

# Transportation Improvement Program

## FY 2017- FY 2020

SNHPC MPO Meeting  
November 22, 2016

Nathan Miller, AICP  
Principal Transportation Planner





# What is the Transportation Improvement Program?

The Transportation Improvement Program (TIP) is a four-year program of regional transportation improvement projects for the SNHPC Metropolitan Planning Organization (MPO) area.

- The TIP **must cover a period of no less than four years**, be updated every four years, and be approved by the MPO and the Governor;
- The TIP **must include capital and non-capital surface transportation projects**, or phases of projects within the metropolitan planning area;
- The TIP **must be made reasonably available to all interested parties** that may wish to provide comment;
- The TIP **must contain all regionally significant projects** requiring an action by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA);
- The TIP **must be financially constrained**.



# The SNHPC FY 2017-2020 TIP

## Draft Transportation Improvement Program

**FY 2017 – FY 2020**

for the  
Southern New Hampshire Planning Commission



Auburn, Bedford, Candia, Chester, Deerfield, Derry, Frankestown, Goffstown,  
Hooksett, Londonderry, Manchester, New Boston, Raymond, Weare, Windham

November 16, 2016

- Released for Public Comment in October, public comment period extended for an additional 30 days starting on November 16, 2016 to coincide with new NHDOT STIP update.
- Public Hearing and consideration of adoption scheduled for December 20, 2016 MPO Meeting.
- Available for review at SNHPC Office in hardcopy and on SNHPC website in electronic form.



# Elements of the SNHPC FY 2017-2020 TIP

- Introduction
- Regional Project Selection Process
- Public Involvement Process
- Financial Plan
  - Fiscal Constraint Analysis
- Monitoring Process
- Air Quality Conformity
- **Project Listing** ←
- Appendix A- SNHPC Prospectus
- Appendix B- MPO Self-Certification Resolution
- Appendix C- NHDOT FY 2017-2020 STIP Fiscal Constraint Summary
- Appendix D- Annual List of Obligated Projects for FY 2016



## Projects Completed/In Progress and Not Included in FY 2017-2020 TIP

- **Deerfield (24477)**- Engineering and ROW for Replacement of Bridge #137/116 on NH 107 over Freese's Pond.
  - *Construction scheduled for 2023 at a cost of \$1.208 Million.*
- **Goffstown (16029)**- Goffstown Branch Rail Trail Improvements.
  - *Constructed in FY 2015.*
- **Goffstown (20246)**- Improvements to two intersections along the NH 114 and NH 13 Corridors.
  - *Project closed at the request of the Town.*
- **Manchester (14966)**- Replace or rehabilitate five red list bridges on I-293 and replace median crossover protection rail.
- **Manchester (14412A)**- Improve trestle over Piscataquog River and construct ½ mile of multi-use trail.



## Projects Completed/In Progress and Not Included in FY 2017-2020 TIP

- **Portsmouth-Manchester (68087)**- Bus service between Portsmouth, Downtown Manchester, and the Manchester-Boston Regional Airport.
  - *The East-West Express bus service was discontinued in July 2016.*
- **Salem to Manchester (10418H)**- I-93 Exit 3 Park-and-Ride in Windham.
  - *This project advertised in August 2016 and the apparent low bid was \$1,652,268.*
- **Salem to Manchester (13933H)**- I-93 Exit 3 NB Mainline and Ramp Improvements.
  - *This project advertised in October 2013 with a low bid of \$32,237,737.*



# Projects Completed/In Progress and Not Included in FY 2017-2020 TIP

- **Salem to Manchester (13933I)**- I-93 Exit 3 SB Mainline Improvements.
  - *This project advertised in September 2012 and the apparent low bid was \$32,997,605.*
- **Salem to Manchester (14633B)**- I-93 Mainline Improvements between Weigh Station and Kendall Pond Road in Windham and Derry.
  - *This project advertised in December 2015 and the apparent low bid was \$49,419,915.*
- **Salem to Manchester (14633C)**- Replacement of NH Route 102 Bridge over I-93 in Londonderry.
- **Salem to Manchester (14633H)**- I-93 Mainline Improvements from Exit 5 to the I-293 Split.
  - *This project advertised in March 2016 and the apparent low bid was \$45,922,045.*





## Projects Outside of the SNHPC Region Included in the FY 2017-2020 TIP

- **Bow (29641)**- NH Route 3A Corridor Safety Improvements
  - *Includes Engineering and ROW costs totaling \$1,096,271.*

Note: This project is included in the SNHPC TIP because NH Route 3A in the Town of Bow is now in the Manchester Urbanized Area (as defined by the U.S. Census).





## “New” Projects (i.e. Included for the First Time) in the FY 2017-2020 TIP

- **Bedford (13692C)**- Bridge Rehabilitation or Replacement of Bridge #090/065 on NH Route 101 over Pulpit Brook.
  - *Construction in 2019-2020 at a cost of \$1,464,802.*
- **Salem to Manchester (14633)**- Debt Service Project for I-93 Improvements (Northern Projects).
  - *Total of \$5.78 Million programmed for 2017-2020.*
- **Salem to Manchester (14633J)**- Construction of 4<sup>th</sup> lane from Exit 1 to Exit 5.
  - *Total of \$12,127,258 programmed for 2019-2020.*
- **Windham (40663)**- NH 111 Corridor Study from Wall St. to Lowell/Hardwood Road.
  - *Total of \$343,119 programmed for 2020.*



# Expansion of I-93



Project #	Year	Amount in 2017-2020 TIP (Total)	Description
10418L	2017-2020	\$3,710,328	Operational support for commuter bus service
10418T	2017	\$103,200	Corridor service patrol
10418W	2017	\$1,065,024	Chloride reduction efforts
10418X	2017-2019	\$175,110	Final Design and ROW for I-93 Expansion
14633	2017-2020	\$5,757,976	Debt Service for I-93 Northern Projects
14633D	2017-2020	\$4,664,999	Exit 4 interchange, mainline, and approach work
14633I	2017-2018	\$1,965,996	I-93 mainline work between exits 4 and 5
14633J	2019-2020	\$12,127,258	Construction of 4 <sup>th</sup> lane between exits 1 and 5
14633P	2017	\$1,509,816	Programmatic Mitigation- CTAP Phase 3
14633R	2017-2019	\$2,259,367	Programmatic Mitigation- NHDES Land Grant Program
14800B	2017-2020	\$8,214,287	Debt Service for I-93 Exit 5 project
14800C	2017-2020	\$2,702,006	Debt Service for bridges over NH 111
14800D	2017-2020	\$17,764,874	Debt Service for Exit 3 SB project
14800F	2017-2020	\$12,327,554	Debt Service for Exit 3 NB project
14800H	2017-2020	\$5,799,262	Final Design Services for PE and ROW



## Other Important Regional Projects Proceeding in the FY 2017-2020 TIP

- **Derry/Londonderry (13065)**- I-93 Exit 4A Final Design, ROW acquisition, and Construction.
  - *Construction scheduled to start in FY 2019 and continue through FY 2022.*
- **Manchester (16099)**- Preliminary Engineering for the Reconstruction of I-293 Exits 6 and 7.
  - *Construction anticipated to start in 2024. Exit 6 estimated to be \$96.2 Million, Exit 7 estimated to be \$55.8 Million.*
- **Nashua-Merrimack-Bedford (13761)**- Widening of F.E. Everett Turnpike from Exit 8 in Nashua to the I-293 Interchange in Bedford.
  - *Engineering and ROW costs totaling \$8.9 Million are included in the TIP, with construction anticipated to begin in 2022.*



# Statewide Programs Included in the TIP

**The SNHPC estimates, based on the region's proportional share of population and lane miles, that a maximum of 17% of programmatic funds will directly benefit the region.**

Program	Year	Amount in 2017-2020 TIP (Total)	Description
ADA	2017-2020	\$931,175	Upgrades to sidewalks, ramps, and signals for ADA compliance
HIB-M&P	2017-2020	\$11,180,000	Maintenance and preservation for high investment bridges
T1/2-M&P	2017-2020	\$21,500,000	Maintenance and preservation of Tier 1-2 bridges
T3/4-M&P	2017-2020	\$7,740,000	Maintenance and preservation of Tier 3-4 bridges
CBI	2017-2020	\$1,000,000	Complex bridge inspection program
CRDR	2017-2020	\$8,000,000	Culvert replacement and rehabilitation program
DBE	2017-2020	\$360,000	Disadvantaged Business Enterprise compliance monitoring
FLAP	2017-2020	\$1,325,000	Access improvements to Federal Lands within NH
FTA 5307	2017-2020	\$14,618,938	Transit capital and operating funds for the Boston UZA
FTA 5309	2017	\$1,000,000	Discretionary transit capital program
FTA 5310	2017-2020	\$10,514,689	Capital and operating funds for elderly/disabled transportation



# Statewide Programs Included in the TIP

Program	Year	Amount in 2017-2020 TIP (Total)	Description
FTA 5339	2017-2020	\$12,918,604	Statewide transit capital program
GRR	2017-2020	\$8,140,000	Guardrail replacement
HAZMAT	2017-2020	\$108,000	Hazardous materials reviews for post construction obligations
HSIP	2017-2020	\$36,013,955	Highway Safety Improvement Program
LTAP	2017-2020	\$600,000	Local Technology Assistance Program
MOBRR	2017-2020	\$18,550,000	Municipal Owned Bridge Rehabilitation and Replacement
PAVE-T1P	2017-2020	\$47,600,000	Pavement preservation for Tier 1 roadways
PAVE-T2M	2017-2020	\$50,860,000	Pavement maintenance for Tier 2 roadways
PAVE-T2P	2017-2020	\$32,100,000	Pavement preservation for Tier 2 roadways
PVMRK	2017-2020	\$12,400,000	Statewide pavement markings
RCTRL	2017-2020	\$6,250,000	Recreational Trails Program (Administered by DRED)
RRRCD	2017-2020	\$4,640,000	Railroad Crossing Reconstruction Program
SRTS	2017-2018	\$1,156,995	Safe Routes to School Program
TAP	2017-2020	\$12,768,400	Transportation Alternatives Program



# Statewide Programs Included in the TIP

Program	Year	Amount in 2017-2020 TIP (Total)	Description
TRAC	2017-2020	\$88,000	Transportation and Civil Engineering Program for high schools
TRAIN	2019-2020	\$400,000	Annual training program
TRCK	2017-2020	\$400,000	Truck weight safety inspection program
TSMO	2017-2020	\$1,400,000	Statewide transportation systems management (ITS)
UBI	2017-2020	\$230,000	Underwater bridge inspection program
USSS	2017-2020	\$2,544,000	Statewide signage update project
VARIOUS	2017-2018	\$4,400,000	Statewide bridge maintenance program (NHDOT bridge maintenance crew)



# Questions on the TIP?



# Regional Transportation Plan Update

SNHPC MPO Meeting  
November 22, 2016

Nathan Miller, AICP  
Principal Transportation Planner





# Progress Continues on the Regional Transportation Plan

- The SNHPC has reviewed draft chapters of the Regional Transportation Plan throughout the course of 2016.
- Goal is for the MPO to complete the Regional Transportation Plan at the December 20, 2016 meeting.
- Today's presentation will summarize the regional Travel Demand Forecast for the Build Network.
  - **Note: The purpose of this effort is to determine the impact that transportation improvement projects in the TIP/TYP/RTP will have on the region's road network.**



# Projects Impacting the Region's Road Network

Community	Project
BE	NH 101 - Widen NH 101 to 5 Lanes from NH 114 up to Wallace Rd
BE	NH 101 - Widen NH 101 to 5 Lanes from Wallace Rd up to Amherst TL <sup>2</sup>
BE	US 3 - Widen US 3 to 5 Lanes from Hawthorne Drive North to Manchester Airport Access Road
BE-ME	F.E.E Turnpike - Improvement to Bedford Mainline Toll Plaza to Institute Open Road Tolling
NA-ME-BE	F.E.E Turnpike - Widen existing 2-Lane Sections of the Turnpike to a 3-Lane Typical From Exit 8 in Nashua to I-293 in Bedford
CH	NH 102 - NH 102/North Pond Road Intersection Improvements.
DE-LO	I-93 - Construction of I-93 Exit 4A
HO	US 3/NH 28 - Widen US 3/NH 28 to 5 Lanes from Martins Ferry Rd to West Alice Ave
HO	US 3/NH 28 - Construct Southern Segment of US 3/NH 28 Alternate Bypass <sup>2</sup>
HO	US 3/NH 28 - Construct Northern Segment of US3/NH28 Alternate Bypass <sup>2</sup>
HO	Widen US3/NH28 to 5 Lanes from Legends Dr to Hunt Street <sup>2</sup>
HO	Hackett Hill Road - Reconstruction intersection of NH 3A/Hackett Hill Road
HO	NH 3A - Reconstruct and Widen from Commerce Road North to Goonan Rd.
LO	NH 28 - Widening NH 28 from NH 128 to Page Rd.
LO	NH 102 - Widen NH 102 to 4 Lanes from Hudson Town Line to NH 128 <sup>2</sup> - Lower Corridor
LO	NH 102 - Widen NH 102 to 5 Lanes from I-93 East to Londonderry Road <sup>2</sup> - Upper Corridor
LO	NH 102 - Widen NH 102 to 6 Lanes from I-93 to NH 128 <sup>2</sup> - Central Corridor
LO	Intersection Improvements at NH28/NH128 for Safety and Traffic Flow
MA	I-293 - Reconstruction of Exit 4 on I-293
MA	I-293 - Reconstruct and Widening of Exit 6 (Amoskeag)
MA	I-293 - Reconstruct Exit 7
SA-MA	I-93- Reconstruct and Widen Mainline, Environmental Impact Study and Final Design From Mass S/L in Salem to I-293 in Manchester. Capacity Improvements, Reconstruction, and Widening from North of Exit 3 to I-293
SA-MA	I-93 - NB & SB Mainline Weigh Station to Kendall
SA-MA	I-93 - Exit 4 Ramps, NB & SB Mainline, NH 102 Approach Work
SA-MA	I-93- NB & SB Mainline, Exit 5 to I-293 Split (Londonderry & Manchester)
SA-MA	I-93- NB & SB Mainline, Exit 4 and 5 (Londonderry)
SA-MA	I-93 - Exit 1 to Exit 5 - Construct 4th Lane Northbound and Southbound
SA-MA	I-93 - Final Desidgn (PE) and ROW for I-93 Salem to Manchester Corridor post September 4, 2014
Windham	NH 111 - Corridor Improvements Within Town Center
Windham	NH 28 - Intersection NH 28/Roulston Road Improvements

- **Key Regionally-Significant Projects Include:**

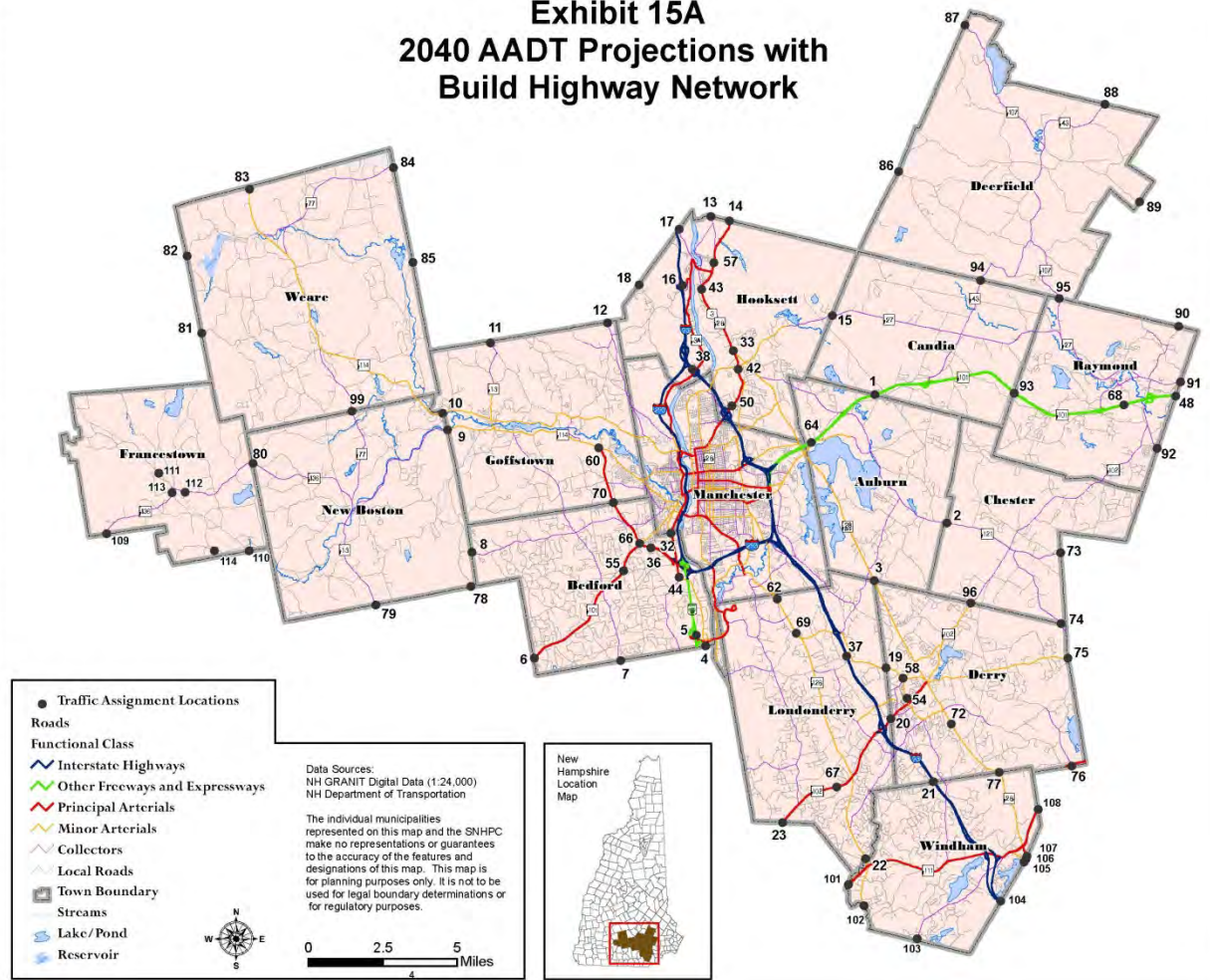
1. The widening of Interstate 93;
2. The reconstruction of Exit 4 and Exit 6-7 on Interstate 293;
3. The construction of I-93 Exit 4A;
4. The widening of U.S 3/NH 28 in Hooksett;
5. The widening of NH 101 in Bedford.



# Build Network Projections

2040 Annual Average Daily Traffic NB Projections			
Location	2040 Build Projections	Location	2040 Build Projections
1	54,557	58	8,643
2	6,845	59	52,764
3	5,975	60	24,649
4	15,015	61	12,378
5	54,205	62	12,120
6	18,198	63	33,938
7	4,675	64	36,664
8	8,270	65	16,583
9	5,159	66	23,740
10	23,059	67	22,228
11	3,199	68	48,507
12	1,014	69	15,763
13	5,668	70	16,593
14	19,041	71	18,193
15	6,989	72	11,807
16	90,001	73	3,879
17	12,925	74	1,930
18	1,057	75	10,508
19	11,885	76	3,153
20	19,433	77	9,785
21	107,734	78	1,326
22	11,254	79	3,471
23	25,323	80	2,709
24	10,487	81	1,797
25	86,656	82	729
26	137,203	83	4,686
27	83,609	84	8,171
28	112,871	85	706
29	88,084	86	1,617
30	103,513	87	4,118
31	20,572	88	4,228
32	16,319	89	420
33	17,331	90	4,256
34	31,908	91	7,015
35	91,019	92	7,264
36	34,830	93	46,987
37	133,203	94	9,484
38	59,407	95	4,884
39	17,764	96	13,655
40	87,175	97	26,537
41	10,243	98	32,847
42	14,513	99	2,084
43	18,129	100	52,361
44	17,403	101	14,686
45	16,039	102	5,332
46	75,450	103	5,433
47	25,527	104	103,393
48	51,514	105	8,518
49	5,765	106	13,080
50	14,117	107	13,349
51	78,434	108	17,201
52	7,642	109	1,767
53	78,973	110	1,316
54	10,823	111	1,498
55	25,102	112	1,805
56	63,728	113	1,667
57	16,429	114	61

**Exhibit 15A**  
2040 AADT Projections with  
Build Highway Network





# High-Level Summary of Results

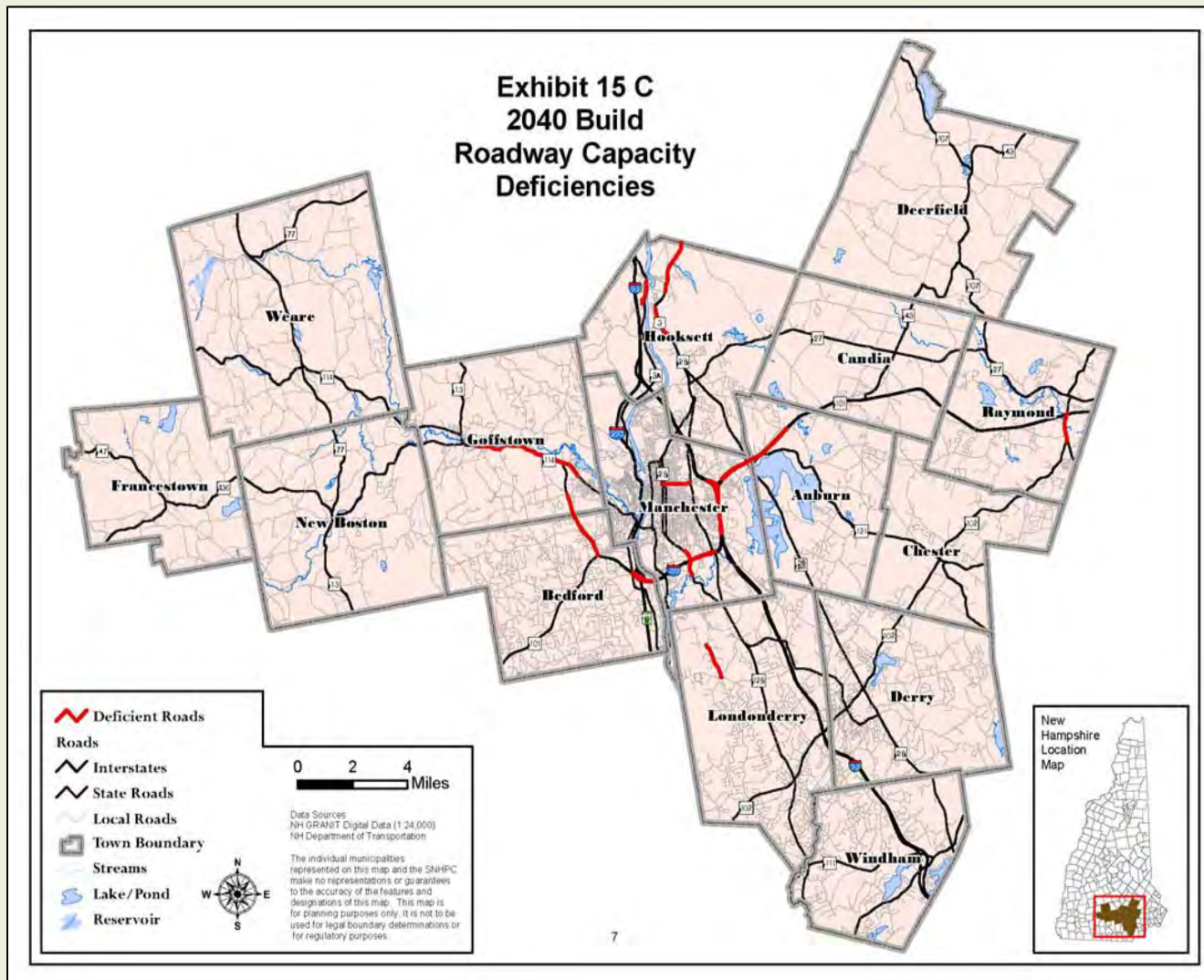
- Congestion would be **reduced** in the following key regional corridors:
  1. South Willow Street in Manchester;
  2. Crystal Avenue in Derry;
  3. NH 102 in Derry;
  4. NH 28/US 3 in Hooksett;
  5. NH 28 Bypass in Hooksett.

- “**New**” congested segments in the build model include the following key regional corridors:
  1. NH 101 in Auburn;
  2. NH 102 in Raymond;
  3. NH 111 in Windham;
  4. NH 114A in Goffstown;
  5. NH 114 in Goffstown.





# Build Network Deficiencies





# What do these results mean?

## Congestion Management Process



for the

**Southern New Hampshire Planning Commission  
Region**

July 2010

- There is no panacea, not even the expansion of I-93, that cures all of the region's congestion issues.
- Continued emphasis on the SNHPC Congestion Management Process will be essential.
- The region needs to continue its focus on developing accessible transportation alternatives.





# Multi-faceted Approach to Congestion Mitigation

## Continued Transit Development



## Pedestrian/Bicycle Infrastructure



## Operational Improvements





# Looking Ahead to December's MPO Meeting

- Public Hearing on 2017-2020 SNHPC Transportation Improvement Program.
- Final Review of the SNHPC Regional Transportation Plan.
- Discussion of FY 2018-2019 SNHPC Unified Planning Work Program.
- Annual List of Obligated Projects.
- **Initial Takeaways from FHWA MPO Review.**