I-93 Transit Investment Study

Public Information Open House

November 27 & 28

Andover, MA & Salem, NH

New Hampshire Department of Transportation

Massachusetts Executive Office of Transportation
Agenda

- Study update
- Objectives
- Transit alternatives refinement
- Land use policy – Transit Oriented Development
- Strategic plan
Phase 1
- Previous studies
- Existing conditions
- Purpose & need
- Conceptual alternatives

Phase 2
- Evaluation criteria
- Alternatives
- Impacts
- Transit-oriented development
- Land-use policy
- Final Alternatives
- Public meetings

Phase 3
- Strategic implementation plan
- Public meeting
• Purpose is to determine long-term transit investment necessary to meet mobility needs along I-93 study corridor.

• Projected increases in congestion
• Limited mobility options
• Environmental impacts of continued rate of growth of vehicular travel
• Constrained development opportunities
• Lack of integrated transportation/land use strategy
Objectives

- Accommodate growth in longer distance (north-south) travel markets
- Increase mobility options
- Improve economic development opportunities
- Support regional strategies
- Help attain regional environmental objectives
Six Alternatives

• Rail Alternatives
  – Two M&L Alternatives
  – Two I-93 Alternatives

• Bus Alternatives
  – Shoulder Alternative
  – Dedicated Lanes Alternative
About the M&L Rail Alignment

• In NH:
  – M&L Branch

• In MA:
  – Haverhill line
  – Wildcat branch
  – Lowell line

• Five new stations:
  – Exit 5
  – Derry
  – Salem
  – Methuen
  – Lawrence (Essex Street)
M&L Condition Assessment

- Physical Condition
- Legal Status
About the I-93 Rail Alignment

• In NH:
  – I-93 Transit Reservation

• In MA:
  – M&L
  – Haverhill Line
  – Wildcat Branch
  – Lowell Line

• Six new stations:
  – Exit 5
  – Exit 4
  – Exit 3
  – Exit 2
  – Methuen
  – Lawrence (Essex Street)
Peak Travel Time to Boston

- Londonderry
- Derry
- Windham
- Salem

**I-93 Rail Boston**
**I-93 Rail ATC**
**M&L Boston**
**M&L ATC**
**Private Auto**

Minutes
About the I-93 Shoulder Bus Alternative

- **Routing**
  - Manchester to MA Exit 30
    - Shoulders of I-293 and I-93
  - Exit 30 to Boston
    - Existing HOV Lane

- **Peak buses serve two stations en route to Boston**
## About the I-93 Shoulder Bus Alternative

- Nine offline bus terminals:

<table>
<thead>
<tr>
<th>Route</th>
<th>Peak Headway (min)</th>
<th>Town Center Station</th>
<th>P&amp;R Lot</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td><strong>Manchester:</strong> Canal Street &amp; Granite Street</td>
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<tr>
<td>2</td>
<td>15</td>
<td><strong>Manchester Airport</strong></td>
<td>Exit 5</td>
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<td>3</td>
<td>15</td>
<td><strong>Derry:</strong> Broadway near Railroad Square</td>
<td>Exit 4</td>
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<td>4</td>
<td>30</td>
<td><strong>Windham:</strong> North Broadway &amp; Lake Street</td>
<td>Exit 3</td>
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<td>5</td>
<td>15</td>
<td><strong>Salem:</strong> South Broadway at Rockingham Park</td>
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Examples of BOS Operations

- Twin Cities, MN
  - 230 miles of shoulders
  - Buses travel at up to 35mph
  - Use of shoulders is by driver discretion

- Ottawa, CAN
  - 12 miles of highway shoulders in Transitway
  - Buses travel at posted speed limit (62mph)

- No serious safety concerns
  - MN experiences 20 annual minor accidents on 271 miles of highway BOS
  - Ottawa has experienced 1 accident over the past 15 years
About the I-93 Median Busway Alternative

• Five stations:
  – Manchester
  – Exit 5
  – Exit 4
  – Exit 3
  – Exit 2

• Buses serve all stations
Planned Freeway Bus Station in Seattle Area

Transmilenio Bus Station
Bogota, Colombia
Peak Travel Time to State Street Station

- Manchester
- Exit 5
- Exit 4
- Exit 3
- Exit 2

Comparison of travel times:
- I-93 Shoulders
- I-93 Busway
- Private Auto
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- ☀️ = Greatest positive impact
- ⌀ = Lowest positive impact
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Seven Truths of I-93 Transit

1. Boston only cost-effective southern terminus.
2. Only M&L has major positive land use/development impact.
3. M&L (exit 5 to Lawrence) physically and legally feasible.
Seven Truths of I-93 Transit

4. Maximum bus ridership effectiveness requires significant travel time savings.

5. Significant travel time savings require busway or shoulder use.

6. Busway effective, but not cost-effective.

7. Rail in I-93 r-o-w effective (ridership not land use) but not cost-effective.
Recommended Alternatives for Detailed Evaluation

- No Build
- TSM/Baseline
- M&L Branch
- I-93 Shoulder Bus
Land Use - TOD

- Land use and transit-oriented development (TOD)
  - Existing development near stations
  - Transit-supportive land use policies
  - Future development and ridership
Hillsboro-Beaverton-Portland, OR
Middleton, WI
TOD Tools

- Station Area Zoning
- Mix of Uses
- Development Density and Intensity
- Design Guidelines
Station Area Zoning

- **Best practices:**
  - Allow the creation of TOD zones
    - **Base zones:** traditional zoning tool
    - **Overlay zones:** control without complexity
    - **Floating zones:** specific to development

- **National models:**
  - **Seattle, WA**
    - Station Area Planning Program
  - **Portland, OR**
    - Light Rail Transit Station overlay zones
  - **Minneapolis, MN**
    - Hiawatha Corridor light rail transit station areas

Mix of Uses

• **Best practices:**
  – Commercial core with residential use
  – Mix varies by station type:
    • Regional, district, and developing neighborhood

• **National models:**
  – **San Diego, CA**
    • Encourages village greens and plazas
  – **Gresham, OR**
    • Creates four zones around each station
  – **Seattle, WA**
    • Allows light industrial uses
  – **Tacoma, WA**
    • Combines mix of uses with design and engineering guidelines

Central Fountain at the Promenade, Rio Vista West, San Diego.
Source: http://www.tndwest.com/riovistawest.html
Development Density and Intensity

**Best practices:**
- Density is most important in creating ridership
- Mix of residential types
- Employment density is critical

**National models:**
- **San Diego, CA**
  - Minimum and maximum densities
- **Huntersville, NC**
  - TOD-R and TOD-E districts
- **Denver, CO**
  - Transit mixed-use district

Design Guidelines

• **Best practices:**
  - Good design encourages transit usage
  - Advisory
  - Soften perceptions of density

• **National models:**
  - **Raleigh-Durham, NC**
    • Triangle Transit Authority guidebook
  - **San Diego, CA**
    • Transit-Oriented Development Design Guidelines
  - **Somerville, MA**
    • Design Review Overlay Districts

Charlotte, NC. Source: Reconnecting America’s Center for Transit-Oriented Development “Realizing the Potential: Expanding Housing Opportunities near Transit.”
Land Use Analysis: Communities Studied

**New Hampshire:**
- Bedford
- Manchester
- Derry
- Hudson
- Litchfield
- Londonderry
- Merrimack
- Nashua
- Salem
- Windham

**Massachusetts:**
- Andover
- Lawrence
- Methuen
- Tewksbury
- Wilmington
- Woburn
Derry, NH

Existing transit-supportive practices:

• New zoning code adopted in 2000: good mix of uses across districts
• Multifamily Residential district: density approaches transit-supportive level

Opportunities:

• Design regulatory and policy incentives to guide development
• Create a TOD overlay to allow increased density
Derry, NH
Salem, NH

Existing transit-supportive practices:

• Density bonus for open space preservation
• Density bonus for senior housing

Opportunities:

• Consider implementing a TOD district
• Reduce parking requirements to encourage pedestrians
• Expand design guidelines beyond Town Center district
Salem, NH