MOVING FORWARD

CONNECTICUT'S TRANSPORTATION STRATEGY

Report and Recommendations of the Transportation Strategy Board

January, 2007

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Photos courtesy of the Department of Transportation

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“Not later than January 1, 2007, and biennially thereafter, the board shall review and, if necessary, revise the strategy adopted pursuant to subsection (a) of this section. A report describing any revisions and the reasons for them shall be submitted to the Governor and, pursuant to section 11-4a, the General Assembly. Such report shall include a prioritized list of projects which the board, in consultation with the commissioner, determines are necessary to implement the recommended strategy, including the estimated capital and operating costs and time frame of such projects. Not later than January 31, 2007, the joint standing committees of the General Assembly having cognizance of matters relating to transportation, finance, revenue and bonding and planning and development shall meet with the Commissioners of Transportation and Economic and Community Development, the Secretary of the Office of Policy and Management, the chairperson of the Transportation Strategy Board and such other persons as they deem appropriate to consider the report required by this subsection”.

Public Act 06-136 and Section 14(j)

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[1] Ex-officio members or their designees are voting members of the Board

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Transportation Strategy Board

450 Capitol Avenue
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Kevin J. Kelleher
Chairman

January 11, 2007

To the Governor and the General Assembly:

I am pleased to submit, as required by law, the revised strategy, report and recommendations of the Transportation Strategy Board, which were adopted by the Board on January 5, 2007. This report includes a prioritized list of projects which the Board believes are necessary for the effective implementation of its strategy and recommendations.

As the Board's report notes, this is a time of challenge and opportunity for Connecticut's transportation system. Over the last two years, the Governor has recommended, and the General Assembly has approved, the largest investments in the state's transportation system in more than two decades. Those investments have included:

- Over 300 new railcars for use on the New Haven Line;
- New rail maintenance facilities in New Haven to support the new railcars;
- $187 million for operational improvements on Interstate 95;
- $150 million for transportation improvements other than those on I-95;
- Commuter rail service between New Haven, Hartford, Springfield and intermediate points;
- Completion of the New Britain-Hartford busway;
- Improvements on the New Haven Line branch lines; and
- Station and parking improvements on the New Haven Line, the branch lines and Shore Line East.

Clearly, none of this is self-implementing. A great deal of work will be required in order to make each of them a reality. For that reason, implementing initiatives already approved is the Transportation Strategy Board's highest

priority. Accomplishing that goal will require a clear focus on execution and accountability. It will also require a spirit and climate of behavioral change.

Connecticut can no longer afford to endure years, sometimes decades, of planning studies, environmental reviews, design and construction before new transportation projects become reality. Time is of the essence and the state needs to redesign its systems and procedures in a way which insures both timely and cost effective delivery of projects and accountability for performance. This will require the development of new metrics and measurements, as well clear accountability for timely, accurate, reporting and delivery on all initiatives which make up our strategy.

Beyond "Results-based Accountability" and "Speed in Execution", there are several other changed behaviors or approaches that must be embraced. Local land-use planning must be integrated into the thinking and modeling for the future. Connecticut must continue to work closely with our neighboring states to strategize investments and mutually define and design a vision that maximizes opportunity and contributes to the overall economic vitality and quality of our region. Clean air and protecting our environment is not just a matter of compliance, it's responsible leadership and must be modeled in all we do. Non-construction solutions such as demand management techniques, and employee transit benefits, both at the state, municipal, regional and private employer level need to be evaluated, encouraged and implemented as possible.

This revised strategy focuses on the need to address and mitigate congestion; expand transit options; continually improve safety; strengthen our airports and water ports are vital economic drivers ; establish transit centers that are multi-modal in nature and operation; the employment of land use planning in conjunction with transportation planning; aligning of economic development, environmental requirements, and transportation planning, in thought and practice; striving to preserve open space; and, perhaps the most critical component of consideration because of its impact on all others, we must use the State's, as well as the Federal programs, as well as examine and create new means to fund a transportation system that links jobs, housing, and leisure (tourism) activities.

The strategic investments approved in 2005 and 2006 and those included in this strategy support the fundamental goals of insuring mobility of people and goods, preserving Connecticut's quality of life and enhancing its economic competitiveness. Our plans, both in thought and in action, are motivated by our desire to be one of our country's most dynamic and attractive areas, characterized by a robust economic environment; strong linkages to regional and global economies; a pristine set of shoreline and rural areas; stimulating urban centers; valued educational institutions; a recognized center for technology bioscience and other critical industry clusters; and employment opportunities that enable all of its residents to pursue their dreams.

Since the passage of Public Act 06-136 the Transportation Strategy Board has met twelve (12) times and conducted six (6) public hearings across the state, as well as meetings with local Transportation Investment Areas. This plan takes into account the genuinely

passionate expression of the very real needs, requirements, and desires of residents, commissions, Transportation Investment Areas, boards and other stakeholder groups. We learned that the strategic imperatives identified in 2003 are even more paramount today.

As the Board reached out to and listened to the many constituencies across the State, it was clear that the state needed to continue to build upon those strategies. Capacity is an issue for all modes of transportation. Likewise, delivery of services must be complimentary, coordinated, and more user-friendly. Improving multi-modal integration and logistical planning is essential. Investing in technology in order to improve systems management and increase information availability and its flow to users; leveraging existing public transportation, as well as existing infrastructure, while simultaneously ensuring that what we have today is maintained in a state of good repair; and reinvesting in our core communities, as evidenced by our strong recommendations on transit-oriented development, are all essential.

All of this will require leadership, priorities, planning and performance at all levels. It will also require money. There is no shortage of initiatives requiring new, additional, or continued funding. Agencies which administer a myriad of transportation responsibilities and services need additional support. State funds must be sufficient in order to maximize all federal funding available to the State. The strategy targets numerous projects where rehabilitation of existing infrastructure, replacement of aging systems, or investments in initiatives that combine to create the alignment required in ensuring a successful delivery of strategies must be coordinated.

The Board recognizes the significant fiscal challenges that confront us, both at a State and Federal level. We also recognize that the challenges we can identify today, and those yet to present themselves, are both a reality of today and our future. The funding which has been approved over the last two years is still in the process of being applied to targeted projects and appears to be sufficient to address the immediate horizon. However, capital investments required for long-term application against prioritized future projects will require both creativity in identifying funding alternatives and what many may consider courageous decision making.

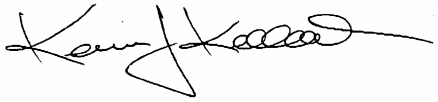
It is with this in mind that the Board strongly endorses the recommendation for examining and understanding strategic funding alternatives. Comprehensive review of electronic tolling, congestion pricing, and public private partnership are just three of several alternative measures that need to be understood and evaluated. The Board also believes, as do many of those who appeared before it, that any new revenues should be legally dedicated to transportation purposes.

Over the last two years, the Governor and General Assembly have demonstrated bold thinking and commitment to our existing multi-faceted transportation system and the investment required for its future growth and success. The investments, prioritized projects, and plans for the future are substantial evidence of your commitment to Connecticut's economic future and quality of life.

By their nature, strategies such as this one evolve over time. The challenges of balancing priorities between investing in existing infrastructure, expanding capacity, shifting emphasis to enhanced public transportation options and alternatives, strengthening and expanding our airports and water ports, and responsibly examining all funding formulas are on-going. It is the Board's promise to continue providing vision, strategy, execution, and resources in response to the transportation challenges that lie ahead.

The Board looks forward to working with the Governor, the Legislature and all our state's transportation customers to strengthen and expand the State's transportation system to enhance prospects for sustainable economic growth and a premier quality of life.

Respectfully submitted,



Kevin J. Kelleher
Chairman

INTRODUCTION

For Connecticut's transportation system this is a time of challenge and opportunity. Over the last two years, the Governor has recommended, and the General Assembly has approved, the largest investments in the State's transportation system in more than two decades. Those investments have included:

- Over 300 new railcars for use on the New Haven Line;
- New rail maintenance facilities in New Haven to support the new railcars;
- $187 million for operational improvements on Interstate 95;
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- Commuter rail service between New Haven, Hartford, Springfield and intermediate points;
- Completion of the New Britain-Hartford busway;
- Improvements on the New Haven Line branch lines; and
- Station and parking improvements on the New Haven Line, the branch lines and Shore Line East.

However, those initiatives are not self implementing. A great deal of work will be required in order to make each of them a reality. For that reason, implementing initiatives already approved is the Transportation Strategy Board's highest priority.

Achieving that goal will require aggressive action by the Department of Transportation and other state agencies involved in transportation, economic development and environmental issues. It will also require the state to ensure those agencies have the capacity to get the job done.

The Transportation Strategy Board recommends that:

- **The Department of Transportation establish detailed public project schedules leading to the timely implementation of the 2005 and 2006 transportation initiatives;**
- **The Governor and the General Assembly provide adequate staffing and resources for the Department of Transportation in order, consistent with workload and productivity models, implement the transportation initiatives included in the 2005 and 2006 transportation legislation and in this strategy; and**
- **The Office of Policy and Management monitor and report on project status implementation as required by public act 06- 136.**

The last two years have also seen a shift in emphasis away from highways and toward public transportation as a means of addressing Connecticut's transportation needs. While the Transportation Strategy Board recognizes the importance of maintaining, modernizing and in some cases expanding the state highway system it believes that the new emphasis on public transportation is necessary, proper and appropriate.

A significant part of the new funding approved over the last two years has not yet been committed to specific projects and remains available to meet the state's highest priority transportation projects. For that reason, new funding does not appear to be necessary in order to make capital investments required over the next several years. However, additional financial resources will be required in order for the state to make the transportation capital investments required over the long term. That shortfall will require tough decisions about what projects to undertake and how to pay for them.

For example, the Transportation Strategy Board's prioritized project list includes five major highway projects. The cost of one of those projects is undetermined. The remaining four projects (expansion of I-95 East of Branford; Route 11; expansion of I-84 West of Waterbury; and the interchange between I-84 and Route 8) are projected to cost almost $6 billion. Current financial resources are unlikely to support one, let alone all, of those projects.

In addition, the State faces the challenge of maintaining an aging transportation infrastructure, some of which is approaching the end of its useful life, at a time when federal support for the interstate highway system is declining.

Additional resources will also be required in order to meet increased operating costs, including additional Department of Transportation staffing and bus and rail operating subsidies, as well as addressing part of the "state of good repair" deficit.

Over the last two years the Governor and the General Assembly have demonstrated a commitment to meeting Connecticut's transportation needs. The Transportation Strategy Board recognizes that further leadership will be required in order to meet the challenges that lie ahead. This strategy represents the Transportation Strategy Board's roadmap for moving the state forward.

Guiding Principles & Strategies

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GUIDING PRINCIPLES AND STRATEGIES

Early in its deliberations, the Transportation Strategy Board adopted a series of eight guiding principles which are the central themes of this strategy, report and recommendations. Taken together their goal is the creation of a balanced, intermodal transportation system which provides for the efficient, cost effective movement of people and goods.

These are the guiding principles:

- A balanced transportation system is essential to Connecticut's economic and social health and welfare. That system must provide mobility for people and goods in a way which meets the needs of users, business and commerce.

- Connecticut's transportation system must be multi-modal and provide options to the single passenger automobile.

- Connecticut's transportation system represents an investment in the state's future which must be maintained and preserved. It requires both strategic investments and on-going operating and capital support. It also requires efficient, cost effective, management and operations which make the best use of available resources.

- Transportation policy does not exist in a vacuum; it must also reflect the economic, social and environmental needs and policies of the state. Transportation investments, or the lack of them, can be an important factor in influencing economic development and job growth. Likewise, proper planning of transportation infrastructure and improvements can positively influence housing, land use and commutation patterns. It must support both economic development and a sustainable environment.

- Connecticut's transportation system must be flexible and responsive enough to meet the transportation needs of a wide variety of customers, including those with special needs. It must leverage innovation and advances in technology in order to improve service and control costs.

- The provision of accurate, timely, information about transportation systems and services is essential to the success of Connecticut's transportation system.

- Connecticut's transportation and development investments must support responsible growth, transit oriented development and the State Plan of Conservation and Development.

- Transportation planning, at all levels, must be comprehensive, inclusive and visionary and must maximize the options available to decision makers. Cooperation between local, state and federal organizations and entities must be encouraged. Whenever possible, transportation investments should be coordinated with similar planning and investments in neighboring states.

The Transportation Strategy Board also adopted broad strategies dealing with economic development, movement of people and movement of goods. All three adopted strategies are substantially similar to those adopted by the Transportation Strategy Board in 2003.

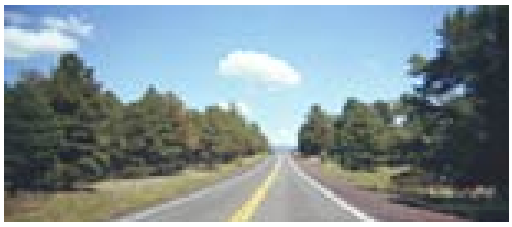
The strategies are:

- Ensure that the State's Transportation Investment Areas remain vibrant and competitive economic engines for Connecticut and attractive gateways to the State by leveraging existing transportation and other infrastructure assets, especially in Connecticut's urban centers, and by focusing appropriate resources on the mitigation and management of road congestion throughout the State with a focus in the near term on the Coastal Corridor.

- Facilitate the movement of people within and through the State by: expanding the quality and quantity of options (e.g. air, bike, bus, ferry, flex-time, rail, ridesharing, telecommuting) to single occupancy automobile trips; encouraging employer participation in demand management programs; enhancing the customer's transit experience; improving transit travel times through better integration of all transportation options; increasing capacity of roads through continued focus on information, safety, and incident management tools; and expanding targeted portions of certain roads.

- Facilitate the movement of goods to and through the State by: expanding and coordinating the State's air, rail, road and water infrastructure; improving the flow and safety of commercial truck traffic; and providing a broader range of competitive options to commercial trucks.

Transportation & Air Quality



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TRANSPORTATION AND AIR QUALITY

Connecticut's transportation choices play an important role in achieving the state's air quality goals. Integration of air quality considerations into transportation planning is the best way to assure Connecticut achieves its multi-faceted goals for our State's transportation sector.

In accordance with the federal Clean Air Act, the U.S. Environmental Protection Agency (EPA) must establish health-based National Ambient Air Quality Standards (NAAQS) for certain pollutants. Once EPA sets the standard, states must submit State Implementation Plans (SIPs) to attain and maintain air quality within their borders consistent with the NAAQS requirements. Currently, the entire state has been designated as a non-attainment area for the federal, health-based standard for ozone. Fairfield and New Haven Counties have also been designated as non-attainment areas for the fine particulate NAAQS standard. Non-attainment designation means that the air quality exceeds the maximum limits for ozone and fine particulate established by EPA.

Under federal law, Connecticut must identify legally binding strategies to attain the federal NAAQS. Failure to attain the federal health-based standards within prescribed time frames, or failure to maintain that level of air quality once achieved, can result in the loss of federal highway funds.

Connecticut's non-attainment status for ozone and particulate matter require strategies designed to reduce emissions of nitrogen oxides (NOx), volatile organic compounds (VOCs) and fine particulate matter (fine particulate). The mobile source sector, which includes cars, trucks, buses, locomotives, and construction equipment, is a significant source of NOx, VOC, and fine particulate emissions. Minimizing Vehicle Miles Traveled (VMT) and single-occupancy vehicles are important strategies to improve Connecticut's air quality.

Mobile sources are also significant carbon emitters. State efforts to address climate change recognize the substantial contribution of mobile sources to the state's total annual carbon emissions. Similarly, the state has recognized that diesel-powered engines produce toxic emissions of concern as well as carbon and fine particulate.

State-wide plans have been developed as part of an integrated approach to addressing air quality impacts from transportation sources. These plans include The Climate Change Action Plan, The Governor's Energy Plan and the Connecticut Diesel Plan, as well as the state's on-going SIP efforts.

Key transportation initiatives identified in these plans include:

- Reducing VMTs by encouraging transit, bicycle and pedestrian components for the strategic transportation network
- Encouraging inclusion of climate modeling data in repair/replacement of transportation infrastructure
- Developing an infrastructure plan for providing alternatives to freight trucks, including enhanced freight rail infrastructure and intermodal transfer facilities
- Reducing emissions from legacy fleets, in the transit, construction, school bus and motor transport sectors
- Enhancing education and enforcement of the state's existing anti-idling strategy

The Transportation Strategy Board supports integrating Connecticut's air quality goals into the state's transportation planning.

Responsible Growth

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RESPONSIBLE GROWTH

The Guiding Principles adopted by the Transportation Strategy Board and included in this strategy recognize the link between transportation and responsible growth:

> "Transportation policy does not exist in a vacuum; it must also reflect the economic, social and environmental needs and policies of the state. Transportation investments, or the lack of them, can be an important factor in influencing economic development and job growth. Likewise, proper planning of transportation infrastructure and improvements can positively influence housing, land use and commutation patterns. It must support both economic development and a sustainable environment".

In the four years since the Transportation Strategy Board's 2003 strategy was adopted, there have been significant developments in the area of land use and economic development, including preparation and approval of a new Conservation and Development Policies Plan (Plan of Conservation and Development), focused, for the first time on growth management principles; revision of the laws governing that plan; a new statutory requirement that "state and regional transportation planning be coordinated with other state planning efforts," and the issuance of Governor Rell's Executive Order on Responsible Growth.

The most recent version of the Conservation and Development Policies Plan was adopted in 2005 and covers the period from 2005 to 2010. Unlike earlier versions of the plan, the 2005-2010 plan is organized around six Growth Management Principles. They are:

- Redevelop and Revitalize Regional Centers and Areas with Existing or Currently Planned Physical Infrastructure
- Expand Housing Opportunities and Design Choices to Accommodate a Variety of Household Types and Needs
- Concentrate Development Around Transportation Nodes and Along Major Transportation Corridors to Support the Viability of Transportation Options
- Conserve and Restore the Natural Environment, Cultural and Historical Resources, and Traditional Rural Lands
- Protect and Ensure the Integrity of Environmental Assets Critical to Public Health and Safety

- Promote Integrated Planning Across all Levels of Government to Address Issues on a Statewide, Regional and Local Basis

State agencies are required to consider the Plan when they prepare agency plans. In addition, certain agency prepared plans are required to be submitted to the OPM for a review of conformity with the Plan.

In addition, State agency actions are required to be consistent with the Plan when undertaking the following actions:

- The acquisition of real property when the acquisition costs are in excess of one hundred thousand dollars;
- The development or improvement of real property when the development costs are in excess of one hundred thousand dollars;
- The acquisition of public transportation equipment or facilities when the acquisition costs are in excess of one hundred thousand dollars; and
- The authorization of any state grant for an amount in excess of one hundred thousand dollars for the acquisition, development, or improvement of real property or for the acquisition of public transportation equipment or facilities.

The Transportation Strategy Board's strategic actions and tactics included in the Transportation Strategy support the growth management principles of the Plan of Conservation and Development.

Executive Order on Responsible Growth

Earlier this year, Governor Rell issued Executive Order 15 [2] which:

- Establishes an Office of Responsible Growth within the Office of Policy and Management, which is responsible for:
    - Chairing an Interagency Steering Council, consisting of the Commissioners of the Department of Economic and Community Development, Department of Environmental Protection, Department of Agriculture, Department of Transportation and the Department of Public Health as well as the Executive Directors of the Connecticut Housing Finance Authority and the Connecticut Development Authority, to coordinate policy development and capital planning in an effort to efficiently utilize state expertise and financial resources.

[2] The full text of the Executive Order is included as Appendix "A" and can be found at: http://www.ct.gov/governorrell/cwp/view.asp?A=1719&Q=320908

- Creating Regional Roundtables that will invite the ongoing participation of city and town officials and foster the development of planning agendas tailored to the specific needs of different parts of our state, starting with new transit corridors.
- Developing support and incentives for communities to engage in regional planning, to update zoning maps and ordinances and to build the capacity of municipal staff, boards and agencies to make complex land use decisions. This effort will include the establishment of a new municipal training program that will be created in conjunction with regional planning organizations, the Connecticut Land Use Academy and resources that already exist in our state's colleges and universities.
- Updating the "Green Plan" for Connecticut by June of 2007 to better identify sensitive ecological areas and unique features, guide acquisition and preservation efforts, support local build-out maps and assessments, and make these and other maps accessible to state agencies, regional planning agencies, local communities and nongovernmental organizations through geographic information systems (GIS).
- Reviewing transportation policies and projects to increase opportunities to promote mass transit and roadway design that support state and local economic development while preserving and enhancing the character, as well as the "walkability," of our communities.
- Expanding housing opportunities to meet the needs of all Connecticut residents and support an expanding workforce with housing that provides ready access to passenger rail and bus service.
- Reviewing all state funding that has an impact on the growth and development of Connecticut and establishing criteria that will target funds for uses that are consistent with goals that emerge for responsible growth.
- Targeting economic incentives to support development in designated Responsible Growth areas.
- Creating a new "Green and Growing" webpage to highlight best practices and develop a virtual toolbox and roadmap to promote Responsible Growth region by region and community by community.

- Places the Office of Responsible Growth within OPM's Intergovernmental Policy Division; provides for staffing; and requires the Secretary of the Office of Policy and Management to designate a State Responsible Growth Coordinator.

The Transportation Strategy Board supports the implementation of the Governor's Executive Order on Responsible Growth, with special emphasis on Transit Oriented Development.

Planning Coordination

Public Act 06-136 requires that state and regional transportation planning be coordinated with other state planning efforts including economic development and housing plans. The Secretary of the Office of Policy and Management is responsible for ensuring that the required planning takes place. Planning oversight is among the responsibilities of OPM's Office of Transportation Policy.

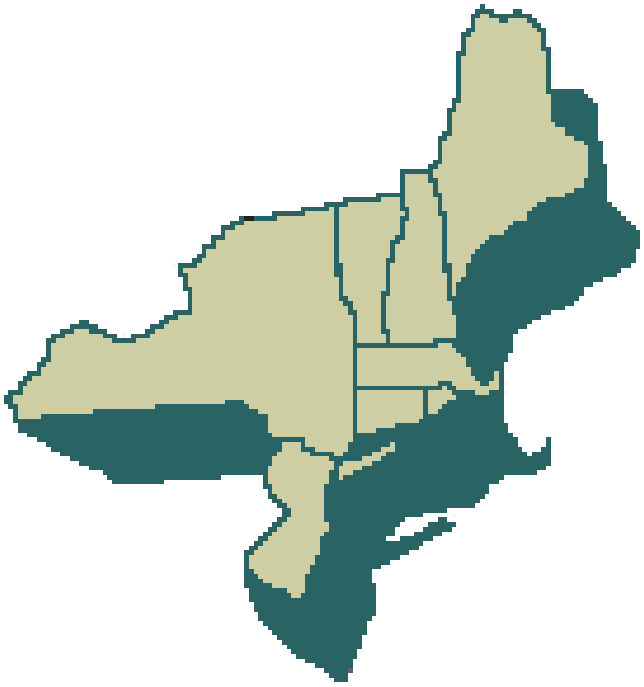
The Board believes that it is also important to improve local and regional transportation planning and to facilitate the integration of transportation and land use planning activities at the regional and local levels. **The Transportation Strategy Board recommends the coordination of state and regional transportation planning with other state planning efforts, including economic development and housing plans. Also, that the State foster the integration of transportation and land use planning at all levels of government.** This strategy, and the Board's prioritized project list, includes additional funding for regional planning organizations to support improved local and regional transportation planning.

Preapproved Development Areas

Finally, in order to facilitate transit oriented development, the **Transportation Strategy Board is recommending that the state seek legislative authority, during the 2007 legislative session, if possible, for the establishment of pre-approved development areas including processes for:**

- **establishing site nomination or eligibility processes and evaluation priorities;**
- **evaluating such properties in advance of the receipt of specific development proposals;**
- **determining the types and size of the activities appropriate for the site;**
- **identifying the project specific permits and approvals required in order to utilize the site; and**
- **Providing grant funding for a significant portion of the cost of site remediation for brownfield sites located near transit hubs.**

Interstate Cooperation



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INTERSTATE COOPERATION

The reach and impact of Connecticut's transportation system is not limited to within the state itself. It is also part of larger regional and national transportation systems. For that reason, Section 20 of Public Act 06-136 provides that:

> "The state of Connecticut, acting through the Governor or the Governor's designee, shall initiate ongoing formal discussions with the commonwealth of Massachusetts and the states of New York and Rhode Island regarding opportunities to enhance commuter and freight mobility throughout the region. On or before January 1, 2008 and biennially thereafter the Governor or the Governor's designee shall report to the General Assembly on such discussions and any actions taken or recommended as a result of such discussions".

A number of the Transportation Strategy Board's recommendations involve, or potentially involve, other states. They include:

- Including business and community leaders from Western Massachusetts in Bradley Airport planning and service development.
- Implementing commuter rail service between New Haven and Springfield by 2010
- Supporting the development and implementation of a "smart card" based transit pass program that can be utilized across the entire public transportation network.
- Improving integration of the New Haven Line, the branch lines, Shore Line East and the New Haven to Springfield Line so that seamless service is provided regardless of the entity responsible for operating a particular line.
- Purchasing 24 M8 electric rail cars for use on Shore Line East by 2013.
- Purchasing additional electric rail cars for use on the New Haven Line to increase reliability and support additional service.
- Specifying, funding and purchasing new rolling stock for use on the New Haven-Springfield rail line.
- Supporting cost effective proposals for Metro North access to Penn Station and intermediate stops.
- Supporting the efforts of DOT, the Governor and the General Assembly to:
  - Obtain voting representation for Connecticut on the Metropolitan Transportation Authority and the Metro-North Board of Directors;
  - Until voting representation is obtained continue DOT's participation on a non-voting basis; and

  - Take other actions necessary to ensure the long term financial and operational vitality of the Metro-North line as one of the most critical components of the State's transportation infrastructure.
- Supporting DOT's continued monitoring of the future of Amtrak and its effects on operations and operating agreements for SLE and New Haven–Hartford– Springfield rail service.
- Supporting the state's acquisition of the New Haven-Springfield rail line currently owned by AMTRAK.
- Developing a comprehensive analysis of the potential for enhanced rail freight service to and through Connecticut, including, but not limited to: (1) the market for enhanced rail freight services; (2) the impact of enhanced rail freight service on traffic and congestion; (3) obstacles to enhanced rail freight service and ways to address them; and (4) the impact of enhanced rail freight service on commuter rail service, including scheduling and track availability, safety and physical infrastructure.
- Supporting continued federal funding for development and completion of a Dredged Material Management Plan for Long Island Sound.
- Reviewing the feasibility and viability of the proposed Bridgeport to New York feeder barge service. Entertain, and potentially fund, proposals for feeder barge services from ports other than Bridgeport.
- Finalizing and implementing a plan to increase available truck rest stop parking spaces, to increase the safety of Connecticut's highway system. Include support systems necessary to comply with state anti-idling laws.
- Supporting the expansion and improvement of Automated Traveler Information Systems, and other technologies that provide more comprehensive and timely information to travelers.
- Continuing the development and build out of the Commercial Vehicle Information Systems and Network.

The Transportation Strategy Board believes that effective partnerships with our neighboring states and their respective transportation systems are essential to Connecticut's development of a sound and effective state transportation system. **The Transportation Strategy Board specifically endorses the interstate initiative required by Public Act 06-136 and recommends that the State explore and, where appropriate, implement regional planning, cooperation and operating partnerships wherever they will enhance Connecticut's transportation system.**

Highways

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HIGHWAYS

Overview

With 3,733 miles (9,775 lane miles) Connecticut's highway and roadway system provides the backbone to our State's transportation network. These state owned and maintained roadways include 376 ramp miles and connectors and 3,701 state maintained bridges. The State's road network also includes 16,852 miles of roads maintained by local municipalities.

The Connecticut Department of Transportation is responsible for the operation and maintenance of the entire State highway system. This includes the design and construction of roads and bridges; directing, managing and coordinating all engineering and support; administration, supervision and coordination of all highway related maintenance programs and activities; and managing construction activities for the State highway network.

The Department of Transportation must deal with an aging infrastructure, the effects of New England weather, increasing auto use, and, most of all, traffic congestion[3]. Addressing that congestion through alternatives to single passenger auto trips[4], operational and safety improvements, and selected additional capacity has been, and continues to be, a central focus of the State's transportation strategy.

That kind of highway congestion is hardly limited to Connecticut. The Texas Transportation Institute's *2005 Urban Mobility Report* notes that congestion continues to grow in America's urban areas.

> "Despite a slow growth in jobs and travel in 2003, congestion caused 3.7 billion hours of travel delay and 2.3 billion gallons of wasted fuel, an increase of 79 million hours and 69 million gallons from 2002 to a total cost of more than $63 billion. The 2005 report shows that the current

[3] It was that congestion, especially in the southwestern part of the state, which more than any other factor, led to the creation of the Transportation Strategy Board.

[4] According to US Census Data, the single occupancy vehicle represents the predominant mode of travel for all trip types. That fact is a major cause of highway congestion.

pace of transportation improvement is not sufficient to keep pace with even the slow growth in travel demands in most urban areas.[5]"

Connecticut's urban areas are not immune to this assessment; as illustrated in figures 1 and 2[6]. Figure 1 illustrates the 2005 hrs of congestion on Connecticut's highways. Figure 2 shows the projected 2025 hrs of congestion on the same highways.

Figure 1

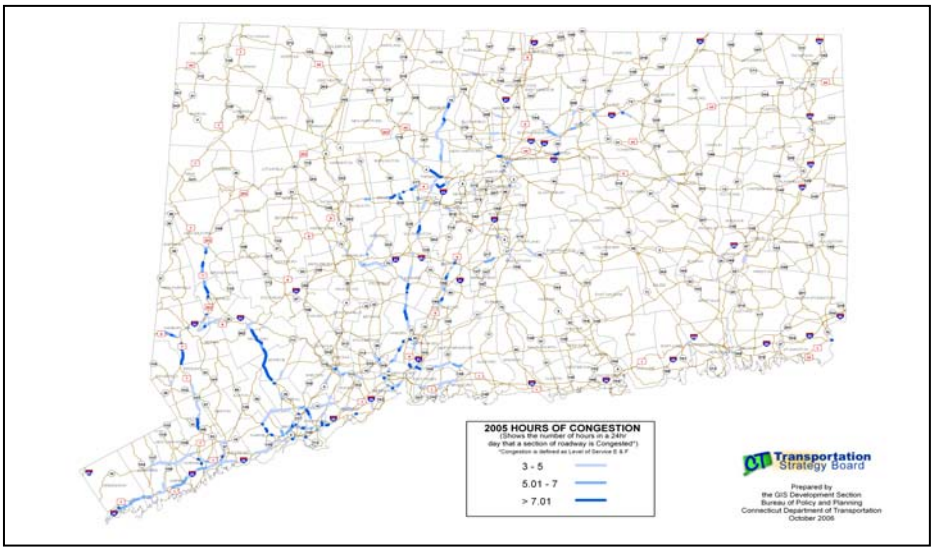
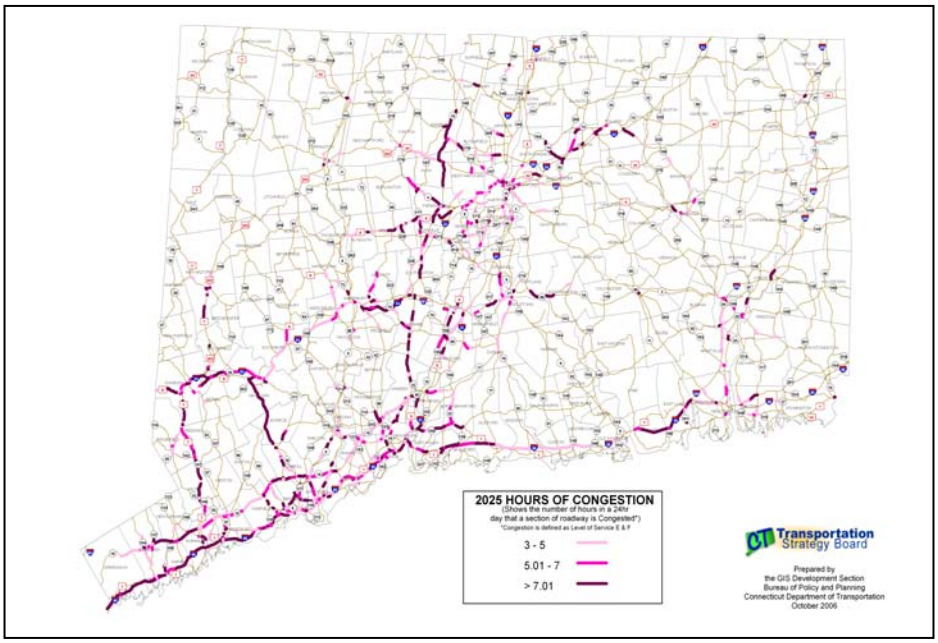


Figure 2



[5] 2005 Urban Mobility Report, David Schrank & Tim Lomax, Texas Transportation Institute, Texas A&M University, May 2005.

[6] Source: Connecticut Department of Transportation

Highway Projects and Funding

Federal funding provides the primary funding to implement these responsibilities. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) program, which authorizes highway funding to the State from 2005 to 2009, provides annual average highway funding of $495 million, which is matched by state bond funds. The Federal funding includes $183 million designated for 84 "high priority projects" and $93 million for the Q-Bridge project.

In addition, the 2005 and 2006 transportation initiatives have provided funding for several other selected projects. These include:

- Operational and safety improvements on Interstate 95 between Greenwich and North Stonington;
- Transportation improvement projects, including highway improvements, other than those on Interstate 95;
- Environmental assessment of the widening of Interstate 95 between Branford and/or Stonington;
- Preliminary design of the widening of Interstate 84 between Waterbury and the New York State line at Danbury;
- Highway improvements in support of economic development in the Hartford area.

The Transportation Strategy Board recommends the expeditious implementation of the safety and operational improvements authorized and funded by Public Act 05-4, including the identification and implementation of similar improvements on other state highways.

As previously noted, Connecticut's existing Interstate highways are aging; many operate above their design capacities; and some include elements which are approaching the end of their useful life. At the same time, the state's share of federal highway funding is decreasing. Since 2005, the State has authorized about $200 million, above and beyond regular highway capital funding, for safety and operational improvements on Connecticut's Interstate Highways. However, additional work is required to address safety, maintenance and capacity issues. **Recognizing the difficult challenges facing Connecticut's interstate highways, the Transportation Strategy Board recommends that the State develop a master plan for the maintenance, capacity and future operations of the State's interstate highway system.**

Major Roadway Projects

The Department of Transportation has identified these as its highest priority highway projects. Each of which is programmed as part of the Department's Statewide Transportation Improvement Plan (STIP), which guides the use of federal transportation funds available to the state:

- Pearl Harbor Memorial Bridge;
- Moses Wheeler Bridge (Stratford);
- I84, Southington-Waterbury;
- Route 7/Route 15 Interchange (Norwalk);
- West River Bridge (New Haven/West Haven);
- Route 7 Bypass (Brookfield);
- I84-Farmington;
- Route 72 Relocation;
- I95 Operational Improvements;
- I95 Expansion East of Branford; and
- I84 Viaduct Rehabilitation (Hartford).

The New Haven Harbor Crossing Corridor Improvement Program includes improvement of 7.2 miles of I95, including the replacement of the Pearl Harbor Memorial (Q) Bridge, and is the largest transportation investment in Connecticut since the creation of the interstate system. The plan will be accomplished under five major contracts, three minor contracts and ten associated projects. The total project cost is $1.5 billion with construction scheduled for completion in 2014.


Pearl Harbor Memorial (Q-Bridge) Rendering

The replacement of the Moses Wheeler Bridge on I95 between Stratford and Milford is scheduled for advertising in July 2007. Construction is expected to take six years to complete. The total cost to replace the bridge is estimated at $200-300 million.

The reconstruction and widening of I84 between Southington and Waterbury is the final phase of the highway widening east of Waterbury, and includes interchange improvements to Exits 23, 24 and 25.

The Route 15/Route 7 Interchange (Norwalk) project involves completion of connections between the Merritt Parkway (Route 15) and US Route 7. The

project was originally scheduled to be bid early in 2007 and cost $100 and $150 million. This project is currently the subject of litigation challenging the design and scale of the interchange.

The West River Bridge project (New Haven/West Haven), will widen and replace the bridge over the West River, which is nearing the end of its serviceable life. The project also includes the reconfiguration of interchanges 44 and 45 on I95. The project is under design with construction scheduled for 2008; estimated total project cost is $85 million.

The Route 7 Bypass (Brookfield) involves the construction of a bypass around Brookfield center and a series of seven projects to reconstruct existing Route 7 north to New Milford. The total estimated project cost of $87 million, project initiation is scheduled for mid-2007. Completion of the project is anticipated in late 2009.

The I84-Farmington project, implements improvements recommended in the *Hartford West Major Investment Study (1999)*, specifically those in the vicinity of I84 and Route 9, and the Route 4 and US Route 6 interchanges. Estimated project cost of $54 million and project initiation is scheduled for 2009

The Route 72 relocation involves the relocation of 3.2 miles of Route 72 on a new location as a four-lane arterial highway from the terminus of the existing Route 72 in Plainville to the Pine Street/Todd Street intersection in Bristol. The estimated project cost is $50 million and project initiation is scheduled for 2007, with a construction schedule of three years.

I95 Operational Improvements projects, implements a series of operational and safety improvements on Interstate 95. The 2005 transportation initiative provided $187 million for these projects. **The Transportation Strategy Board recommends that the State expeditiously implement the safety and operational improvements authorized and funded by Public Act 05-4 and Identify and implement similar improvements on other state highways.**

The expansion of I95 east of Branford, implements recommendations of the *Interstate 95 Branford-Rhode Island Feasibility Study*, which was completed in August 2004. The study presented an assessment of the existing transportation and environmental conditions, an analysis of future transportation conditions (projected to 2025), recommended improvement concepts and an implementation plan of action for the I95 corridor improvements. The estimated project cost is $1.75 billion. The 2006 transportation initiative provided funding for the environmental assessment of the first phase of the project. **The Transportation Strategy Board recommends that the State continue to support and fund the capacity expansion of the I95 between Branford and North Stonington consistent with on-going environmental study of that project.**

The I84 Viaduct Rehabilitation project in Hartford Involves the repair and rehabilitation of an elevated portion of I84 referred to as the Aetna Viaduct. The project extends the life of the 3200 foot viaduct for 10-20 years and has an estimated cost of $100 million.

The Transportation Strategy Board has also considered a number of other strategic highway projects, which will be implemented beyond the three year life of the state's transportation improvement program. They include:

- Route 6. This project was intended to address safety, access and mobility issues on the principal state highway connecting Willimantic to Hartford. However, it has been delayed for a number of years as the result of disagreements between state and federal transportation and environmental officials over the layout of the road. During the delay the Department of Transportation has undertaken safety improvements along the existing highway. However, highway access to and from Willimantic remains problematic and presents both an economic development and a mobility challenge. **The Transportation Strategy Board recommends that the state support the funding and construction of the Route 6 Expressway from Bolton Notch to Windham and urge DOT, DEP and federal agencies to resolve outstanding issues**.
- Route 11. This project, which is among the region's top transportation priorities, involves construction of a limited access highway from the current terminus of Route 11 in Salem to Interstate 95. The Department of Transportation recently completed an updated environmental assessment of this project, which is currently in the review process. DOT's most recent estimate of the cost of this project is $850 million. **The Transportation Strategy Board recommends that the state complete Route 11, and the associated greenway, from Salem to I-95 consistent with the on-going environmental study of that project.**
- Interstate 84 west of Waterbury. This project involves the addition of an additional lane in each direction between Waterbury and the New York State line in Danbury. An environmental assessment of this project is currently underway. The 2006 transportation initiative provided funding for the preliminary design of the improvements. The Department of Transportation's most recent cost estimate is $ 1.0 billion. **The Transportation Strategy Board recommends that the state support and fund the widening of Interstate 84 west of Waterbury.**
- Interstate 84/Route 8 Interchange. This project involves the rehabilitation or replacement of the elevated interchange between Connecticut and Route 8 and Interstate 84 in Waterbury. The Department of Transportation estimates the construction of the project will not begin for about a decade. The cost estimate is about $2 billion. **The Transportation Strategy Board recommends that the State support and fund the feasibility and environmental studies for the reconstruction of the interchange of Routes 8 and I84 in Waterbury.**

Town Aid Roads

The Town Aid Road (TAR) Grant funding is provided to municipalities to assist in the construction, reconstruction, improvement or maintainance of their local roads, highways and bridges. This included snow plowing, the sanding of icy pavements, trimming and removal of trees, the installation, replacement and maintenance of traffic signs, signals and markings for traffic control and vehicles safety programs, and the operation of essential public transportation services and related facilities. While Town Aid Road funding has been increased in recent years, the permanent funding is still below historic levels.

The historical distribution of the TAR grants are outlined below in Figure 3[7].

Figure 3

Fiscal Year	Expenditures	%Expenditures Change
98	19,918,524	0.0
99	29,879,611	50.01
00	34,857,231	16.66
01	34,856,862	0.0
02	34,856,000	0.0
03	15,935,763	(54.28)
04	12,499,800	(21.56)
05	19,919,919	59.36
06	28,000,000[8]	40.56
07 (Revised Appropriation)	28,000,000	0.0

The Transportation Strategy Board recommends that the State significantly increase the town aid road grant.

Highway Safety

In 2003 there were over 80,000 accidents on Connecticut highways. Of these 273 were fatal, with 30,952 resulting in injuries. The mission of the Department of Transportation is to "provide a safe, efficient and cost-effective transportation system that meets the mobility needs of its users."

The Department of Transportation's Division of Highway Safety prepares an annual highway safety strategic plan as part of its highway safety program. The strategic planning document provides historic, trend and current accident data detailing highway safety in Connecticut. Problem areas are identified, which dictate highway safety goals, objectives and planned countermeasures.

[7] Source: Office of Fiscal Analysis, Connecticut General Assembly.
[8] TAR Grants were increased from $20 million to $28 million for FY06 and FY07 only. The $8 million increase is funded from the FY05 General Fund surplus for FY06 and FY07; the remaining $20 million is funded from the Transportation Fund.

The *2007 Highway Safety Plan* noted a 1.1% increase from 2003 to 2004 in fatal crashes in Connecticut; with the greatest number of fatal accidents occurring on state highways. In addition, between 2000 and 2004, the plan cited a slight increase in alcohol-related fatalities; a 2% decrease in speeding-related fatalities; a continued decline in work zone-related fatal and severe injury accidents; a 9% increase (82%) in seat-belt use since 1999; and a 26% decrease in motorcyclist fatalities.

Several reports, including a *2000 National Transportation Safety Board (NTSB)Report*[9] and the *2001 Connecticut Department of Transportation Report on Truck Stop and Rest Area Parking* have cited the importance of providing adequate rest stops to improve the overall safety on highways. Specifically, the NTSB report concluded that "the lack of available truck parking, or truck drivers not knowing where parking would be available, can negatively impact safety." According to the Connecticut Department of Transportation report, "(truck) drivers are using unauthorized locations on the side of highways and along entrance and exit ramps as ad hoc rest areas," which demonstrate a need for additional truck parking areas. The 2003 Transportation Strategy Board's report recommended to "increase available truck rest stop parking spaces to increase the safety of Connecticut's highway system." **The Transportation Strategy Board continues to support a recommendation to finalize and implement this plan, including the support systems practicable and necessary to comply with state anti-idling laws.**

In the summer of 2005 the Connecticut Department of Transportation, in cooperation with the Federal Highway Administration (FHWA), initiated a study of Connecticut's rest areas and service plazas. Alternative concepts offered by the study advisory committee are currently under review by the Department of Transportation whose analysis is expected to be presented in early 2007. The study evaluates the State's overall needs, requirements, and options for rest areas and service plazas and will also evaluate the needs of each individual existing facility. The study will result in a long-term plan to move Connecticut to the forefront of states providing highway rest facilities and traveler services and will also recommend specific facility improvements.

Highway Capacity

States, including Connecticut, employ a variety of strategies and methods to deal with the causes and effects of existing and predicted congestion, including a mix of physical improvements to highways, in the form of either capacity or operational improvements; transit services that match demand with markets; and transportation demand management (TDM) and transportation system management (TSM). Those strategies are discussed more fully later in this document.

[9] NTSB report, "Highway Special Investigation Report Truck Parking Areas" (Report NTSB/SIR-00/01).

Public Transportation

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PUBLIC TRANSPORTATION

Nowhere has progress since presentation of the Transportation Strategy Board's 2003 report and strategy been more evident than in the field of public transportation. In 2005, the State committed almost $1 billion to new rail cars and maintenance facilities for the New Haven line. The following year, for the first time in memory, a Governor proposed a transportation initiative devoted almost entirely to public transportation. The final legislation approved by the General Assembly maintained that public transportation focus.

Public transportation, both rail and bus, is a central focus of this transportation strategy. Among the challenges facing the state's public transportation system is implementation of the initiatives already approved; continuing to build on the progress made in 2005 and 2006; better integrating bus and rail services into a true statewide transportation system; and providing and funding an adequate level of bus and rail service.

Coordinated Service

Several of the current Transportation Strategy Board recommendations focus on coordinating and integrating a variety of public transportation services with the goal of providing a seamless statewide transportation system. Central to this approach is the recommendation to:

- **Identify a statewide Strategic Transportation Network linking rail and transit services and determine the basic level of service necessary to provide statewide mobility.**

Both the rail and bus transportation systems involve a variety of services, provided by multiple operators. Recognizing the advantage of coordinating and integrating those services, the **Transportation Strategy Board recommends that the State:**

- **Improve integration of the New Haven Line, the branch lines, Shore Line East and the New Haven to Springfield Line so that seamless service is provided regardless of the entity responsible for operating a particular line.**
- **Design and implement, as part of the Strategic Transportation Network, an integrated multimodal transit network that uses common brand identity and that takes into account all forms of bus service and provides links to the state's rail system.**

Much of this strategy deals with traditional public transportation systems. But, the Department of Transportation, the transit districts, and rail services are not the only entities providing publicly funded transportation services to Connecticut

residents. For example, the Department of Social Services and local aging and social service agencies provide transportation services to their clients. The Department of Transportation has recently undertaken an effort to better coordinate those services. **The Transportation Strategy Board recommends and encourages the Department of Transportation's efforts to ensure coordination of all state funded transportation services regardless of the program or agency responsible for administering and/or funding such services.**

In order to help make the state's public transportation system truly intermodal, **the Transportation Strategy Board recommends that the State support the development and implementation of a "smart card" based transit pass program that can be utilized across the entire public transportation network.**

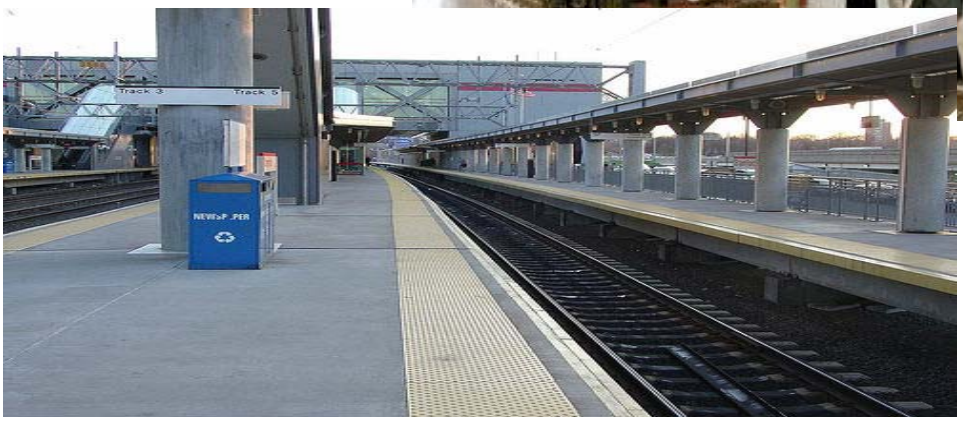
Employee Transit Incentives

As a major employer, especially in the Hartford area, the State of Connecticut is in a position to encourage its employees to utilize public transportation while at the same time serving as an example for other employers. That effort should begin, as several Transportation Investment Areas have suggested, with the transportation benefits the State provides to its own employees.

The current state employee transit benefits take the form of a fairly minimal three dollar per month reduction in the price of bus and rail passes. To put that figure in perspective, federal employees are provided with a transit benefit capped at $100 per month. **The Transportation Strategy Board believes that, over time, the existing employee transit benefit should be increased to a level that provides a significant incentive to transit use. In addition, the state should consider other such incentives. The State should also encourage municipal and private employers to provide transit benefits and incentives to their employees.**

Finally the location of state facilities and the availability or unavailability of transit options can also directly impact employee use of transit options. **The Transportation Strategy Board believes that the law should require that in locating state facilities, the State give priority to those locations on or near rail and bus lines. Likewise, the State should consider the availability of rail and bus service and facilities when making other state investment decisions.** For example, the availability of bus and/or rail service should be considered when evaluating economic development and housing projects.

Commuter Rail



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COMMUTER RAIL

Connecticut's rail passenger system consists of five elements:

- The New Haven Line main line between New Haven and Grand Central Terminal in New York City
- The New Haven Line branch lines which run between Stamford and New Canaan, South Norwalk and Danbury, and Bridgeport and Waterbury;
- Shore Line East, which provides service between New Haven and New London;
- The New Haven-Hartford-Springfield commuter rail service which the Governor recommended and the General Assembly approved in 2006 and which is targeted to begin service in 2010; and
- AMTRAK, whose Northeast Corridor service between Washington and Boston makes stops in Stamford, Bridgeport, New Haven, Old Saybrook and New London and which provides feeder service between Springfield and New Haven.

The New Haven Line service is operated by Metro North, a subsidiary of New York's Metropolitan Transportation Authority (MTA), under a contract with the Connecticut Department of Transportation and the MTA. AMTRAK operates its own service and operates Shore Line East Service under a contract with the Connecticut Department of Transportation. The operator for the New Haven-Hartford-Springfield rail service has not been selected. Public Act 06-136 requires that the operator of that service be selected through a competitive process.

New Haven Line

The New Haven Line main line service between New Haven and New York City is the oldest, the busiest and, by any measure, the most productive of the Connecticut's commuter rail lines. During the fiscal year ended June 30, 2006, just under 32 million passengers used the main line service, which serves 18 Connecticut stations between New Haven and Greenwich.

The New Haven Line branch line service includes lines running between Stamford and New Canaan; South Norwalk and Danbury and

Bridgeport and Waterbury. During the fiscal year ended June 30, 2005, the branch lines carried about 2.2 million passengers.

Branch Lines

The New Canaan branch runs between Stamford and New Canaan, a distance of about eight miles. It is by far the shortest of the branch lines and the only one which is electrified. In many ways it functions more like an extension of the main line than a true branch line.

For example, because the line is electrified, New Canaan line trains utilize the same electric rail cars which operate on the main line. Unlike the other branch lines, most New Canaan branch trains continue beyond Stamford to Grand Central Station without the need for passengers to change trains. Indeed, the Metro North timetable treats the New Canaan service as a part of the main line service, rather than as a branch line.

The New Canaan branch is the most productive of the branch lines, carrying about 1.4 million passengers in FY 2006. However, it has not experienced the same growth in ridership which the main line, the other branches and Shore Line East have experienced over the last few years.

The Danbury Branch operates between South Norwalk and Danbury, a distance of about 24 miles. There are seven station stops on the line, which carried about 700,000 passengers in FY 2006. The line was at one time electrified, but the electrification was eliminated in the 1950's. The possibility of electrification is being explored as part of the on-going branch line studies.

The longest (27 miles) and the least utilized of the branch line is the Waterbury branch, which operates between Bridgeport and Waterbury with station stops in Derby, Ansonia, Seymour, Naugatuck and Waterbury.

State Financial Support

The State of Connecticut's involvement with the New Haven Line dates back to the mid-1960's when Connecticut Governor John N. Dempsey and New York Governor Nelson Rockefeller agreed to provide public subsidies in order to ensure the continuation of commuter rail service between New Haven and New York. Initially the two states' participation took the form of subsidy payments to the private carriers operating the commuter service. Under the original

agreement each state paid 50% of the operating deficit for both the main line and the branch lines.

In 1970, the State of Connecticut began providing capital grants to support the improvement of the commuter rail service both directly and utilizing federal funds. At about the same time the state acquired ownership of the New Haven line trackage within the State of Connecticut.

In 1983, as the result of federal legislation, the two states were forced to accept responsibility for the actual operation—as opposed to the financial subsidization—of the New Haven Line. They agreed that Metro-North, a newly created subsidiary of the Metropolitan Transportation Authority, would assume operational responsibility for the line[10].

While the two states agreed about who would operate the service, they were unable to agree how much each state would pay and that issue eventually went to arbitration. That arbitration, and another a few years later, resulted in a substantial change in the original 50/50 division of expenses.

Under the current formula, the State of Connecticut pays 65% of the operating deficit and moveable capital expenses of the main line service and 100% of the operating debt and moveable capital expenses for the branch line[11]. It also continues to pay 100% of the cost of fixed capital equipment located in Connecticut[12].

Shore Line East

The creation of Shore Line East was approved by the General Assembly in the late 1980's and the service began operations in 1990. It offers weekday service (21 trains / 23 on Friday) between New Haven and Old Saybrook. The service is supposed to operate from New Haven to New London. However, restrictions on bridge use force all but two trains a day to stop in Old Saybrook.

Over the last several years, Shore Line East has seen a dramatic growth in ridership, which has risen from 299,000 in FY 2000 to about 433,000 in FY 2006.

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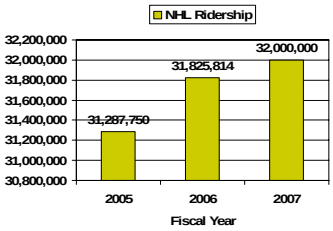
[10] That decision proved to be extremely controversial. So controversial that a General Assembly controlled by the then Governor's own party passed legislation designed to block the selection. However, the legislature failed to override the Governor's veto of the legislation.

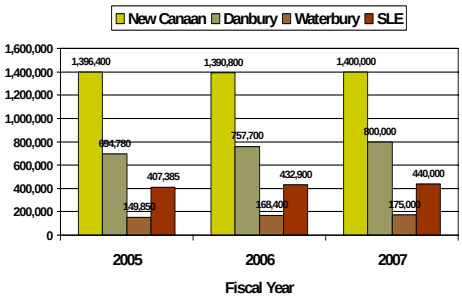
[11] The State of Connecticut's payment is reduced by a factor intended to reflect the fact that Connecticut has been more willing than New York to hold down deficits (and subsidy payments) by raising fares.

[12] New York pays 100% of the cost of fixed capital costs (other than Grand Central Station) which are located in that state.

Ridership



As these charts indicate, the New Haven Line main line, two of the three branch lines and Shore Line East have all experienced and are projected to continue to see, significant growth in ridership. The exception to this trend was the New Canaan branch, which saw a decrease in ridership in FY 2006, but is projected to bounce back in FY2007.

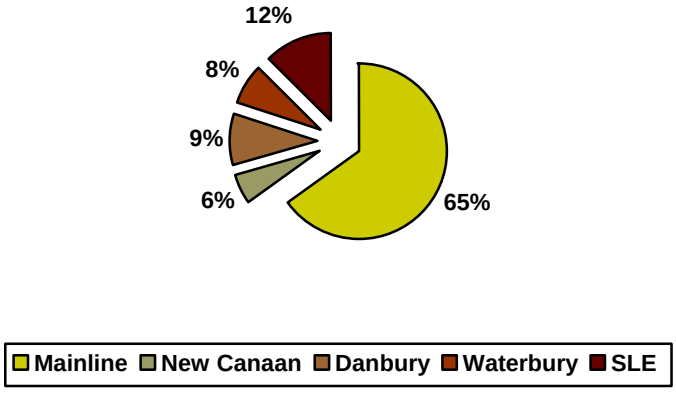


The main line, the branch lines and Shore Line East are all projected to increase ridership in FY 2007, although not at the same rate of growth as in FY 2006.

Subsidies

In FY 2006, the State paid about $81 million to offset operating deficits on the New Haven Line, the branch lines and Shore Line East. Figure 4 shows the distribution of those subsidy dollars between the various branch lines.

Figure 4[13]
Distribution of State Subsidies



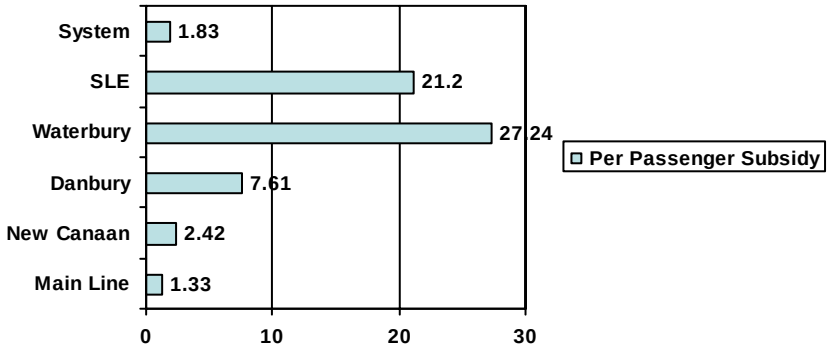
One measure of the operating efficiency of a rail service is the average subsidy per passenger. For the overall state rail system the FY 2006 subsidy was $1.83 per passenger, which is among the lowest per passenger subsidies in the nation.

Typically the lowest subsidies are found on heavily traveled main lines and short spur lines, such as the New Canaan branch. Subsidies on longer and less

[13] Data Source: Department of Transportation

heavily traveled branch lines tend to be higher. That has been the experience in Connecticut, as Figure 5 demonstrates.

Figure 5[14]
Per Passenger Subsidy



New Haven-Hartford-Springfield Commuter Rail Service

In 2006, the Governor recommended, and the General Assembly authorized, the initiation of commuter rail service between New Haven, Hartford and Springfield, which will be supplemented by the existing AMTRAK rail service[15] on that line.

The new commuter rail service will serve eight existing and thee new stations between New Haven and Springfield and will be linked to the New Britain – Hartford busway. The existing stations are in New Haven, Wallingford, Meriden, Berlin, Hartford, Windsor, Windsor Locks and Springfield. The new stations will be in North Haven, Newington, and Enfield. As part of the new service new rail stations will be constructed in most locations. Transit oriented development will be a key aspect of the planning for each station.

The New Haven-Hartford-Springfield commuter rail service will operate 16 trains a day (eight in each direction). Ridership is projected at about 630,000 passengers per year[16].

[14] Data Source: Department of Transportation
[15] The AMTRAK service, which is designed as a feeder for the railroad's Northeast Corridor service, does not operate at times or frequencies that meet the needs of most commuters.
[16] Ridership and subsidy estimates would put the New Haven–Springfield line about the middle of the range of the branch lines and Shore Line East.

Implementation of the New Haven-Hartford-Springfield rail service by 2010 has been, and continues to be, among the Transportation Strategy Board's highest priorities. Recognizing the long lead time associated with the purchase of rail rolling stock, the Transportation Strategy Board is also recommending the purchase of new rolling stock for this line in about 2012.

Issues

Rolling Stock

When the Transportation Strategy Board's 2003 strategy was submitted to the General Assembly one of most significant transportation challenges facing the state was how to fund the replacement of the aging M2 electric rail cars used on the New Haven Line. Today, that issue has been addressed.

In 2005, Governor Rell recommended, and the General Assembly approved, funding for 342 new M8 rail cars for the New Haven Line. Three hundred of those cars have been ordered[17] and will begin arriving in 2009. The cars are scheduled to be delivered at the rate of 10 cars per month, or 120 cars per year, with the last car scheduled for delivery in 2013.

In 2006, $25 million in bond funding was provided for the rehabilitation of 40 locomotive rail coaches, which will be used on the New Haven line, the branch lines and the New Haven to Springfield commuter rail service.

While the state has made significant progress in revitalizing its rail rolling stock, it is important to continue to address those needs in a timely manner**. Recognizing the long lead time required for most rolling stock purchases, the Transportation Strategy Board has made a number of recommendations for future purchases of additional rail cars. They include:**

- **Twenty-four M8 electric rail cars for use on Shore Line East;**
- **The final 14 M8 electric rail cars available under the State's current contract, for use on the New Haven line;**
- **New rolling stock for use on the New Haven-Hartford-Springfield commuter rail service.**

[17] The remaining 42 cars are expected to be ordered in 2010, when the Metropolitan Transportation Authority, which pays 35% of the cost of the cars, receives its next capital allocation.

The Transportation Strategy Board also recommends that funding be set aside early in the next decade for design of the next-generation electric rail car for use on the New Haven Line.

Service Coordination

As previously noted, the New Haven Line service, is operated by the Metropolitan Transportation Authority's Metro-North subsidiary, while AMTRAK operates the Shore Line East service. An operator has not yet been selected for the New Haven to Springfield rail service, however, that operator is required to be selected through a competitive process.

The Transportation Strategy Board believes that it is essential that service between the lines be integrated regardless of which operator is responsible for the operation of a particular line. The Transportation Strategy Board also supports and recommends the adoption of a state rail operations plan which will address this and other issues.

Rail Parking

The State of Connecticut owns virtually all rail stations and the associate parking facilities between New Haven and Greenwich. However, most station facilities and parking are operated by local communities under long-term leases with the Department of Transportation. Under those arrangements each community generally establishes its own rules and parking rates and is responsible for collecting the fees and maintaining local parking and Station facilities. This arrangement has led to a wide variety of local rules, charges and station and parking conditions.

The Board reviewed the rail governance study commissioned by the Department of Transportation and heard testimony from a variety of individuals regarding parking needs, especially along the New Haven Line. **The Transportation Strategy Board recommends that the State develop, in consultation with local officials and commuters a uniform policy concerning rail station governance and implement it as existing leases come up for renewal. The policy should provide for centralized oversight of rail stations and parking, uniform policies, permits and fees; consistency with low-impact environmental standards; design of attractive enclosed structures that are in harmony with abutting structures and should ensure adequate funding for station and parking area improvements.**

In order to further address parking needs on the New Haven Line the Transportation Strategy Board recommends that the State implement planned rail station parking initiatives in Bridgeport, Stratford and New Haven; expedite replacement of the Stamford rail station parking garage; and maximize the amount of parking associated with new rail stations.

Shore Line East

Shoreline East service primarily operates westbound (toward New Haven) in the morning and eastbound (toward New London) in the evening. There is no weekend service. In 2006, the General Assembly directed the Department of Transportation to report on obstacles to improve service on Shoreline East. That report is due to be submitted at the start of the 2007 legislative session**. The Transportation Strategy Board believes that reliable reverse commute and weekend service is important to long-term development of Shoreline East and recommends that such service be instituted.**

As previously noted, Shore Line East service theoretically operates between New Haven and New London. However, because of limitations on the use of certain rail bridges all but two Shore Line East trains stop at Old Saybrook. The restriction on bridge use limits of both the current operations are Shore Line East and the potential for future operations between Connecticut and Rhode Island. Similar issues have recently arisen on Metro North. **The Department of Transportation should work with the Department of Environmental Protection, the United States Coast Guard and other responsible entities to address bridge issues limiting or potentially limiting rail service especially on Shore Line East.**

Penn Station Service

Currently all Metro North rail service operates into Grand Central Station with no direct service to Penn Station. However, the MTA is studying the potential for such service. Metro North service to Penn Station would potentially benefit Connecticut in two ways. First, it would provide commuters with direct service to the west side of Manhattan. Second, it would also create the potential for commuters from Long Island and Queens to access southwestern Connecticut using Metro-North rather than passenger automobiles. **The Transportation Strategy Board recommends that the State support and encourage cost-effective proposals for Metro-North access to Penn Station and intermediate stations.**

Branch Lines

Several years ago the State undertook studies of potential improvements on the New Canaan, Danbury and Waterbury branches of the New Haven Line. While the costs and of those studies have escalated greatly, the **Transportation Strategy Board believes that it is important to complete the studies and to begin to implement their recommendations.** Among the issues being addressed as part of the studies are the extension of Danbury branch service to New Milford; electrification of the Danbury branch; and the evaluation of the Branch Line “collector" stations recommended by the Board in 2003.

Another important branch line issue is the installation of a modern centralized train control (CTC) on the Danbury branch, which will improve operations and safety of the line. The development and installation of this critical system has been delayed several times by funding and design issues. **The Transportation Strategy Board recommends that it be made a high priority.**

Infrastructure

There are a number of infrastructure projects included in the Department of Transportation's regular rail capital program which the Transportation Strategy Board believes are essential to the future of the New Haven Line. These include the rehabilitation of rail bridges in Norwalk and Westport; completion of other scheduled bridge replacements and rehabilitations; replacement of the catenary system on the Metro-North Line; replacement and improvement of the electric substations; replacement and enhancement of the Main line signal system; and lengthening the platforms at all stations so they can accommodate at least 10 coaches. **The Transportation Strategy Board supports funding for those projects.**

In addition, there are a number of projects to enhance rail stations in the 2006 transportation initiative. These include the development of a new Metro North rail station and transit oriented development in the City of West Haven, evaluation and planning for a new Metro North rail station in the Town of Orange, development of stations and station improvements on the Shore Line East, and the encouraging of transit oriented development at and near rail stations. **The Transportation Strategy Board supports these projects.**

Metro North Operating Agreement

In 2003, the Board recommended, and the legislature endorsed, the state seeking voting representation for Connecticut on the Metropolitan Transportation Authority's board of directors and on the board of directors of Metro-North.

While the State has not obtained voting representation on the MTA board, the Department of Transportation has been taking a much more active role on a nonvoting basis. **The Transportation Strategy Board reiterates its earlier recommendation concerning voting representation. Until such time as voting representation is obtained the Connecticut Department of Transportation continue to participate in both boards on a nonvoting basis.**

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Bus Transit


STAMFORD GATEWAY
CT TRANSIT


Northeast Transit


CT TRANSIT
366

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BUS TRANSIT

Overview

Connecticut's bus transit system consists of five types of service delivered by a variety of providers. They are:

- Fixed route service, which provides traditional urban bus service, operating on a fixed route with regularly scheduled service;
- Express service, which makes one or few stops before proceeding non-stop to an end destination, (in Connecticut this service is almost exclusive to the Greater Hartford area);
- Commuter connection, connecting rail services to residential and employment centers;
- Demand responsive and Dial-a-Ride services, providing as-needed service within a system's service area;
- Flex route, which provides similar service as demand responsive service, however boardings are at pre-arranged times within a system's service area.

Connecticut Transit (CTTransit)

CTTransit, consisting of eight divisions, is the largest transit operation in the State and is owned by the State of Connecticut. Three divisions, in Stamford, New Haven and Hartford, are operated and managed by First Transit Inc. under a five year contract with the State (last awarded in September 2006). The remaining five divisions of CTTransit are operated under contract with private bus operators in Waterbury, New Britain, Bristol, Meriden and Wallingford.

CTTransit provides fixed route and express services. ADA paratransit services are contracted out by CTTransit to various organizations located within the respective service areas. In 2006 CTTransit services accounted for 79% (26,321,775) of the total bus transit ridership in the State.

Transit Districts

Connecticut's urban transit districts provide various types of services within the State's urban population and employment centers. In 2006 urban transit districts' ridership represented 20% (6,471,026) of the State's total bus transit ridership.

- The Greater Bridgeport Transit Authority serves Bridgeport, Fairfield, Stratford and Trumbull as well as providing limited service to Monroe, Shelton and Derby.
- The Housatonic Area Region (HART) serves the eight towns of the Greater Danbury area and operates the Katonah shuttle, which links commuters in Ridgefield with the Metro North's Harlem Line service to New York City.
- The Middletown Transit District provides bus transit service connecting Middletown and Meriden, in addition to servicing the Route 372 corridor in Cromwell.
- The Milford Transit District serves the Milford area and provides Jobs Access service to Norwalk.
- The Norwalk Transit District provides fixed route service in Norwalk and Westport; inter-town service between Norwalk and Milford and between Norwalk and Danbury; and ADA paratransit service in Westport, Norwalk, Darien, Stamford and Greenwich.
- The Southeast Area Transit District (SEAT) serves nine towns in Southeastern Connecticut.
- The Valley Transit District primarily provides dial-a-ride and ADA services in the four towns of the Naugatuck River Valley.

Local transit districts also provide service in five rural service areas:

- The Northwestern Transit District serves sixteen towns with deviated fixed (flexible) route and dial-a-ride services.
- The Northeastern Transit District operates flex route service in the seven towns around Putnam.
- The Windham Transit District provides rural fixed route, demand response and ADA service to ten towns in the Willimantic area.
- The Connecticut River Estuary area is serviced by the Estuary Transit District, which provides demand response services as well the Shoreline Shuttle service, which is a fixed route service operating between Old Saybrook and Madison.
- The Middletown Transit District provides rural fixed route service linking the rural suburbs with Middletown.

In 2006, rural transit districts' services represented 1% (335,000) of the total state ridership on bus transit.

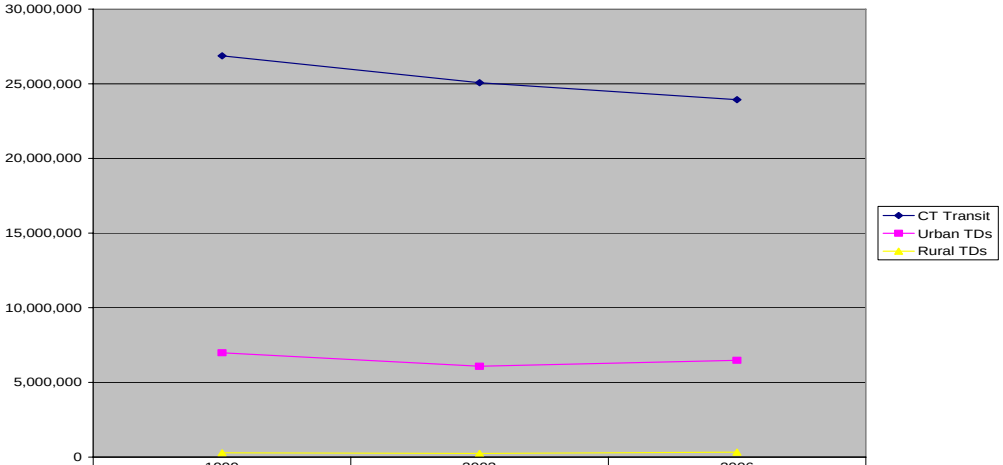
In addition there are transit districts, primarily served by CTTransit, which provide specialized transit services such as ADA and Dial-A-Ride. These transit districts

include the Greater New Haven Transit District, and the Greater Hartford Transit District.

Ridership

Bus transit ridership among urban and rural routes has experienced a increase over the past year; while ridership on the CTTransit services has leveled. Figure 6 displays ridership among these systems since 1999.

Figure 6[18]



	1999	2003	2006
CT Transit	26,875,449	25,064,730	23,934,138
Urban TDs	6,987,692	6,078,668	6,477,133
Rural TDs	293,148	240,371	331,919

State Financial Assistance

The State of Connecticut provides both operating subsidies and capital funding to CTTransit and the urban and rural transit districts. The annual FY 2006 operating budget for bus transit was $100 million, which represents the State's share of the $140 million annual operating cost of those services. The remaining operational cost is paid by fares, as well as local funding in areas served by transit districts[19]. The fare box recovery rate and degree of state subsidy varies from service to service and is dependent on a variety of factors, including population density and the type of service.

The State of Connecticut also provides about $8.5 million in annual funding for capital needs at CTTransit and the transit districts. A majority of transit capital projects have a funding ratio of 80% federal, matched with 20% state or local matching funding. It is noteworthy that these figures do not include the capital

[18] Data source: Connecticut Department of Transportation.
[19] The requirement for local contributions in areas serviced by transit districts, but not those serviced by the state owned CTTransit services, has been, and continues to be, a subject of controversy.

funding included in the 2005 and 2006 transportation initiatives, which provided 100% state funding for most capital projects funded as part of the initiatives.

The Department of Transportation has taken steps to address several issues related to the long-term capital needs of the bus transit system. The Department's capital program includes plans to update and upgrade buses, the fare box and revenue collection systems; radio system improvements; implementation of intelligent transportation system technology to provide automated vehicle location, global positioning systems and geographic information systems; and fleet replacement.

Testimony provided to the Transportation Strategy Board at public hearings and as part of a panel of transit providers noted there are a series of funding policies which the providers believe "no longer meet the needs of our public transit providers," and are "a result of chronically insufficient investment in public buses and related services." Factors such as the 67% rule (which limits the state's funding contribution to bus systems other than CTTransit); silo funding and overcrowded routes contribute to these issues.

The transit districts also noted problems they have experienced accessing available Federal funds due to a lack of matching funding. An example, brought to the Transportation Strategy Board's attention by the Greater Bridgeport Transit Authority, was their inability to access $375,000 in Federal funding for a lack of a $75,000 match. This issue appears to result from the fact that some smaller projects, with a useful life of less than twelve years are, properly, matched using operating, rather than capital (bond) funds. **The Transportation Strategy Board recommends that the State ensure that sufficient capital and/or operating funds are available to match the available Federal funds.**

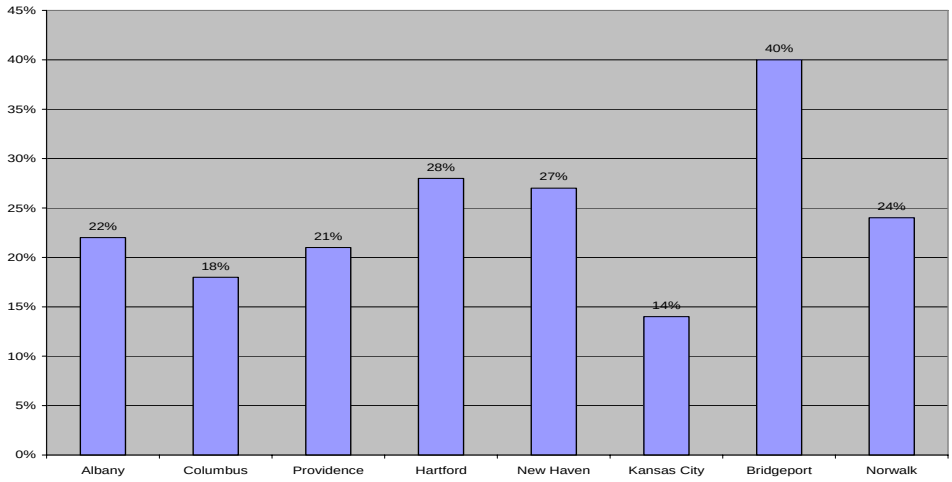
Transit districts have also expressed concern about the lack of flexibility in most efficiently utilizing the available state funds. The Department of Transportation has thirteen separate program based funding silos for transit districts. Funds can generally not be moved from one silo to another. As a result of this policy, a surplus from program or funding source generally cannot be applied against the deficit for another program or service. Funding silos are generally the result of program specific budgets, rules and/or funding sources. Several transit districts argued that, subject to program accountability, they should have the ability to move funding to address needs. **The Transportation Strategy Board recommends that the State provide transit districts funding flexibility consistent with program accountability.**

The Department of Transportation has stated that it is attempting to address the silo funding issue as former demonstration programs (such as Jobs Access) are integrated into their regular operating budget.

Financial Performance

One measure of the operating efficiency of bus transit services is the percentage of operating costs paid for by fares, known as the fare box ratio. Generally speaking, the fare box ratios for CTTransit and the local transit providers compare favorably to national peers, as figure 7 indicates.

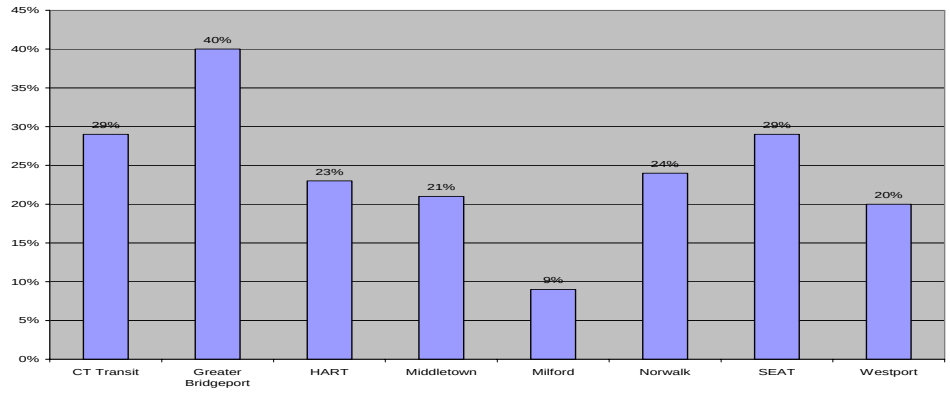
Figure 7[20]



The performance of Connecticut's bus transit service doesn't go unnoticed; in fact the State received bonus federal funds ($1.0 million) in SAFETEA-LU because of its "transit intensive urbanized areas."

Within the State, fare box ratios vary widely depending upon the area and the type of service, as demonstrated by a comparison of the State's urban fixed route services in Figure 8.

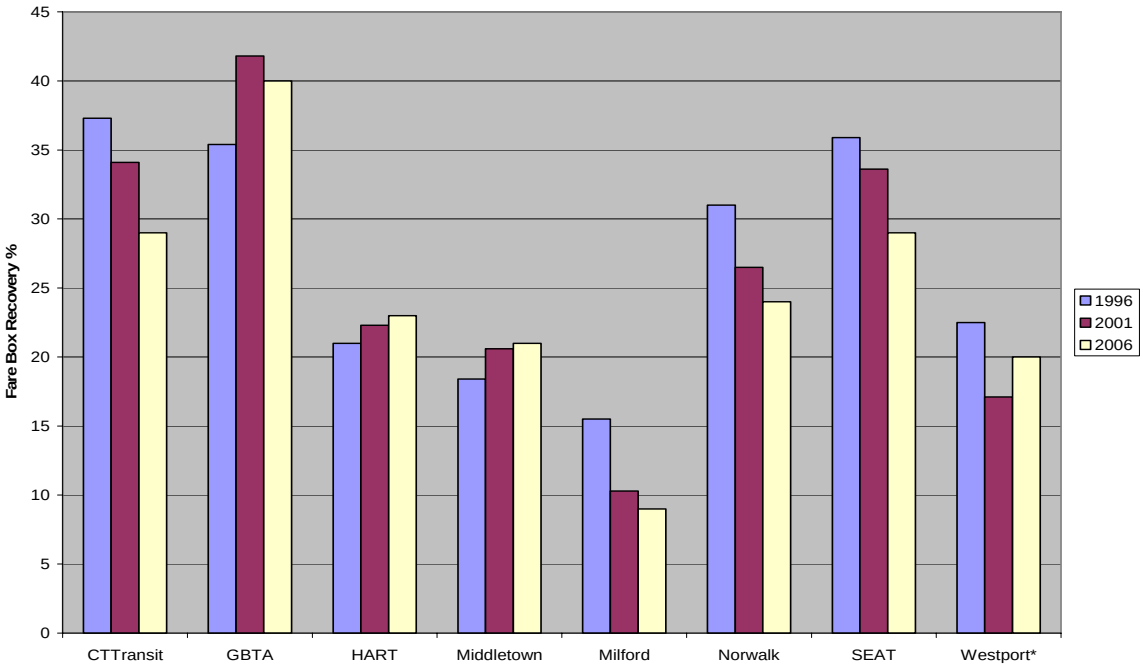
Figure 8[21]



[20] Data Sources: Federal Transit Administration & Connecticut Department of Transportation.
[21] Data Source: Connecticut Department of Transportation.

Figure 9 shows the long and short term trends in CTTransit and transit district fare box ratios (urban fixed route service).

Figure 9[22]



Bus Rapid Transit (BRT)

The Federal Transit Administration defines bus rapid transit as "a flexible, high performance rapid transit mode that combines a variety of physical, operating and system elements into a permanently integrated system with quality image and unique identity." This definition highlights the flexibility and variety of applications BRT systems can accommodate and address.

The Department of Transportation has a number of Bus Rapid Transit projects in various stages of development, the most advanced of which is the busway running between New Britain and Hartford.

The New Britain-Hartford Busway is one of ten demonstration projects in the country approved by the Federal Transit Administration in 1999. The project consists of a two-way, 9-mile exclusive busway with 12 on-line stations linking downtown New Britain and Hartford's Union Station. One station will also link the

[22] Data source: Connecticut Department of Transportation; Westport is shown as a portion of Norwalk Transit District for 1996.

busway to the New Haven-Hartford-Springfield commuter rail service. The 2006 transportation initiative provides $50 million towards the State's portion of the capital funding required to complete this busway.

This busway will be built on active and inactive rail rights-of-way and offer four types of service: express, shuttle, neighborhood collectors and feeder bus. The primary busway service will operate 18 hours each day using a mix of standard buses and 40-foot articulated buses. In addition, the project includes a station area planning component with a goal to encourage transit oriented development in order to enhance the State's transportation investment with enhanced community livability.

A draft environmental impact statement was issued in April 2001 on this busway project. The environmental impact process was completed with a record of decision in March 2002. Preliminary engineering began in September 2002, and preliminary design began in 2004. The Federal Transit Administration recently authorized final design activities. Construction is estimated to start in 2008, and operations are expected to begin a couple of years afterwards.

The total project costs for this busway are estimated at $458 million, which includes the busway design and construction, purchase of ten 40-foot articulated buses and ten 30-foot buses, as well as the modification of an existing maintenance facility to accommodate servicing of these buses. The capital cost of the busway has almost tripled since it was originally proposed. As with a number of other transportation projects, the escalating capital cost is a serious concern.

The operating budget for the busway service is estimated at $9.6 million annually, with a 30% fare box return; this results in a needed annual subsidy of $7.0 million.[23] Ridership is forecasted at 16,400 daily riders upon commencement of the service.

Other BRT proposals include the Hartford East Busway, which provide service from Hartford to East Hartford, Manchester and Vernon; and the Griffin Line Busway, from downtown Hartford to Bradley International Airport.

Other Issues

Coordination of Services

Bus transit services are funded by the State of Connecticut and delivered by a wide variety of providers, including CTTransit, local transit districts and private providers. The Transportation Strategy Board believes it is important to coordinate these

[23] Operating cost estimates are in 2010 dollars

largely local transit services in a way that provides an effective statewide transit service. **The Transportation Strategy Board recommends that the State "design and implement, as part of the strategic transportation network, an integrated multimodal transit network that uses a common brand identity and that takes into account all forms of bus service and provides links to the states rail system".**

Funding

As previously discussed, officials of several local transit districts expressed concerns about the level of operating capital to support local bus transit services. In particular, users and providers expressed concern about the level of local bus service which can be provided based on current funding levels. **The Transportation Strategy Board recommends that the Governor and the General Assembly review transit district funding formulas and requirements in order to ensure adequate funding for bus transit services and parity between transit districts and state owned or operated transit services, including CTTransit.**

Jobs Access and Reverse Commute

The Jobs Access and Reverse Commute program originally began as a result of the welfare reform legislation in the mid-1990s and was later enhanced using state and federal funds. It has been a transit success story, extending bus service and providing access to jobs in areas not previously served. **The Transportation Strategy Board recommends that the State continue funding for the Jobs Access and Reverse Commute program, while making maximum use of federal funds to support needed services. The state should also continue to identify and implement additional service opportunities as appropriate.**

When the original Transportation Strategy Board legislation was passed in 2001 funding was provided for number of rail and bus pilot services. The bus services included:

- The Jobs Access and Reverse Commute program;
- Funding for expanded bus services connecting with rail services in the Coastal Corridor. These include the Stratford Shuttle, enhanced Westport Road Shuttle, Wheeler Shuttle (Milford), High Ridge Road Commuter Connection (Stamford), Route 7 Link (Norwalk-Danbury), enhanced Coastal Link, Commuter Connection Central and East (Stamford);
- Purchase of ten new buses to expand Fairfield County inter-regional service;
- Development of a new commuter connection for western Connecticut commuters to Metro-North's Harlem Line, known as the Ridgefield-Katonah Shuttle;

- o Enhancements to Southeast Area Transit; and
- o Expanding express bus service in the Hartford area.

Funding for those programs has been continued since the original appropriation on a year by year basis. **The Transportation Strategy Board has evaluated the services on several occasions and recommends that the Governor and the General Assembly make those services permanent and include them in the State's regular bus and rail operations budgets.**

Links to Commuter Rail Service

Among the transportation needs identified by the I-395 Transportation Investment Area was the need to provide a way for commuters in northeastern Connecticut to connect with MBTA commuter rail services to Boston. **The Transportation Strategy Board recommends that the State evaluate the possibility of providing bus links to the MBTA similar to those provided between the Danbury area and Metro-North's Harlem line in New York State.**

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Bike & Pedestrian

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BICYCLE AND PEDESTRIAN

The 2006 transportation strategy includes a significantly increased emphasis on bicycle and pedestrian travel. Effective bicycle and pedestrian networks result in a reduction in vehicle trips. The reduction in vehicle trips then results in a reduction in emissions, need for roadway infrastructure and parking facilities.

There are three major roles the bicycle and pedestrian modes can fill:[24]

- As a primary mode, directly accessing a job or other site.
- As a feeder mode, accessing transit services that will complete the trip.
- For circulation through an activity center.

Important factors that influence the choice of bicycle or pedestrian commuting include:

- Trip Distance
- Perceived Traffic Safety
- Travel Cost – surveys suggest that financial incentives could make a difference in the choice of this mode.[25]
- Physical environment, including terrain, climate, circulation within activity centers and availability of alternative modes.
- Demographics – bicycle commuting generally declines rapidly in the segment of the population over age 45.

Bicycle use in Connecticut as a mode for commuting remained fairly constant between 1990 and 2000, at approximately 0.2 percent of all commuters. Walking to work declined as an option in the State between those same years, from 3.6 percent to 2.7 percent. Compared to national averages, Connecticut has a lower percentage of bike commuters (0.2% vs. 0.4% nationally), and roughly the same percentage of pedestrian commuters (2.7% vs. 3% nationally).

In 1999, the Department of Transportation developed a *Connecticut Statewide Bicycle and Pedestrian Transportation Plan,* the focus of which is recreational cycling and walking. The plan discusses current policies and regulations relating to bicycle and pedestrian facilities, presents planning and design guidelines, goals, funding strategies and completed and planned projects. It also includes

[24] Goldsmith, S. 1993. *Case Study No. 1: Reasons Why Bicycling and Walking Are and Are Not Being Used More Extensively as Travel Modes,* Report FHWA-PD-92-041, Federal Highway Administration, Washington D.C.
[25] Herman, M. 1993. Bicycle Blueprint: *A Plan to Bring Bicycling Into the Mainstream in New York City,* New York.

the bicycle and pedestrian plans of all the Regional and Metropolitan Planning Agencies in the State.

Recommendations presented in the plan include:

- Review of the Connecticut Bicycle Map and Long Range Bike Map when evaluating the suitability of providing sidewalks, shoulder widening, etc., and multi-use trails within projects.
- Inclusion of bicycle and pedestrian facility planning in the highway planning and design process.
- Provision for bicycle/pedestrian access in all bridge design and reconstruction processes.

The Department of Transportation has worked to provide bike racks on buses; specifically the full equipping of CTTransit buses in the Stamford and New Haven areas has been accomplished. The equipping of CTTransit buses in the Hartford area is scheduled as part of the upcoming fleet replacement. In addition efforts to provided bike racks at train stations are being addressed on a continual basis.

The current State Plan of Conservation and Development recommends incorporation of Greenways into State Agency and municipal development plans, acknowledging the importance of Greenways as an alternative mode of transportation.

In recognition of the role that bicycle and pedestrian strategies can play in accomplishing the State's transportation strategy, the **Transportation Strategy Board recommends:**

- **Provide bike space on passenger trains at all times of the day.**
- **Identify and support bike routes to transportation centers.**
- **Identify and remedy existing bicycle storage and parking deficiencies, especially in urban centers and transportation centers.**
- **Adopt a policy of allowing bicycles to be carried on state funded bus routes. As new buses are ordered equip them to permit the carriage of bicycles.**
- **Encourage municipal and regional officials to work closely with DOT to include expanded bicycle and pedestrian facilities as a part of all roadway projects.**
- **Support the development and implementation of the Federal Safe Routes to School program.**

Rail Freight

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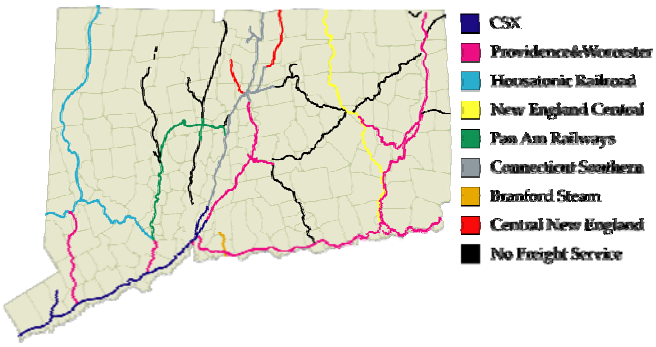
RAIL FREIGHT

Over the five years since the establishment of the Transportation Strategy Board, numerous speakers and advocates have argued for expanding the use of rail freight as a means of diverting traffic from the highways and thereby reducing congestion. The Board has considered those arguments as well as the concerns of the Department of Transportation and others about the possible impact of increased rail freight on Connecticut's growing commuter rail system. In addition, several regional initiatives to enhance the use and potential of rail freight have been undertaken in recent years. These include the Cross Harbor Freight Movement Project by the NYC Economic Development Corporation and the Northeast Rail Operations Study by the I95 Corridor Coalition.

Connecticut's Freight Rail System



The Transportation Strategy Board believes that there are a series of important questions and issues which need to be resolved in order for the state to properly assess the potential impact of increased rail freight service and whether to pursue that service. They include:

- Whether a commercial market exists and will support enhanced rail freight service;
- How increased rail freight service would impact highway congestion, particularly on Connecticut's interstate highways;
- How enhanced rail freight service would impact Connecticut's existing and planned commuter rails lines, including scheduling, track availability, safety and physical infrastructure; and
- the obstacles to enhanced rail freight service and how best to address them.

In order to address those issues, and provide a sound basis for decision making, **the Transportation Strategy Board recommends that the State develop a comprehensive analysis of the potential for enhanced rail freight service to and through Connecticut, including, but not limited to: (1) the market for enhanced rail freight services; (2) the impact of enhanced rail freight service on traffic and congestion; (3) obstacles to enhanced rail freight service and ways to address them; and (4) the impact of enhanced rail freight service on commuter rail service, including scheduling and track availability, safety and physical infrastructure.**

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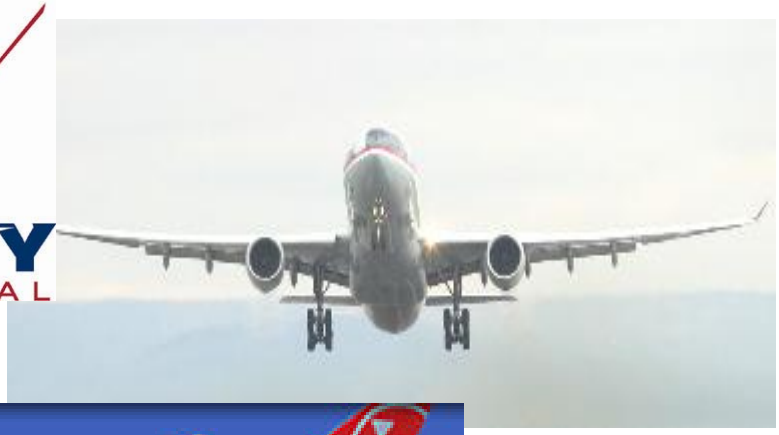
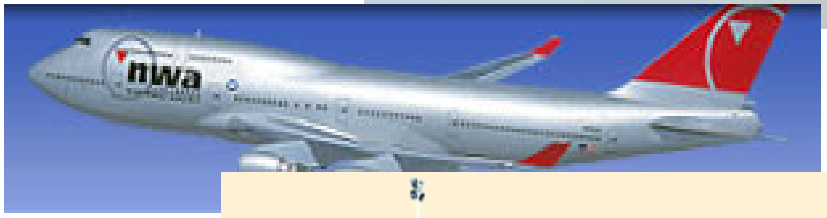
Aviation





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AVIATION

Connecticut's statewide aviation system consists of over 150 facilities of various types, including:

- Six State Airports;
- Four Municipal Airports;
- 13 Private Airports which are open to the public; and
- 130 Private Airports and Landing Areas.

The State owned airports are:

- Bradley International Airport in Windsor Locks, which is the largest airport in the state and the only state owned airport with scheduled commercial air service;
- Brainard Airport in Hartford, a general aviation airport and a reliever airport for Bradley;
- Groton-New London Airport in Groton, a general aviation airport which had scheduled commercial air service until 2004;
- Oxford, a general aviation airport which serves the corporate aviation market in Western Connecticut;
- Windham Airport, a general aviation airport serving the local aviation community; and
- Danielson Airport, a general aviation airport serving the local aviation community.

The municipal airports are:

- Tweed-New Haven Airport is owned by the City of New Haven and located in New Haven and East Haven. It is the only Connecticut airport other than Bradley with scheduled commercial air service;
- Sikorsky Memorial Airport is owned by the City of Bridgeport and located entirely in the Town of Stratford. It is a general aviation airport which had scheduled commercial air service until 1999;
- Danbury Airport, owned by the City of Danbury, is a general aviation airport which serves as the base for a substantial amount of pilot training; and
- Meriden Markham is a general aviation airport owned by the City of Meriden and located in Meriden and Wallingford.

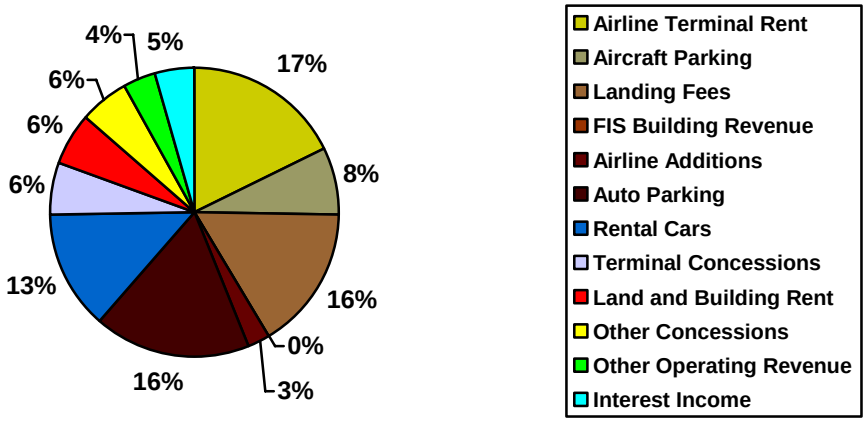
Connecticut residents are also served by a number of commercial airports outside the state, including Logan Airport in Boston, T.F. Green Airport in Providence, Kennedy, LaGuardia and Westchester Airports in New York and Newark Airport in New Jersey.

Airport Funding

Funding for publicly owned airports depends on who owns the airport and the services which it provides.

Bradley International Airport is primarily funded through airport fees, including landing and gate fees and rental charges paid by the airlines, and concession fees. Those fees and rentals are deposited in an enterprise fund which supports the airport's operations. The airport's annual operating and capital budgets are approved by the Bradley Board of Directors and the Commissioner of Transportation and the Secretary of the Office of Policy and Management, but are not part of the state budget process and are not subject to legislative approval.

Figure 10
Bradley Revenue Sources



Because the airlines fund a large part of the airport's operations the current master agreement between Bradley and the major carriers which use the airport gives the airlines a role in the approval of the airport's operating budget. That provision is fairly typical of agreements between airlines and other airports that were negotiated at the same time as the Bradley agreement. However, it has proven problematic at times and has led to disagreements over issues such as how much, and what type of, marketing is required. Bradley management has indicated that it will attempt to follow the lead of several other airports and eliminate that clause when the agreement comes up for renegotiation in 2011.

Seventy-five per cent of the cost of most Bradley capital projects is paid for by the federal government with the balance coming from a combination of revenue

bonds and “Passenger Facility Charges”, which are ticket surcharges paid by passengers using the airport.

Other State Airport’s operating costs are paid from the Department of Transportation’s budget and, unlike Bradley, are subject to the state’s annual budget process. Ninety per cent of approved capital project expenses are paid by the federal government, with the balance coming from Department of Transportation’s annual capital program.

Municipal Airport operating costs are, with one exception, paid entirely by the community owning the airport. The sole exception is Tweed-New Haven Airport which has, for a number of years, received a $600,000 operating grant from the State of Connecticut. **The Transportation Strategy Board recommends continuation of that grant.** Ninety per cent of the costs of approved capital projects are paid by the federal government. The State of Connecticut pays seven and one half per cent of the costs and the balance are paid by the local community.

Bradley International Airport

Bradley International Airport is, by far, the largest and busiest airport in the State of Connecticut. It ranks:

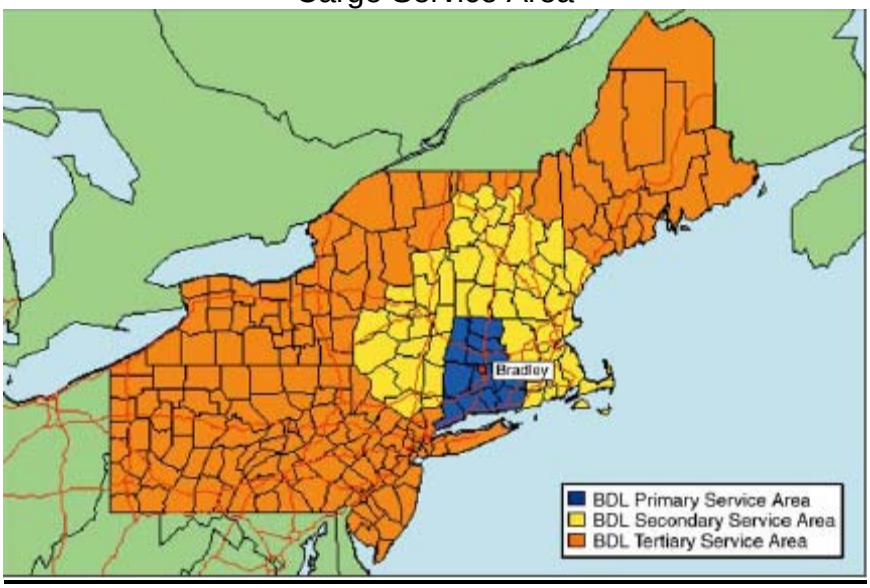
- 49th of 175 Airports nationwide in terms of passenger volume
- 35th of 161 airports nationwide in terms of cargo volume
- 146th of 1,075 airports worldwide in terms of total volume

Figures 11 and 12 show Bradley’s passenger and cargo service areas[26].

Figure 11
Passenger Service Area

[26] Source: Connecticut Department of Transportation, Connecticut Statewide Airport Systems Plan.

Figure 12
Cargo Service Area



As these figures demonstrate, a significant part of Bradley's service area is outside Connecticut. **Recognizing the interstate nature of Bradley's market, the Transportation Strategy Board recommends that business and community leaders from Western Massachusetts be involved in airport planning and service development.**

Bradley Board of Directors

In 2001 the same legislation which created the Transportation Strategy Board created a Board of Directors for Bradley International Airport. The Bradley Board of Directors is composed of:

- A Chairperson, appointed by the Governor;
- The Commissioner of Transportation;
- The Commissioner of Economic and Community Development;
- A representative of the Transportation Strategy Board, appointed by the Speaker of the House;
- A member of the Bradley International Airport Community Advisory Board[27], appointed by the Minority Leader of the House of Representatives;
- One member appointed by the President Pro Tempore of the Senate; and
- One member appointed by the Minority Leader of the Senate.

[27] The Bradley International Airport Community Advisory Board is composed of the chief elected officials of the towns (Windsor, Windsor Locks, East Granby and Suffield) which adjoin the airport.

The Bradley Board of Directors shares responsibility for the management of the airport with the Department of Transportation. The Board of Director's duties include:

- Developing an organizational and management structure that will best accomplish the goals of Bradley International Airport;
- Approving the annual capital and operating budgets of Bradley International Airport;
- Establishing a procedure to review significant contracts;
- Approving Bradley International Airport's master plan;
- Ensuring the establishment of service standards, performance targets and performance assessment systems;
- Establishing and reviewing policies and plans for marketing the airport and for determining the best use of airport property,
- Advocating for Bradley International Airport's interests and ensure that Bradley International Airport's potential as an economic development resource for the state and region are fully realized;
- Developing an appropriate mission statement and set of strategic goals for Bradley International Airport and that progress toward those goals is regularly assessed;
- Ensuring appropriate independent expertise is available to advise the Bradley Board of directors;
- Approving community relations policies and ensure that the community advisory board operates effectively to ensure that community comment and information is regularly and fully considered in decisions related to Bradley International Airport;
- Creating a code of conduct for the Bradley Board of Directors consistent with the Code of Ethics;
- Acting in cooperation with the Connecticut Transportation Strategy Board ; and
- Reporting to the Governor and the General Assembly on an annual basis.

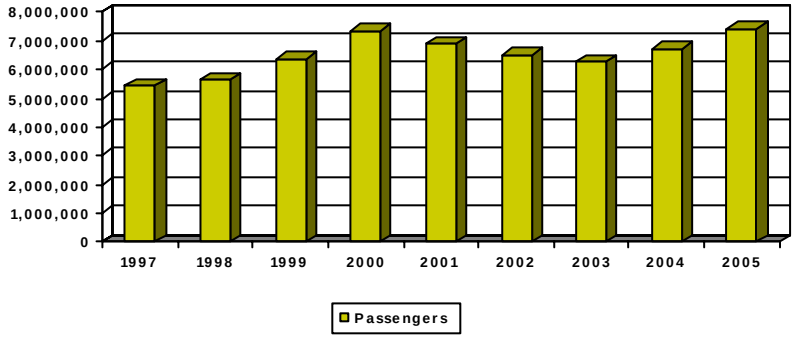
The Transportation Strategy Board supports the strategies and tactics (including the traffic improvement recommendations) adopted by the Bradley Board of Directors to strengthen Bradley as the State's major commercial airport for both passenger and air freight services for the State and the rest of Western New England. The Transportation Strategy Board also encourages the Bradley Board of Directors to work with the appropriate State agencies and neighboring municipalities to:

- **Define economic development goals and priorities for Bradley;**
- **Establish procedures to pre-approve development sites on Bradley property; and**
- **Encourage support for complementary and coordinated multi-town economic development plans.**

Passenger and Cargo Trends

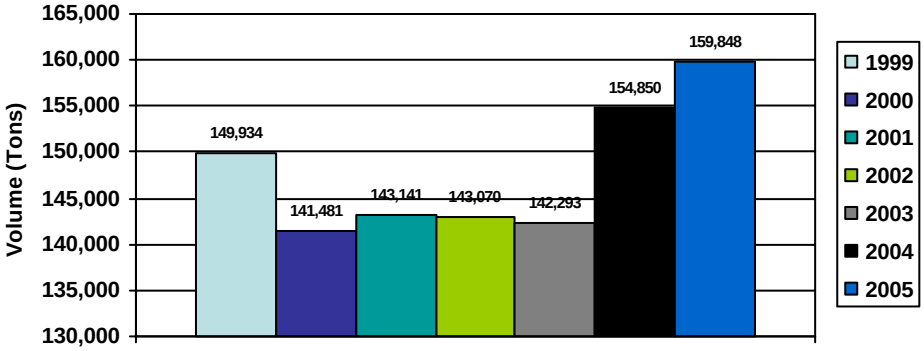
Figure 13 shows Bradley passenger trends since 1997. From 1997 though 2000 passenger use rose steadily to a record of 7,338,744 passengers in 2000. Through the first eight months of 2001 the airport seemed certain to set a new passenger record. Then came the events of September 11, 2001 and their impact on the airline industry. By 2003 annual passengers had fallen to 6,261,807. In 2004, Bradley saw its first increase in passenger travel since 2001 and the following year it set a new annual record for passengers.

Figure 13
Passenger Trends 1997-2005



Cargo volumes at the airport dropped from 1999 to 2000 and remained fairly level for several years before rising in 2004 and again in 2005.

Figure 14
Cargo Trends 1999-2005



The Transportation Strategy Board recommends the establishment of improved cargo service as a priority for the Bradley Board of Directors and the Department of Transportation.

Infrastructure and Initiatives

Over the last decade Bradley has undertaken a number of initiatives aimed at improving the airport's physical infrastructure, including a new terminal and terminal improvements; a new on-airport parking garage; an electric cogeneration facility designed to reduce energy costs; and a new customs and federal inspection station. Planned improvements include replacement of Murphy Terminal, the oldest part of the current terminal facilities; expansion of the parking garage; a high speed taxiway and consolidated cargo and rental car facilities. All of the planned projects are to be funded from the airport's state and federal resources.

Bradley International Airport has also undertaken a number of marketing and route development initiatives designed to increase the markets, especially in the western United States and Europe, which have direct service from Bradley. Among the new markets added have been:

- Amsterdam (2007)
- Denver (2007)
- Salt Lake City (2005)
- Los Angeles (2005)
- Phoenix
- Las Vegas

The Transportation Strategy Board recognizes the success of Bradley's marketing and route development efforts and supports continuation of those efforts.

Recognizing the value of Bradley International Airport as a major economic resource for the Capitol Region and the State of Connecticut, the Capitol Region Council of Governments (CRCOG) undertook a comprehensive analysis of current and future traffic conditions and land use in the airport area. *The Bradley Area Transportation (BAT) Study* identifies transportation improvements that are needed to accommodate growth and to develop a strategic plan for maintaining safe and efficient access to the airport area.

Improvements identified in the study are categorized as regional or local (primarily of town concern) based on the nature of their impacts and/or benefits. The following four improvements were identified as being of regional significance:

- Northern Bradley Connector Roadway - provides a direct connector (4.3 miles) for industrial and commercial parcels on and adjacent to Bradley Airport by connecting Route 75 near Bradley Airport to Route 190 over the Connecticut River

- Route 75-Bradley Airport Gateway - recommended to provide access from the rear of businesses to Route 75 and Schoephoester Road at existing signalized intersections, and helps to alleviate traffic and unsignalized left-turns on Route 75.
- Bradley Park Road - improves access and safety to existing cargo and industrial land uses along Perimeter Road, and unlocks the potential for new cargo and industrial development on land north of and on Russell Road.
- Improved Transit Service to the Bradley Area - incorporates several transit enhancements of CRCOG's Regional Transit Strategy, including the Griffin Busway, New Haven-Hartford-Springfield Commuter Rail[28], additional Bradley local bus service and bus connections to Hartford and Springfield.

The Transportation Strategy Board supports the funding and implementation of the Capitol Region Council of Government's Bradley Area Transportation Study.

Other Airports

There are three other airports in the state which have had scheduled passenger air service during the past decade. They are Tweed New Haven Airport, Sikorsky Airport in Stratford and Groton-New London Airport. Only Tweed-New Haven currently has scheduled air service.

All three airports are located along the coast and face a similar issues and challenges.

Tweed-New Haven

Tweed-New Haven Airport is owned by the City of New Haven and located in New Haven and East Haven. It is currently operated by a regional Airport Authority composed of representatives appointed by the city, the town and regional Council of Governments.

Historically, Tweed-New Haven's location has led to a number of controversies between the City of New Haven and the Town of East Haven, including a current dispute about the implementation of runway safety areas.

[28] The 2006 transportation initiative includes funding for a bus link between Bradley and the New Haven-Springfield rail service.

Tweed-New Haven currently has scheduled passenger air service, provided by US Air, which operates 12 flights per day between New Haven and its regional hub in Philadelphia. Until recently Delta Airlines provided schedule service between New Haven and its Cincinnati hub.

Groton – New London

Groton – New London Airport, located in Groton, is owned by the State of Connecticut and operated by the Department of Transportation's Bureau of Aviation and Ports. It previously had scheduled air service provided by US Air through its Philadelphia regional hub. The airport currently has no scheduled commercial air service and operates as a general aviation facility.

Sikorsky Airport

Sikorsky Airport is owned by the City of Bridgeport and is located entirely in the Town of Stratford, a fact which has, as in the case of Tweed New Haven, led to a long running series of disputes between the city and the town over taxes, zoning, obstructions, runway safety areas and other issues. The airport, its location and operations remain highly controversial within the Town of Stratford. The airport is managed by an Airport Commission composed of Bridgeport city officials and the mayor of Stratford.

Sikorsky had scheduled commercial air service, provided by a variety of carriers, until 1999. It currently operates as a general aviation facility and has more total aircraft based at it than any other airport in the state.

As previously noted all three airports are located along the Connecticut coast and two out of three are located, in whole or in part, in communities other than the one which owns it. This combination tends to make proposals involving physical alterations of any kind highly controversial. It has also effectively prevented any serious consideration of expansion possibilities. Indeed, officials at both Tweed New Haven and Sikorsky airports have experienced difficulty implementing proposals for enhanced runway safety at least partially because of concerns that they will ultimately lead to runway expansion and/or use by larger aircraft.

The issue of runway safety areas is not limited to coastal airports. Four of the five state general aviation airports have at least one runway which is shorter than the Federal Aviation Administration standards, as do two of the four municipal airports.

The Transportation Strategy Board recommends that the State:

- **Support Tweed's ability to serve the travel needs of business and institutional travelers in Southern Connecticut to complement Bradley.**
- **Continue the State's annual operating assistance grant to the Tweed-New Haven Airport Authority.**
- **Support the implementation of the Safety Improvements described in Phases I and II of the Tweed Master Plan within the planned three to five year period.**
- **Evaluate Phases III and IV of the Master Plan as Phases I and II are being implemented, including the fiscal and other impacts to adjacent municipalities**

Other issues facing Connecticut's general aviation airports include zoning in areas adjoining or near airports, which can affect airport access, and difficulties encountered dealing with both natural and man-made obstructions which are located off the airport property but impact airport operations**.**
The Transportation Strategy Board recommends that the State assist airport operators in addressing obstruction issues which can not be resolved locally.

The Board is also concerned about the potential loss of privately owned airports which are open to the public, especially those which serve as relievers for other public airports. **The Transportation Strategy Board recommends that the State support efforts to retain and preserve private airports open to the public, including an adequate number of reliever airports.**

Maritime

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MARITIME

The State of Connecticut's maritime programs support the movement of both people and goods by water. They function as a part of the State's larger maritime transportation industry.

Connecticut's port system handles just over 19 million tons of cargo annually, with about 87% handled at the State's three deep water ports[29]. The Maritime Coalition estimates this represents the equivalent of 950,000 truck trips annually. Connecticut is also served by several smaller commercial ports as well as numerous recreational ports and facilities.

In addition to goods and cargo transportation, Connecticut also has several passenger ferry services, which together transport over 2 million passengers and close to 82,000 vehicles annually. These services operate out of Bridgeport and New London as well along the Connecticut River. The Connecticut River ferries are owned and operated by the Department of Transportation and operate on a seasonal schedule; while the Bridgeport and New London based services are privately owned and operated on a year-round schedule.

Connecticut's Ports

Connecticut's three deep water ports[30] account for the bulk of the State's maritime commerce. These ports each have several unique features which include their geographical location, ownership and operating entities.

Geographically, Connecticut's deep water ports are located at the mouth of rivers. This feature is most important when considering dredging issues due to silt and sediment build-up which occurs quicker than at other areas, including Long Island. Also, a vast majority of the port facilities in Bridgeport and New Haven are privately owned and operated, which too is a unique feature in comparison to other commercial US ports.

The Port of Bridgeport is located at the mouth of the Pequannock River and operates as a port district organized by the City of Bridgeport, and managed by the Bridgeport Port Authority. In turn, the Port Authority leases property to private operators which operate two commercial terminals receiving approximately 50 containers each week of product from Central America.

[29] The deep water ports are in Bridgeport, New Haven, and New London
[30] "Deep Water Port" is defined by the Army Corps of Engineers as having an authorized depth in excess of 14'

The Port of Bridgeport also receives 250 barges of petroleum products annually and houses commercial passenger ferry service to Port Jefferson, NY. There is no rail connection to the Port of Bridgeport.

The Port of New Haven is located on the east side of the Quinnipiac River. Like Bridgeport its nine terminals are owned and operated by private entities. The New Haven Port Authority was formed in 2003 and governs a 366-acre port district on the east side of New Haven Harbor.

The Port of New Haven is the State's busiest port and a leading port of call on the Atlantic Seaboard. New Haven primarily receives petroleum (handling over 70% of all petroleum movements at Connecticut's ports); in addition the port handled 98% of all manufactured goods shipped through the State's ports. Other significant commodities include steel products; sand and gravel; copper and other non-metallic materials. All tonnage is handled through the nine private terminals at the port.

An almost invisible part of the port operation is the petroleum products received in New Haven and moved via pipeline to inland users. Exports that flow through the Port of New Haven include scrap metal. In addition, the port houses several large storage facilities.

Currently, the rail connection to the Port of New Haven stops at a loading dock which the Department of Transportation constructed on Waterfront Street. The development of potential rail spur links from the Waterfront Street rail extension into the individual port operators is in development. Rail extension is identified as a priority project in the 2006 transportation initiative (Public Act 06-135). This rail line is serviced by Providence & Worchester Railroad.

The Port of New London is located at the mouth of the Thames River. Unlike the State's other two deep water ports, the port's primary dry cargo facilities and piers are owned by the State of Connecticut, which lease the facilities to private operators. In addition to housing a commercial fishing fleet, the State Pier also handles lumber and copper products from its two piers. The State Pier is very land constrained, a fact which helps define its market niche. New London also has three passenger ferry operations, serving Orient Point and Fisher's Island, NY as well as Block Island. There are also several other port facilities located on the east side of the Thames River which are affected by this Port's viability.

The State Pier in New London is serviced by a direct rail connection operated by New England Central Railroad, providing relatively seamless intermodal linkage. It is probably the best rail connection of Connecticut ports.

According to the *2004 Waterborne Commerce Report of the Army Corps of Engineers*, Connecticut's ports accounted for just over 21 million tons of freight traffic. As noted, the Port of New Haven handled about 50% of this commerce. The flow in the freight traffic has increased on a steady and significant basis, most notably at Bridgeport (Figure 15).

Figure 15
Freight Traffic-CT Ports 2004 v. 2003

PORT	FREIGHT TRAFFIC (TONS) (2004/2003)
BRIDGEPORT	6,871,000 (+31%)
NEW HAVEN	10,868,000 (+4%)
NEW LONDON	2,458,000 (+1%)
OTHER COMMERCIAL PORTS	1,295,000 (+6%)
TOTAL (STATEWIDE)	21,492,000 (+13%)

Connecticut's 5 other commercial ports house gravel and stone operations as well as several other activities.

The State's recreational facilities, which are primarily marinas, house and support the 113,000 registered recreational boats in Connecticut.

ISSUES

Dredging

The most pressing issue facing Connecticut's ports is a need for maintenance dredging, which is the process of restoring channels and pier areas to their previously permitted or authorized depths. While this need is the most pressing in Bridgeport it exists at other ports as well.

Maintenance dredging is necessary in order to ensure that ships can safely enter and leave the port. Failure to maintain proper depths will (1) limit the types and size of ships able to use the ports, which affects their competitiveness and/or (2) require multiple handling of cargo, such as loading the cargo onto smaller barges in order to get it to port, which adds to the cost and reduces the competitiveness of the Port as well as presenting potential environmental risks.

The US Army Corps of Engineers has the primary responsibility for the scheduling, funding and undertaking of maintenance dredging in federally authorized channels. The cost of maintenance dredging in federally authorized channels has historically been borne by the Federal government, while port operators have paid to dredge their pier areas. Historically, state transportation officials have played little or no role in the dredging process.

However, the Federal government has recently changed its system for prioritizing and funding dredging activities from one based upon regional cooperation and priorities to one based on national competition. In effect, this means that Connecticut's ports will be competing with all ports nationwide for federal funding. In addition, the Federal government is increasingly looking to state and local governments to pay a portion of the cost of dredging projects.

Dredging projects are also subject to environmental regulation at the state and federal level through the permitting authority of the Connecticut Department of Environmental Protection and the U.S. Army Corps of Engineers. Each dredging project is unique, therefore the material to be dredged must be tested to determine the physical characteristics of the sediment and to identify any contamination of concern. This information is then used by regulators to determine the appropriate method and location of reuse or disposal. Clearly the cost of testing and disposal increases the cost of dredging.

In determining the suitability of dredged material for open water disposal in Long Island Sound, state and federal regulators apply criteria established under the authority of the federal Clean Water Act, including the State's water quality standards, and for some projects by the Marine Protection, Research and Sanctuaries Act of 1972 ("MPRSA"). One of the primary federal environmental regulations affecting dredging and disposal of dredged sediments in Long Island Sound results from the so-called "Ambro Amendment" to the MPRSA. This legislation, named after the Long Island congressman who proposed it, applies the inflexible requirements of the MPRSA to open water disposal in Long Island Sound from all Federal dredging projects and non-federal dredging projects disposing more than 25,000 cubic yards of sediment. This unique application of MPRSA singles out the Long Island Sound estuary for regulation the same way that material is regulated for disposal in the open ocean. Such regulation limits the state of Connecticut's ability to use existing disposal sites in Long Island Sound (shown in Figure 16) for the disposal of dredged materials. In other words, we have less control of what happens in our state waters then other states around the country.

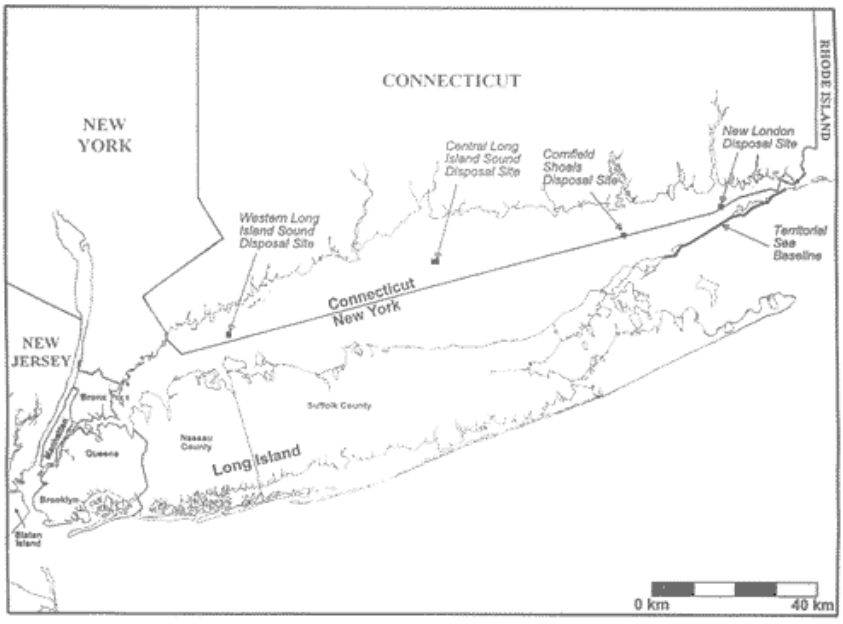
There are several alternative methods to treat or dispose of dredged materials which do not meet these standards or the State water quality standards. Disposal of dredged materials may require confinement by "capping" at a Long Island Sound disposal site with cleaner dredged sediment, or, if determined unsuitable for open water disposal in Long Island Sound, require upland disposal. To be eligible for upland disposal, contaminated sediments are subject to solid waste and possibly hazardous waste disposal regulations and may require pretreatment by methods such as washing or chemical treatment. The costs of alternative treatment methods are generally significantly higher than those for open water disposal and may not be eligible for federal payment

Under the Ambro Amendment, Connecticut's four open water disposal sites must be "designated" as disposal sites by the federal Environmental Protection Agency ("EPA"). The designation process was completed for two of the sites in June 2005. As a result of the disposal site designation process the EPA has required by federal rule the development of a Dredged Materials Management Plan (DMMP) for Long Island Sound in cooperation with New York and Connecticut by 2013. The DMMP will be developed by the Army Corp of Engineers utilizing federal dollars in coordination with the States of Connecticut and New York and the EPA. Federal funding for this requirement has been sporadic, which has resulted in further delays in the development of the DMMP. The previously announced supplemental EIS by EPA to potentially designate the two disposal sites in Eastern Long Island Sound has not materialized to date and it is expected that the New London Disposal Site will close to Ambro-regulated projects in September 2011.

The requirements of the Ambro Amendment are just one of several layers of state and federal regulation on the disposal of dredged materials. First, the materials must be determined to be suitable for open water disposal through application of the Federal Clean Water Act and the Marine Protection, Research and Sanctuaries Act. These Federal standards address the testing criteria and are generally applicable to all disposal options and methods.

Disposal of dredged materials which do not meet these standards, or other State water quality standards, require the treatment, confinement or a combination of the two options (such as pretreatment, washing or chemical treatment). There are also several alternative methods to treat or dispose of dredged materials. The costs of alternative treatment methods are generally higher than those for open water disposal and may not be eligible for federal payment.

Figure 16[31]



The State's role in dredging activities is guided by the Connecticut Coastal Management Program, the Connecticut Coastal Area Management Act, the Structures, Dredging & Fills Act and the issuance of a Water Quality Certificate and dredging permit.

The Connecticut Coastal Management Program balances economic growth of coastal communities with the preservation and protection of coastal resources. The Coastal Area Management Act identifies key policies and standards to be used at all levels of government in the evaluation of activities that affect the shoreline and coastal management. Additionally the adoption of the Harbor

[31] Source: www.epa.gov/ne/eco/lisdreg/index.html

Management Act by the State in 1984, provided for a role of the State's municipalities for determining how their coastal areas are used and developed.

Finally, the Army Corps of Engineers has encouraged the State to take a more active role in setting dredging priorities. Historically, decisions and the setting of priorities for dredging projects were fulfilled by the Army Corps of Engineers based on regional needs as well as a variety of other factors. As noted earlier the changes to the Federal dredging program in 2005 have significantly changed the funding formula for the districts.

The ability to implement or undertake dredging activities are also driven by factors such as cost and funding, the length of time needed to obtain the necessary permits from the federal and state sources, and testing requirements placed on the disposal or use of dredged materials which arise under federal and state regulations. Also, the Federal budget and project appropriations process typically adds an additional layer of process to negotiate in order to facilitate these projects.

Lastly, the scheduling of dredging activities in Connecticut is affected by seasonal considerations; these include weather conditions, recreational traffic as well as reproductive cycles of marine wildlife.

Dredging Needs at State Ports

The immediate need to address dredging issues is the greatest at the Port of Bridgeport. Action is critical so that deepwater vessels can operate at times other than high tide.

Bridgeport's main channel has not been dredged since at least 1966. Because of the lack of maintenance dredging is it sometimes necessary to offload cargo onto barges in order for them to access the port. This affects the attractiveness of the port in terms of costs and time.

Dredging of the Port of Bridgeport is made more difficult because of the level of contamination of much of the materials located within the channel and which are difficult and expensive to dispose of. The current main channel has an authorized project depth of 35' according to the Army Corps of Engineers. However, the actual depth is reported to be about 29 feet.

Maintenance dredging of the federal main channel at the Port of New Haven was last completed in January 2004. Dredging of the channel is scheduled on a 10-year cycle. However, the city of New Haven believes that the channel needs to be deepened beyond its current depth[32] in order to remain competitive.

[32] The current main channel has a project depth of 23'-33' according to the Army Corps of Engineers.

Improvement projects, such as deepening the channel beyond the authorized federal depth require non-Federal cost-sharing. In addition, to be eligible for federal funding the project must have a positive cost-benefit analysis.

The Port of New London underwent limited dredging of the main channel north of I95 in 1996 as part of an operation by the Department of Defense in order to accommodate their needs at the US Sub Base. However, significant maintenance dredging of the channel was last done in 1986. The main channel into New London is maintained to a depth of 40', with the access channel to the east side of the State Pier at 35'. Dredging is constrained at portions of the pier by the presence of bedrock which will likely preclude the possibility of dredging for true "deepwater" capability. Maintenance dredging of the piers is also needed at this port. The channel has a current project depth of 35' according to the Army Corps of Engineers.

Several other commercial and recreational ports in Connecticut also have dredging needs. These include Norwalk which recently completed the maintenance dredging of upper Norwalk River, north of I95, and which is currently working to identify funding for the remainder. North Cove in Old Saybrook has received earmark funding in order to undertake its dredging needs; however this funding is between $1.5 and $4.0 million short. This is currently under review by a Congressional Conference Committee. Also, dredging needs along the Housatonic River at this stage are under review by the Connecticut Department of Environmental Protection in cooperation with the Army Corps of Engineers.

Movement of People

In addition to freight service, Connecticut's ports provide important passenger ferry services.

Passenger ferry services currently operate out of New London and Bridgeport and carry over 2 million passengers and 82,000 vehicles a year. The Department of Transportation also operates two passenger ferries which cross the Connecticut River and operate on a seasonal schedule.

The New York Metropolitan Transportation Council recently completed a study of services in Long Island Sound and made a number of recommendations to grow the industry. In addition to recommending a new service between New Haven and Long Island; proposals have been offered for new passenger high speed ferry services linking Stamford and Bridgeport to New York's financial district, mid-Manhattan and LaGuardia Airport.

Also, Bridgeport and Stamford have received earmark funding in the FY2006 Federal Ferryboat Discretionary Program that could be used to launch a high-speed ferry service.

Issues that remain before implementation of such a service include terminal location, parking, identification of a source of capital funds and potential operating subsidy.

Other Issues

Port zoning and land use issues also have an affect on any maritime strategy. In addition to items already reviewed, the competing interests for the use and development of the State's coastal areas, that is the gentrification versus the commercial use of these areas, are things which need to be considered in the development of a maritime policy. The Coastal Management Act as well as the Harbor Management Act play a role in addressing this, by discouraging the conversion of existing water-dependent facilities to other uses, such as condominiums and hotels, which could be located inland.

Recommendations

The urgent need to address and manage dredging issues will determine to a large degree, the long term sustainability of the State's use of this natural resource as a component of our transportation strategy. Issues which directly impact the ability to perform dredging include cost, the disposal of dredged material in compliance with Federal and State standards and the establishment and use of disposal sites. The ability and willingness to balance these, at times competing, factors determines the degree of success in efforts to enhance the State's maritime transportation system.

The Transportation Strategy Board recommends the adoption of the following maritime based initiatives and policies as part of the State's transportation strategy:

- **Inventory and prioritize statewide dredging needs and develop an estimate of the non-federal funding required for each such project.**
- **Expedite the long overdue dredging of Bridgeport harbor.**
- **Support continued federal funding for development and completion of a Dredged Material Management Plan for Long Island Sound.**
- **Review the feasibility and viability of the proposed Bridgeport to New York feeder barge service. Entertain, and potentially fund, proposals for feeder barge services from ports other than Bridgeport.**
- **Determine the State's role in the funding and prioritization of dredging projects.**
- **Complete the rail link to the Port of New Haven and evaluate the potential for improved rail connections to the state's other commercial deep water ports.**

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Electronic Tolling & Congestion Pricing

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ELECTRONIC TOLLS AND CONGESTION PRICING

Over the last several years, the Transportation Strategy Board has devoted considerable time and attention to the potential for congestion pricing and/or electronic tolls as both a transportation demand management tool and a source of revenue for transportation purposes. This is a controversial issue with strong advocates on either side, none of whom have hesitated to make themselves heard. After evaluating the available evidence and attempting to assess the impact of various options on Connecticut, the Transportation Strategy Board has concluded that, as in the case of rail freight, additional information and analysis are required before making a recommendation on this important issue.

The Transportation Strategy Board recommends that the State undertake a comprehensive review and analysis of electronic tolls and congestion pricing as a means of both managing transportation demand and raising revenue for transportation purposes. The review should include, but not be limited to: (1) identification of opportunities for tolls and congestion pricing in Connecticut; (2) analysis of the steps required to take advantage of those opportunities; (3) type, location and operation of tolls; (4) pricing strategies; (5) potential operating costs and revenues; (6) impact on traffic congestion and patterns of travel; (7) regional equity; (8) environmental impact; (9) economic impacts; (10) safety; (11) public/private partnerships; (12) impact of federal requirements on identified options; and (13) implementation strategies, costs and timelines.

Transportation System Management & Demand Management

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TRANSPORTATION SYSTEMS AND DEMAND MANAGEMENT

Transportation Systems Management (TSM) and Transportation Demand Management (TDM) are two strategic approaches to dealing with the causes and effects of congestion. They include a mix of physical improvements to highways, in the form of either capacity or operational improvements; limitations on, or management of, highway use, transit services that match demand with markets; and similar strategies and tactics.

Transportation System Management

As the name suggests, Transportation System Management (TSM) is the name given to a series of strategies and techniques which focus on managing the transportation system in a way which reduces or mitigates the causes and/or effects of congestion. They can include limitations on access to highway facilities (HOV Lanes), congestion or value pricing, incident management, and traveler information systems.

Transportation system management techniques utilized in Connecticut include:

- High Occupancy Vehicle (HOV) lanes;
- E-traffic and rail alert system;
- Incident Management techniques; and
- The Commercial Vehicle Information Systems & Networks (CVISN).

HOV Lanes

Connecticut's highway network includes 38 lane miles of high occupancy vehicle (HOV) lanes. These are located north and east of Hartford, along both I91 and I84. The HOV lanes were established along I91 in 1993 and I84/I384 in 1989. These were extended into Hartford in 2000. The benefits of HOV lanes include promotion of carpooling, travel time savings, reduced fuel usage and reduced congestion. A 2005 survey by the Department of Transportation of HOV lane use indicated that the use of the lanes has increased over 2004, with an average occupancy of 2.11 persons per car.

Value Pricing

The Department of Transportation and the South Western Region Planning Agency (SWRPA) both filed applications to participate in the Value Pricing Pilot Program offered by the Federal Highway Administration in 2006. The Department of Transportation's application supports a statewide review of implementing value pricing techniques, focusing on tolling and types of technology, and includes the conversion of HOV lanes to high occupancy toll (HOT) lanes. SWRPA's application includes a pricing strategy link between roads and transit, as well as an environmental justice component. Final decisions on this pending application are expected sometime in early 2007.

In addition, the University of Connecticut's "Connecticut Cooperative Highway Research Program" has undertaken a project to develop an array of realistic value pricing scenarios for Connecticut, determine network response to pricing policy scenarios, and determine the economic impact of policy simulations to Connecticut. The anticipated completion date of this project is May 2007.

Incident Management

Studies estimate that more than half of all highway delays in urban areas are the result of incidents. These incidents can include a flat tire, vehicle breakdown, traffic accident or truck rollover, as well as weather. Connecticut's incident management system is primarily operated by the Department of Transportation. The program is managed out of two operations centers located in Newington and Bridgeport. These centers monitor 262 closed circuit cameras and operate commuter notification through 110 fixed and 8 portable variable message signs. In addition, the Department of Transportation has access to seven highway advisory radio transmitters, with three more planned for deployment as part of projects on Interstates 91 and 95 which can be used to advise commuters of traffic incidents. The average detection time of incidents in Connecticut is under two minutes.

In 2005 Governor Rell announced the launch of a statewide electronic highway traffic and rail incident notification system for Connecticut. The service is operated by the Department of Transportation and provides subscribers with alerts via e-mail when there is a traffic or major rail incident that affects travel in the subscriber's chosen area. Subscribers may choose preferences including geographical area(s), time(s) of day, and day(s) of the week. The traffic e-alerts are generated from the DOT's Highway Operations Centers in Newington and Bridgeport The rail e-alerts are generated from the DOT's New Haven Rail Operations Center and indicate route and delay information.

As a result of the 2003 Transportation Strategy Board's report a statewide incident management task force was established. The task force included representatives from the State Departments of Public Safety, Transportation,

Motor Vehicles, and Environmental Protection, as well as representatives from the Connecticut Chiefs of Police Association, Connecticut Fire Chiefs Association, Towing and Recovery Professions of Connecticut, emergency management services, and regional planning organizations with incident management councils. The task force's recommendations included the development and aggressive implementation of "an efficient, coordinated incident management system to secure its economic future by enhancing its ability to compete in the national and global marketplaces and by strengthening the use of its overall transportation infrastructure."

The task force recommendations also included the development and adoption of a unified response manual (URM), the expansion of the Connecticut Highway Assistance Motorist Patrol program (CHAMP) and the development and distribution of highway diversion plans for major incidents.

The Transportation Strategy Board continues to support these recommendations and specifically recommends the promotion and acceptance of a Unified Response Manual, including adoption of the URM as a standard by all responding agencies, as well as the development and conducting of appropriate training to implement the URM. The Board also recommends the funding of development of additional diversion plans for major accidents that close limited access highways.

In 1996 the Connecticut Highway Assistance Motorist Patrol program (CHAMP) (CHAMP), began operating along the I95 corridor between the New York Stateline and Branford. The program was expanded in 1999 to the Greater Hartford area. CHAMP operates on a weekday schedule from 5:30 a.m. to 7 p.m., as well as during selected holidays and Sundays. In addition to providing motorist assistance, the program notifies the highway operations centers of any need for emergency personnel. In FY2005, CHAMP serviced 663 motorists per month along the I95 corridor and 669 motorists per month in the Greater Hartford area.

Funding has been provided to support the expansion of the CHAMP program to the Merritt Parkway, Greater Waterbury and Southeastern Connecticut. According to the Department of Transportation the expanded system will be operational during the second half of 2007. **The Transportation Strategy Board recommends the completion of the planned expansion of the CHAMP program.**

Weigh Stations

Connecticut's weigh station program consists of 6 permanent weigh facilities as well as the use of portable scales.

Connecticut's commercial weigh station facilities are jointly staffed and operated by the Departments of Motor Vehicles and Public Safety. The Department of Motor Vehicles' operations implement the federal Motor Carrier Safety Assistance Program, which also includes enforcement of carrier compliance and rating programs. The Department of Motor Vehicles is primarily responsible for the weighing program at the Union facility. The Department of Public Safety is responsible for a law enforcement effort aimed at achieving strict compliance with applicable commercial motor vehicle regulations and laws, specifically the enforcement of commercial motor vehicle size, weight and safety requirements. The Department of Public Safety is primarily responsible for operations at the Greenwich and Danbury facilities.

CVISN

The Commercial Vehicle Information Systems & Networks (CVISN) organizes commercial vehicle operations, allowing all systems to operate in an integrated manner. In 1996, Connecticut became one of ten pilot states that began field operational testing of CVISN technology. The program emphasizes three main components:

(1) Credentials administration - which is an electronic permitting system for over-dimension vehicles. This system has been operational since mid-2004 and is an internet-based, 24-hour service to apply and pay for permits. An automatic issuance component is scheduled to be operational by the end of 2006.
(2) Electronic pre-clearance - which was installed in 2001 at Union Station on I84. An implementation plan for pre-clearance at the Greenwich Station is funded and is currently under development at the Department of Transportation.
(3) Safety Information Exchange - is the electronic exchange of current and historical safety data, which allows inspectors to concentrate their efforts on those motor carriers with poor or unknown safety records.

The 2006 transportation legislation includes $1 million to support continued build-out of the CVISN system. In addition a $1.0 million Federal grant is available to the State as a result of our participation in the earlier program. This grant can be used to expand the CVISN program if state matching funding can be identified.

The Transportation Strategy Board recommends the continued development and build out of the Commercial Vehicle Information Systems and Network.

511 Traveler Information Systems

In March 1999 the US Department of Transportation petitioned the Federal Communications Commission to designate a three digit telephone number to be used for providing traveler information services. In July 2000, the FCC designated 511 as the national traveler information number. The goal of the 511 Deployment Program is "the timely establishment of a national 511 traveler information service that is sustainable and provides value to users." Connecticut received a Federal grant to perform a 511 implementation study. Additionally, the Connecticut Department of Transportation is participating in a Consortium of New England Colleges that is considering regional implementation issues.

More than 100 million Americans (35%), now have access to 511 services. Since 2001, systems have been deployed in all or parts of Alaska, Arizona, California, Colorado, Florida, Iowa, Kansas, Kentucky, Maine, Minnesota, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Ohio, Oregon, South Dakota, Utah, Vermont, Virginia, and Washington. The most recent launch was the Rhode Island statewide system. Other states are also planning to implement 511 systems.

The Department of Transportation has recently provided a notice to proceed to a consultant to implement Connecticut's 511 system. The Implementation Plan has an anticipated completion date in April 2007. The 511 Project is in the preliminary stage of system alternative review. After the various 511 systems are narrowed down to the systems which best suit the needs for Connecticut, preliminary project implementation costs can be identified. At this time the Department of Transportation does not have funding in place to start Connecticut's 511 Traveler Information System. The Department does anticipate to have a 511 Traveler Information System operational by the FHWA 2010 goal for nationwide deployment.

The USDOT is facilitating national implementation of 511 systems to make real-time traveler information more widely available to motorists. It is working with a 511 Deployment Coalition that includes the American Association of State Highway and Transportation Officials, Intelligent Transportation Society of America, and American Public Transportation Association.[33]

The Transportation Strategy Board supports the providing of a coordinated 511, Automated Traveler, construction, incident alert, transit, parking availability, directions and other information via email, website, platform kiosk, brochures, schedules, maps and customer assistance telephone.

[33] Federal Highway Administration, http://www.fhwa.dot.gov/crt/lifecycle/511.cfm.

Transportation Demand Management

Transportation Demand Management (TDM) is the name given to actions designed to influence travel behavior in a way that manages congestion and increases overall mobility. TDM strategies can be site specific or region-wide. Significantly, TDM strategies differ depending upon the purpose of the trip. For example, strategies designed to influence travel behavior for work trips are different than those for tourist trips. Since work trips have a more concentrated distribution and occur in compressed timeframes, management of work trips presents a significant opportunity to improve decrease congestion and mobility. As the Board pointed out in its 2003 report, TDM techniques "represent the lowest cost tactics for congestion mitigation."

Connecticut's TDM programs are provided using a regional service delivery model, under which TDM services are provided through three primary brokerages based upon geographical destination. In addition to administrating their regional TDM services, each of the brokerages, acting as the state contracting company, is responsible for the marketing, coordination and administration of specific statewide programs. These include the Telecommute Connecticut, Easy Street and Nu-Ride programs. Each of these regional, non-profit companies use employer based commuter programs, which assist in the development, promotion and marketing of multi-passenger transportation options such as carpools, vanpools, bus, and train services to employers and employees.

Demand-side strategies can often be implemented more quickly, and at a lower cost, than capacity increases and other supply-side improvements. For that reason, supply-side and demand-side approaches are complementary, with demand-side efforts taking on an asset management role by maximizing the performance and extending the life of existing infrastructure.

However, it is important to recognize the limits of demand side strategies. They need to be implemented as part of a comprehensive and integrated strategy which balances supply-side infrastructure investments and demand side strategies.

Demand side strategies are ultimately about choice and balance. Expanding the array of mode, route and departure-time choice available and supported by robust real-time traveler information, incentives and other resources, allows the traveling public to make informed decisions and choose an option that works best for them.

The Transportation Strategy Board recommends the development and implementation of strategies to encourage modes of travel other than single occupancy vehicles, specifically:

- **Support of public (commuter connections), public/private (shuttles, vans, station cars) and private (ridesharing) participation to get more people onto transit and reduce congestion;**
- **Enhancement of state employee transit benefits and encouraging private employers to provide transit benefits to their employees, including the consideration of tax benefits, incentives, matching investments and recognition programs to encourage participation;**
- **Utilization of the trip reduction tax credit statewide;**
- **Support the development of a customer focused traveler assistance network; and under the Department of Transportation Commuter Assistance brand offer train, bus, ferry, shuttle, parking, pedestrian, ridesharing information and customer assistance;**
- **When a transportation project or initiative requires extensive redesign or construction, develop and implement a targeted strategy to minimize the effects of those projects on employers and employees; and**
- **An evaluation of the effectiveness of Connecticut's existing transportation demand management programs.**

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Funding & Finance

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FUNDING AND FINANCE

Connecticut's transportation program is primarily funded through the Special Transportation Fund (STF), which supports transportation capital bonding, as well as the operations of the Department of Transportation and the Department of Motor Vehicles. The Special Transportation Fund is supported by a variety of taxes and fees, including the motor fuels (gas) tax and the petroleum gross receipts tax.

Revenue bonds, known as Special Tax Obligation (STO) bonds, backed by the pledged receipts of the fund are the primary state vehicle for funding transportation capital projects. Those funds are generally used to provide the state share of the cost of transportation projects financed by the state and federal governments.

Because the Special Transportation Fund revenues are pledged to pay the debt service on STO bonds, the use of money in the Special Transportation Fund is limited by a series of requirements and covenants included in the Bond indentures. For example, one covenant requires that the annual STF revenues be at least twice the annual debt service. Another requires that STF be balanced on a biennial basis.

The Special Transportation Fund currently meets the coverage and balanced budget tests. However, the Office of Policy and Management (OPM) currently projects a small STF budget surplus in FY 2008 and a deficit of at least $25 million in FY 2009. In short, before considering any additional spending recommended by the Board, action, in the form of either increased taxes or reduced spending, or both will be required in order to balance the fund.

STF expenditures are also impacted by the State’s statutory and constitutional spending caps, which limit the total state appropriations permitted each year. OPM currently projects that the cost of current programs and services will, without further action, exceed the spending cap by $600 million.

In short, the State fiscal climate over the next biennium promises to be more difficult than in recent years. Fortunately, the immediate need for new spending is limited as a result of the progress made in recent years.

Over the last two years $2.3 billion in new bond funding for transportation projects has been authorized, along with approval for the issuance of grant anticipation bonds, known as GARVEE bonds, based on anticipated federal funds. About $600 million of that funding has not been committed to specific

projects or programs. That funding is available in annual increments running until 2018.

For that reason, the Transportation Strategy Board does not believe that additional capital funding is required in the near term to support most of the projects and services included in the strategy. However, there is not adequate long-term funding to support all such projects.

For example, this strategy includes five major highway projects. The cost of one of those projects is undetermined. The remaining four projects are projected to cost almost $6 billion. Current financial resources are unlikely to support one, let alone all, of those projects.

Additional resources will also be required in order to meet increased operating costs, including additional Department of Transportation staffing, increased bus and rail operating subsidies and the cost of addressing part of the "state of good repair" deficit.

While the Transportation Strategy Board recognizes the seriousness of the State's fiscal challenges, it believes that it is essential to continue to address the financial and operating needs of the state's transportation system in a responsible manner. The Transportation Strategy Board believes that this strategy achieves that goal.

Evaluation

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EVALUATION

During the development and passage of the 2006 transportation initiative, the Governor and legislative leaders from both parties clearly expressed the need for the Transportation Strategy Board to develop effective **evaluation criteria, systems and methods.**

Given the short time available to prepare this revision of the transportation strategy, it was agreed that the Transportation Strategy Board would not attempt to address evaluation issues in this report, but would devote a major part of its work in 2007 and 2008 to that issue.

The Transportation Strategy Board shares the Governor and the General Assembly's commitment to developing effective evaluation criteria, systems and methods and recommends that the state:

- **Develop and pilot evaluation tools and objective metrics, including those necessary to analyze alternative strategic actions and tactics, including cost benefit analysis for projects which require significant capital investment or ongoing operating support.**
- **Provide funding to support the development of evaluation tools**

Funding to support the development of evaluation criteria, systems and methods is included in the Board's prioritized project list.

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Recommendations

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TRANSPORTATION STRATEGY BOARD RECOMMENDATIONS

IMPLEMENTATION OF TRANSPORTATION INITIATIVES

- Establish detailed project schedules leading to the timely implementation of 2005 and 2006 transportation initiatives
- Ensure adequate staffing and resources for the Department of Transportation in order, consistent with workload and productivity models, implement the transportation initiatives included in the 2005 and 2006 legislation and in this strategy.
- Monitor and report on project status and implementation

RESPONSIBLE GROWTH

- Support and facilitate implementation of the Governor's Executive Order on Responsible growth, with special emphasis on Transit Oriented Development (TOD)
- Ensure that the strategic actions and tactics included in the Transportation Strategy support the growth management principles of the Plan of Conservation and Development.
- Ensure the coordination of state and regional transportation planning with other state planning efforts, including economic development and housing plans;
- Foster the integration of transportation and land use planning at all levels of government
- Provide incentives to municipalities and regions to encourage Transit Oriented Development and sound maintenance and pavement management.
- Provide funding to regional planning organizations and councils of governments to support improved local and regional transportation planning
- Facilitate Transit Oriented Development by providing legislative authority, during the 2007 session, if possible, for pre-approved development areas, including processes for:
    - establishing site nomination or eligibility processes and evaluation priorities;
    - evaluating such properties in advance of the receipt of specific development proposals;
    - determining the types and size of the activities appropriate for the site;
    - identifying the project specific permits and approvals required in order to utilize the site; and

- providing grant funding for a significant portion of the cost of site remediation for brownfield sites located near transit hubs.

HIGHWAYS

- Develop a master plan for the maintenance, capacity and future operations of the State's Interstate highway system
- Expeditiously implement the safety and operational improvements authorized and funded by Public Act 05-4. Identify and implement similar improvements on other state highways.
- Finalize and implement a plan to increase available truck rest stop parking spaces, to increase the safety of Connecticut's highway system. Include support systems practicable and necessary to comply with state anti-idling laws.
- Continue to support and fund the capacity expansion of the I95 between Branford and North Stonington consistent with the on-going environmental study of that project.
- Complete Route 11, and the associated greenway, from Salem to I95 consistent with the on-going environmental study of that project.
- Continue to support and fund the capacity expansion of I84 from Danbury to Waterbury consistent with the on-going environmental study of that project. Significantly increase the town aid road grant.
- Support and fund the feasibility and environmental studies for the reconstruction of the Interchange of Routes 8 and I84 in Waterbury.
- Support the funding and construction of the Route 6 Expressway from Bolton Notch to Windham and urge DOT, DEP and federal agencies to resolve outstanding issues.
- Plan and support improved north/south connections between Interstate Routes 95 and 84.

PUBLIC TRANSPORTATION

- Identify a statewide Strategic Transportation Network linking rail and transit services and determine the basic level of service necessary to provide statewide mobility.
- Enhance state employee transit benefits and encourage municipal and private employers to provide transit benefits to their employees.
- Ensure coordination of all state funded transportation services regardless of the program or agency responsible for administering and/or funding such services.
- Require that, in locating state facilities, the State give priority to those locations on or near rail and bus lines. Consider the availability of rail and bus service and facilities when making other state investment decisions.
- Support the development and implementation of a "smart card" based transit pass program that can be utilized across the entire public transportation network.

Commuter Rail

- Implement commuter rail service between New Haven and Springfield by 2010
- Improve integration of New Haven Line, the branch lines, Shore Line East and the New Haven to Springfield Line so that seamless service is provided regardless of the entity responsible for operating a particular line.
- Develop a statewide rail operations plan
- Purchase 24 M8 electric rail cars for use on Shore Line East by 2013.
- Purchase additional electric rail cars for use on the New Haven Line to increase reliability and support additional service.
- Specify, fund and purchase new rolling stock for use on the New Haven-Springfield rail line.
- Support cost effective proposals for Metro North access to Penn Station and intermediate stops.
- Work with the Department of Environmental Protection, the United States Coast Guard and other responsible entities to address bridge issues limiting, or potentially limiting, rail service, especially on Shore Line East.

Rail Stations

- Support and fund, as provided in Public Act 06-136, the development of a new Metro North rail station and transit oriented development in the City of West Haven. Evaluate and plan for a new Metro North rail station in the Town of Orange. Maximize Transit Oriented Development (TOD) associated with both projects.
- Develop stations and station improvements on Shore Line East, as required by Public Act 06-136.
- Encourage Transit Oriented Development (TOD) at and near rail stations.

Rail Station Parking

- Develop, in consultation with local officials and commuters, a uniform policy concerning rail station governance and implement as existing leases come up for renewal. The policy should provide for centralized oversight of rail stations and parking; uniform policies, permits and fees; consistency with low-impact environmental standards; design of attractive enclosed structures that are in harmony with abutting structures and should ensure adequate funding for station and parking area maintenance.
- Implement rail station parking initiatives in Bridgeport, Stratford and New Haven.
- Expedite replacement of the Stamford rail station parking garage.
- Maximize the amount of parking associated with new rail stations.

- Urge DOT, Amtrak, and local officials to resolve any outstanding issues related to parking expansion at SLE sites.

Branch Lines

- Expedite design and construction of a Centralized Train Control system for the Danbury branch.
- Expedite the completion of the Waterbury, Danbury and New Canaan Branch line studies, including the evaluation of the branch line "collector" stations recommended by the Transportation Strategy Board in 2003. Utilize funding provided in Public Act 06-136 to begin implementation of the study recommendations.
- Support funding for the Waterbury Intermodal Transportation Center.

Infrastructure

- Support funding and implementation of programmed improvements, including rehabilitation of the Walk (Norwalk) and Saga (Westport) bridges; completion of other scheduled bridge replacements and rehabilitation; replacement of the catenary system on the Metro-North line by 2014; replacement and improvement of electrical sub stations; replacement and enhancement of the main line signal system.
- Support DOT's inclusion in its annual capital plan of an appropriate amount to continue to lengthen the platforms at 14 metro-north stations to the preferred standard platform length of 850 feet to accommodate 10 rather than 8 coaches
- Ensure the availability of sufficient state funds to annually match all federal funding available to the state.

Metro North Operating Agreement

- Support the efforts of DOT, the Governor and the General Assembly to:
  - Obtain voting representation for Connecticut on the Metropolitan Transportation Authority and the Metro-North Board of Directors;
  - Until voting representation is obtained continue DOT's participation on a non-voting basis; and
  - Take other actions necessary to ensure the long term financial and operational vitality of the Metro-North line as one of the most critical components of the State's transportation infrastructure.

AMTRAK

- Support DOT's continued monitoring of the future of Amtrak and its effects on operations and operating agreements for SLE and New Haven–Hartford– Springfield rail service.

- Support the state's acquisition of the New Haven-Springfield rail line currently owned by AMTRAK.

Other Rail Recommendations

- Continue to evaluate and enhance transit connections between rail stations and major residential and employment centers.

Bus Transit

- Design and implement, as part of the Strategic Transportation Network, an integrated multimodal transit network that uses a common brand identity and that takes into account all forms of bus service and provides links to the state's rail system.
- Review transit district funding formulas and requirements in order to ensure adequate funding for bus transit services and parity with state owned or operated transit services, including Connecticut Transit.
- Provide additional state matching funds for transit district capital projects.
- Provide transit districts funding flexibility consistent with program accountability.
- Continue state funding for the Jobs Access and Reverse Commute program while making maximum use of federal funds to support needed services. Identify and implement additional service opportunities as appropriate.
- Implement bus retrofits and other clean diesel initiatives
- Incorporate the remaining Section 16 bus demonstration programs in the state's bus operating funding and evaluate on the same basis as other bus transit services.
- Construct a bus maintenance and storage facility for the Windham and Torrington Regional Transit Districts.
- Explore potential connections between northeastern Connecticut and MBTA rail service in Massachusetts and Rhode Island.
- Provide funding for those services included as part of the original Transportation Strategy Board legislation and include them in the State's regular bus and rail operations budgets.

Bus Rapid Transit

- Expeditiously implement the New Britain – Hartford busway as provided in Public Act 06-136.
- Encourage the continued evaluation of other bus rapid transit services, whether dedicated or complementary to existing highways, in light of the anticipated results of the New Britain-Hartford busway, including its economic development contributions.

Bicycles and Pedestrians

- Provide bike space on passenger trains at all times of the day.
- Identify and support bike routes to transportation centers.
- Identify and remedy existing bicycle storage and parking deficiencies, especially in urban centers and transportation centers.
- Adopt a policy of allowing bicycles to be carried on state funded bus routes, and as new buses are ordered equip them to permit the carriage of bicycles.
- Encourage municipal and regional officials to work closely with DOT to include expanded bicycle and pedestrian facilities as a part of all roadway projects.
- Support the development and implementation of the Safe Routes to School program.

RAIL FREIGHT

- Develop a comprehensive analysis of the potential for enhanced rail freight service to and through Connecticut, including, but not limited to: (1) the market for enhanced rail freight services; (2) the impact of enhanced rail freight service on traffic and congestion; (3) obstacles to enhanced rail freight service and ways to address them; and (4) the impact of enhanced rail freight service on commuter rail service, including scheduling and track availability, safety and physical infrastructure.

AVIATION

Bradley International Airport

- Support the strategies and tactics (including the traffic improvement recommendations) adopted by the Bradley Board of Directors to strengthen Bradley as the State's major commercial airport for both passenger and air freight services for the State and the rest of Western New England.
- Encourage the Bradley Board of Directors to work with appropriate State agencies and neighboring municipalities to:
    - define economic development goals and priorities for Bradley;
    - establish procedures to pre-approve development sites on Bradley property; and
    - Work with adjacent towns and encourage support for complementary and coordinated multi-town economic development plans.
- Establish the improvement of cargo service as a priority for the Bradley Board of Directors and the Department of Transportation.

- Recognize the success of Bradley's marketing and route development efforts and support continuation of those efforts.
- Including business and community leaders from Western Massachusetts in Bradley Airport planning and service development.
- Support and fund implementation of the Capitol Region Council of Government's Bradley Area Transportation Study, including:
    - Relocation of Bradley Park Road
    - Development of new northern route to/from Bradley
    - Route 75 Gateway
    - Improved transit services
- Evaluate, by January 1, 2008, and, if feasible, implement express bus service between Bradley and downtown Hartford.
- Establish through legislative and/or administrative action the process and the funding needed for land banking to mitigate the environmental impact of airport development including safety improvements.

Tweed New Haven Airport

- Support Tweed's ability to serve the travel needs of business and institutional travelers in Southern Connecticut to complement Bradley.
- Continue the state's annual operating assistance grant to the Tweed-New Haven Airport Authority.
- Support the implementation of the Safety Improvements described in Phases I and II of the Tweed Master Plan within the planned three to five year period.
- Evaluate Phases III and IV of the Master Plan as Phases I and II are being implemented, including the fiscal and other impacts to adjacent municipalities.

Other Aviation Recommendations

- Assist airport operators in addressing obstruction issues which can not be resolved locally.
- Support efforts to retain and preserve private airports open to the public, including an adequate number of reliever airports.

MARITIME

- Inventory and prioritize statewide dredging needs and develop an estimate of the non-federal funding required for each such project.
- Expedite the long overdue dredging of Bridgeport harbor.
- Support continued federal funding for development and completion of a Dredged Material Management Plan for Long Island Sound.
- Review the feasibility and viability of the proposed Bridgeport to New York feeder barge service. Entertain, and potentially fund, proposals for feeder barge services from ports other than Bridgeport.

- Determine the State's role in the funding and prioritization of dredging projects.
- Complete the rail link to the Port of New Haven and evaluate the potential for improved rail connections to the state's other commercial deep water ports.

ELECTRONIC TOLLS & CONGESTION PRICING

- Undertake a comprehensive review and analysis of electronic tolls and congestion pricing as a means of both managing transportation demand and raising revenue. The review should include, but not be limited to: (1) identification of opportunities for tolls and congestion pricing in Connecticut; (2) analysis of the steps required to take advantage of those opportunities; (3) type, location and operation of tolls; (4) pricing strategies; (5) potential operating costs and revenues; (6) impact on traffic congestion and patterns of travel; (7) regional equity; (8) environmental impact; (9) economic impacts; (10) safety; (11) public/private partnerships; (12) impact of federal requirements on identified options; and (13) implementation strategies, costs and timelines.

TRANSPORTATION SYSTEMS & DEMAND MANAGEMENT

Transportation System Management

- Support the expansion and improvement of Automated Traveler Information Systems, and other technologies that provide more comprehensive and timely information to travelers.
- Support development and implementation of 511 Plan for CT.
- Continue the development and build out of the Commercial Vehicle Information Systems and Network.

Transportation Demand Management

- Develop and implement strategies to encourage modes of travel other than single occupancy automobiles.
- Support public (commuter connections), public/private (shuttles, vans, station cars) and private (ridesharing) participation to get more people onto transit and reduce congestion.
- Enhance state employee transit benefits and encourage private employers to provide transit benefits to their employees. Consider tax benefits, incentives, matching investments, and recognition programs to encourage participation.
- Expand the trip reduction tax credit statewide.
- Support development of a customer focused traveler assistance network. Under CT DOT Commuter Assistance brand offer train,

bus, ferry, shuttle, parking, pedestrian, ridesharing information and customer assistance.

- Provide coordinated 511, Automated Traveler, construction, incident alert, transit, parking availability, directions and other information via email, website, platform kiosk, brochures, schedules, maps and customer assistance telephone.
- When a transportation project or initiative requires extensive redesign or construction, develop and implement a targeted strategy to minimize the effects of those projects on employers and employees, including:
    - Additional vanpools and incentives;
    - Coordination with employers to provide free/reduced transit passes to employees; and
    - Creation of a centralized marketing and information effort on alternative transportation options.
- Evaluate the effectiveness of Connecticut's existing transportation demand management programs.

Incident Management

- Complete the planned expansion of the CHAMP (CT Highway Assistance Motorist Patrol) program.
- Promote and build acceptance of a Unified Response Manual (URM) including adoption of URM as a standard by all responding agencies. Develop and conduct appropriate training.
- Fund development of additional diversion plans for major accidents that close limited access highways.

EVALUATION

- During 2007, develop and pilot evaluation tools and objective metrics, including those necessary to analyze alternative strategic actions and tactics, including cost benefit analysis for projects which require significant capital investment or ongoing operating support.
- Provide funding to support the development of evaluation tools

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Project Priority List

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Major Mode	Priority	Project[34]	Capitol	Annual Operating	Planning	Timeline
Air	1	Tweed Operating Grant		$0.600		2008-
Air	2	BDL Park Road	$5.000			2011
Air	4	Route 75	$27.000			2011-12
Air	5	HF Shuttle Service	TBD	TBD		TBD
Air	3	Tweed RSA	$0.500			2008
BUS	1	Continue Section 16 Projects		$2.700		2008 -
Bus	2	Additional TD Operational Funding		TBD		2009 -
Bus	3	Transit District Matching	$0.500			2008
Bus	4	Clean Diesel	$5.500			2009
Bus	5	Bus Connection to MBTA	TBD			TBD
Bus	6	Windham Bus Facility	$6.000			2010
Bus	6	Torrington Bus Facility	$7.500			2011
Bus	8	Smart Fare Boxes	$10.000			TBD
HWY	1	Toll Study	TBD			2008
HWY	2	Rest Stop Capacity	TBD	TBD		TBD
HWY	3	I-95 East	$1,750			2012
HWY	4	CVISN Buildout	$2.000			2009
HWY	5	Route 11	$850.000			2011
HWY	6	I-84 East of Waterbury	$1,000.000			2011
HWY	7	Route 6	TBD			TBD
HWY	8	I-84/Route 8	$2,000.000			After 2017
Other	1	Town Aid Roads		TBD		2008 -
Other	2	TOD Incentives		$5.000		

[34] $ million

Plan	1	Rail Freight			$3.500	2009-2010
Plan	2	I-95 Master Plan			$2.000	2010-2011
Plan	3	RPA-MPO Planning Funding		$1.000		2009 -
Ports	1	Dredging Needs Study			$1.500	2009
Ports	2	New Haven Harbor Rail Connection	TBD			TBD
Rail	1	SLE EnhancedService	$6.000	$2.300		2010
Rail	2	Continue Section 16 Projects		$1.000		2008 -
Rail	3	Branch Line Improvements		$50.000		2011
Rail	4	Stamford Station	$30.000			2009-2010
Rail	5	NH-Spfld Line Acquisition	TBD			TBD
Rail	6	Commuter Connections		$1.000		2009
Rail	7	Statewide Rail Operations Plan	TBD			TBD
Rail	9	Platform Lengthening	$8.000			TBD
Rail	10	SLE Rolling Stock	$66.000			2013
Rail	11	NHL Rolling Stock	$30.000			2013
Rail	12	NH-Spfld Rolling Stock	$74.000			2011
Rail	13	M10 Car Redevelopment	$5.000			2011-2013
Rail	14	NHL Bike Access	$0.250			2009
Rail	15	Waterbury Transportation Center	$15.000			TBD
Rail	16	Greenwich Interlocking	$25.000			TBD
Rail	8	Penn Station Access	TBD			TBD
TDM	1	State Employee Benefits		TBD		TBD
TDM	2	Make tax credit statewide				2008 -
TDM	3	TDM Evaluation		TBD		2009
TSM	1	Email System Improvements		TBD		TBD
TSM	2	511 System		TBD		TBD
TSB	1	Develop Evaluation Tools			$0.150	2008-2009

APPENDIX A

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STATE OF CONNECTICUT
BY HER EXCELLENCY
M. JODI RELL
GOVERNOR

EXECUTIVE ORDER NO. 15

WHEREAS, The State of Connecticut is defined by breathtaking landscapes that extend from the majestic shoreline to the rolling hills, vibrant cities, attractive suburbs, scenic small towns and picturesque farms; and

WHEREAS, We must actively steer the continued growth and development of our state to prevent sprawling development patterns from forever changing the character of our communities. If left unchecked, this trend will continue to fragment the landscape, impair our ability to remain economically competitive, consume precious natural resources, waste energy, pollute the air and water, increase Greenhouse Gases (GHG) that can accelerate the pace of climate change, and overwhelm local and state infrastructure; and

WHEREAS, Connecticut has already taken action to address issues raised by growth and development through approval of more than $3.5 billion to fund transportation programs that will improve our highways, rail lines and bus systems and encourage transit-oriented growth; and

WHEREAS, Connecticut has launched a national search that will soon bring to our Department of Transportation a Deputy Commissioner who will focus exclusively on creating mass transit systems that support and encourage sound land use; and

WHEREAS, Connecticut has put in place impressive programs to protect open space, farmlands and historic sites. As a result of funding for state and local purchases of open space, Connecticut has preserved 479,160 acres of open space. This represents achievement of 71 percent of the state's goal of preserving 673,210 acres – or 21 percent of our land area – as open space. Connecticut's efforts have also resulted in the preservation of 222 farms with 31,025 acres of farmland. In the past two years alone, $20 million in state bonding has been authorized for this purpose. In addition, funding for these and other important programs will be increased in future years as a result of the enactment in 2005 of the Community Reinvestment Act; and

WHEREAS, Connecticut has established an Office of Brownfield Remediation and Development to strengthen our efforts to clean up and reuse valuable properties often located in urban areas; and

WHEREAS, Connecticut is working actively to develop energy policies for the 21st century that will decrease our reliance on fossil fuels through increased use of renewable energy sources and a focus on conservation and efficiency; and

WHEREAS, Connecticut has embraced sound growth principles through revisions to

the State Plan of Conservation and Development that provide a mechanism to begin steering growth to appropriate areas of our state; and

WHEREAS, Connecticut must build on these and other initiatives to ensure the success of our efforts to revitalize cities, preserve the unique charm of our state and build livable, economically strong communities while protecting our natural resources for the enjoyment of future generations; and

WHEREAS, Efforts to better steer growth and development must be respectful of the Connecticut tradition of "home rule" and "local autonomy" by including municipal officials as full partners in this initiative;

NOW, THEREFORE, I, M. Jodi Rell, Governor of the State of Connecticut, acting by virtue of the authority vested in me by the Constitution and by the statutes of this state, do hereby ORDER and DIRECT that:

1) There shall hereby be created an Office of Responsible Growth within the Office of Policy and Management.

2) The Office of Responsible Growth shall be responsible for the following:

    a. **Chairing an Interagency Steering Council**, consisting of the Commissioners of the Department of Economic and Community Development, Department of Environmental Protection, Department of Agriculture, Department of Transportation and the Department of Public Health as well as the Executive Directors of the Connecticut Housing Finance Authority and the Connecticut Development Authority, to coordinate policy development and capital planning in an effort to efficiently utilize state expertise and financial resources.

    b. **Creating Regional Roundtables** that will invite the ongoing participation of city and town officials and foster the development of planning agendas tailored to the specific needs of different parts of our state, starting with new transit corridors.

    c. **Developing support and incentives for communities** to engage in regional planning, to update zoning maps and ordinances and to build the capacity of municipal staff, boards and agencies to make complex land use decisions. This effort will include the establishment of a new municipal training program that will be created in conjunction with regional planning organizations, the Connecticut Land Use Academy and resources that already exist in our state's colleges and universities.

    d. **Updating the "Green Plan" for Connecticut** by June of 2007 to better identify sensitive ecological areas and unique features, guide acquisition and preservation efforts, support local build-out maps and assessments, and make these and other maps accessible to state agencies, regional planning agencies, local communities and nongovernmental

organizations through geographic information systems (GIS).

e. **Reviewing transportation policies and projects to** increase opportunities to promote mass transit and roadway design that support state and local economic development while preserving and enhancing the character, as well as the "walkability," of our communities.

f. **Expanding housing opportunities** to meet the needs of all Connecticut residents and support an expanding workforce with housing that provides ready access to passenger rail and bus service.

g. **Reviewing all State Funding** that has an impact on the growth and development of Connecticut and establishing criteria that will target funds for uses that are consistent with goals that emerge for responsible growth.

h. **Targeting economic incentives** to support development in designated Responsible Growth areas.

i. **Creating a new "Green and Growing" webpage** to highlight best practices and develop a virtual toolbox and roadmap to promote Responsible Growth region by region and community by community.

3) The Office of Responsible Growth shall be housed within the Intergovernmental Policy Division of the Office of Policy and Management. Two additional planning staff shall be added to the existing planning staff in the Division.

4) The Secretary of the Office of Policy and Management shall designate a member of his staff to serve as the State Responsible Growth Coordinator.

This order shall be effective upon signing.

Dated at Hartford, Connecticut, this 10 day of October 2006.

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M. JODI RELL
Governor

By Her Excellency's Command:

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Susan Bysiewicz
Secretary of the State