

NEWINGTON-DOVER

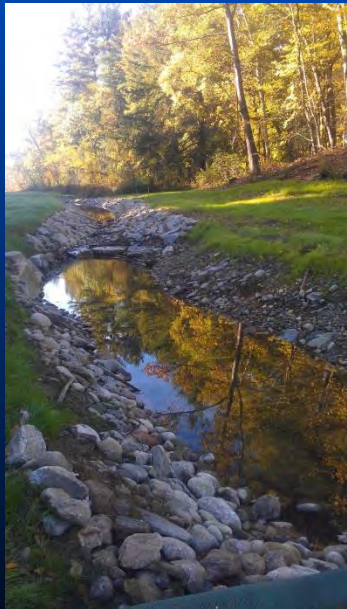
Improvements to NH Rte. 16 /

Spaulding Turnpike / Little Bay Bridges

Strafford Metropolitan Planning Organization

Strafford Regional Planning

OCTOBER 16, 2015

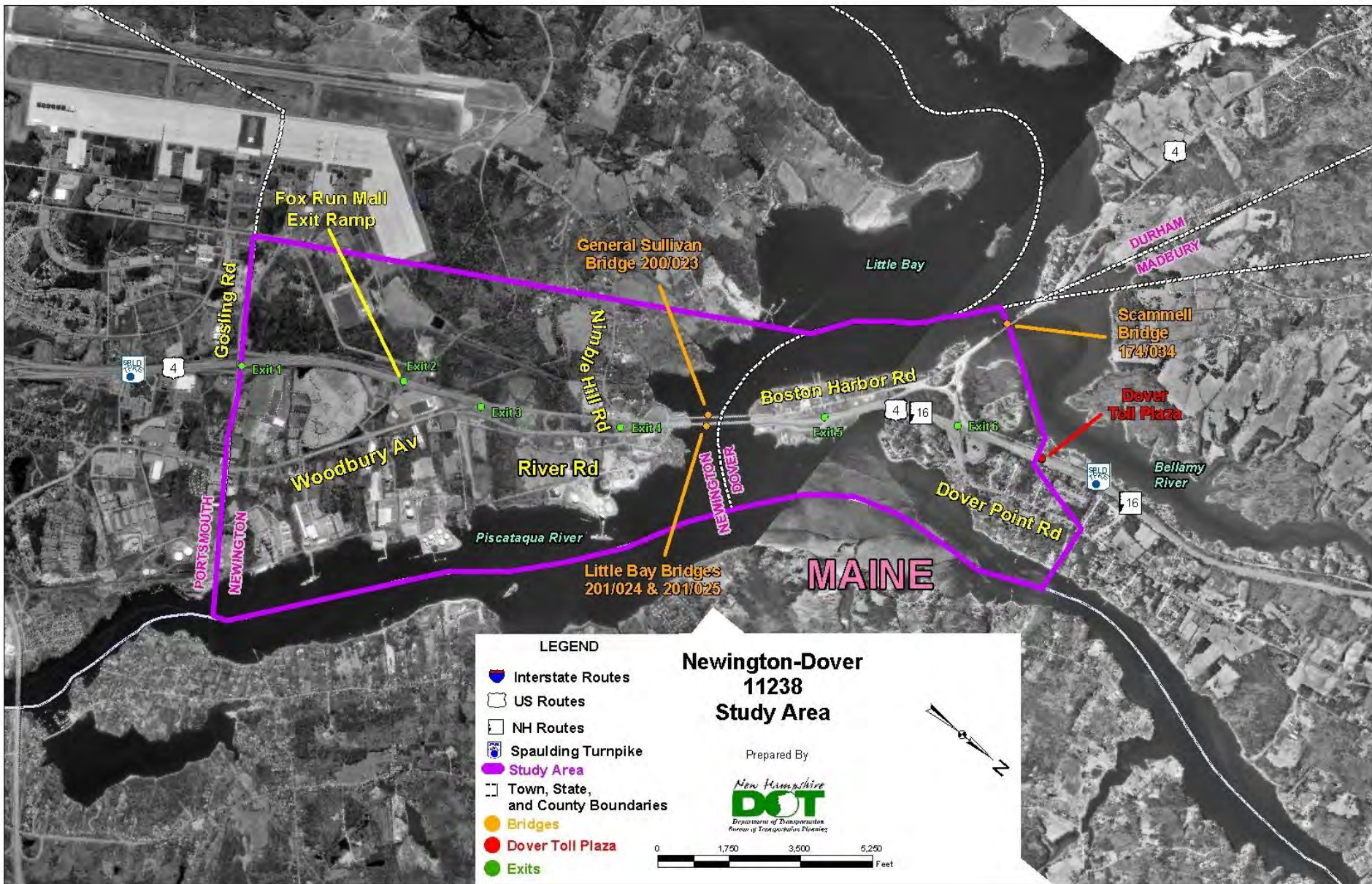


Meeting Agenda

- **Project Overview**
- **Status of Newington-Dover, 11238 Contracts**
 - **Contract L – New Little Bay Bridge SB**
 - **Contract M – Newington**
 - **Contract O – Little Bay Bridge NB Rehabilitation**
 - **Contract Q – Dover**
 - **Contract S – General Sullivan Bridge Rehabilitation**
- **Upcoming Turnpike Projects**
 - **Dover Open Road Tolling**
 - **Newington Maintenance Facility**



Project Area



Project Need



Newington-Dover Project Funding & Estimated Cost

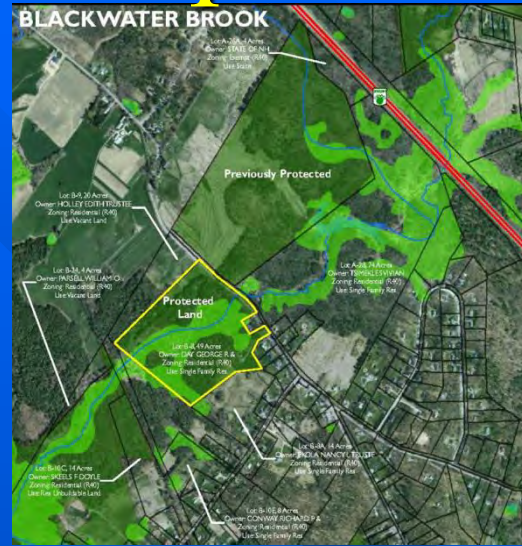


- Total Estimated Project Cost - \$269.7M
 - Engineering - \$20.4M
 - ROW - \$8.9M
 - Environmental Mitigation & TDM (Bus, Park'n'Rides) - \$20.9M (2010 Dollars)
 - ❖ \$12.66M federal CMAQ & Advanced ROW funding
 - Construction - \$207.2M (2010 Dollars)
 - \$219.5M (w/ inflation)

- Project Primarily Funded with Turnpike Toll Revenue & Bond Proceeds
 - \$31.4M dedicated Federal Earmarked Funds & Grants
 - CMAQ/Federal Funding for TDM Elements (P&R)
 - Final two contracts to be paid through combination of toll revenue and bonding, and is on schedule as approved through the State Ten Year Transportation Improvement Plan (STIP-2014).

Environmental Mitigation

Components



- Environmental Mitigation - \$4.57M (224 acres)
 - 120-acre Preservation of Tuttle Farm (Joint Effort w/ City, SRC, DOT) – (\$1.34M)
 - 40-acre Preservation of Day Property in Blackwater Brook Watershed – (\$0.23M)
 - 64 acres of Preservation in Knight Brook Watershed – (\$2.0M)
 - Railway Brook Restoration – (\$1.0M)

NEWINGTON-DOVER 11238

Park 'n' Ride

- Park 'n' Ride at Exit 9 in Dover – Completed (\$3.49M)
- Rochester – Completed (\$1.35M)
- Multi-use Park 'n' Ride in Lee – CMAQ Location under Review (est. \$85k)



NEWINGTON-DOVER 11238

Improved Downeaster Rail Service

- CMAQ Investment of \$2.0 M with N-D Turnpike Match



NEWINGTON-DOVER 11238

Expanded Transit Service

- NH – Boston Bus Service (C&J)
- Express Coast Bus Service from Rochester, Dover, Somersworth/Berwick to Portsmouth Naval Shipyard
- Direct Bus Service – COAST Bus Service from Rochester to Pease



NEWINGTON-DOVER 11238

Transportation Demand Management

- Commute SMART Seacoast – a new Transportation Management Association (TMA) to promote:
 - Carpooling/vanpooling
 - Ride mass transit
 - Bicycle/walk
 - Telecommuting
 - Compressed work schedules
- Focus is employers and employees at Pease and within the Greater Seacoast
- More information at www.commuteSMART.org



NEWINGTON-DOVER 11238



Post Construction

Pre-Construction



NEWINGTON
SOUTHERLY
RENDERING

Aerial View - LBB, GSB, & Exits 3 & 4

Aerial View - LBB, GSB, & Exits 3 & 4 in Newington

NEWINGTON-DOVER 11238



Post Construction

Pre-Construction



DOVER
NORTHERLY
RENDERING

Little Bay Bridges Contracts L, O, & S

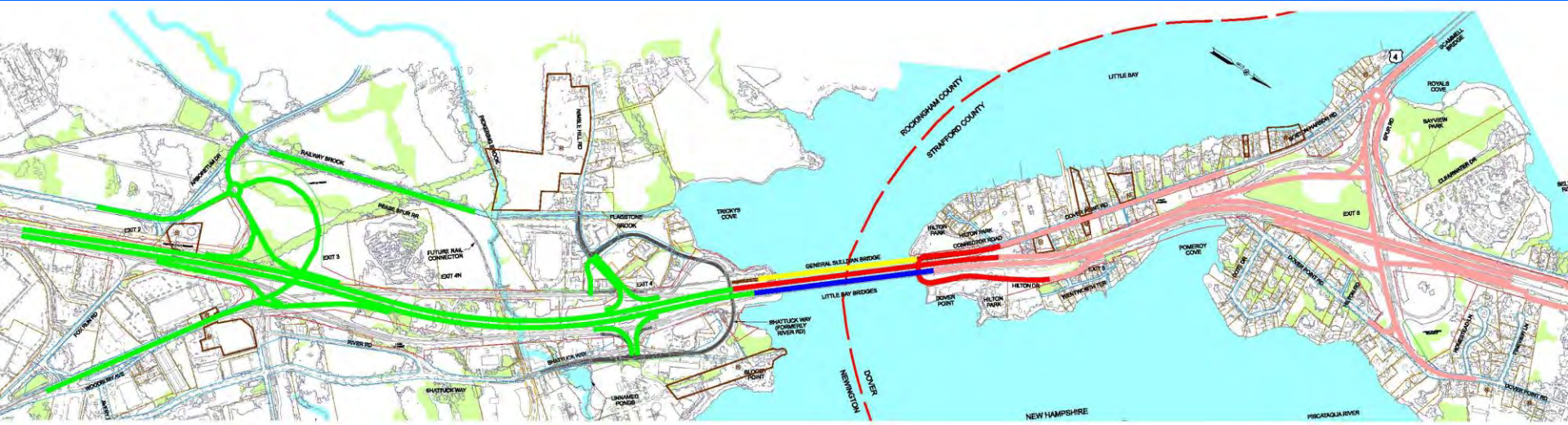


**General
Sullivan Bridge
Rehabilitation
Contract S**

**New Little Bay Bridge
Contract L**

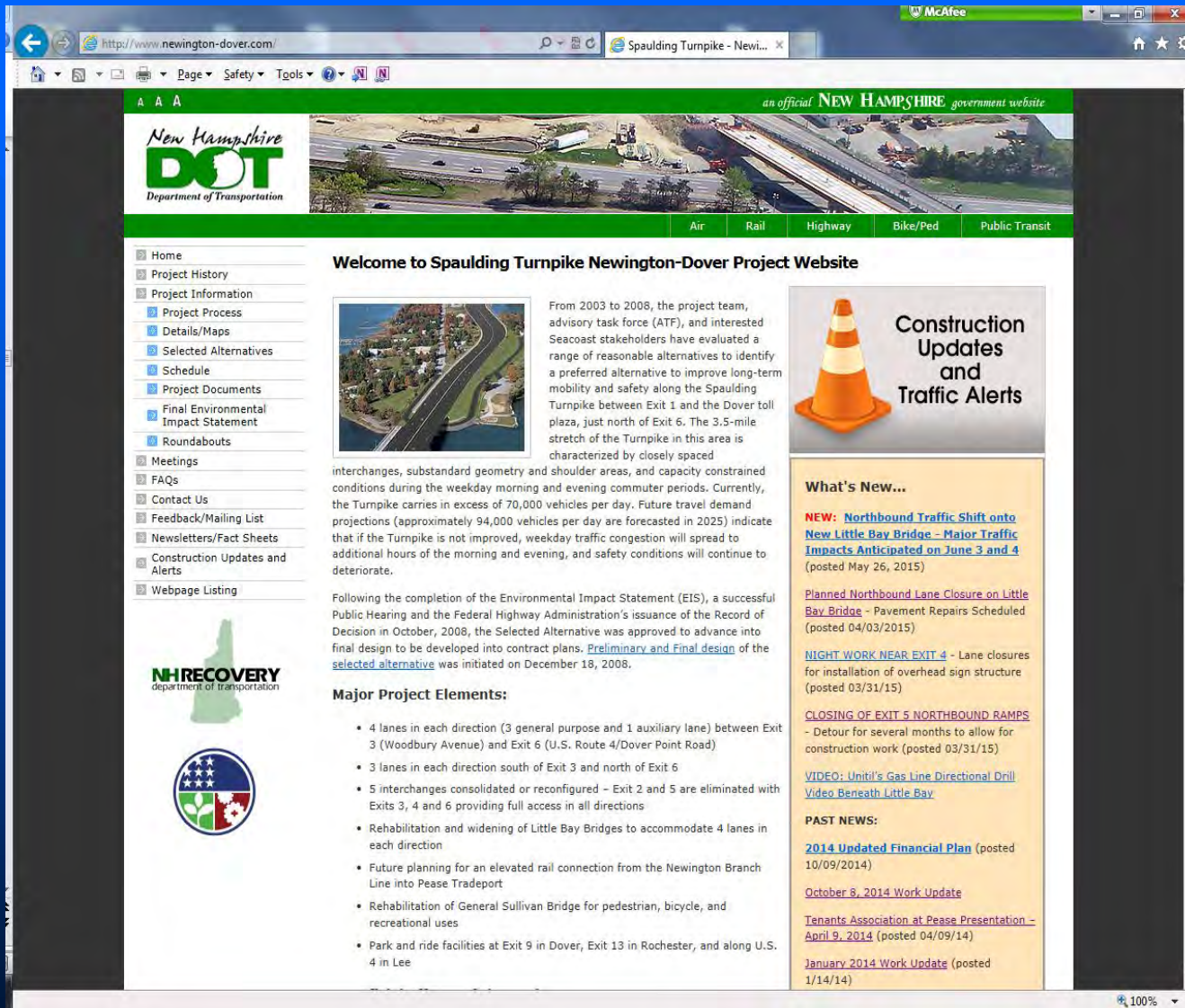
**Existing Little
Bay Bridges
Rehabilitation
Contract O**

Current Contract Breakout & Schedule



	CONSTRUCTION SCHEDULE													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
CONTRACT L	[Red Bar]				\$57.5 M									
CONTRACT M			[Green Bar]			\$49.9 M								
CONTRACT O					[Blue Bar]			\$21.9 M*						
CONTRACT Q							[Red Bar]					\$46.4 M*		
CONTRACT S									[Yellow Bar]			\$27.6 M*		
DOVER TOLL PLAZA												[Black Bar]		\$13.0 M
NEWINGTON MAINTENANCE SHED										[Black Bar]		\$6.0 M		

CONSTRUCTION OUTREACH



The screenshot shows a web browser window displaying the website for the Spaulding Turnpike Newington-Dover Project. The browser's address bar shows the URL <http://www.newington-dover.com/>. The website header features the New Hampshire Department of Transportation (DOT) logo and a navigation menu with categories: Air, Rail, Highway, Bike/Ped, and Public Transit. A main navigation sidebar on the left lists various project-related links such as Home, Project History, Project Information, Project Process, Details/Maps, Selected Alternatives, Schedule, Project Documents, Final Environmental Impact Statement, Roundabouts, Meetings, FAQs, Contact Us, Feedback/Mailing List, Newsletters/Fact Sheets, Construction Updates and Alerts, and Webpage Listing. The main content area is titled "Welcome to Spaulding Turnpike Newington-Dover Project Website" and includes an aerial photograph of the project site. Below the photo, there is a text block describing the project's history and goals, followed by a section titled "Major Project Elements" which lists specific construction and planning tasks. On the right side of the main content area, there is a "Construction Updates and Traffic Alerts" section featuring a traffic cone icon and a "What's New..." section with several news items, including "NEW: Northbound Traffic Shift onto New Little Bay Bridge - Major Traffic Impacts Anticipated on June 3 and 4" and "Planned Northbound Lane Closure on Little Bay Bridge - Pavement Repairs Scheduled".

an official NEW HAMPSHIRE government website

New Hampshire DOT Department of Transportation

Air Rail Highway Bike/Ped Public Transit

Welcome to Spaulding Turnpike Newington-Dover Project Website

From 2003 to 2008, the project team, advisory task force (ATF), and interested Seacoast stakeholders have evaluated a range of reasonable alternatives to identify a preferred alternative to improve long-term mobility and safety along the Spaulding Turnpike between Exit 1 and the Dover toll plaza, just north of Exit 6. The 3.5-mile stretch of the Turnpike in this area is characterized by closely spaced interchanges, substandard geometry and shoulder areas, and capacity constrained conditions during the weekday morning and evening commuter periods. Currently, the Turnpike carries in excess of 70,000 vehicles per day. Future travel demand projections (approximately 94,000 vehicles per day are forecasted in 2025) indicate that if the Turnpike is not improved, weekday traffic congestion will spread to additional hours of the morning and evening, and safety conditions will continue to deteriorate.

Following the completion of the Environmental Impact Statement (EIS), a successful Public Hearing and the Federal Highway Administration's issuance of the Record of Decision in October, 2008, the Selected Alternative was approved to advance into final design to be developed into contract plans. [Preliminary and Final design](#) of the [selected alternative](#) was initiated on December 18, 2008.

Major Project Elements:

- 4 lanes in each direction (3 general purpose and 1 auxiliary lane) between Exit 3 (Woodbury Avenue) and Exit 6 (U.S. Route 4/Dover Point Road)
- 3 lanes in each direction south of Exit 3 and north of Exit 6
- 5 interchanges consolidated or reconfigured - Exit 2 and 5 are eliminated with Exits 3, 4 and 6 providing full access in all directions
- Rehabilitation and widening of Little Bay Bridges to accommodate 4 lanes in each direction
- Future planning for an elevated rail connection from the Newington Branch Line into Pease Tradeport
- Rehabilitation of General Sullivan Bridge for pedestrian, bicycle, and recreational uses
- Park and ride facilities at Exit 9 in Dover, Exit 13 in Rochester, and along U.S. 4 in Lee

Construction Updates and Traffic Alerts

What's New...

NEW: [Northbound Traffic Shift onto New Little Bay Bridge - Major Traffic Impacts Anticipated on June 3 and 4](#) (posted May 26, 2015)

[Planned Northbound Lane Closure on Little Bay Bridge - Pavement Repairs Scheduled](#) (posted 04/03/2015)

[NIGHT WORK NEAR EXIT 4 - Lane closures for installation of overhead sign structure](#) (posted 03/31/15)

[CLOSING OF EXIT 5 NORTHBOUND RAMPS - Detour for several months to allow for construction work](#) (posted 03/31/15)

[VIDEO: Uniti's Gas Line Directional Drill Video Beneath Little Bay](#)

PAST NEWS:

[2014 Updated Financial Plan](#) (posted 10/09/2014)

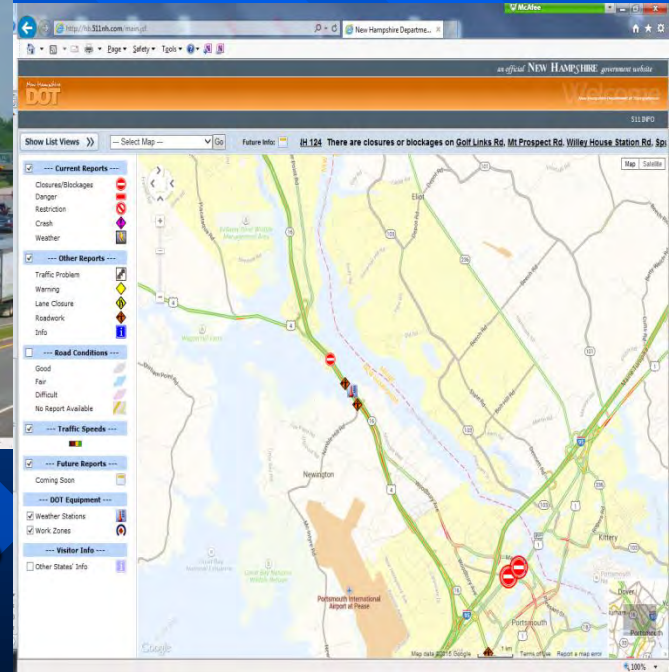
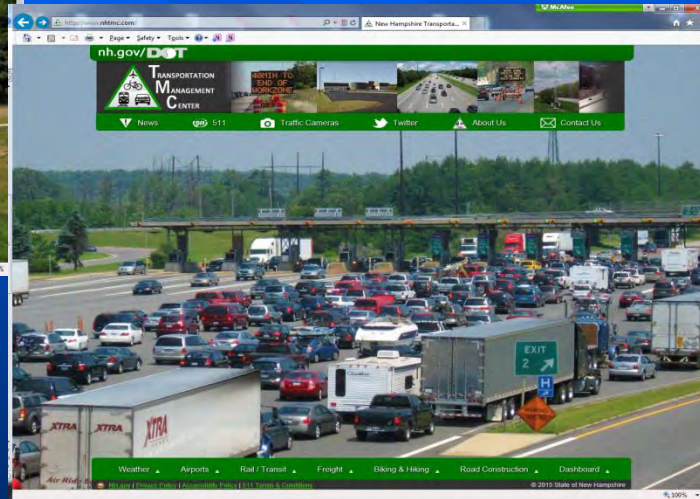
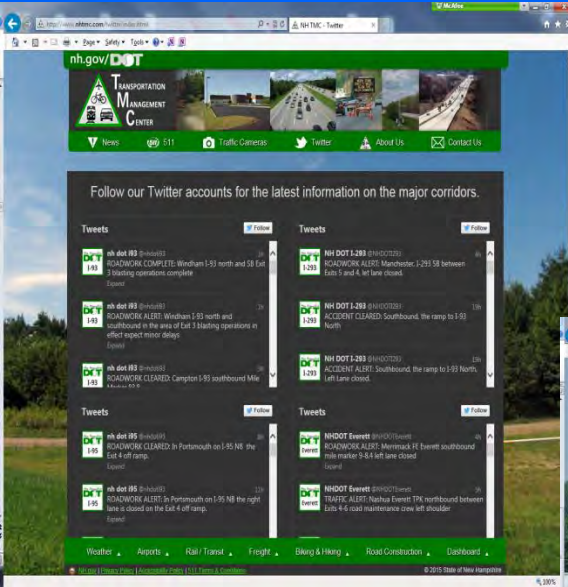
[October 8, 2014 Work Update](#)

[Tenants Association at Pease Presentation - April 9, 2014](#) (posted 04/09/14)

[January 2014 Work Update](#) (posted 1/14/14)

WEB SITE: www.newington-dover.com

CONSTRUCTION OUTREACH



TWITTER

■ For traveler/real-time information, please visit www.nhtmc.com.

TRAFFIC CAMERAS

Contract L (Completed)

New Little Bay Bridge





Contract L

Contract L - SB New Little Bay Bridge Construction

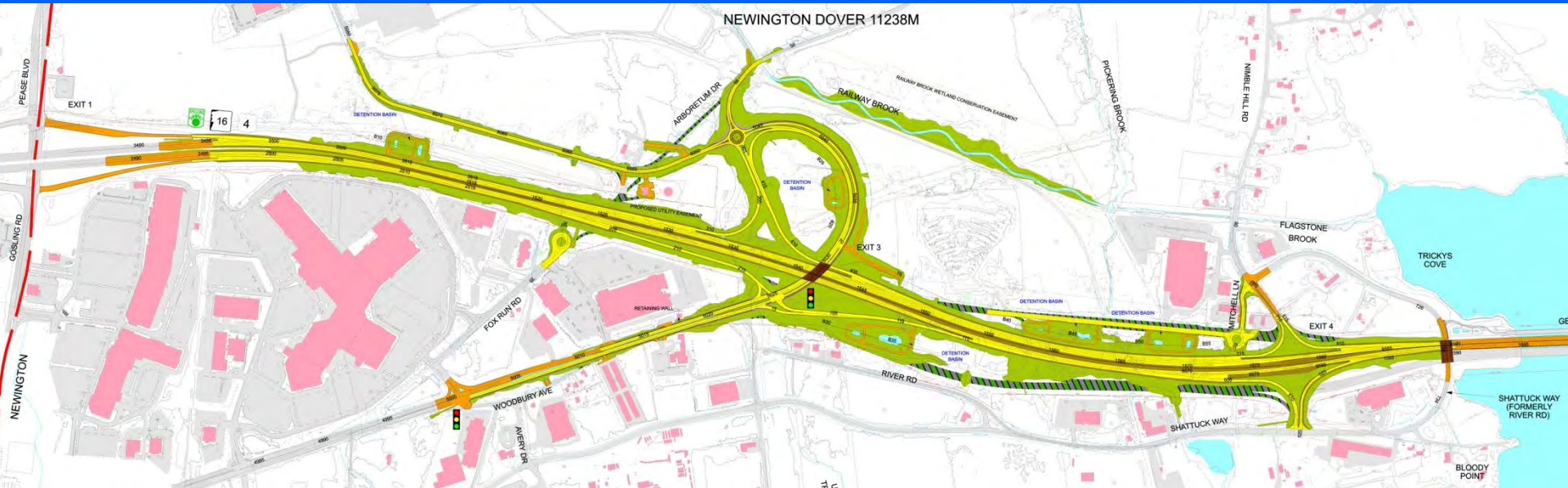
- Project completed by Cainbro Contractors of Maine at cost of \$54.1M
- Construction Initiated in 2010 Completed in Fall 2013
- Spaulding Turnpike Dover Approach Work
- Spaulding Turnpike Newington Roadway Approach
- Wentworth Terrace - Now Opened for Two-way Traffic
- Pedestrian & Bicycle Structure (Approach to GSB)

Construction – Contract L Ped and Bikeway Access to GSB

- Pedestrian, Bicycle Access to GSB
- Wentworth Terrance/Hilton Park Access Under LBB's



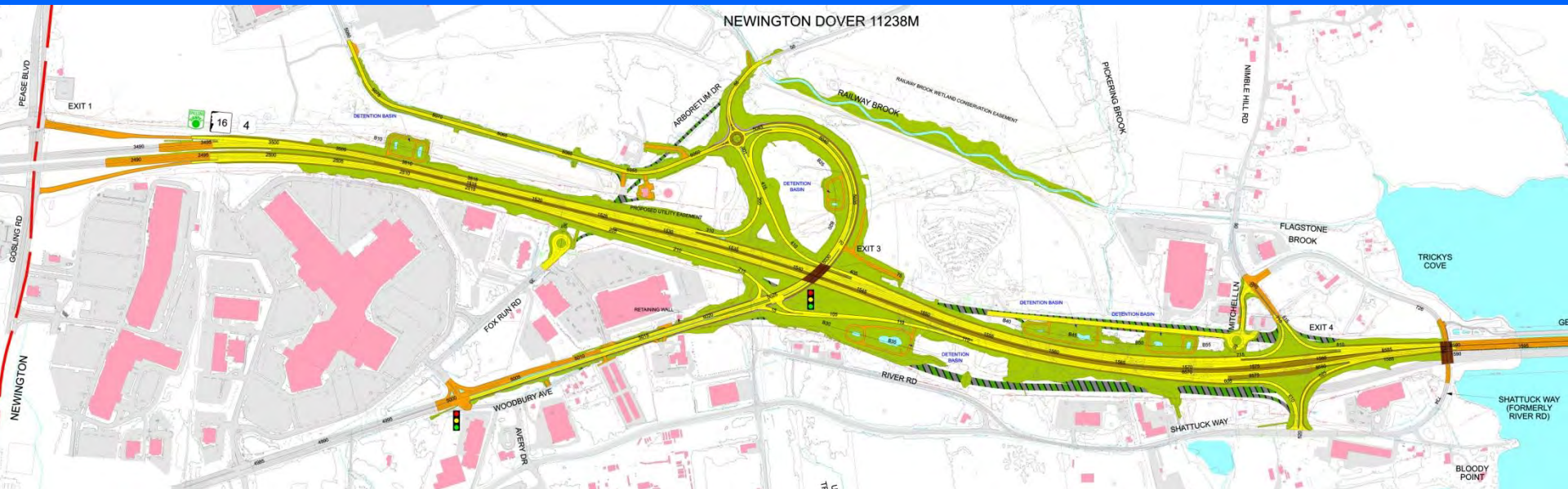
Contract M



Contract M Construction (Ongoing)

- Contractor: A. J. Coleman
- Construction Cost: \$48.7M
- Construction Duration: 2012 – 2015

Contract M (continued)



- **Constructs Four Lanes NB & SB along Turnpike**
- **Full Service Interchange at Exit 3**
- **Improves Stormwater Detention Basins for Water Quality Treatment**
- **Railway Brook Restoration (Completed)**
- **Accommodates Future Consideration for Railroad Spur**

Construction – Contract M

Construction Operations for 2015:

- Exit 2 Ramps and Exit 3 SB Off Ramp Closed - July 2015
- Exit 3 Ramps and Woodbury Avenue Bridge (November Opening)
- Exit 4 Ramps Construction (Ongoing)
- Stormwater Detention Basin & Railway Brook Construction (Completed)
- Mainline Traffic Shifted to New LBB (Completed)
- Newington Turnpike 'M' Construction Completion Nov. 2015



Construction – Contract M



Exit 3 NB On Ramp



Exit 3 SB

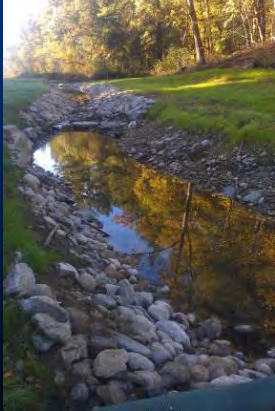


Woodbury Avenue
Bridge – looking
NB

Construction – Contract M

Railroad Brook Restoration

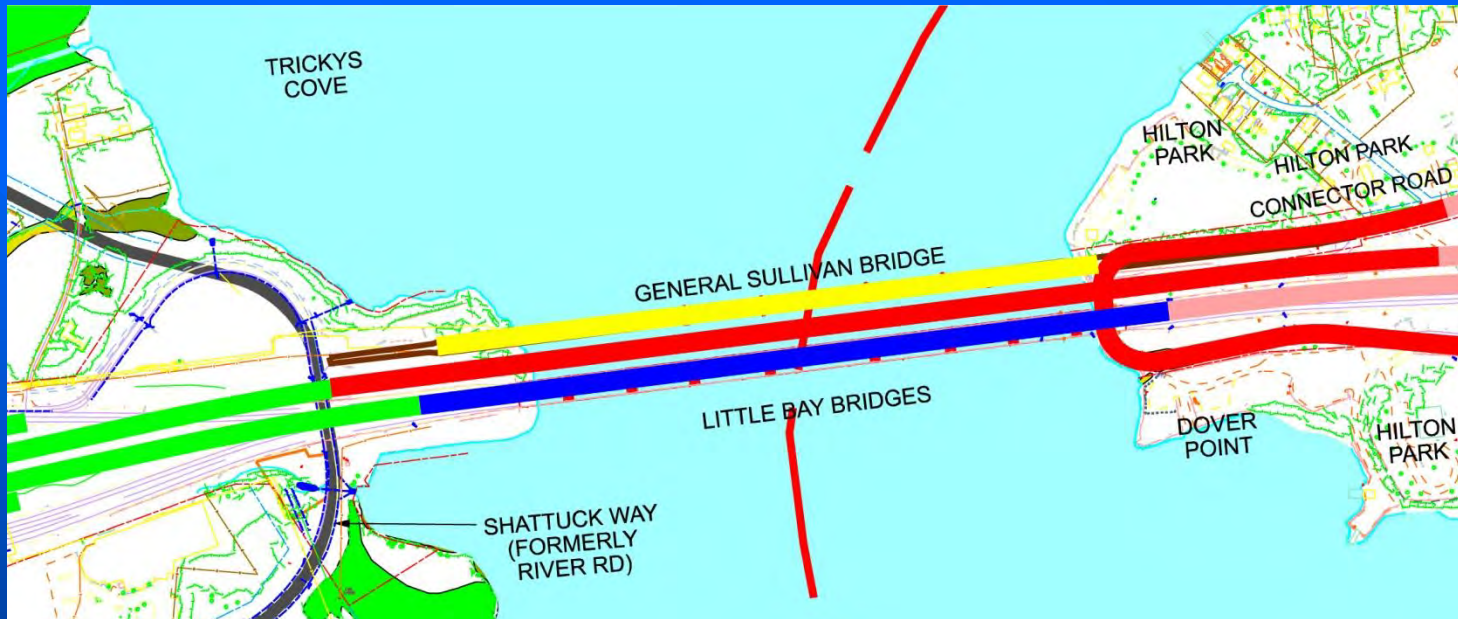
- Initiated in Summer 2014
- Completed in Summer 2015
- Cost: \$1.0M



BEFORE

AFTER

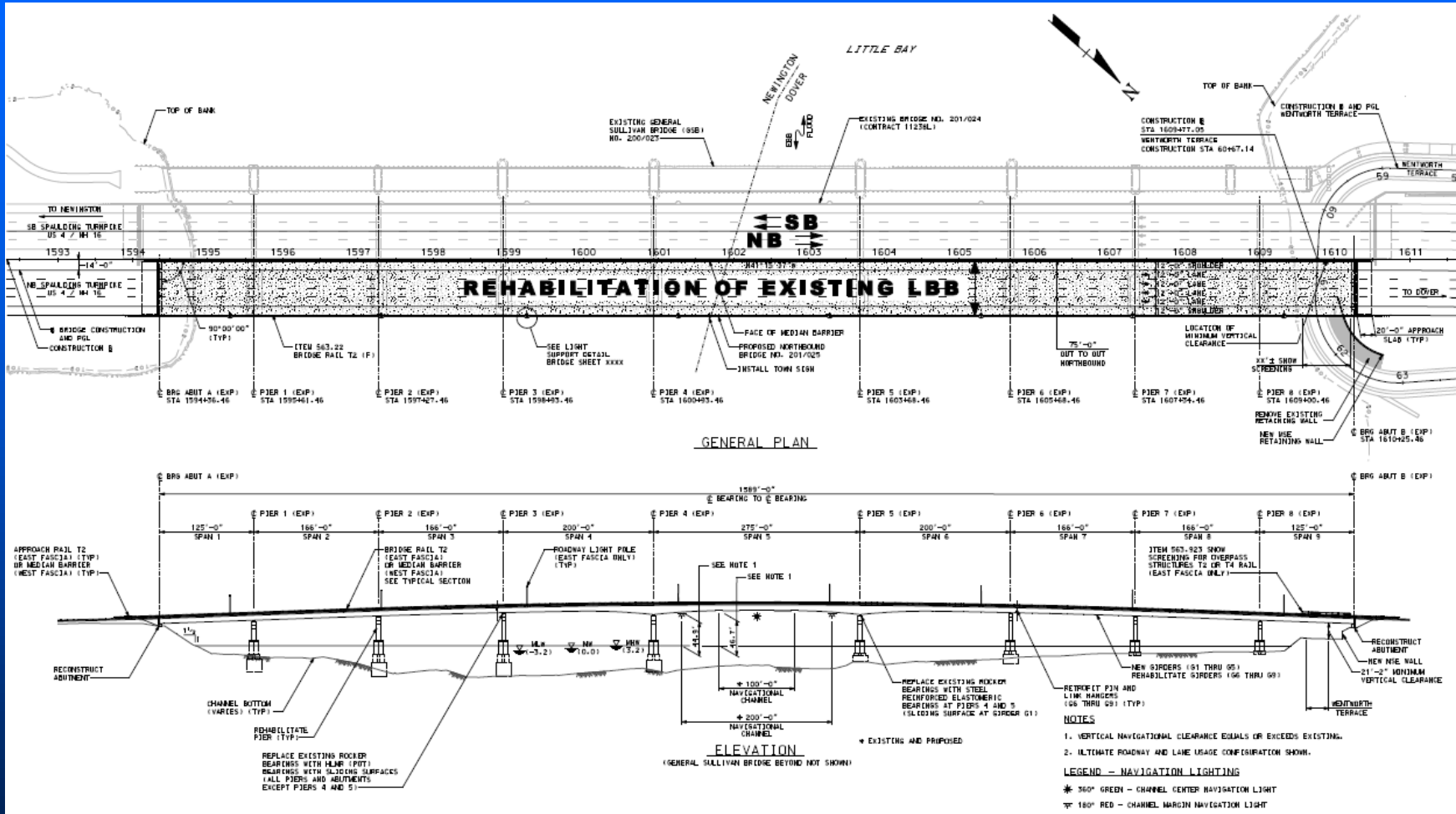
Construction - Contract O



Contract O – Existing Little Bay Bridges Rehabilitation

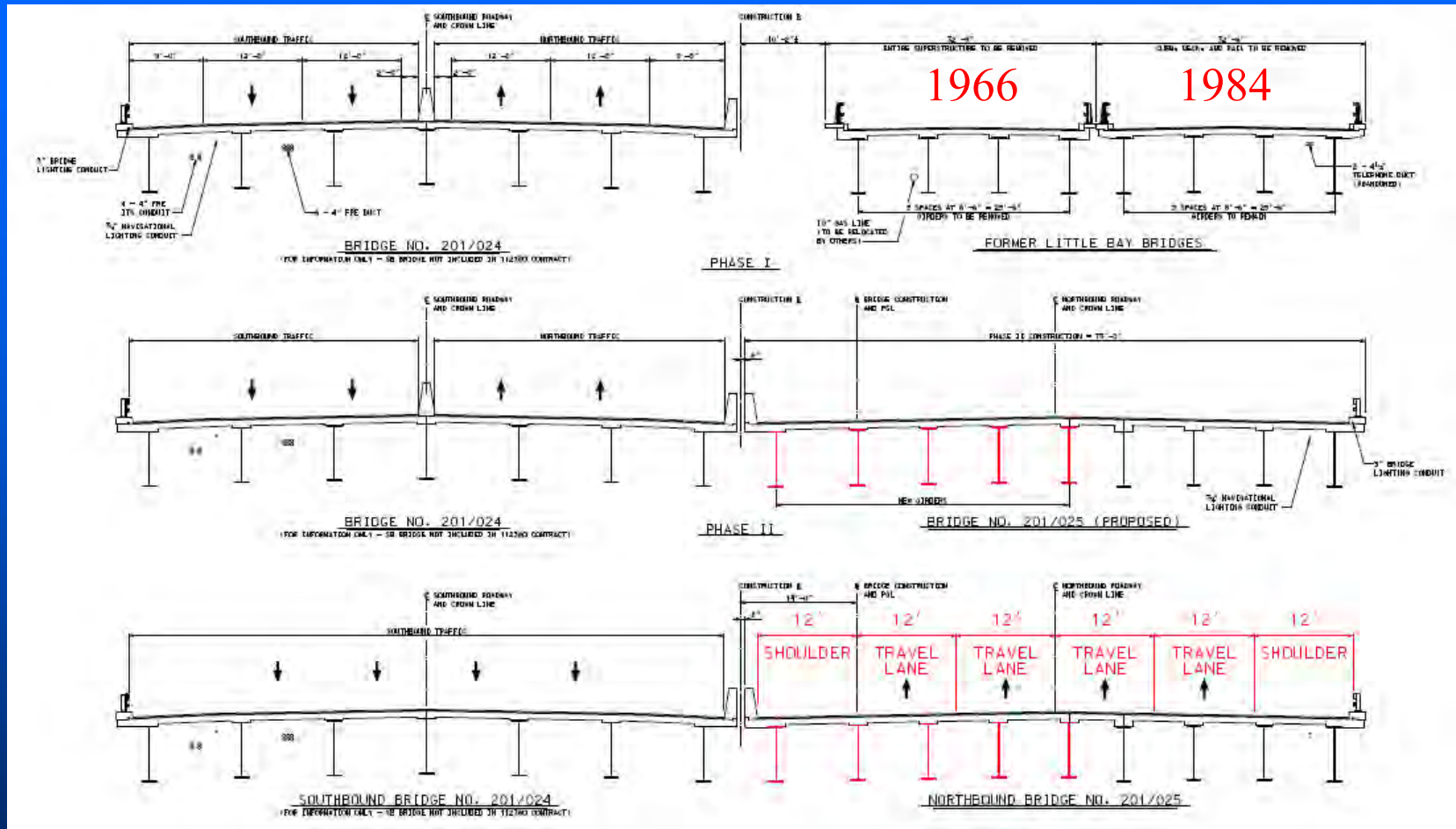
- Opened Bids on October 23, 2014 (\$20.4M)
- Contractor: R. S. Audley, Inc.
- Construction Duration: 2015 – 2017
- Concurrent Construction with Contracts M and Q

Construction - Contract O



- Rehabilitates Existing 9 Span 1,589' Little Bay Bridges to provide Four Lanes of NB Traffic

Construction – Contract O

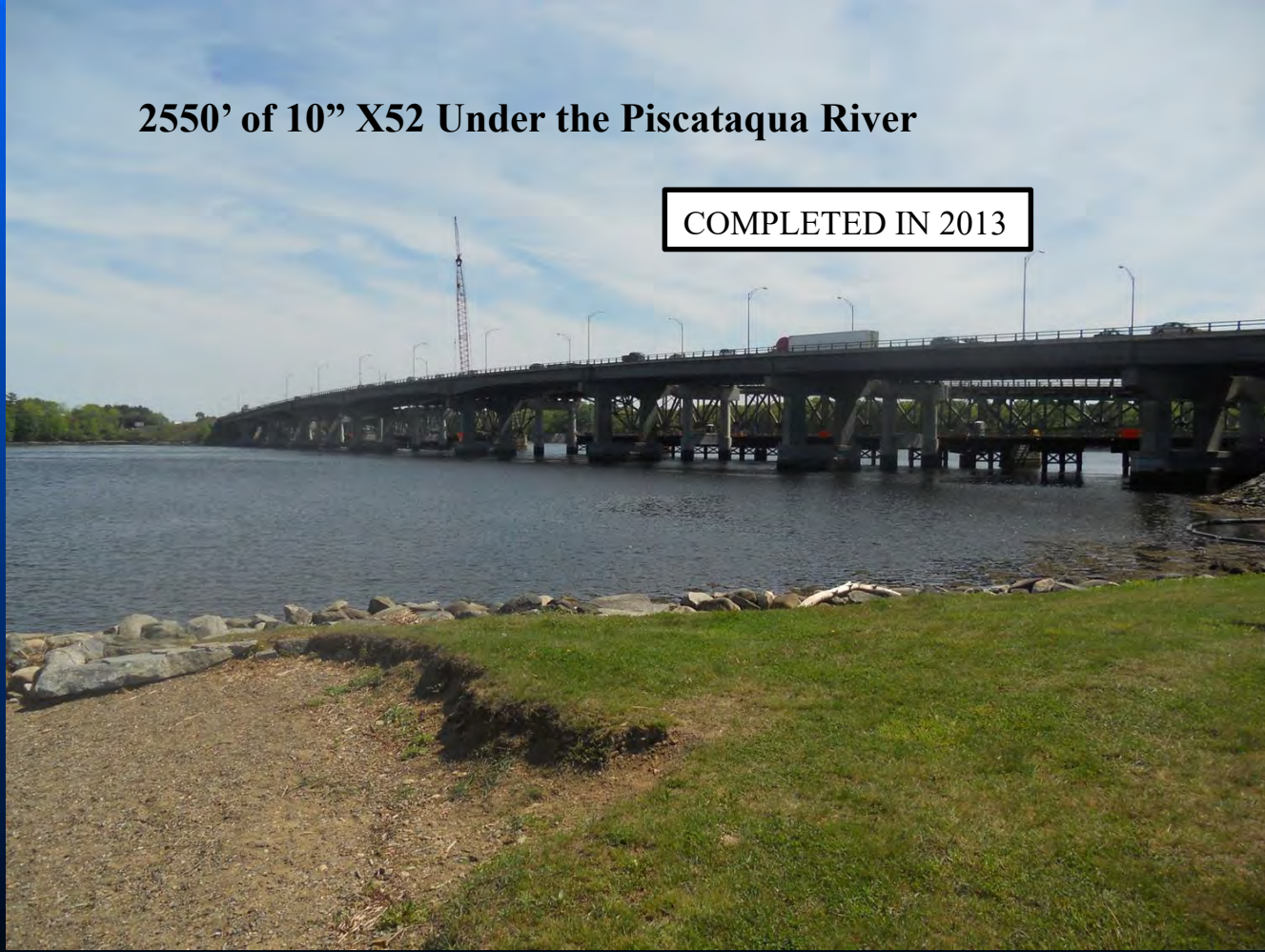


- Older Structural Steel Members being Replaced to Meet Current Standards
- Utilize 1984 Superstructure as Work Platform to Replace 1966 Beams & Deck
- Utilize New Beams & Concrete Deck as Work Platform to Replace 1984 Deck
- Reconstruct Wentworth Terrace Retaining Wall Beneath Bridge

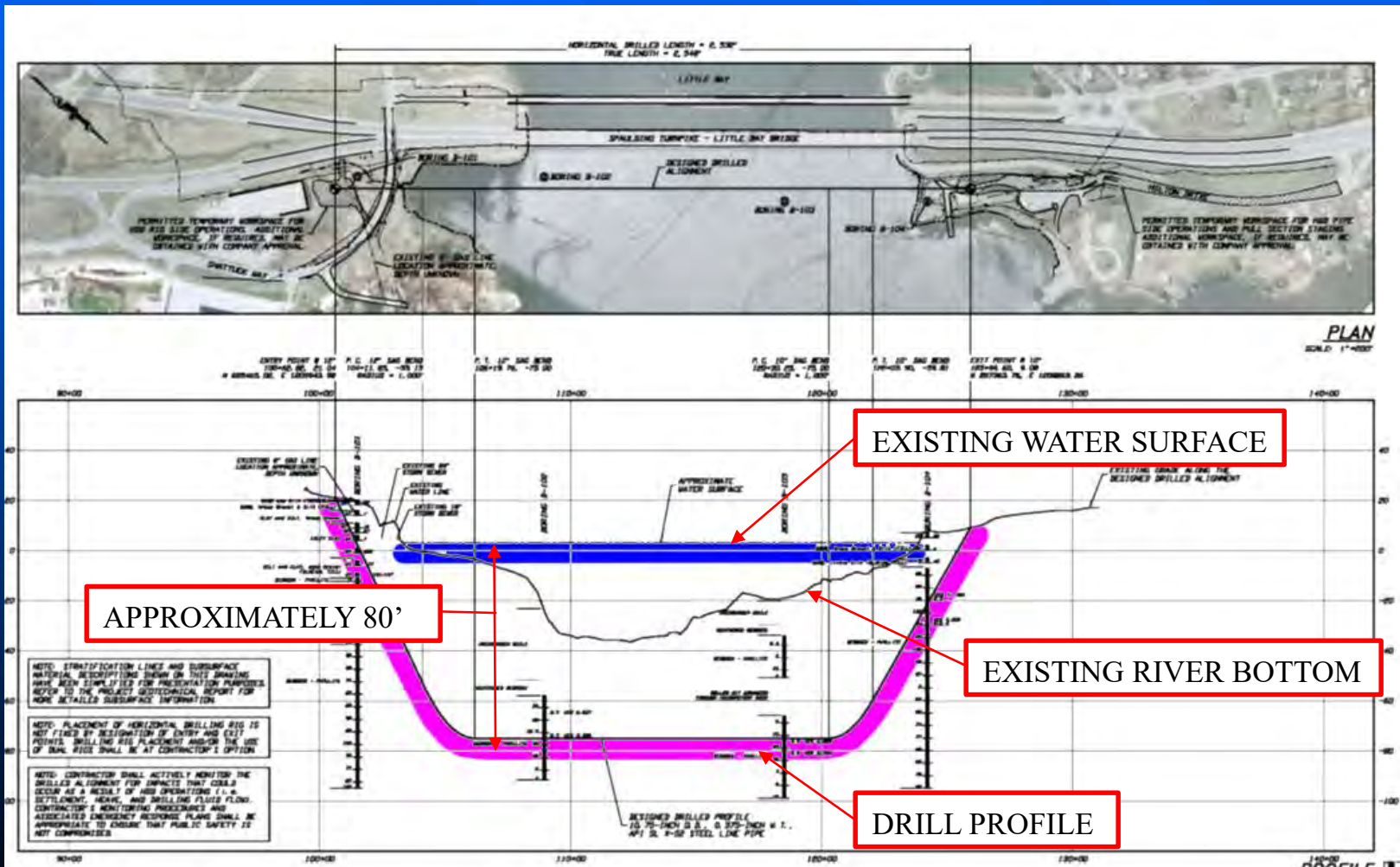
Unitil Gas Line Improvements Little Bay Crossing Horizontal Directional Drill

2550' of 10" X52 Under the Piscataqua River

COMPLETED IN 2013



Unitil Gas Line Improvements Little Bay Crossing Design



Contract Q



Contract Q - Dover

- Advertising Date: May 2016
- Construction: 2016 - 2020
- Completes and Opens All Spaulding Turnpike Improvements
- Concurrent Construction with Contracts O and S

Contract Q (continued)



- Provides a Full Service Interchange at Exit 6
- Eliminates Exit 5
- Introduces 2 Signalized Intersections for Exit 6 Ramps
- Roundabout Replaces Signalized Intersection at Boston Harbor Rd.
- Constructs 4 Sections of Soundwall – North and South of Exit 6 and Dover Toll Plaza

Contract Q – Boston Harbor Rd.

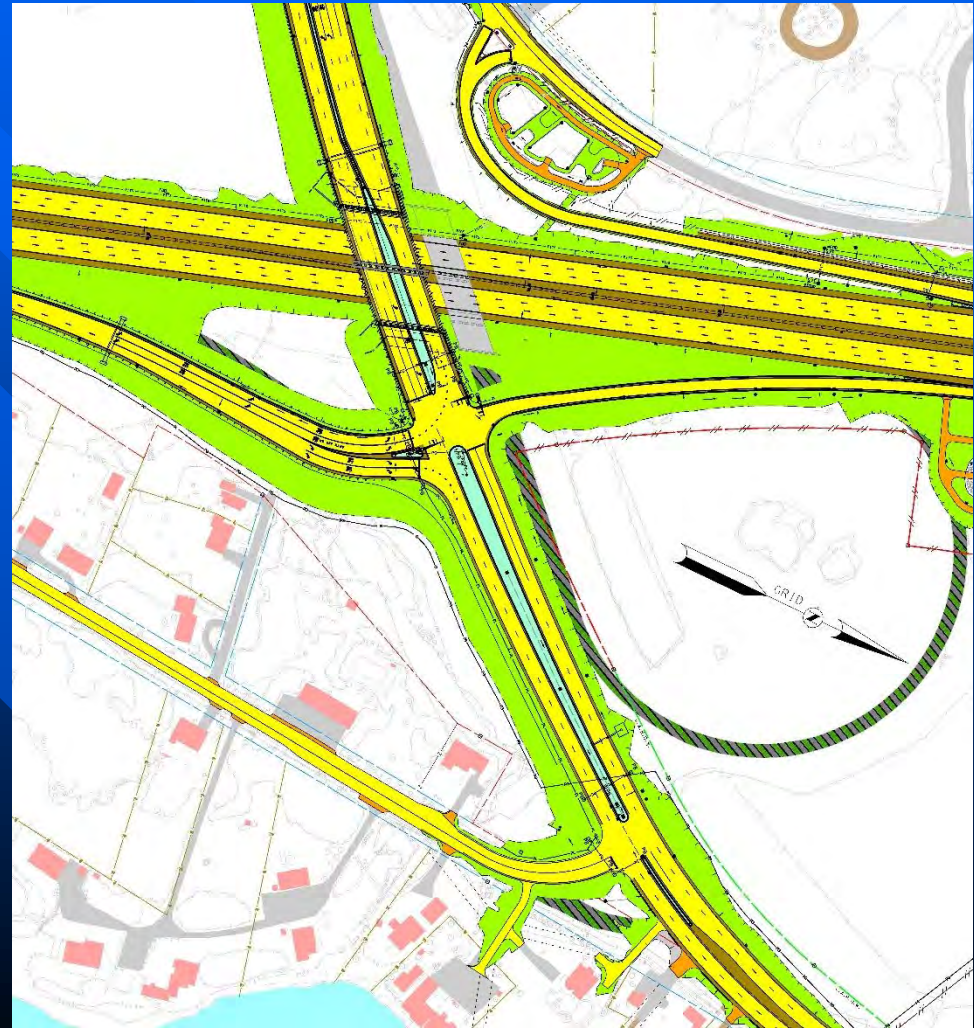
- Roundabout Replaces Signalized Intersection at Boston Harbor Rd.
- Two-Lane Hybrid Roundabout
- Pedestrian Hybrid Beacon Signal West of Roundabout
- Roundabout Website Link:

<http://www.nh.gov/dot/org/projectdevelopment/highwaydesign/roundabouts/index.htm>



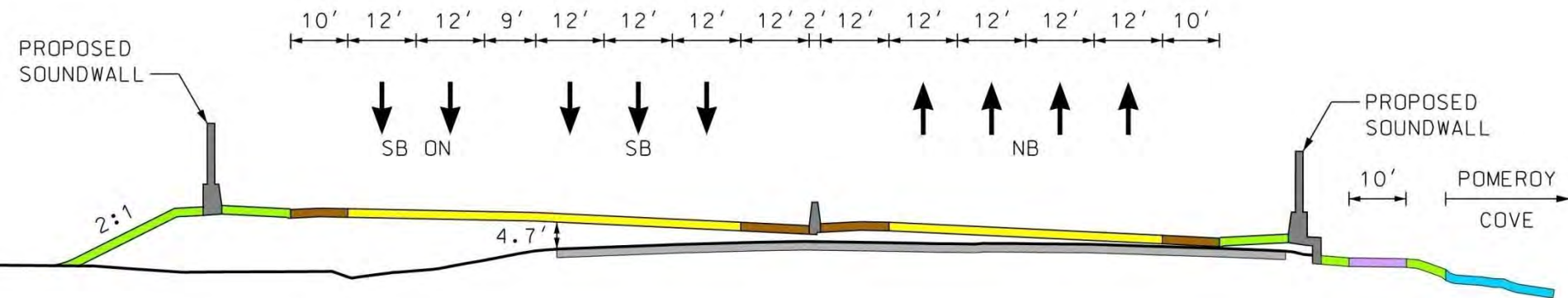
Contract Q - Exit 6

- New Bridge South of Existing
- Signalized Intersection at Exit 6 NB Ramps
- New Eastbound Access Along Route 4
- Pavement Overlay Along Dover Point Road East



Contract Q

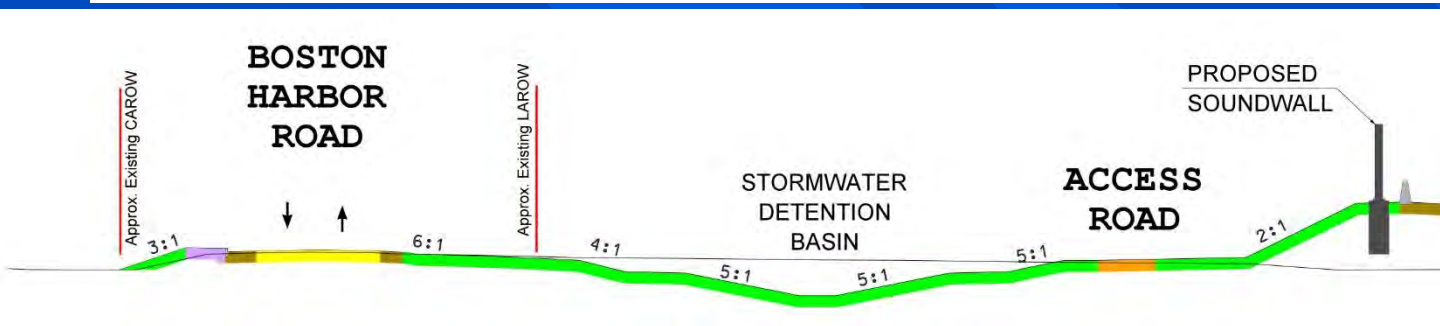
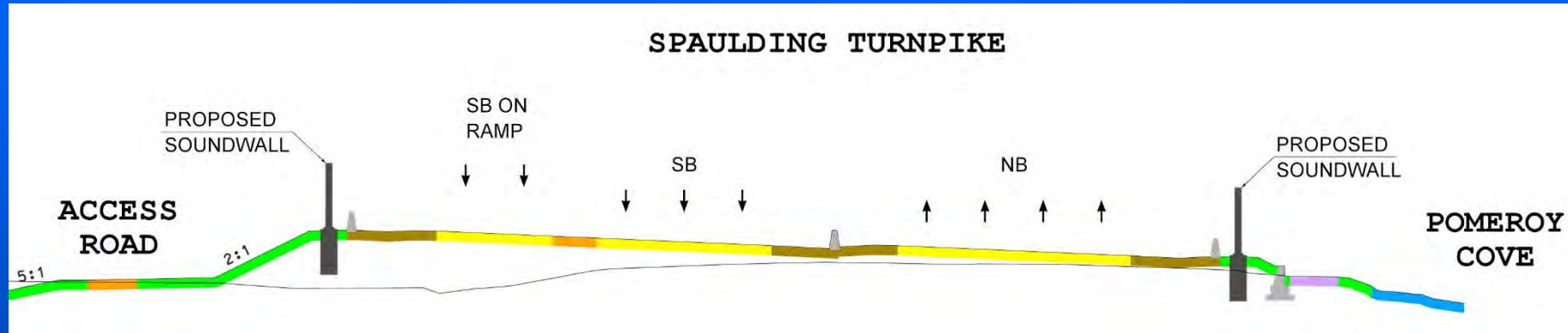
Spaulding Turnpike



- 40' of Spaulding Turnpike Widening
- SB Raise in Elevation
- Soundwalls along NB and SB
- Pomeroy Cove Bike and Pedestrian Paved Pathway (10' wide) is maintained

Contract Q

Spaulding Turnpike

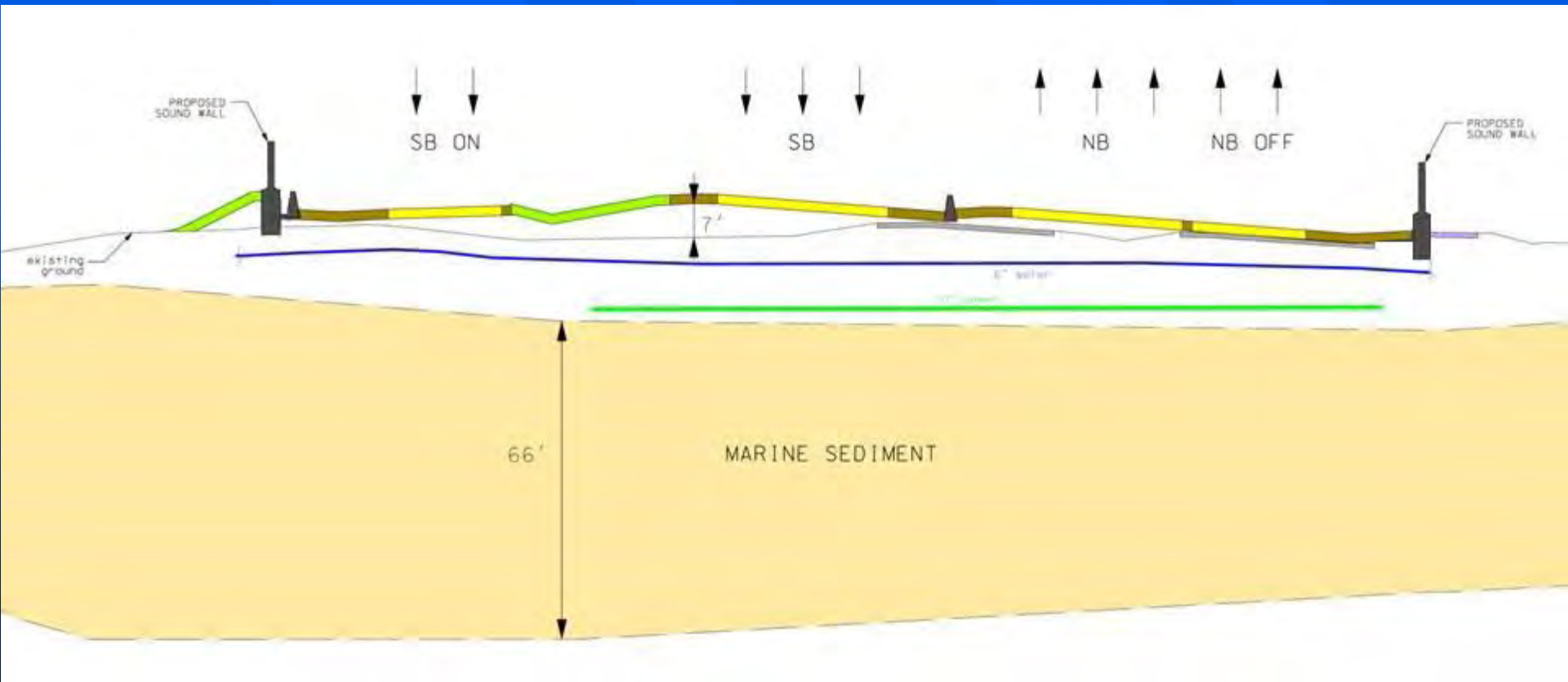


- Stormwater Detention Basins
- Boston Harbor Road Rehabilitation
- Boston Harbor Road Sidewalk

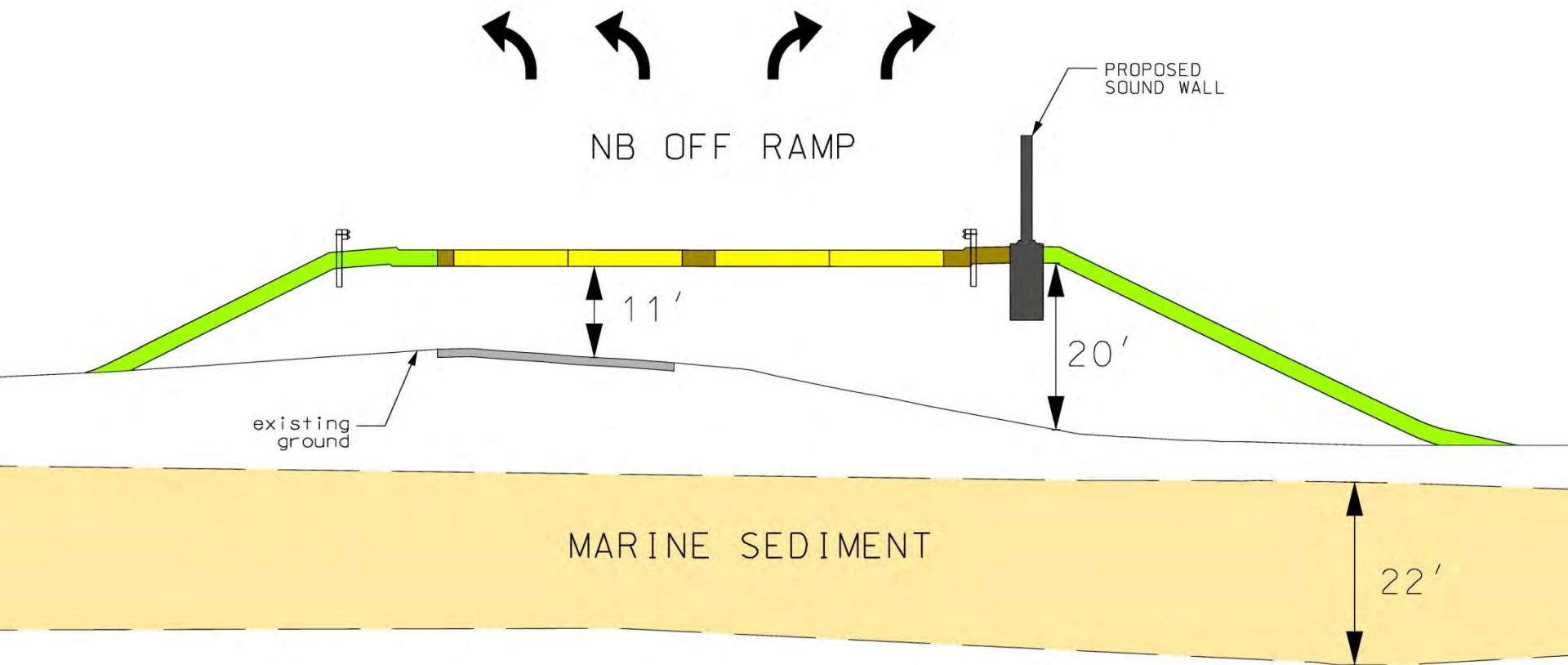
Engineering Challenges

Cross Section

Just North of Pomeroy Cove



Cross Section NB Off Ramp



Settlement Platform Constructed under Contract M



Initial Construction Phase

- Exit 6 Test Embankment Area
- Settlement Testing
- UNH Study

Settlement Platform

Embankment Area

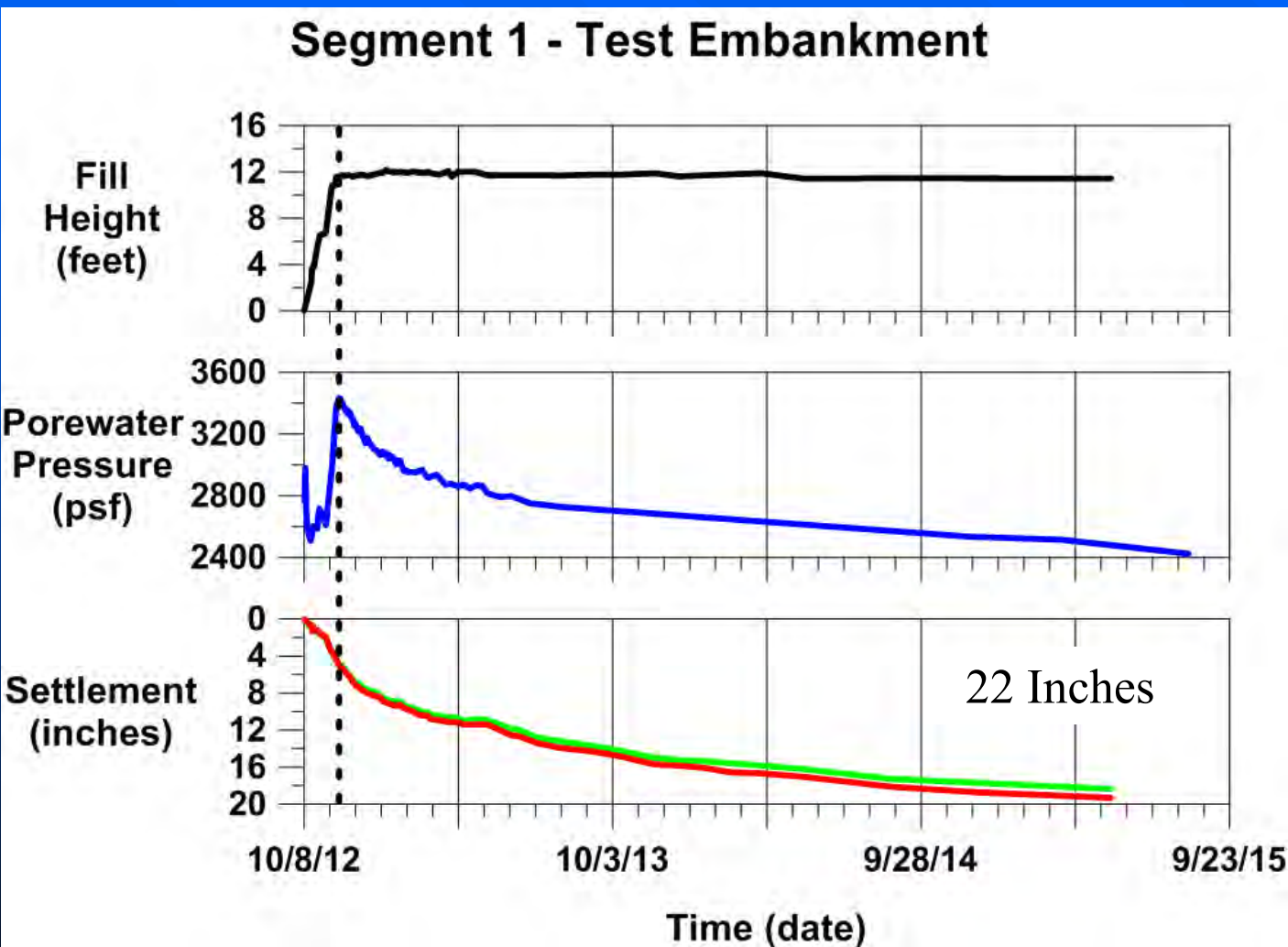
- Installation of Sand Drains



Sand Wick Drains

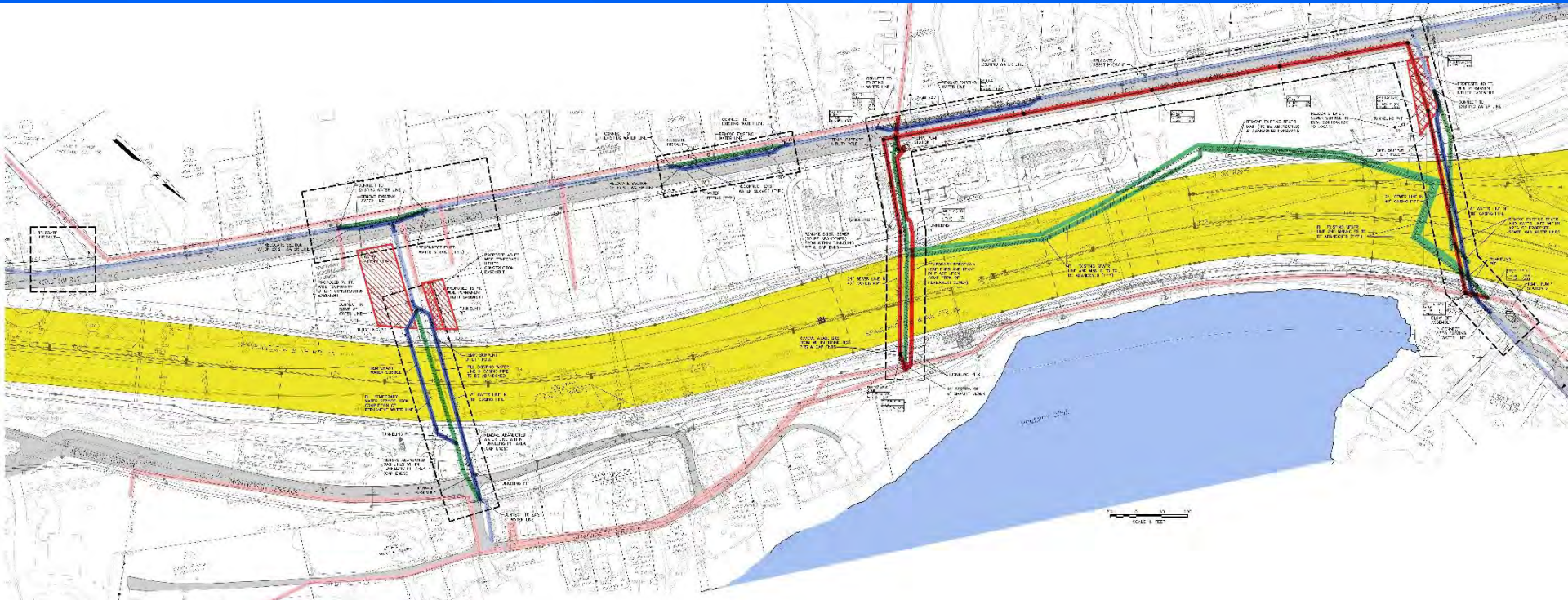
Contract Q

Soft Soil Settlement Predictions



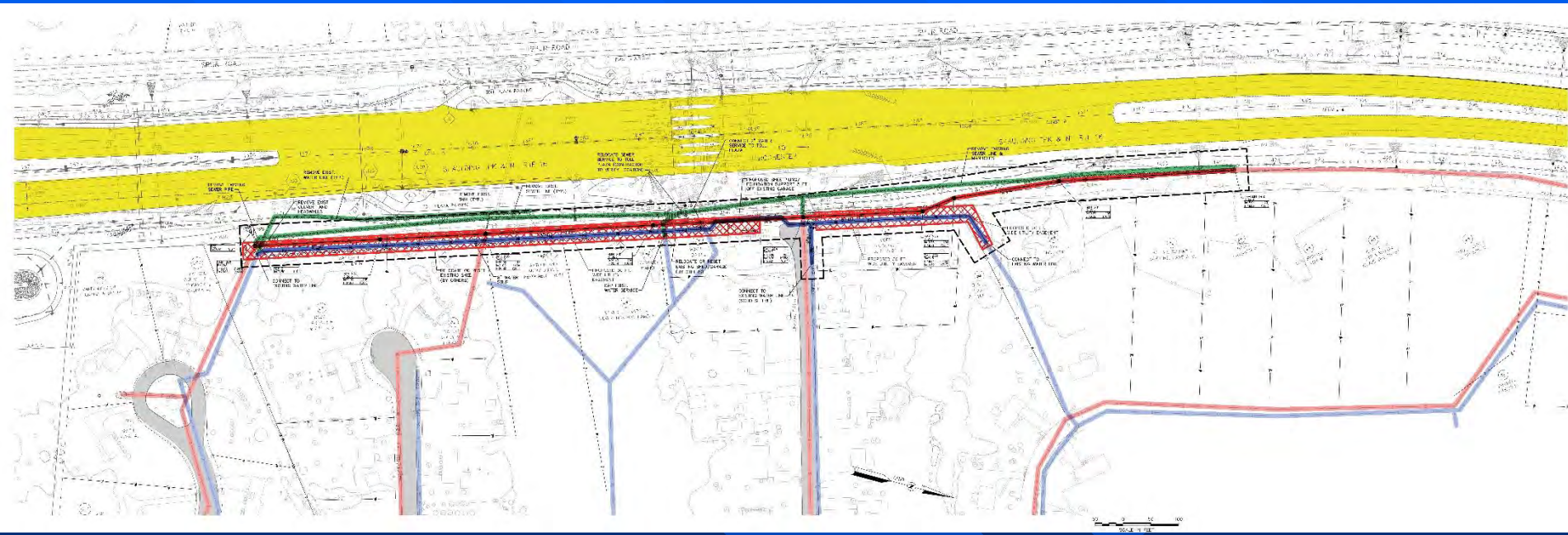
- Have seen over 22 inches of settlement
- Anticipate settlement periods of a minimum 45 days to be included in each construction phase

Water and Sewer Improvements



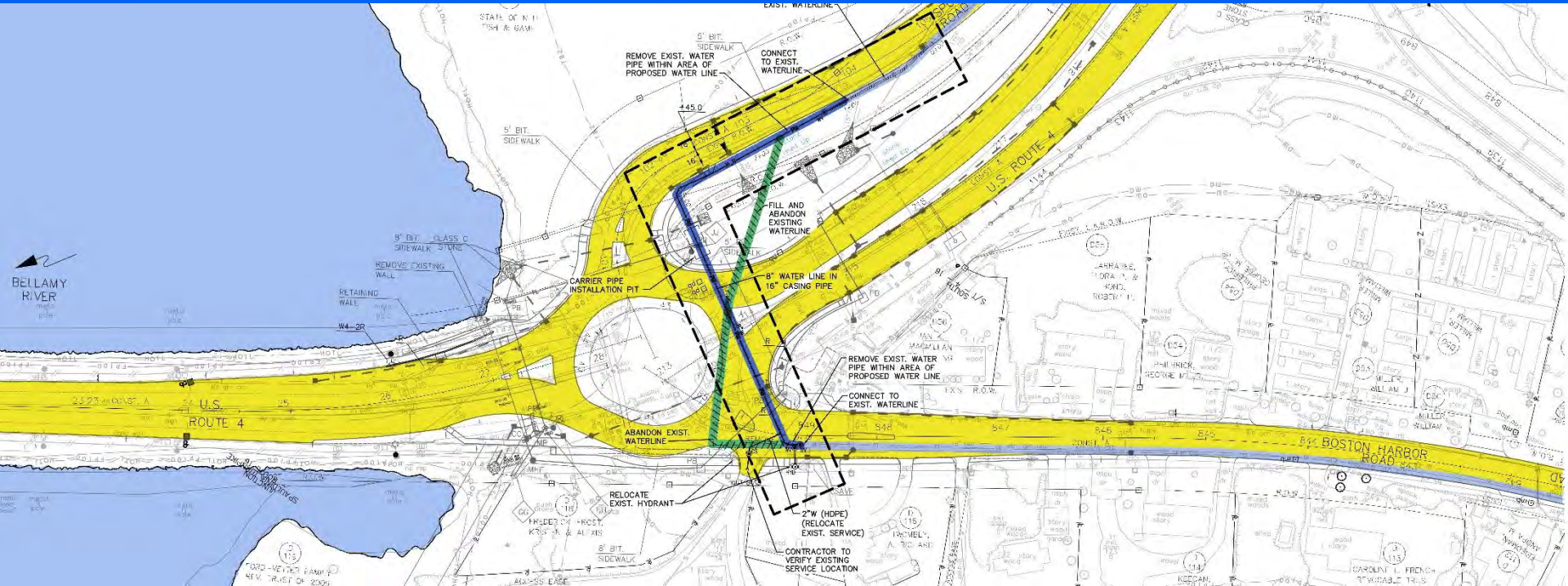
- Boston Harbor Road Locations
- Wentworth Terrace Crossing
- Pomeroy Cove Area Locations

Water and Sewer Improvements



■ Dover Toll Plaza Location

Water and Sewer Improvements



■ Roundabout Location

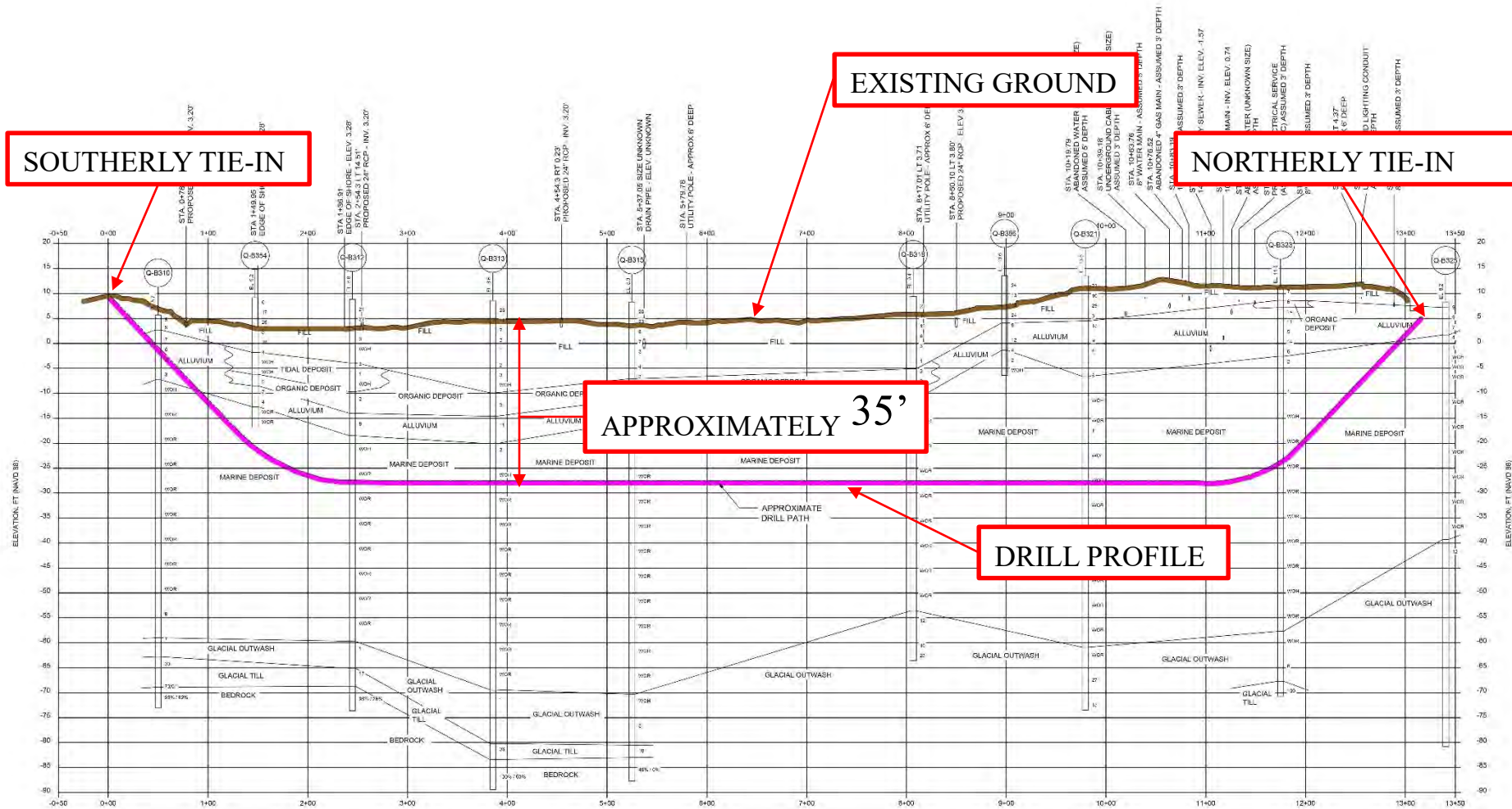
Unitil Gas Line Improvements



**3950'-10" Natural Gas
Summer 2016**

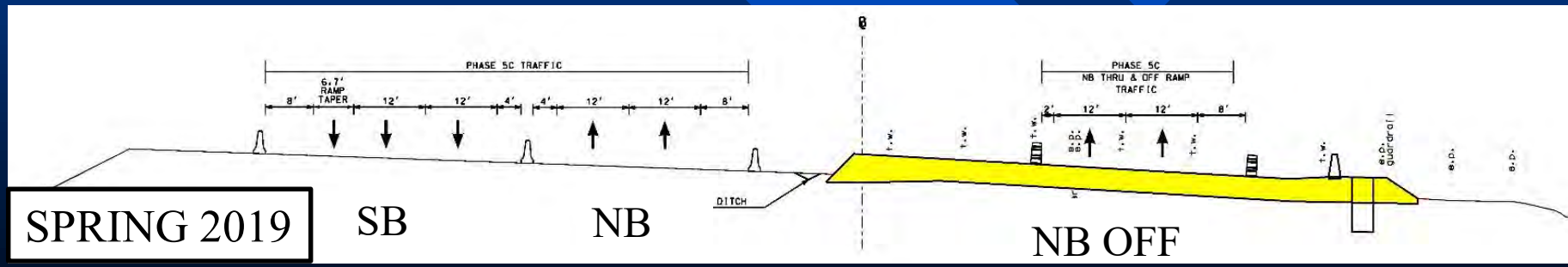
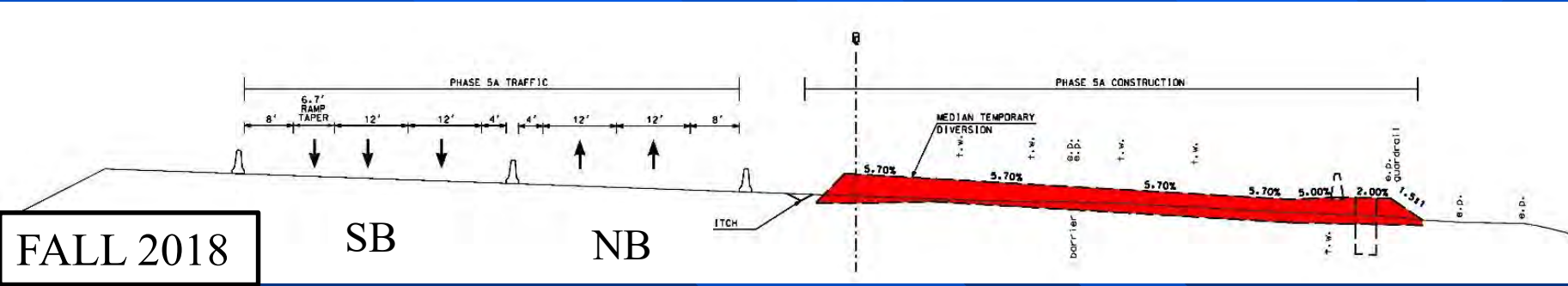
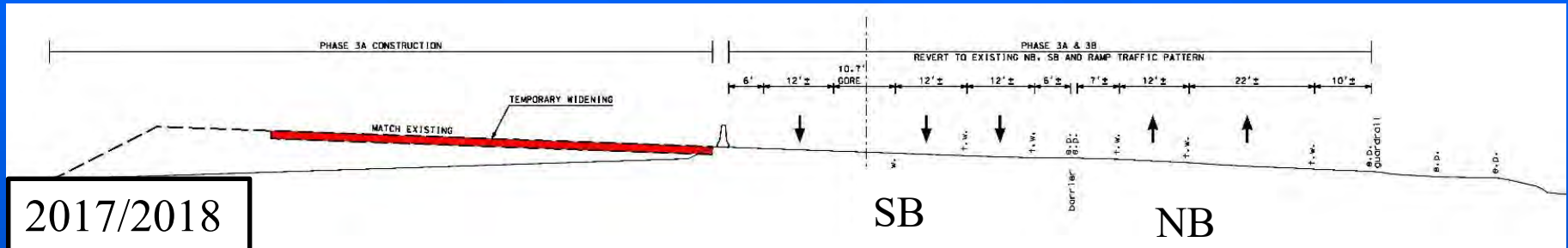
**1300'-10" Natural Gas
Horizontal Directional Drill
Spring 2016**

Unitil Gas Line Improvements Pomeroy Cove Horizontal Directional Drill



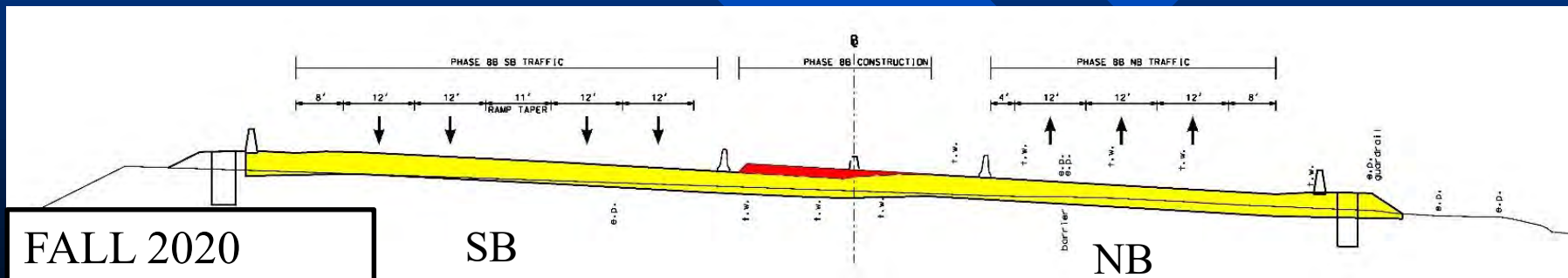
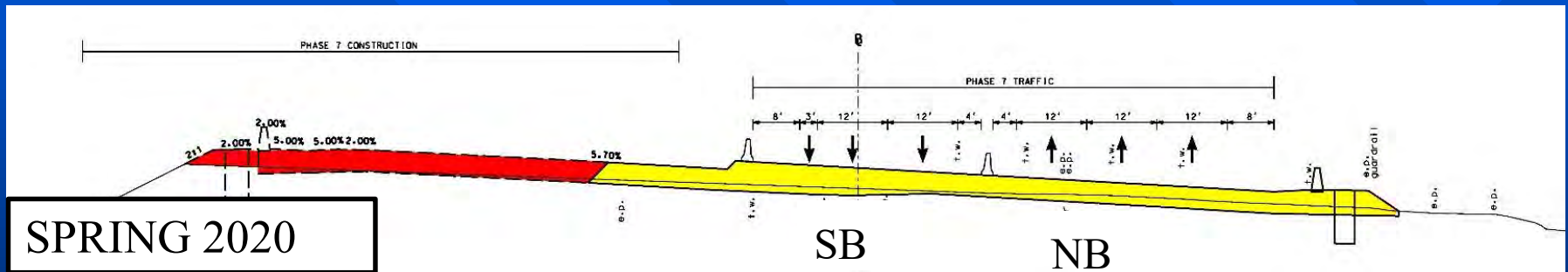
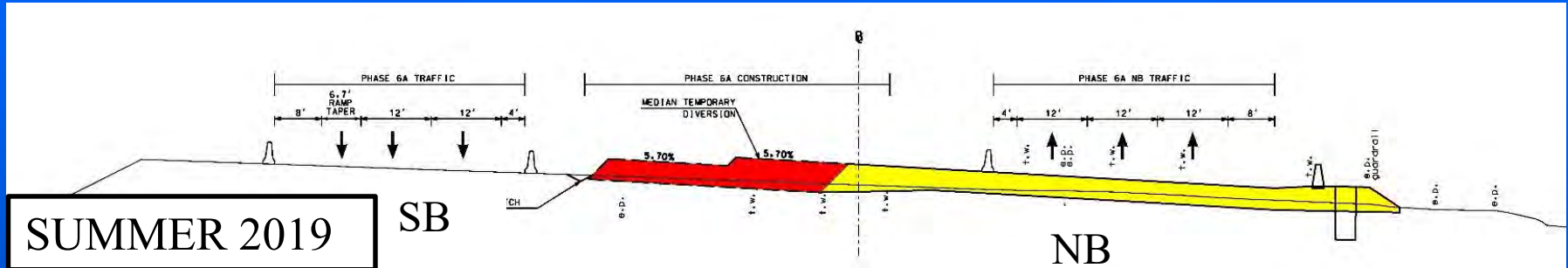
Contract Q

Construction Milestones



Contract Q

Construction Milestones



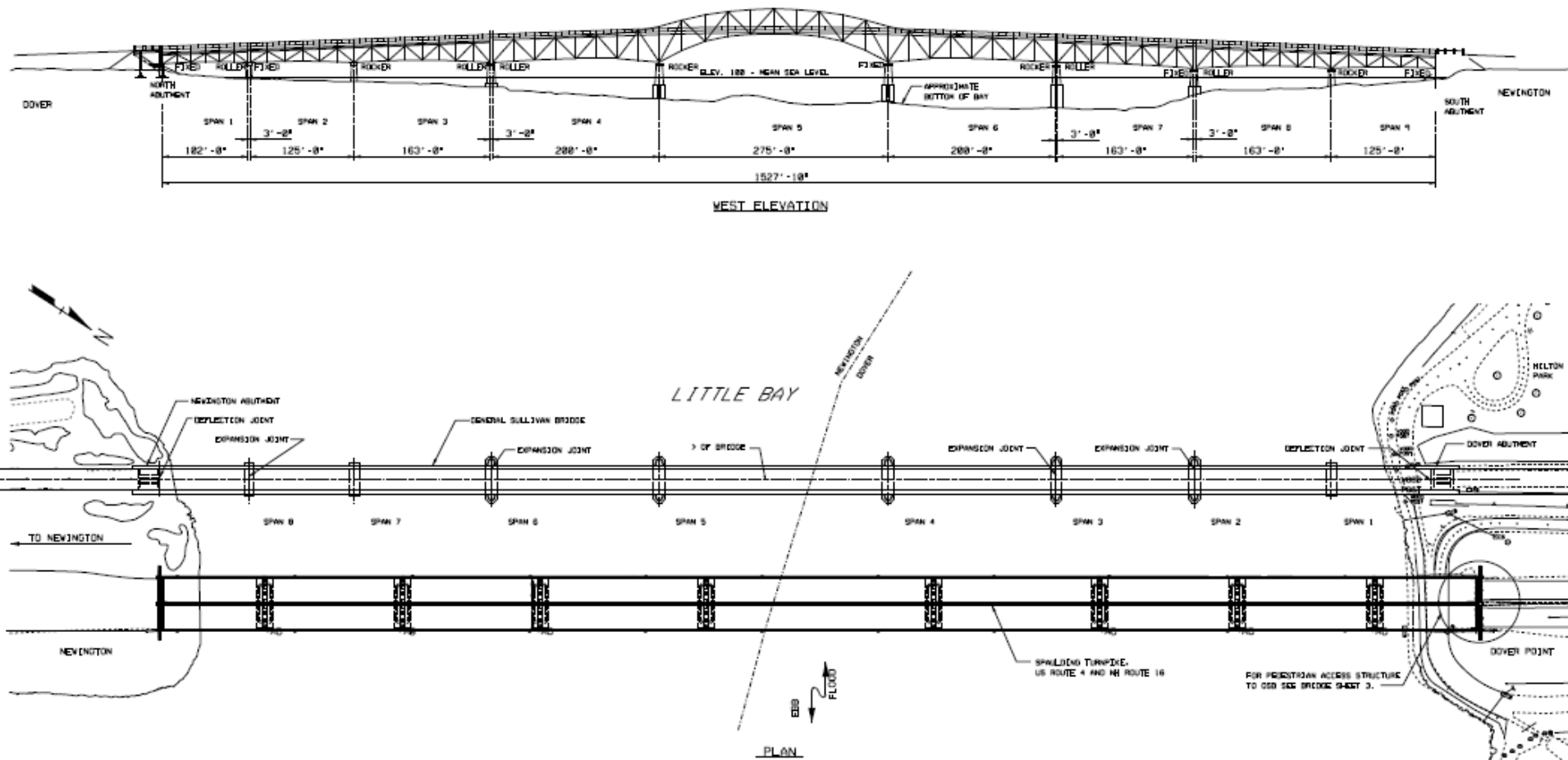
Contract S



Contract S – General Sullivan Bridge Rehabilitation

- Tentative Advertising Date: Summer 2018
- Tentative Construction: 2018 – 2021
- Concurrent Construction with Contract Q

Contract S - General Sullivan Bridge



- Rehabilitates Existing 9-Span (1527 ft.) General Sullivan Bridge for Pedestrian and Bicycle Use

Contract S - General Sullivan Bridge Pedestrian and Bicycle Construction Access

- Temporary Shuttle Service During Closure Period
- Hilton Park Area in Dover to Shattuck Way Area in Newington



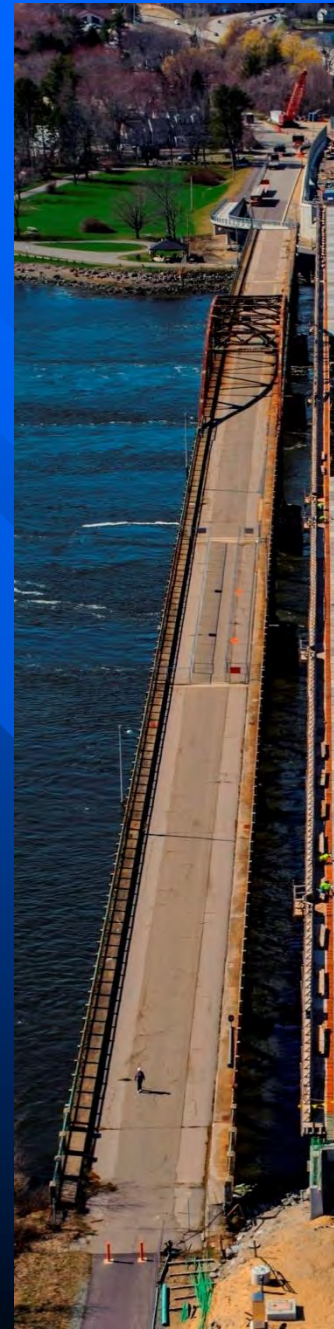
General Sullivan Bridge - Work To Date



- First Detailed Inspection Completed in 2009
- Underwater Inspection Completed in 2011
- New Dover Approach Bridge Constructed in 2013 (Contract L)
- Dover Abutment Rehabilitated 2013 (Contract L)
- In-Depth, Hands-On Inspection Completed in May 2014
- Capacity Load Rating Completed September 2014



General Sullivan Bridge – Preliminary Results from 2014 Inspection



- Deterioration Continues - Worse than 5 Years Ago
- Deck Concrete Significantly Spalled on Underside
- Outside Stringers **Critically** Deteriorated
- Interior Three Stringers in Fair to Good Condition
- Floor Beams Fair to Poor
- Span 7 (previously fenced) Span - Truss Limited Capacity
- Lattice Trusses for All Other Spans Fair to Poor

General Sullivan Bridge - Overview



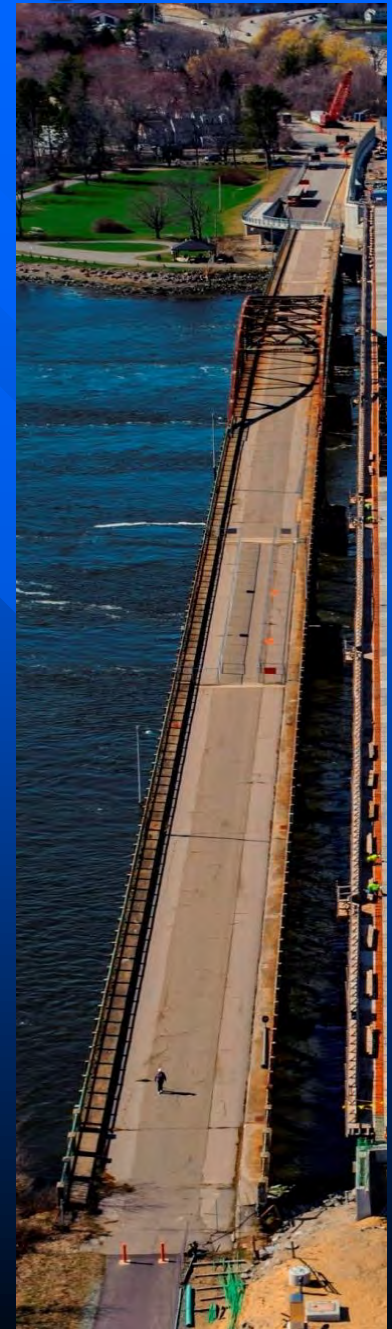
General Sullivan Bridge - Next Steps



Install 15' Wide Fencing Full Length of Bridge

General Sullivan Bridge - Next Steps

- Detailed Structural Analysis/Evaluation Continues
- Evaluate Environmental Commitments (Historic Preservation) – Fall 2015
- Assess Rehabilitation/Replacement Options - Winter 2015-2016
- Develop Rehabilitation or Replacement Plans – 2016-2017
- Follow-up Inspection in 2016



Upcoming Turnpike Projects

- Dover Toll Plaza Conversion to Open Road Tolling (ORT)
- Newington Maintenance Facility

Dover Toll Plaza

Existing Conditions

- Existing Facility
Built in 1956
- Operational
Challenges Exist
with Exit 6 at
Current Location
- Rehabilitation
Results in No
Realized
Benefits to
Customers



Dover Toll Plaza Conversion to Open Road Tolling (ORT)

- Increase Mobility
- Improved Safety for Employees
- Reduction in Accidents
- Reduce Energy Consumption

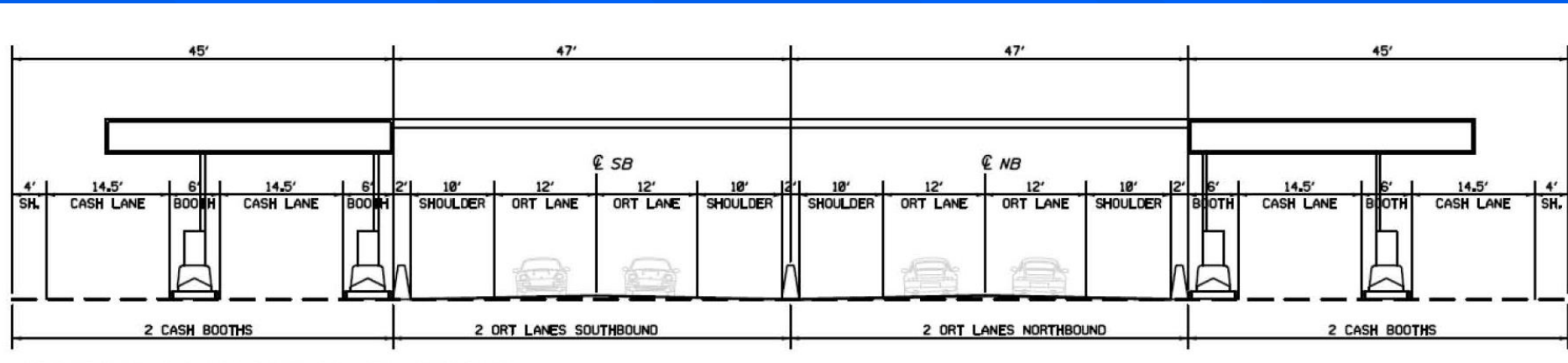


Dover Toll Plaza Conversion to Open Road Tolling (ORT)



- Option 1 – Reconstruction at Current Location
- Option 2 – Construction of New Toll Plaza 1.25 miles North of Existing Toll Plaza

Dover Toll Plaza ORT Typical Section



- 2 Open Road Tolling (ORT) Lanes in Each Direction (E-ZPass only)
- 2 Conventional Toll Plaza Lanes in Each Direction (E-ZPass and Cash)

Dover Toll Plaza Schedule

- Funded in Ten Year Plan 2015 – 2024
- Anticipated Start of Construction Spring 2021
- Anticipated Completion of Construction Fall 2022

Newington Maintenance Facility



- Need Results from Expansion of Spaulding Turnpike
- Proposed Location on Turnpike Owned Parcel
- Between Exits 3 and 4 on West Side of Spaulding Turnpike (Former Drive-in Site)

Newington Maintenance Facility

- Funded in Ten Year Plan
2015 - 2024
- Anticipated Start of
Construction – Fall 2019
- Anticipated Completion of
Construction – Fall 2020
- Existing Dover
Maintenance Shed
Discontinued in Fall 2020



Contact Information

Newington-Dover

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J.O. Morton Building

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Concord, NH 03302-0483

Phone : (603) 271-1615

Email: Kcota@dot.state.nh.us

<http://www.Newington-dover.com/>

Upcoming Turnpike Projects

Dave Smith, PE

Asst. Administrator of Turnpikes

NH Dept. of Transportation

I-93 Exit 11 (Hooksett)

PO Box 2950

Concord, NH 03302-2950

Phone : (603) 485-3806

Email: Dssmith@dot.state.nh.us



<http://www.newington-dover.com/>

THANK YOU

Questions/Comments

