

Central York County Connections Study

March 31, 2011

Advisory Committee

Agenda

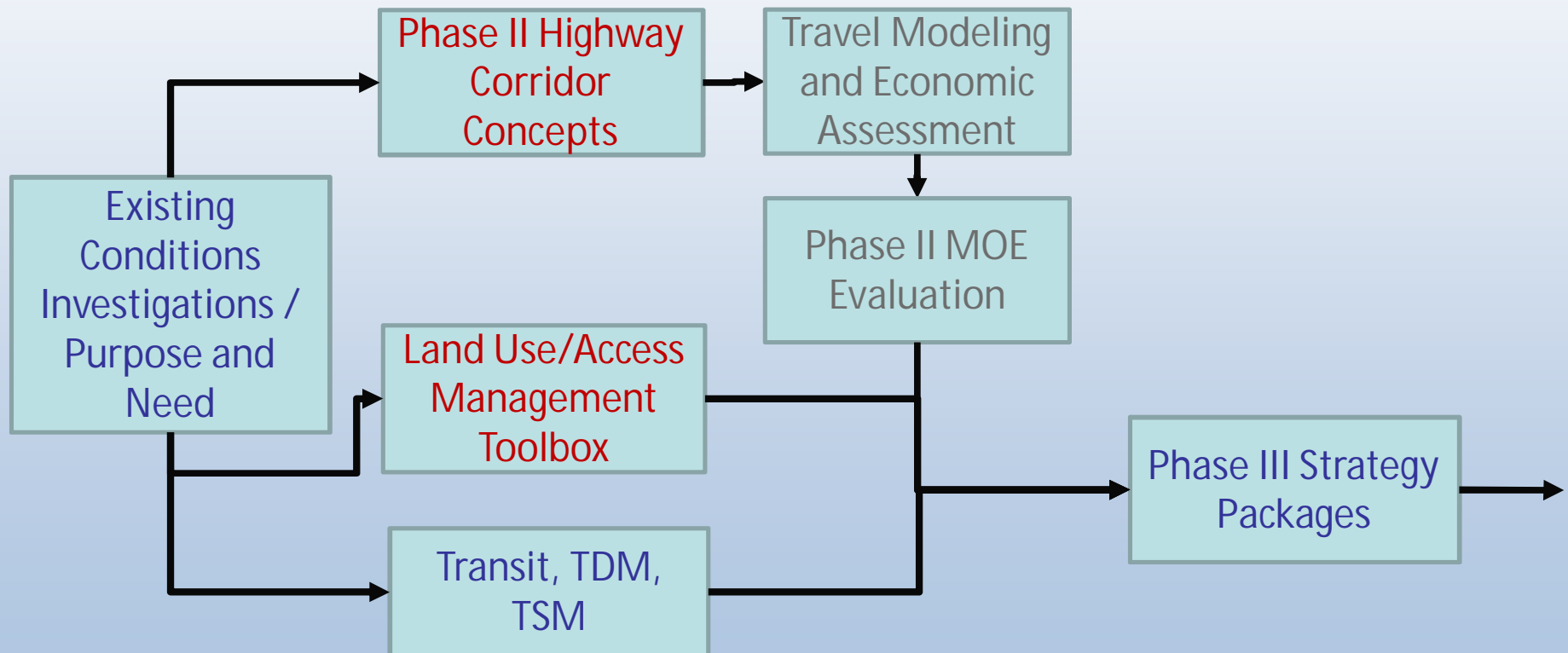
- Welcome
- Communications Update
- Review Population and Employment Projections
- Key Findings from Prior Transportation Studies
- Possible Land Use/Access Management Options
- Review Potential Phase II Corridor Concepts
- Next Steps/Next Meetings

Study Process

Phase I

Phase II

Phase III



Communications Update

- Purpose and Need Statement

The purpose of the Central York County Connections Study is to identify and evaluate **feasible** transportation strategies and related land use options that will enhance regional economic growth, increase regional transportation interconnectivity, improve traffic safety, direct expected travel demand through a strong mix of multimodal strategies and preserve and improve existing infrastructure while maintaining the visual, cultural and historic character of village centers and rural areas.

Communications Update webOT Survey #1

- Who responded:
 - 38 responses
 - Age range 26-65, avg. age 47
 - All lived or worked in study area (almost half from Sanford)
 - Most live in region because of family/friends
 - More than three-quarters own 2+ vehicles
- Commute distance avg. 11-25 miles
- Big majority commute by car, but 18% also walk or bike part of the time



webOT Survey #1

**Rate the importance of the following transportation goals
(1= lowest, 5 = highest):**

	Avg.
Improving highway safety	4.3
Expanding regional travel choices (buses, passenger trains, van services, park and ride lots)	4.1
Reducing traffic congestion	3.9
Reducing impacts of traffic (noise, speeding, etc) in towns & neighborhoods	3.7
Reducing the time it takes to drive to key destinations (either inside or outside of York County)	3.7
Reducing dangerous driveways on higher speed roads	3.7
Better bicycle and pedestrian accommodations within towns	3.6
Adding parking in downtowns	3.0
Better bicycle accommodations outside of towns	2.8

webOT Survey #1

Are you interested in other options for commuting, such as:

Note: More than one selection allowed, so totals exceed 100%

		Percent of Respondents who Selected
Carpool	3	9%
Vanpool	2	6%
Bus	12	36%
Bike Paths/Lanes	6	18%
(None selected)	15	45%

webOT Survey #2

- Measures of Effectiveness
- Next....evaluation of concepts



Central York County Connections Study

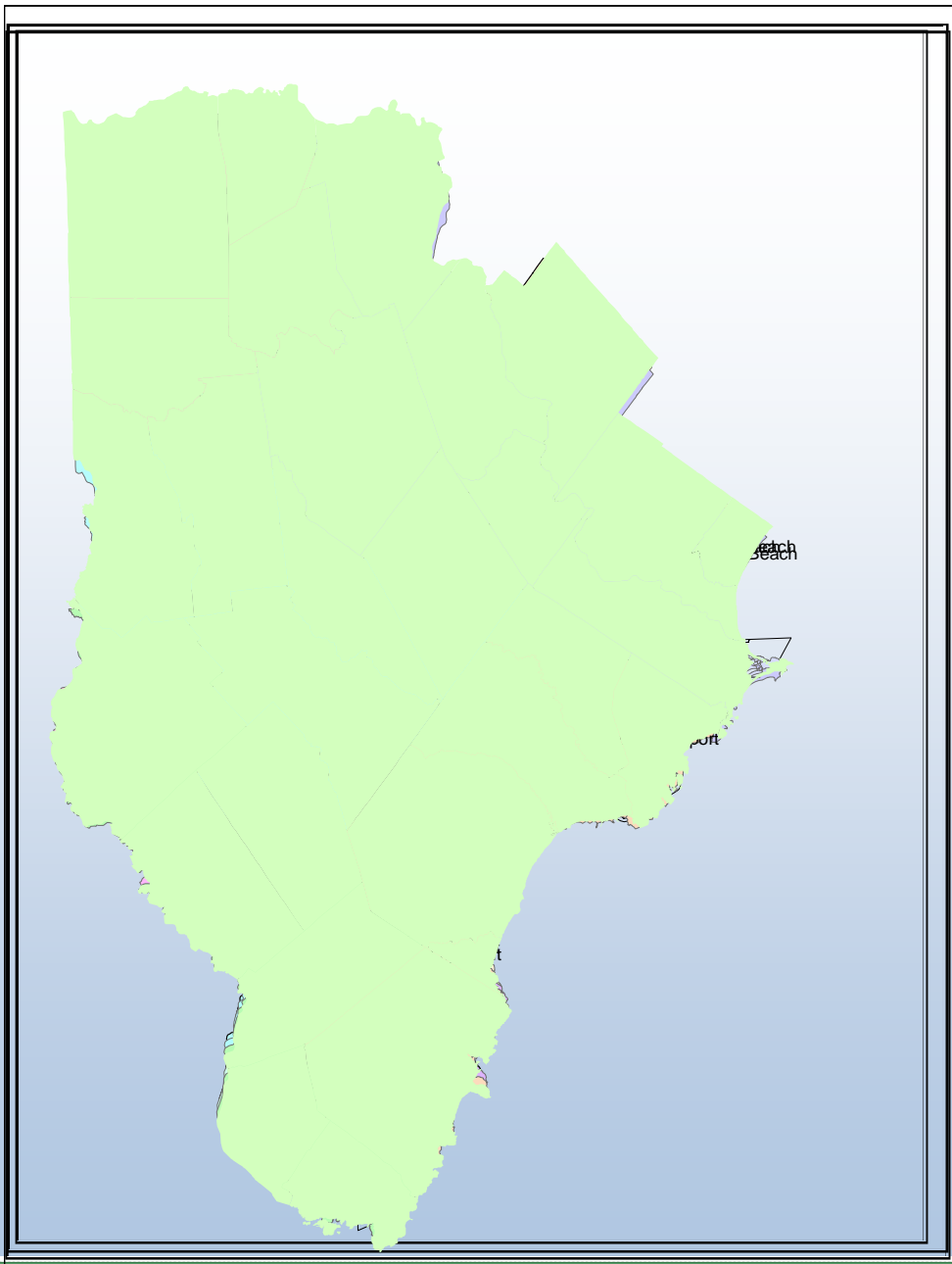


Baseline Population and Employment Projections



Central York County Connections Study

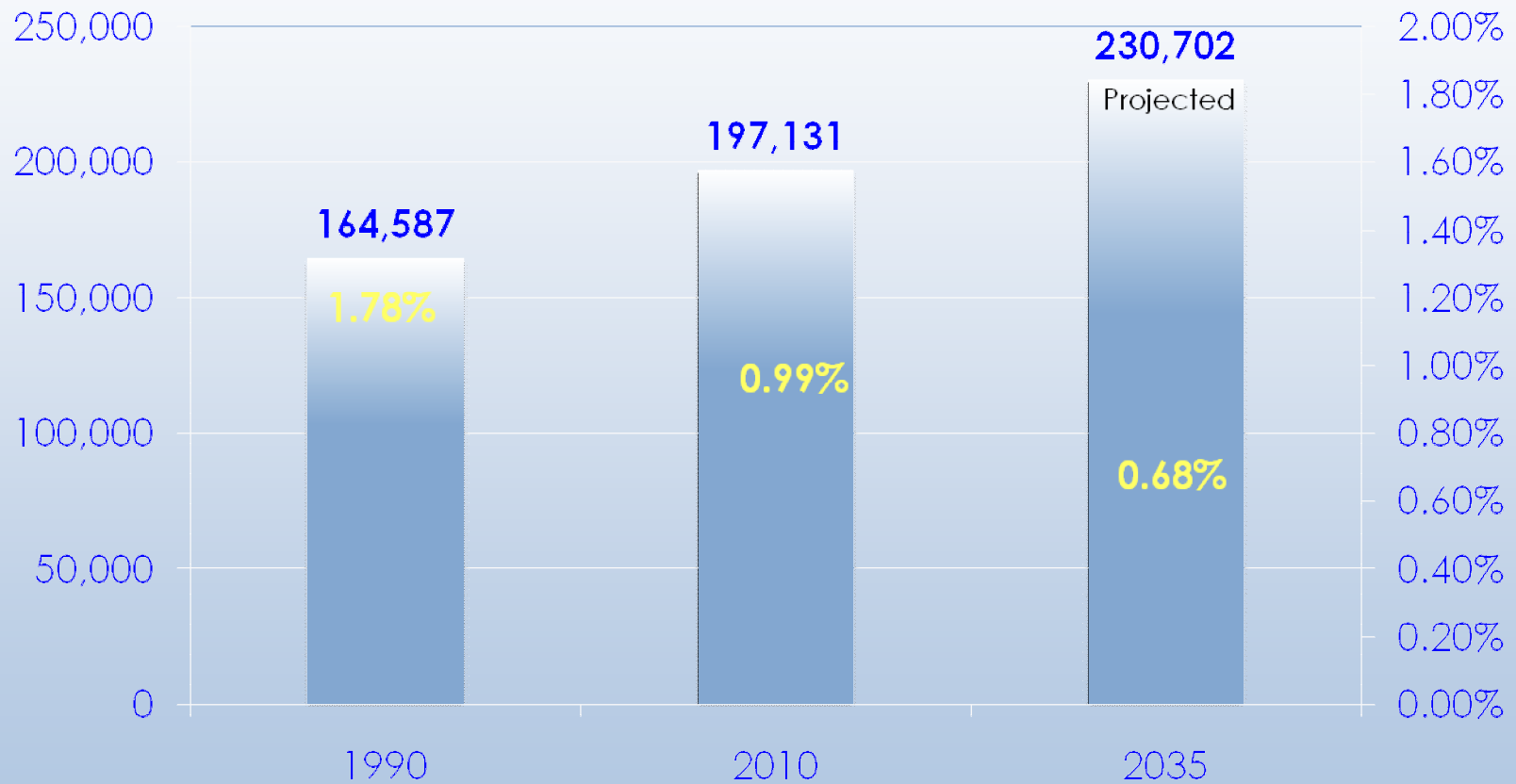




Central York County Connections Study

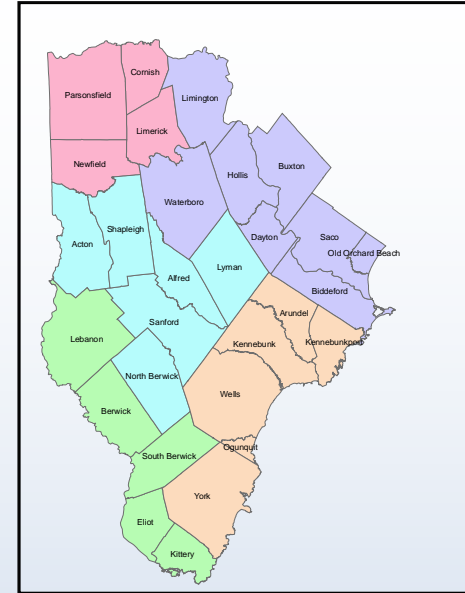
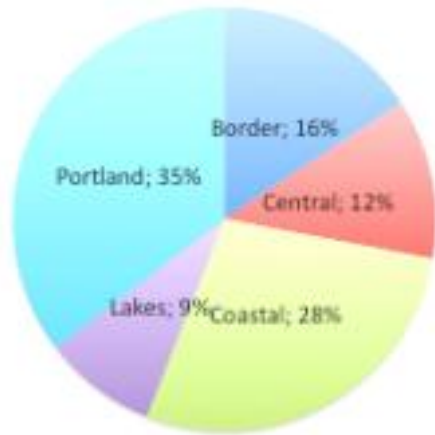


York County Population and Annual Average Growth Rates

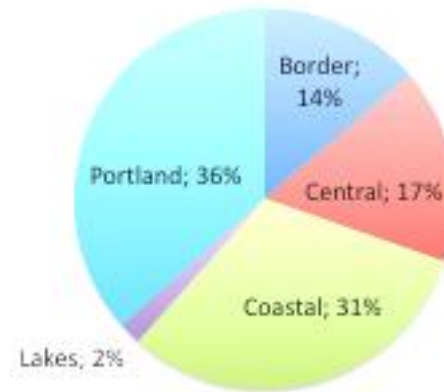


Zone shares of growth

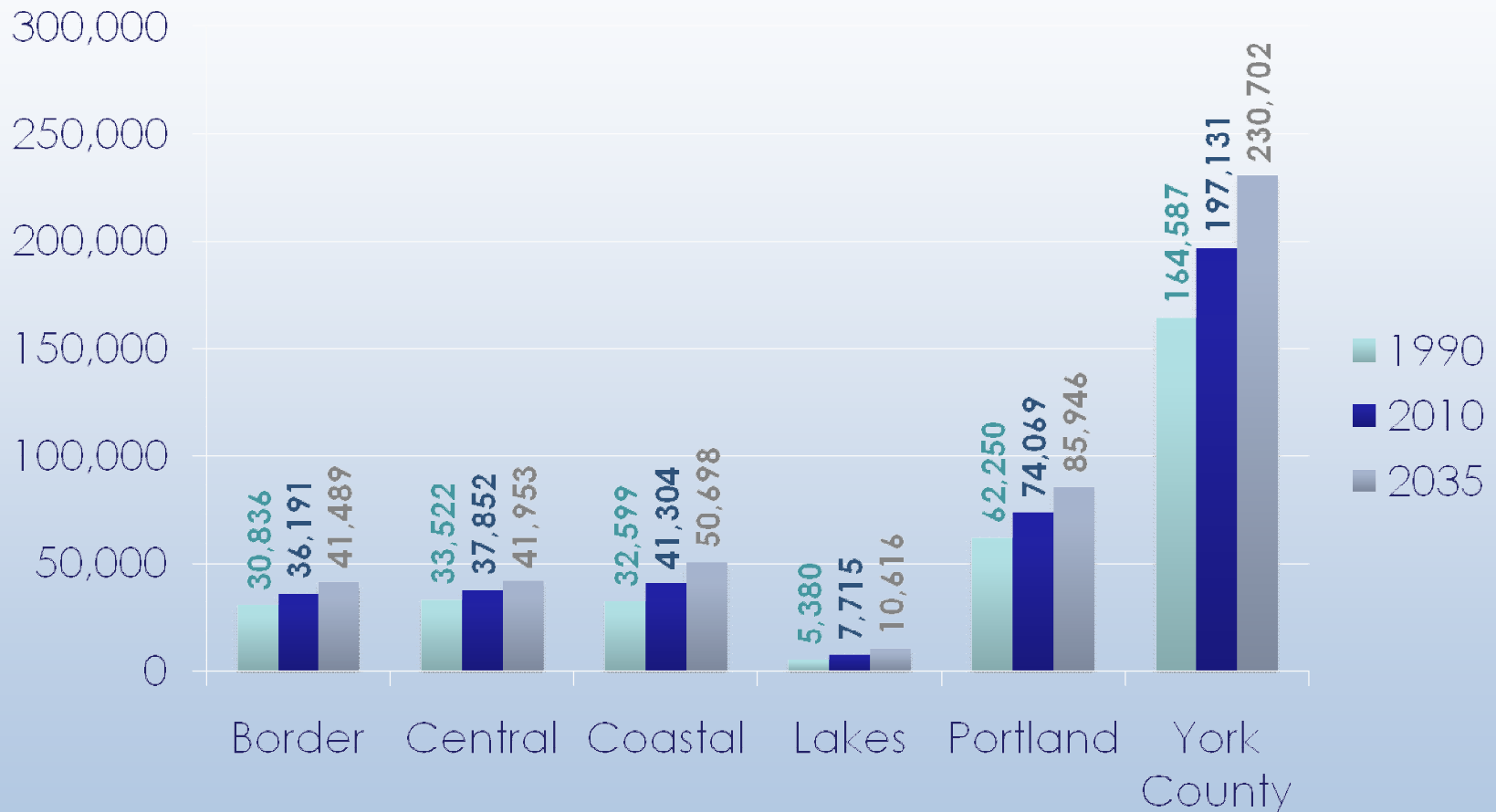
Share of 2010-2035 Population Growth



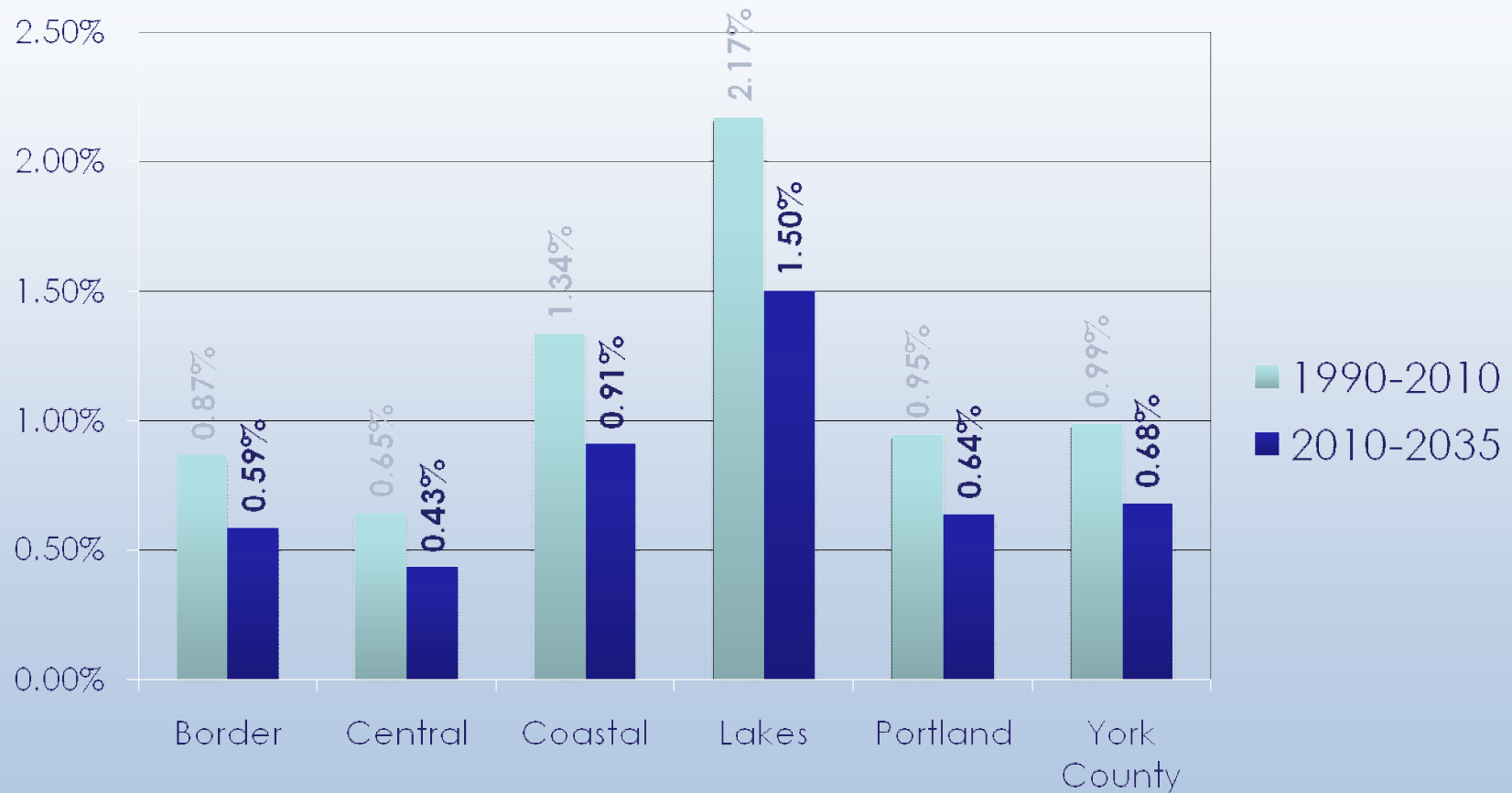
Share of 2010-2035 Employment Growth



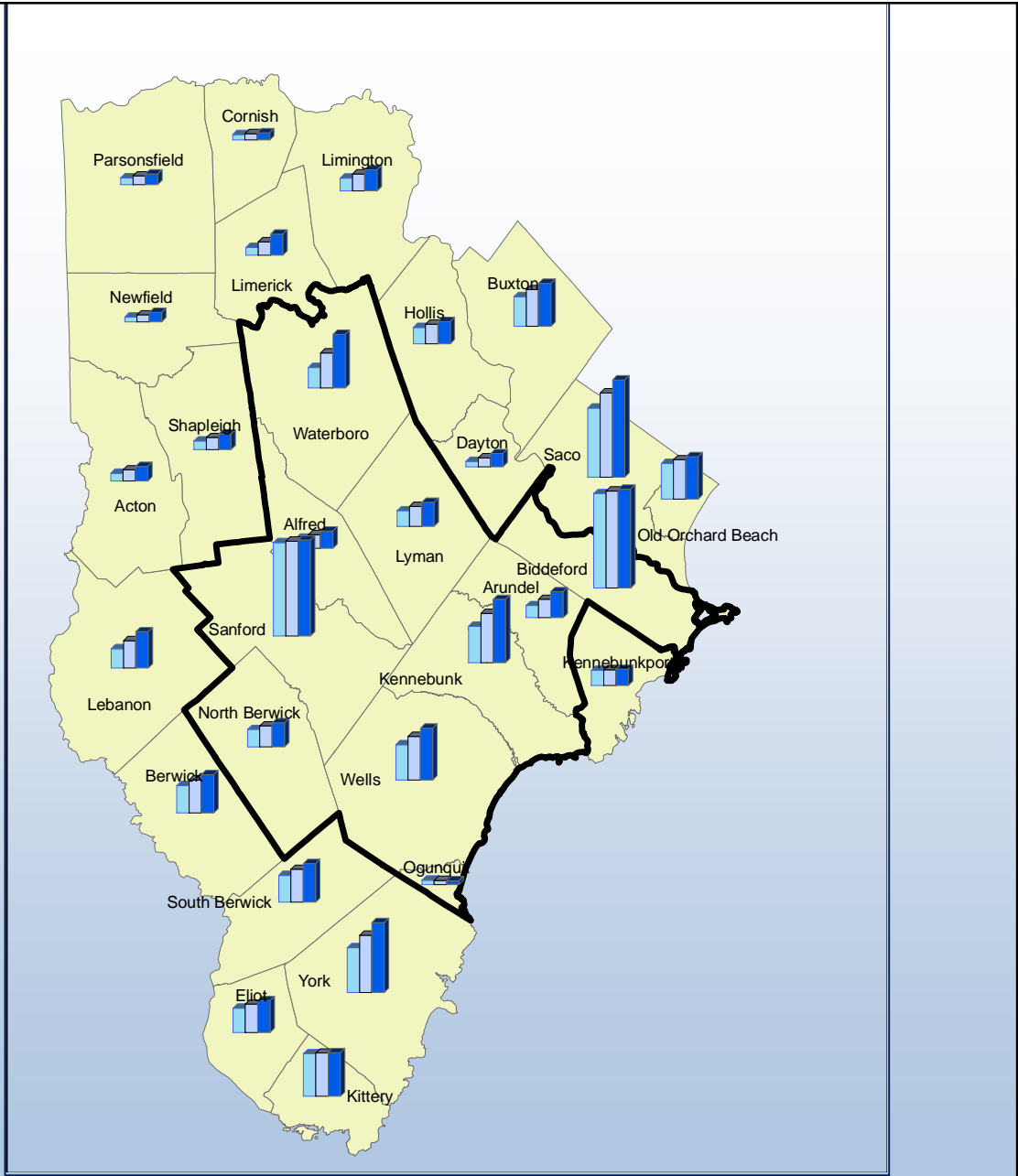
Zone Population Change 1990-2035



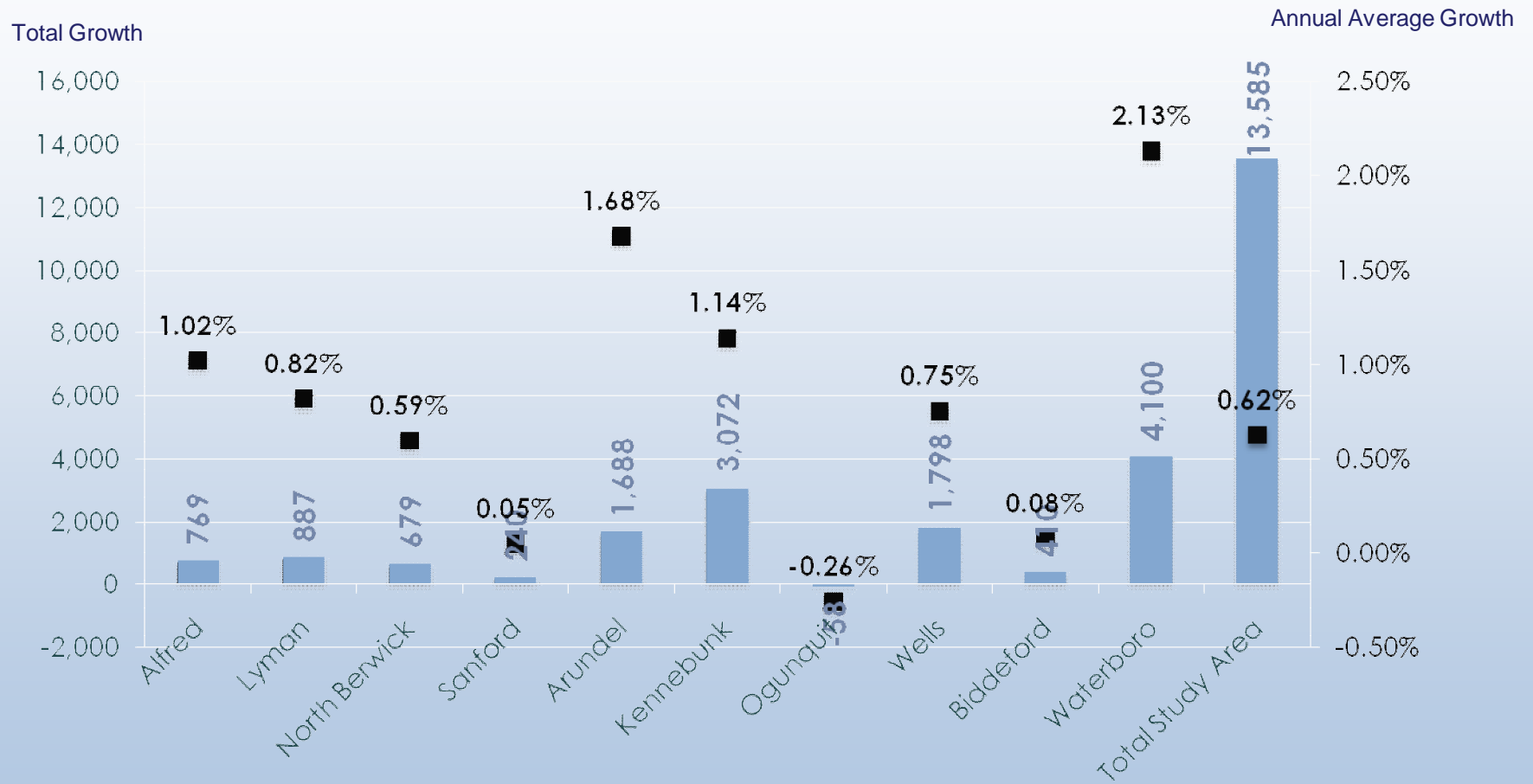
Zone Population Growth Rates



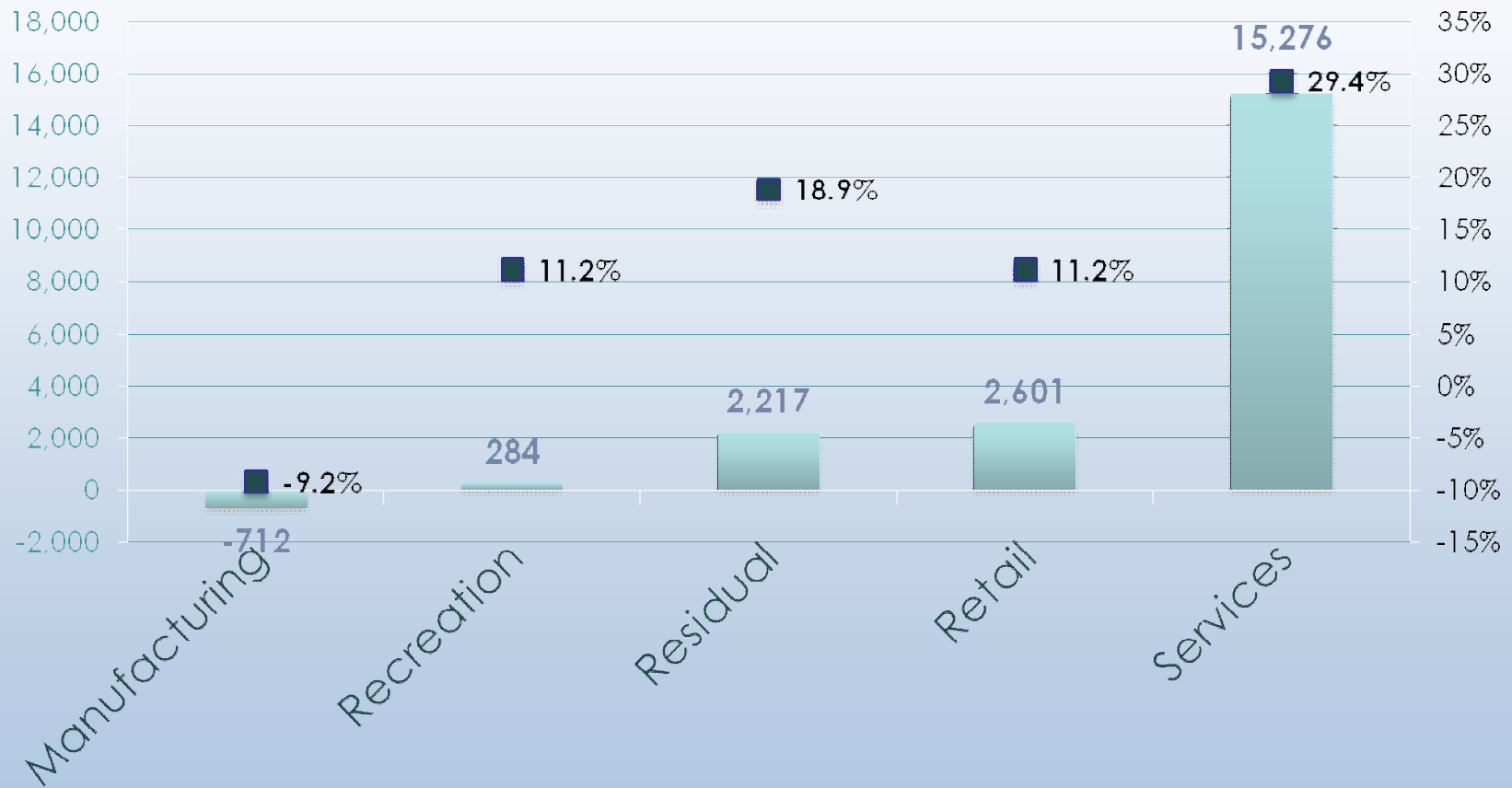
Population by Town



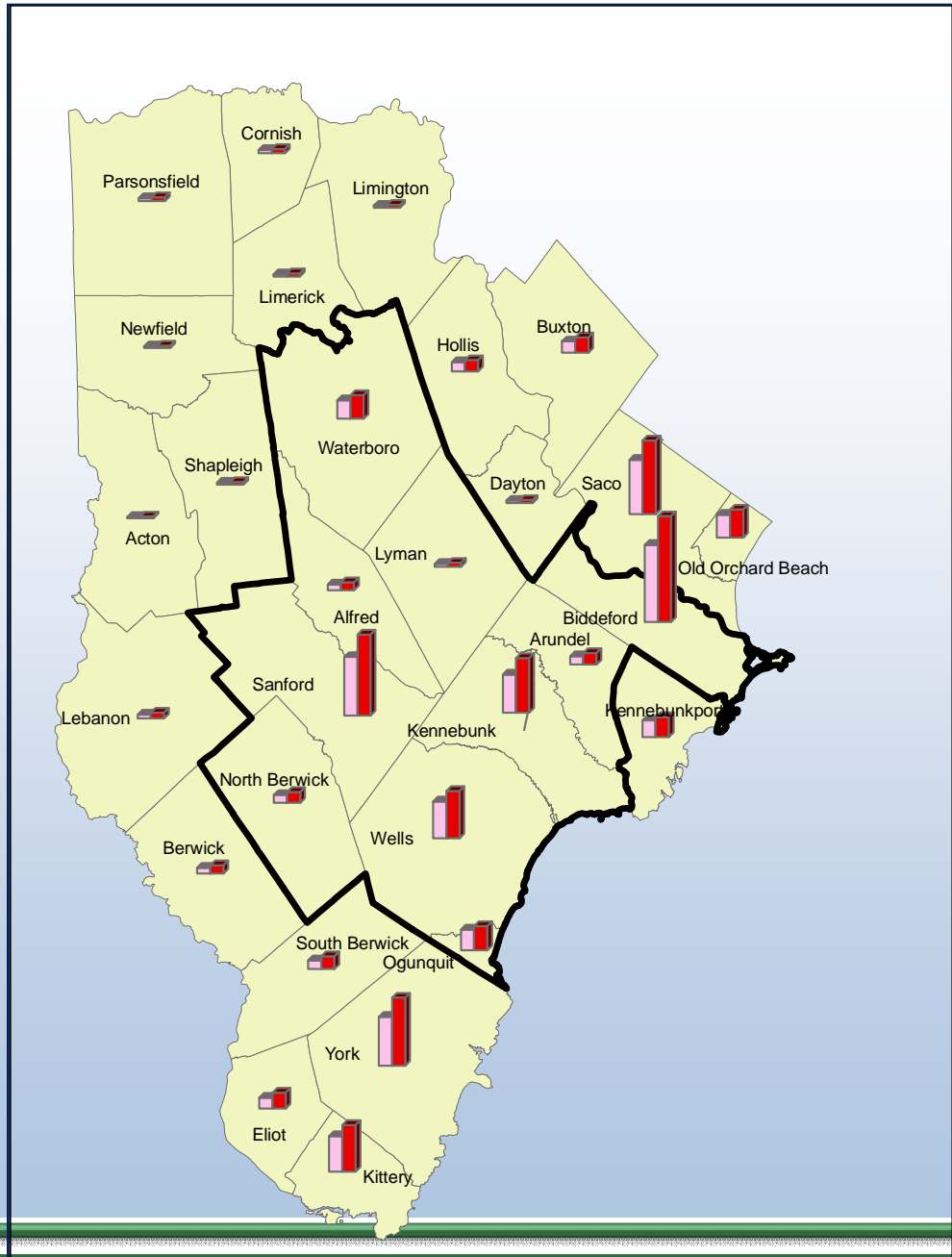
Study Area Population Change 2010-2035



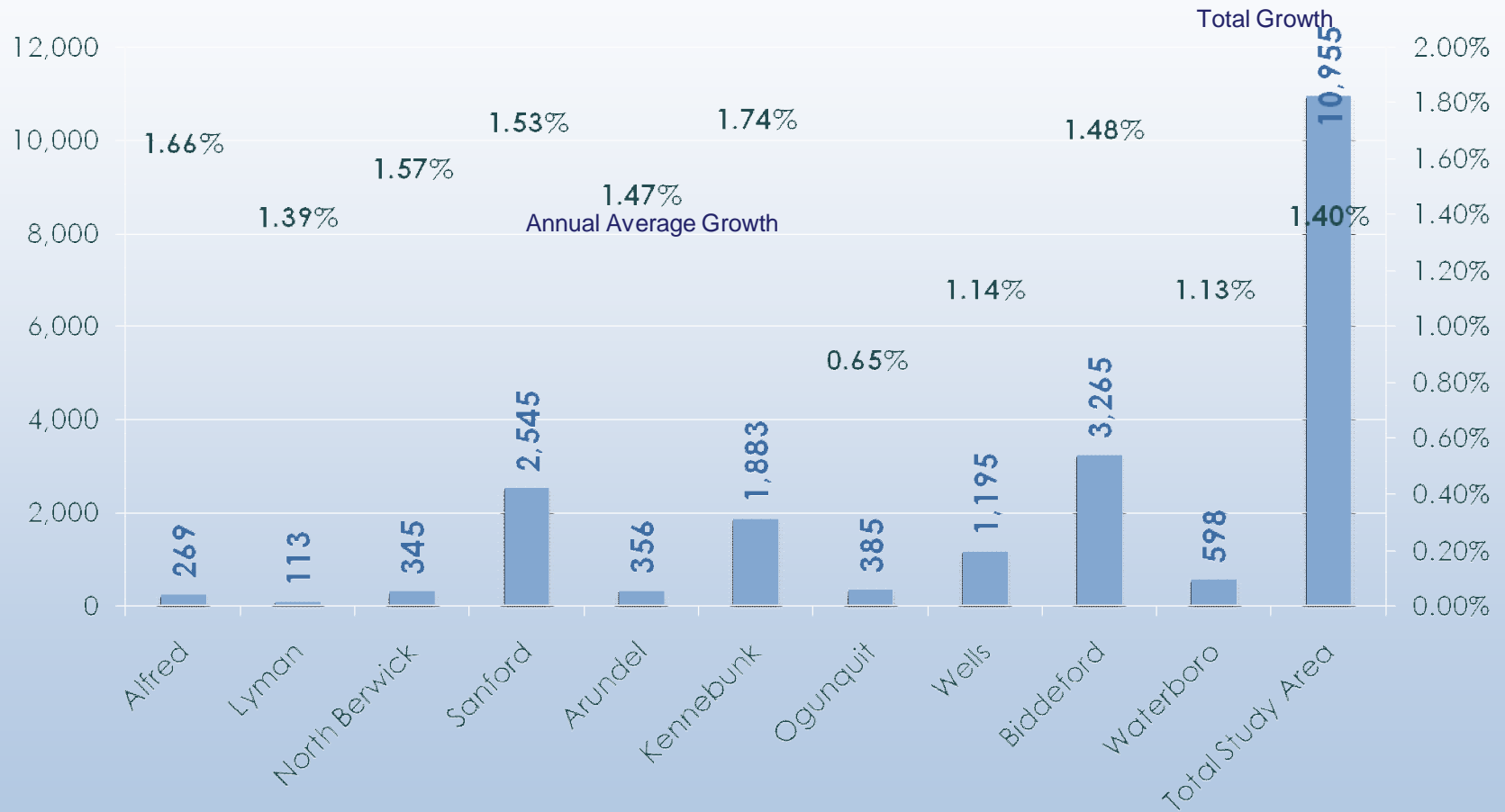
Forecast Employment Change 2010-2035



Employment by Town



Study Area Employment Change 2010-2035



Prior Transportation Studies



Central York County Connections Study



Review of Prior Transportation Studies

- Prior Corridor Studies
 - Route 1 Corridor Committee (SMRPC, 2006)
 - State Route 1 Corridor Traffic Study (MaineDOT, 2005)
 - U.S. Route 1 Corridor Traffic Analysis (MaineDOT, 1993)
 - Rte 109 Corridor Committee (SMRPC, 2004)
 - State Route 111 Corridor Study (MaineDOT, 2003)
 - Rte 111 Corridor Committee (SMRPC, 2003)
- Statewide Planning Documents
- Other Studies



US Route 1 Corridor Studies

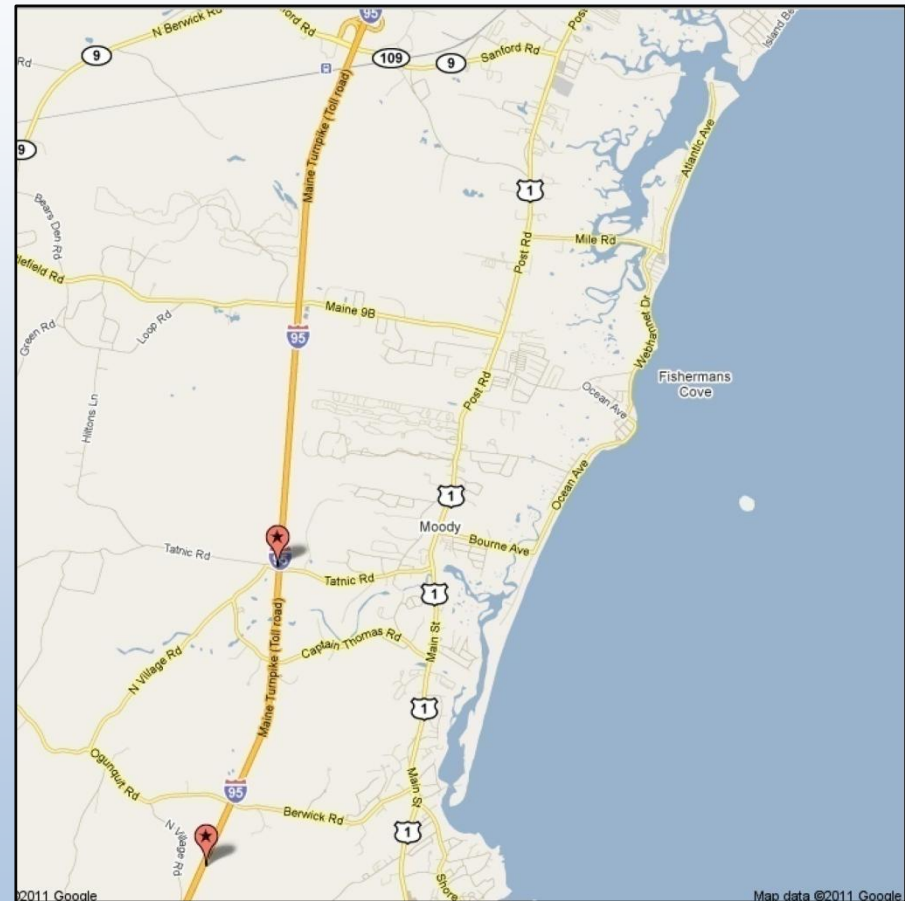
- Studied in 1993 and 2005
- Highlights
 - 63% more traffic in summer than winter
 - Heavy congestion in summer
 - Slower traffic growth since 2000
 - Evaluated new interchange in Ogunquit



Route 1 Corridor – Prior Studies

Ogunquit Interchange

- Tatnic Lane (north of village)
- Bourne Lane (south of village)
- Did not consider interchange in conjunction with other local road improvements



Route 109 – Prior Studies

- SMRPC Route 109 Corridor Committee (2003-2004)
 - Interim report issued in 2003
 - General recommendations with emphasis on access management and sight distance
 - Sanford Access Concept
 - Directional Mobility Map
 - Development Potential Map

Route 109 Corridor

- Upcoming Project: Wells Rte109 Highway Rehabilitation
 - Realign intersection at Rte 9A and install flashing beacons
 - Road/pavement rehabilitation
 - 2.44 miles from Exit 19 through Meetinghouse Road (under construction, complete by Oct. 2012)
 - Continue north 2.14 miles past Meetinghouse Road (to be bid in May 2011, complete by June 2013)
 - Sidewalk from US Route 1 to the Wells Town Office (complete by Dec. 2011)



Prior Studies- Route 111

- SMRPC Corridor Committee (circa 2003)
 - Detailed focus on access management
 - Build out scenario of properties along corridor
 - Recommendations for MaineDOT and Towns
- MaineDOT Corridor Study (2003)
 - Comprehensive traffic evaluation



Route 111 Corridor Study Highlights

Study Findings	Current Status
<p>Strong Directional Traffic Flow 70% AM eastbound, 64% PM westbound</p>	<p>Still applies</p>
<p>High Traffic Growth Rate 4% annually near Biddeford 2.5% annually elsewhere</p>	<p>Slower recently 1.5% near Biddeford < 1% elsewhere</p>
<p>High rate of fatal/severe crashes</p>	<p>Lower rate of fatal/severe crashes Several High Crash Locations</p>
<p>Congestion near Biddeford and at Rte 4.</p>	<p>Still congested, but less so due to improvements</p>

Route 111 Corridor Study Highlights

Study Recommendations	Current Status
Intersection improvements <i>High Priority</i>	Constructed: Rte 35, Rte 202/4, Exit 32
Intersection improvements <i>Median and Low Priority</i>	Constructed: Improved traffic signal visibility Several intersection improvements not yet constructed.
Passing Lanes (2 each direction) <i>Long-term</i>	Not Constructed
Expanded Cross Section in Biddeford	Constructed



Possible Land Use/Access Management Options



Central York County Connections Study



Possible Land Use/Access Management Options

- Purpose: Identify land use regulation and access management strategies that could help maintain capacity and improve corridor safety.
- Decision to implement these actions lies with the towns.
- Study will identify range of strategies and potential applicability to major corridors

Possible Land Use/Access Management Options

- Efficiency of highways relates to land use
 - Roads move traffic
 - Also provide access to land uses in the corridor
 - As access increases – capacity decreases
- Major concern is turning movements (aka side friction)
- Important to consider land use and access management provisions to help maintain highway capacity

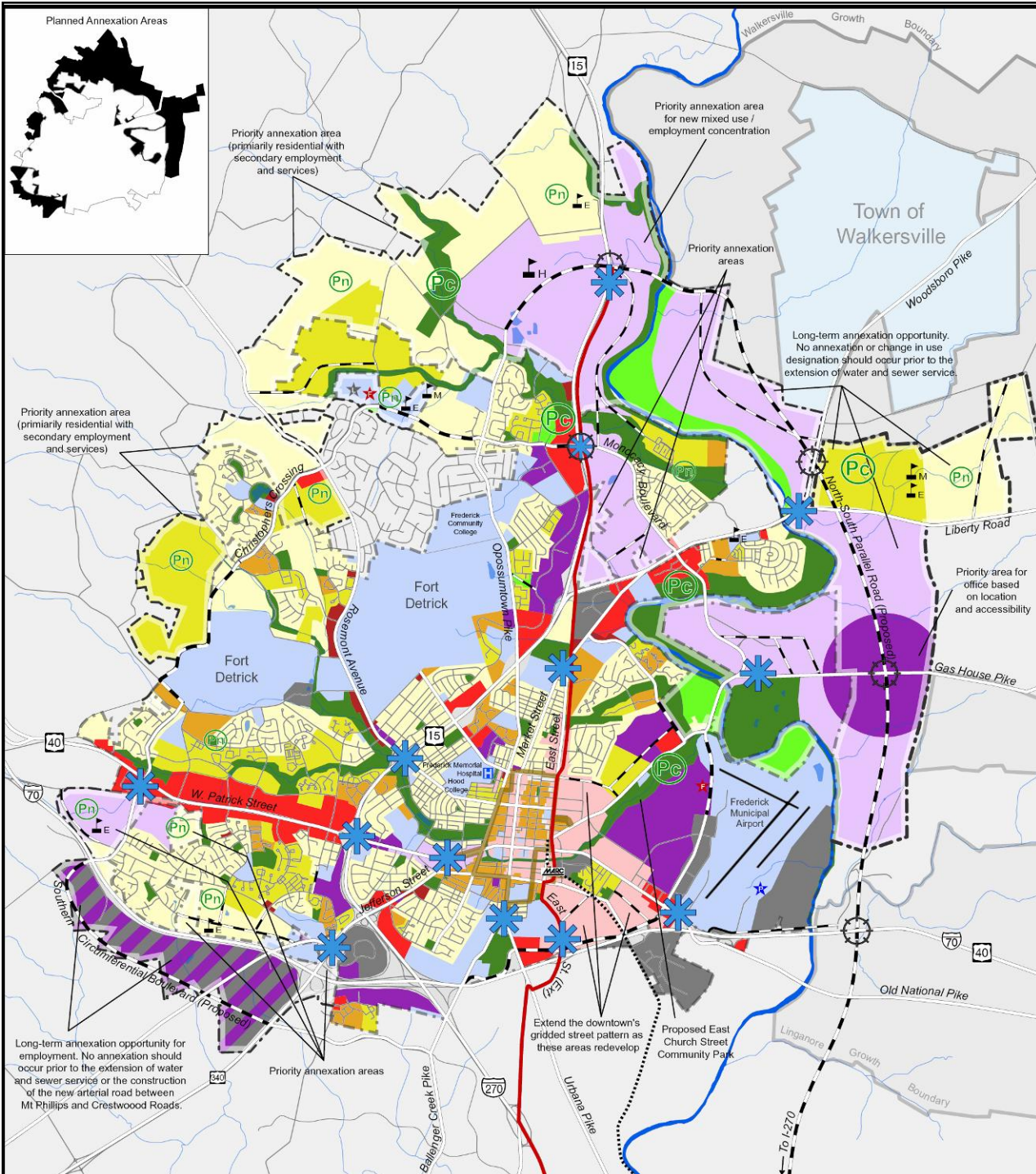
Two Basic Concepts

- Two different but interrelated approaches
 1. Reducing the number of new trips generated in the corridors through land use policies and practices.
 2. Managing how and where vehicles enter or leave the highway
- Looked at possible ways to do this
- Just a starting point for discussion

Official Map – Major Thoroughfare Plan

- Purpose: To plan for access and to interconnect the transportation network
- Community identifies where new roads are needed
- Community lays out general road locations
- Developers required to:
 - Protect the right-of-way identified in Communities' Official Map
 - Build necessary new road segments and other needed transportation improvements





City of Frederick, Maryland Comprehensive Plan Map 2004

Legend

- City Boundary, 2004
- Planned City Boundary, 2030
- Planned Annexation Areas (See inset map)
- City Gateway
- Proposed Interchange
- Proposed Community Park (general location)
- Proposed Neighborhood Park (general location)
- Proposed Elementary School (general location)
- Proposed Middle School (general location)
- Proposed High School (general location)
- Proposed Fire Station (general location)
- Proposed Police Facility (general location)
- Proposed Library (general location)
- MARC Rail and Station
- Proposed Road
- Planned Transit Service
- Frederick Town Historic District

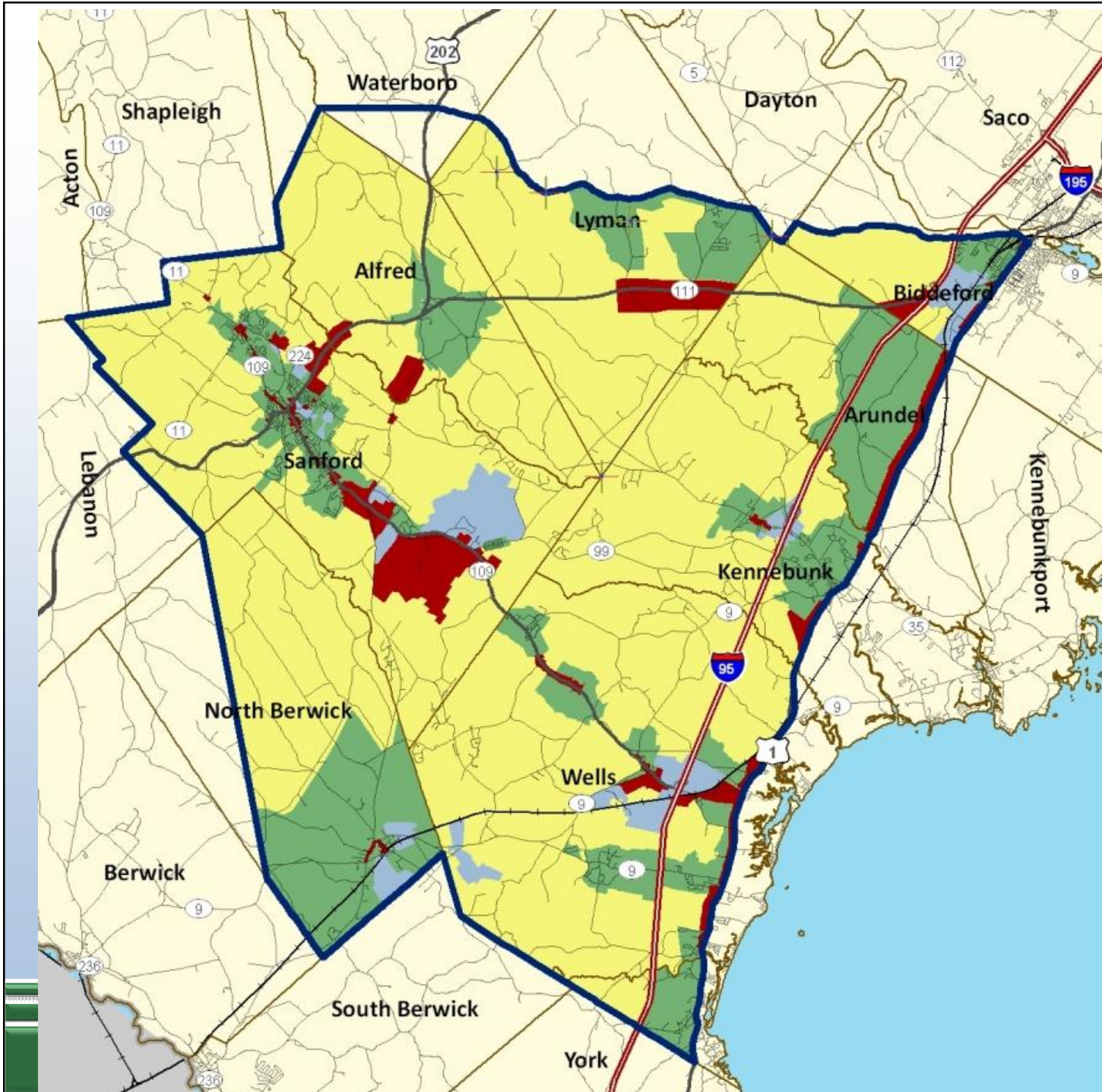
- ### Land Use Designations
- General Commercial
 - Neighborhood Commercial
 - Office
 - Office/Industrial
 - Industrial
 - Institutional/Government
 - Downtown Mixed Use
 - Planned Mixed Use
 - Residential-Moderate Density
 - Residential-Medium Density
 - Residential-High Density
 - Parks/Public Open Space
 - Conservation

Trip Reduction Possibilities

- Number of new trips is a function of the scale and intensity of development in corridor
- May be possible to reduce trip generation through land use policies
 - Managing uses that generate considerable amounts of peak hour trips such as restaurants, coffee shops, gas stations, convenience stores, day care centers, etc.
 - Managing the scale and density/intensity of development

Land Use Options to Reduce Trips

- Increase minimum lot frontage requirements along highways
- Provide for transfer of residential development rights
- Limit the intensity of development that relies on the highway for access
- Refine zoning in undeveloped areas to preserve open space and limit high traffic uses
- Encourage ridesharing & transit provisions at larger or multi-lot developments.

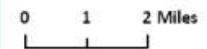


Generalized Zoning

Data Source: SMRPC

Updated: November 17, 2010

- Rural
- Commercial/Mixed Use
- Industrial
- Residential
- Study Area
- Limited Access
- US & State Highways
- Other Roads
- Town Boundary
- Railroad



Central York County
Connections Study



Direct Traffic to Existing Cross Streets - Possibilities

- Concentrate zoning for high traffic uses away from major highways and instead to existing non-highway roads where practicable
- Provide access from non-highway roads where feasible (when lots front on highway and a cross-connecting road)
- Official map/thoroughfare plan is also a way to do this

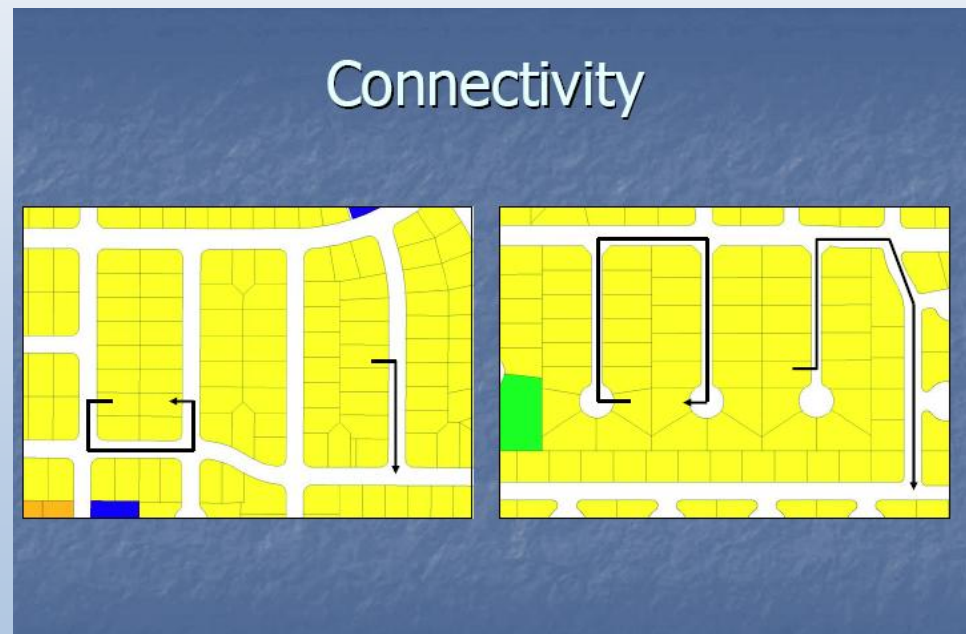
Direct Traffic to New Common Access-ways -- Possibilities

Common access can be a street, private way or shared access or driveway

- Limit creation of new lots that are dependent on highway access
- Encourage lots in a subdivision to access minor or local roadways
- Reduce frontage requirements if common access is provided along non-highway roads

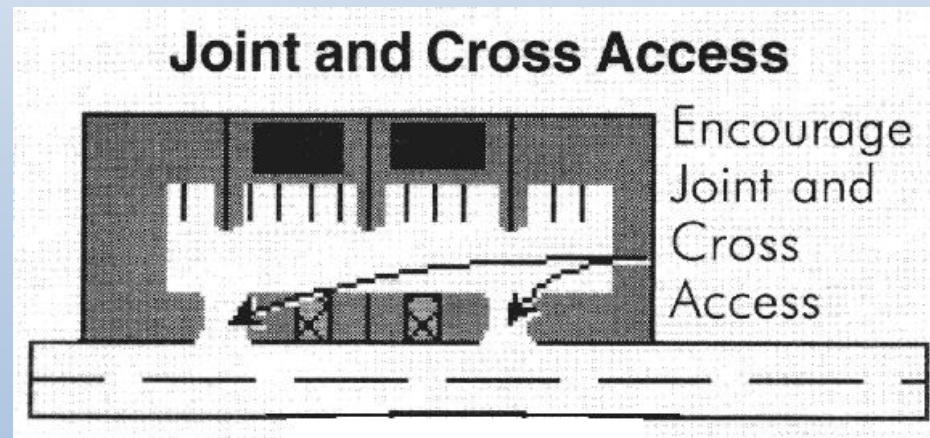
Direct Traffic to New Common Access-ways (continued)

- Require access plan for large parcels (residential or non-residential) prior to any development
- Provide for street extension into adjacent land to allow for future connections or extension
- Provide for rear access road to common exit



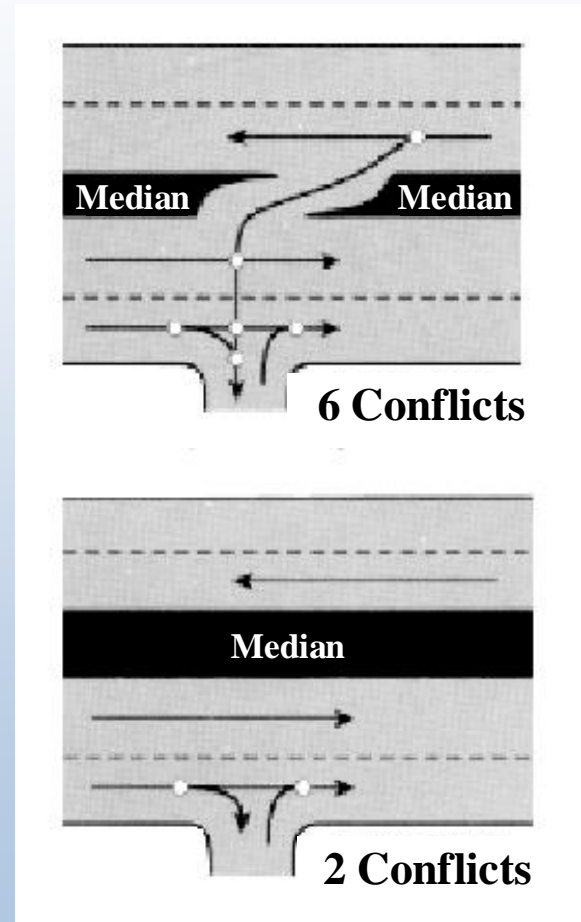
Frequency of Curb Cuts – Possible Approaches

- Increase lot frontage on highway
- Require shared access where feasible
- Limit number of curb cuts based on lot frontage
- Require interconnection of multi-lot residential subdivisions and adjoining non-residential lots



Frequency of Curb Cuts – Possible Approaches (continued)

- Require “backage roads” for commercial lots
- Limit access to right-in, right-out turns (no left turns)



Initial Investigation – Two Sample Corridors

- Looking at two corridors – Rt. 111 and Rt. 109
- Consider:
 - Existing land use pattern
 - Current zoning and access limitations
 - Possibilities for improved land use management
 - (zoning map)

Possibilities for Improved Management

- Looking at possible ways to maintain capacity and address safety in these 2 corridors
 - Identified possible BASIC improvements that are “good practices”
 - Also identified more ADVANCED improvements that involve policy decisions
- Not recommendations – ideas for discussion

Matrixes

- Developed matrixes that identify where various approaches might be considered by local communities
- Idea of Official Map could be broadly applicable
- These judgments will need to be reviewed carefully by community representatives
- Only a starting point for thinking about how these 2 corridors may be managed to maintain capacity
- SHOW SAMPLE MATRIX

Potential Phase II Highway Corridor Concepts



Central York County Connections Study



Phase II Highway Corridor Concepts

- Purpose: Define the conceptual highway improvement types that will be investigated in Phase II

New routes are conceptual to show general connections and locations, and are not intended to depict specific alignments

- Location (General area and connections to other highways)
- Number of travel lanes
- Access type (limited access or arterial)
- Posted speed limit

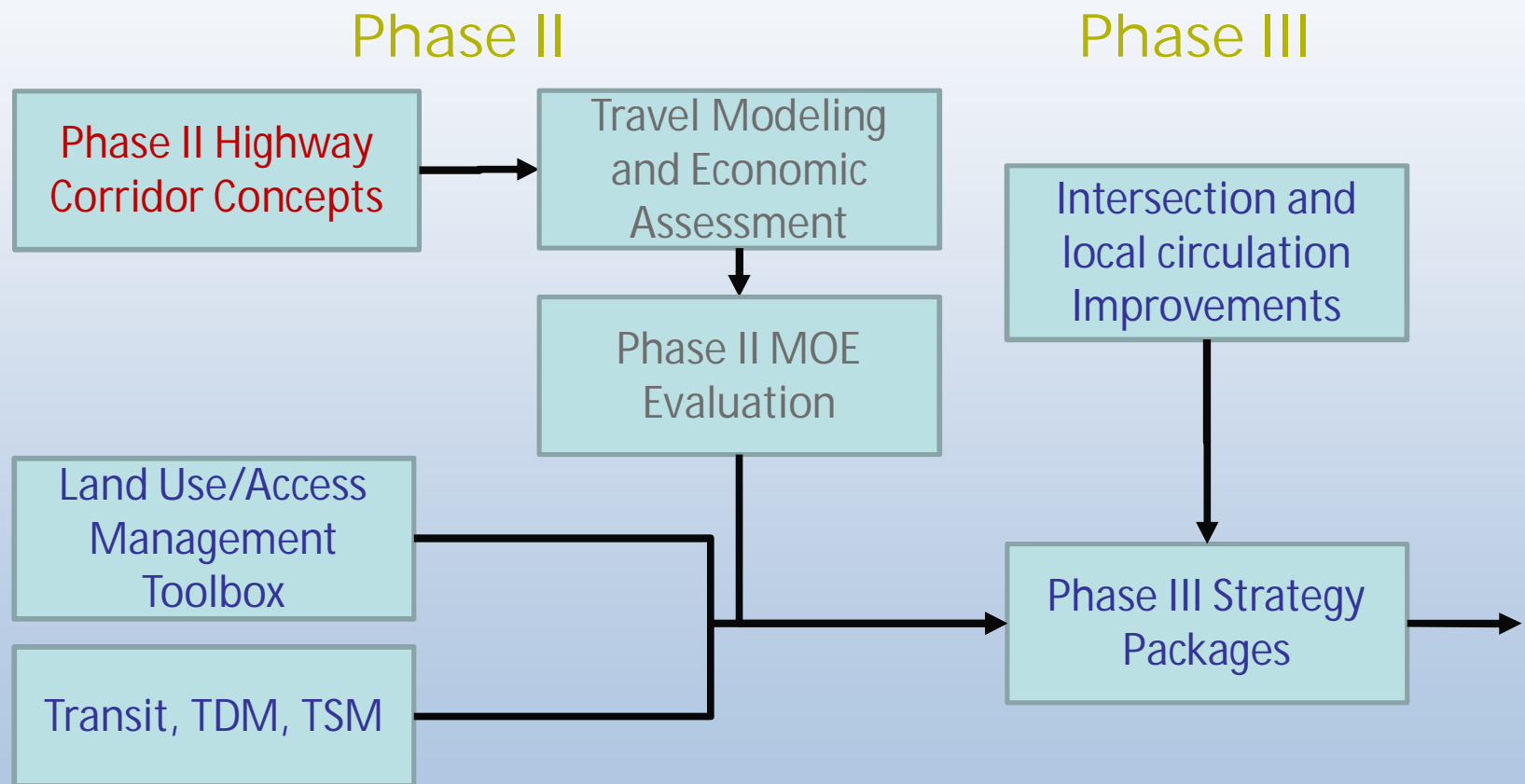
Candidate Highway Corridors

Questions for the Committee

- Did we miss any “Big Picture” candidate conceptual approaches?
- Are there additional combinations or variations that would be useful to investigate in Phase II?

Role in the Study Process

- One of many steps in the process



Types of Highway Improvements

- Upgrade Existing Corridors
 - Increase travel speeds or capacity
- New Highways and Connecting Roads
 - Create new or improved connections
- New Limited Access Highways
 - High speed, high capacity

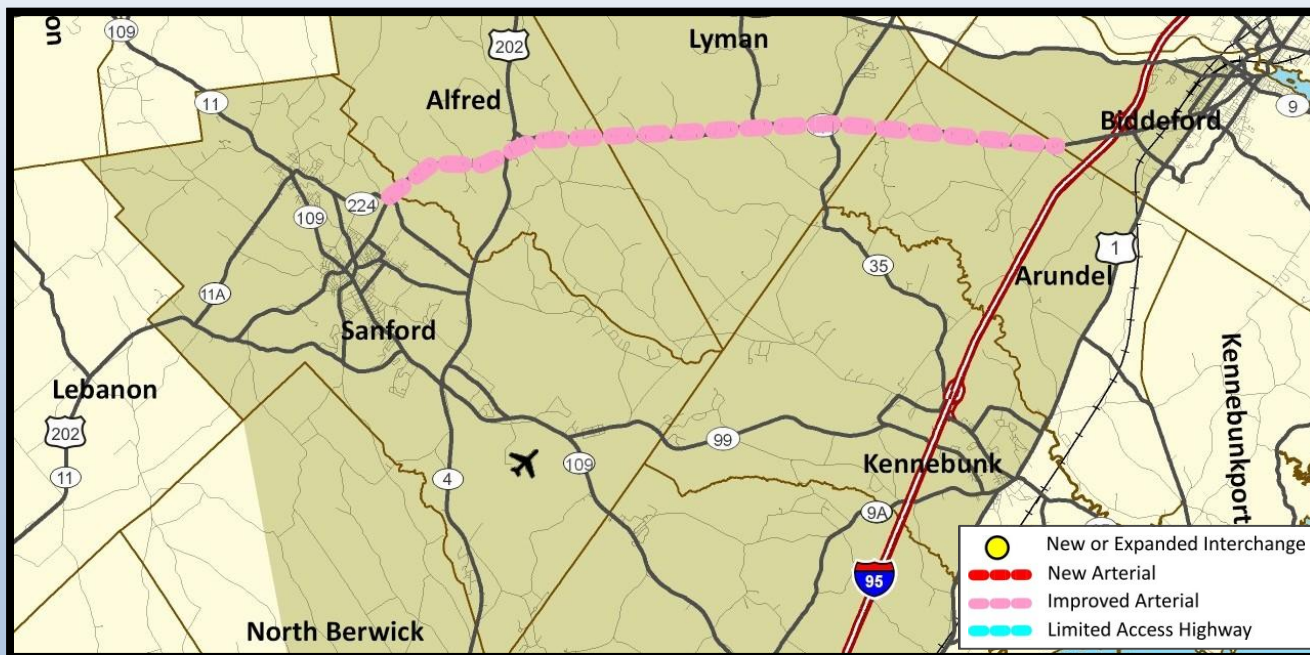
Candidate Phase II Highway Concepts

Corridor	Upgrade Existing Highways	New Highways and Connecting Roads	New Limited Access Highways
Sanford – Biddeford <i>Route 202/111</i>	<ul style="list-style-type: none"> •Major Upgrade •Moderate 	<ul style="list-style-type: none"> •Biddeford connectors •Expanded exit 32 access •Sanford bypass 	<ul style="list-style-type: none"> •Sanford/Alfred – Maine Turnpike (south of exit 32)
Sanford – Kennebunk <i>Route 99</i>		<ul style="list-style-type: none"> •Rte 99 connection to exit 25 	<ul style="list-style-type: none"> •South Sanford – Maine Turnpike (south of exit 25)
Sanford – Wells <i>Route 109</i>	<ul style="list-style-type: none"> •Major Upgrade •Moderate 		
Alfred/Sanford – North Berwick/Ogunquit <i>Route 4</i>	<ul style="list-style-type: none"> •Upgrade 	<ul style="list-style-type: none"> •New arterial and interchange connecting Rte 4 to the Maine Turnpike •North Berwick bypass 	<ul style="list-style-type: none"> •Sanford – Maine Turnpike (south of exit 19)

Concept Elements	Upgrade Existing Highways					New Highways and Connecting Roads						New Limited Access Highways		
	Rte 202/111 Major Upgrade EC-1	Rte 202/111 Moderate Upgrade EC-2	Rte 109 Major Upgrade EC-3	Rte 109 Moderate Upgrade EC-4	Rte 4 Upgrade EC-5	Biddeford Connectors NC-1	Expanded Exit 32 Access NC-2	Sanford Bypass NC-3	Rte 99 – Exit 25 Connector NC-4	Rte 4 – Maine Turnpike Connector and Interchange (Ogunquit) NC-5	North Berwick Bypass NC-6	Sanford/Alfred – Maine Turnpike (Biddeford) LA-1	South Sanford – Maine Turnpike (Kennebunk) LA-2	Sanford – Maine Turnpike (Ogunquit) LA-3
Sanford – Biddeford Corridor														
Scenario B1	✓													
Scenario B2		✓												
Scenario B3						✓								
Scenario B4						✓	✓							
Scenario B5	✓					✓	✓							
Scenario B6								✓						
Scenario B7											✓			
Sanford – Kennebunk Corridor														
Scenario K1									✓					
Scenario K2												✓		
Sanford – Wells Corridor														
Scenario W1			✓											
Scenario W2				✓										
Alfred/Sanford – North Berwick/Ogunquit Corridor														
Scenario N1					✓									
Scenario N2					✓				✓					
Scenario N3					✓					✓				
Scenario N4														✓

Sanford – Biddeford Corridor

- Upgrade Route 202/111
 - EC-1 Major Upgrade
 - EC-2 Moderate Upgrade

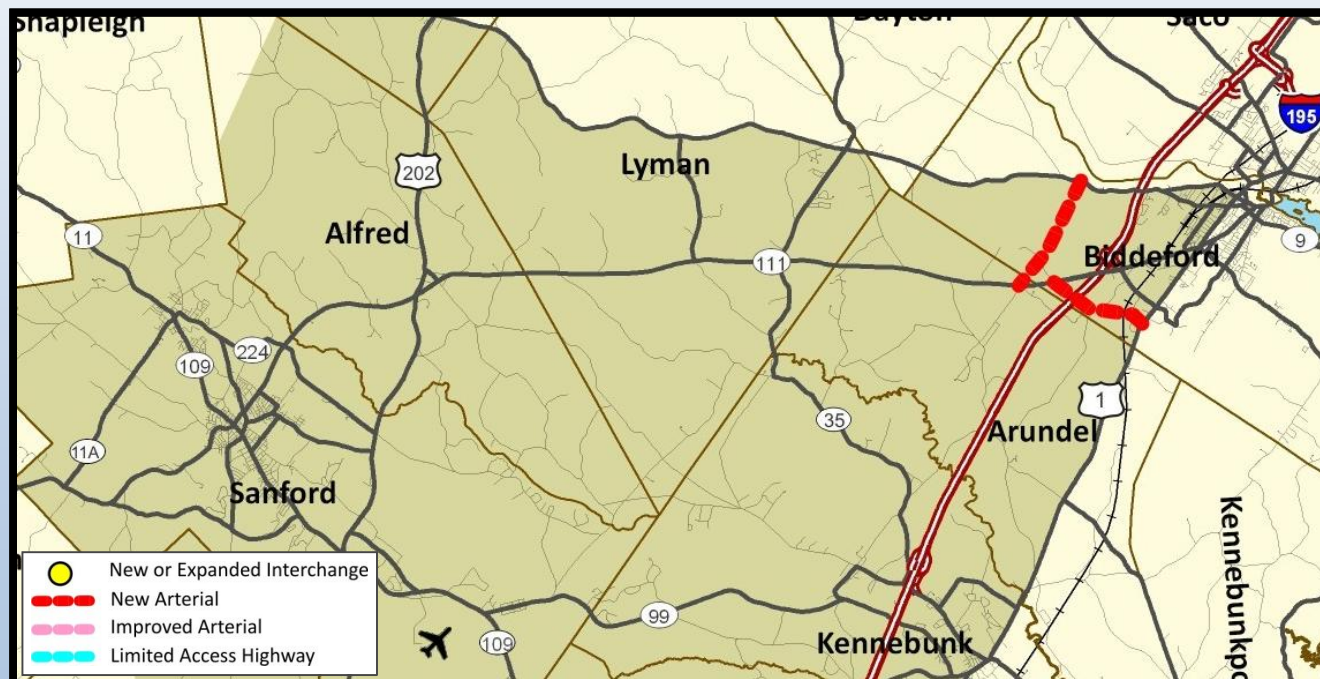


Upgrade Rte 202/111 (Sanford – Biddeford)

	EC 1 Major Upgrade	EC 2 Moderate Upgrade
Travel Lanes	<ul style="list-style-type: none"> •4 lanes east of Rte 224 •Turn lanes at intersections 	<ul style="list-style-type: none"> •2 lanes •Turn lanes at major intersections •2 passing lanes each direction
Posted Speed	<ul style="list-style-type: none"> •Generally 55 mph •45 mph at major crossroads •25 mph – 35 mph in Sanford and Biddeford 	<ul style="list-style-type: none"> •Generally 55 mph •45 mph at major cross roads •25 mph – 35 mph in Sanford and Biddeford
Access Management	<ul style="list-style-type: none"> •Left turns only from turn lanes •High degree of access management 	<ul style="list-style-type: none"> •Moderate degree of access management
Other	<ul style="list-style-type: none"> •Presumes some capacity enhancement in Sanford 	

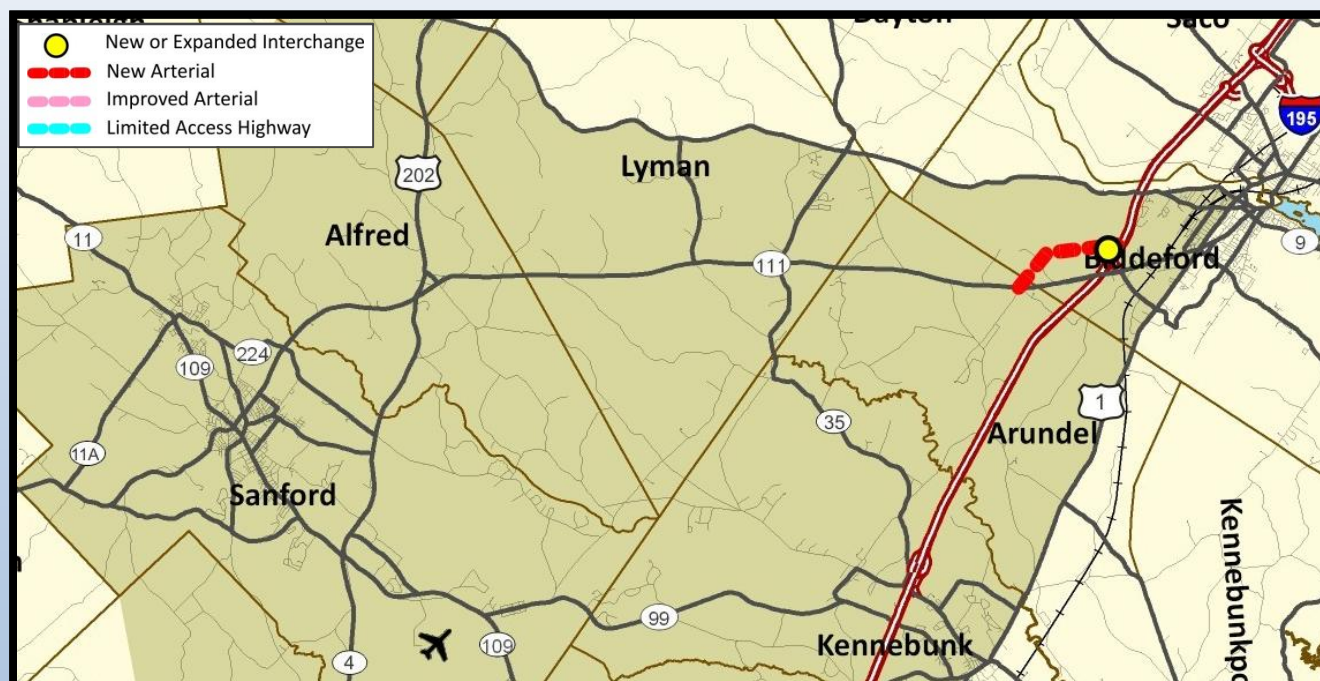
Sanford – Biddeford Corridor

- New Highways and Connecting Roads
 - NC-1 Biddeford Connectors: New roads connecting Rte 111 to Rte 1 and Waterboro Rd



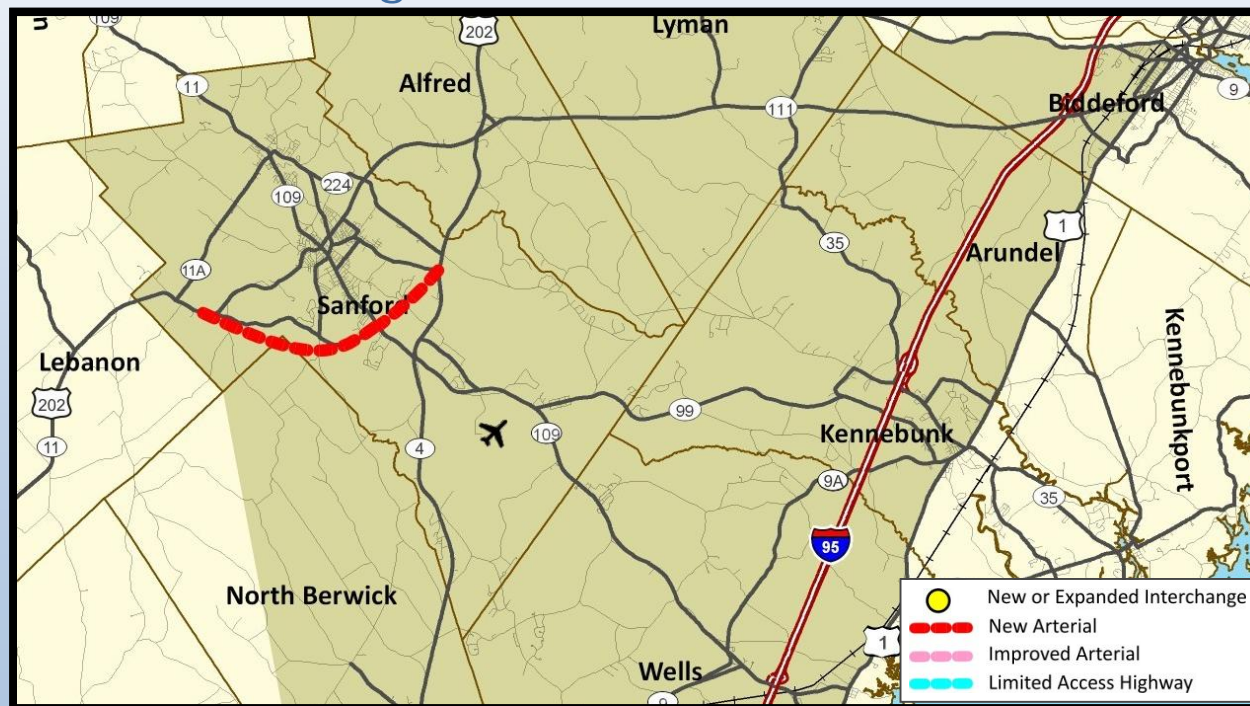
Sanford – Biddeford Corridor

- New Highways and Connecting Roads
 - NC-2 Expanded Exit 32 Access: Expand interchange and connect Rte 111 to exit 32 from the north.



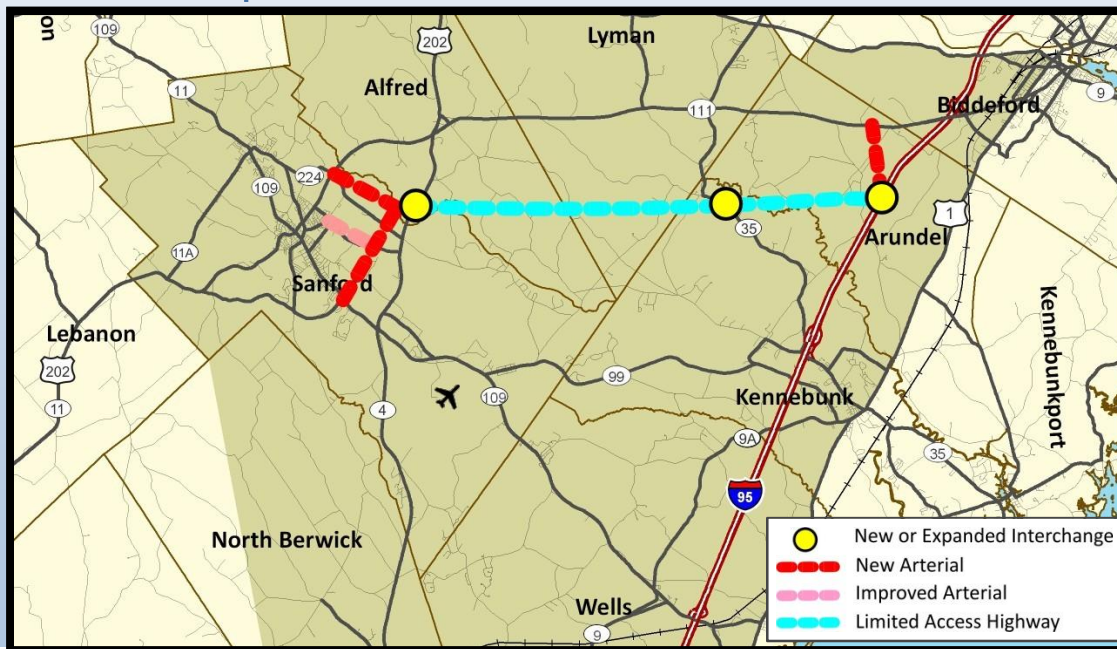
Sanford – Biddeford Corridor

- New Highways and Connecting Roads
 - NC-3 Sanford Bypass: New arterial through South Sanford connecting Rte 202 with Rte 4.



Sanford – Biddeford Corridor

- New Limited Access Highway
 - LA-1 Sanford/Alfred – Maine Turnpike (Biddeford): New four-lane limited access highway connecting to the Maine Turnpike south of exit 32.



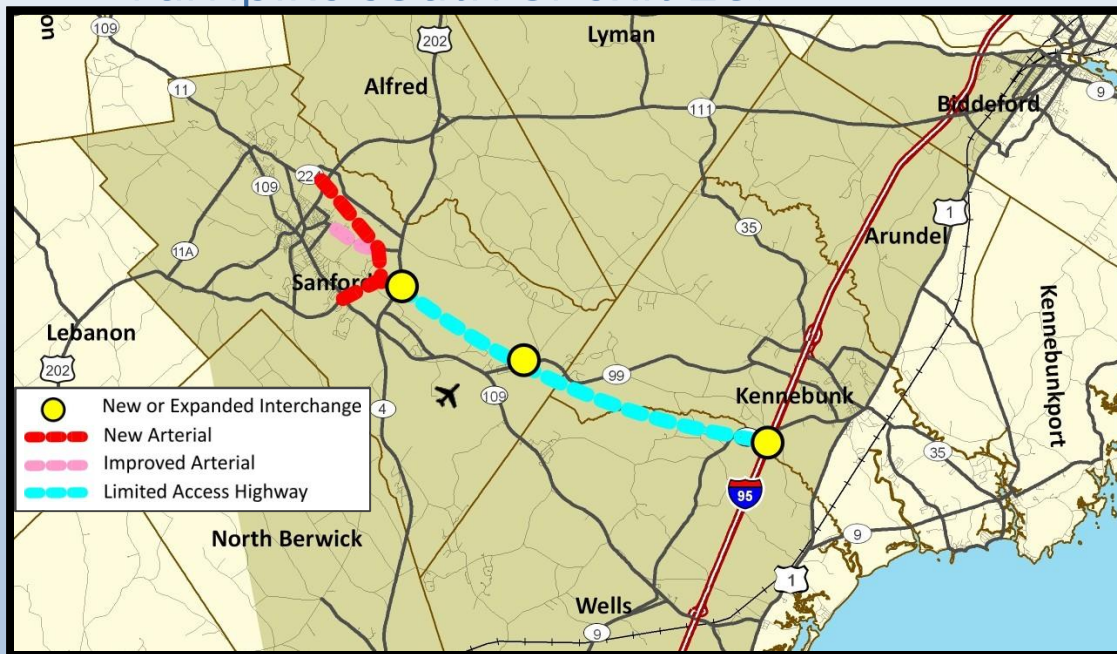
Sanford – Kennebunk Corridor

- New Highways and Connecting Roads
 - NC-4 Rte 99 – Exit 25 Connector: New highway connecting Rte 99 to Alfred Road and exit 25.



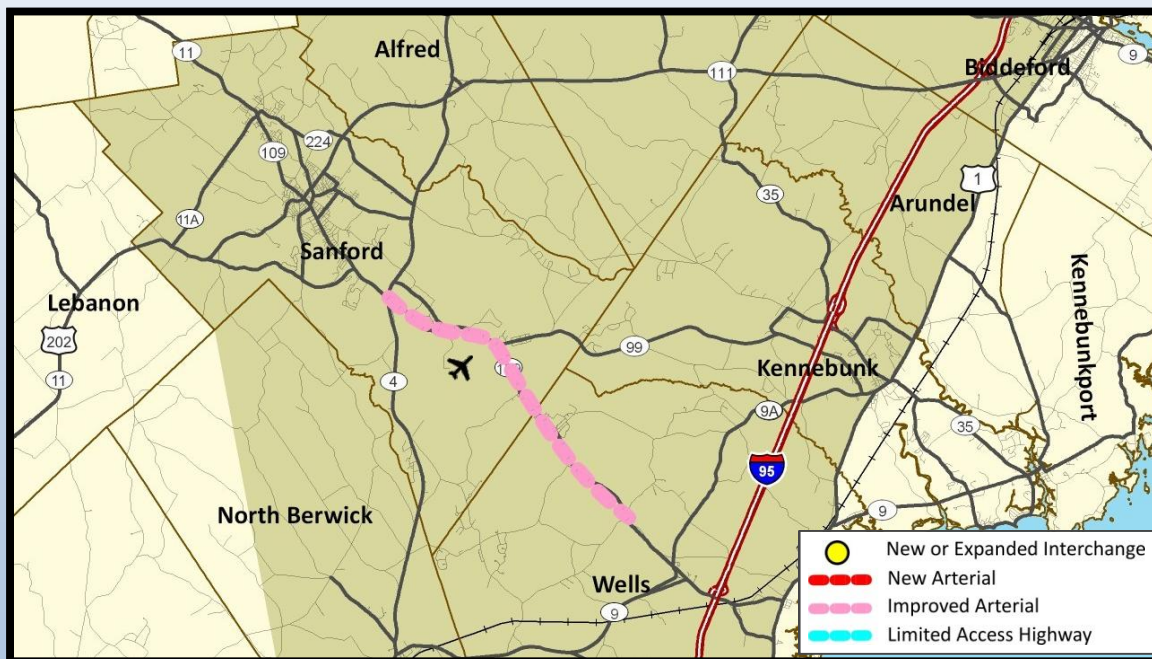
Sanford – Kennebunk Corridor

- New Limited Access Highway
 - LA-2 South Sanford – Maine Turnpike (Kennebunk): New four-lane limited access highway connecting to the Maine Turnpike south of exit 25.



Sanford – Wells Corridor

- Upgrade Route 109
 - EC-3 Major Upgrade
 - EC-4 Moderate Upgrade

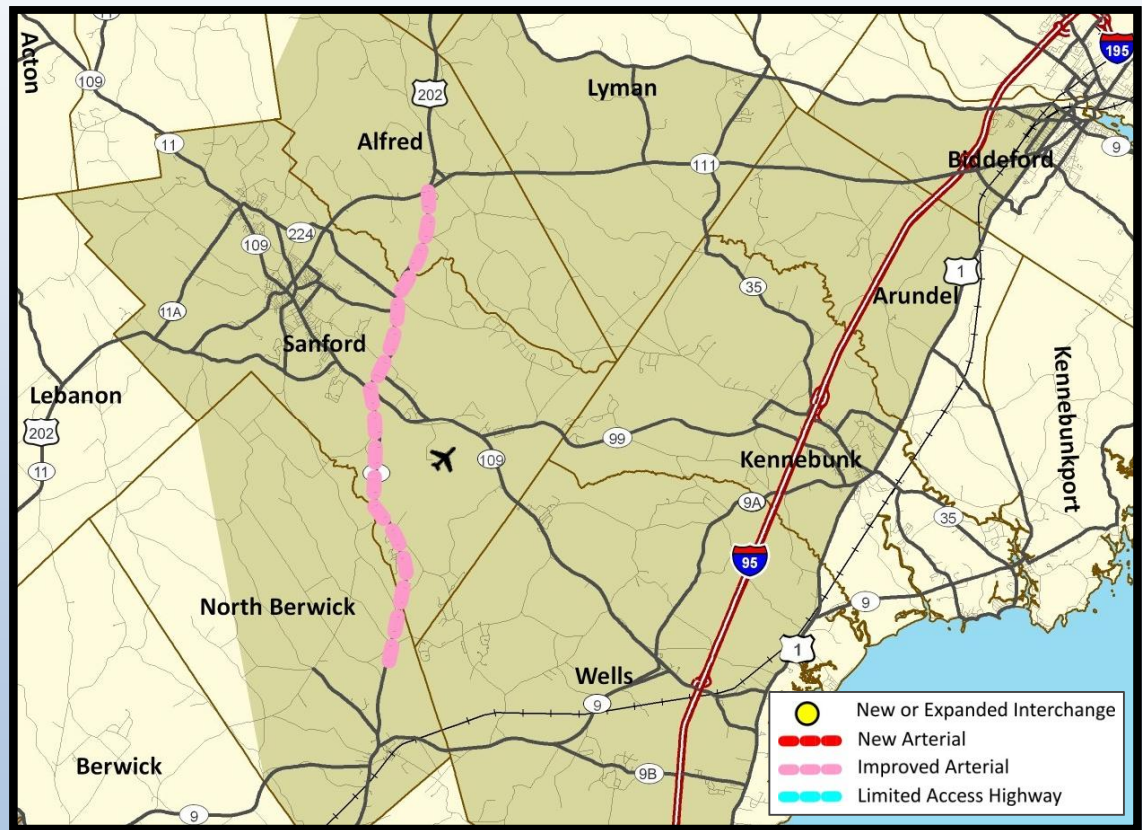


Upgrade Route 109 (South Sanford – Wells)

	EC 3 Major Upgrade	EC 4 Moderate Upgrade
Travel Lanes	<ul style="list-style-type: none"> •4 lanes north of Rte 99 •Turn lanes at intersections and in developed areas north of Rte 99 •Bypasses and realignment south of Rte 4 •Passing lanes south of High Pine 	<ul style="list-style-type: none"> •Turn lanes at major intersections and in developed areas north of Rte 99.
Posted Speed	<ul style="list-style-type: none"> •55 mph between Rte 4 and Rte 9A. •Current posted speeds elsewhere 	<ul style="list-style-type: none"> •40 mph in High Pine •50 mph elsewhere between Rte 4 and Rte 9A •Current posted speeds elsewhere
Access Management	<ul style="list-style-type: none"> •Left turns only from turn lanes •High degree of access management 	<ul style="list-style-type: none"> •Moderate degree of access management

Alfred/Sanford – North Berwick/Ogunquit Corridor

- Upgrade Route 4
 - EC-5 Upgrade

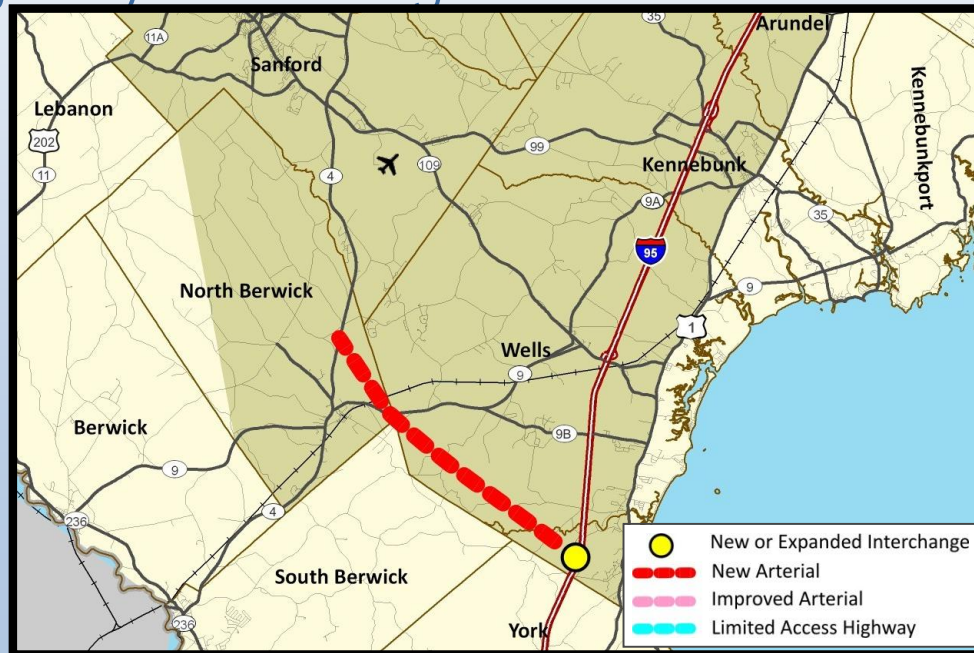


Upgrade Route 4 (Alfred – North Berwick)

	EC5 Upgrade
Travel Lanes	<ul style="list-style-type: none">•Maintain Current (2+) travel lanes•Turn lanes at intersections and in developed areas•Passing lanes north and south of Rte 109
Posted Speed	<ul style="list-style-type: none">•55 mph except approaching major intersections
Access Management	<ul style="list-style-type: none">•Moderate to high degree of access management

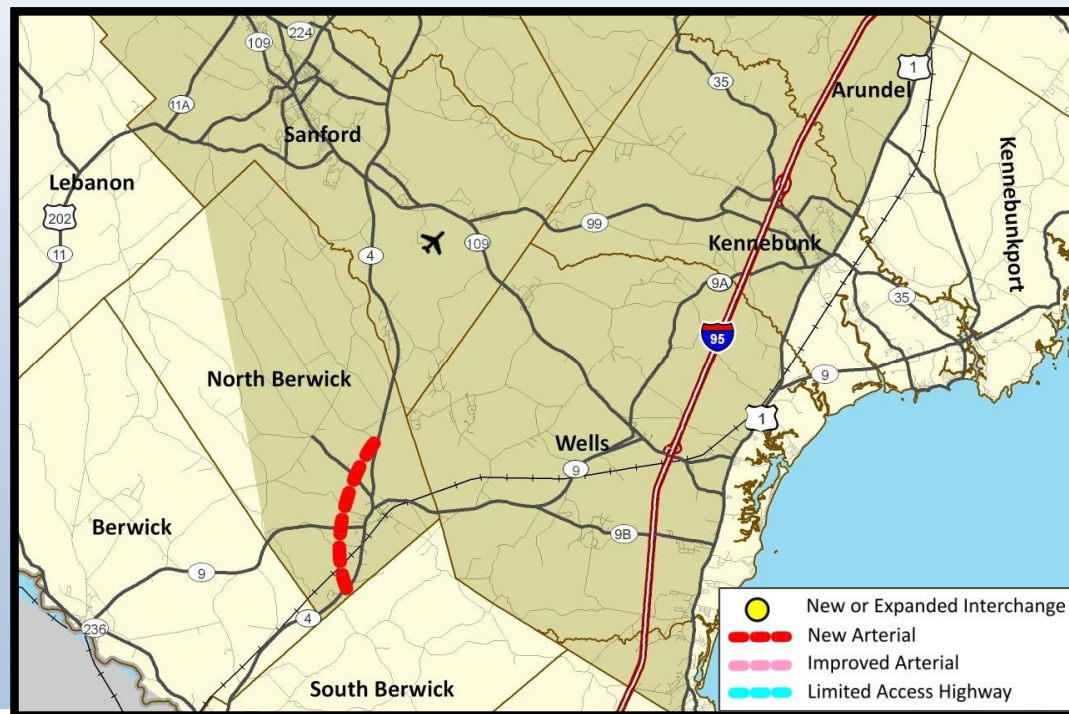
Alfred/Sanford – North Berwick/Ogunquit Corridor

- New Highways and Connecting Roads
 - NC-5 Rte 4 – Maine Turnpike Connector and Interchange (Ogunquit): New interchange in Ogunquit near Berwick Rd and highway connecting to Rte 4 north of North Berwick.



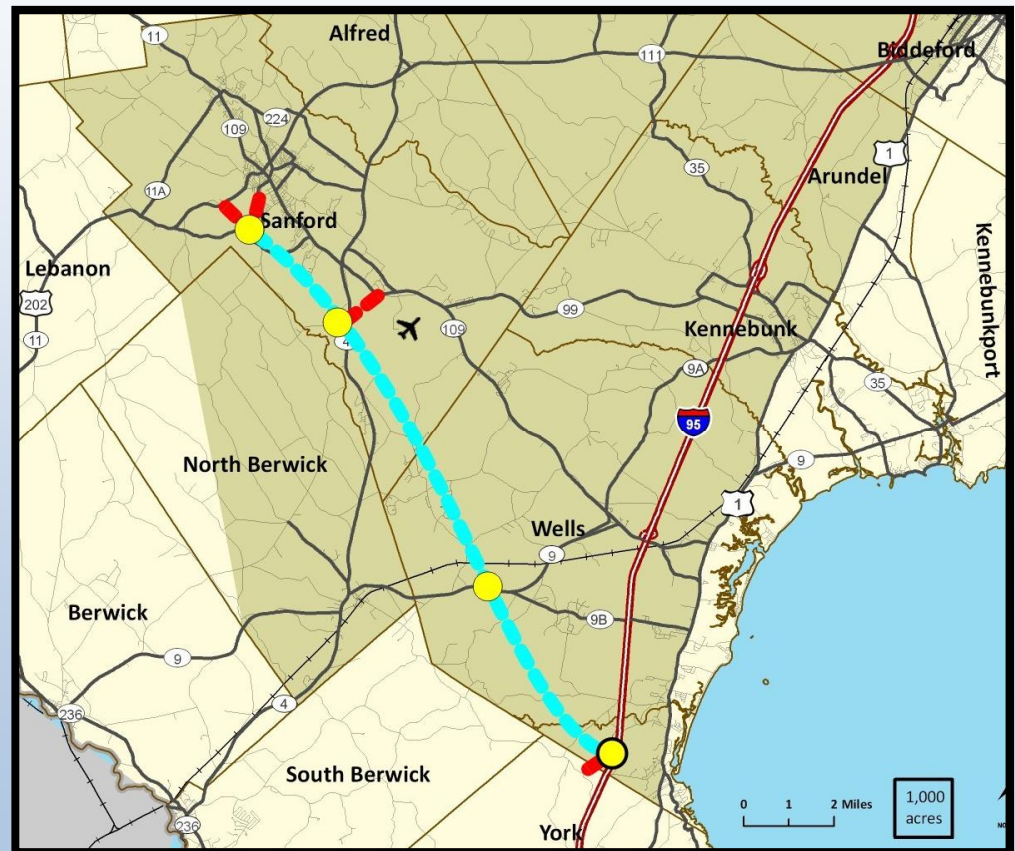
Alfred/Sanford – North Berwick/Ogunquit Corridor

- New Highways and Connecting Roads
 - NC-6 North Berwick Bypass: New bypass on Rte 4 around town center.



Alfred/Sanford – North Berwick/Ogunquit Corridor

- New Limited Access Highway
 - LA-3 Sanford – Maine Turnpike (Ogunquit): New four-lane limited access highway connecting to the Maine Turnpike south of exit 19.



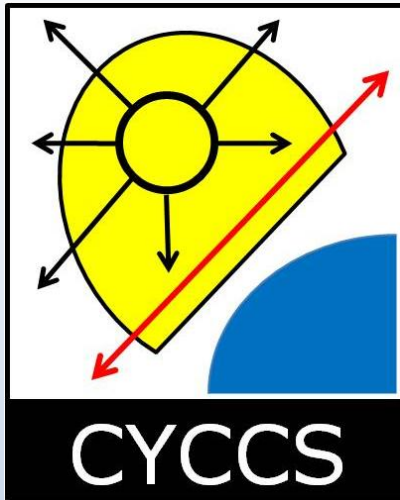
Candidate Highway Corridors

Wrap up

- Did we miss any “Big Picture” candidate conceptual approaches?
- Are there additional combinations or variations that would be useful to investigate in Phase II?

Next Steps

- Finalize Employment and Population Projections
- Finalize and Model Corridor Concepts
- Continue evaluating potential Land Use Development Policies, Access Management options.
- Identify potential Transit and Travel Demand Management (TDM) strategies
- Next Meeting Dates



Central York County Connections Study

March 31, 2011

Steering Committee