



Heroes Tunnel Project



State Project No. 167-108

Public Information Meeting

**Route 15 Wilbur Cross Parkway
Through West Rock Ridge**

**Town of Woodbridge, Town of Hamden
& City of New Haven**

**June 7, 2017, 7:00 PM
New Haven Hall of Records
200 Orange Street, New Haven, CT**

Project Roles

CTDOT Division of Bridges, Bridge Consultant Design Unit

- **Oversight/Liaison/Coordination of Design Consultant**
 - Theodore Nezames, Manager of Bridges
 - Timothy Fields, Principal Engineer
 - David Cutler, Supervising Engineer
 - Derick Lessard, Project Engineer

CTDOT Office of Environmental Planning

- **Coordination/Review of Environmental Aspects**
 - Kevin Fleming, Planner
 - Amanda Saul, Planner
 - Chris Samorajczyk, Planner
 - Scott Speal, NRS Archaeologist

Project Roles

CTDOT Interchange 59 Project Team

- **Independent utilities and stand-alone projects**
- **Continual coordination**
 - **Project No. 92-672**
 - **Scott Bushee, Supervising Engineer**
 - **Long-term Improvements**
 - **Marissa Washburn, Supervising Engineer**

Project Roles

Federal Highway Administration (FHWA)

- **Federal Funding Anticipated**
- **Review of Environmental Assessment and Design Plans**
 - Timothy Snyder, Area Engineer
 - Christopher Hansen, Environmental Protection Specialist

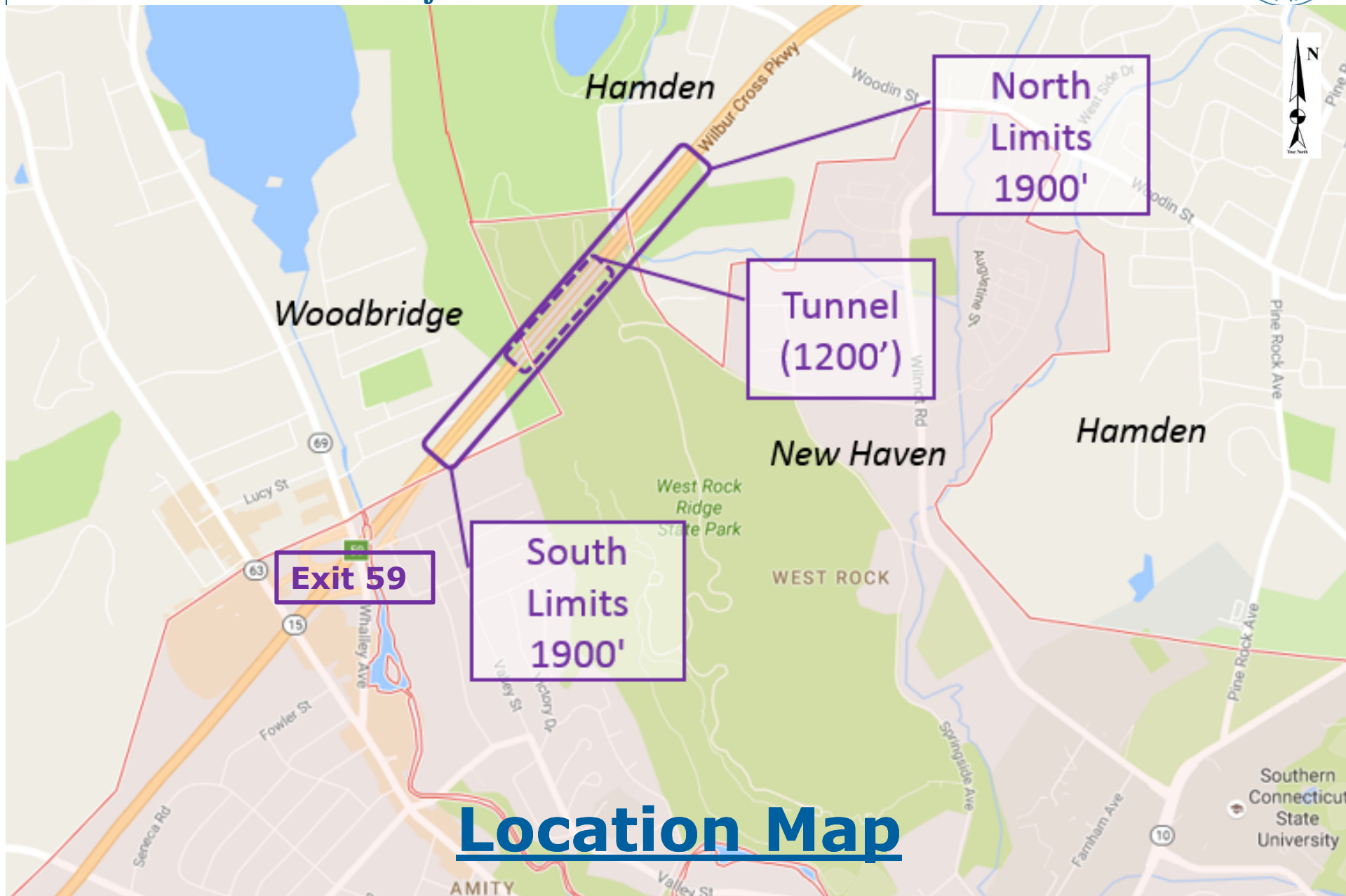
CDM Smith

- **Retained as Design Consultant Engineer**
- **Tunnel inspection and preliminary engineering report**
 - Mike Egan, Principal, Project Manager
 - Dave Sousa, Public Engagement
 - Mohammad Jafari, Tunnel Designer



Heroes Tunnel Project

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Aerial View





Purpose of Project

- **Tunnel Inspected Once per Year (Biennial and Special Inspections)**
- **Most current inspection has given the Tunnel an overall rating of “Poor”**
- **“Poor” rating is not an indication of an imminent safety issue**
- **Project scope to address safety, structural, and geometric deficiencies.**

Tunnel Description

- **Opened in 1949 - Wilbur Cross Parkway**
- **Eligible for Listing on State/National Historic Register**
- **Only Highway Tunnel Through Natural Land Form in CT**
 - **Carries 70,000 vehicles per day**
- **Each Barrel 1,200' long, 28' wide, 11' Lanes, 6" shoulders**
 - **Standards Require 12' Lanes, 8' left and 10' right shoulder**
- **Non-Compliance w/Tunnel Standards/Requirements**
 - **Geometrics, Ventilation and Emergency Systems**
- **CDM Smith 2009 Inspection: Need for Rehabilitation**

Existing Conditions

- **Significant Deterioration**
 - Prior Biennial Reports
 - CDM Smith Inspection/Study
- **Peak Hour Congestion**
 - Recurring Bottlenecks
- **Substandard Shoulder Widths**
create emergency response constraints
- **Does not meet current standards**
for electrical, mechanical or fire
protection systems



Tunnels

- Ground Water Infiltration
 - Walls/Ceiling - Stalagmites
 - Freeze/Thaw Conditions
 - Falling Icicles
- Cross Section Deficient
 - 28' Existing Width
 - 50' Required (2 Lanes)
 - (includes two 4' curbs)
- **Frequent Maintenance
Requires Tunnel Closures –
Shifting Traffic**



Tunnel Walls



Tunnel Wall



Tunnel Wall



Tunnel Wall



Tunnel Ceiling



Tunnel Ceilings



Tunnel Ceiling

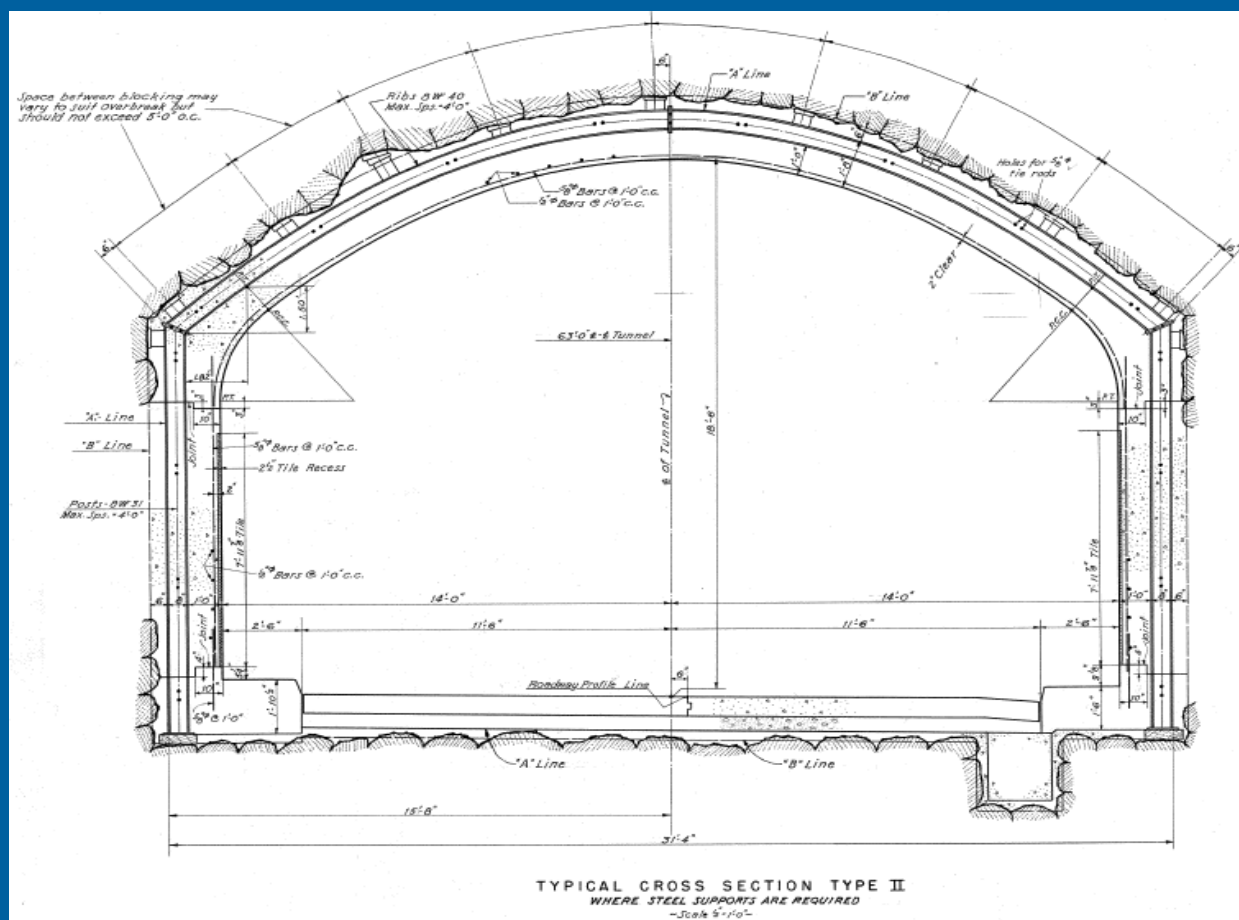




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Typical Cross Section at Steel Framing



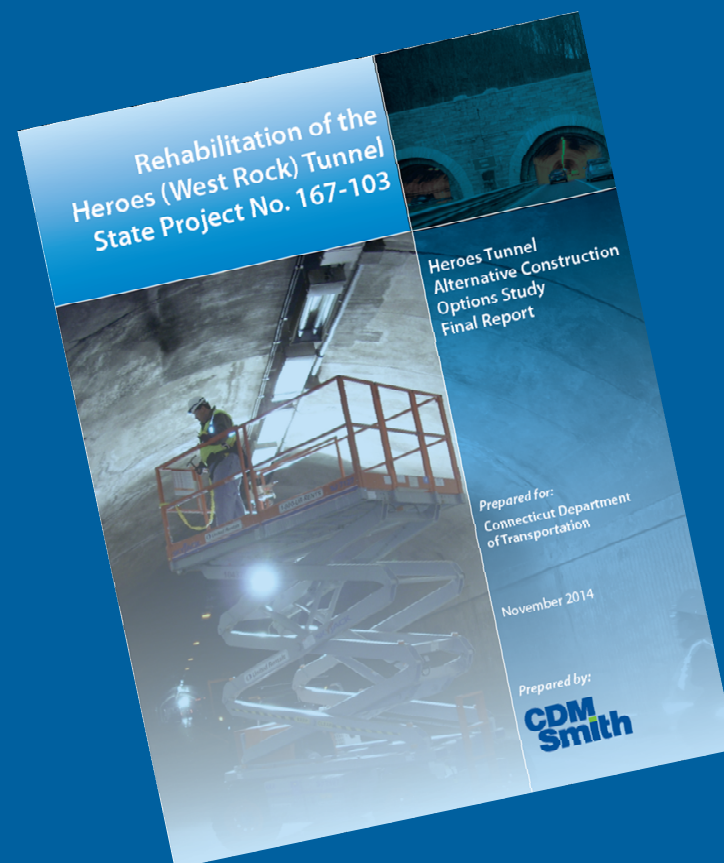


Steel Framing (before concrete)



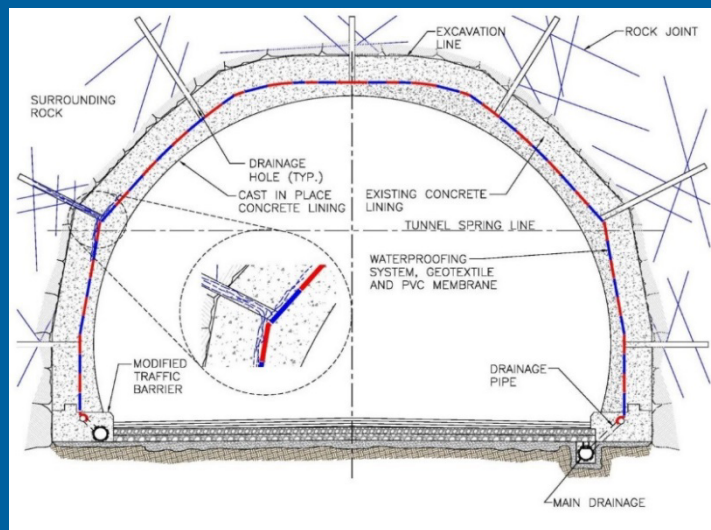
Rehabilitation Report Summary

- **November 2014 Alternative Construction Options Study and September 2016 Supplement**
 - **Several Options Evaluated:**
 - **Construction Methods**
 - **Construction Duration**
 - **Construction Schedule (Staging)**
 - **Cost**
 - **Traffic Impacts**
 - **Construction Complexity**
 - **Anticipated Useful Life**



Rehabilitation Options

- **Rehabilitation Options Evaluated in 2014 Report:**
 - **Rehabilitation of Existing Tunnel by Complete shutdown of one barrel.**
 - **Rehabilitation of Existing Tunnel by Partial shutdown of one barrel.**

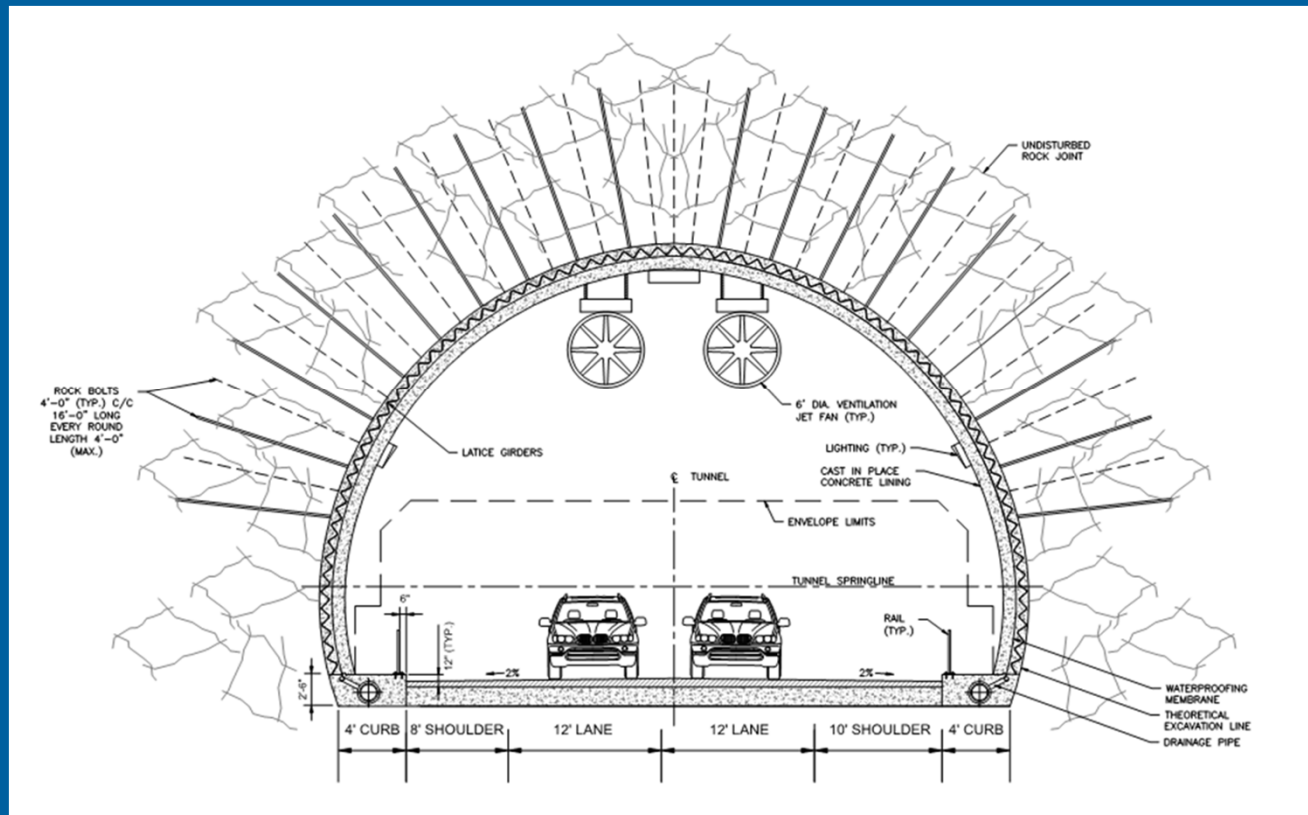


- **Significant Traffic Impacts During Lane Closures**
- **Geometrics Not Correctable Within Existing Tunnel Widths**
- **Structural Integrity of Tunnels**
- **Ground Water Infiltration**

Reconstruction Options

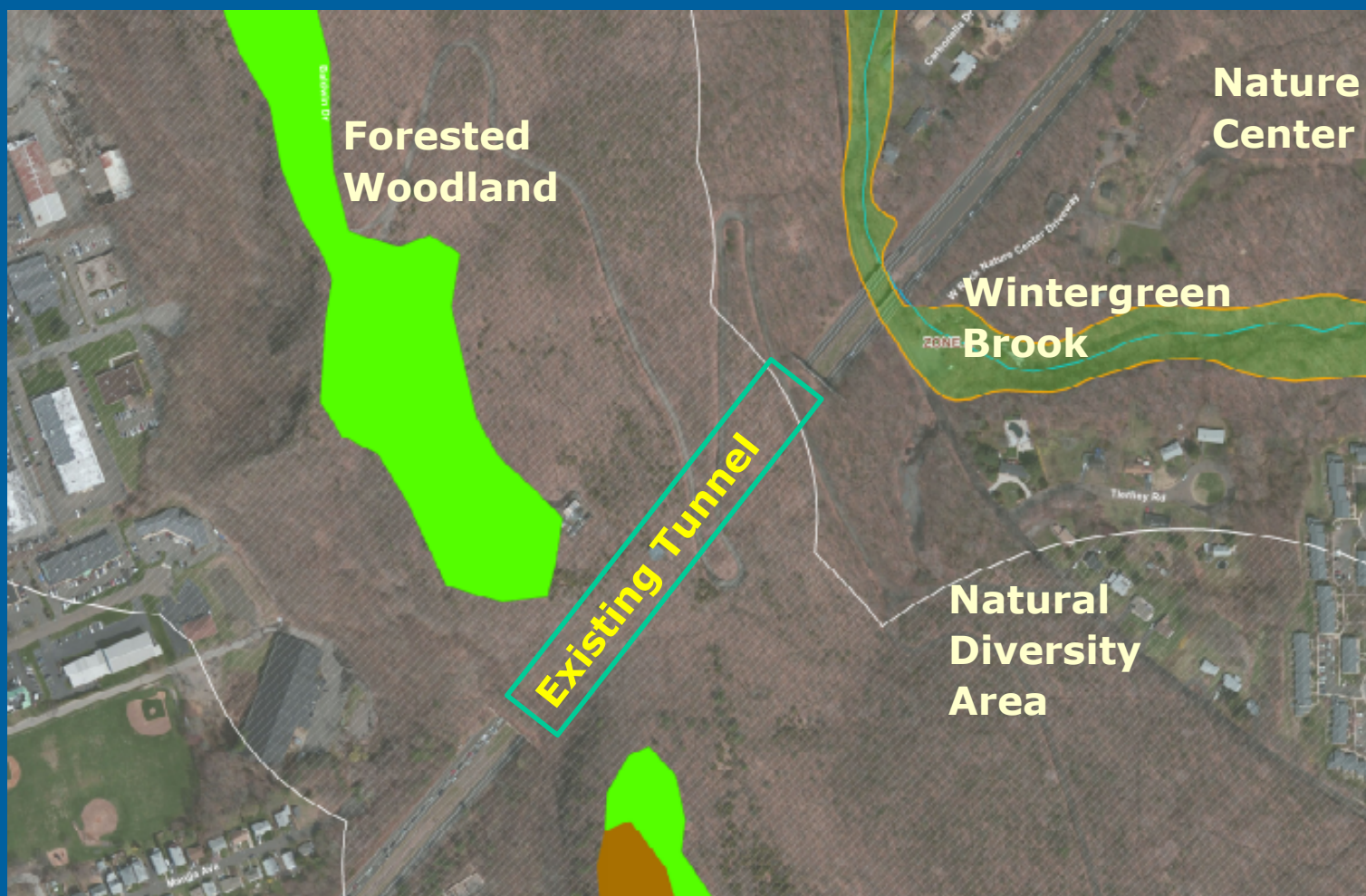
- **Reconstruction Options Evaluated in 2014 Report and 2016 Supplement:**
 - **New One Lane Tunnel, Rehabilitate Existing Tunnels.**
 - **New Two Lane Tunnel, Rehabilitate Existing Tunnels.**
 - **Enlarge Existing Tunnels, while maintaining traffic, using Protective Shield.**
 - **Construct a Temporary Bypass Tunnel, then Enlarge Existing Tunnels.**
 - **The 2014 Report and 2016 Supplement presents combinations of construction sequencing scenarios to assess traffic impacts and future level of service.**
 - **Reconstruction can provide additional service life and meet future traffic flow capacity**

New/Reconstructed Tunnel Barrel



•Two Lane Tunnel Cross Section

Existing Environmental Resources



Environmental Document/Process

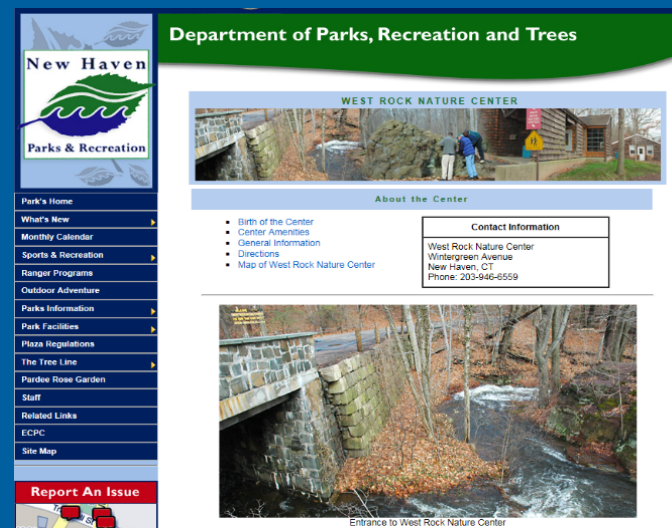
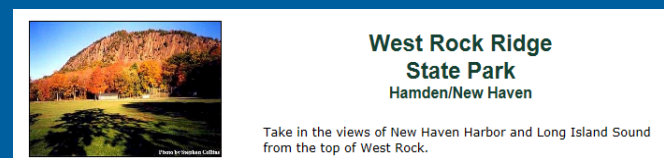
- **Prepare Environmental Document**
 - **Alternative Analysis Including No Build**
 - **NEPA/CEPA* Processes**
 - **Potential Environmental Impacts of All Alternatives**
 - **Public Outreach**
- **Preliminary Design**
 - **Preferred Alternative**
 - **Construction Staging Impacts**

*National Environmental Policy Act /
Connecticut Environmental Policy Act



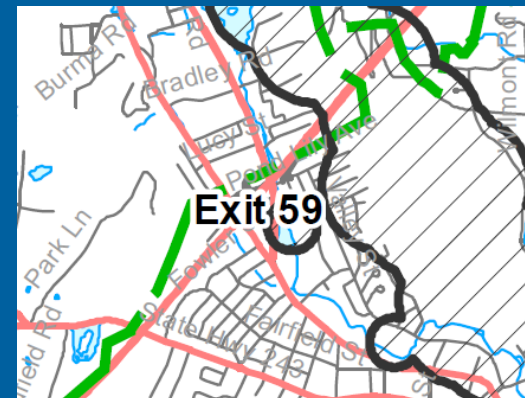
Environmental NEPA/CEPA Tasks

- Prepare Environmental Assessment (EA)/ Environmental Impact Evaluation (EIE)
 - Establish Purpose and Need Statement
 - Conduct Field Studies
 - Evaluate Alternatives
 - Consider Construction/ Post-Construction Impacts
- Consider Sensitive Resources:
 - West Rock Nature Center (City)
 - Wintergreen Brook
 - West Rock Ridge State Park
 - Historic Designation



Environmental NEPA/CEPA*

- Air quality
- Water quality
- Noise
- Groundwater
- Wetlands, water bodies and floodplains
- Archaeological/Cultural resources
- Recreational Resources
- Natural communities, including endangered animal and plant species
- Aesthetics
- Traffic

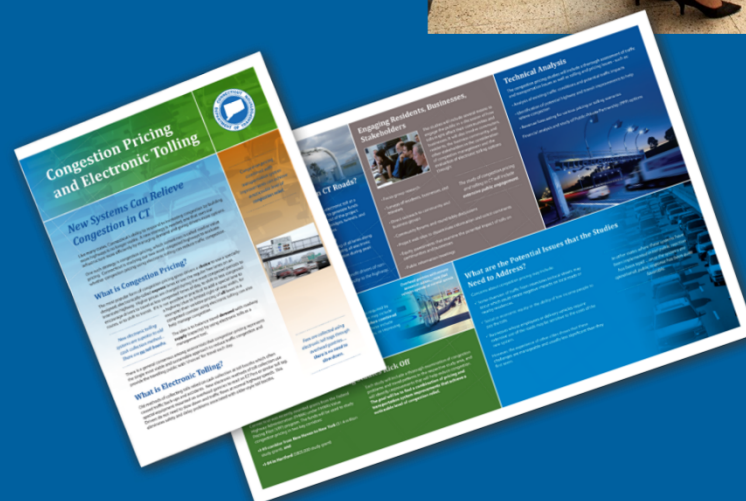


*National Environmental Policy Act /
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Public Involvement

Includes:

- Identification and Engagement of Stakeholders
- Project Website and Social Media
- Email Bulletins to Interested Citizens and Community Groups



Public Involvement

Includes Various Meetings:

- **Outreach Events (Pop-Ups)**
- **Informational Meetings or Open Houses**
- **Formal Public Meeting(s)**



Potential Stakeholders

Large Employers/ Business Orgs:

- Southern CT State University
- Sikorsky
- Yale University
- Greater New Haven Chamber of Commerce
- REX Regional Economic Xcelleration
- Yale-New Haven Hospital

Governmental:

- Elected Officials (Local, State & Federal)
- South Central Council of Gov'ts
- CT Dept. of Energy & Environmental Protection
- Federal Highway Administration
- U.S. Environmental Protection Agency

Non-Profit Orgs:

- CT Association for Community Transportation
- AAA of Southern New England
- CT Coalition for Environmental Justice
- CT Fund for the Environment
- Economic Development Corp. of New Haven
- CT Technology Council
- New Haven Urban Design League
- Elm City Cycling
- CT Business & Industry Association

Municipalities:

- Town of Woodbridge
- Town of Hamden
- City of New Haven

Transportation Providers:

- CT Transit
- Greater New Haven Transit District
- CT Rides
- CTDOT

Next Steps

- **Early Field Work: Next 6-9 months**
 - Topographical Survey
 - Endangered Species Survey
 - Archaeological Survey

- **NEPA/CEPA Document Studies: Next 18 months**
 - Alternative Analysis
 - Environmental Assessment/Environmental Impact Evaluation

- **Preliminary Design: After NEPA/CEPA**
 - Advance preferred alternative to 30% Design Level

THANK YOU!

Project Contact Information:

**Mr. David A. Cutler, P.E.
Transportation Supervising Engineer
Connecticut Department of Transportation
Bureau of Engineering and Construction
2800 Berlin Turnpike, Newington, CT 06131
860-594-3210
David.Cutler@ct.gov**



Project Website:

<http://www.ct.gov/dot/heroes-tunnel>