

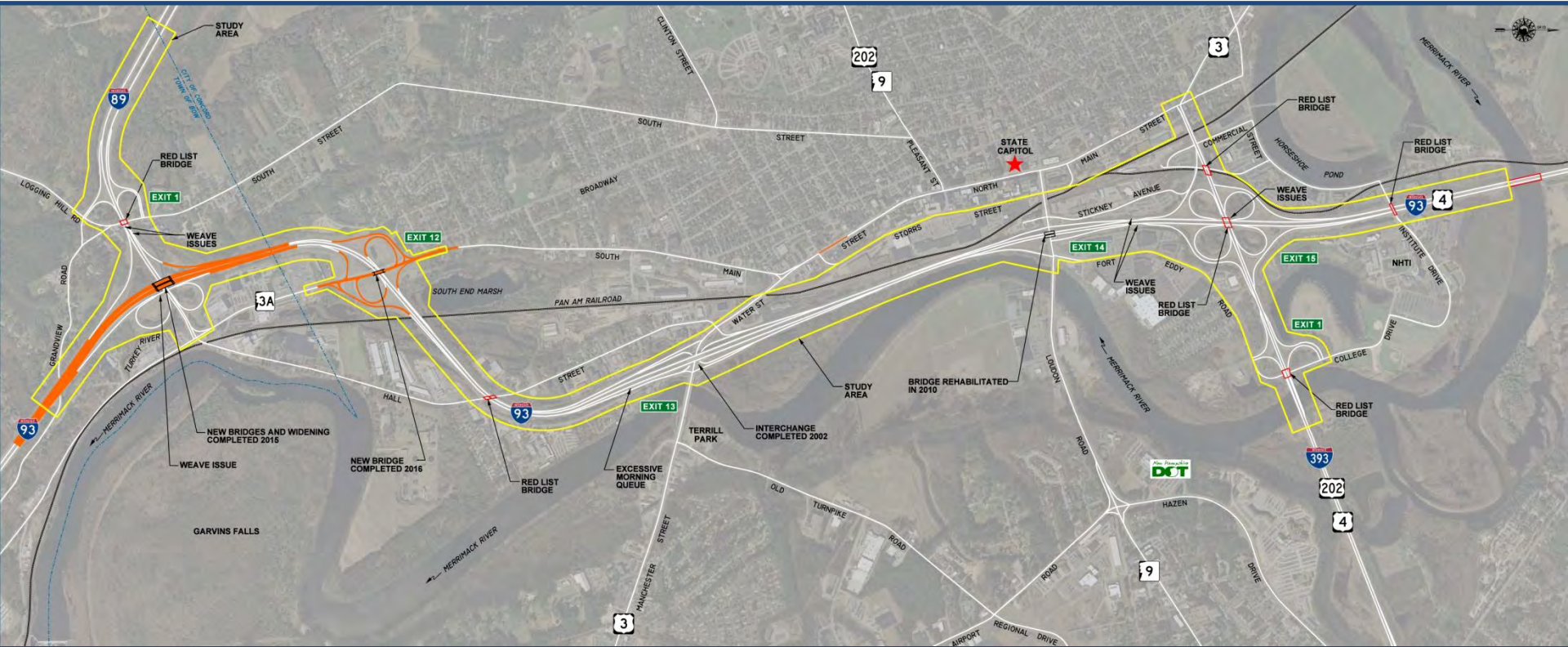
Bow Concord I-93 Improvements

Public Informational Meetings

May 31, 2017

June 1, 2017

Study Area



Bow Concord I-93 Improvements Project

Agenda

- Project History / Project Development Process
- Project Scope
- Project Purpose and Need
- Resources
- Alternatives Development
 - I-93 Corridor
 - Exit 13
 - Exit 12
 - I-89/I-93
 - Exit 14/15
- Next Steps
- Questions

Project History/ Project Development Process

Part A – Planning (2002 - 2008)

- Problem & Goal Statements
- Range of Reasonable Alternatives
- Determine Level of Environmental Document
- Prepare Summary/Classification Report

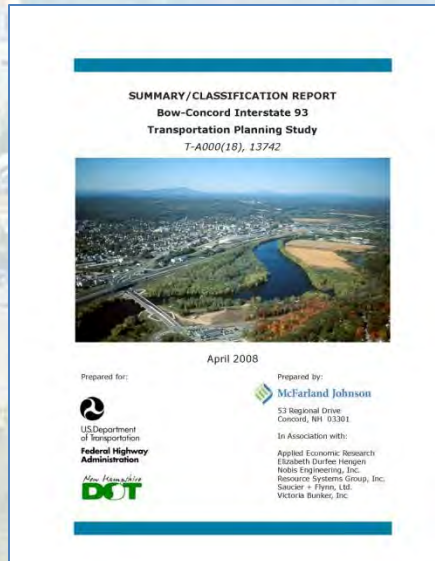
Red List Bridges (2008 - 2016)

- Exit 14 Rehabilitation
- I-93 over I-89 Replacement
- Exit 12 Replacement

Part B – Scoping (2013 - 2017)

- Select Preferred Alternative
- Environmental Documentation (EA)
- Public Hearing

Part C – Final Design



Part B Scope

Preliminary Engineering

- Traffic Modeling
- Alternatives Development
- Cost Estimates
- Rail & Transit Assessment Report
- Corridor Report
- Engineering Report

Public Participation

- Public Meetings
- Project Website
- Public Hearing

NEPA Document

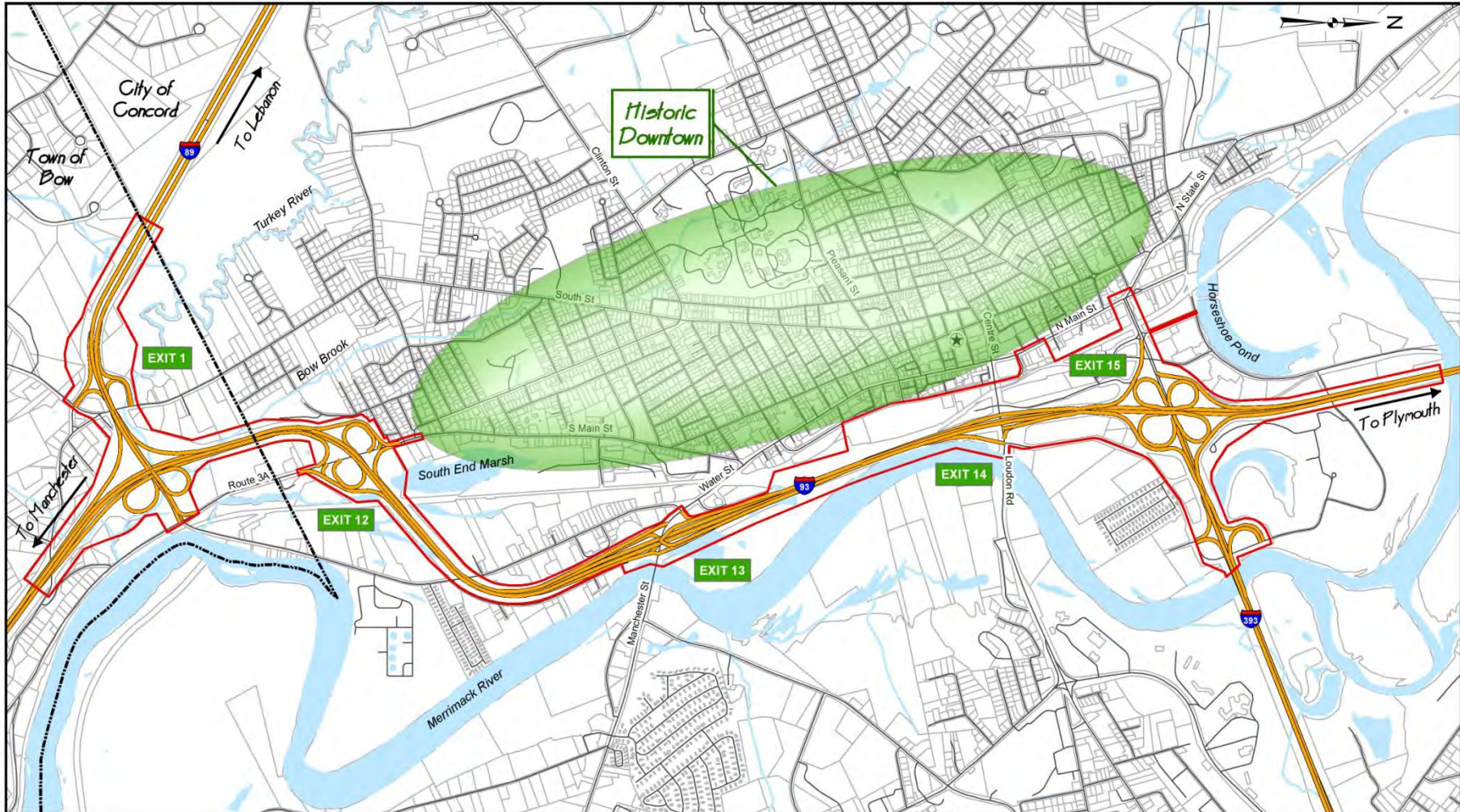
- Prepare Purpose and Need
- Environmental Assessment
- FONSI

Project Purpose and Need

Purpose

The purpose of the Interstate 93 Bow-Concord project is to address the existing and future transportation needs for all users of this four-mile segment of I-93, while balancing the needs of the surrounding communities, by providing a safe and efficient transportation corridor for people, goods and services.

Cultural Resources



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Legend

- State Capital
- Study Area
- Parcels
- Streams
- Rivers and Ponds
- Roadways
- Rural - Principal Arterial -- Interstate
- Urban - Principal Arterial -- Interstate
- Urban - Principal Arterial -- Other Freeways and Expressways

New Hampshire DOT
U.S. Department of Transportation
Federal Highway Administration
McFarland Johnson

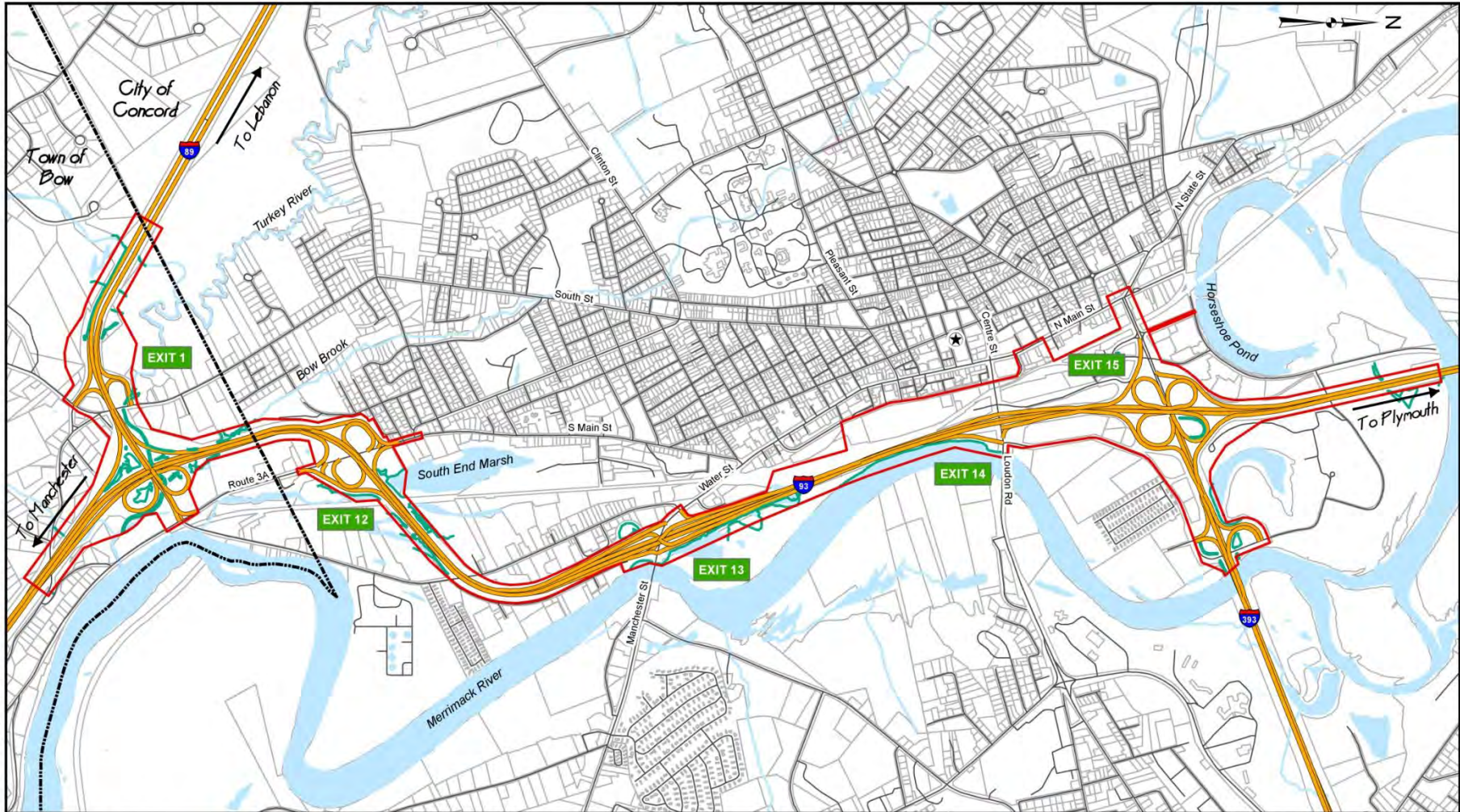
BOW-CONCORD I-93 IMPROVEMENTS

STUDY AREA OVERVIEW

FIGURE 1.1

DATE: DECEMBER 2015 SCALE: 1"=1500'

Delineated Wetlands



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Legend

-  State Capital
-  Study Area
-  Parcels
-  Streams
-  Rivers and Ponds
-  WETLANDS / WATERWAYS





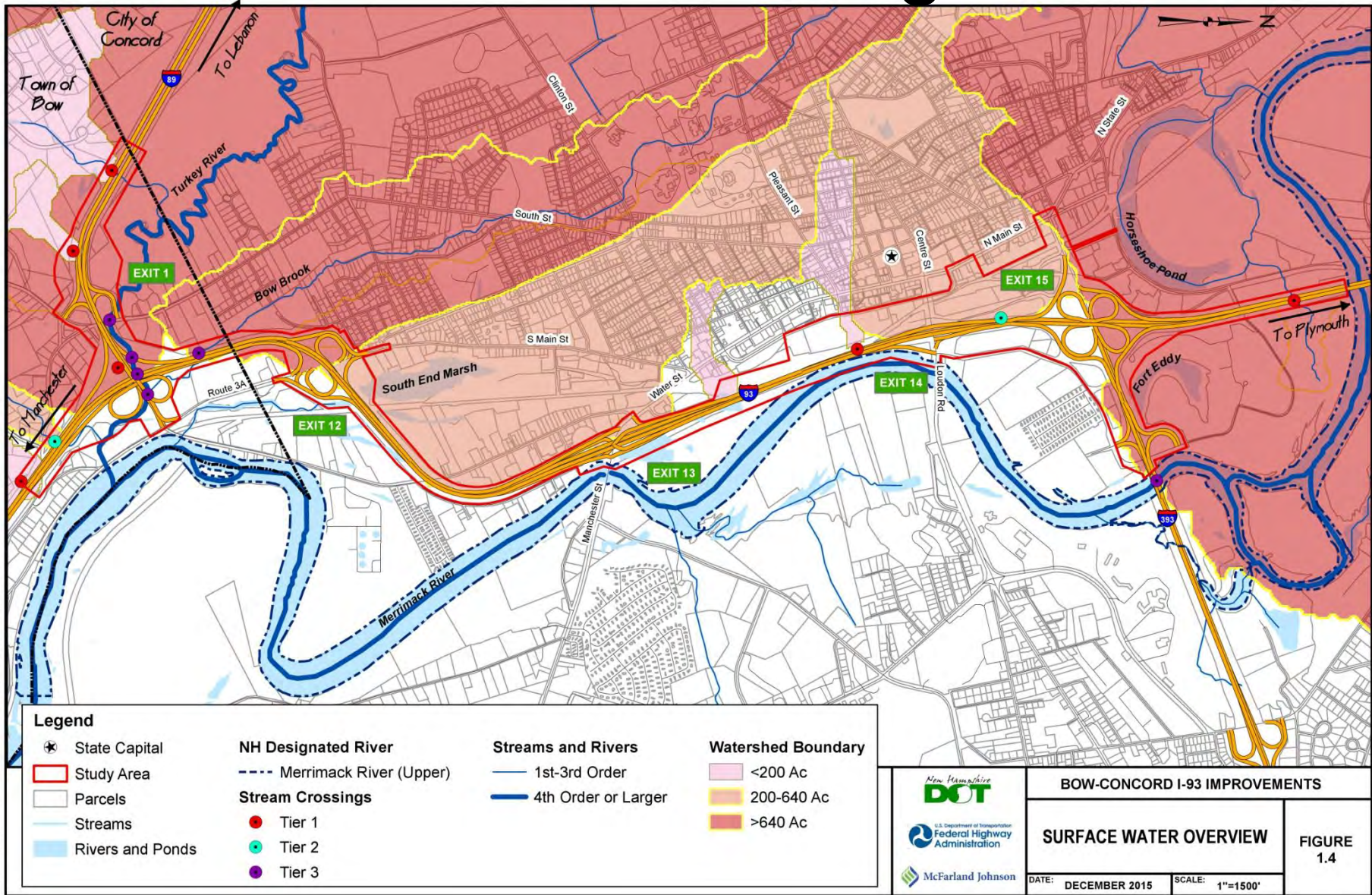
BOW-CONCORD I-93 IMPROVEMENTS

DELINEATED WETLANDS

FIGURE 1.14

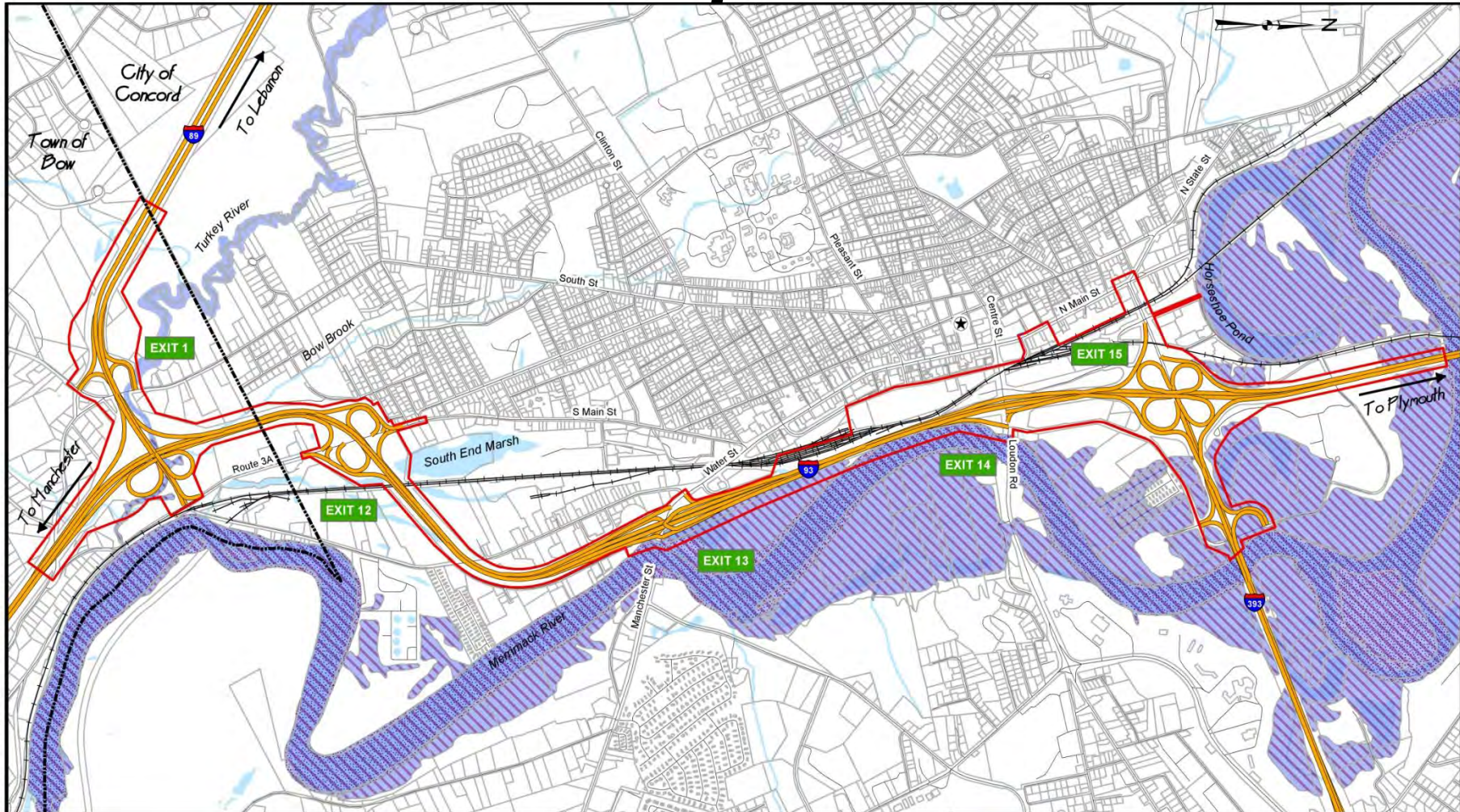
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Stream Crossings



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Floodplains



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Legend

- Study Area
- Parcels
- Railroad
- Streams
- Rivers and Ponds
- Regulatory Floodway
- ZONE A - No Base Flood Elevation
- ZONE AE - Base Flood Elevation Provided

New Hampshire
DOT
U.S. Department of Transportation
Federal Highway Administration
McFarland Johnson

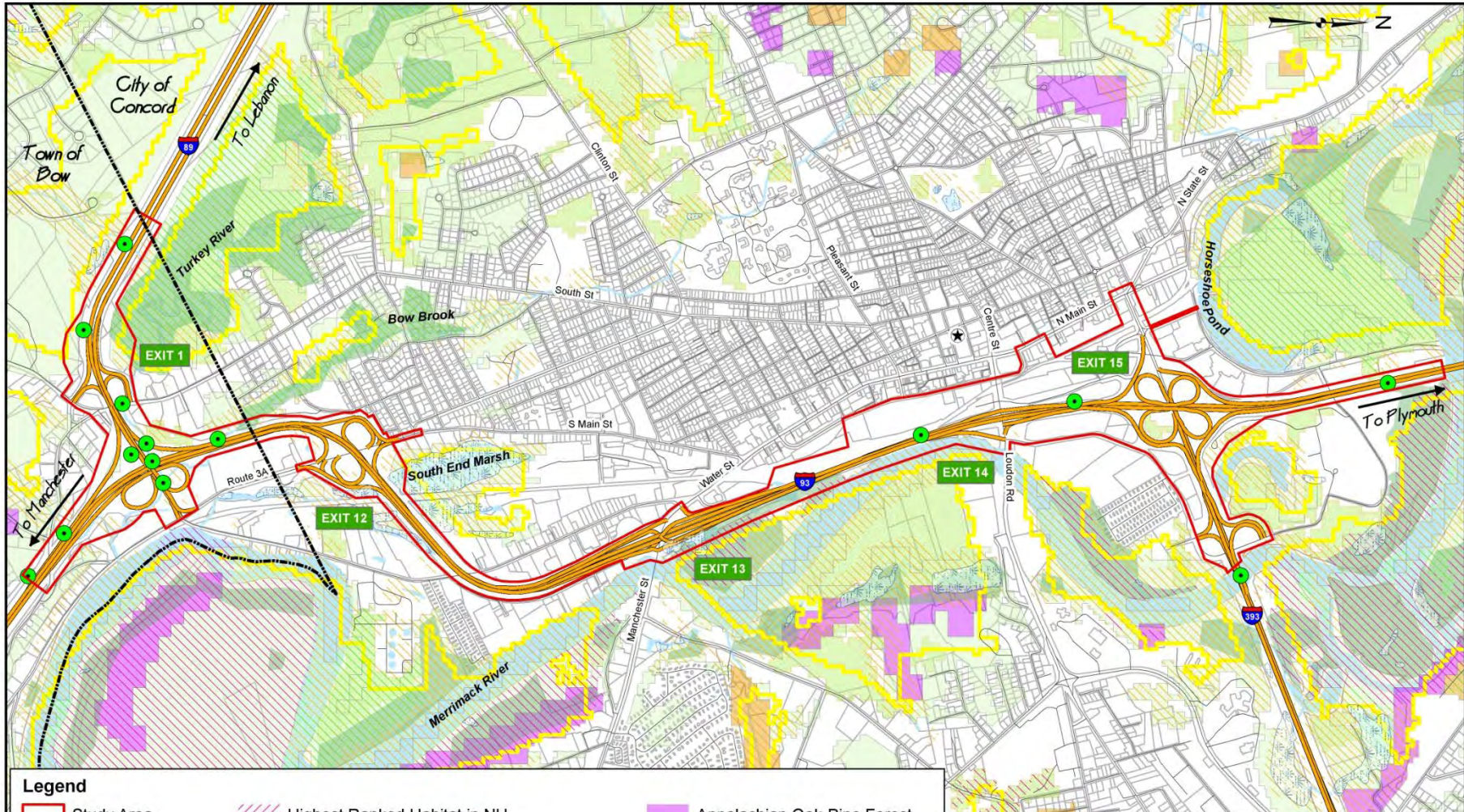
BOW-CONCORD I-93 IMPROVEMENTS

**FLOOD HAZARD AREAS
OVERVIEW**

**FIGURE
1.2**

DATE: DECEMBER 2015 SCALE: 1"=1500'

Wildlife Habitat and Plant Communities



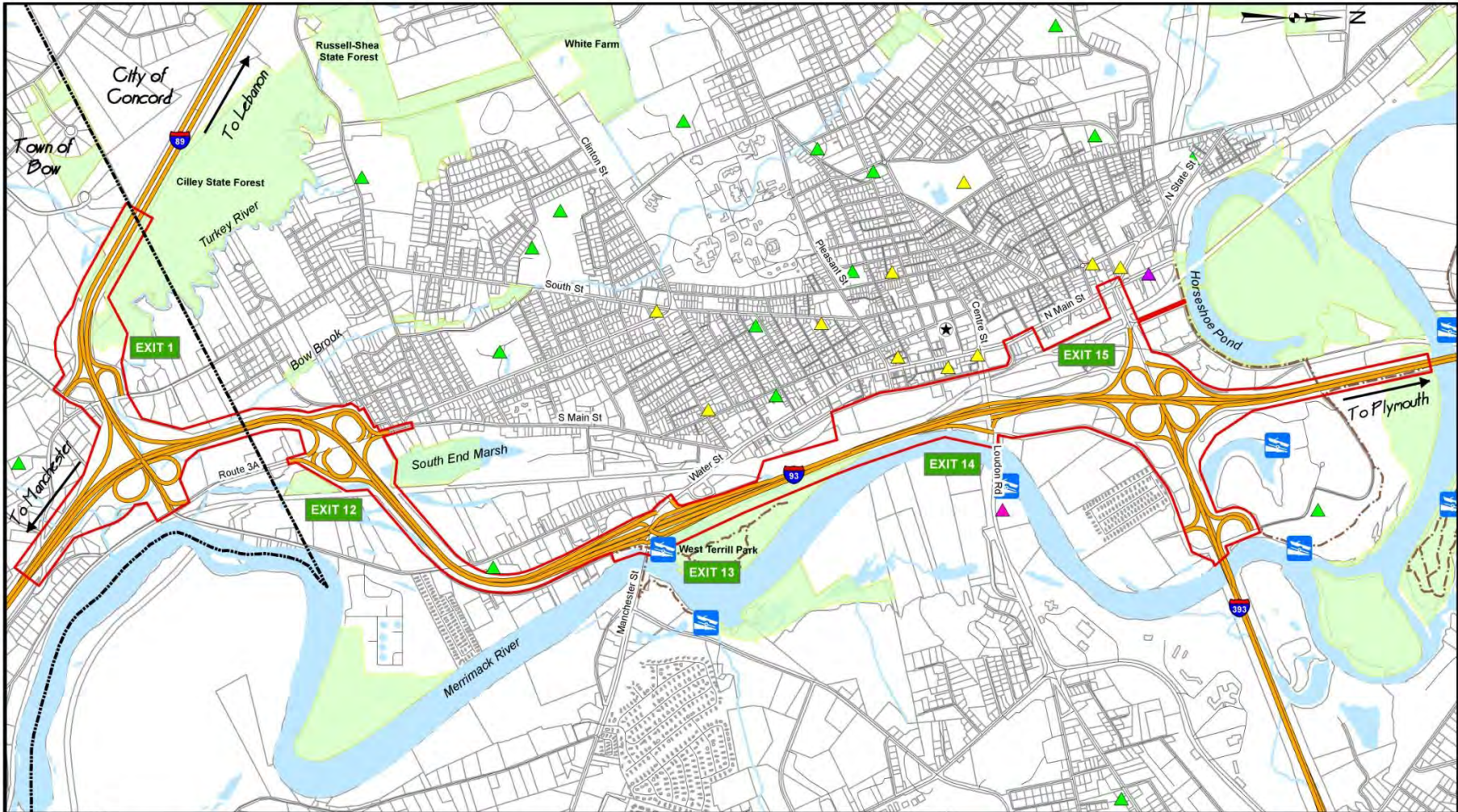
Legend

- | | | |
|------------------|---|------------------------------|
| Study Area | Highest Ranked Habitat in NH | Appalachian Oak-Pine Forest |
| Streams | Highest Ranked Habitat in Biological Region | Hemlock-Hardwood-Pine Forest |
| Rivers and Ponds | Supporting Landscapes | Pitch Pine Forest |
| Marsh | Unfragmented Habitat | Grasslands |
| Stream Crossings | Floodplain Forest | |

New Hampshire
DOT
U.S. Department of Transportation
Federal Highway Administration
McFarland Johnson

BOW-CONCORD I-93 IMPROVEMENTS	
PLANTS AND WILDLIFE OVERVIEW	
DATE: DECEMBER 2015	SCALE: 1"=1500'
FIGURE 1.6	

Conservation Lands



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Legend

- State Capital
- Study Area
- Parcels
- Streams
- Rivers and Ponds
- Trails
- Public Water Access
- Conservation Lands
- Field Sports
- Historic Site
- Park
- Winter Sports Area

New Hampshire
DOT
U.S. Department of Transportation
Federal Highway Administration
McFarland Johnson

BOW-CONCORD I-93 IMPROVEMENTS

CONSERVATION AND PUBLIC LANDS

FIGURE 1.3

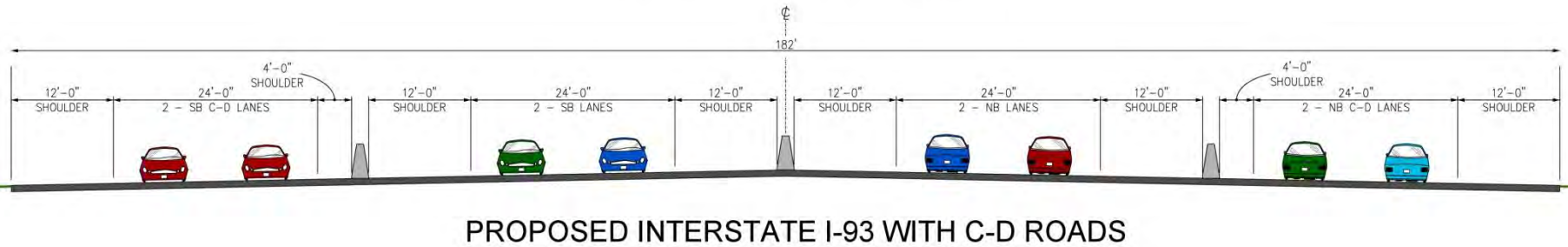
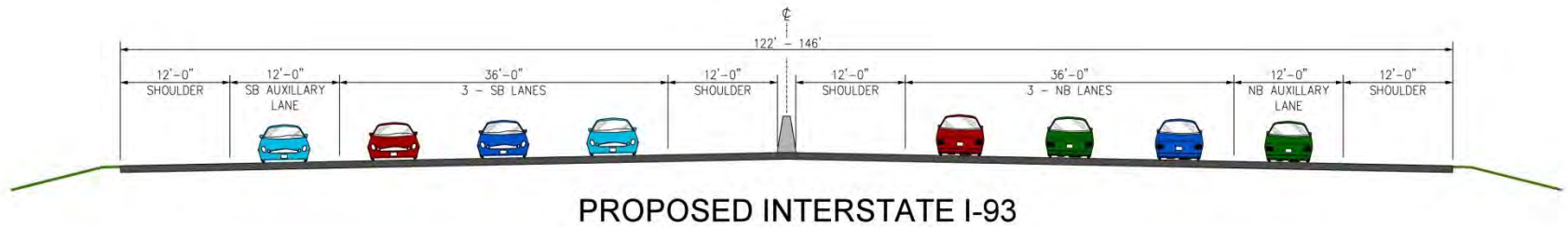
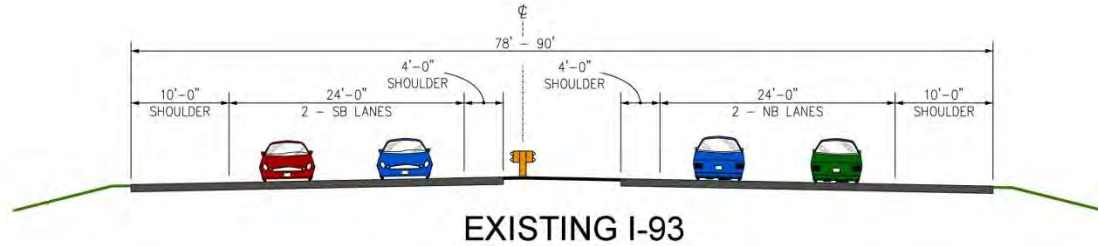
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Alternatives Development



Bow Concord I-93 Improvements Project

I-93 Typical Sections



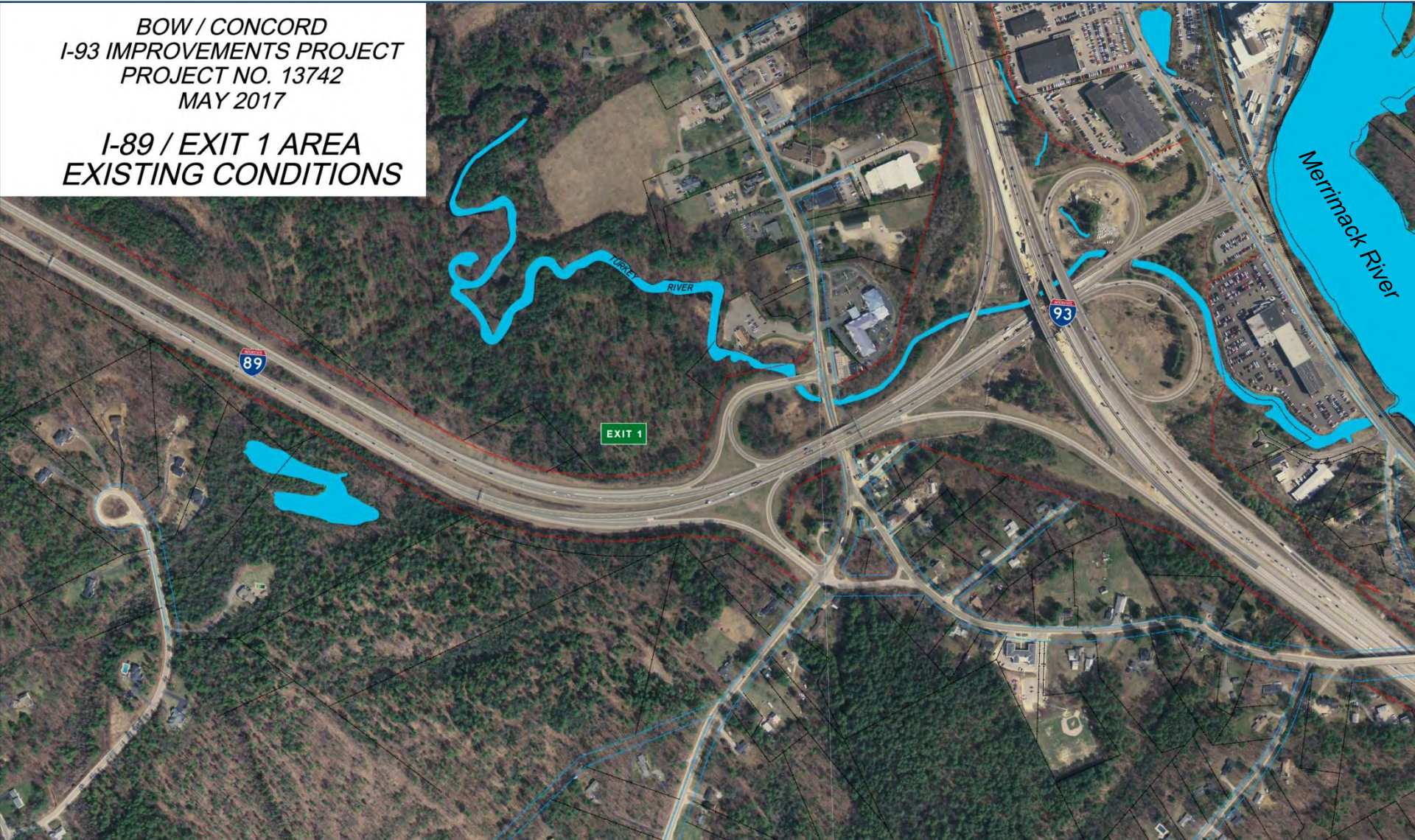
Alternatives Development



Bow Concord I-93 Improvements Project

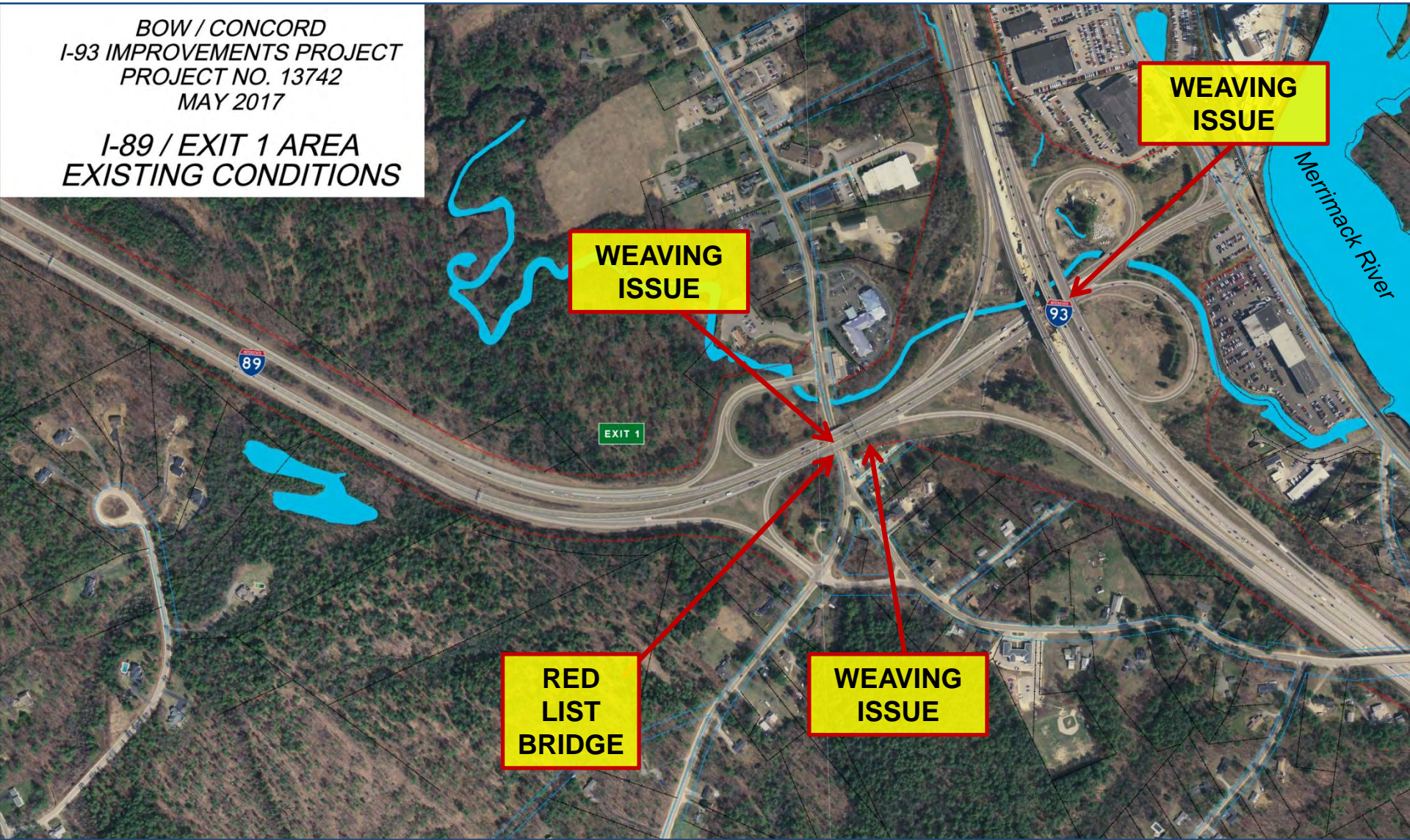
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I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**I-89 / EXIT 1 AREA
EXISTING CONDITIONS**



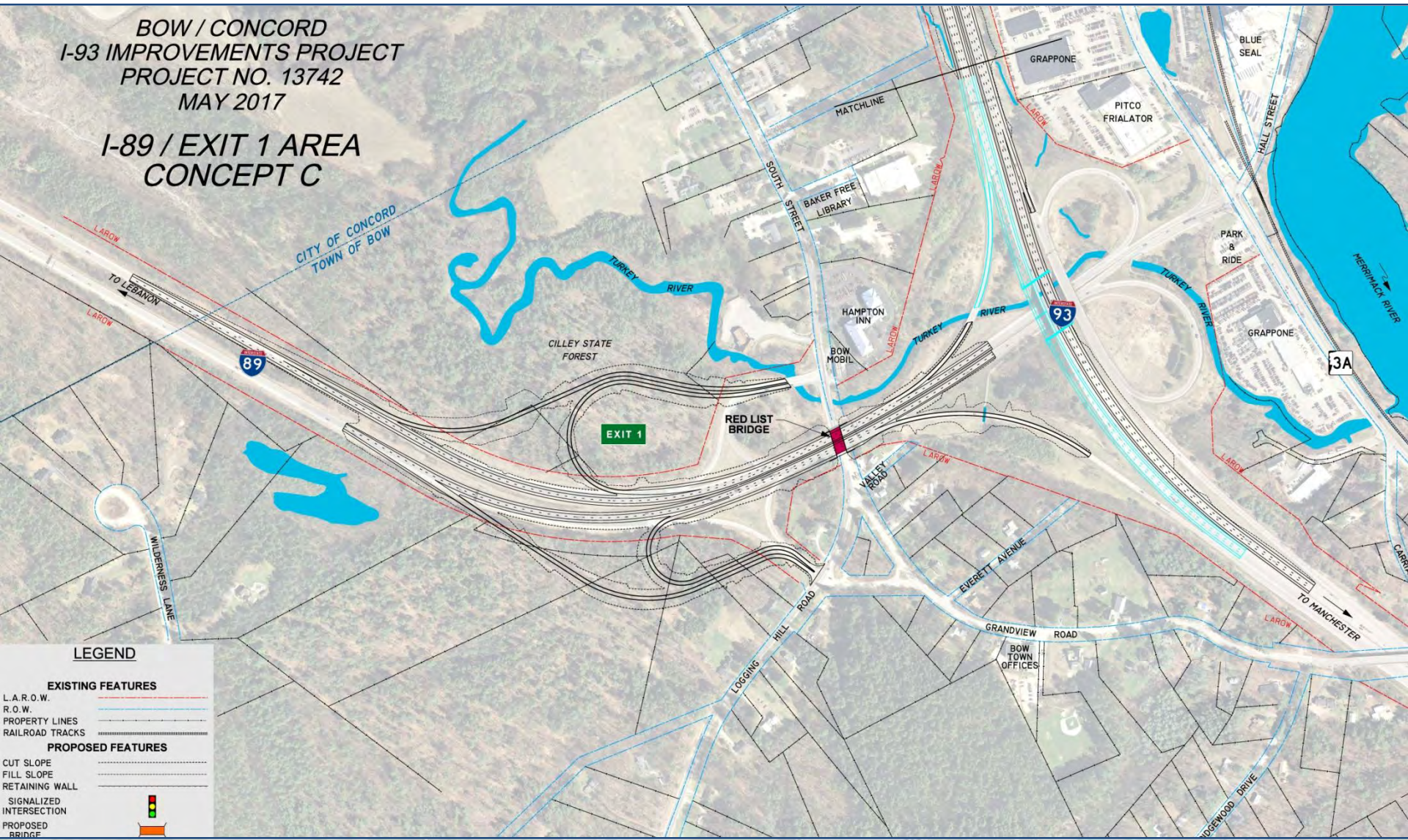
BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017

I-89 / EXIT 1 AREA
EXISTING CONDITIONS






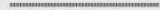
**BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**I-89 / EXIT 1 AREA
CONCEPT C**

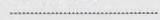
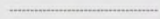
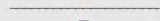




LEGEND

EXISTING FEATURES

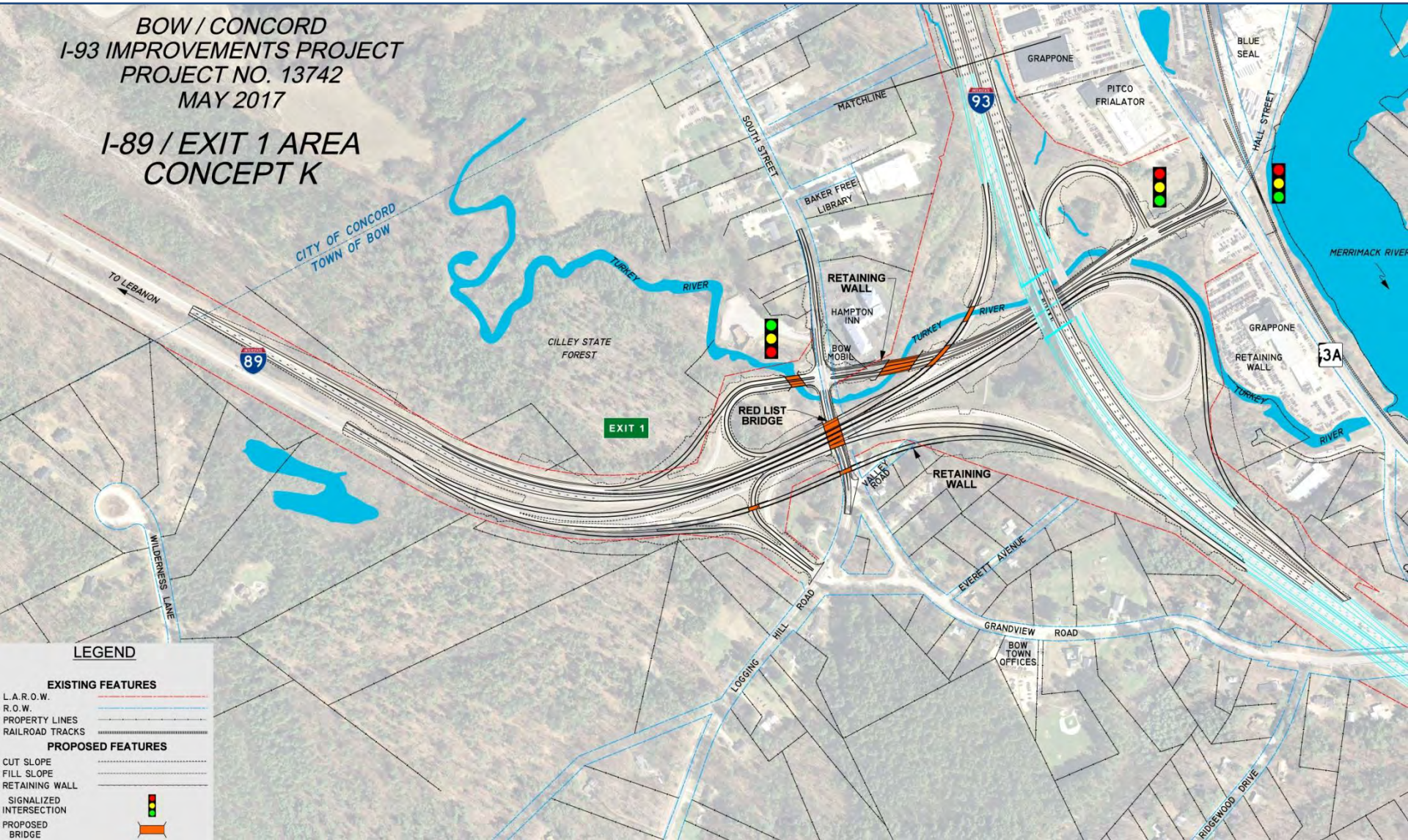
- L.A.R.O.W. 
- R.O.W. 
- PROPERTY LINES 
- RAILROAD TRACKS 

PROPOSED FEATURES



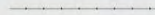

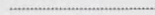
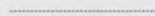



- CUT SLOPE 
- FILL SLOPE 
- RETAINING WALL 
- SIGNALIZED INTERSECTION 
- PROPOSED BRIDGE 

**BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
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MAY 2017**

**I-89 / EXIT 1 AREA
CONCEPT K**

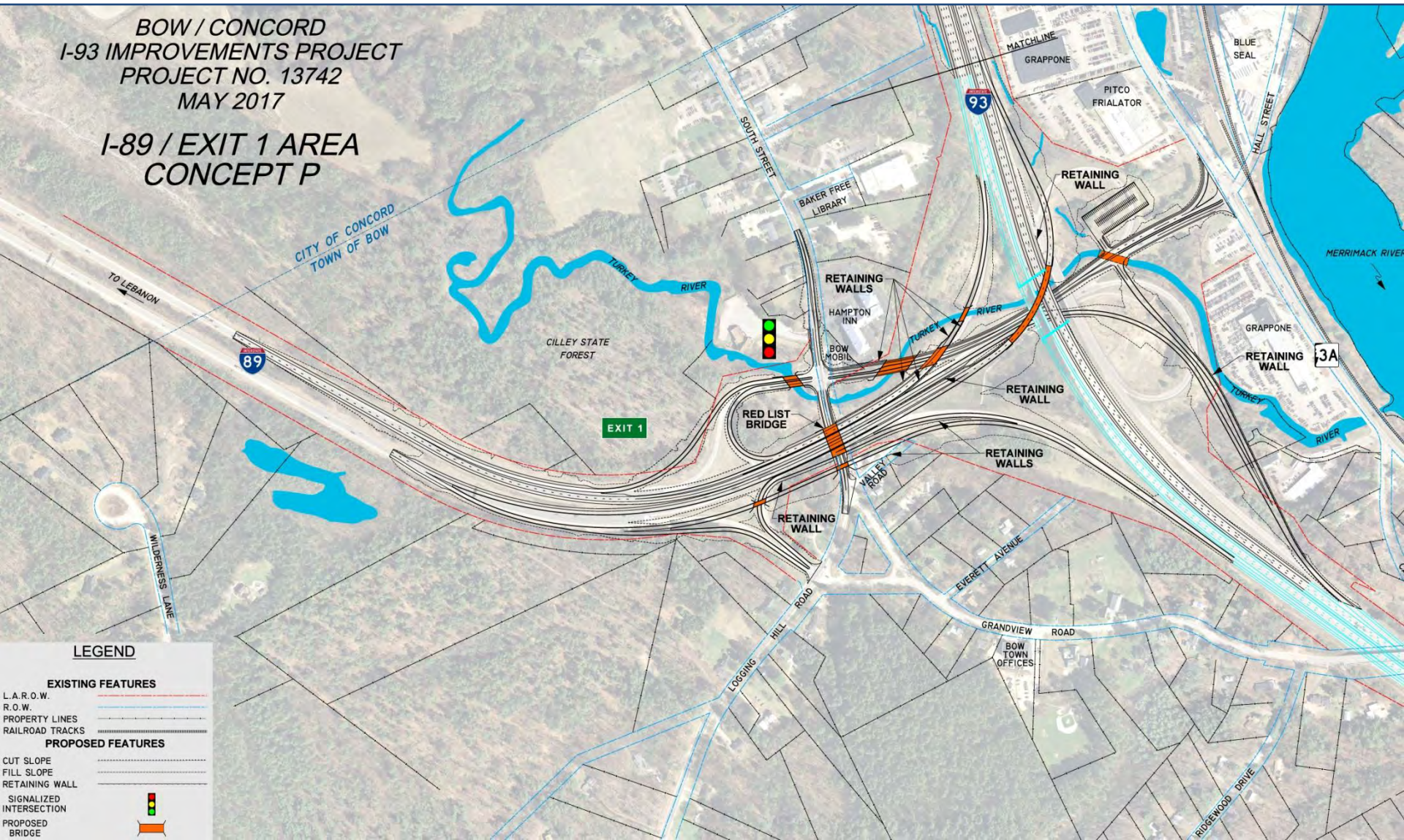


LEGEND



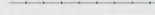
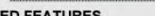

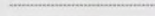



- EXISTING FEATURES**
- L.A.R.O.W. 
 - R.O.W. 
 - PROPERTY LINES 
 - RAILROAD TRACKS 
- PROPOSED FEATURES**
- CUT SLOPE 
 - FILL SLOPE 
 - RETAINING WALL 
 - SIGNALIZED INTERSECTION 
 - PROPOSED BRIDGE 

**BOW / CONCORD
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**I-89 / EXIT 1 AREA
CONCEPT P**



LEGEND

- EXISTING FEATURES**
- L.A.R.O.W. 
 - R.O.W. 
 - PROPERTY LINES 
 - RAILROAD TRACKS 
- PROPOSED FEATURES**
- CUT SLOPE 
 - FILL SLOPE 
 - RETAINING WALL 
 - SIGNALIZED INTERSECTION 
 - PROPOSED BRIDGE 

I-89 Comparison

CONSIDERATION	CONCEPT C	CONCEPT K	CONCEPT P
Exit 1 To I-93 Weaves	Improved	Eliminated	Eliminated
I-93 NB To I-89 NB Weave	No Change	Improved	Eliminated
I-89 To Route 3A Access	No Change	Via Exit 1 or Via I-93 Exit 12	Via Exit 1 or Via I-93 Exit 12
Property Impacts	Cilley State Forest & Private Parcels	Bow Mobil & Private Parcels	Bow Mobil & Private Parcels
# Red List Bridges	1	1	1
# New Bridges	0	4	5
Project Cost	\$30.0 M	\$62.5 M	\$87.6 M

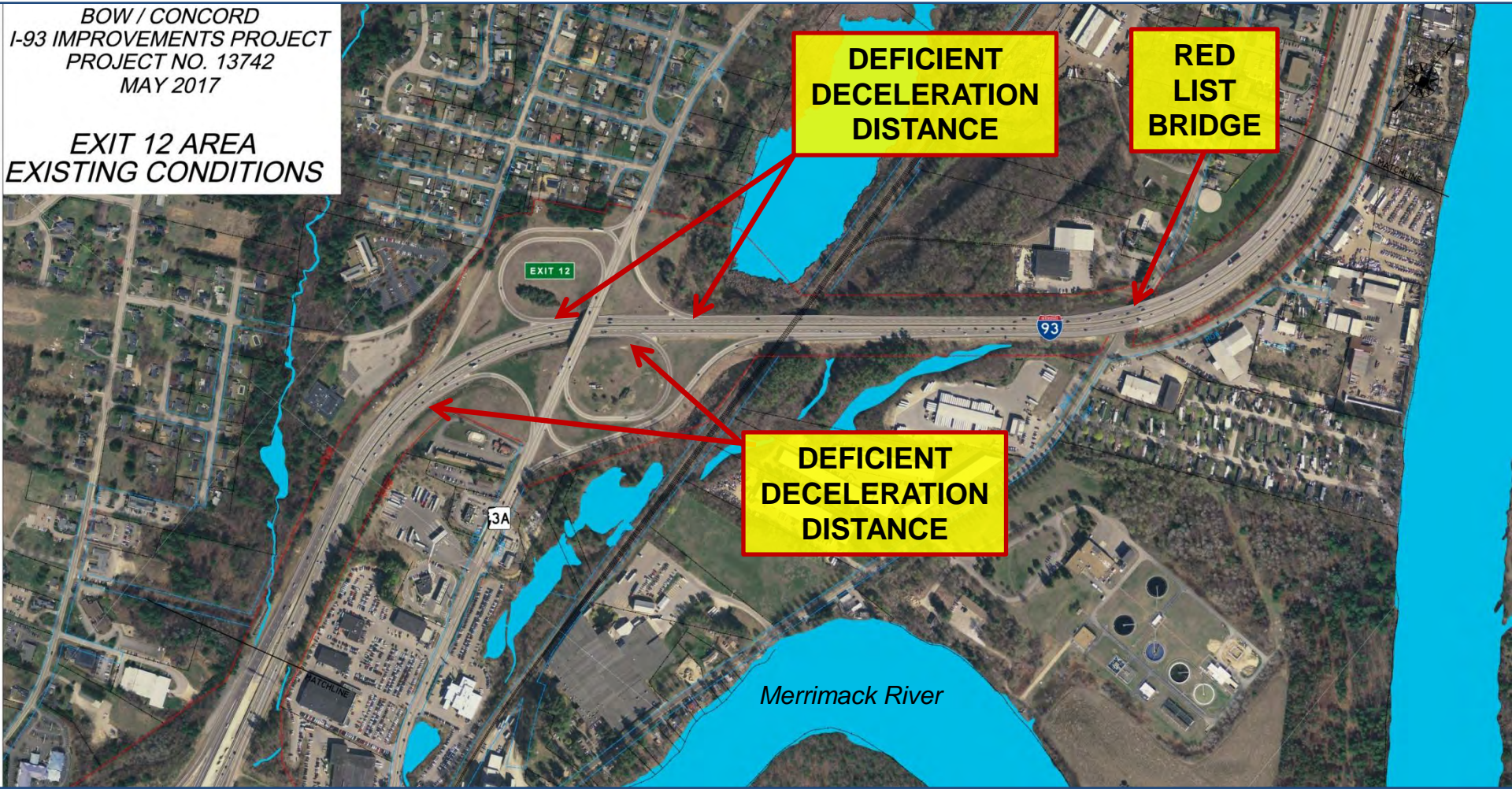
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I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**EXIT 12 AREA
EXISTING CONDITIONS**

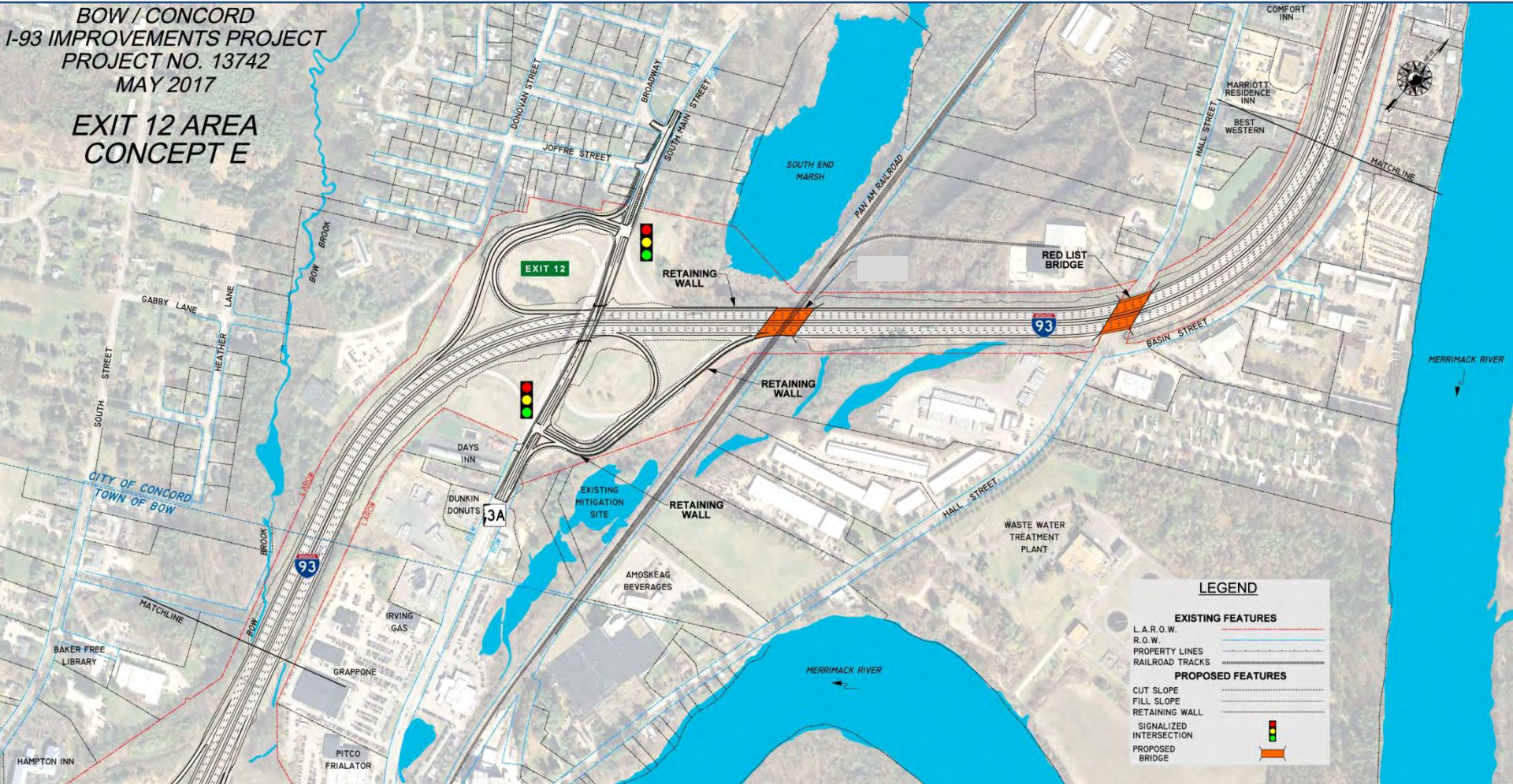


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PROJECT NO. 13742
MAY 2017**

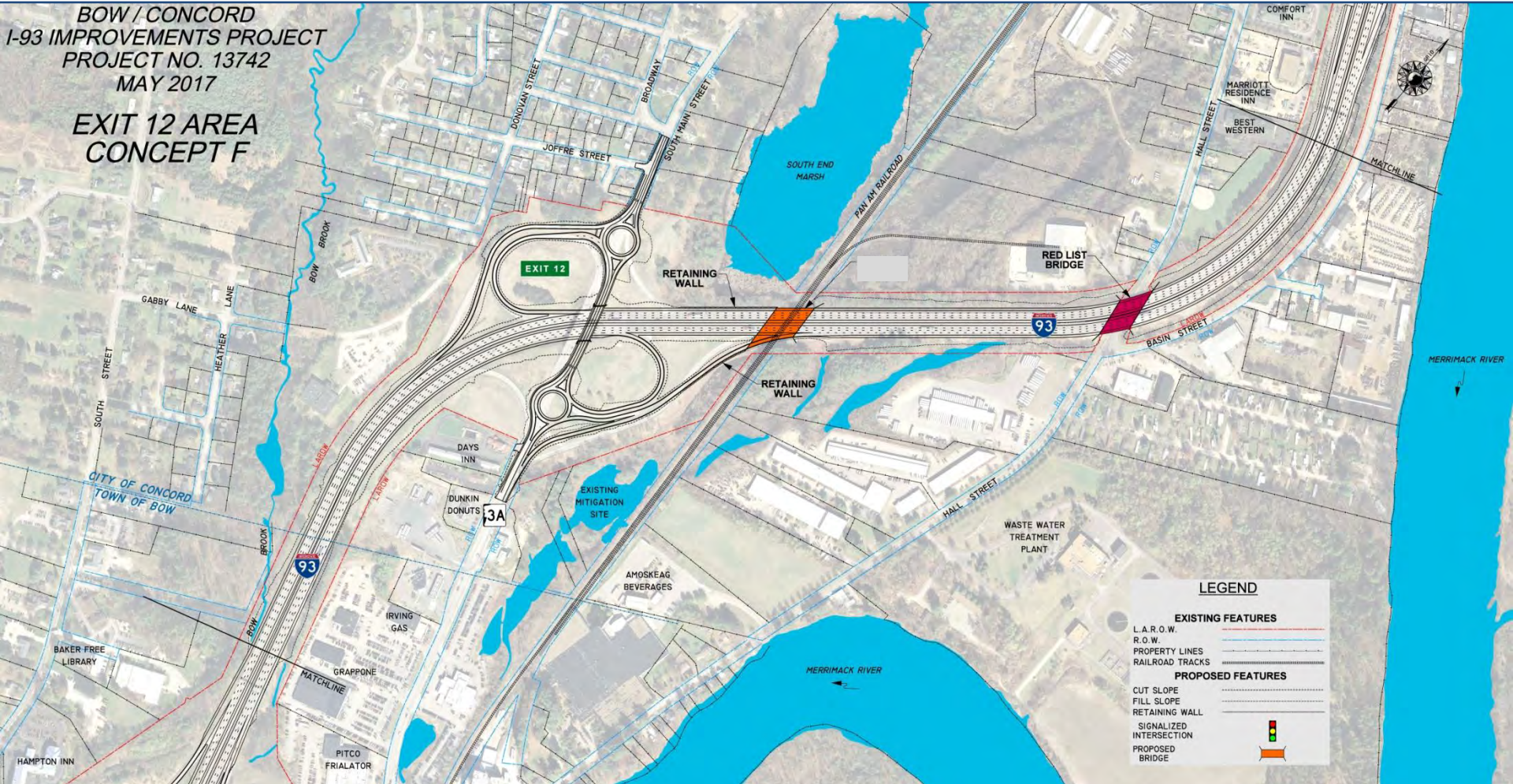
**EXIT 12 AREA
EXISTING CONDITIONS**



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PROJECT NO. 13742
MAY 2017
EXIT 12 AREA
CONCEPT E**



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MAY 2017
EXIT 12 AREA
CONCEPT F**



Exit 12 Comparison

CONSIDERATION	CONCEPT E	CONCEPT F
Level of Service (AM/PM)	LOS C/C with Queuing	LOS A/C with little Queuing
Property Impacts	Partial Impacts along Route 3A	Partial Impacts along Route 3A
# Red List Bridges	0	0
# New Bridges	0	0
Project Cost	\$34.4 M	\$34.5 M

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MAY 2017

EXIT 13 AREA
EXISTING CONDITIONS



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PROJECT NO. 13742
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EXIT 13 AREA
EXISTING CONDITIONS



**QUEUING
ISSUE**

Merrimack River

EXIT 13

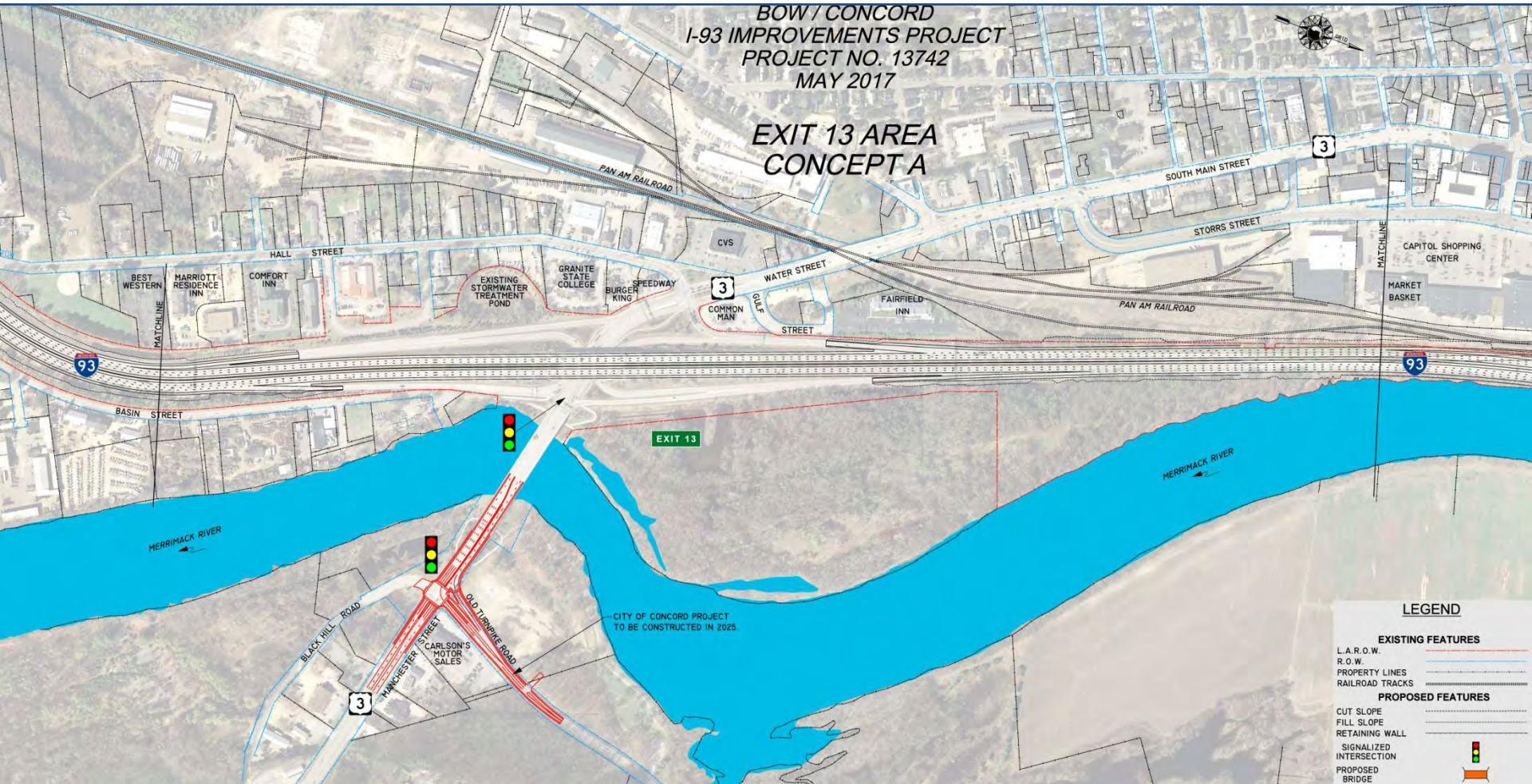
93

3












**BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**EXIT 13 AREA
CONCEPT A**



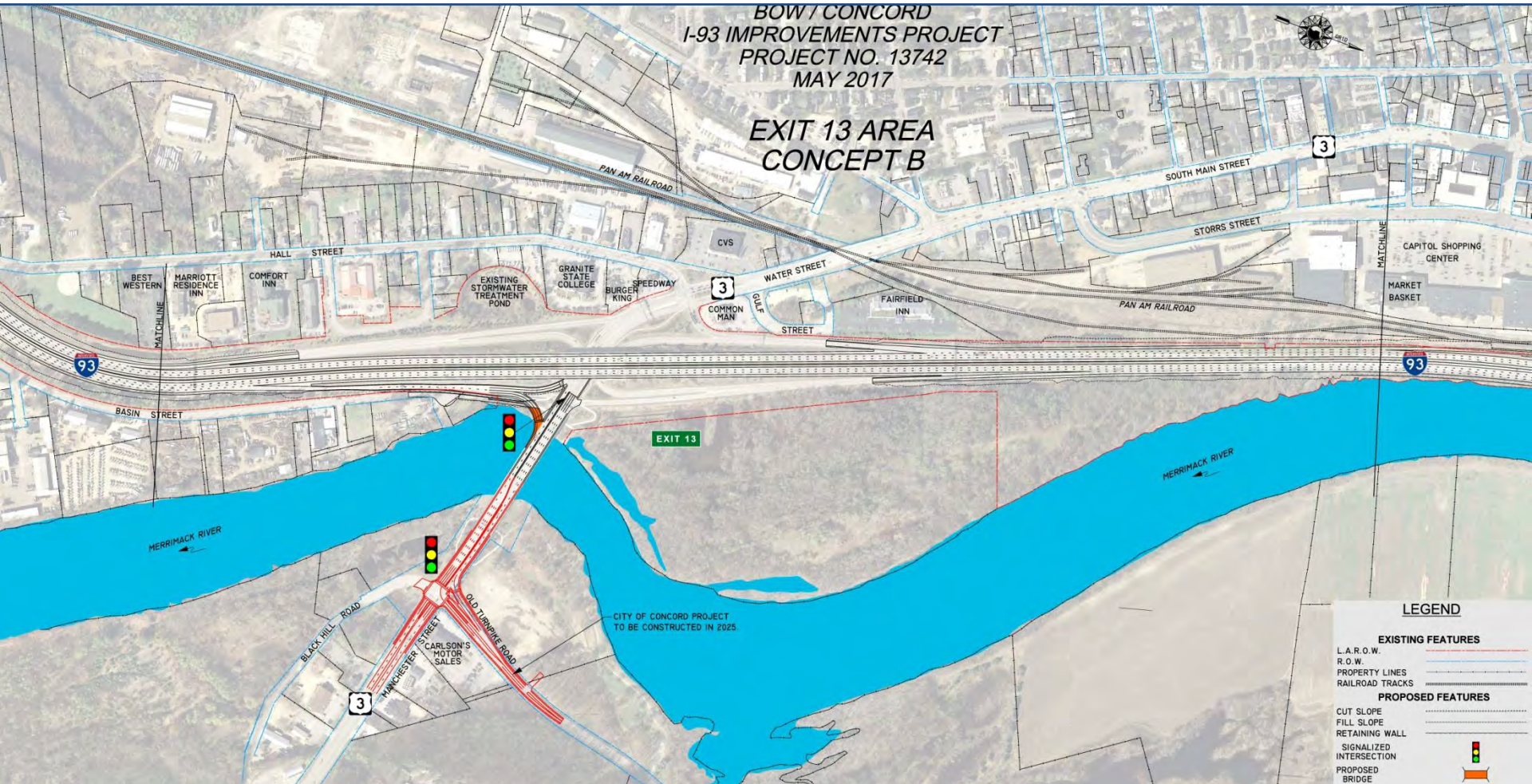
LEGEND

- EXISTING FEATURES**
- L.A.R.O.W. 
 - R.O.W. 
 - PROPERTY LINES 
 - RAILROAD TRACKS 
- PROPOSED FEATURES**
- CUT SLOPE 
 - FILL SLOPE 
 - RETAINING WALL 
 - SIGNALIZED INTERSECTION 
 - PROPOSED BRIDGE 






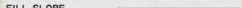





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I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**EXIT 13 AREA
CONCEPT B**



LEGEND

EXISTING FEATURES	
L.A.R.O.W.	
R.O.W.	
PROPERTY LINES	
RAILROAD TRACKS	
PROPOSED FEATURES	
CUT SLOPE	
FILL SLOPE	
RETAINING WALL	
SIGNALIZED INTERSECTION	
PROPOSED BRIDGE	

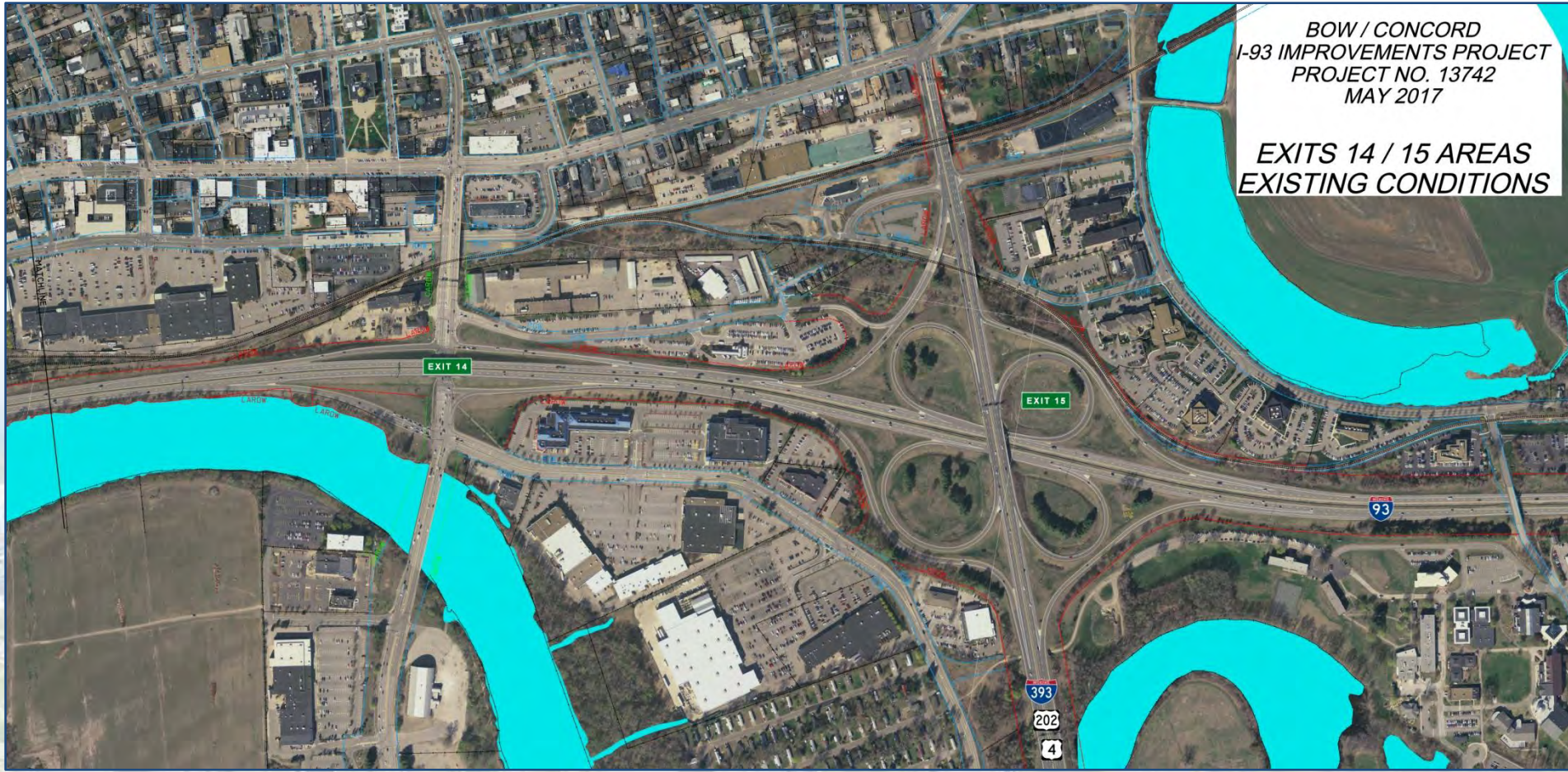


Exit 13 Comparison

CONSIDERATION	CONCEPT A	CONCEPT B
Queuing on NB Exit Ramp	Onto I-93 by 2035	Acceptable
Property Impacts	None	1 Private Parcel
# Red List Bridges	1	1
# New Bridges	0	0
Project Cost	\$28.6 M	\$33.1 M

**BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
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**EXITS 14 / 15 AREAS
EXISTING CONDITIONS**



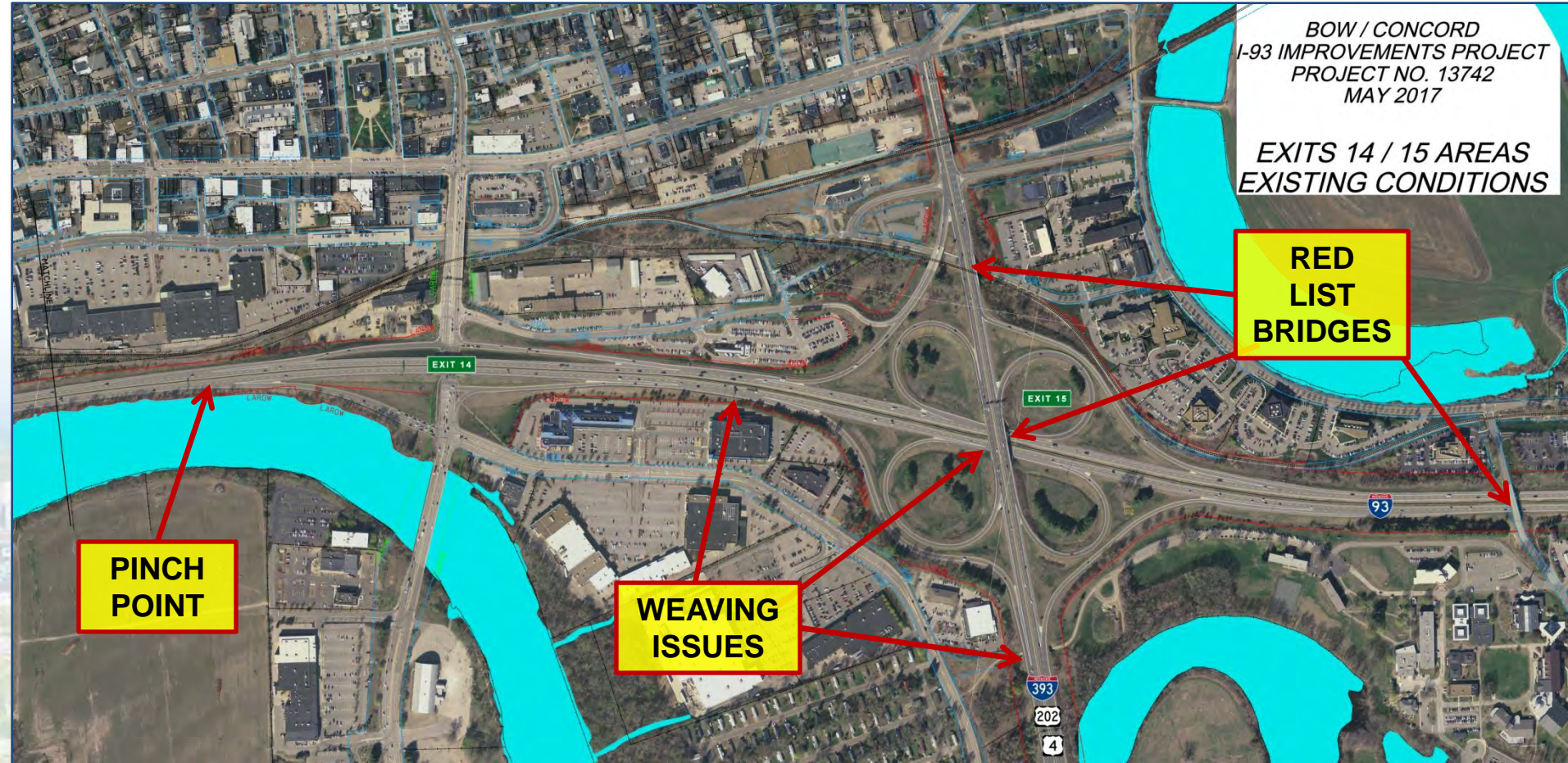
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I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017

EXITS 14 / 15 AREAS
EXISTING CONDITIONS

**RED
LIST
BRIDGES**

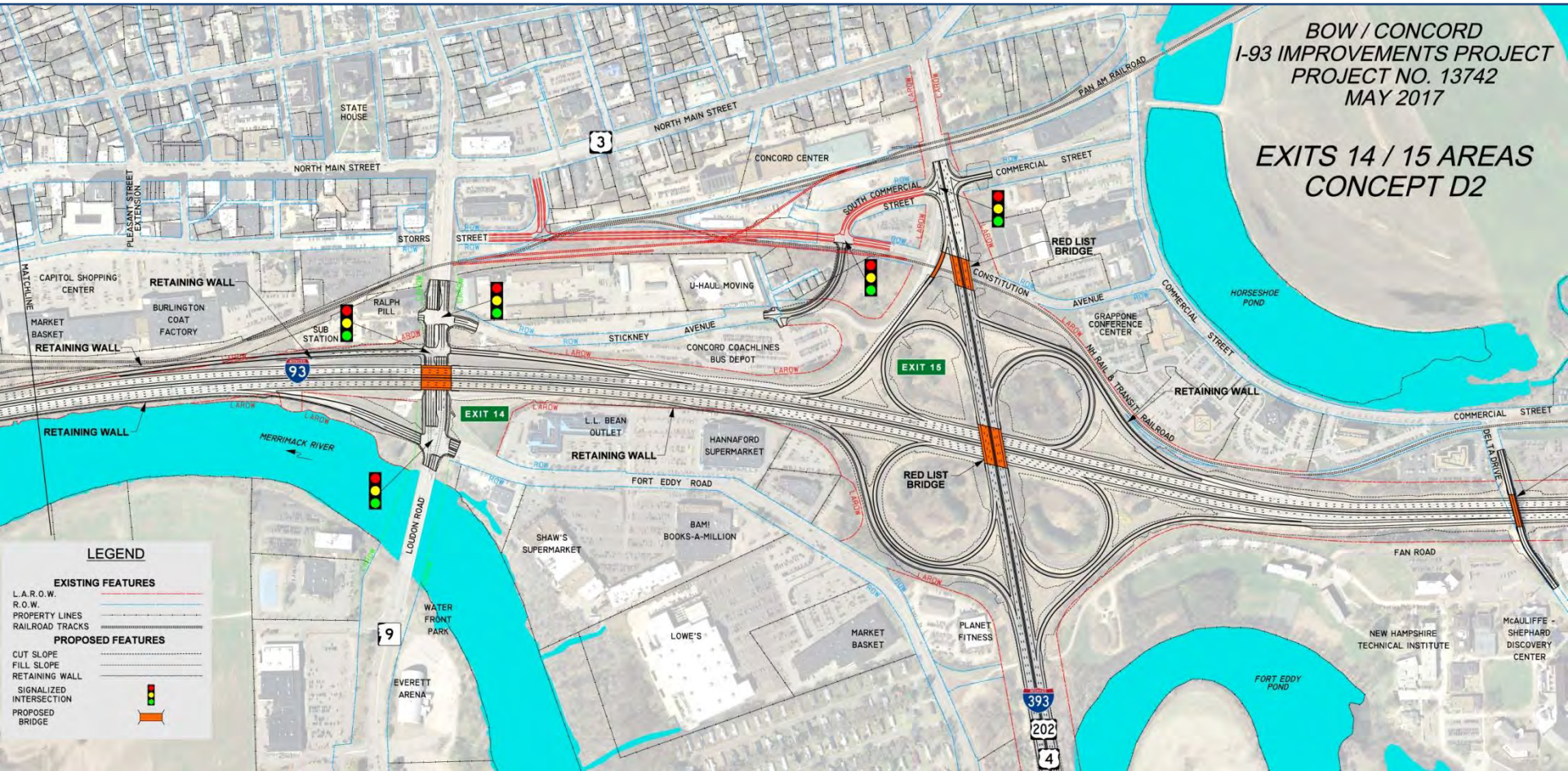
**PINCH
POINT**

**WEAVING
ISSUES**



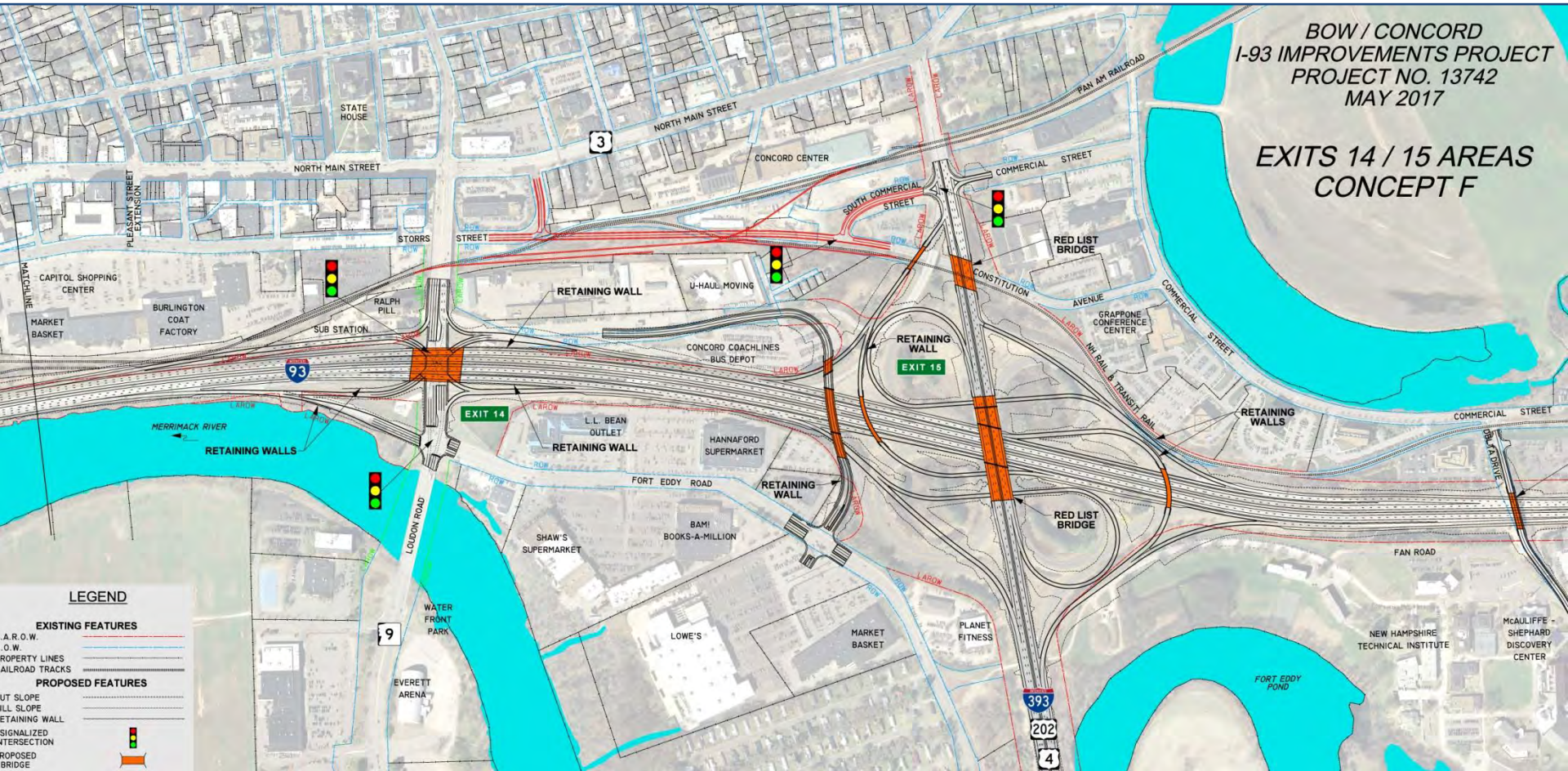
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PROJECT NO. 13742
MAY 2017**

**EXITS 14 / 15 AREAS
CONCEPT D2**



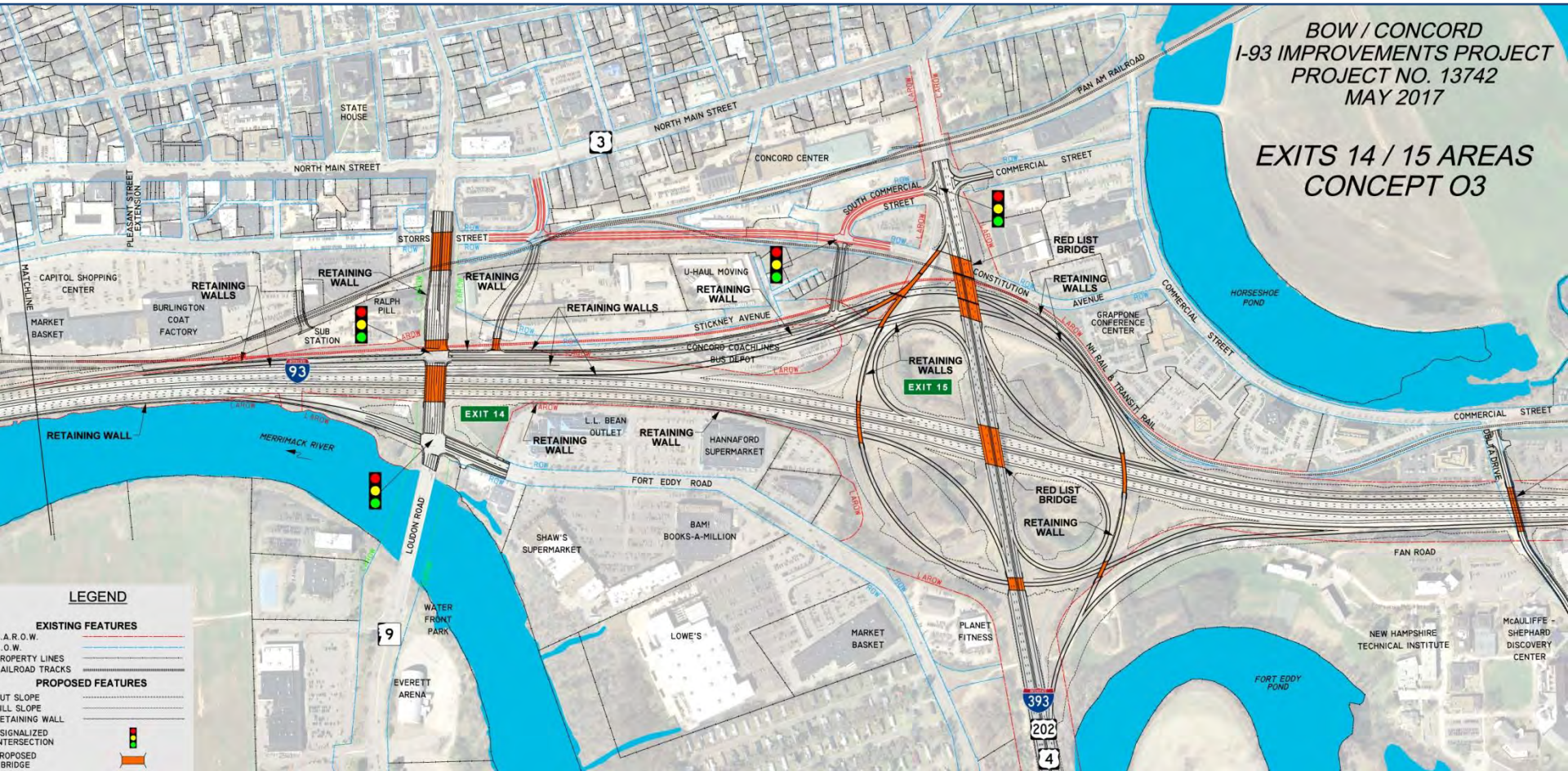
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PROJECT NO. 13742
MAY 2017**

**EXITS 14 / 15 AREAS
CONCEPT F**



**BOW / CONCORD
I-93 IMPROVEMENTS PROJECT
PROJECT NO. 13742
MAY 2017**

**EXITS 14 / 15 AREAS
CONCEPT 03**



Exit 14 / 15 Comparison

CONSIDERATION	CONCEPT D2	CONCEPT F	CONCEPT O3
Exit 14 to Exit 15 Weaves	Improved	C-D Roads	Eliminated
Exit 15 Weaves	Improved	Eliminated	Eliminated
NB Entrance Ramp at Exit 14	Eliminated	No Change	Eliminated
Property Impacts	Higgins Place	Ralph Pill Bldg., Unitil Sub Station, & Burlington	Higgins Place & Bus Station
# Red List Bridges	4	4	4
# New Bridges	0	3	6
Project Cost	\$86.5 M	\$186.2 M	\$163.2 M

Alternatives Development



Bow Concord I-93 Improvements Project

Next Steps

- Determine Preferred Alternative
- Complete Environmental Document
- Conduct Public Hearing
- Finding of No Significant Impact (FONSI)
- Develop Corridor Plan
 - Blueprint for Corridor
 - Set Priorities



Questions & Answers

www.i93bowconcord.com

