to Hudson substation will be underground within Hudson city street limits.
  - ✓ The total length of the new line is estimated to be 8.9 miles, of which approximately 4.3 miles will be in Sudbury and 4.6 miles in Hudson. The proposed route also includes small portions within Marlborough and Stow.
  - ✓ As part of construction of the Project, a 12 foot wide access road will be created which may be used by others as a bike path after Project construction is complete.
- **Noticed Variation Design:**
  - ✓ The Noticed Variation Design route utilizes the same route as the Preferred Route above, except the route will be underground in the MBTA owned Right-of-Way.

# Sudbury to Hudson Transmission Reliability Project

## Overview Map

EVERSOURCE  
ENERGY



- Project Route
- Project Route - Underground Segment within Town Streets
- Waterbody Crossing
- Wetland (MADEP)
- Municipal Boundary

Source:  
MassGIS, VHB

0 5,000 10,000 Feet



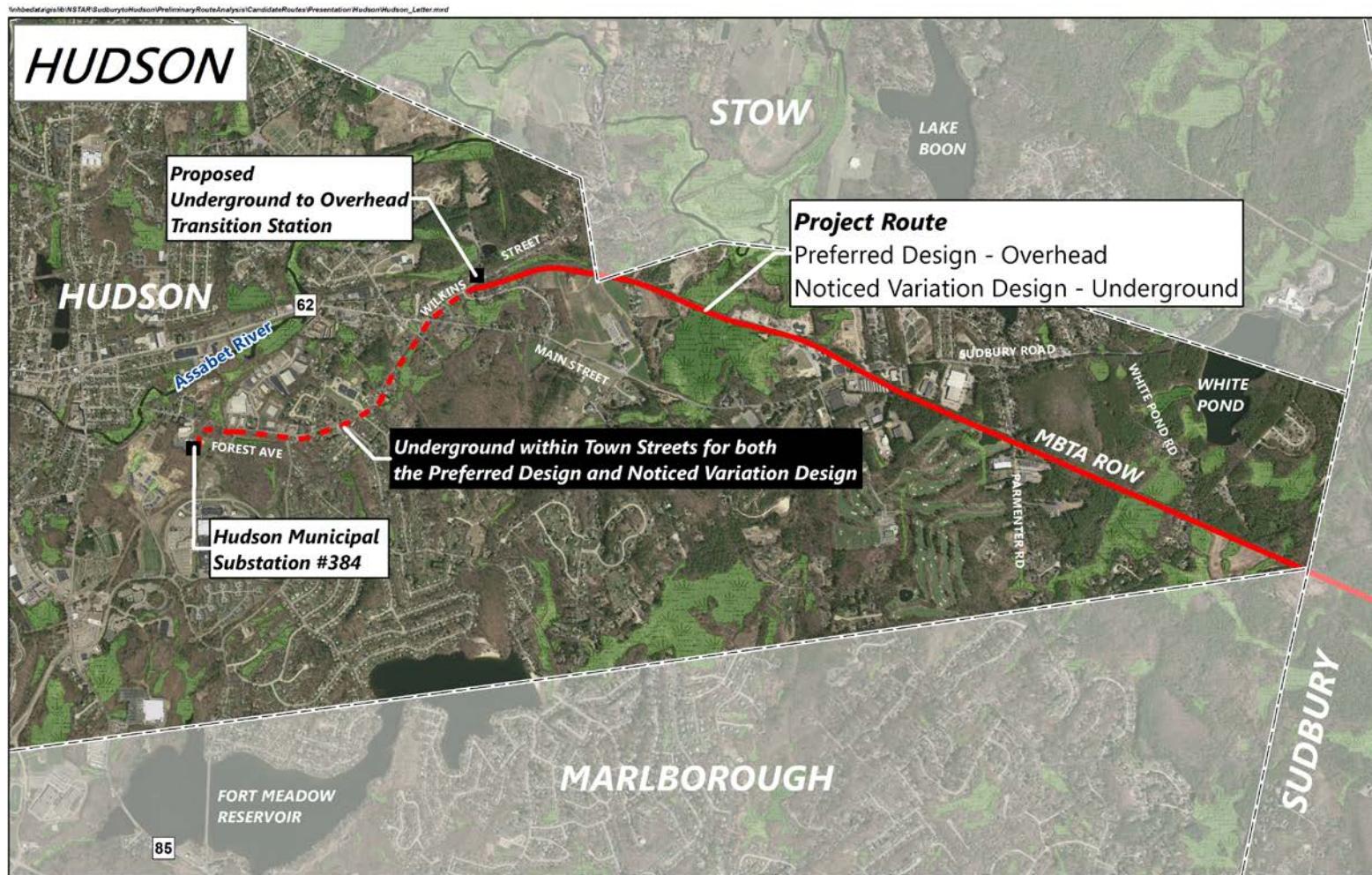
**DRAFT subject to change**



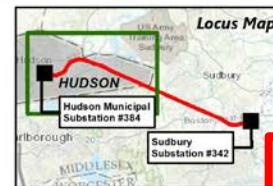
# Sudbury to Hudson Transmission Reliability Project

## Hudson Map

EVERSOURCE  
ENERGY



- Project Route
- Project Route - Underground Segment within Town Streets
- Wetland (MADEP)
- Municipal Boundary



Proposed 115 kV Line Sudbury Substation #342 to Hudson Municipal Substation #384

Preferred Project and Noticed Variation

DRAFT subject to change



# Sudbury to Hudson Transmission Reliability Project

## Photo Simulation of MBTA Multi-Use Path

**EVERSOURCE**  
ENERGY

### Boston Post Road & Station Road, Sudbury (Facing East)

Sudbury-Hudson Line and Proposed Rail Trail



 **BEALS + THOMAS**  
DATE: 03/24/2016  
BTI FILE NO: 240901P002E-001

Preferred Route - Overhead  
Immediately Following Construction

**EVERSOURCE**  
Westwood, Massachusetts

DRAFT subject to change

# Sudbury to Hudson Transmission Reliability Project

## Photo Simulation of MBTA Multi-Use Path

**EVERSOURCE**  
ENERGY

### Boston Post Road & Station Road, Sudbury (Facing East)

Sudbury-Hudson Line and Proposed Rail Trail



 **BEALS + THOMAS**  
DATE: 03/24/2016  
BTI FILE NO: 240901P002F-001

**EVERSOURCE**  
Westwood, Massachusetts

DRAFT subject to change

# Sudbury to Hudson Transmission Reliability Project

## MBTA Multi-Use Path



The Project intends to coordinate with the proposed rail trail project along the MBTA corridor.

The Project has begun to reach out to the following identified rail to trail organizations to keep them informed of proposed Project:

- Sudbury Valley Trustees (Sudbury-Marlborough)
- Friends of Bruce Freeman Trail (Sudbury)
- Sudbury Greenways (Sudbury)
- Assabet River Rail Trail (Hudson)
- Track Road Committee (Stow)

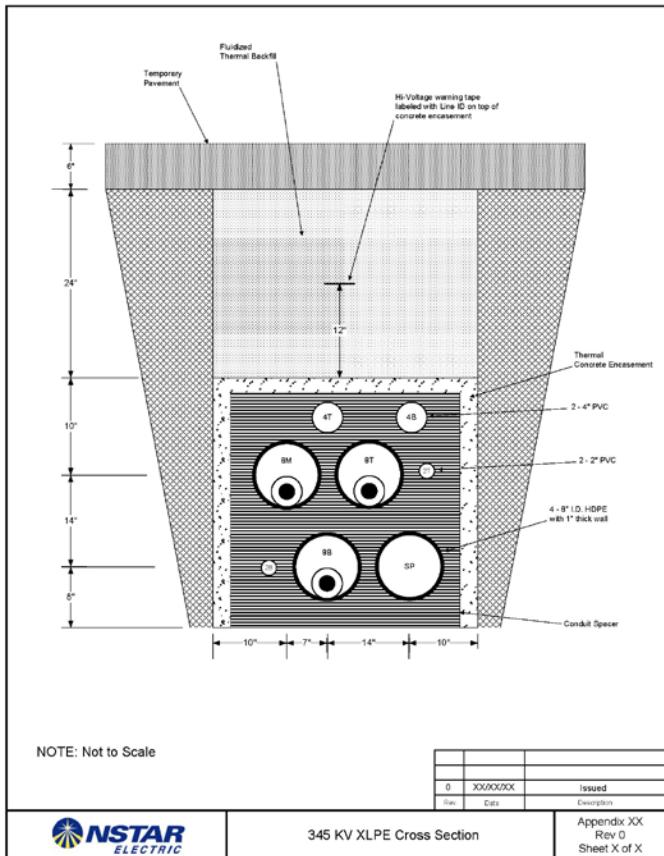
# Sudbury to Hudson In-Street Construction Process



- Splice Vault/Manhole installation
- Trench excavation, conduit installation, backfill and temporary paving.
- Waterway crossings
- Install cables between each manhole.
- Cable splicing and testing in manholes.
- Final pavement and other Project restorations completed per municipal town agreements.
- Construction at substations will be concurrent with cable construction.

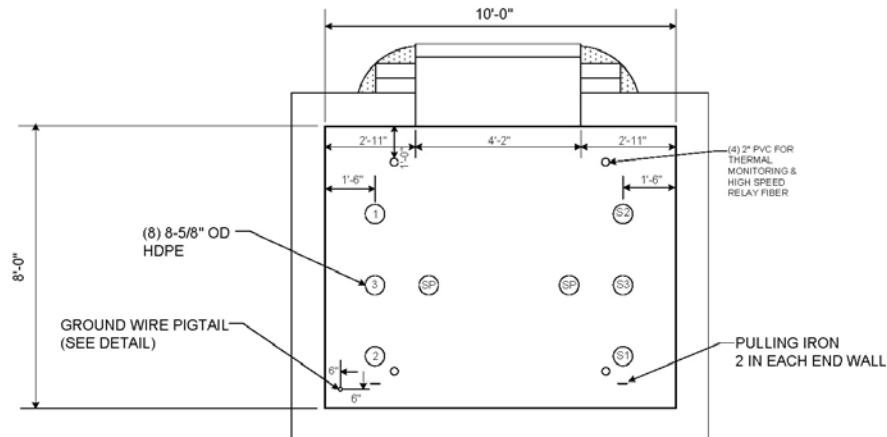
# Sudbury to Hudson Typical Cross-Sections

## Cable Installation



3' x 3' along the underground route

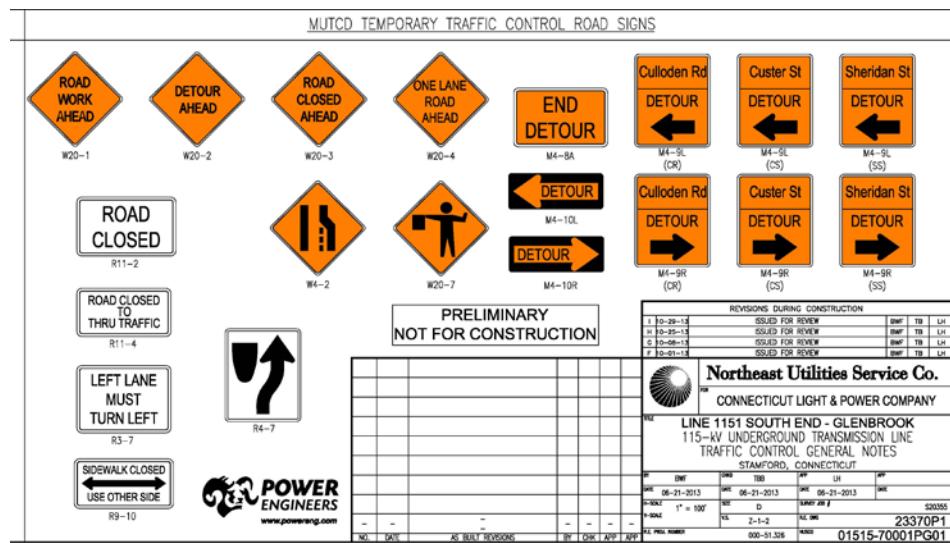
## Splice Vault/Manhole



10' tall x 12' wide x 30' long  
(approx. 1500'-1800' apart along the underground route)

# Managing Impacts During Construction

- Traffic Management
  - ✓ Traffic Management Plan to be developed jointly with municipalities.
  - ✓ Police details paid by Project
  - ✓ Maintaining access
  - ✓ Hours of Construction
  - ✓ Maintain pedestrian safety
- Eversource will communicate and work closely with neighbors in the communities throughout the process by providing:
  - ✓ Door-to-door outreach
  - ✓ Informational mailings via town certified abutting property owner list
  - ✓ Project website with progress updates
  - ✓ Project hotline and e-mail



# Sudbury to Hudson Transmission Reliability Project

## Environmental Permitting



- Local Conservation Commissions
- State Review and Permitting:
  - MEPA
  - Mass Historic Commission
  - Natural Heritage Endangered Species Program
  - Mass DEP Water Quality
- Federal Review and Permitting:
  - Army Corps of Engineers
  - US Fish and Wildlife Service
  - US Environmental Protection Agency

# Sudbury to Hudson Transmission Reliability Project

## Next Steps



### ***First Step (ongoing)***

Solicit municipal input regarding proposed project and potential routes.

Hudson Board of Selectman – February 22

### ***Second Step***

Conduct Open Houses to gather community input. All property owners abutting the proposed route will be invited to both open houses.

Hudson Town Hall Auditorium – March 15  
Sudbury Town Hall – March 16

### ***Third Step***

File an application with the Energy Facilities Siting Board (EFSB) – early Q2 2016

After we file, the EFSB will conduct a local public hearing, offering additional opportunity for community input. Abutters will be notified.

### ***Fourth Step***

EFSB issues its Decision – estimated 2017  
Construction start (pending approvals) -- 2017  
In-Service (pending approvals) – estimated 2019

# Proactive Municipal and Community Outreach Throughout Project Duration



## Stakeholders

- Municipal officials
- State and federal elected officials and regulators
- Property owners & tenants
- Businesses
- Community Groups
- Rail to Trail organizations

## 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](mailto:TransmissionInfo@Eversource.com)
- Project webpage: under development

**Sudbury to Hudson Transmission Line Project - Project Manager**

**Bev Schultz**

**781-441-8345**

**[Beverly.Schultz@Eversource.com](mailto:Beverly.Schultz@Eversource.com)**

**Community Relations Specialist (Municipalities)**

**JoAnne O'Leary**

**508-305-6898**

**[JoAnne.OLeary@Eversource.com](mailto:JoAnne.OLeary@Eversource.com)**

**Project Outreach Specialist (business/residential )**

**Mark Kimball**

**860-728-4663**

**[Mark.Kimball@Eversource.com](mailto:Mark.Kimball@Eversource.com)**