

NEWINGTON-DOVER

Spaulding Turnpike / Little Bay Bridge Improvements

WELCOME

Public Informational Meeting

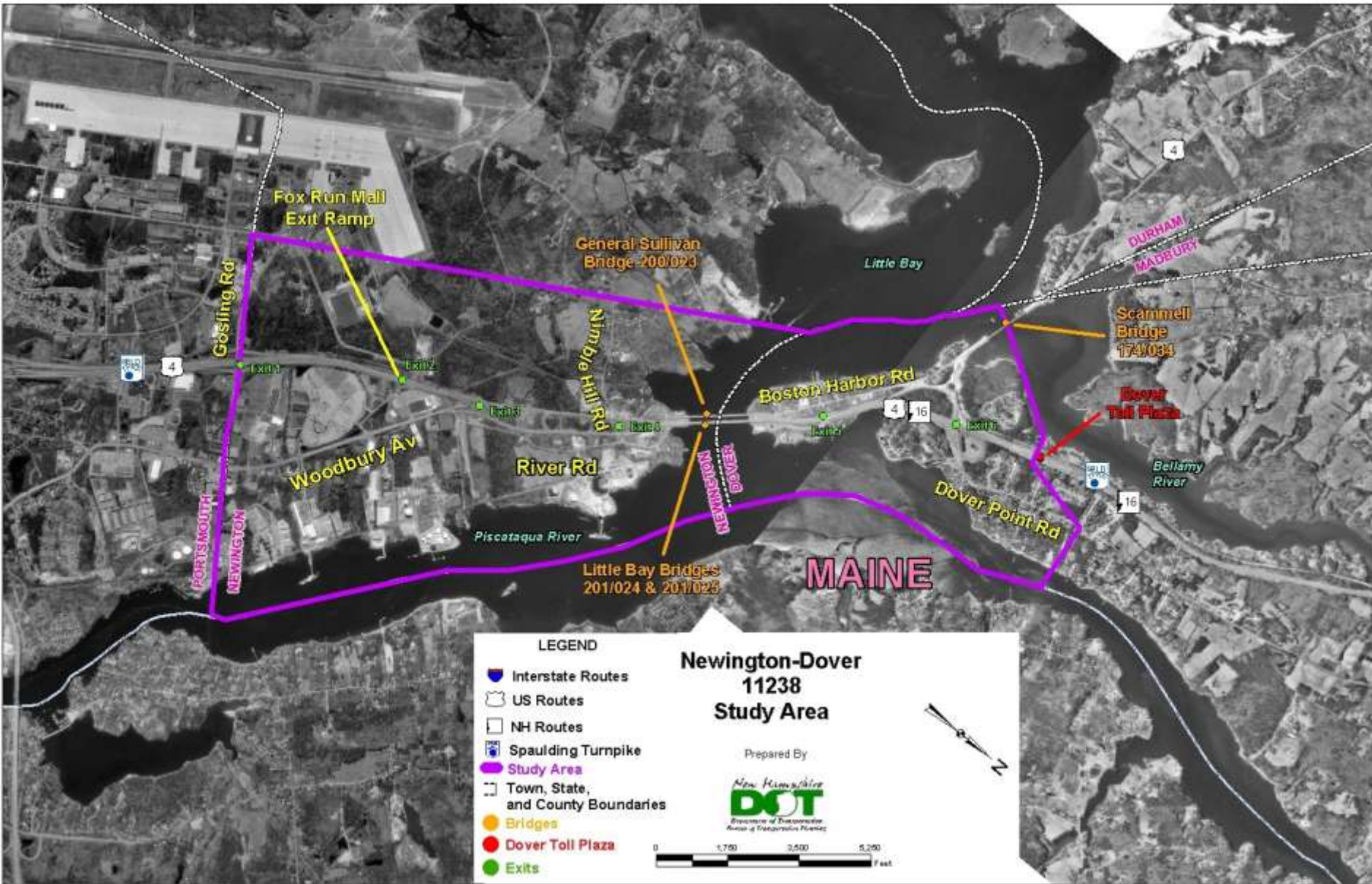
May 16, 2013

7:00 PM

Meeting Agenda

- **Introductions**
- **Project Overview**
- **Contract 11238 L – Little Bay Bridge SB Contract**
- **Contract 11238 M – Newington Contract**
- **Contract 11238 Q – Dover Contract**
- **Contract 11238 O – Little Bay Bridge NB Contract**
- **Contract 11238 S – General Sullivan Bridge**

Project Area



Project Need

■ Spaulding Turnpike

- **Limited Capacity – Chronic Congestion**
 - ❖ Four Lane Facility – 2 Lanes in each direction
 - ❖ High Traffic Volumes
 - ❖ 30,000 (1980) 70,650 (2003) 71,000 (2005)
 - ❖ Projected 94,300 (2025)
- **Level of Service E & F (during peak hours)**
- **High Number of Interchanges**
 - ❖ 5 Interchanges in 2 ½ miles
- **Geometric Deficiencies**
 - ❖ Substandard Shoulders (Little Bay Bridges)
 - ❖ Substandard Ramp Geometry, Accel & Decel Lanes
 - ❖ Inadequate Weave Areas
- **Poor Local & System Connectivity**
- **Accident Data – Long Delays**

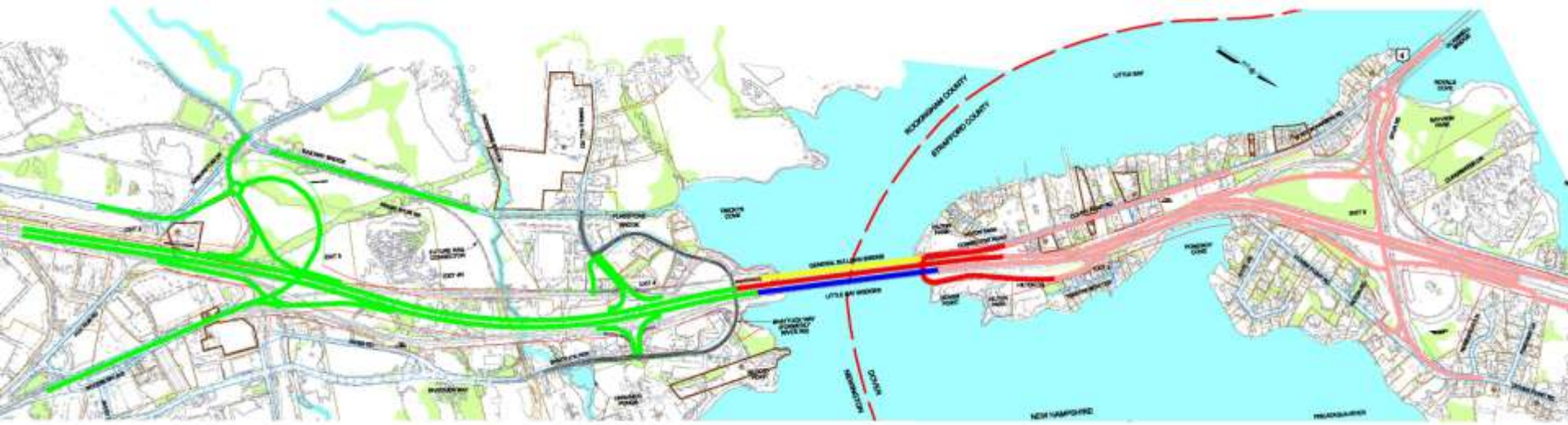
Newington-Dover

Record of Decision (2008)

Selected Alternative



- **Reconstructs & Widens Turnpike**
 - 8 Lanes – Exit 3 to Exit 6
 - 6 Lanes south of Exit 3 (match into 6 lanes at Exit 1)
 - 6 Lanes north of Exit 6 (match into width at Toll Plaza)
- **Consolidates & Reconfigures the Interchanges**
 - Eliminate Exit 2 (Fox Run Road ramps)
 - Reconstruct Exit 3 (Full service interchange with northern access into Pease)
 - Maintain Exit 4 Ramps (Nimble Hill Road & Shattuck Way)
 - Eliminate Exit 5 (Hilton Park & Wentworth Terrace)
 - Reconstruct Exit 6 (Full service interchange with US 4 & Dover Point Road)

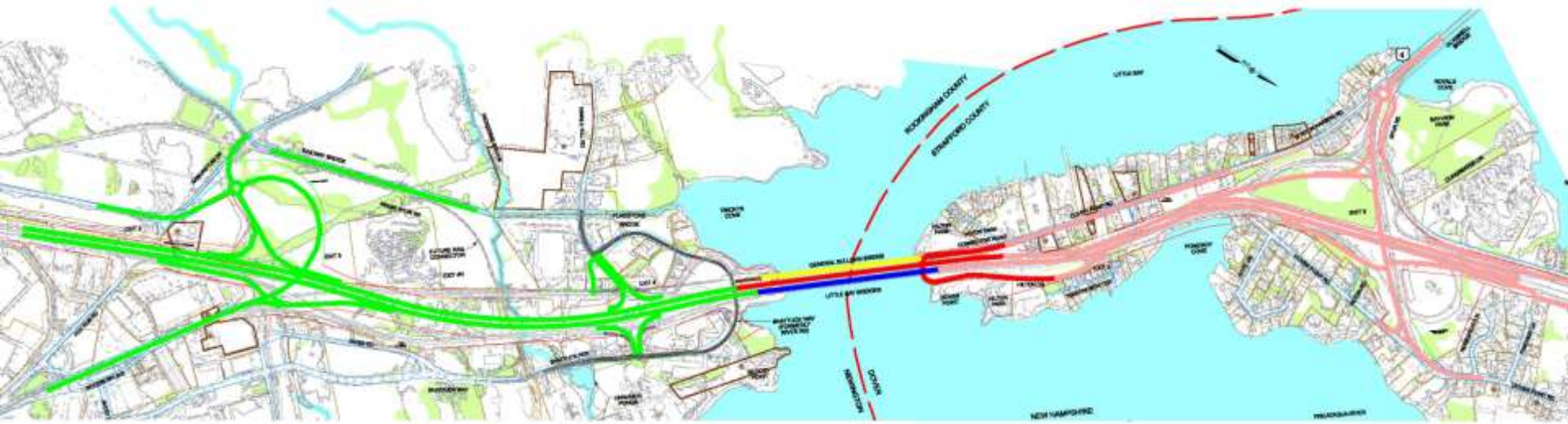


■ Construction Contract Breakouts

- Contract L – SB Little Bay Bridge - \$54.1M - Anticipated Construction Completion **Fall 2013**
- Contract M – Exits 3 & 4 - \$48.7M - Anticipated Construction Completion **Summer 2015**
- Contract O – Existing LBB Rehabilitation - \$34.0M – Design Ongoing
- Contract Q – Exit 6, Dover Mainline & Soundwalls - \$49.2M - Design Ongoing
- Contract S – GSB Rehabilitation - \$26.8 M - Design Ongoing

Total Construction Cost = \$212.8M (2012 Dollars)

Current Contract Breakout & Schedule



CONSTRUCTION SCHEDULE										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTRACT L	[Red bar]				\$54.1 M					
CONTRACT O					[Blue bar]		\$34.0 M*			
CONTRACT M			[Green bar]			\$48.7 M				
CONTRACT Q						[Pink bar]			\$49.2 M*	
CONTRACT S								[Yellow bar]		\$26.8 M

* Contract Q & O schedules subject to change



Contract L - SB Little Bay Bridge Construction

- **Construction Initiated in 2010 with Completion in Fall 2013**
 - – Cianbro Contractors, Maine
- **SB Little Bay Bridge**
- **Spaulding Turnpike Dover Approach Work**
- **Spaulding Turnpike Newington Roadway Approach**
- **Exit 5 Ramp Reconstruction (Within Contract M)**
- **Wentworth Terrace**
- **General Sullivan Bridge Dover Abutment**
- **Pedestrian & Bicycle Structure**

Construction – Contract L

Ground Breaking
Celebration in
September 2010



General Sullivan Bridge Access

General Sullivan Bridge Access Closure

Dover side - November 1, 2010 to May 1, 2011

Newington side – occasionally

Sidewalk beneath GSB and LBB closed during construction



Pedestrian / Bicycle Access to
General Sullivan Bridge
Option 2

Construction – Contract L Pedestrian Bike Pathway to GSB



Construction – Contract L Little Bay Bridge



**Temporary Trestle to Construct Phase 1 – Cost
\$6 Million (2010 – 2012)**

Construction – Contract L

Little Bay Bridge



Temporary Trestle to Construct Bay Piers and Set Steel (2010 - 2012)

Construction – Contract L Little Bay Bridge



**Deck Reinforcing Steel and Concrete Pour
(2012)**

Construction – Contract L

Little Bay Bridge

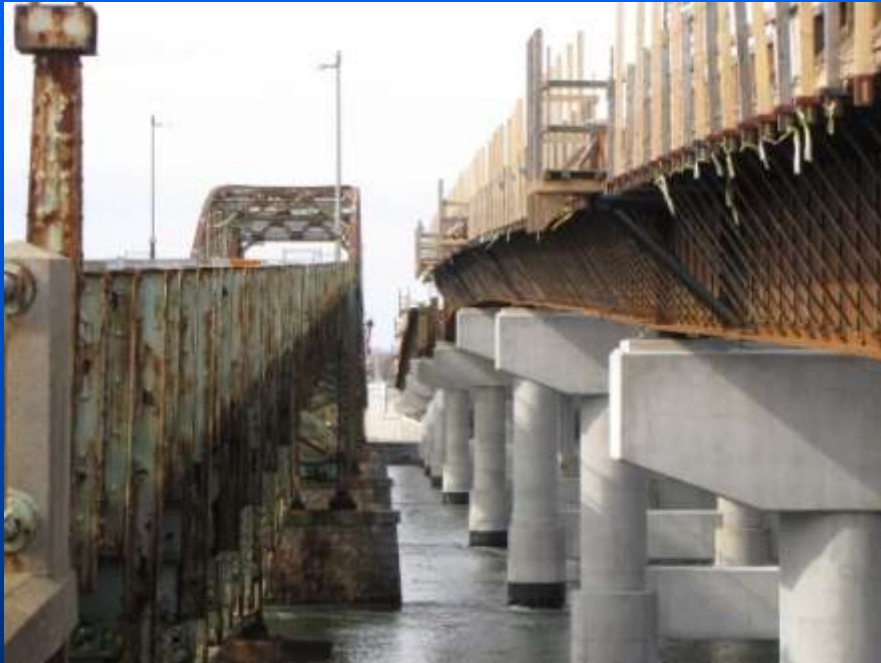
Construction Operations for 2013:

- Completion of Southbound Little Bay Bridge



Construction – Contract L

Little Bay Bridge



**Westerly Placement of Final Mid-Span Girder
(March 13, 2013)**

Construction – Contract L Little Bay Bridge



Wentworth Terrace Open to Public in October

Contract M



Contract M Construction

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

Contract M



- **Discontinues Exit 2 and Replaces it with Cul-de-Sac**
- **Provides a Full Service Interchange at Exit 3 and Reconstructs Woodbury Avenue**
- **Provides Additional Access into Pease**
- **Provides Future Consideration for Railroad Spur**
- **Eliminates Maintenance and Incident Management Reverse Direction Ramps Between Exits 3 and 4**

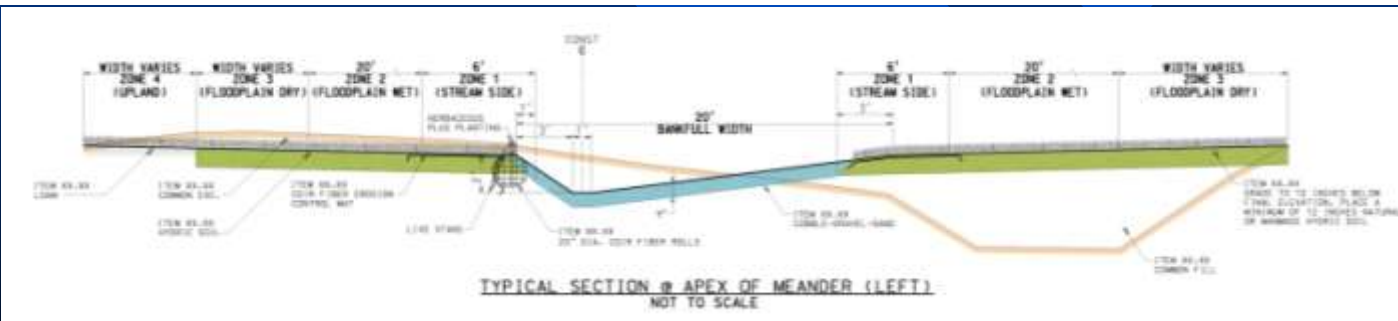
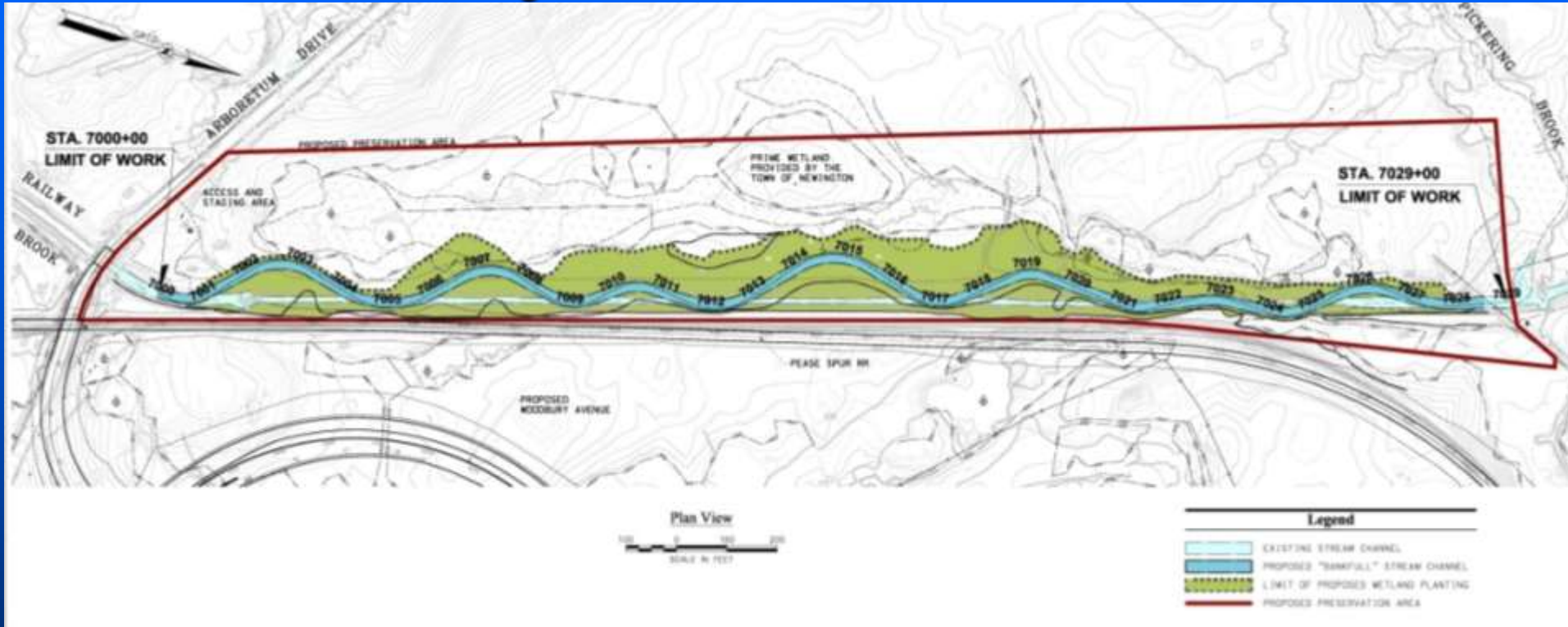
Contract M (Cont'd)



- **Exit 4 Reconstruction**
- **Roadwork Extends into Dover to Match into Existing Spaulding Turnpike**
- **Shifts SB and NB Traffic onto SB LBB**
- **Railway Brook Restoration**
- **Stormwater Detention Basins for Water Quality and Pollutant Loading Treatment**

Contract M

Railway Brook Restoration



Construction - Contract M

Pre-Construction Prior to Contract M:

- 30” M&N Gas Line - Exit 3 and Arboretum Drive Area (Completed By Others in 2012)

Concurrent Construction

- Contract L - ongoing through 2013
- Unutil - River Directional Drill – ongoing through 2013
- Contract Q – Anticipated Start in 2014
- Contract O – Anticipated Start in 2015

Construction - Contract M

Current Construction Operations:

- **Exit 3 Embankment Area Including Roundabout and Arboretum Drive**
- **Woodbury Avenue Bridge - Western Abutment**
- **Unitil Gas Line Relocation SB Barrel - Exit 1 to Exit 3 (By Others)**
- **Water Line Relocation SB Barrel - Exit 1 to Exit 3**
- **Traffic Remains on Existing Roadways**

Construction – Contract M

Pre-Construction Operations:

- 30 Inch Diameter High Pressure M&N Gas Line Relocation (Completed By Others in 2012)



Construction – Contract M

Current Construction Operations:

- Staging Area at Former Drive-in Theater
- Future Site for Turnpike Maintenance Facility



Construction – Contract M

Current Construction Operations:

- Woodbury Avenue Bridge - Western Abutment



Construction – Contract M

Current Construction Operations:

- **Unitil Gas Line Relocation SB Barrel - Exit 1 to Exit 3 (By Others)**
- **Water Line Relocation SB Barrel - Exit 1 to Exit 3**



Construction – Contract M

2013 Construction Operations:

- Shattuck Way Bridge Widening



Construction – Contract M

2013 Construction Operations:

- Stormwater
Detention Basin



Construction – Contract M

Anticipated Construction Operations for 2013:

- **Exit 3 Embankment Area, Roundabout and Arboretum Drive**
- **SB Barrel Ledge Excavation**
- **SB Traffic Shift Exit 1 through Exit 3**
- **Woodbury Avenue Bridge Pier Construction**
- **Shattuck Way Bridge Widening**
- **Railway Brook Restoration**
- **NB and SB Barrel Construction in Existing Median Area**

Construction – Contract M

Anticipated Construction Operations for 2014/2015:

- **Phased Construction of Turnpike**
- **Multiple Traffic Shifts along Turnpike**
- **Exit 3 Interchange Phased Construction**
 - **Exit 3 SB Off Ramp Temporary Closures**
 - **Detours Traffic to Exit 1**
 - **Multiple Closures for Durations from 3 Days to 3 Months (2013 – 2015)**
 - **Exit 2 Discontinuance (2015)**
 - **Detours Traffic to Exit 1**
 - **Full Ramp Access to Woodbury Avenue and Retail Area with Completion of Exit 3 (2015)**

Construction – Contract M

Anticipated Construction Operations for 2014/2015 (cont'd):

- **Exit 4 Construction**
- **Woodbury Avenue Bridge Completion**
- **Stormwater Detention Basin Construction**
- **2015 Traffic Shift onto SB LBB**

Contract Q



Contract Q- Dover- \$49.2 M

- Tentative Advertising Date: July 2014
- Tentative Construction: 2014 - 2017
- Completes and Opens All Spaulding Turnpike Improvements
- Concurrent Construction with Contracts M, O and S

Contract Q



- Provides a Full Service Interchange at Exit 6
- Eliminates Exit 5
- Provides Two-way Connection via Wentworth Terrace
- Introduces 2 Signalized Intersections for Exit 6 Ramps
- Roundabout Replaces Signalized Intersection at Boston Harbor Road
- Constructs 4 Sections of Soundwall – North and South of Exit 6

Contract Q

- Roundabout
- Pedestrian Signal and Cross Walk
- Additional Parking along Spur Road
- Sidewalk Extension on Boston Harbor Road and Dover Point Road (West)
- Signalized Intersection at Exit 6 SB On Ramp
- Soundwall Extended towards Roundabout



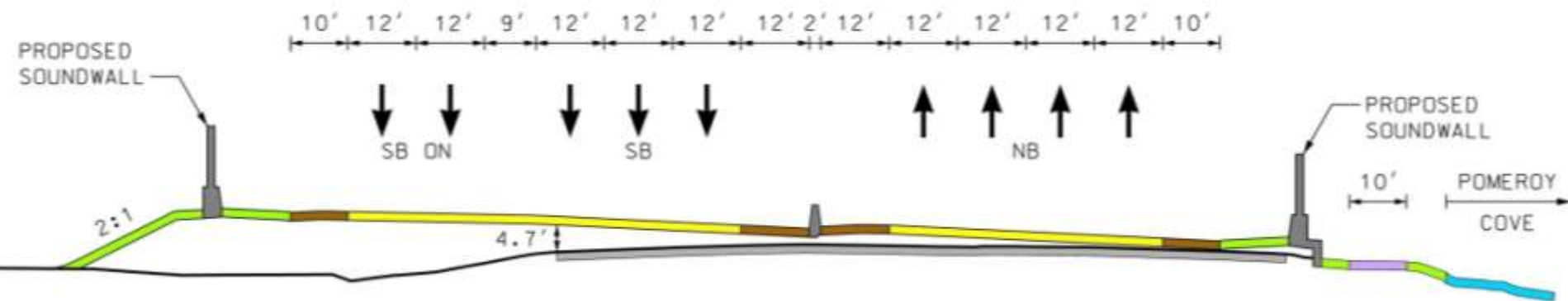
Contract Q

- **New Bridge South of Existing**
- **Signalized Intersection at Exit 6 NB Ramps**
- **Conduit and Pullboxes Installed at Dover Point Road (East) for Future Signals when Warranted**



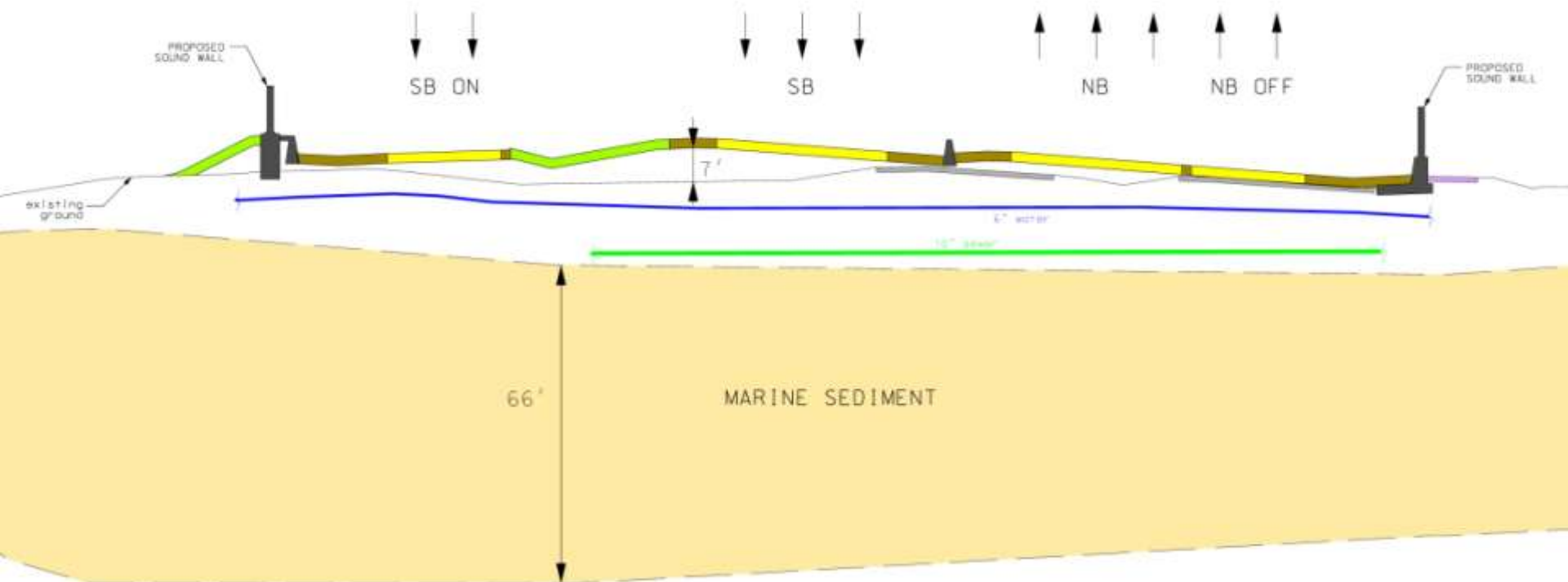
Contract Q

Spaulding Turnpike Cross Section

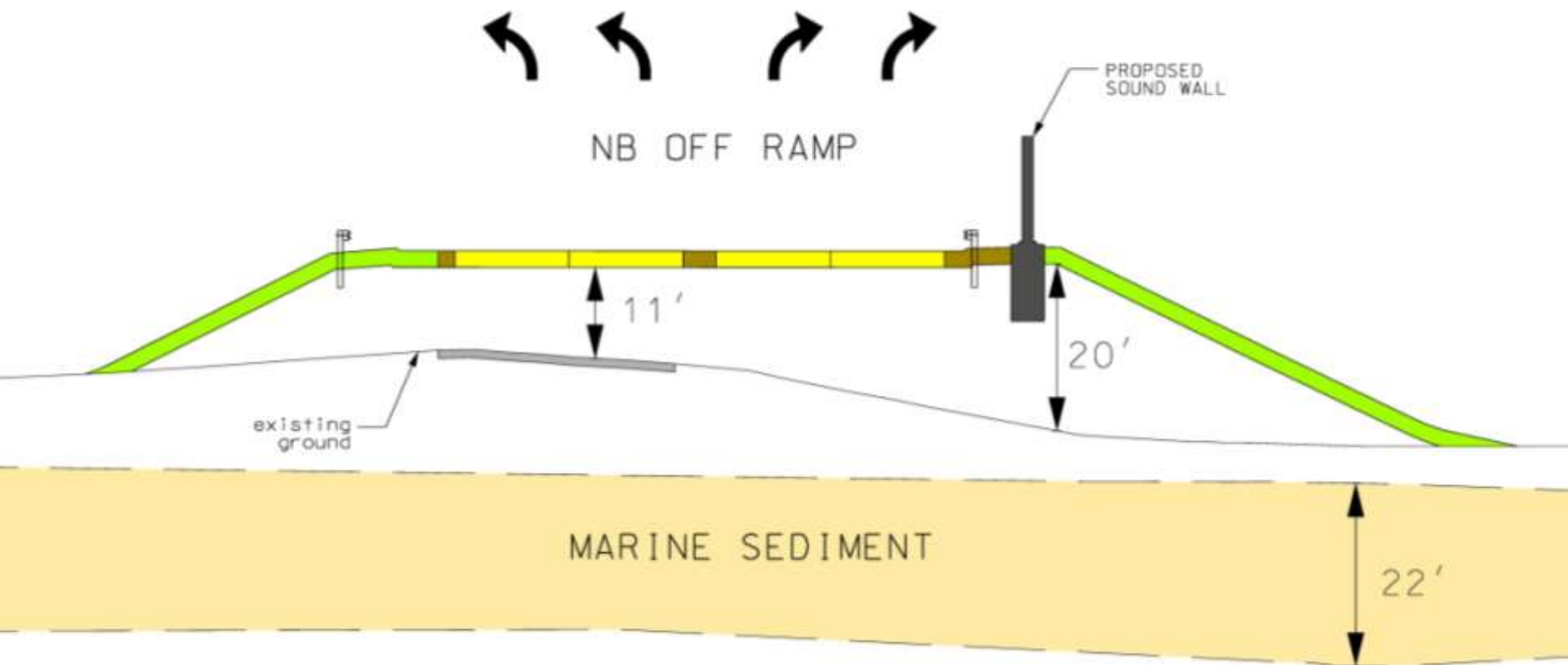


- 40' of Spaulding Turnpike Widening
- SB Raise in Elevation
- Soundwalls along NB and SB
- Pomeroy Cove Paved Pathway (10' wide) is Maintained

Cross Section Just North of Pomeroy Cove



Cross Section NB Off Ramp



Contract Q Soundwall Locations

Southbound

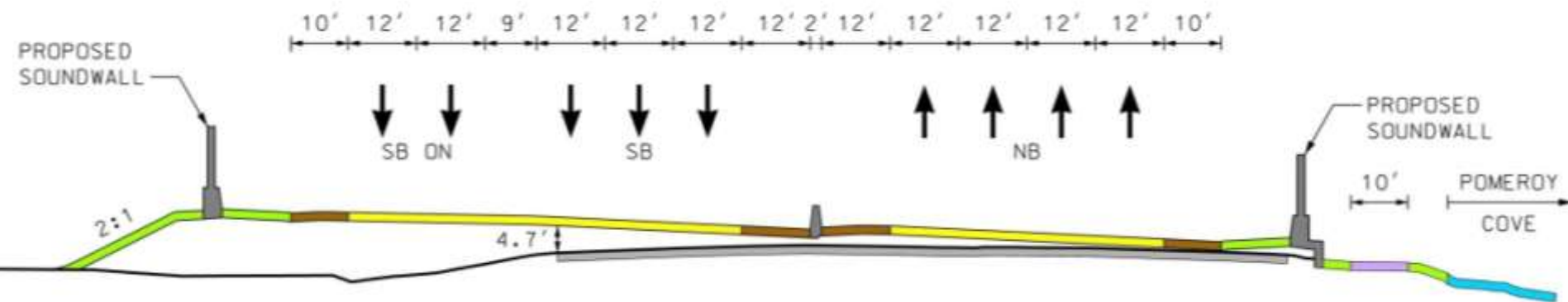
- Begins 0.5 miles north of Dover Toll Plaza and ends at Exit 6 SB off ramp
- Begins near the roundabout and continues to Exit 6 SB on ramp and SB turnpike to the Little Bay Bridge

Northbound

- Begins 1,200' north of Little Bay Bridge and continues along NB and Exit 6 NB off ramp to the intersection of Dover Point Road (East)
- Begins at the Exit 6 NB on ramp and ends 0.5 miles north of the Dover Toll Plaza

Contract Q

Spaulding Turnpike Cross Section South of Exit 6 at Pomeroy Cove

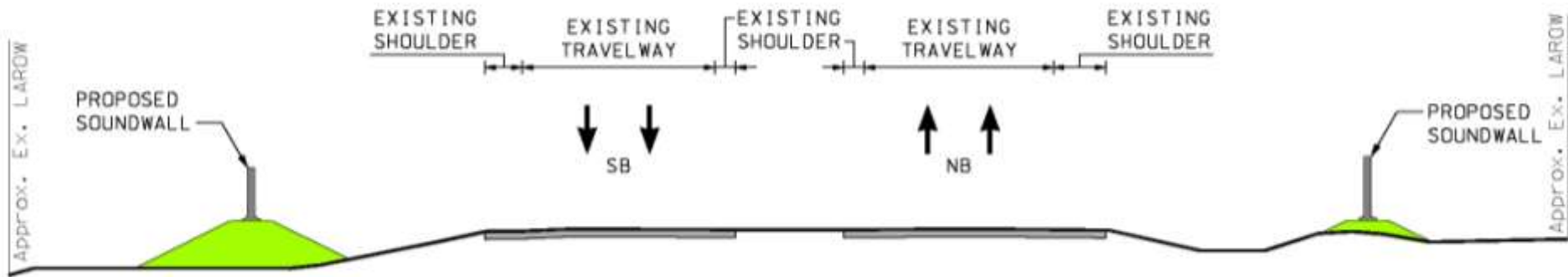


- 40' of Spaulding Turnpike Widening
- SB Raise in Elevation
- Soundwalls along NB and SB
- Pomeroy Cove Pathway (10' wide) is Maintained

Contract Q

Soundwalls North of Dover

Toll Plaza



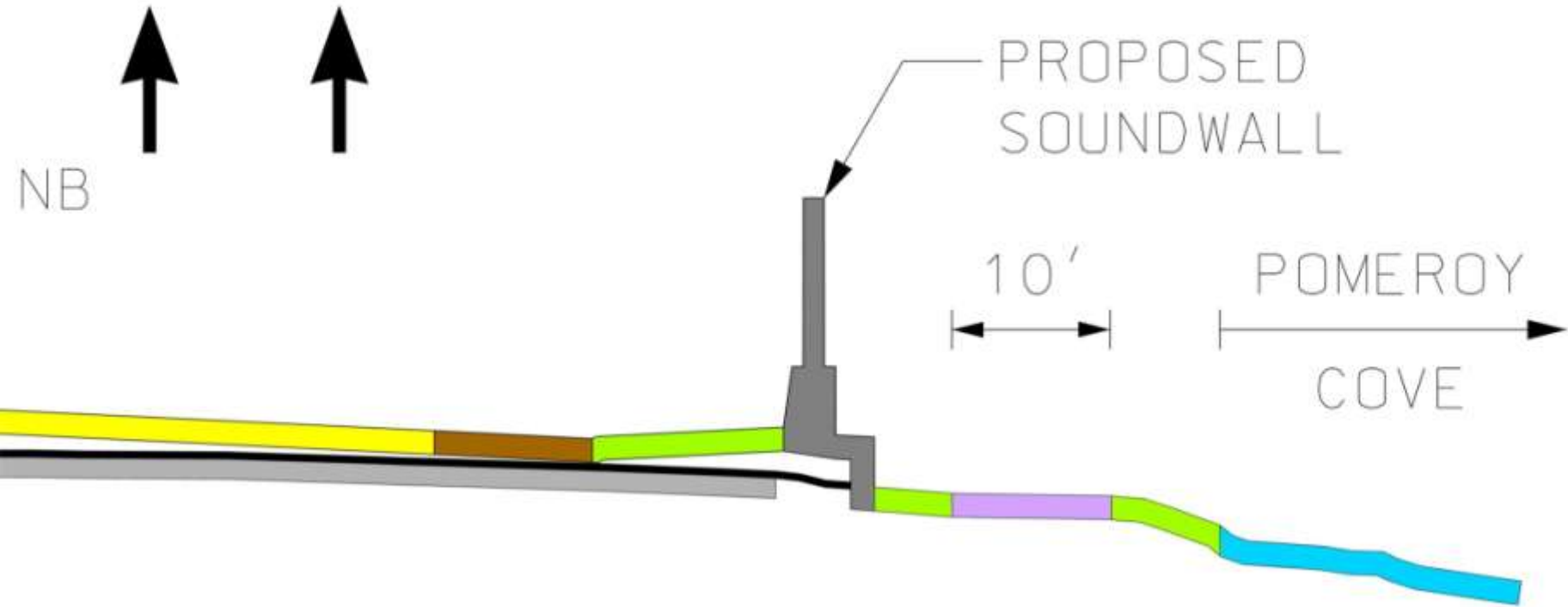
- No Spaulding Turnpike Work Proposed
- Soundwalls Located Near Right-of-Way to Accommodate Potential Third Lane

Contract Q

Soundwall with Ivy



Special Consideration for Pomeroy Cove Soundwall Area



Pomeroy Cove Transparent Soundwall Alternative



Pomeroy Cove - Looking Northwest from Exit 5 On-Ramp



Pomeroy Cove - Looking East from Exit 6 On-Ramp



Looking North Adjacent to Pomeroy Cove



Pomeroy Cove - Looking East from Exit 6 On-Ramp

Pomeroy Cove Soundwall Alternatives

Soundwall Type Study Completed in 2009

- Wood soundwall is NHDOT standard at a cost of approximately \$23/sf
- Transparent soundwall estimated costs approximately double the cost of wood at \$46/sf

Neighborhood Soundwall Meeting in March 2010

- Transparent soundwall considered along Pomeroy Cove only (1,000 lf)
- Concerns raised include: Headlight glare, graffiti, birds, and discoloration
- Wentworth Terrace residents support wood soundwall

Pomeroy Cove Soundwall Alternatives

2012 Additional Study and Design

- Transparent wall types vary in safety performance and cost
- Safety considerations for pedestrians and bicyclists along Pomeroy Cove
- Soundwall with Integrated Fragment Retention System retains fragments from falling
- Crashworthy transparent soundwall costs approximately \$115/sf compared to the \$30/sf for wood – resulting in an estimated increased cost of \$850,000 (\$1,150,000 vs \$300,000)

Crashworthy Soundwall



Pomeroy Cove Soundwall Recommendations

Selection Considerations

- Cost differential for crashworthy transparent wall is almost 4 times that of wood
- Wentworth Terrace Neighborhood previously supported wood soundwall
- NHDOT currently contemplating soundwall alternatives
- NHDOT soliciting public feedback

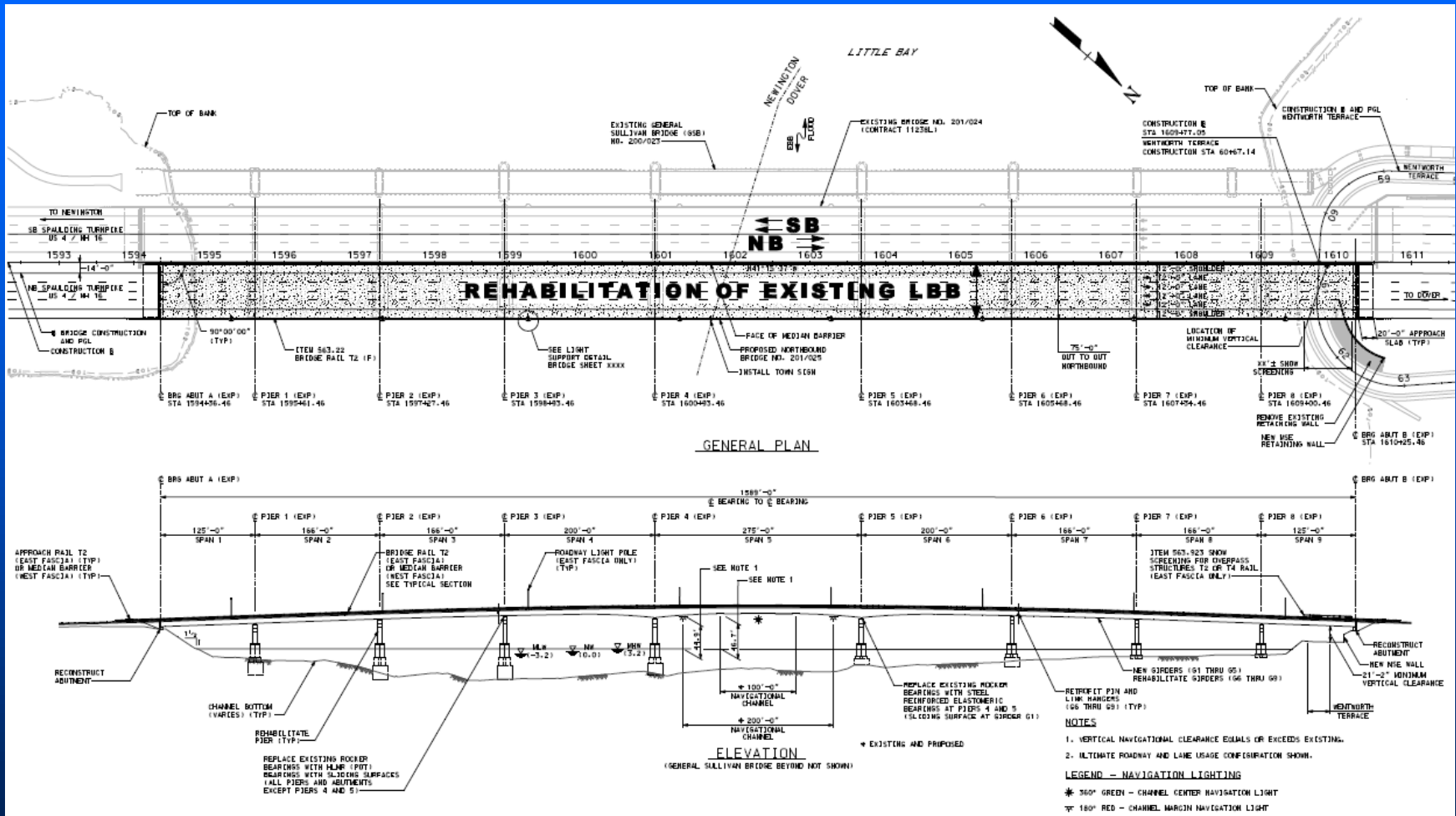
Contract O



Contract O – Existing Little Bay Bridge Rehabilitation - \$ 34M

- Tentative Advertising Date: April 2014
- Tentative Construction: 2015 – 2016
- Concurrent Construction with Contracts M and Q

Contract O



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

Contract O

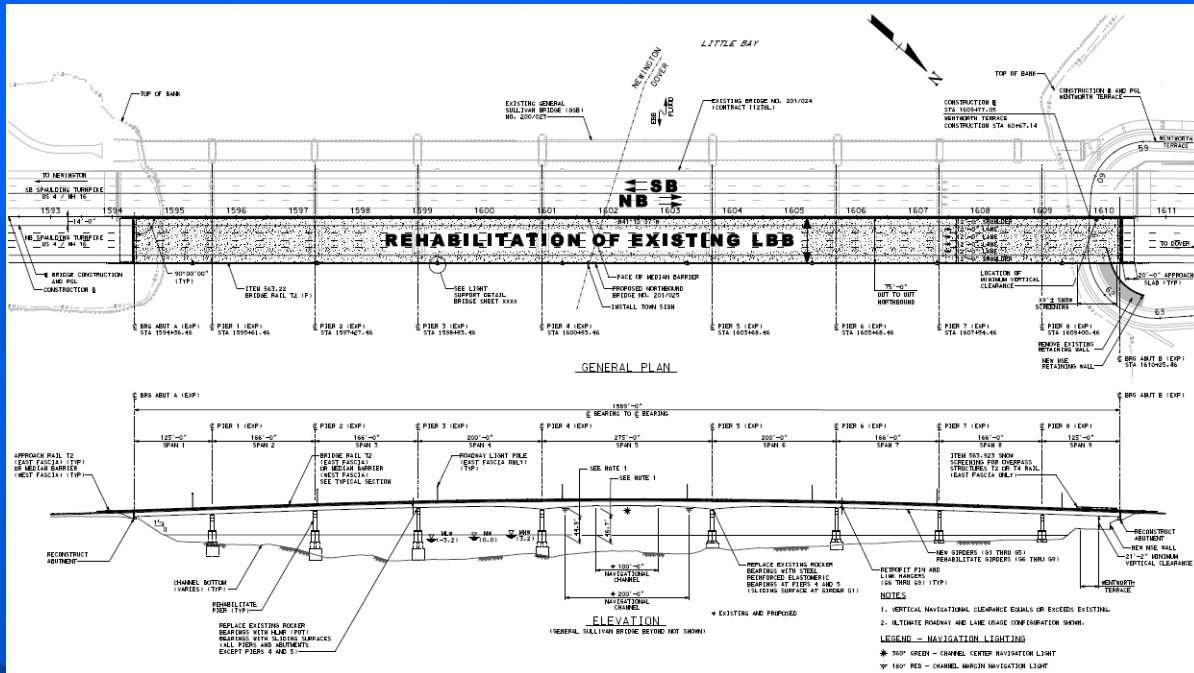
- Original Construction Completed in 1964 for NB Traffic with SB Traffic on General Sullivan Bridge

- Easterly Half of Bridge Construction Completed in 1982 for NB Traffic and General Sullivan Bridge Closed to Vehicular Traffic

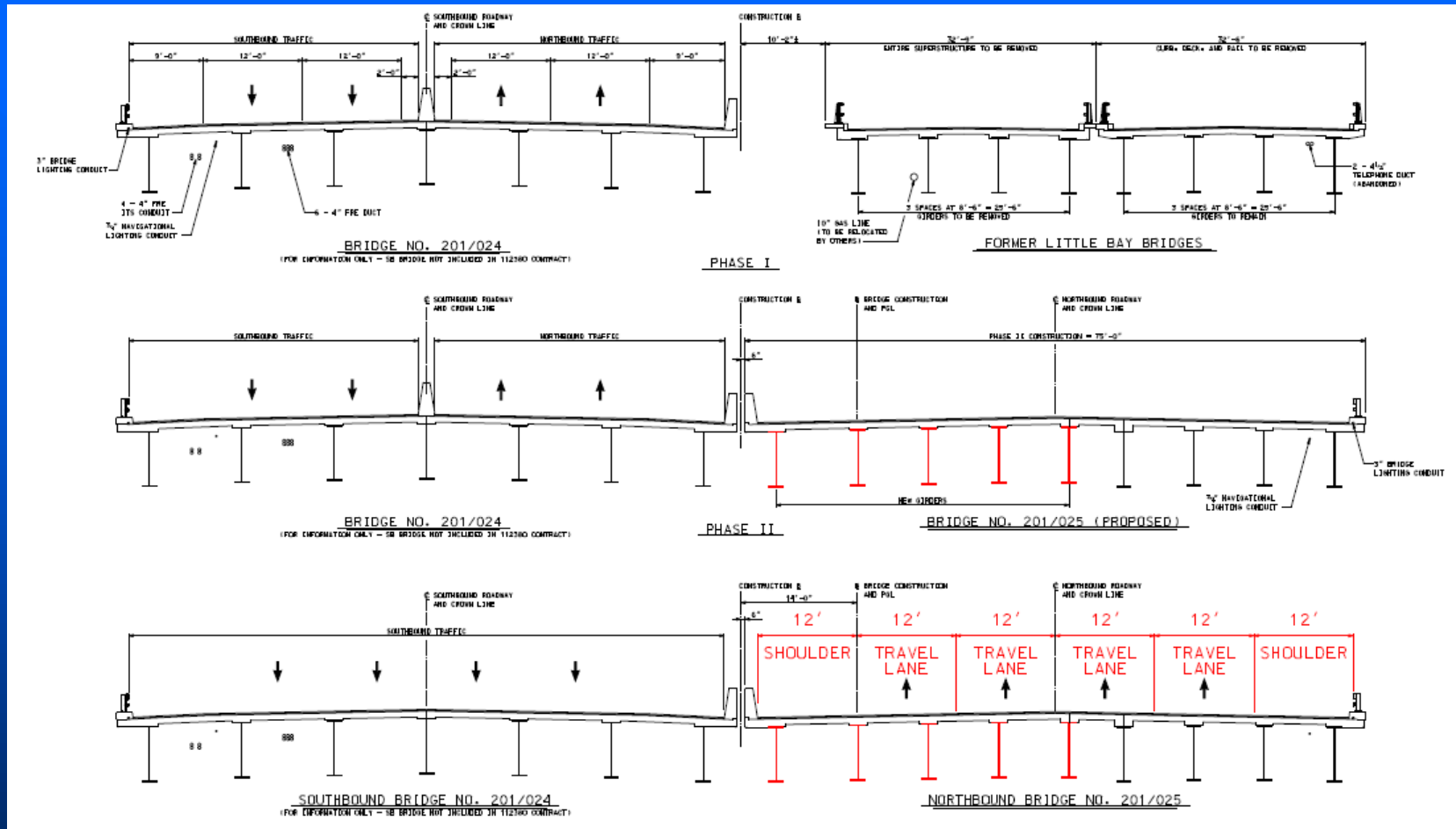
- Abutment Reconstruction

- Older Structural Steel Members being Replaced to Meet Current Standards

- Minor Pier Repair Work



Contract O



- Older Structural Steel Members being Replaced to Meet Current Standards
- Utilize Existing Concrete Deck as Work Platform to Replace Older Structural Steel and Concrete Deck
- Utilize New Concrete Deck as Work Platform to Replace Existing Concrete Deck

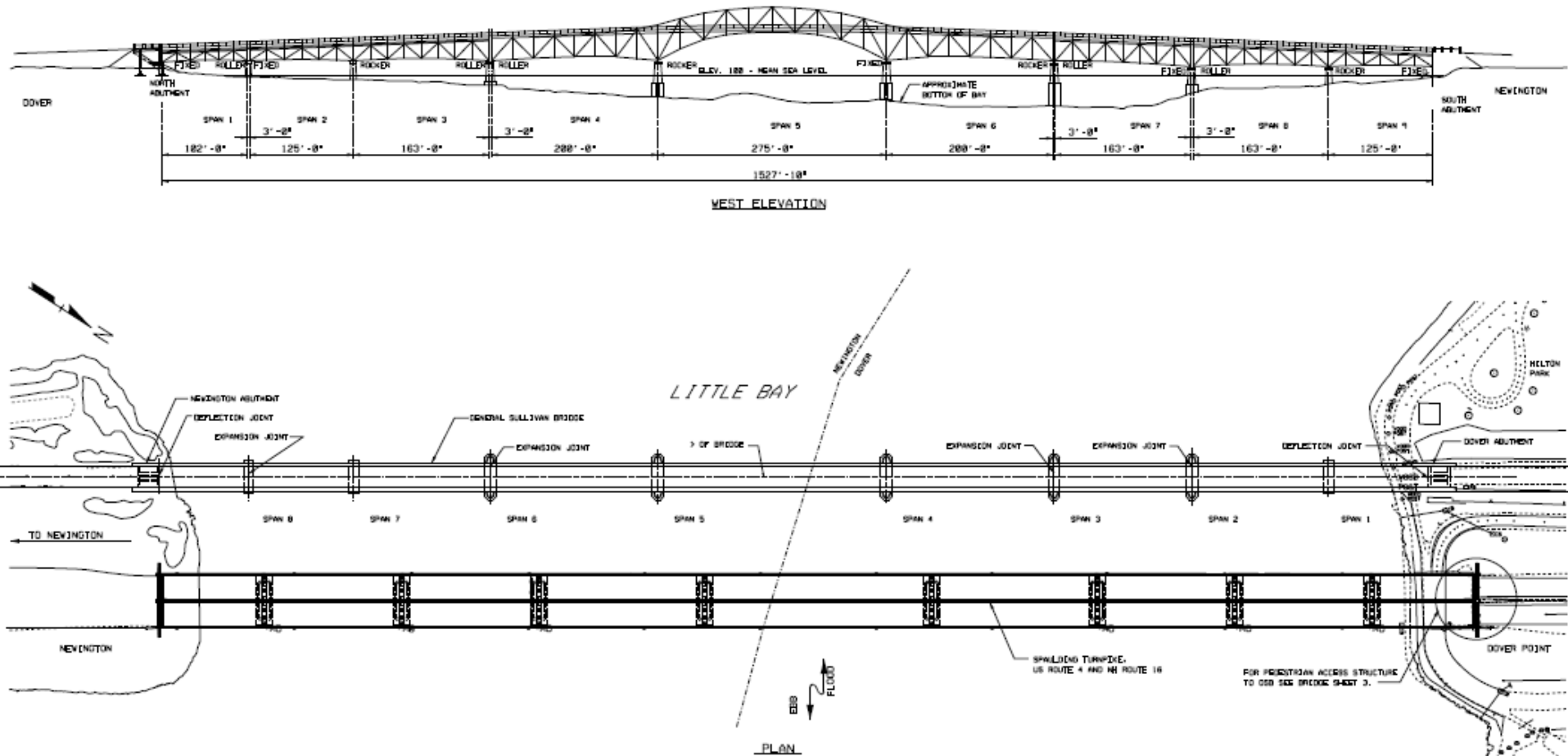
Contract S



Contract S – Existing General Sullivan Bridge Rehabilitation- \$ 26.8M

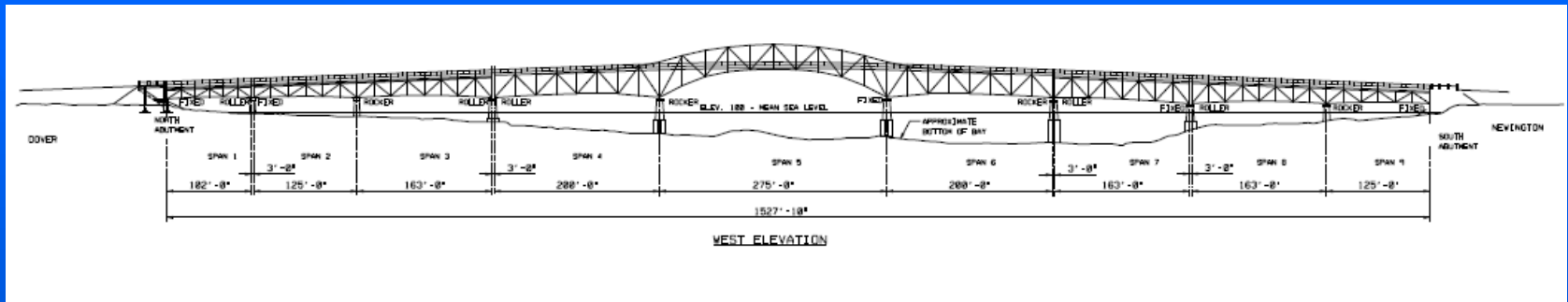
- Tentative Advertising Date: October 2016
- Tentative Construction: 2017 – 2019
- Concurrent Construction with Contract Q

Contract S



- Rehabilitates Existing 9 Span General Sullivan Bridge for Pedestrian and Bicycle Use

Contract S



- Dover Abutment Rehabilitated with Contract L
- Full Deck and Floor System Replacement
- Inspections Scheduled over Next Several Years to Determine Extent of Rehabilitation Required
- Underwater Inspections Completed in 2011 and Found Minor Pier Repair Work is Required

Contact Information

Keith Cota, PE

Chief Project Manager

NH Department of Transportation

J.O. Morton Building

7 Hazen Drive

PO Box 483

Concord, NH 03302-0483

Phone : (603) 271-1615

Email: KCota@dot.state.nh.us

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

THANK YOU

Questions/Comments