Maine-New Hampshire Connections Study

Public Informational Meeting
August 20, 2009
Meeting Overview

• Welcome
• Federal Stimulus Grant Update
• Bridge Inspections Update
• Study Update/Schedule Review
• Baseline Conditions and Analysis Overview
• Purpose and Need: Review and Discussion
• General Questions/Discussion
Federal Stimulus Grant Update

• Maine and NH are actively working to develop the application for submittal prior to the September 15 deadline

• If the grant is successful:
  – Memorial Bridge will be funded
  – The Connections Study scope of work will be modified to exclude further analysis of Memorial Bridge alternatives
  – The Connection Study will continue evaluating Sarah Mildred Long alternatives

• If the grant is not successful, Connections Study will provide direction for solutions going forward
Bridge Inspections and Cost Analyses (BICA) Status

• Field Inspection work on both bridges complete
• Full Report due in September
• Memorial Bridge Inspection Findings:
  – Accelerated Deterioration, including the Kittery approach
  – Bridge Posting Reduced from 20 tons to 10 tons
• Sarah Mildred Long Bridge Inspection Findings:
  – Posted for 20-ton loads as of June 27
  – Albacore Park Connector Road opened to improve truck access to the I-95 Bridge
  – Recent rail delivery to Portsmouth Naval Shipyard recently completed without incident
• Both bridges remain safe for their respective posted load limits
Study Update/Schedule Review

- **August:** Baseline Data completed
- **September:** Traffic analysis and travel demand model forecasts complete for no-build conditions
- **September:** Fatal Flaw Analysis and process
- **September:** Brainstorm alternatives (solutions)
- **December:** Fatal Flaw Analysis results yields list of feasible alternatives
- **January:** Analysis of feasible alternatives begins
Baseline Conditions and Analysis

What did we learn??
Background Data Categories

- Cultural/Historic
- Natural Resource
- Land Use
- Transportation
- Origin-Destination
Cultural/Historic
Natural Resources
Please note the following data has been requested from the appropriate agencies and will be incorporated into study area mapping:

New Hampshire Natural Heritage Bureau Database:
- Rare or declining native plants and animals and exemplary natural communities

Maine Natural Areas Program:
- Rare Plants and Exemplary Natural Communities

Maine Department of Inland Fisheries and Wildlife:
- Endangered, Threatened, or Special Concern Species

Legend:
- Study Area
- Mapped Eelgrass Habitat
- New Hampshire Mapped Salt Marsh
- Resource Area Buffers
- Waterfront and Wading Bird Habitat
- Maine South Coastal Bioregion
- Anadromous/Catadromous Fish Run

Source: City of Portsmouth, Town of Kittery, NH/GRANT, ME/US, Engineering With Habitat

Mapped Wildlife and Fisheries Habitat
ME-NH CONNECTIONS

DRAFT
Land Use
Transportation
Origin Destination Survey
Highlights

Vehicle Survey – May 2009
Bicycle/Pedestrian Survey – July 2009
State of Vehicle Registry

<table>
<thead>
<tr>
<th></th>
<th>Memorial NB</th>
<th>Memorial SB</th>
<th>Sarah Long NB</th>
<th>Sarah Long SB</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHER</td>
<td>6%</td>
<td>5%</td>
<td>6%</td>
<td>13%</td>
<td>8%</td>
</tr>
<tr>
<td>NH</td>
<td>28%</td>
<td>44%</td>
<td>26%</td>
<td>49%</td>
<td>37%</td>
</tr>
<tr>
<td>ME</td>
<td>67%</td>
<td>51%</td>
<td>68%</td>
<td>38%</td>
<td>54%</td>
</tr>
</tbody>
</table>
Vehicle Trip Purpose

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Memorial Bridge</th>
<th>Sarah Long Bridge</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>9%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Work-based</td>
<td>14%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Home-to-Recreation / Leisure</td>
<td>10%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Home-to-Shopping / Personal Business</td>
<td>31%</td>
<td>22%</td>
<td>26%</td>
</tr>
<tr>
<td>Home-to-Work</td>
<td>36%</td>
<td>44%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Average Vehicle Trip Length

<table>
<thead>
<tr>
<th></th>
<th>Memorial</th>
<th>Sarah Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Trip Length</td>
<td>5.9</td>
<td>16.7</td>
</tr>
</tbody>
</table>
Top 3 Movements:
- I-95/4/16 to I-95 N: 18.7%
- 1/33 to I-95 N: 15.4%
- Subarea 5 to I-95 N: 13.8%

Most Common Origins:
- External 105: 36.2%
- External 106: 21.0%

Most Common Destinations:
- External 111: 66.7%
- Subarea 9: 7.5%

Trips through Sarah Long NB
Top 3 Movements:
PNSY to I-95S/4/16: 30.1%
I-95 N to I-95S: 10.6%
I-95 N to 1/33: 5.0%

Most Common Origins:
Subarea 8: 40.6%
External 111: 33.3%

Most Common Destinations:
External 105: 49.7%
Subarea 4: 15.1%
**Most Common Origins:**
- Subarea 1: 33.9%
- External 105: 15.4%

**Most Common Destinations:**
- External 111: 41.6%
- Subarea 9: 20.6%

**Top 3 Movements:**
- Downtown to I-95 N: 14.5%
- Downtown to Subarea 9: 7.7%
- I-95/4/16 to I-95 N: 6.0%

Trips through Memorial NB
Most Common Origins:
Subarea 9: 26.1%
External 111: 24.1%

Most Common Destinations:
Subarea 1: 38.6%
External 105: 17.1%

Top 3 Movements:
I-95 N to Downtown: 9.9%
Subarea 9 to Downtown: 7.4%
Subarea 9 to I-95S/4/16: 6.4%

Most Common Destinations:
Subarea 1: 38.6%
External 105: 17.1%

Most Common Origins:
Subarea 9: 26.1%
External 111: 24.1%

Top 3 Movements:
I-95 N to Downtown: 9.9%
Subarea 9 to Downtown: 7.4%
Subarea 9 to I-95S/4/16: 6.4%

Trips through Memorial SB
Summer Bike/Ped Volumes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:00</td>
<td>53</td>
<td>57</td>
<td>89</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>44</td>
<td>56</td>
<td>88</td>
</tr>
<tr>
<td>10:00-11:00</td>
<td>76</td>
<td>48</td>
<td>104</td>
</tr>
<tr>
<td>11:00-12:00</td>
<td>47</td>
<td>42</td>
<td>98</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>45</td>
<td>31</td>
<td>108</td>
</tr>
<tr>
<td>13:00-14:00</td>
<td>37</td>
<td>30</td>
<td>123</td>
</tr>
<tr>
<td>14:00-15:00</td>
<td>52</td>
<td>29</td>
<td>93</td>
</tr>
<tr>
<td>15:00-16:00</td>
<td>94</td>
<td>45</td>
<td>93</td>
</tr>
<tr>
<td>16:00-17:00</td>
<td>78</td>
<td>49</td>
<td>103</td>
</tr>
<tr>
<td>17:00-18:00</td>
<td>113</td>
<td>47</td>
<td>89</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>639</strong></td>
<td><strong>434</strong></td>
<td><strong>988</strong></td>
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</tbody>
</table>
Percentage of Bikes vs. Peds

<table>
<thead>
<tr>
<th></th>
<th>Weekday (Cloudy)</th>
<th>Weekday (Sunny)</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bikes</td>
<td>36%</td>
<td>39%</td>
<td>33%</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>64%</td>
<td>61%</td>
<td>67%</td>
</tr>
</tbody>
</table>
Bike/Ped Trip Purpose Summary

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Weekday</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>Shopping</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Personal Business</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Work/Home</td>
<td>37%</td>
<td>8%</td>
</tr>
<tr>
<td>Recreation/Leisure</td>
<td>17%</td>
<td>35%</td>
</tr>
<tr>
<td>Exercise</td>
<td>21%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Purpose and Need
Purpose and Need Statement

• A foundation for the Study
• A starting point for development of alternatives (solutions)
• Must clearly address transportation needs
• Must clearly state the Study’s goals
• Used as a basis to measure which alternatives (solutions) will remain for more detailed analysis and final selection
Input from Public Meetings

- Bike/Ped access should be non-negotiable
- Bike/Ped access attracts tourists
- Bike lanes that meet safety requirements
- Bike lanes on all bridges
- Low bridges = historic appeal
- Historic nature important to region
- Economic link to downtown Kittery from Ports.
- Economic support for businesses on Rte. 103
Input from Public Meetings

- Must support PNS
- Must accommodate tourism needs
- East Coast Greenway a key link
- Must meet evacuation and safety requirements
- Need less maintenance in future
- Support rail transportation for future
- Should not solve summer traffic on I-95
Input from Steering Committee

• Local connection with bridges provides pride of place
• Portsmouth at capacity; businesses spilling over into Kittery
• Reduced maintenance cost very important due to state budgets
• Fewer trucks through downtowns is good
• Need better access to Sarah Long in new locations such as Market Street.
Input from Steering Committee

- Promoting ped/bike important for residents and tourism
- Access to downtown Portsmouth key to both communities
- Access for ALL modes is key
- Zoning shows compatibility
- Good to be able to cross river casually
- Knitting communities together is good
- Required to minimize or avoid adverse affects to a historic bridge.
Purpose and Need Statement: The Process

- Gathered initial feedback from Public – April 09
- Draft presented to Stakeholder Committee June 30
- Comments incorporated - revised P&N to Steering Committee and Stakeholder Committee on July 7
- Federal agencies commented on format
- SC met to discuss in early August and agreed to revised format with adjustments
- Revision sent to SHC on August 11
- Conference call with SHC on August 17 and 19
- Version 8: Still a “work in progress”
Purpose and Need Statement

Statement of Purpose

• The purpose of the Maine-New Hampshire Connections Study is to identify and evaluate feasible long-term (2035) transportation strategies that facilitate the safe, secure and effective multi-modal movement of people and goods across and upon the Piscataqua River between Kittery, Maine and Portsmouth, New Hampshire and which support the region’s economic, cultural, historic, archeological and natural resources and its community quality of life.
Statement of Need:

(Statement of Transportation Deficiencies)

a) Structural deficiencies exist that threaten accessibility and mobility to the region and require load postings on the Memoria Bridge and the Sarah Mildred Long Bridge,

b) Decreased reliability of the lift spans and increasing maintenance needs of the Memorial and Sarah Long bridges are causing unnecessary delays to marine and land transportation, including response times of emergency vehicles,

c) Inadequate or outdated design features of these two bridges potentially adversely affect marine and land transportation safety,

d) Multi-modal (pedestrian, bicycle, rail, maritime traffic, vehicular) opportunity is limited by inadequate or outdated facilities.
Study Goals:

In order to achieve the stated Purpose and Need, the Study will strive to achieve the following goals:

- Improve local and regional economic growth and stability, tourism and recreational opportunities
- Maintain or improve access to Portsmouth and Kittery downtowns and Portsmouth Naval Shipyard
- Improve local connections to regional transportation modes
- Minimize long-term costs for the regional transportation system
- Improve bicycle and pedestrian access across the Piscataqua River
Study Goals

• Reduce operational and maintenance costs (currently $1.1+ M per year per bridge)
• Avoid or minimize detrimental impacts to the historic significance and integrity of the Kittery-Portsmouth area
• Conserve the aesthetic setting of the Piscataqua River
• Conserve the environmental quality of the Piscataqua River
• Avoid or minimize detrimental impacts to residential neighborhoods in Kittery, Portsmouth and neighboring areas.
• Reduce or maintain emissions of pollutants, including greenhouse gases
Fatal Flaw Analysis: How it works

• Used to evaluate and screen full range of alternatives (solutions) identified
• Remaining feasible alternatives receive “Higher” level of analysis
• Fatal flaw screening:
  – Does alternative satisfy purpose, need and goals?
  – Does alternative have significant impacts?
  – Is alternative permittable?
  – Is alternative financially/physically feasible?
  – Is alternative clearly inferior to other alternatives?
Fatal Flaw Analysis

All Alternatives identified by Steering and Stakeholder Committees, Public, Agencies

Fatal Flaw Analysis

Evaluate Feasible Alternatives
<table>
<thead>
<tr>
<th>Fatal Flaw Analysis: Examples of Potential Measures</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. X</th>
<th>Alt. Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Does the alternative increase structural strength and life of the Memorial Bridge and/or SML Bridge?</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>- Does the alternative increase the reliability of lift spans?</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>- Does the alternative increase navigation and land traffic safety?</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>- Does the alternative improve economic growth and stability?</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>- Does the alternative improve bicycle and pedestrian access (and all other modes)</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>- Does the alternative maintain or improve access to PNS and downtowns?</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>- Is the alternative financially feasible for the states to construct and maintain?</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>- Does the alt. avoid or minimize detrimental impacts to natural and physical resources?</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
Upcoming Meetings

– Sept. 11: Stakeholder Meeting
– Sept. 17: Steering Committee Meeting
– Sept. 24: Public Meeting
General Questions/Discussion