NEW HAVEN STREETCAR
PRELIMINARY ALIGNMENT
AND IMPLEMENTATION PLAN

EXECUTIVE SUMMARY

City of New Haven
John DeStefano, Jr., Mayor
Downtown New Haven has growing residential and commercial bases. The areas around Union Station and the Medical District especially have shown recent growth and potential for tremendous future growth. With this growth, there will be an increased demand for transit. To meet this need, the City reached out to the Connecticut Department of Transportation, CT Transit, the South Central Regional Council of Governments, and Yale University to look at a streetcar system. Its preliminary alignment would connect six economic centers within Downtown: Union Station; Yale Medical Center; the Route 34 Corridor; Gateway Community College and 100 College Street; the New Haven Green and government center; and Science Hill.

The New Haven Streetcar would relieve congestion and enhance the livability, walkability, and sustainability of Downtown. The streetcar is an important component of the City’s overall transportation strategy and would provide a critical link within Downtown.

The New Haven Streetcar Study demonstrates that a streetcar would:

- Support the City’s goals of improving Downtown mobility, sustainability, and connectivity
- Complement and support New Haven’s existing public transportation network
- Link Union Station and other key economic centers
- Connect existing development with planned projects
- Relieve traffic congestion and accommodate the Route 34 overflow and future transit service demand
- Begin as a Downtown circulator and have the potential for extensions

The South Central Regional Council of Governments’ “New Haven Streetcar Assessment” report (April 2008) proposed alignments for a streetcar system. Following this report, the City of New Haven began developing a more in depth plan for implementing a streetcar in Downtown New Haven.

The New Haven Streetcar Preliminary Alignment and Implementation Plan includes the following:

- Conceptual design of a preliminary alignment for a starter system in Downtown New Haven
- Review of potential regional alignments
- Assessment of the potential economic development impacts of a streetcar system
- Review of vehicle technologies available and appropriate for New Haven
The service area for the preliminary streetcar alignment in New Haven is a corridor running approximately one and a half miles north/south through Downtown New Haven. The alignment would serve five key economic development centers in Downtown New Haven: Union Station; Yale Medical Center; the Route 34 Corridor; Gateway Community College and 100 College Street; the New Haven Green and government center; and Science Hill.

While there is potential for future extensions, this preliminary alignment represents the minimum segment required to attract the maximum number of riders at the lowest reasonable cost. This segment should be defined as the route with the most advantageous alignment and highest potential for success, as it would serve as the starter segment for the overall streetcar system.

Stops along this alignment could include:

1. Union Station
2. Gateway Community College
3. New Alliance Bank
4. Grove Street Garage
5. Peabody Museum North
6. Science Hill
7. Peabody Museum South
8. Grove Street and Temple Street
9. Elm Street and Temple Street
10. The New Haven Green
11. Temple Street Garage
12. Yale New Haven Medical Center
Downtown New Haven demonstrates considerable demand for a streetcar system. Within ¼-mile of the proposed preliminary alignment, the population is approximately 13,100. In expanded radii of ½-mile and one-mile, the population increases to 32,100 and 56,700 residents, respectively. These population figures represent a significant population density surrounding the preliminary alignment. The population density in Downtown New Haven compares favorably to the population densities around streetcar alignments that are either in operation or have received Federal funding. The graphic on the facing page demonstrates this fact.

In addition to its strong residential base, Downtown New Haven also has numerous economic and employment hubs. These include the following:

- **Yale University**
  - 24,500 students, faculty, and staff

- **Gateway Community College**
  - 12,000 students and faculty

- **Union Station**
  - 8,000 daily passengers (3,000 into New Haven)

- **State Street Station**
  - 600 daily passengers (half into New Haven)

- **Yale New Haven Hospital**
  - 8,000 employees
  - 1,500 daily patient visits
  - 764 average inpatient population

- **Smilow Cancer Hospital**
  - 600 employees
  - 168 patient beds

These 56,000 individuals, along with the residential population, are potential streetcar riders. Not only could the streetcar serve as a means of travel from home, but it would also be a convenient way to get around once already in Downtown. The streetcar would allow employees, students, and visitors to make short trips within Downtown throughout the day. Efficient service would encourage these types of trips (lunch, errands, etc), and this would be beneficial to local businesses.
CT Transit operates 15 bus routes within Downtown New Haven. Additionally, Yale University and Yale New Haven Hospital offer shuttle service for their affiliates, and the Greater New Haven Transit District offers paratransit service. New Haven is also linked to the broader regional rail network through Union Station, which offers train service via Amtrak, Shoreline East, and Metro-North Railroad.

Even though Downtown New Haven is well-served by existing transit services, the streetcar would offer a level of service that is not currently available to the public, thus closing an existing transportation gap in the city. As a result, the existing transportation network would both complement and be complemented by the streetcar. When implementing the streetcar, fare standardization and schedule coordination across modes should be a priority so that the system is convenient for riders.

"The existing transportation network would both complement and be complemented by the streetcar."
New Haven is the educational and cultural center of Southern Connecticut. A hot-spot for education, technology, and biomedical sciences, the city is home to the “Eds and Meds” industries that are major drivers of development. New Haven is experiencing a 20-year low in its commercial market vacancy rate, resulting in the recent opening of 40 new start-up companies. New Haven is among the top 10 “secondary cities” for venture capital deals, and it is home to the second largest bio-science cluster in New England. The city is also a mecca for dining, shopping, and the arts. All of these characteristics make New Haven an ideal location for a streetcar. Downtown New Haven will likely see the completion of 21 development projects in the next decade, resulting in 17,000 construction jobs, 5,000 permanent jobs, and 3,000 stabilization jobs. Key projects include:

**Union Station Transit-Oriented Development**
- To be completed in 2017
- Pedestrian bridges and at-grade multi-modal connections
- 1,700 parking spaces
- 50,000 square feet of mixed use development
- 34,000 square feet of retail space
- 90,000 square feet of commercial space
- 138 loft apartments

**Gateway Community College**
- Downtown New Haven Campus expected to open in 2012
- $200 million, 380,000 square-foot facility
- First LEED Gold Certified project in Connecticut
- 12,100 full- and part-time students and faculty members
- 600-space parking garage

**Route 34 Corridor**
- Six-lane divided highway converted to an urban boulevard
- 10 acres of development sites
- 100 College Street:
  - 400,000-square-foot building
  - $1.5 million in property taxes
  - $16 million in TIGER II grants from USDOT in 2010

**Medical District**
- Smilow Cancer Hospital opened in 2009
- $500 million, 497,000-square foot facility
- Southern New England’s only comprehensive care center
- One of 41 NIH-certified cancer centers in the country
Coordination between the City of New Haven, stakeholders, and relevant agencies has been a critical part in the development of the New Haven Streetcar Plan. Meetings between the Stakeholder Team, the City of New Haven, and the consultant team kept the stakeholders informed of the project’s progress and allowed them to actively participate in developing a plan for the New Haven Streetcar. The Stakeholder Team for the New Haven Streetcar includes representatives from:

- Connecticut Department of Transportation (CTDOT)
- CT Transit
- South Central Regional Council of Governments (SCRCOG)
- Yale University
- Gateway Community College
- New Haven Town Green Special Services District
- Greater New Haven Transit District
- Town of Hamden
- City of West Haven

In October 2010, the Project Team hosted a briefing and site visit for representatives from FTA Region I. Not only was this meeting a way for the FTA to learn about the New Haven Streetcar, but it was also an opportunity for the Project Team to learn about FTA’s expectations and processes regarding such projects. The meeting included a project briefing, an alignment tour, and a discussion period. For the alignment tour, attendees rode through Downtown New Haven and disembarked at potential streetcar stops to hear brief presentations by local stakeholders, including representatives from Yale University and Yale New Haven Hospital.

In September 2010, the Project Team held a Public Meeting to educate the public about streetcars, discuss the preliminary plan for the New Haven Streetcar, and explain the next steps in the process of developing a streetcar system. The meeting was also an opportunity to gather public input.

Approximately 50 people attended the meeting, and 95 people submitted comments either at the meeting or via the project website. Half of the respondents do not currently use public transit, but nearly 70% of respondents indicated that they would ride the streetcar at least once per week.
The City of New Haven must complete a wide array of activities to enable successful streetcar operation. These action items include an Alternatives Analysis, either an Environmental Assesment (EA) or an Environmental Impact Statement (EIS), preliminary engineering, final design, construction, and testing and start-up activities. Following is a summary of the approximate time and cost required for each of these activities:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>TIME</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives Analysis</td>
<td>12 months</td>
<td>$1 million</td>
</tr>
<tr>
<td>Environmental Process</td>
<td>12 months (EA) or 18 months (EIS)</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>Preliminary Engineering</td>
<td>18 months</td>
<td>$3 million</td>
</tr>
<tr>
<td>Final Design</td>
<td>12 months</td>
<td>$2.5 million</td>
</tr>
<tr>
<td>Construction</td>
<td>24 months</td>
<td>$75-$105 million ($25-$35 million per mile)</td>
</tr>
<tr>
<td>Testing and Start-Up</td>
<td>6 months</td>
<td>$750k</td>
</tr>
</tbody>
</table>

**PROJECT TIMELINE**

<table>
<thead>
<tr>
<th>Year One</th>
<th>Year Two</th>
<th>Year Three</th>
<th>Year Four</th>
<th>Year Five</th>
<th>Year Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Process</td>
<td>Preliminary Engineering</td>
<td>Final Design</td>
<td>Construction</td>
<td></td>
<td>Start-Up</td>
</tr>
</tbody>
</table>

**POTENTIAL FUNDING SOURCES**

**LOCAL**
- Educational/Institutional Partnerships
- Tax Increment Financing
- Special Services District
- Value Capture
- Employer Pass Programs

**STATE**
- General Bond Obligation
- CT Transit Operating Funds (through partnership)

**FEDERAL**
- New/Small Starts
- Urban Circulator Grants
- Re-Authorization of SAFETEA-LU
- Transportation Infrastructure Finance Innovation Act (TIFIA)

**NEXT STEPS**

To progress the New Haven Streetcar to design and construction, the City of New Haven must do the following:
- Work with SCRCOG to get the project into the region’s Transportation Improvement Program (TIP)
- Secure State or Federal funding for the AA
- Prepare a Project Initiation Package (PIP) and submit it to the FTA
- Complete an AA, including detailed utilities analysis and public involvement
- Apply for Federal funding (New Starts, Small Starts, Urban Circulator) for Final Design and Construction