

Central York County Connections Study
Steering Committee Meeting
June 16th, 2011 3:30-6:00
Conant Chapel, Alfred

Attendees: Tad Redway, Arundel; Judy Bernstein, Kennebunk; Charlie Andreson, Sanford; John Sylvester, Alfred; Mike Littlefield, Wells; Myranda McGowan, SMRPC; Gerry Audibert, MaineDOT; Penny Vaillancourt, MaineDOT; Sara Devlin, Maine Turnpike Authority; Uri Avin, Parsons Brinckerhoff; Steve Rolle, Parsons Brinckerhoff; Kevin Hooper, Kevin Hooper Associates; Carol Morris, Morris Communications; Ben Ettelman, Morris Communications

Meeting began at 3:33 pm.

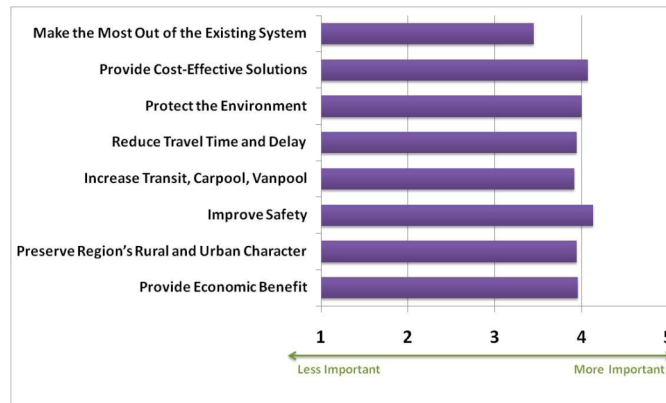
Gerry Audibert: Welcome and thanks for coming to this Steering Committee meeting for the Central York County Connections Study. I am Gerry Audibert from MaineDOT. Today we are going to see the results from the traffic modeling and I want to caution you all that the results of the traffic modeling are just one of the many factors we will examine before making study recommendations so please do not rush to judgment based on the data that we will share with you today as there is still quite a bit of analysis left to do in order to fully compare the strategies that we have developed. The plan is to use this level of analysis to eliminate some of the strategies from consideration in order to move a more finite set of strategies into Phase III, where we will analyze them in greater detail. Now Carol Morris is going to come up and present the agenda for the meeting today.

Carol Morris: Hello and thanks for coming this afternoon. The agenda for today is as follows:

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

You may have noticed that we did not send out any pre-materials before today's meeting. That was not an oversight. The material that we are going to share is complex and challenging to understand without explanation. We want to emphasize that the traffic results are the first piece of the puzzle and they do not paint the complete picture so please look at this data objectively. As Gerry said, do not jump to conclusions as to what the best solution might be.

Carol Morris presented the following slide showing Web Survey #2: “How do YOU define Best?”



Our most recent survey on the study website asked participants to rate between 1 and 5 (1 being least and 5 being most important) how they define what is the most important measure of effectiveness for improving transportation connections within the study area. We had a great response. The first survey had about 35 respondents and for this survey we had 111 respondents. The results of the survey showed that while most people ranked all measures high, the one measure that didn't rank as high as the rest was “to make the most of the existing system”. This leads us to believe that there is a sentiment within the area that people want the system to be fixed, that they want some improvements. The fact that all of the MOEs ranked highly reflects that the Advisory and Steering Committees did a good job pinpointing what people in the area are interested in and that we are in a good place to move forward. Now Steve Rolle is going to review the strategies that we went over in the last meeting.

Steve Rolle: As Carol said, I want to do a quick review of the strategies that we shared with you at the last meeting and have since tested. These are generally what you've seen before, though we did make some adjustments based on input from the Steering and Advisory committees and I will go over those with you.

The following is an overview of the corridor strategies tested:

- 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

The following is an overview of the refinements that we made since the last meeting:

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

Now I am going to review each strategy individually to refresh our memories and to share these with any Steering Committee members who were unable to make the meeting last month. The first corridor that we will focus on is the Biddeford Corridor:

- Strategy B1: Upgrade Rte 111 (Regional Strategy)
 - 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)
- Strategy B2: Biddeford Connections (Local Strategy)
 - New connections between Rte 111, Rte 1 and Waterboro Road
- Strategy B3: Upgrade Rte 111 with I-95 Access and Biddeford Connections (Regional Strategy)
 - Combines elements of Strategies 1 and 2
 - Create new, direct access to Maine Turnpike (I-95 exit 32)
- Strategy B4: Sanford Southern Bypass (Local Strategy)
 - New highway linking Rte 202 (west of Sanford) to Rte 4 (east of Sanford)
- Strategy B5: Expressway (South) (Regional Strategy)
 - 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
- Strategy B6: Expressway (North) (Regional Strategy)
 - 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

The following are the strategies that we tested for the Kennebunk/Wells Corridor:

- Strategy K1: New Rte 99/Rte35/Exit 25 Connector (Local Strategy)
 - More direct connection between Rte 99 and Rte 35 in Kennebunk
 - Improves access between Rte 99 and I-95 (exit 25)
- Strategy K2: Upgrade Rte 109 (Regional Strategy)
 - 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
- 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

The following are the strategies that we tested for the North Berwick/Ogunquit Corridor:

- Strategy NB1: Upgrade Rte 4 (Regional Strategy)
 - Increase speed limit to 55 mph (except approaching Rte 109)
 - Passing lanes (two each direction)
 - Rte 4 bypass around North Berwick town center
- Strategy NB2: Rte 4 – Ogunquit Connector (Regional Strategy)
 - Upgrade Rte 4 (per Strategy NB1)
 - New 2-lane at-grade highway to I-95 and Rte1 in Ogunquit
- Strategy NB3: Expressway (Regional Strategy)
 - 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)

So those are the 12 strategies that we tested in the travel demand model. I want to remind everyone of the Measures of Effectiveness (MOEs) that we will use to analyze and compare the various strategies in Phase II of the study. We are still evaluating the full gamut of MOEs, but today we are going to talk about the following four:

MOE	Measure
Travel Times and Delay	<ul style="list-style-type: none"> • Projected travel times between key origins and destinations • Average network speed and total VHT
Projected Traffic and Highway Capacity	<ul style="list-style-type: none"> • Changes in corridor traffic volumes • Changes in screenline traffic volumes
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

Before we jump into the findings, I want to share the following overall points regarding the travel demand modeling results:

- They account for the projected increase in households and jobs (about 30%)
- Volumes shown are daily volumes in both directions
- Volumes shown are the CHANGES compared to the 2035 baseline volumes except...
- Volumes on new roads are both CHANGE and the new TOTAL volumes, since they carry no traffic (do not exist) in the baseline.
- Volumes are for summer weekdays
- Spaulding Turnpike Improvements are included
- Biddeford Racino are not included

The following are the overall findings:

- VMT (Vehicle Miles Traveled) for the study area increases by 29% in 2035 (Note: VMT is the total distance traveled (measured in miles) spent traveling for all vehicles in York County)
- The various strategies increase VMT by 1.4% county-wide but in some corridors by up to 25%
- VHT (Vehicle Hours Traveled) increases for the study area by 37% in 2035 (Note:

VHT is the total amount of time (measured by hours) spent traveling for all vehicles in York County)

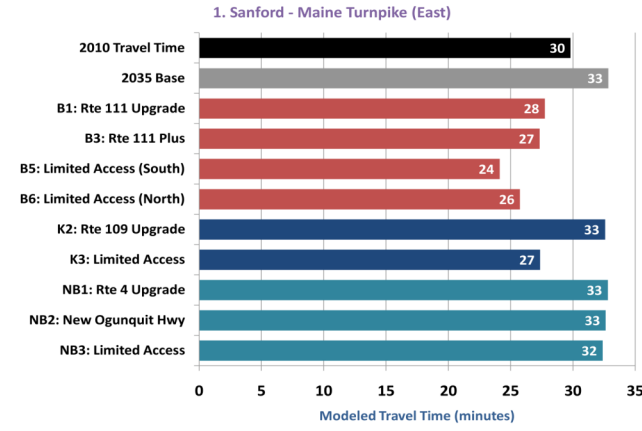
- The various strategies decrease VHT by 1.9% County-wide at most, but specific travel times in some corridors decrease VHT by up to 50%

So the first MOE that we will look at this afternoon is travel time and delay. As I indicated, while the total number of miles traveled increases under the strategies tested, the total amount of time spent traveling decreases, which indicates that the overall speed and efficiency of the network would increase.

What I'm going to focus on for this MOE are representative travel times between various trip pairs. We'll start by looking at trips between central York County and the region:

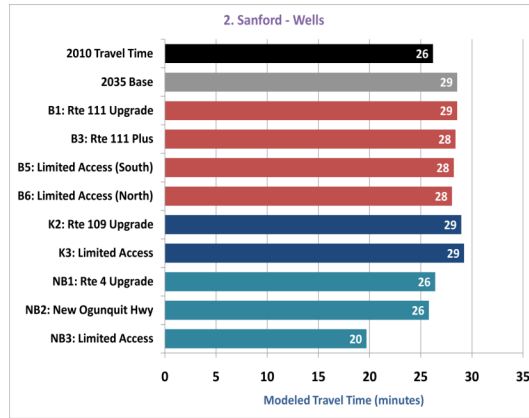
1. Sanford – The Maine Turnpike (north of Biddeford)
2. Sanford – Wells
3. Sanford – The Maine Turnpike (NH-ME Border)
4. Sanford – Dover, NH

Steve Rolle presents a slide showing the following bar graph representing travel times for Trip 1: Sanford – The Maine Turnpike (north of Biddeford)



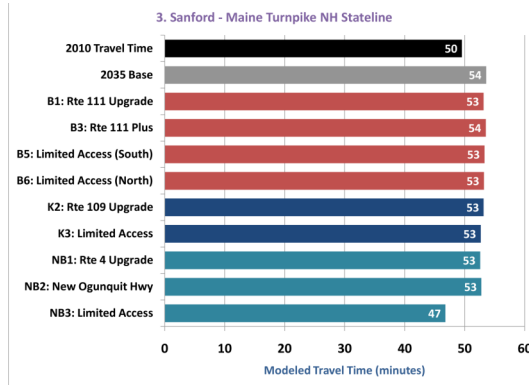
At the top is the existing travel time represented in black, the 2035 baseline is in gray, the Biddeford corridors are red, the Kennebunk Corridors in dark blue and the North Berwick corridors are represented in teal. As you would expect, the travel times for this trip decreases under any of the four strategies, with Strategy B5 having the lowest travel time of all of the strategies. In the 2035 baseline scenario, the travel time for this trip would be 33 minutes and under the B5 strategy that gets reduced to 24 minutes; so a time savings of 9 minutes, which is a considerable decrease.

Steve Rolle presents a slide showing the following bar graph representing travel times for Trip 2: Sanford – Wells:



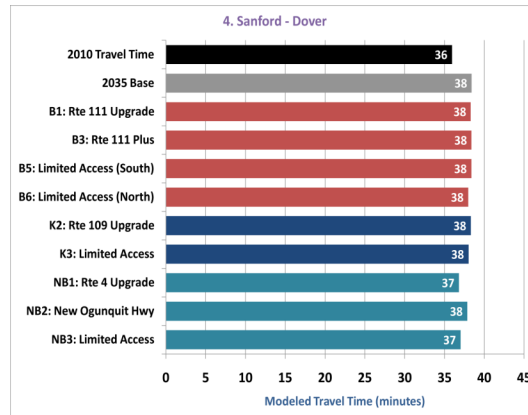
For the Sanford to Wells trip, the interesting things to note are that the improvements that we looked at did not change the travel time. The upgrade to Route 109 attracted additional trips but we did not change the speed appreciably, so the additional traffic offset the speed improvements that were made. And the Kennebunk expressway was very effective in getting to the Turnpike and Kennebunk, but the travel time on Route 109 did not change from the 2035 baseline VHT. The North Berwick improvements did decrease travel time because so much traffic shifted down from Route 109 onto those improved corridors in North Berwick.

Steve Rolle presents a slide showing the following bar graph representing travel times for Trip 3: Sanford to the Maine Turnpike (ME-NH Border):



For the Sanford to the Maine Turnpike trip to the New Hampshire border there was no change in travel time for the Biddeford, Kennebunk or Kennebunk strategies. The North Berwick expressway strategy did result in a decreased travel time of 47 minutes from the 2035 baseline of 54 minutes.

Steve Rolle presents a slide showing the following bar graph representing travel times for Trip 4: Sanford – Dover:

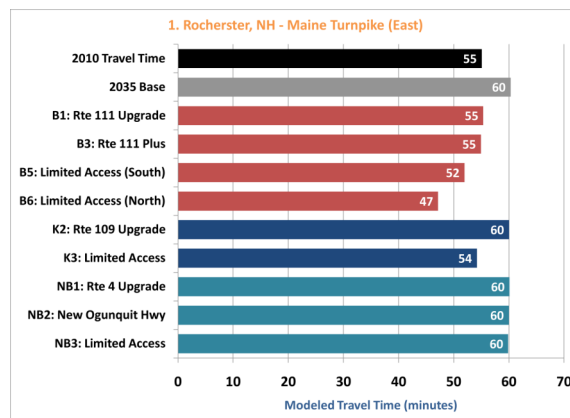


For the Sanford to Dover trip there was not a lot of significant change in travel time for any of the strategies.

The second set of trips that we looked at are regional through-trips. This is measuring the travel time of a vehicle starting somewhere outside and the Study Area and traveling through to another point beyond the Study Area. The two trips that we measured are:

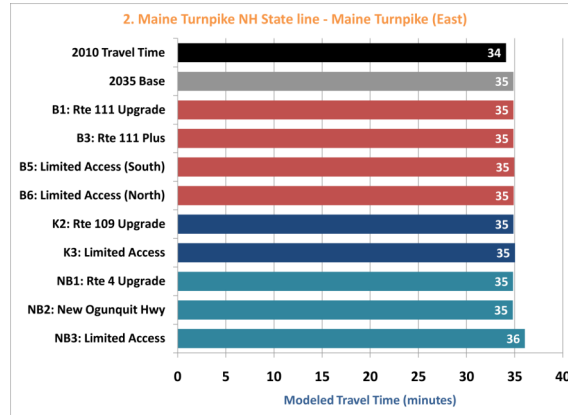
1. Rochester, NH – The Maine Turnpike (north of Biddeford)
2. The Maine Turnpike (ME-NH Border) – The Maine Turnpike (north of Biddeford)

Steve Rolle presents a slide showing the following bar graph representing travel times for Regional Through Trip 1: Rochester, NH to the Maine Turnpike (north of Biddeford)



Looking at the Rochester to the Turnpike north of Biddeford trip, the Biddeford strategies decreased travel time by about 5 minutes from the 2035 baseline projections and the expressway strategies lowered the travel time for this trip even more, from 60 minutes to 52 minutes for B5 and to 47 minutes for B6.

Steve Rolle presents a slide showing the following bar graph representing travel times for Regional Through Trip 2: The Maine Turnpike (NH-ME Border) to The Maine Turnpike (north of Biddeford):

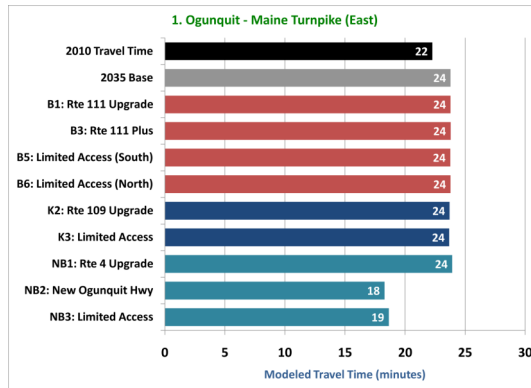


Looking at the regional through-trip along I-95 from the New Hampshire border to north of Biddeford, the travel time stayed the same, which is what we expected to see.

Finally, we looked at three additional trips to understand the effect of adding access to the turnpike at Ogunquit. We measured the travel time of the following three trips:

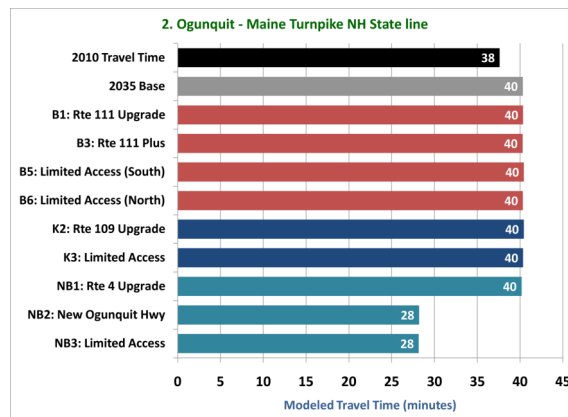
1. Ogunquit to the Maine Turnpike (north of Biddeford)
2. Ogunquit to the Maine Turnpike (NH-ME Border)
3. Ogunquit – Sanford

Steve Rolle presents a slide showing the following bar graph representing travel times from the Ogunquit Interchange: Trip 1: Ogunquit to the Maine Turnpike (north of Biddeford):



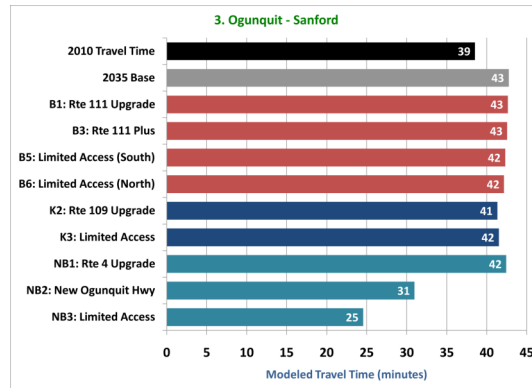
For the trip from Ogunquit to north of Biddeford on the Maine Turnpike, for the two options that add an interchange in Ogunquit, the travel time is reduced to 18 minutes for Strategy NB2 and to 19 minutes for Strategy NB3. This reduces the need to travel on Route 1.

Steve Rolle presents a slide showing the following bar graph representing travel times from the Ogunquit Interchange: Trip 1: Ogunquit to the Maine Turnpike (ME-NH Border):



Under the 2035 Baseline projections the trip from Ogunquit to the New Hampshire border on I-95 is about 40 minutes. When the interchange is added that goes down to 28 minutes, which is a substantial decrease in time (down 12 minutes).

Steve Rolle presents a slide showing the following bar graph representing travel times from the Ogunquit Interchange: Trip 1: Ogunquit to the Sanford:



The trip from Ogunquit to Sanford, which is a difficult trip to make today, goes from a 43-minute trip in the 2035 projections to a 31-minute trip under Strategy NB2 and down to a 25-minute trip under Strategy NB3.

John Sylvester: You are talking about travel time improvements of between 4 and 20 minutes. What is the advantage of these small decreases in time? Especially with the potentially exorbitant cost associated with these strategies?

Gerry Audibert: We don't know yet. That is what we are working to determine.

Steve Rolle: That is the answer at this point of the study. There are many other MOEs that we still have to analyze and one of the most interesting pieces of data that we have yet to finish will be what economic impacts these strategies would have on the Study Area. This is just one piece of the puzzle. Four minutes may not sound like a lot but 4 minutes multiplied by 30,000 vehicles per day can add up to be quite significant.

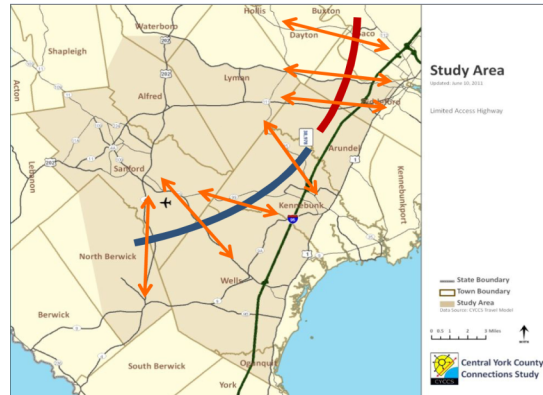
Carol Morris: When you see the traffic volume information, this might make a little more sense.

Steve Rolle: Yes, and that is a good segue into the next MOE that we are going to look at today: Projected Traffic Capacity. We will compare the modeled changes in daily traffic volume in the following two ways:

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

We will look at the difference plots first and then we will look at the screenline plots. The reason that we use screenline plots is because difference plots do not give the complete picture as to how traffic volumes are shifting between locations. As one

corridor's volume increases and two other corridors' volume decreases, we cannot understand the aggregate total of those shifts by looking at the difference of volumes alone. The screenlines are intended to capture travel markets. Below are the screen lines that we used for this analysis:



The red line is intended to capture travel from the Study Area to points east and the blue line is intended to capture travel that is oriented from points in the Study Area to points south. This analysis looks at the total volume of every road that crosses that imaginary line and this provides us with a better understanding of not only how the volume changes on each individual corridor but also how the volume changes on all of those corridors together.

Steve Rolle presents a slide with a map showing 2035 Modeled Daily Traffic: 2035 Baseline

This map shows the volumes that are projected under the 2035 Baseline scenario, which is a scenario that reflects the existing network - meaning that no improvements have taken place other than routine maintenance – under projected 2035 traffic volumes. I want to point out the growth in the volume of vehicles traveled on a couple of the corridors within the study area. In 2035, under the baseline scenario, the Study Area's daily volume grows by 29% on average; some corridors experience more growth in volume as compared to others. Route 111 is projected to have approximately 20,000 to 27,000 vehicles a day, and similarly to today, that number increases as you get closer to Biddeford. Route 109 is projected to have 20,000 vehicles per day in South Sanford; that number drops down to 16,000 as you get toward Wells. Route 4 is projected to have 17,000 vehicles per day. Route 9 is projected to have more than 20,000 vehicles per day near Wells and North Berwick. The Turnpike is projected to have more than 70,000 vehicles per day counting both directions and Route 1 is projected to have 10,000 to 15,000 vehicles per day depending on where you are on Route 1 in the Study Area.

So we are going to look at the difference plots (the difference between the projected 2035 baseline volumes and the modeled traffic volumes) for the following Biddeford Corridor strategies:

- B1: Upgrade Rte 111
- B3: Upgrade Rte 111 with I-95 and Biddeford Connections
- B5: Expressway (southern alignment)
- B6: Expressway (northern alignment)

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy B1

This slide shows the difference plot for Strategy B1, which is the upgrade of Route 111. The blue lines indicate the routes that would experience growth in traffic volume based on this particular strategy. The model forecasted that in the year 2035, this strategy would increase traffic volume on Route 111 between 6,000 and 8,700 vehicles per day. Corridors that experience a decrease in traffic volume from the 2035 baseline projections are shown as red on this map. The traffic volume on Route 99 decreases by 1,300 and the volume on Waterboro Road decreases by 1,900.

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy B3

This slide shows the difference plot for Strategy B3, which is the same upgrade to Route 111 with the added direct connection to Exit 32 of I-95 and the local connections to the local highways in the area. We see similar results and those connections make this a more attractive corridor, especially as you get closer to Biddeford. The model forecasted that in the year 2035 this strategy would increase traffic volume on Route 111 between approximately 6,500 to 10,500 vehicles a day. We show an increase of around 8,000 vehicles per day on the connector to Waterboro Road, 8,800 on the connector to I-95 and about 4,700 on the connector to Route 1.

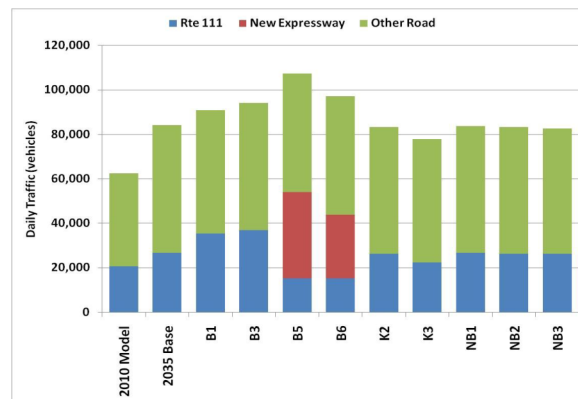
Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy B5

This slide shows a map of the difference plot for strategy B5, which is the southern expressway. The model forecasted that this corridor would attract 30,000 to 39,000 daily trips. This attracts a lot of vehicles off the surrounding corridors. Route 111 decreases by 13,000 vehicles per day on the central part of the corridor and by about 6,000 on the Biddeford end and that is traffic that is accessing the retail stores on that end. There was also a decrease in traffic volume of about 2,000 vehicles per day on Waterboro Road and approximately 5,000 on Route 99.

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy B6

This slide shows a map of the plot difference for Strategy B6, which is a limited access expressway that is north of Route 111. This has a lower volume through Lyman and Arundel and Biddeford. I believe that is because it isn't as successful to the large population areas in Sanford but it is attracting quite a few trips on the bypass section of Sanford (the segment of the expressway that loops around the northern part of Sanford and terminates at Route 202). That particular section attracts over 20,000 trips a day, but the traffic volumes drop significantly on the local roads in Sanford (by approximately 50% on Route 11a for example). This leads me to believe that people are using this as a quick way to get from one side of town to another, so that segment is not only carrying the longer-distance trips, but possibly many short distance, local trips as well. The volume at the central part is around 23,000, so this attracts fewer trips than Strategy B5.

Steve Rolle presents a slide showing Screenline Comparisons for East-West Travelers (West of Biddeford) with the following bar graph:



Now we are going to look at the screenline comparisons, which capture all of the roads that pass across an imaginary line so we can capture the total volume of a specific travel market. In this case we are looking at the east-west market. We have all of the strategies charted here at the bottom with the daily traffic on the left. The blue part is the traffic on Route 111, the red color is the expressway options and the green is all other local roads.

A couple of things of interest here. First of all there is a lot of growth from 2010 current conditions to the 2035 baseline. The second point of interest is looking at how the traffic on Route 111 changes. With the new expressways, Route 111 experiences significant decreases in vehicles per day. The third thing to note is that the expressway options add more total traffic as we have added a lot of capacity, more so on B5 than B6.

Now we are going to look at the difference plots for the following Kennebunk Corridor Strategies:

- K2: Upgrade Route 109
- K3: Limited Access Expressway from Kennebunk to Sanford

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy K2

This slide shows a map of the difference plot for Strategy K2, which is an upgrade of Route 109. This strategy attracts an additional 5,000 trips on Route 109 from the 2035 baseline. We will see higher growth near the Southern Sanford section as well.

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy K3

This slide shows a map of the difference plot for Strategy K3, which is a limited access expressway from Kennebunk to Sanford. This corridor attracts a lot of use with about 32,000 vehicles a day. There is a small increase on either side of the turnpike as well which indicates that this strategy is being utilized by travelers heading to points both north and south of the Study Area.

Tad Redway: You are showing 29% growth in the next 25 years within the study area. I seem to remember that the growth projections were less robust than that percentage.

Uri Avin: The 29% increase is slower than the previous 25 years' percentage of population increase and it is reflecting the recession. But there is still a projected increase in population within the Study Area. The current down trend is going to have an impact for the next ten years but it is projected to slowly start to come back. The 1% annual growth is still less than the 2.5% per year in the 80s and 90s. In fact, that is robust as compared to projections in most of the rest of the state.

Carol Morris: So the perception is that growth is slowing down hugely because it is not matching the growth rate in the 80s and 90s, but that does not mean that there is no growth projected in York County over the next 25 years.

Steve Rolle: It is interesting that VMT (Vehicle Miles Traveled) increases at about the same rate as population growth rate; there was a time when VMT was increasing faster than the population growth rate.

Gerry Audibert: This is countywide growth, not just in Sanford.

Tad Redway: That is why I am asking because all of these connections are between Sanford and the Turnpike, so the assumption is that Sanford is the job center that is attracting all of this commuting, is that correct?

Uri Avin: Partially, but for example it could also be shopping trips from Sanford to Biddeford that are easier to make based on the transportation improvements; these projections are not only one-way travel.

Gerry Audibert: The Legislative Directive for the study was to look at connections between central York County and Route 1 and the Turnpike. Sanford is centrally located in York County so it made sense to look at that as the point within the study area to look at.

Uri Avin: The numbers that you are seeing are not unusual for a study like this. In a county or region-wide study, you usually see less than 5% growth in VMT or less than 5% reduction in VHT but for corridors, a 15-30% change in VMT or VHT is not unusual because you are considering making major improvements to a specific area.

Steve Rolle: Yes, especially for this level of improvement. These are major improvements as compared to the connections provided today. Currently, travel from Sanford to Wells is a 40 mph trip for most of the stretch, this is a four-lane expressway at 65 mph.

Tad Redway: That also changes the economic dynamics in that whole area, now you have a whole new nexus in Kennebunk that can siphon economic development from Sanford. Because you are directly at I-95, that can change everything in the western part of the county.

Uri Avin: Precisely, in this presentation we will not get into what that means in terms of economic impacts and job growth. When we come back in August we will have run the PRISM (economic) model, and then we will be able to evaluate how each of the transportation strategies impacts job and industry growth. When we get that data we will plug that back into the travel demand model and see the aggregate impacts of the transportation strategies and economic impacts.

Steve Rolle: Now we are going to look at the difference plots for the following North Berwick-Ogunquit Corridor Strategies:

- NB1: Upgrade Route 4 with a bypass of North Berwick
- NB2: New At Grade Highway between I-95 in Ogunquit and North Berwick
- NB3: Limited Access Highway between I-95 in Ogunquit and Sanford

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy NB1

This slide shows a map of the difference plot for Strategy NB1, which is an upgrade of Route 4 with a bypass of North Berwick. This strategy attracts about 5,000 additional trips to Route 4. Most of the other increases that we see with this strategy seem to be local trips rather than regional trips. Around 17,000 people used the bypass around Berwick but that only decreased the traffic in Berwick by about 4,000 so that suggests that the original route would continue to get a lot of use by local trips.

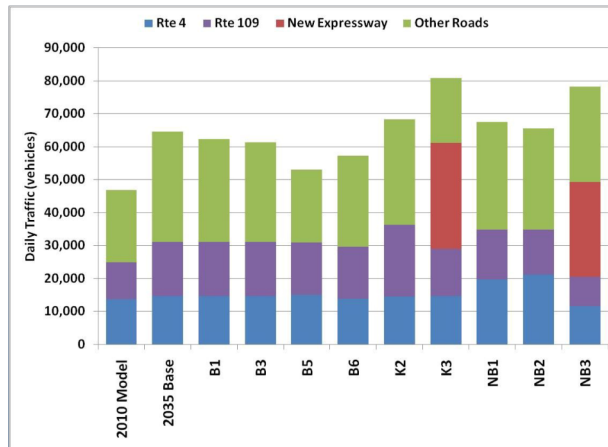
Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy NB2

This slide shows a map of the difference plot for Strategy NB2, which is a new at grade highway from Ogunquit. This is a new direct highway connection and it attracts 20-23,000 vehicles a day, and decreases traffic along some of the parallel routes. The most interesting aspect of this strategy is the connection in Ogunquit to Route 1 where we have 33,000 daily trips attracted to that interchange. This decreases the traffic to Route 1, but that is a lot of traffic in that location.

Steve Rolle presents a slide with a map showing 2035 Modeled Change in Daily Traffic: Strategy NB3

This slide shows a map of the difference plot for Strategy NB3, which is the expressway option from Sanford to the turnpike with a connection at Route 9 and Route 4. This strategy provides a lot of access to the industrial and airport area of Sanford and gets a lot of use attracting around 28,000 more vehicles right in that South Sanford area but the traffic growth decreases to roughly 15,000 north of that connection. That is an indicator of the utility to providing access to that area in Sanford. We see a drop in the parallel roads in the area as well. This strategy also increased traffic from the expressway up into Waterboro.

Steve Rolle presents a slide showing Screenline Comparisons for North-South Traffic (South of Sanford) with the following bar graph:



Again, the screenline comparisons capture all of the roads that pass an imaginary line, so we can capture the total traffic volume of a specific travel market. In this case we are looking at the north-south market. We have all of the strategies charted here at the bottom with the daily traffic on the left. The blue is the traffic on Route 4, the purple is the traffic on Route 109, the red represents traffic volume on the expressway options and the green is all other local roads. You can see that the strategies that increase capacity on Route 4 increase traffic volume on Route 4 and the expressway options increase the total amount of traffic volume within the study area.

Those are the two basic traffic measures that we looked at, how travel patterns will change, what that means in terms of traffic volume on the major corridors and how the speeds will change. Those are important inputs to the economic model that we will share the results from at our next meeting in August.

Uri Avin: The change in travel times and distances are one aspect of how we will measure and compare the various strategies. The next two MOEs we are going to look at today are changes to Urban and Rural Character. We have struggled with how to accurately measure this. All of your comprehensive plans emphasize the importance of rural character, and in some cases the zoning attempts to implement the protection of rural land. The question is how do we accurately measure something as abstract as rural character. Adding to the difficulty of this is the fact that we do not have specific lines and parameters (locations) for many of these strategies. The strategies are, for the most part, conceptual in nature at this point in the study. We had a long discussion with the Advisory Committee this morning about this because the impacts look very substantial and they may be focusing on where they believe the alignments go. What we have done to attempt to measure this MOE is assessing the potential to adversely affect rural and urban character by examining the following components:

- Corridor width
- Open fields and woodlands zoned for low density

- Town centers, historic sites and historic districts

The assumption we made for the new roadways is that they are hypothetically quite wide as we have no idea exactly where they would potentially go. So in order to have an understanding of the potential inventory of impacts for these, we looked at a width of a half a mile on either side of the centerline, so a complete mile in width. For the existing roads we assumed 75-foot potential widths to examine on either side of the centerline. For the new roads that are not expressways or highways, such as the Southern Sanford bypass, we assumed a width of 1,000 feet.

Carol Morris: This is where we ran into some issues with the Advisory Committee because we are trying to assume an apples to apples standard to compare these different strategies and some of the members of the Advisory Committee found it hard to believe that if these corridors were improved, or a new expressway was built, that the entire swath of land that we inventoried would not be negatively impacted.

Uri Avin: The other piece that we looked at was several of the towns have planned and zoned certain areas for more intense commercial or residential development. Our feeling was that those areas ought to be excluded from the rural impact analysis because they are zoned or planned for development. They may not be developed as intensely as Route 1, but they could be developed for commercial use. So we excluded those areas that are zoned for more density and that left us with areas that are zoned and planned for lower density, such as 2-3 acre lots.

Uri Avin presents a slide showing a map of Rural Land Conflicts within the Study Area

In this map the areas that are shaded gray reflect those areas that are counted within the swaths of lands that we assumed for the various strategies.

Uri Avin presents a slide showing a map of Rural Area's Proximity to Town Centers and Historic Sites/Districts

The other piece that is important is historically designated areas that are part of the rural character. This data is very partial. This is treated very lightly because it is incomplete. In the next phase it will be much more detailed.

Uri Avin presents a slide showing the following table of 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

In this table we have the results of the acreage that we counted. This is the overall corridor acreage that is within the swaths that we allocated for each strategy. On the right we have tallied the number of acres that are low density and not designated for development. There is a big range, for example of the 13,000 acres for strategy B6, 9,200 acres fall within the rural character. That is a large percentage. As you would expect, the strategies that go through new undeveloped areas have the most potential impacts on rural character. We have a map that will summarize this information and rank the corridors based on which strategies are most impactful to rural character.

During the Advisory Committee meeting this morning there was concern as to what the impacts would be and what the swaths meant. We would like to know if you have any ideas that would make this more comprehensive, or maybe more effective.

Carol Morris: Some of the concerns were based on the different types of commercial development - areas that do not have infrastructure to support intense commercial development, or those where intense commercial development was not intended. Another issue that came up was the question as to how to handle land that appears to be rural even if it is zoned for commercial use and the landowner wants it to be rural.

Gerry Audibert: The approach we took was that if it is zoned commercial, it would eventually be commercial and therefore not rural. The zoning currently says that there is some farmland that can be developed for commercial use per the current zoning. There was discussion as to whether that was the proper approach. Our assumption has been to follow the guidelines in the current zoning and comprehensive plans as we are considering 25 years in the future.

John Sylvester: The perception of commercial varies from community to community. Alfred certainly has a different conception of commercial than Sanford does. If we assume that commercial zoning means the same thing to each community that would be a mistake. There would not be a Lowe's or Wal-Mart in Alfred; the infrastructure would not support it.

Uri: Should we not consider zoning as a constraint and look at the land?

Tad Redway: I would recommend that, because if you actually built any of these new corridors, it would change the character of the community completely. I would be bound more by the character of the area rather than the zoning. Rural is junkyards to pastoral landscapes.

Uri Avin: Good, thanks. We looked at the aerials, the big blocks of trees and the open fields but we did not get down to vistas, etc. We are going to do that in the next phase of the study.

Uri Avin presents a slide showing a map of Designated Historic Sites and Districts

We have shown you this map before; we have mapped the nationally registered and eligible sites and districts. This is a partial inventory, and as I mentioned earlier in the next phase our historic preservation consultants will provide us with a much more detailed inventory. This is what we counted, but it is still incomplete.

Judy Bernstein: Make sure you check in with the archeological sites as well.

Uri Avin: Yes we do have those maps. Now let's segue into the environmental analysis. The final MOE that we will look at today is Environmental Constraints. We will measure this by assessing the impacts to wetlands and other natural features. The components that we will analyze are:

- Wetlands
- Other regulated natural resources
- Linear feet of alignment

We did an inventory of these resources in Phase I. What we did here is we took the actual centerline of these roads and measured how much of these resources we crossed.

Uri Avin presents a slide showing a map of Environmental Constraints

This is what the map looks like. In the background you can see distribution of environmental resources. If you look at the alignments of the strategies, the darker colors represent more environmental conflicts.

Uri Avin presents a slide showing the following table of 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

This table shows each strategy's impacts to natural resources and wetlands in miles. This gives you an idea of how each strategy compares to the others based on environmental impacts to wetlands and regulated natural resources. The total is on the right.

Uri Avin presents a slide showing a map of Environmental Constraints

In the map background, you can see distribution of environmental resources. If you look at the alignments of the strategies, the darker colors represent more environmental conflicts.

John Sylvester: Do you take into account the zoning ordinances of the individual communities, like rural, residential, shoreline zoning.

Uri Avin: What is mapped and protected legally is what is on the first map, such as wetlands and aquifers. Resources that are protected by state and federal ordinances are reflected on this map and are counted. If your local codes go beyond the state and federal guidelines, we have not looked that up yet. Or if for example your local ordinances say that steep slopes more than 15% cannot be developed, we do not have that data yet.

John Sylvester: Our ordinances go that far. We have a local resource protection district for the entire southern part of Alfred. There is rural residential protection where B6 is; there is five-acre zoning in that area. There are 400-500-acre landowners in that area as well. These people have spent their lifetime keeping these lands in this state.

Uri Avin: And this morning an Advisory Committee member suggested there were conservation easements that were not reflected in our maps. At this stage of the analysis, when we are looking at very broad-brush analysis, what do you suggest we do to improve these maps?

Uri Avin: I can take your map of protected resources and add them to this map. That will be very simple.

Tad Redway: We also have some more areas that are protected.

Judy Bernstein: Branch Brook is the water supply for Wells and Kennebunk. The whole recharge area of Branch Brook is highly protected.

Gerry Audibert: Are all of these local resource protection areas GIS mapped?

Tad Redway: Ours is not GIS'd yet.

Judy Bernstein: Kennebunk's is.

Uri Avin: Is there something in Arundel we should show?

Tad Redway: Kennebunk-Kennebunkport-Wells Water District (KKWWW) has just developed a new well point. They have bought all of the conservation land to protect that aquifer on the Arundel side. We don't have mapped data because this is very recent. KKWWW is a better source.

Judy Bernstein: Justin at the water district is doing our GIS work and he has the data that you need.

John Sylvester: You can get our official zoning map.

Uri Avin: We will add those areas to this map. We looked over the comprehensive plans and zoning maps but we didn't yet look at the specific conservation and environmental areas for specific towns.

Judy Bernstein: The Branch Brook zone would have shown up on our zoning map.

Uri Avin: Good, thank you, we will adjust this accordingly.

Steve Rolle: All that being said, that would not change the Environmental Constraints maps as the new expressways are shown as being the most impactful already.

Carol Morris: Would K3 still be red, or would it be maroon?

Uri Avin: It may well be maroon, and it will change the numbers on the data table.

Uri Avin: At the next meeting we will talk about cost, economic impact, transit, safety data and congestion data. We will also have a better idea of what that all adds up to and

what strategies we will move forward into Phase III for even greater and more detailed analysis.

Gerry Audibert: On the non-highway strategies, such as transit, TSM (transportation systems management), TDM (transportation demand management), when does that come in?

Steve Rolle: We have started to identify the range of strategies that could be considered for application here and those will be considered in detail together with the roadway scenarios that move forward in Phase III. One of the things we will want to do in Phase III is start to meet with the transit agencies, to make sure that those elements that we are going to identify as potential improvements are in line with the agencies' plans.

Carol Morris: So the next meeting is August 18th, we will go through the rest of the MOEs and look at what will stay on the table and what will go. We will hope to scale back the strategies to five or so realistic, feasible strategies to look at in greater detail. We looked at everything in this phase. We will have another meeting in September and after that meeting in August, we will have a public meeting showing what we have looked at and what is still on the table and what we are moving ahead with to see what the public's response is.

The next steps are as follows:

- 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

Thank you for coming this afternoon and we will see you in August.

Meeting adjourned at 5:04 pm.