

Central York County Connections Study

June 16, 2011

Advisory Committee

Steering Committee

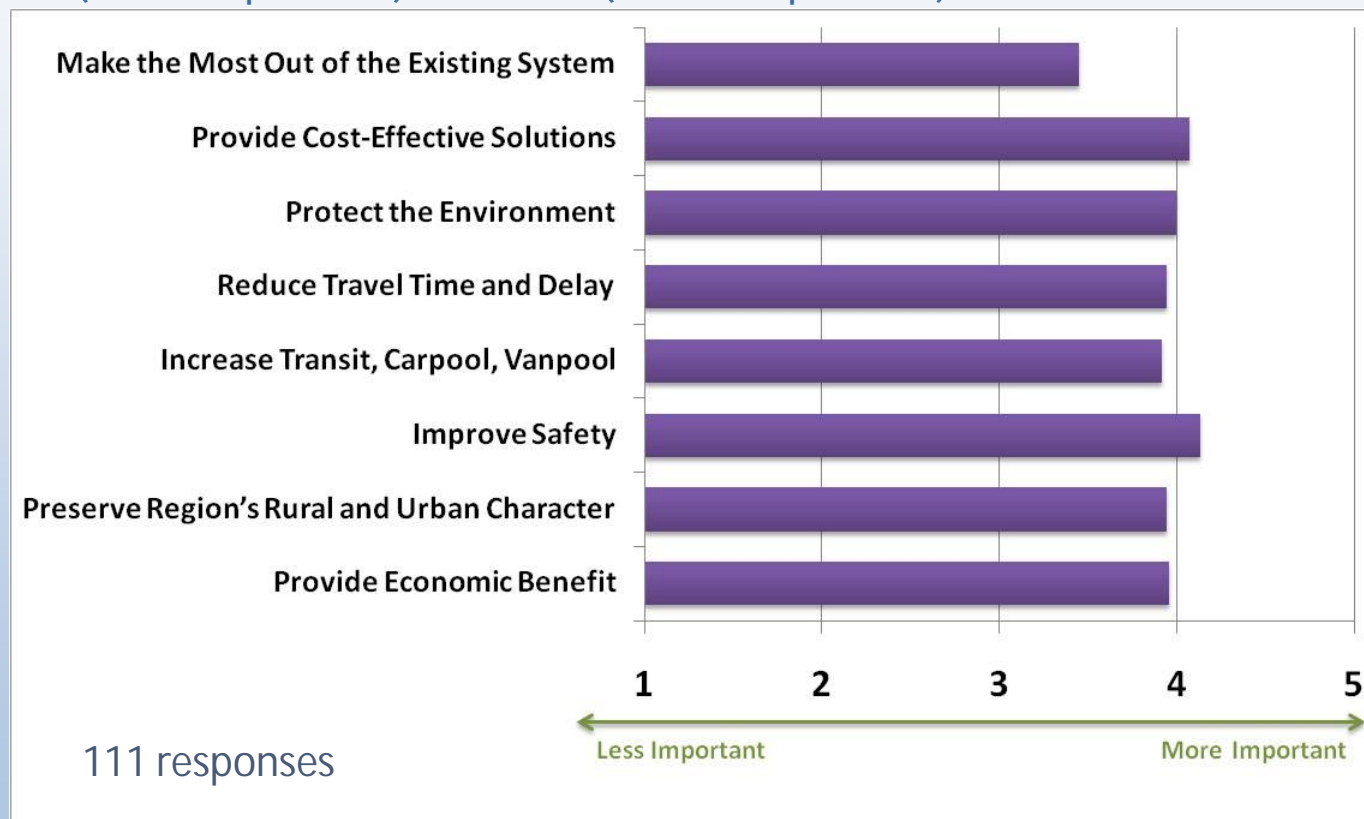
Agenda

- Welcome
- Web Survey #2
- Phase II Strategies
- Review Phase II MOEs
- Results and Initial MOE Assessment
- Next Steps/Next Meetings

Web Survey #2

Which of these goals are the most important?

111 respondents rated potential measures from
1 (least important) to 5 (most important)



Review Phase II Highway Corridor Strategies

- 12 Strategies tested
 - 9 with regional focus connecting Central York County to I-95 and Route 1
 - 3 investigate more localized improvements
- Organized by 3 Corridors
 - Biddeford
 - Kennebunk/Wells
 - North Berwick/Ogunquit



Review Phase II Highway Corridor Strategies

- Refinements since last meeting
 - Focused on the more aggressive options for upgrading existing corridors
 - Added connections to Route 1
 - Added an additional Sanford-Biddeford Expressway strategy

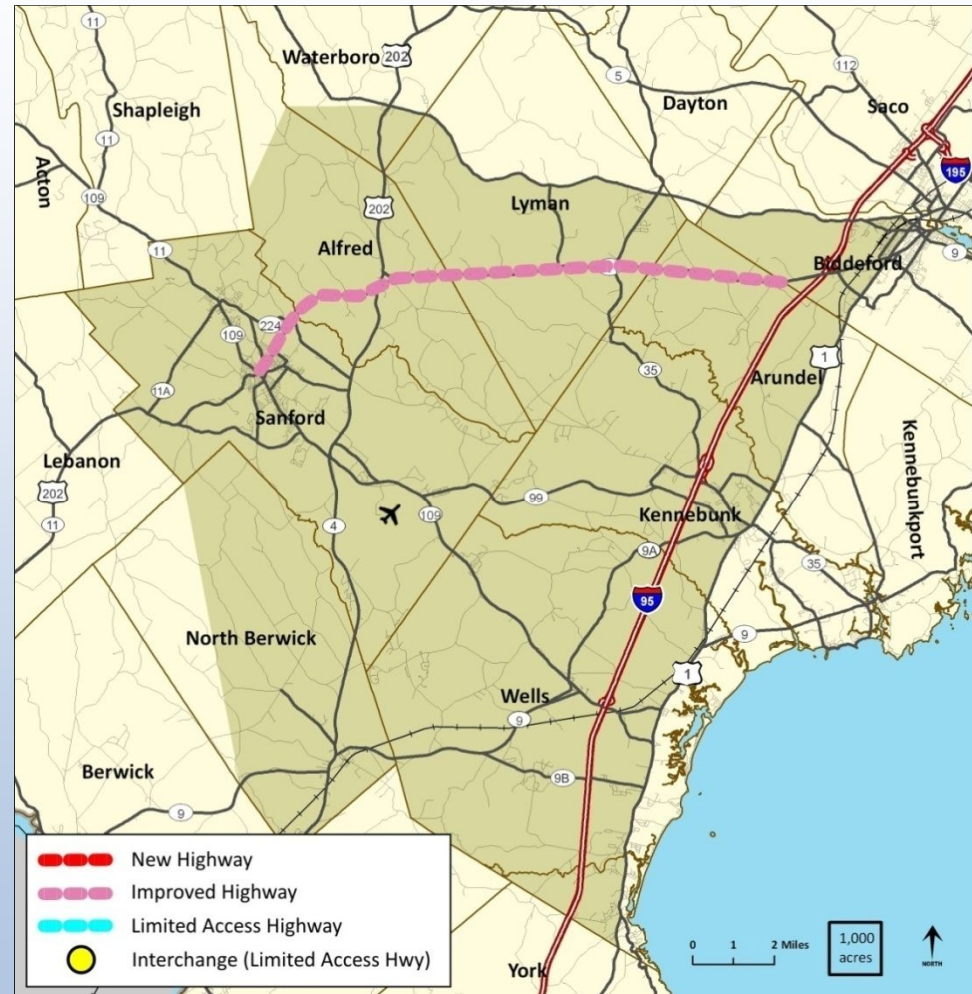


Biddeford Corridor

Strategy B1

Upgrade Rte 111

- 4 Lanes east of Rte 224
- Minor capacity improvements to Rte 202 west of Rte 224
- Increase speed limit to 55 mph (except in town or at major crossroads)



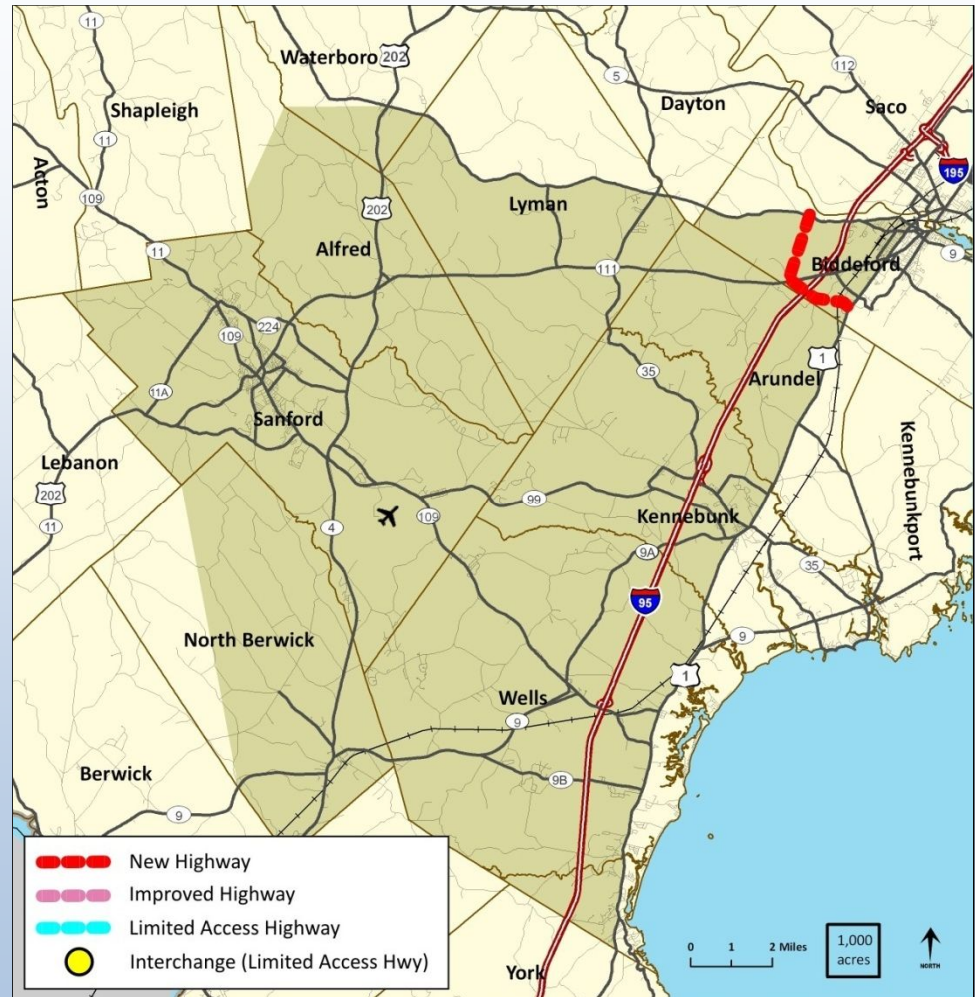
Regional strategy

Biddeford Corridor

Strategy B2

Biddeford Connections

- New connections between Rte 111, Rte 1 and Waterboro Road



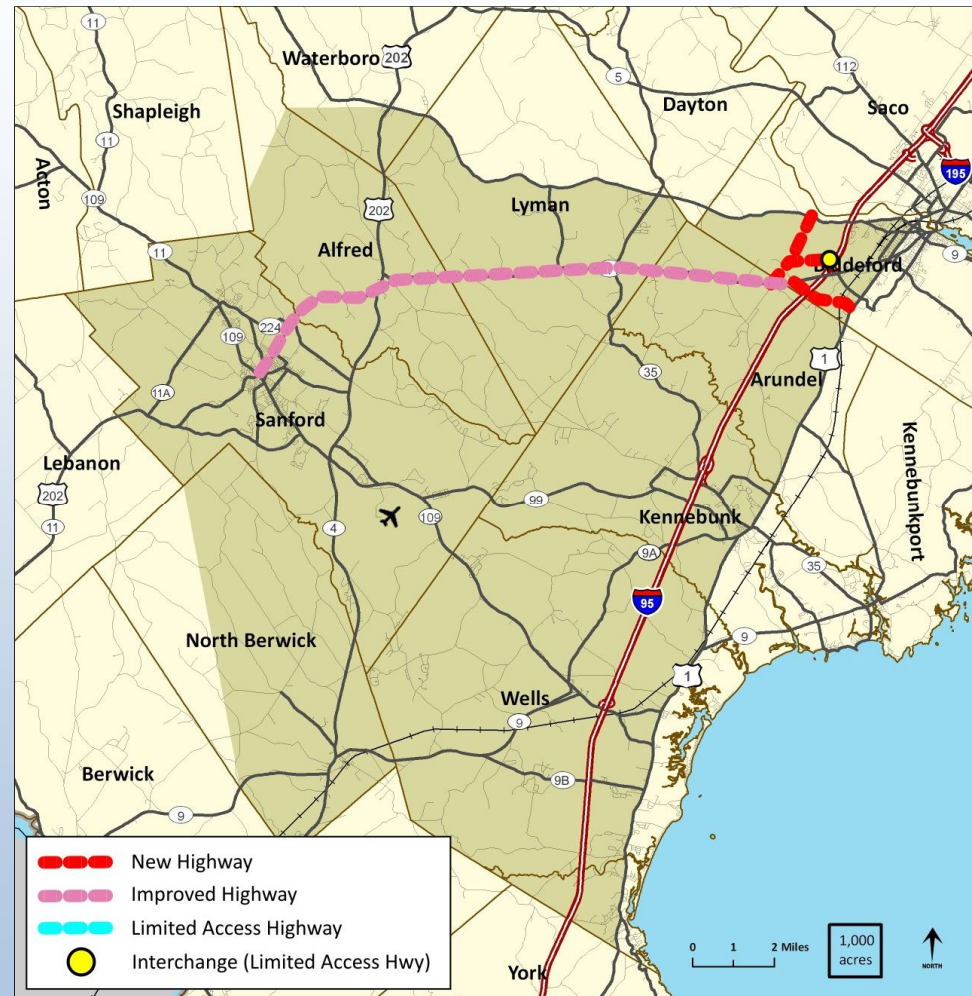
Local strategy

Biddeford Corridor

Strategy B3

Upgrade Rte 111 with I-95 Access and Biddeford Connections

- Combines elements of Strategies 1 and 2
- Create new, direct access to Maine Turnpike (I-95 exit 32)



Regional strategy

Biddeford Corridor

Strategy B5

Expressway (South)

- Limited Access 4-lane Highway
- Interchanges:
 - Sanford/Alfred: Rte 202
 - Kennebunk/Lyman: Rte 35, I-95
 - Arundel/Biddeford: I-95
- New connecting roadways:
 - Arundel/Biddeford: Rte 1
 - Sanford: Rte 109, Rte 224



Regional strategy

Biddeford Corridor

Strategy B6

Expressway (North)

- Limited Access 4-lane Highway
- Interchanges:
 - Sanford: Rte 202, Rte 111
 - Alfred: Rte 202
 - Lyman: Rte 35
 - Biddeford: I-95/Rte 111
- New connecting roadways:
 - Arundel/Biddeford: Rte 1



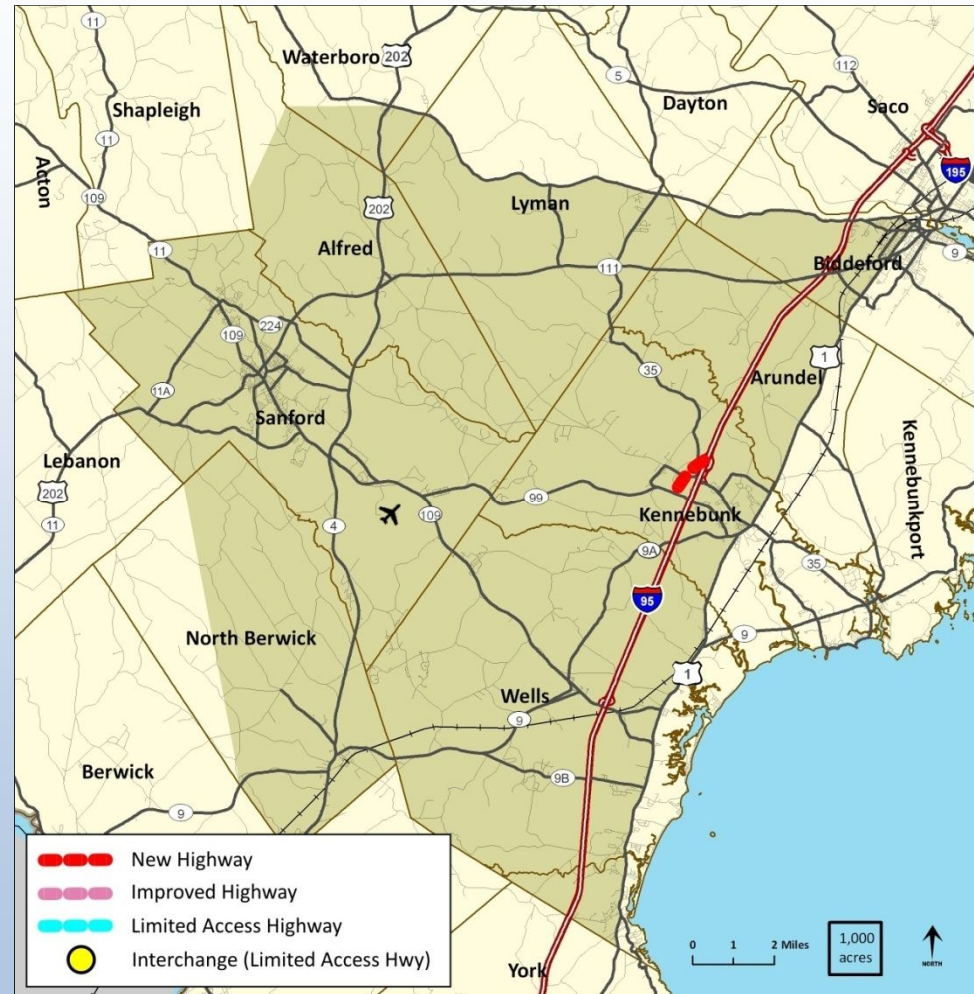
Regional strategy

Kennebunk/Wells Corridor

Strategy K1

New Rte 99/Rte35/ Exit 25 Connector

- More direct connection between Rte 99 and Rte 35 in Kennebunk
- Improves access between Rte 99 and I-95 (exit 25)



Local strategy

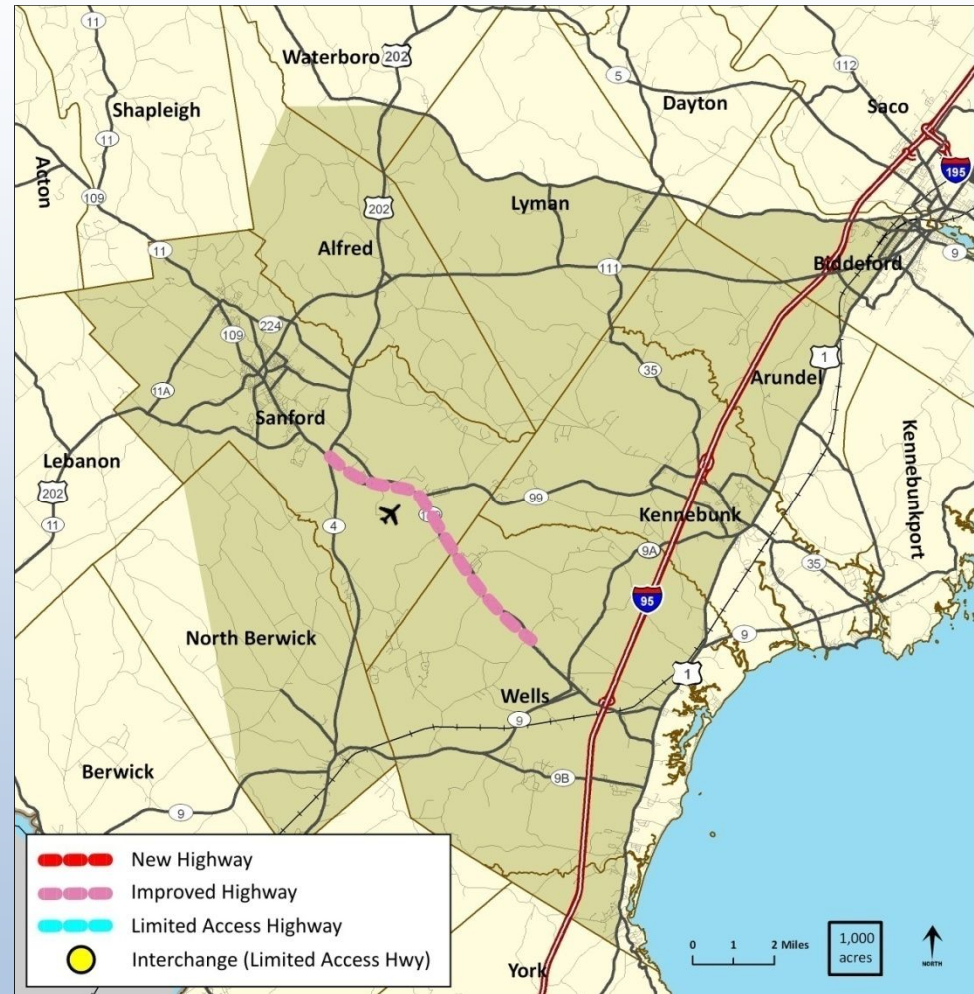
Kennebunk/Wells Corridor

Strategy K2

Upgrade Rte 109

- 4 Lanes between Rte 4 and Rte 99
- Increase speed limit to 55 mph
 - Would require new alignment in developed areas of South Sanford and High Pine
- Passing lanes (one each direction) south of High Pine

Regional strategy



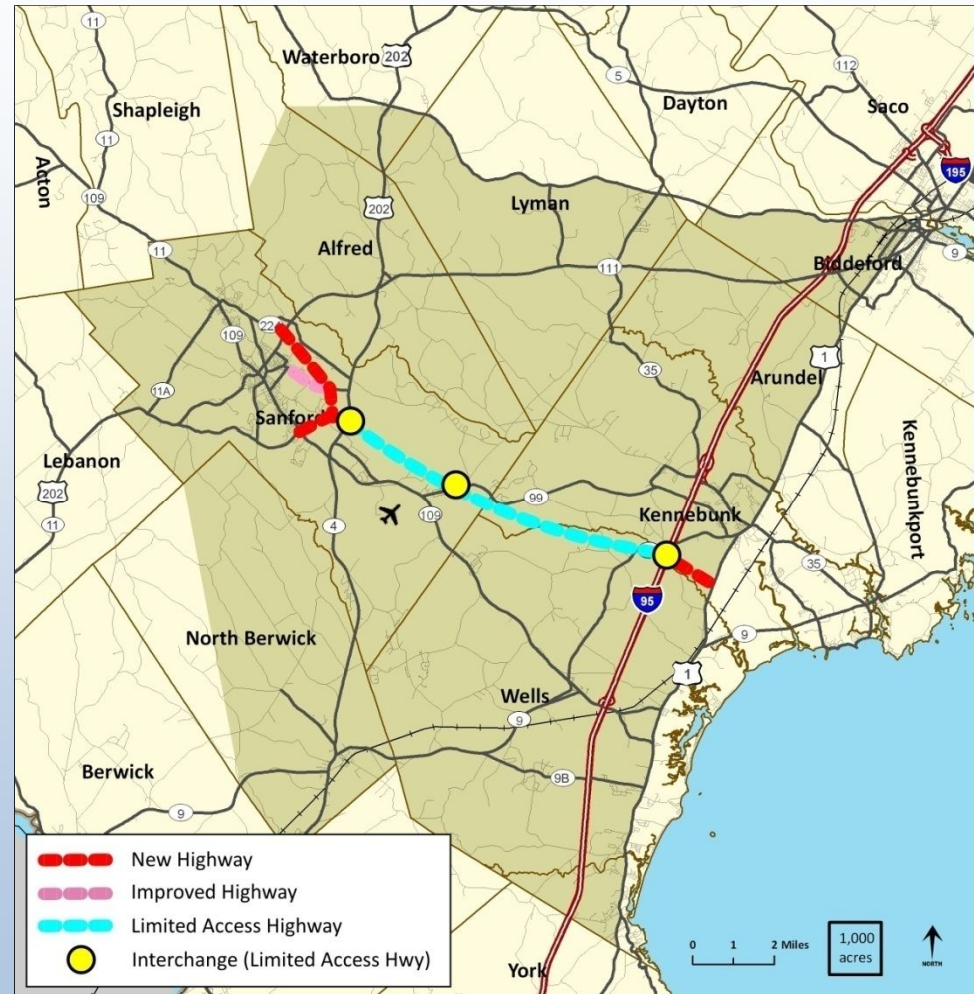
Kennebunk/Wells Corridor

Strategy K3

Kennebunk Expressway

- Limited Access 4-lane Expressway
- Interchanges:
 - Sanford: Rte 202, Rte 99
 - Kennebunk/Wells: I-95/Rte 9A
- New connecting roadways:
 - Kennebunk/ Wells: Rte 1
 - Sanford: Rte 109, Rte 224

Regional strategy

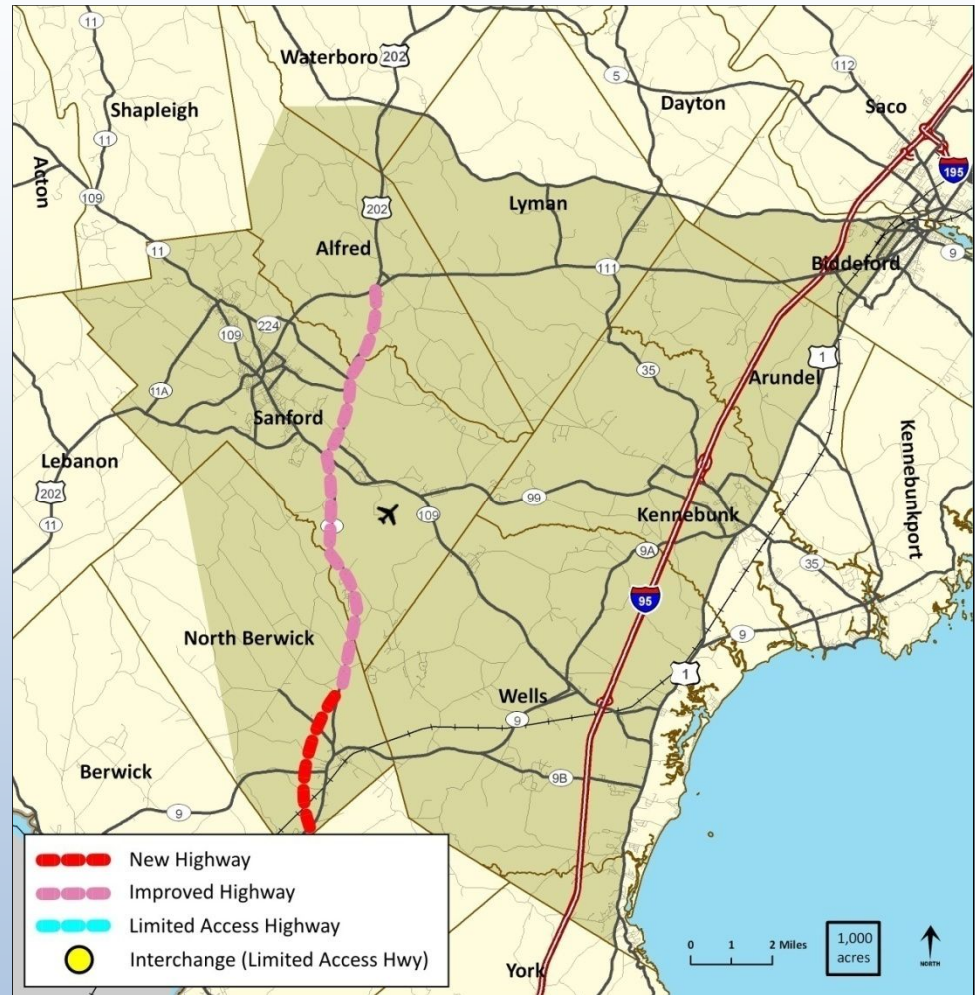


North Berwick/Ogunquit Corridor

Strategy NB1

Upgrade Rte 4

- Increase speed limit to 55 mph (except approaching Rte 109)
- Passing lanes (two each direction)
- Rte 4 bypass around North Berwick town center



Regional strategy

North Berwick/Ogunquit Corridor

Strategy NB2

Rte 4 - Ogunquit Connector

- Upgrade Rte 4 (per Strategy NB1)
- New 2-lane at-grade highway to I-95 and Rte 1 in Ogunquit



Regional strategy

North Berwick/Ogunquit Corridor

Strategy NB3

Expressway

- Limited Access 4-lane Expressway
- Interchanges:
 - Sanford: Rte 202, Rte 4
 - Wells/N Berwick: Rte 9A
- New connecting roadways:
 - Ogunquit: Rte 1, Berwick Rd
 - Sanford: Rte 109 (South Sanford)

Regional strategy



Measures of Effectiveness (MOEs)

MOE Name	Measure
Economic Benefit	<ul style="list-style-type: none"> • Potential job creation • Change in regional economic activity (dollars)
Cost	<ul style="list-style-type: none"> • Approximate (planning-level) cost of strategy
Projected Traffic and Highway Capacity	<ul style="list-style-type: none"> • Changes in corridor traffic volumes • Changes in screenline traffic volumes • Segment Level of Service (LOS)
Travel Times and Delay	<ul style="list-style-type: none"> • Projected travel times between key origins and destinations • Average network speed and total VHT
Traffic Safety	<ul style="list-style-type: none"> • Traffic volumes at current HCLs • Physical improvements to HCLs • VMT by facility type
Access to and Availability of Transit	<ul style="list-style-type: none"> • Ability to access transit stations/corridors
Impact to Rural and Urban Character	<ul style="list-style-type: none"> • Rural acreage potentially affected • Proximity to town centers and identified historic sites/districts
Environmental Constraints	<ul style="list-style-type: none"> • Miles of wetlands and environmental features in corridor

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Impact to Rural and Urban Character	<ul style="list-style-type: none"> • Rural acreage potentially affected • Proximity to town centers and identified historic sites/districts
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General Points on the Projections

- They account for the projected increase in households and jobs (about +30%)
- Volumes shown are daily volumes in both directions
- Volumes shown are the INCREASES over 2035 baseline volumes except...
-Volumes on new roads show the new TOTAL volumes
- Volumes are for summer weekdays
- Spaulding Turnpike Improvements included
- Racino not included



Some Overall Findings

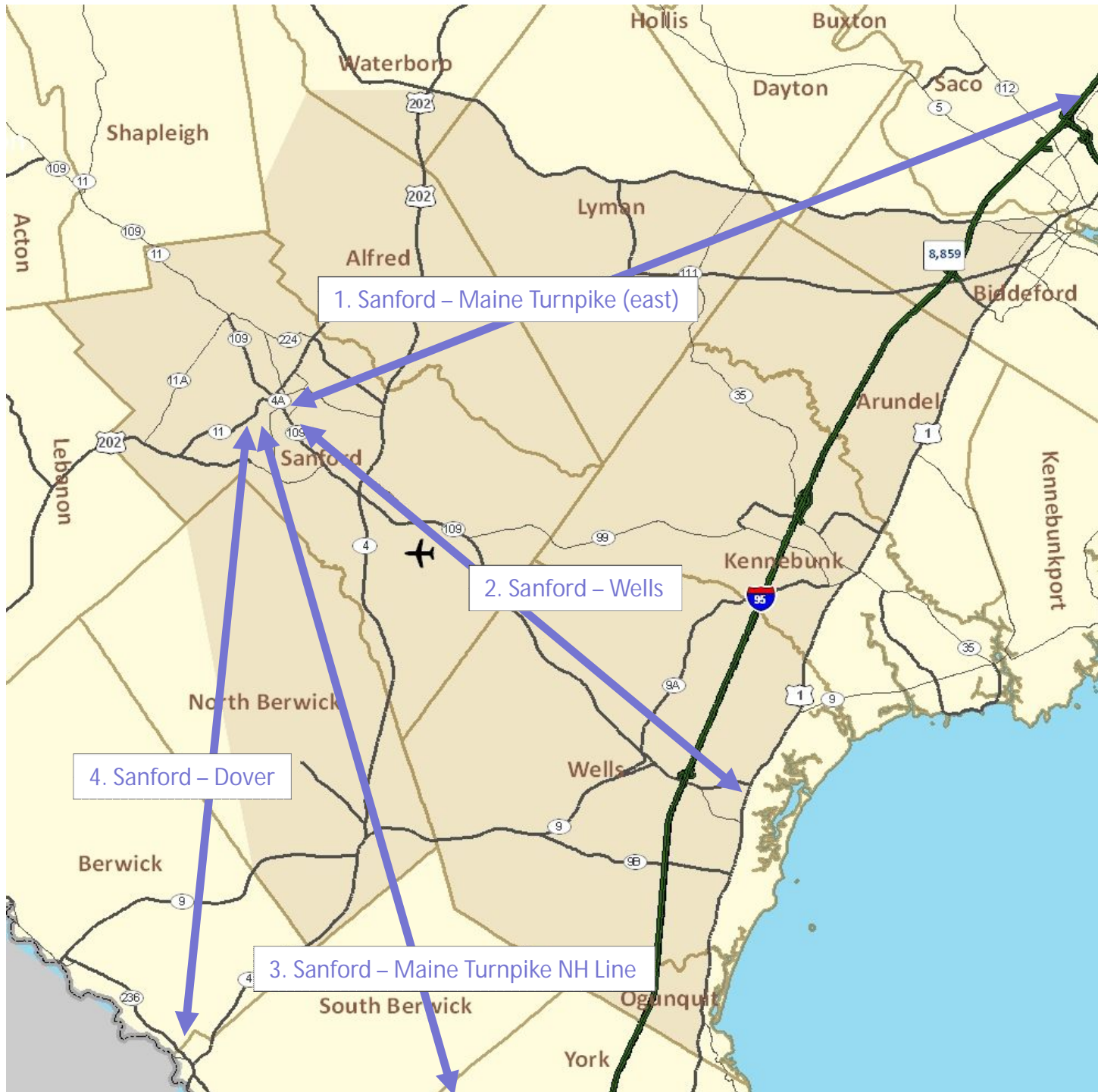
- VMT for the study area increases by 29% in 2035
- The various strategies *increase* VMT by 1.4% County-wide but in some corridors by up to 25%
- VHT increases for the study area by 37% in 2035
- The various strategies *decrease* VHT by 1.9% County-wide at most but in some corridors by up to 50%

MOE: Travel Times



Central York County Connections Study





Travel Times

Updated: June 10, 2011

Central York County to/from the Region

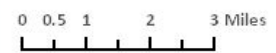
1. Sanford - Maine Turnpike (east)

2. Sanford - Wells

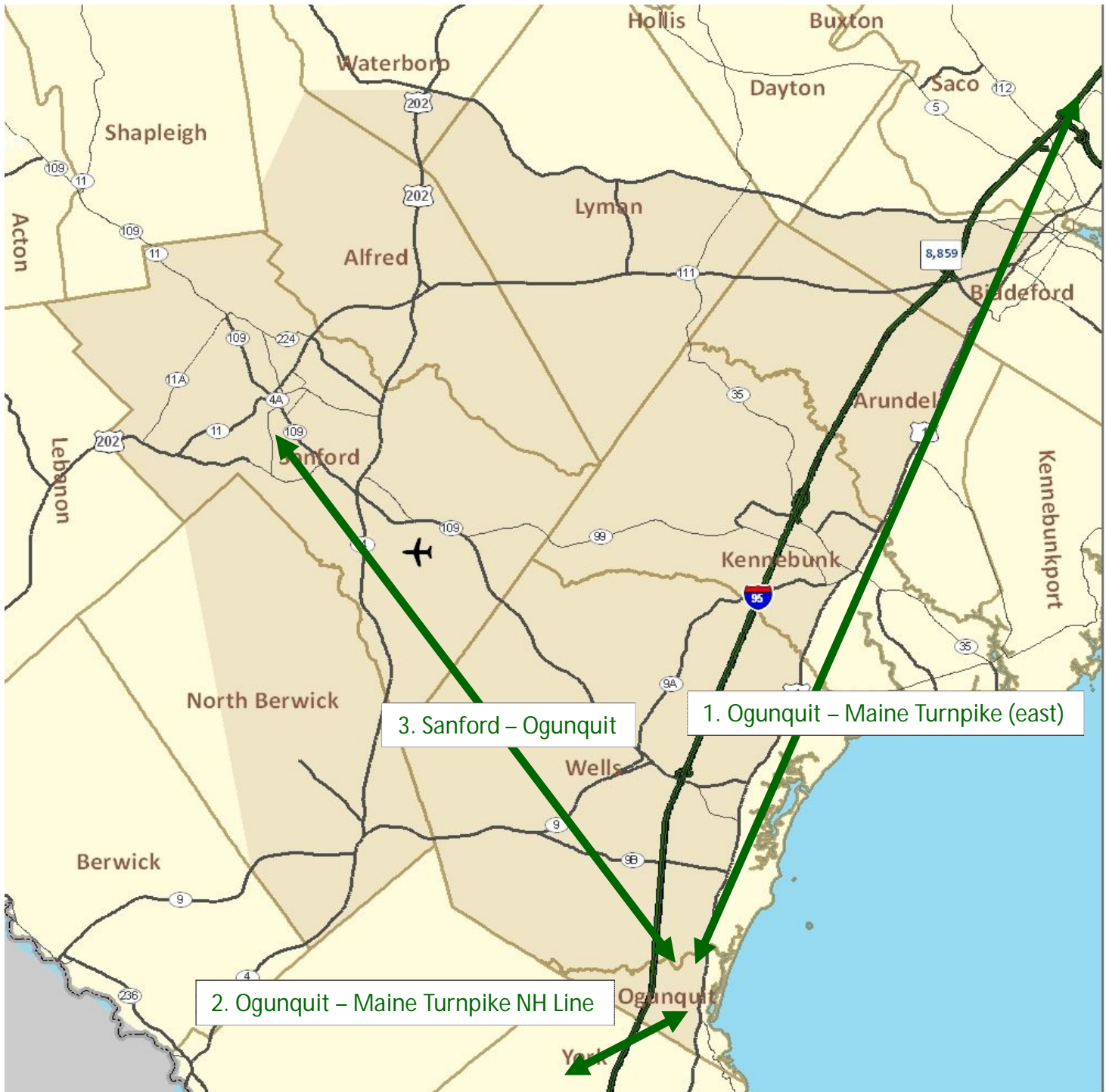
4. Sanford - Dover

3. Sanford - Maine Turnpike NH Line

- State Boundary
 - Town Boundary
 - Study Area
- Data Source: CYCCS Travel Model



**Central York County
Connections Study**



Travel Times

Updated: June 10, 2011

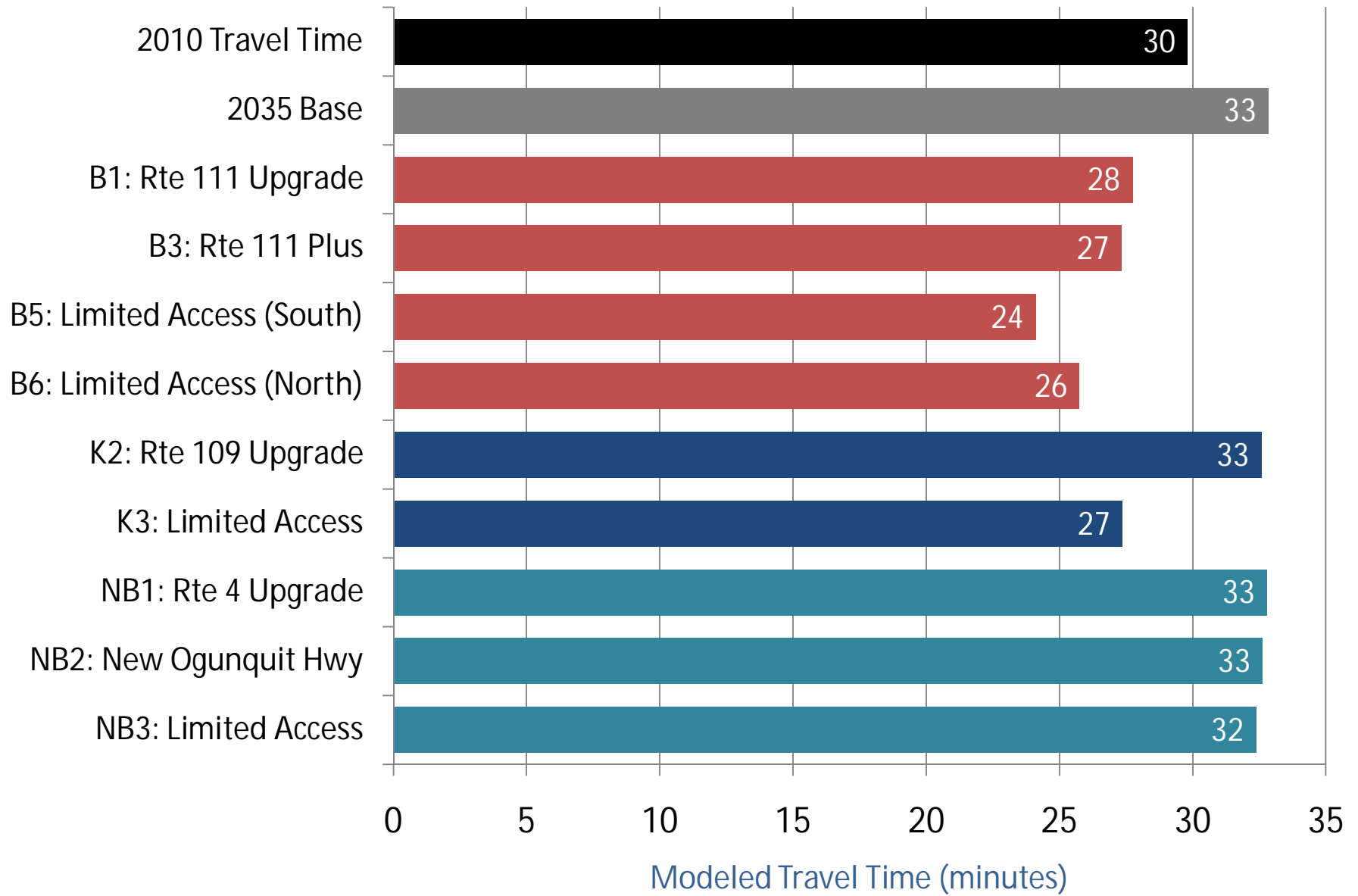
Effect of Adding Access to Turnpike at Ogunquit

— State Boundary
 — Town Boundary
 — Study Area
 Data Source: CYCCS Travel Model

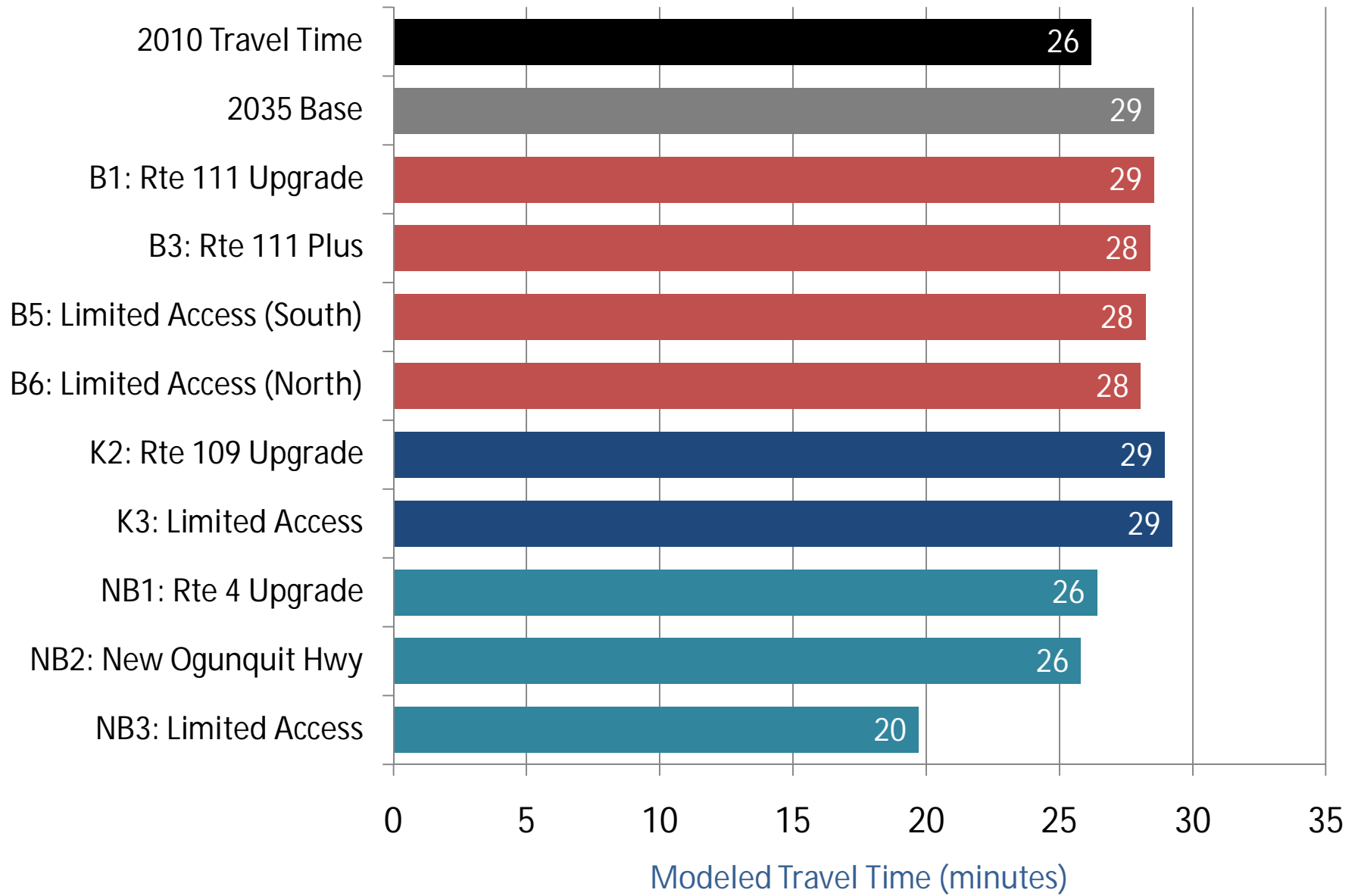
0 0.5 1 2 3 Miles



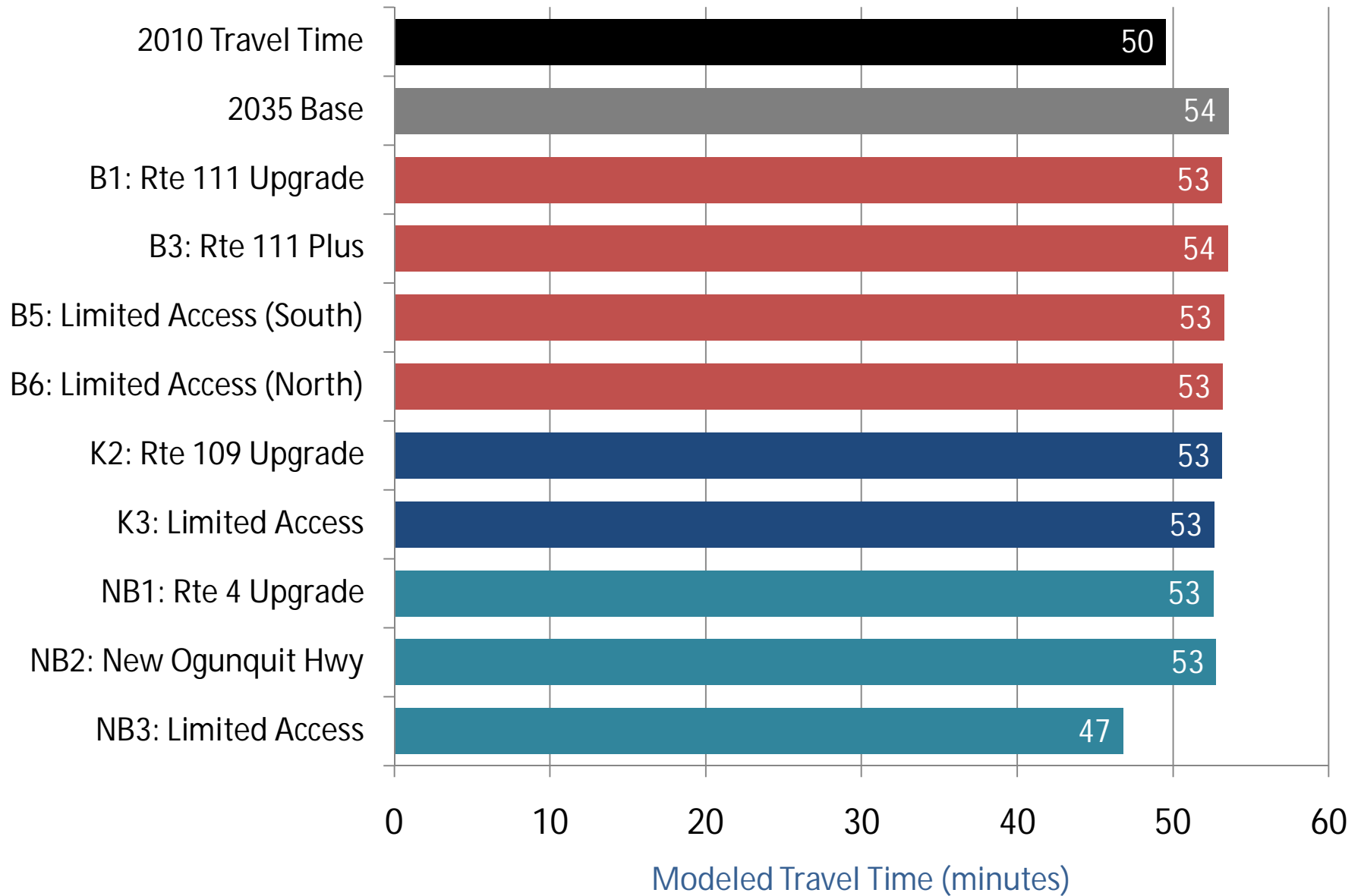
1. Sanford - Maine Turnpike (East)



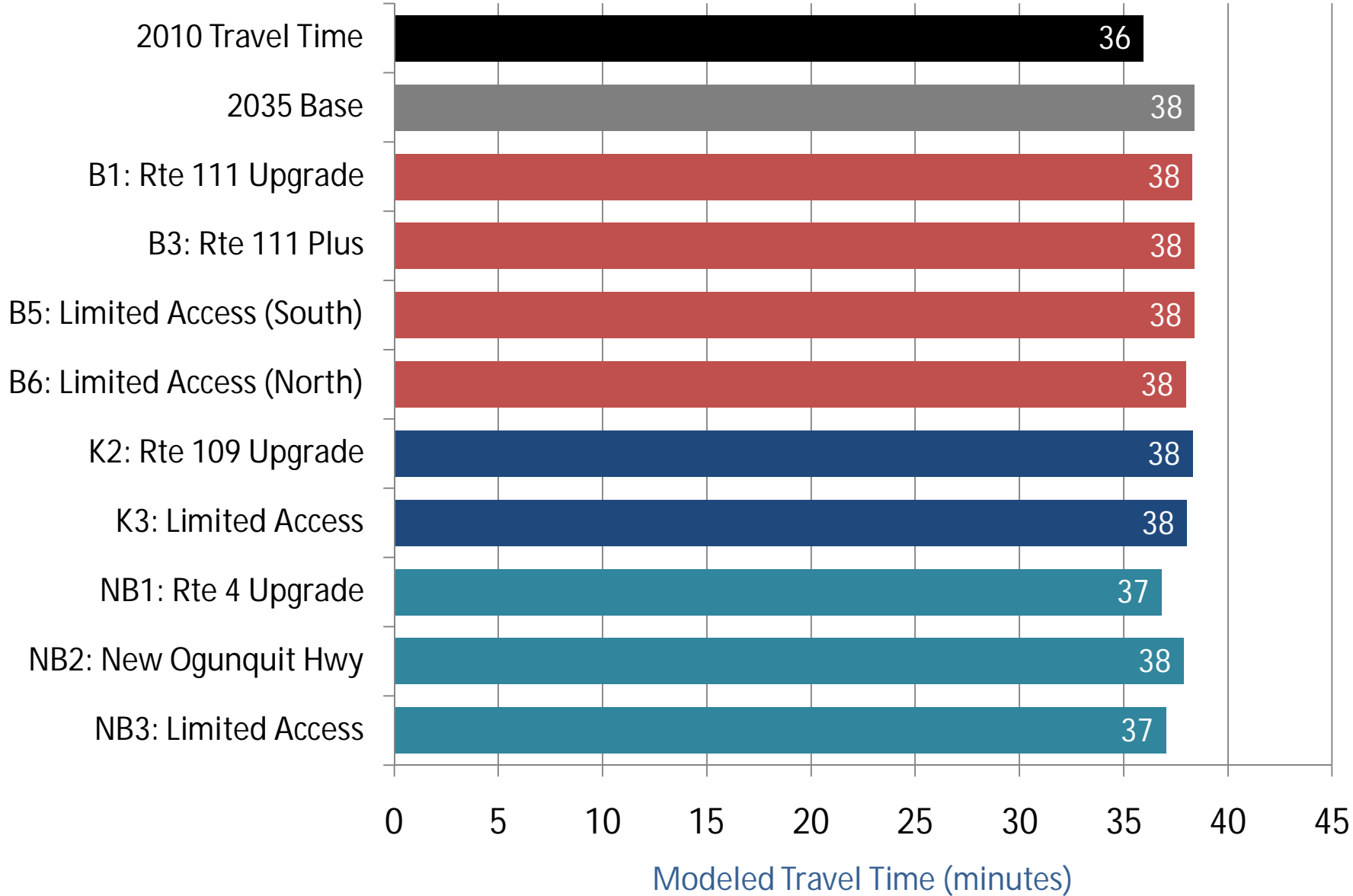
2. Sanford - Wells



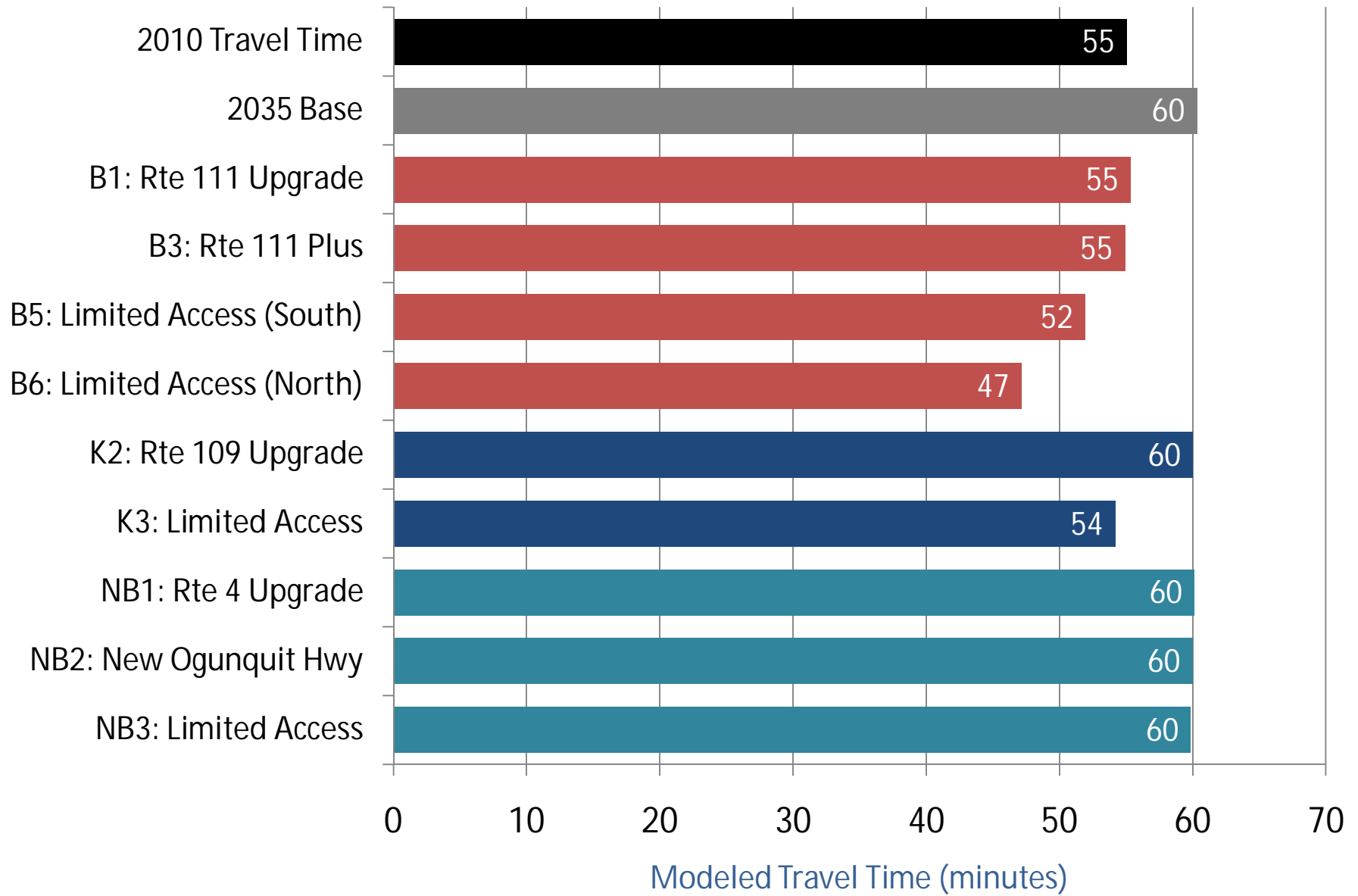
3. Sanford - Maine Turnpike NH Stateline



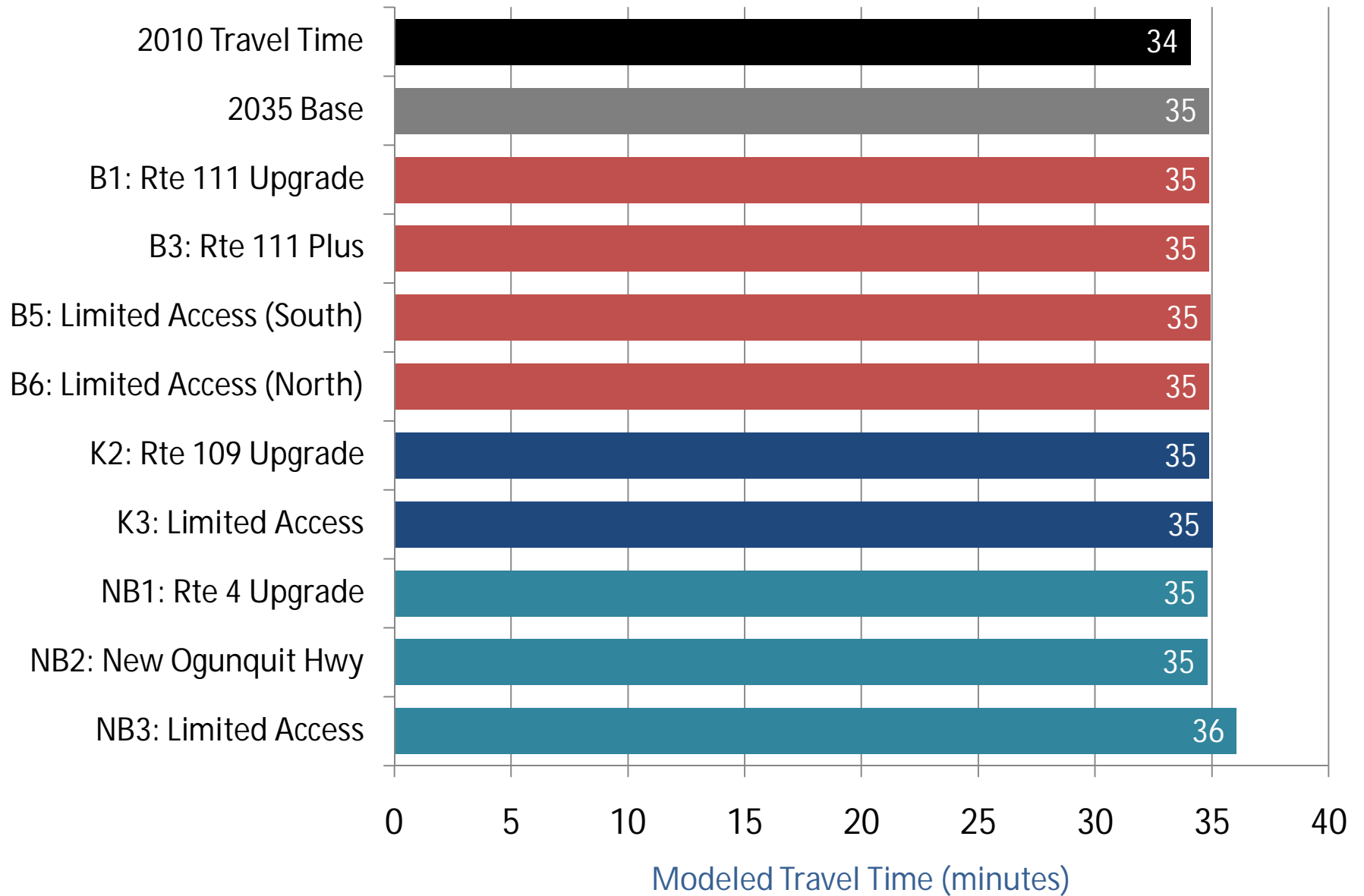
4. Sanford - Dover



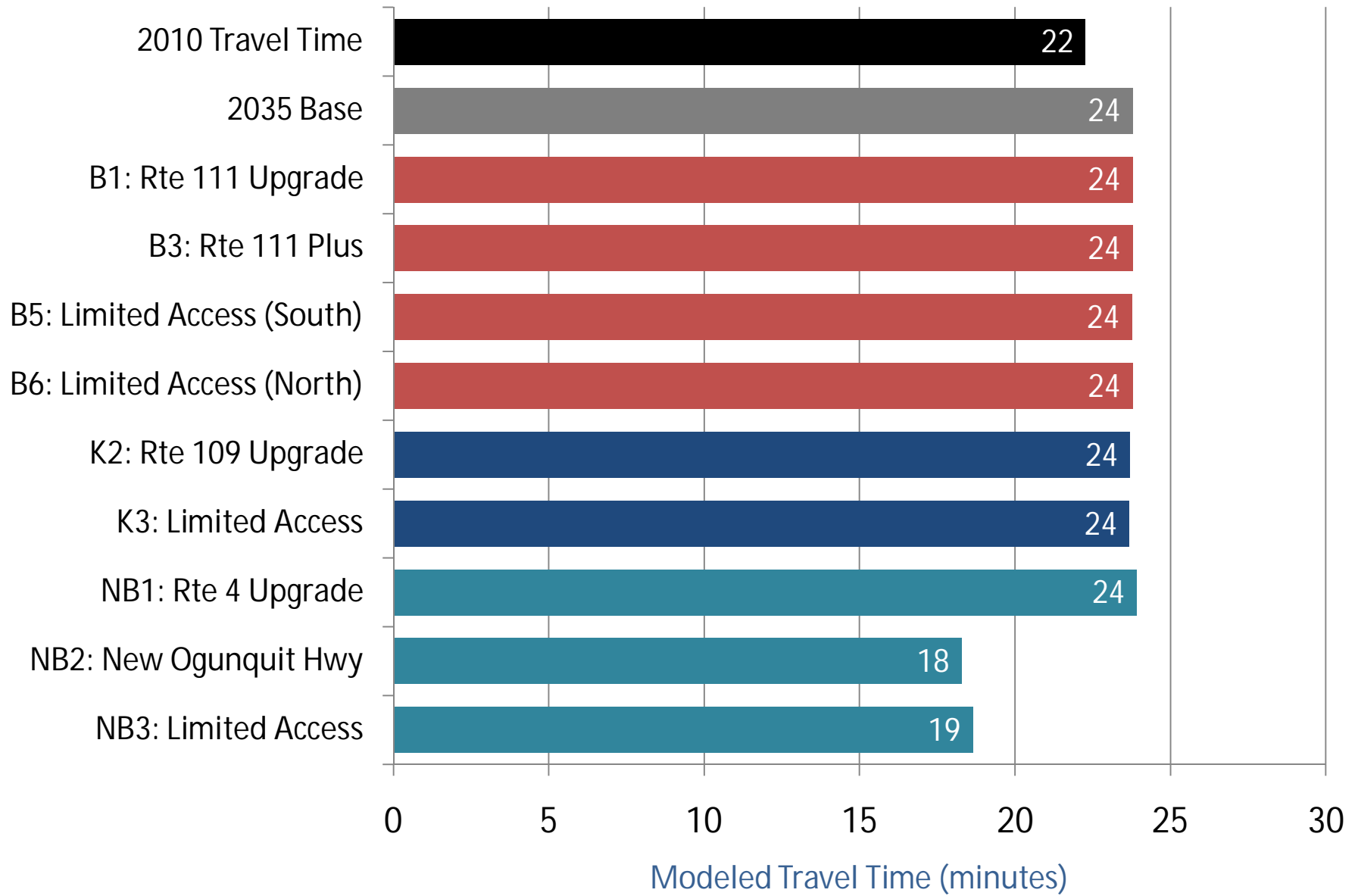
1. Rochester, NH - Maine Turnpike (East)



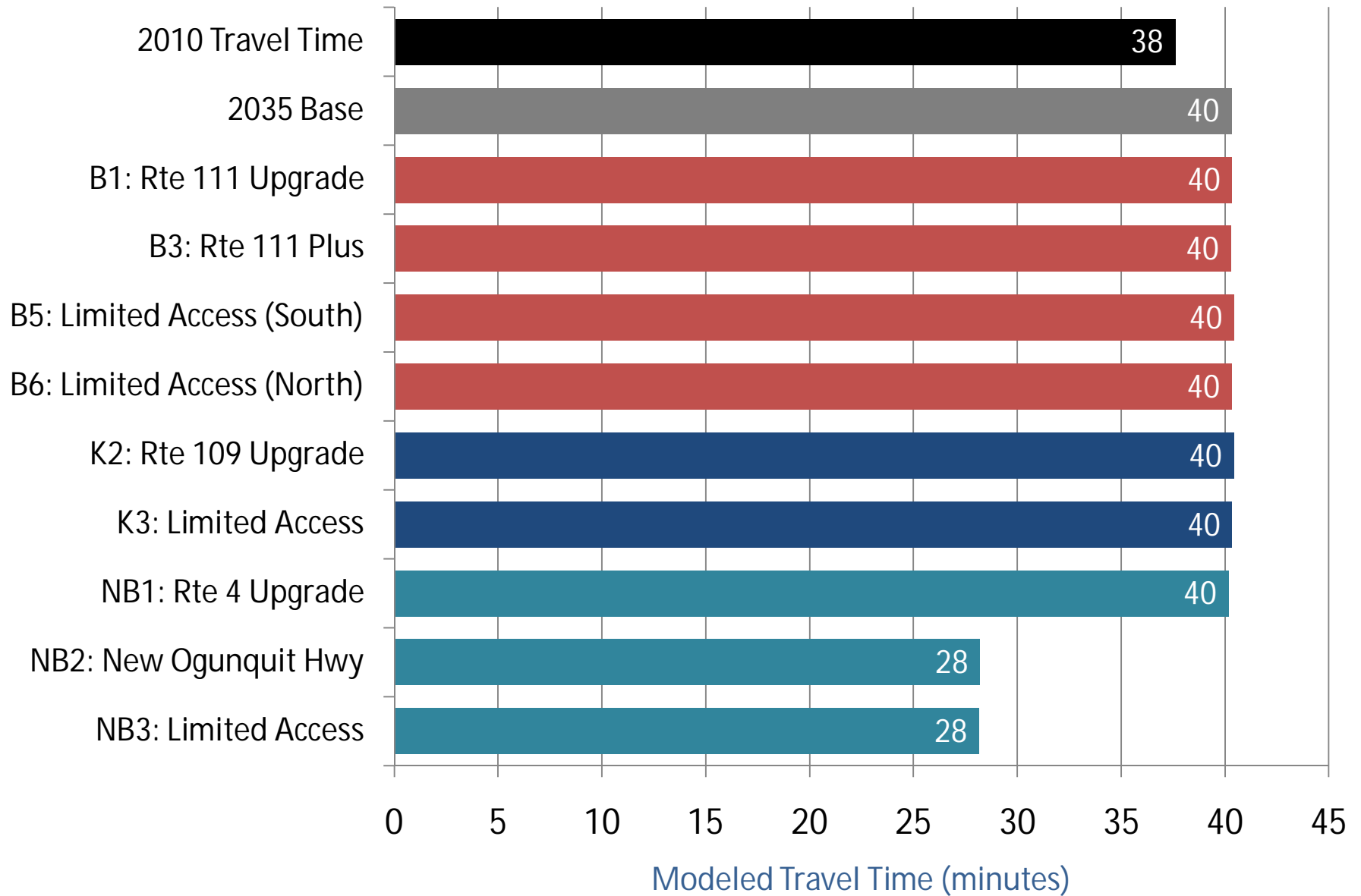
2. Maine Turnpike NH State line - Maine Turnpike (East)



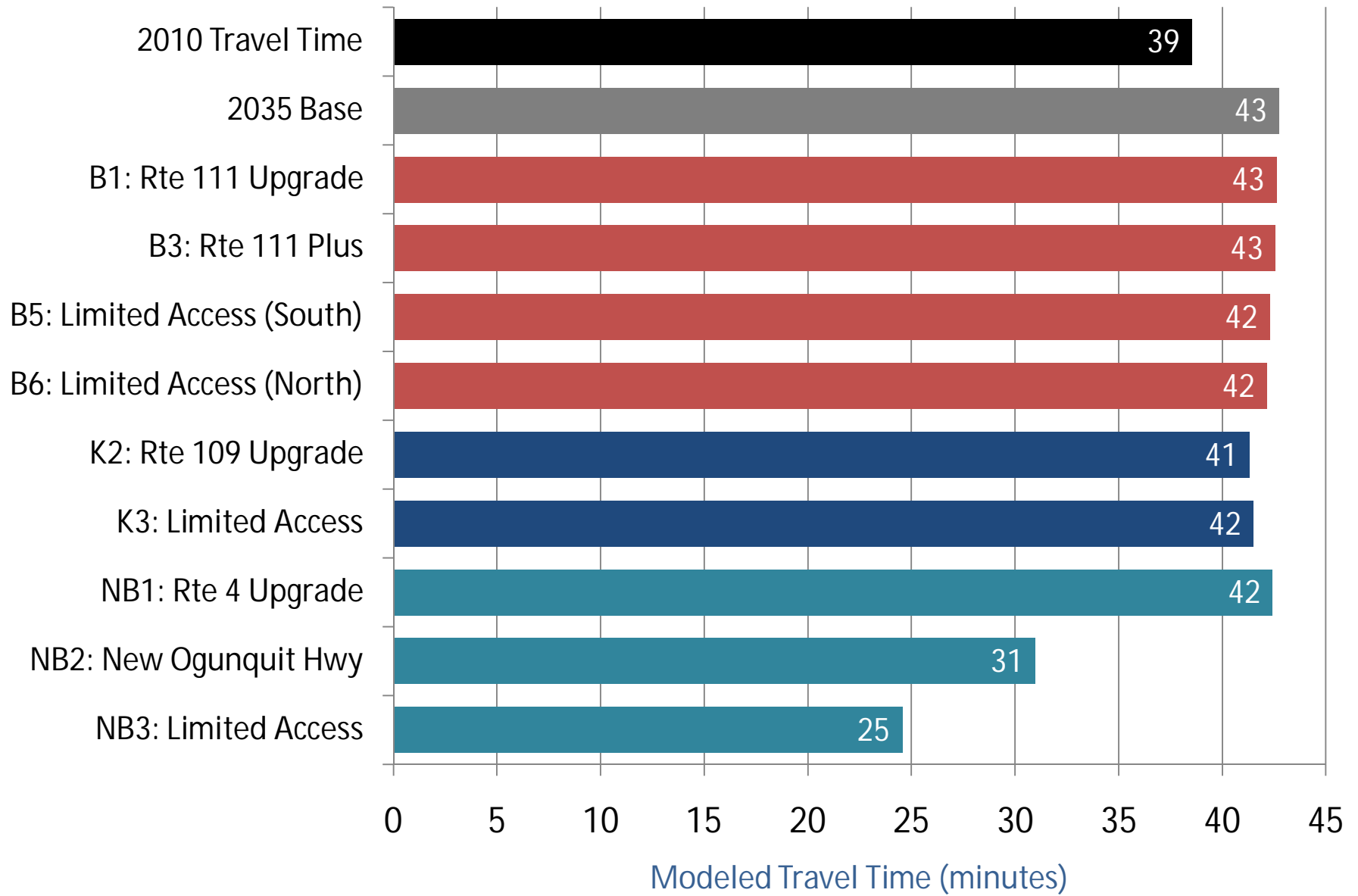
1. Ogunquit - Maine Turnpike (East)



2. Ogunquit - Maine Turnpike NH State line



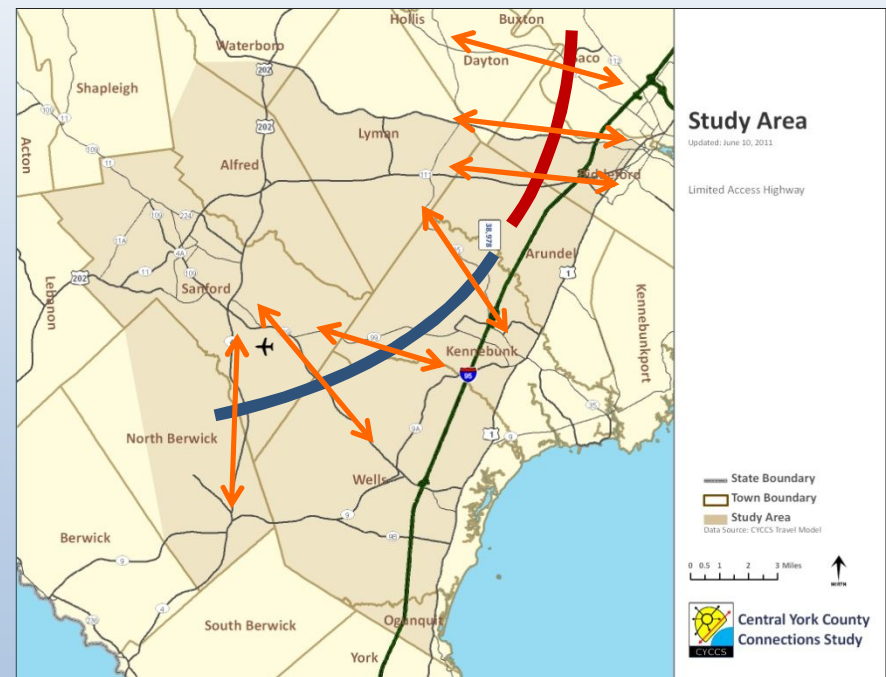
3. Ogunquit - Sanford



MOE: Projected Traffic and Highway Capacity

Compare Modeled Changes in Daily Traffic

- Daily Traffic “Difference Plots”
 - Maps where and by how much traffic changes relative to the 2035 baseline
- Traffic “Screenlines”
 - Shows total traffic volume on all routes crossing an imaginary line

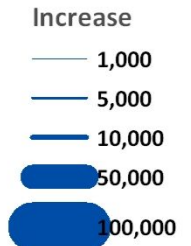




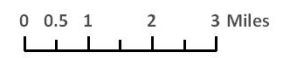
2035 Modeled Daily Traffic

Updated: June 10, 2011

2035 Baseline



- State Boundary
 - Town Boundary
 - Study Area
- Data Source: CYCCS Travel Model



**Central York County
Connections Study**

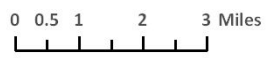
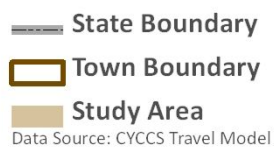


2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy B1

Upgrade Rte 111
Sanford - Biddeford



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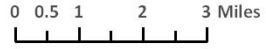


2035 Modeled Change in Daily Traffic

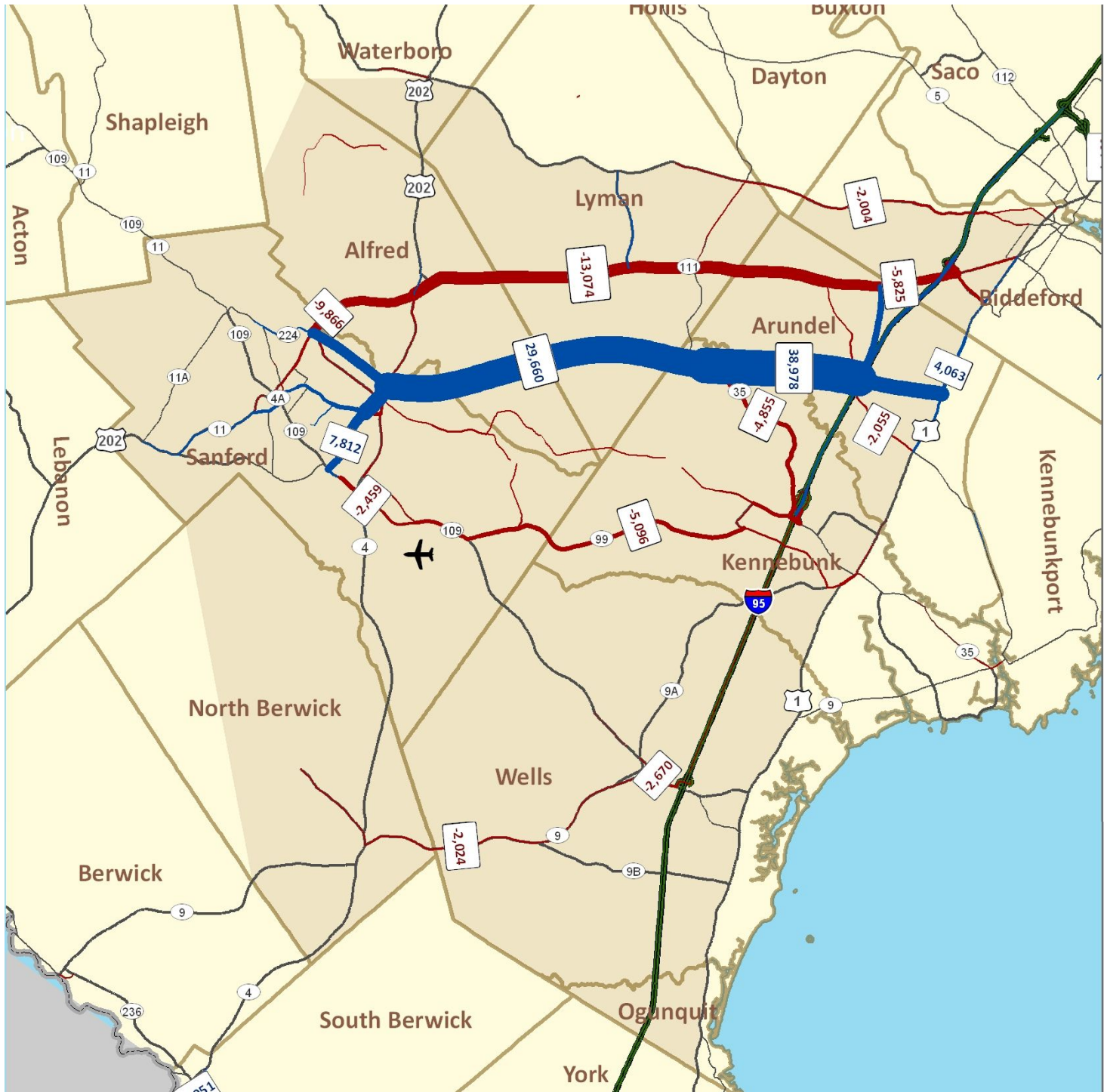
Updated: June 10, 2011

Strategy B3

Upgrade Rte 111 with new Biddeford Connections Sanford - Biddeford



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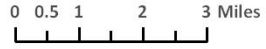
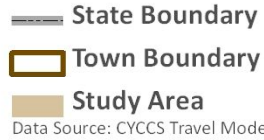


2035 Modeled Change in Daily Traffic

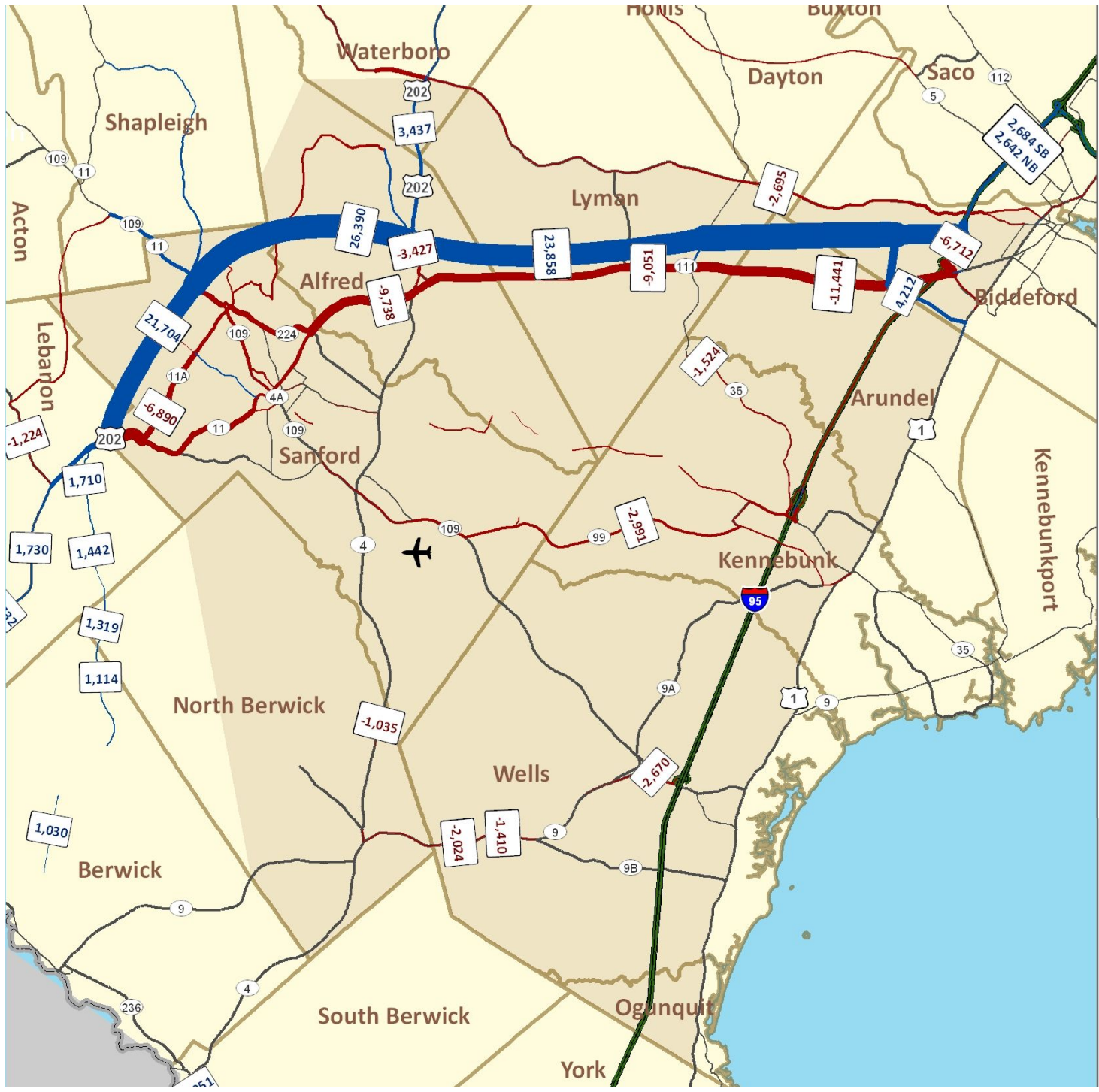
Updated: June 10, 2011

Strategy B5

Limited Access Highway
Sanford - Biddeford



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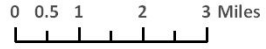
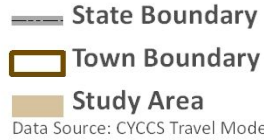


2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy B6

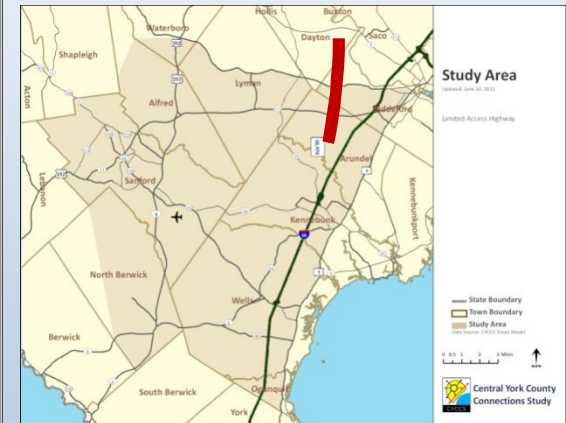
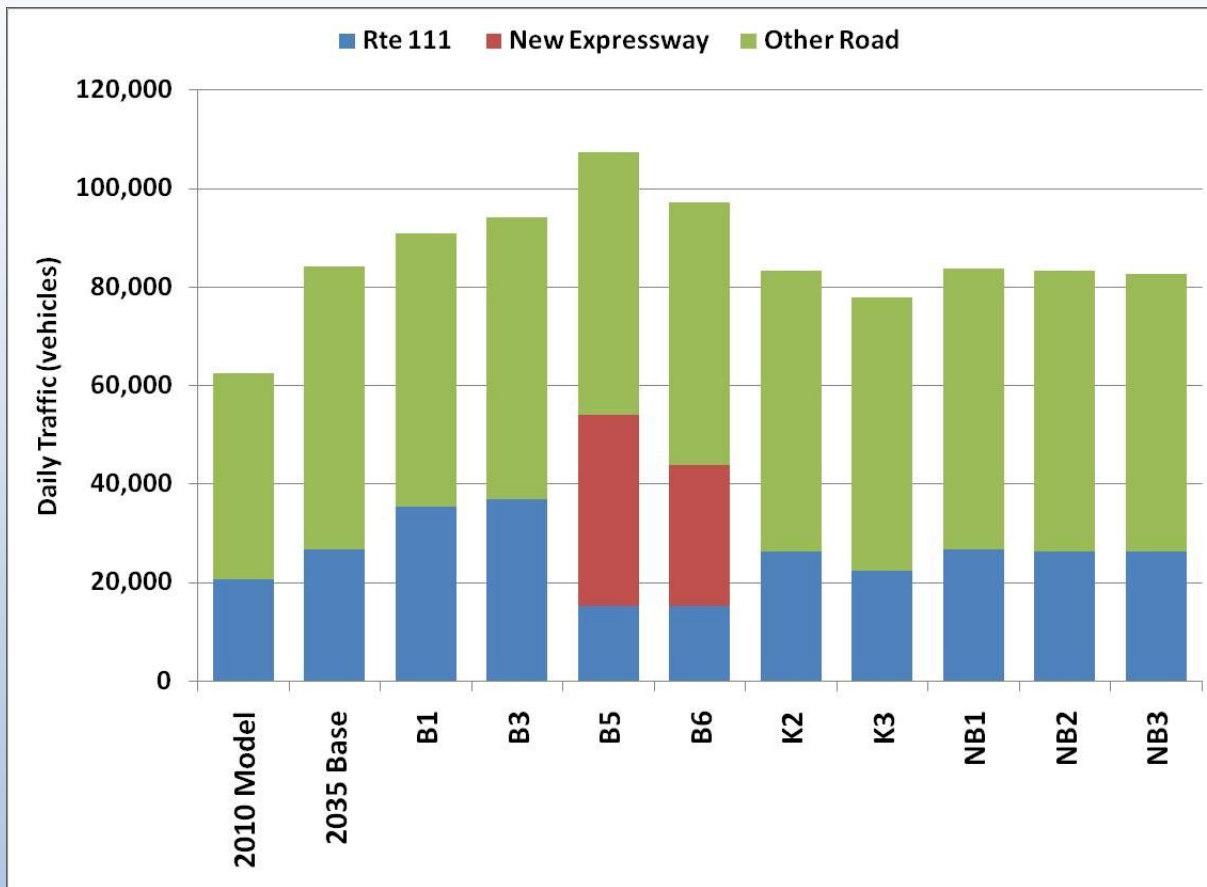
Limited Access Highway
Sanford - Biddeford

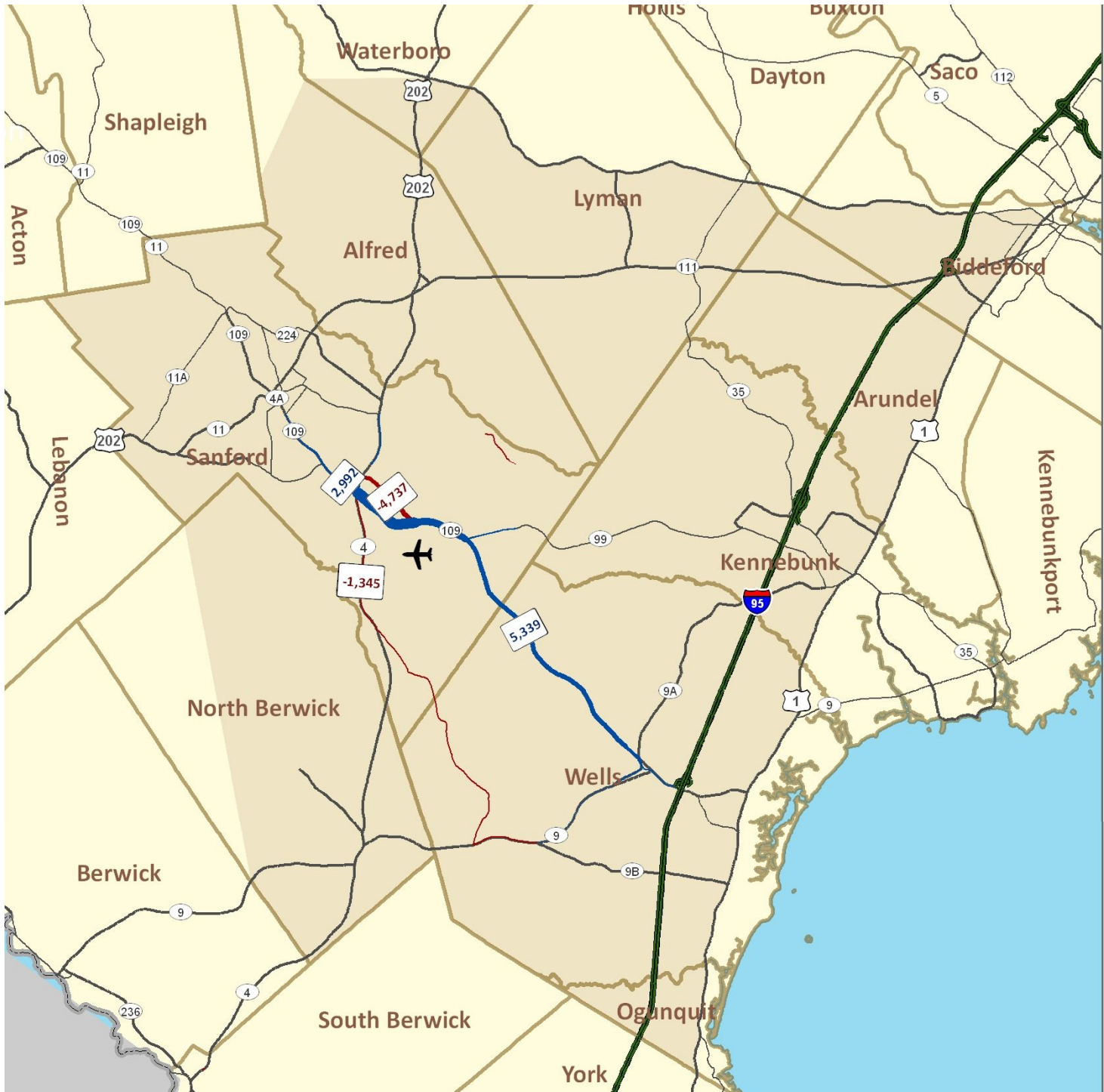


MOE: Projected Traffic and Highway Capacity

Compare Traffic at Screenlines

East-West Traffic (west of Biddeford)



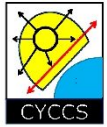
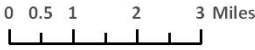
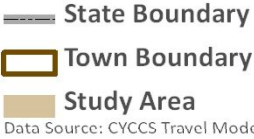


2035 Modeled Change in Daily Traffic

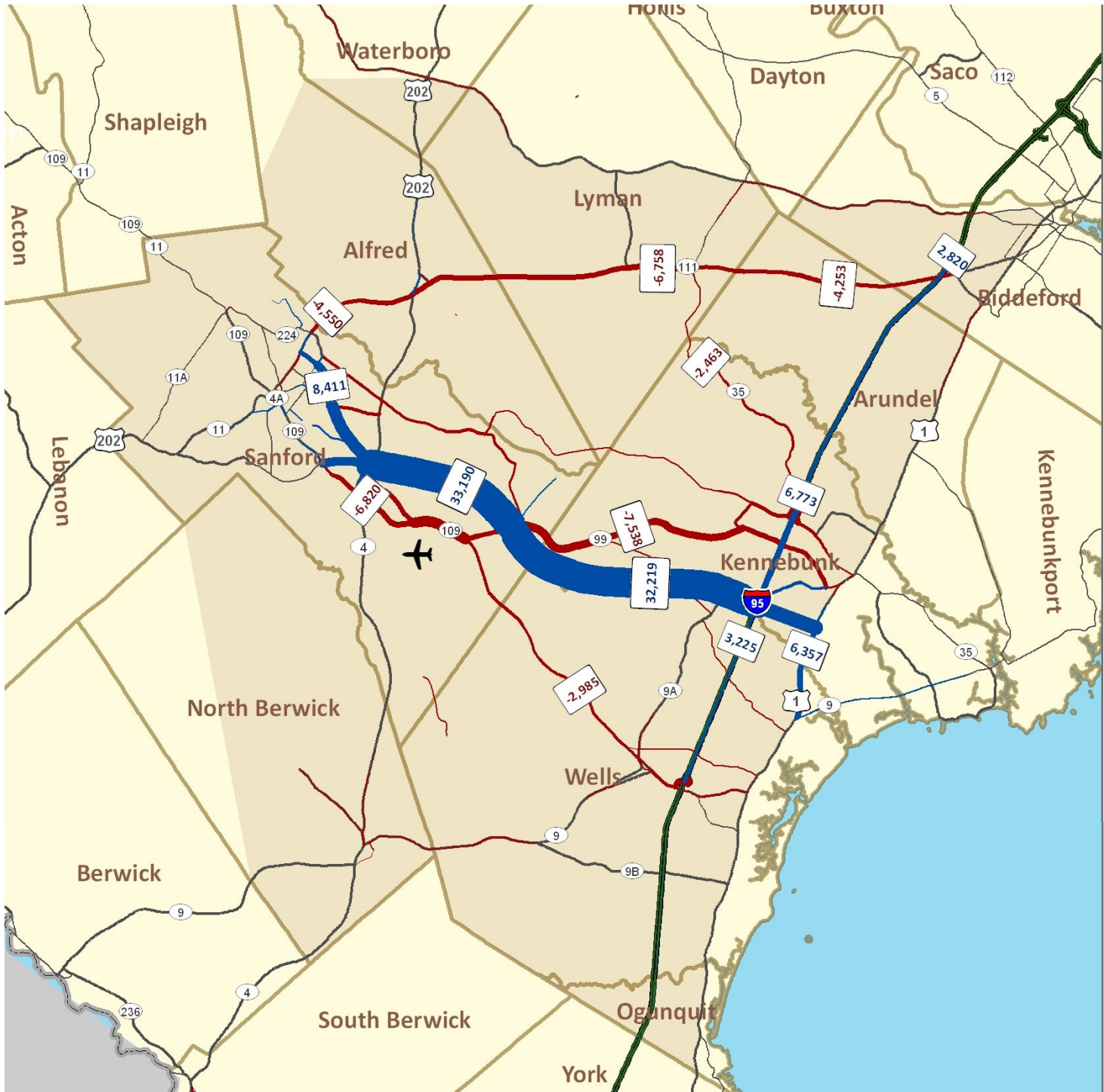
Updated: June 10, 2011

Strategy K2

Upgrade Rte 109
Sanford - Wells



**Central York County
Connections Study**



2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy K3

Limited Access Highway
Sanford - Kennebunk

Increase

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

Decrease

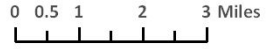
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

— State Boundary

— Town Boundary

— Study Area

Data Source: CYCCS Travel Model



Central York County
Connections Study



2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy NB1

Upgrade Rte 4; bypass North Berwick Alfred/Sanford - North Berwick

Increase

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

Decrease

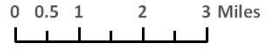
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

— State Boundary

▭ Town Boundary

▭ Study Area

Data Source: CYCCS Travel Model



Central York County
Connections Study



2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy NB2

New Highway (at-grade)
Alfred/Sanford -

North Berwick/Ogunquit

Increase

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

Decrease

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

— State Boundary

— Town Boundary

— Study Area

Data Source: CYCCS Travel Model



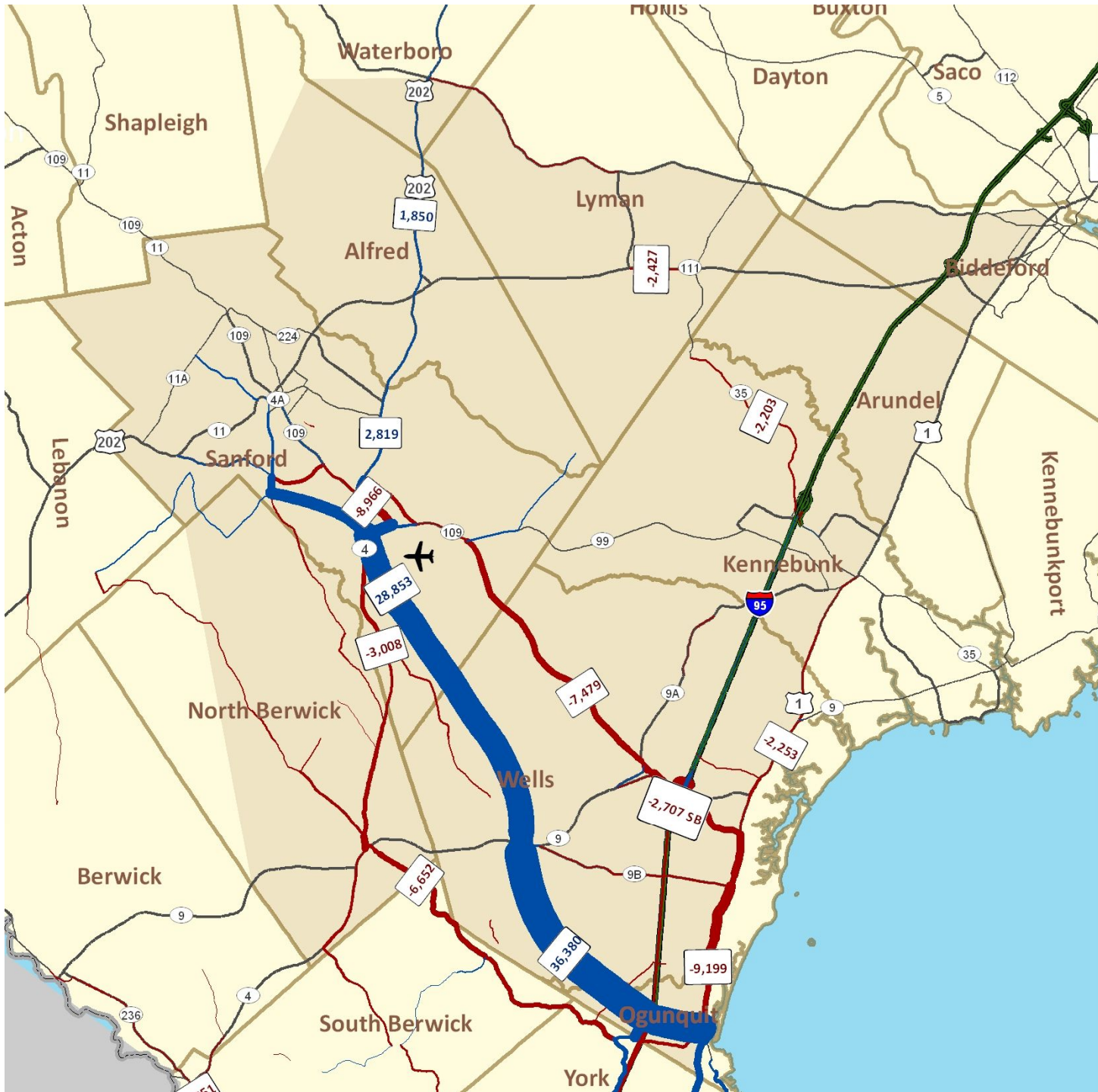
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Connections Study

2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy NB3

Limited Access Highway
Sanford - North Berwick/Ogunquit



Increase

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

Decrease

- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

— State Boundary

— Town Boundary

— Study Area

Data Source: CYCCS Travel Model

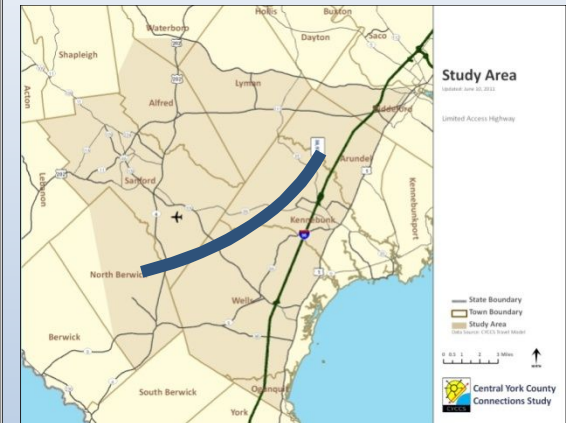
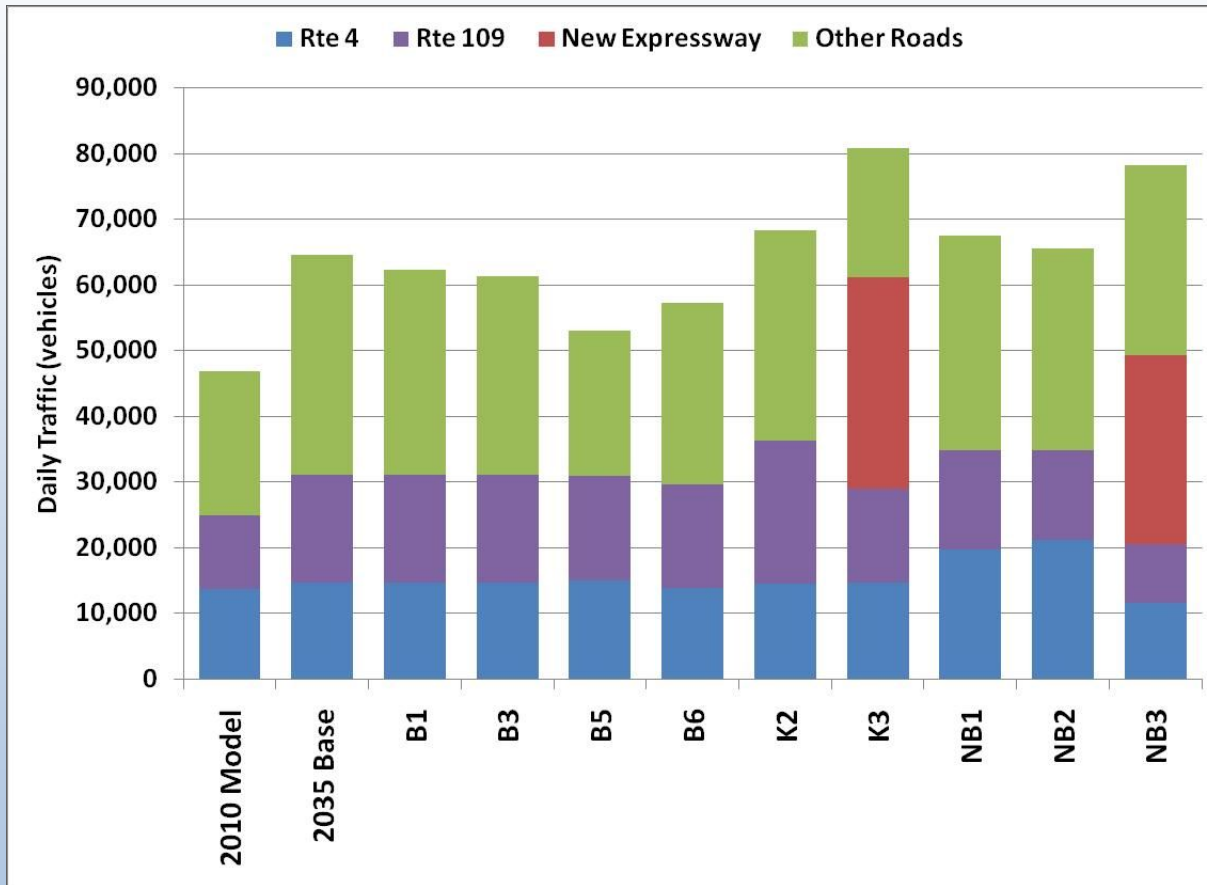
0 0.5 1 2 3 Miles



Central York County
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Daily Traffic Projections

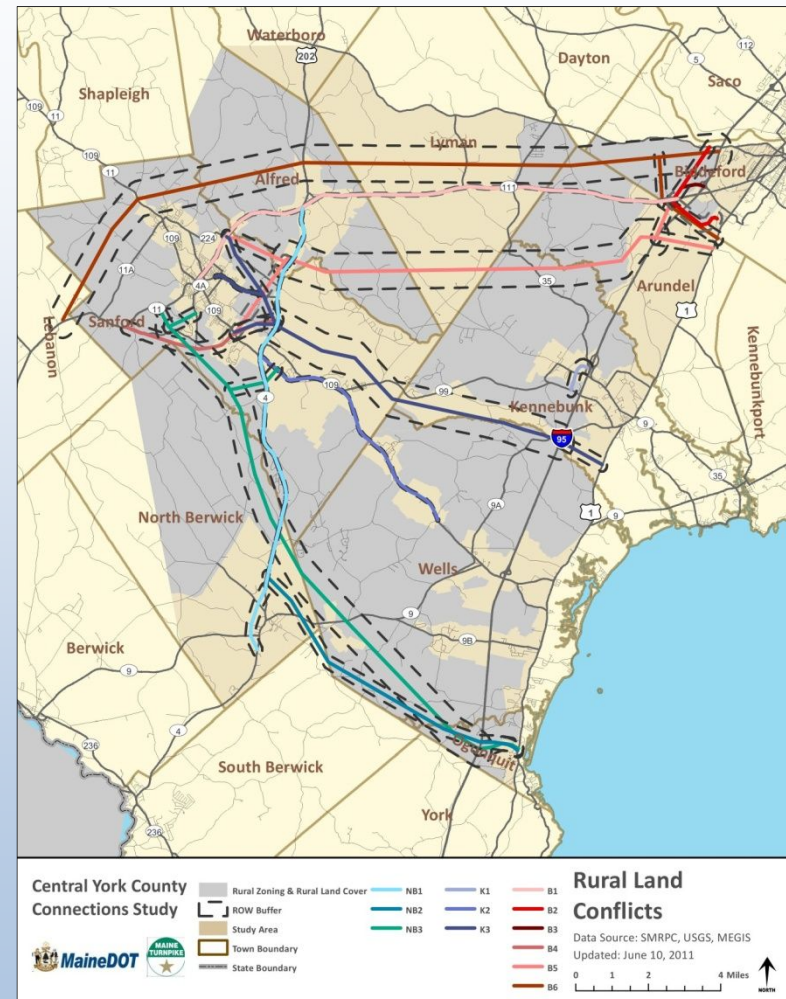
North-South Traffic (south of Sanford)



MOE: Rural and Urban Character

Rural Acreage Potentially Affected

- Purpose: Assess potential to adversely affect rural and urban character
- Components:
 - Corridor width
 - Open fields, woodlands zoned for low density
 - Town centers, historic sites and historic districts



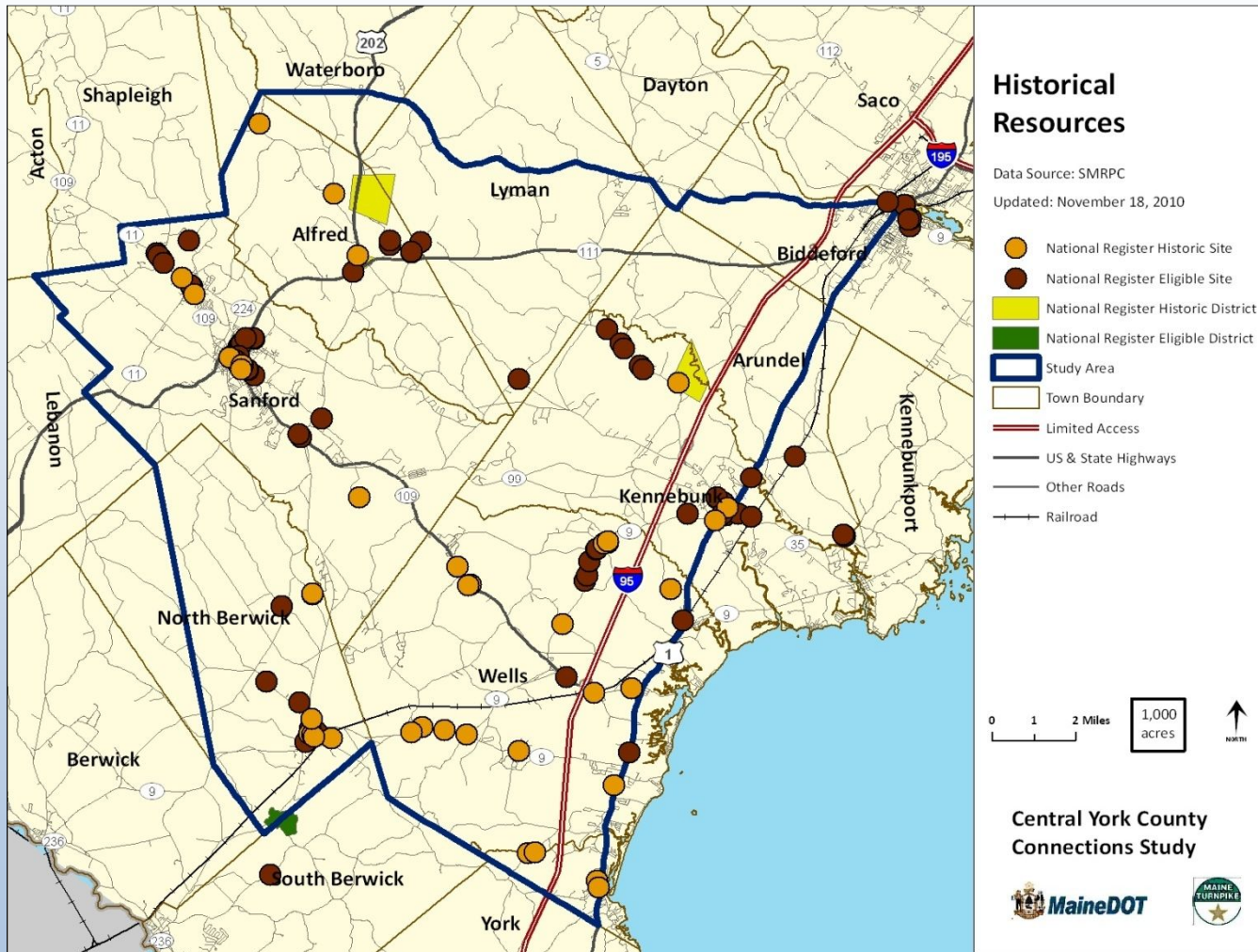
MOE: Rural and Urban Character

Rural Acreage Potentially Affected

Strategy	Corridor Area (acres)	Corridor Length (miles)	Rural Acres within Corridor
Biddeford Corridor			
B1	845	15	262
B2	802	3	448
B3	1,848	18	856
B4	1,111	5	746
B5	8,857	19	4,765
B6	13,387	23	9,223
Kennebunk/Wells Corridor			
K1	236	1	70
K2	384	7	19
K3	7,024	15	2,088
North Berwick/Ogunquit Corridor			
NB1	897	13	121
NB2	2,484	19	1,356
NB3	9,429	19	8,014

MOE: Rural and Urban Character

Proximity to Town Centers and Historic Sites/Districts



MOE: Rural and Urban Character

Proximity to Town Centers and Historic Sites/Districts

Strategy	Town Centers	Historic Districts, Sites			
		NR List	NR Elig	Hist Dist	Arch Site
Biddeford Corridor					
B1	•Alfred (-)		14	1	4
B2					
B3	•Alfred (-)		14	1	4
B4					1
B5			3	1	10
B6	•Springvale (--) •Alfred (-)	1	7	1	1
Kennebunk/Wells Corridor					
K1					1
K2		3			
K3			1		1
North Berwick/Ogunquit Corridor					
NB1	•Alfred (-) •North Berwick (+)			1	
NB2	•Ogunquit (--)	3		1	2
NB3	•Ogunquit (--)	1			

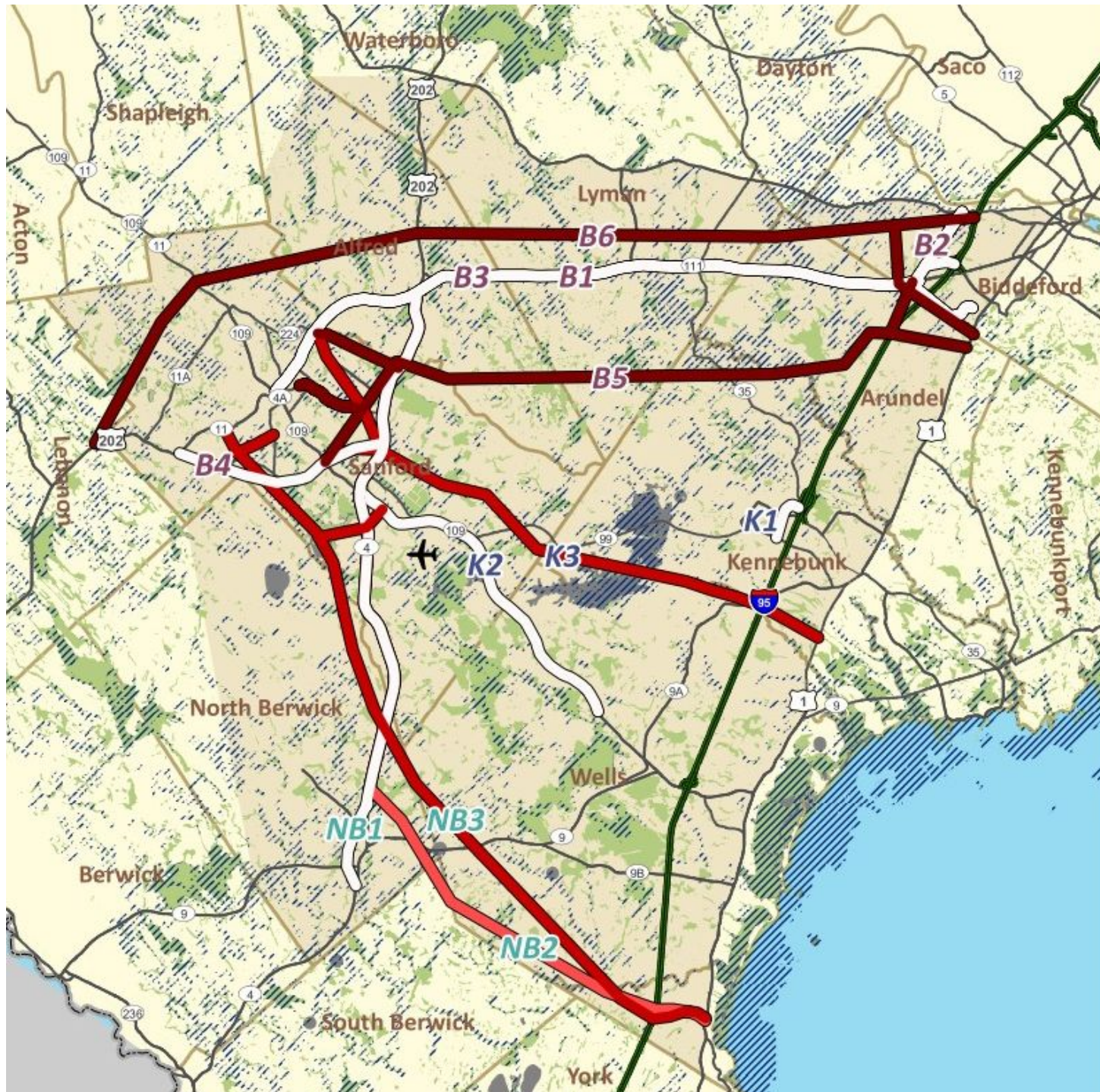
MOE: Environmental Constraints

Wetlands and Regulated Natural Features

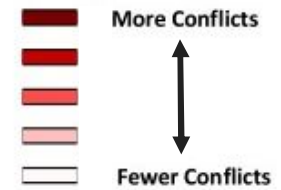
- Purpose: Assess potential to affect environmental resources
- Components:
 - Wetlands
 - Other regulated natural resources
 - Linear feet of alignment

Environmental Constraints

Updated: June 10, 2011



Strategy Rating

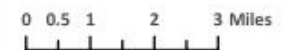


Corridors

- B Biddeford
- K Kennebunk/Wells
- NB North Berwick/Ogunquit

- State Boundary
- Habitat Areas
- Wetlands
- Rare Plant Areas
- Town Boundary
- Study Area

Data Source: Beginning with Habitat



Central York County
Connections Study

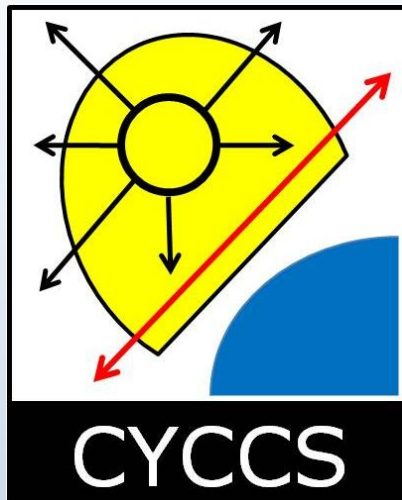
MOE: Environmental Constraints

Wetlands and Regulated Natural Features

Strategy	Wetlands/ Hydric soils (mi)	Regulated Natural Resources (mi)	Total Constraints (mi)
Biddeford Corridor			
B1	0.00	0.00	0.00
B2	1.27	0.69	1.96
B3	1.45	0.72	2.18
B4	0.72	0.58	1.30
B5	7.81	4.40	12.21
B6	6.21	4.56	10.77
Kennebunk/Wells Corridor			
K1	0.06	0.05	0.11
K2	0.00	0.00	0.00
K3	4.27	3.35	7.61
North Berwick/Ogunquit Corridor			
NB1	0.49	0.89	1.38
NB2	2.68	3.72	6.41
NB3	5.05	3.97	9.02

Next Steps

- Finalize Phase II MOE Evaluation
 - Costs and Economic Evaluation
- Finalize other Phase II Documentation
- Begin to develop recommendations for Phase III study
- Identify additional data needs and MOEs for Phase III
- Next Meeting Dates



Central York County Connections Study

June 16, 2011

Advisory Committee

Steering Committee