

Final Report



Economic Importance of Investment in Public Transportation

For:
Transit in Connecticut



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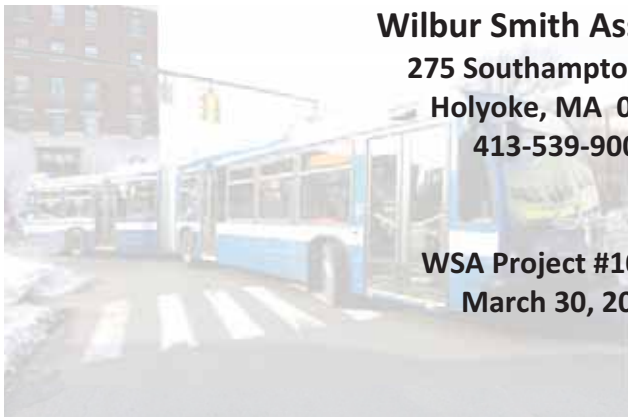
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Economic Importance of Investment in Public Transportation

Overview

Economic benefit analysis is often used to evaluate the desirability of a given investment. Within the context of this report, it is the analysis of the cost of public transportation projects in order to evaluate the benefits which can be expected to be derived from the investment of the dollars. Inputs can be measured in terms of an opportunity cost, that is, what is the value to the community in making the investment, what is the public good which will be derived as a result of the investment. In general, economic impact analysis examines the effect of a policy, program, project, activity or event on the economy of a given area.

Economic impact is usually measured in terms of changes in economic growth and associated changes in jobs, which can be quantified based on a number of factors. The analysis typically measures the level of economic activity occurring at a given time with the project or policy occurring, and calculating the difference from what would otherwise be expected if the project or policy did not occur. The term economic impact can be applied to analysis of the economic contribution of a given activity or industry to the existing local economy.



Over the past few years a number of studies have been completed which looked at transit investments in the State of Connecticut. ***The Bus Transit Needs Analysis***, completed in 2007 by Urbitran Associates, provided a macro review of bus service needs by area, comparing investment levels within the state as well as in comparison to other Northeast states. The primary purpose of that study was to lay out a framework to guide investment at the regional level. In 2008, Mayanka Mudgal, a Master of Environmental Management Candidate at the Yale School of Forestry and Environmental Studies, prepared ***Economic Benefits of Transit in Connecticut***, reviewing national statistical framework and trends related to the economic benefit analysis of public transportation investment. ***Missing Links, Prioritized Bus Service Expansion Plan***, completed in January of 2010 by the Regional Plan Association of NY, NJ and CT, reinforced previous transit studies and recommended establishing public transit corridors in currently underserved corridors and regions of the state.

This paper establishes a framework for a current economic benefit review, using recently crafted livability and community sustainability trends. The first section includes current national trends in livability and sustainability, the new federal agency partnerships, and how these will influence the public transportation industry. The report provides updated national trends in transportation, including changes which have occurred based on current national economic conditions. The report concludes with a review of ongoing and proposed transit projects around Connecticut, providing an estimate of their economic impact.

National Trends Related to Public Transportation Investment

In considering today's economic trends in public transportation investment, it is important to understand the framework of the public transportation context and how it has changed in the last two years. Specifically, public transportation has benefitted from a much stronger national priority for creating livable, sustainable communities.

While transportation has always contributed to enhanced quality of life and economic growth in communities, it has often done this more on an individual case by case or project by project basis, not as part of a national programmatic dialogue. This conversation has been developing through the national partnership of the USDOT, HUD, and EPA. The partnership has created a programmatic and funding framework to recognize that by combining various resources and expertise in a region, one can create a holistic project which is greater than the sum of the individual components. That is to say, a comprehensive project provides more value to a community or region, when it is recognized that the transportation, housing, environmental, economic, and community aspects, when considered as part of a whole overall project, are more valuable than when considered as standalone components.



This has been manifested in a number of new grant opportunities for which transit projects are integral components including:

- TIGER
- TIGER II
- Bus Livability
- HUD Sustainable Communities
- TIGGER

These new grant programs are just a few identified from the last two calendar years. These have funded a number of comprehensive projects in which public transportation has been a part of an overall community benefit package. Public transportation, generally, benefits from strong community partnerships.

How to Build a Business Case for Public Transportation

From an economic basis, what are the real benefits of public transportation investment from a dollars and cents perspective? In order for there to be a dramatic increase in the investment to projects which can support growth and development, we need to make building this case a priority within the transportation industry and include all of our advocacy partners.

The importance of infrastructure investment is demonstrated in maintaining State of Good Repair (SGR) of previous investments and through providing a catalyst for new development, considering Transit Oriented Development (TOD) and its associated benefits to a region. Both of these concepts have a place when considering investments and are included in the newly released President's budget for the 2012 federal transit program.

For instance, what is the cost of congestion, both longer distances and slower speeds? How much time is lost every day, both from work time and from loss of personal time? What is the impact on businesses? How much business do we lose to our competitors because of these impacts? What impact does our

transportation network have on our environment? What are the impacts of greenhouse gases which result from our current network?

What is the future legacy we are leaving for future generations? How much green space are we losing to building more highway lanes? What are the balances that must be achieved by the various modes? Can we achieve a network which recognizes that the various modes, highways, transit and bicycle/pedestrian complement and support the national economy and each other?

The Texas Transit Institute (TTI) releases an annual survey and Urban Mobility Report detailing the trends in congestion and the impacts, comparing communities across the nation. Connecticut is figured in these rankings in several ways; first, as part of the New York Metropolitan area, and additionally, both the Bridgeport, New Haven, and Hartford areas, which are separately ranked. According to the TTI Urban Mobility Report, congestion causes over 32 million hours of delay annually in Connecticut's three largest urban areas. This congestion imposes enormous cost on state residents and businesses. A conservative estimate is that the annual cost of congestion could be as high as \$670 million.



In the most recent report based on 2009 statistics:

New York Metro region showed as follows:

- Average yearly delay per auto commuter is 42 hours
- Travel time index scale - 1.27 hours average delay based on one hour of travel
- Fuel wasted as a result of congestion averaged 32 gallons per commuter
- Congestion cost per commuter - \$999

Bridgeport metro region

- Average yearly delay per auto commuter is 35 hours
- Travel time index scale - 1.25 hours average delay based on one hour of travel
- Fuel wasted as a result of congestion averaged 32 gallons per commuter
- Congestion cost per commuter - \$847

New Haven metro region

- Average yearly delay per auto commuter is 29 hours
- Travel time index scale - 1.15 hours average delay based on one hour of travel
- Fuel wasted as a result of congestion averaged 26 gallons per commuter
- Congestion cost per commuter - \$678

Interestingly, these trends continued to increase annually, even considering that 2009 was a year when the economic downturn had nationally reduced traffic congestion due to high unemployment. What these trends and statistics say is that from a public policy perspective, there needs to be a continuous focus on investing in strategies to significantly improve the congestion which slows our economy and enforces environmental impacts which have such far-reaching consequences.

Partnerships

The partnership of the USDOT, HUD and EPA has collaboratively identified six guiding principles which serve as their guide to understand community impacts of projects. These principles provide insights into how economic benefits will be valued from a longer term policy perspective as the nation re-addresses its Surface Transportation Policy for its next federal reauthorization. Those communities and regions which have refocused their projects to consider holistic impacts of projects will be well positioned to be successful under these principles.

Along with the principles, we have provided some initial insights into what some of the targeted improvements and outcomes of projects that will be viewed from the DOT/HUD/EPA partnerships. This provides some information into how benefits (outcomes) may be reviewed going forward.

On a recent call with planning staff from the Federal Transit Administration, they noted the USDOT and all their modal programs were moving forward with identifying metrics to measure the outcome of projects and transit system performance. Therefore, understanding these metrics will continue to gain importance with projects and benefits in public transportation.



These include:

Goal 1: Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

- Performance Measures:
 - Increase in transit, walk, bike share of trips
 - Change in vehicle miles traveled per capita
 - Percent of new homes built within a ½-mile of high capacity transit service

Goal 2: Promote equitable, affordable housing: Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

- Performance Measures:
 - Increased supply of affordable homes and rental units within a ½-mile of high capacity transit service
 - Decrease in household transportation costs
 - Percent of low income households within a 30-minute transit commute of major employment centers

Goal 3: Enhance economic competitiveness: Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.

- Performance Measures:
 - Percent of employment within a ¼-mile of high capacity transit services
 - Increase in residential units within or close to major employment centers



Goal 4: Support existing communities: Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.

- Performance Measures:
 - Share of new residential and commercial construction on previously developed parcels
 - Decrease in impervious surface per capita

Goal 5: Coordinate and leverage federal policies and investment: Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

- Performance Measures:
 - Shared elements in regional transportation, housing, water, and air quality plans tied to local comprehensive land use or capital improvement plans
 - Dollars of private sector investment within ½-mile of high capacity transit

Goal 6: Value communities and neighborhoods: Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

- Performance Measures:
 - Decrease in transportation related CO₂, PM, NO_x, VOC emissions per capita
 - Increase in acres of public recreation and park land per capita

Public Transportation Influences Many Community Infrastructures - Access to Jobs, Education, Healthcare, and General Mobility

In addition to the direct dollars and cents benefits to a community through investment in public transportation, there are benefits of public good that accrue when access and mobility increase and provide more availability for residents. In the context of this report, the concepts are qualitative not quantitative, but such econometric models have been developed in several parts of the country.

As mobility and access to community centers is increased, the community as a whole stands to gain. In reviewing a number of economic analyses reports of public transportation expenditures, it has been shown that the addition of transit service allows for community centers to be built that are more attractive for the establishment of businesses, due to the increase of activity from transit customers. Instead of serving individual neighborhoods, businesses are able to enjoy the networking effects associated with locating in central business districts made accessible to clients by the existence of public transportation.

The desirability of locations near transportation lines and transit stations is made clear by the competition that often exists for these key business locations. As an example, the implementation of the Health Line BRT service in Cleveland, Ohio led to increased investment of \$4.3 billion along its 6.8 mile corridor in downtown Cleveland. In fact, the partners to the Greater Cleveland RTA, the two health care systems, Cleveland Clinic and University Hospital, saw enough value to their services to financially support the busline by purchasing the naming rights to the service.

Besides its role in supplying transport to jobs, healthcare, and education, public transportation also provides access to shopping centers, tourist attractions, and other entertainment and recreation centers. Cost can be a principal component in making a decision to take shopping and entertainment trips. Savings in transportation costs can provide the transit user with additional cash to spend on his or her shopping or entertainment journey. Shopping centers themselves are common landmarks used as prominent stops along transit lines. Such service provides access for both employees as well as store patrons.

Studies of affordable mobility attempt to define the benefits to riders who are transit dependent as well as choice riders. Transit dependent riders are those who cannot drive due to physical factors or monetary restraints, while choice riders have access and the ability to use an automobile, but make the choice to use transit.

The benefits to riders can be measured by their savings in accessing different activities via public transit instead of driving. In addition to out-of-pocket savings, certain other benefits occur. By providing access to employment sites, transit helps decrease spending on welfare to work programs. Similarly, by providing a means of transit to medical services, transit helps prevent cases that might otherwise become dependent upon home healthcare.



The Transit Cooperative Research Program, TCRP, completed in 2006 **Project B-27, Cost Benefit Analysis of Providing Non-Emergency Medical Transportation**. The report found that the net healthcare benefits of increased access to medical care for the transportation- disadvantaged exceed the additional costs of transportation for all chronic conditions studies, as part of the analysis.

Research within the healthcare industry indicates a number of closely linked issues in healthcare and transportation. Not only does transit service provide a segment of the population with access to medical service centers, but it also provides mobility for individuals lacking the ability to operate a motor vehicle. Recent research also indicates a strong link between distance to grocery stores, transportation, and the consumption of healthy foods. Some of the more significant findings in current research are detailed below.

A study by the National Institute on Aging concluded that 600,000 drivers, 70 years and older, go through the process of losing their drivers licenses every year. Many elders stop driving voluntarily because of poor vision and memory impairment. Some do not, as there are not many obvious mobility choices. The problem of older drivers who should not be behind the wheel is likely to get worse as the population ages.



The National Highway Traffic Safety Administration reports that from 1990 to 2000, the group of Americans 70 years and older grew nearly twice as fast as the total population. For this group of aging Americans, the options are few:

- become dependent on family members
- move from the comfort of their own homes to a retirement community
- or have access to public transit.

Funding Goals



There is a need to develop a symbiotic, balanced relationship of funding in which there is investment from multiple sources for both regional and local projects. There should be both the recognition of the responsibility and the development of programs to support these investments which is balanced appropriately from all sources, including federal, state, local and even private dollars.

Recognizable layers of governance exist, with responsibility clearly articulated between the funding partners. The first layer (whether city, region, or state) has responsibility for basic mobility, which includes non-emergency medical transportation and some other "basic" connections, plus local roads. The next layer includes connecting services – with the federal role for interstate and intercity connections.

There are two basic funding components for public transportation, capital funds which are used to develop infrastructure and operating. Federal programs typically fund up to 80 percent of traditional transit capital purchases including operating and maintenance equipment, with the remainder a non-federal match, either state, local, or a combination. Operating funds are distributed differently, from a federal perspective; large urban systems can use funds for "preventive maintenance", not operating specifically. Small urban (less than 50,000 population) and rural properties can use other federal grants, such as 5311, for operating expenses. In Connecticut, the State supports the transit properties using state funds for operating, covering the operating deficit up to an agreed amount with local transit districts. Local funds, including fares, make up the rest of the funding package.

As tax levels have diminished recently across the nation, the operating funds which primarily come from state and local tax sources have been in jeopardy. The transit industry has been working through its national associations to relax federal policies with regard to the use of federal funds for operating to maintain service levels.

As the sustainability of transit programs continues to be a priority for regions and communities, it is equally as important to develop revenue streams which support operating programs in addition to capital projects.

Programs and projects will be most successful when program and funding sources are intermingled. This can be the outcome of the continued and strengthened recognition that successful projects support local and regional partnership.

National Trends in Measuring Benefits of Public Transportation

In a recent 2010 publication, **Public Transportation, Moving America Forward**, the American Public Transportation Association compiled information regarding the value that public transportation provides in its four key indicators of Economy, Environment, Energy, and Quality of Life. Some statistics outlined in the report are particularly on target. These indicators have been revised to reflect current economic costs, including the significant increases in the cost of fuel and the changing national economic trends.

Public Transit Creates Jobs

- Every \$1 billion invested in public transportation capital and operations creates and supports an average of 36,000 jobs
- These 36 thousand jobs result in \$3.6 billion in business sales and generate nearly \$500 million in federal, state and local tax revenues
- Federal investment provides more than \$10 billion annual for public transportation

Public Transportation Benefits Families and Businesses

- For every \$1 invested in public transportation, \$4 is generated in economic return
- Every \$10 million in capital investment in public transportation can return up to \$30 million in business sales alone
- An individual can achieve an average annual savings of more than \$9,900 by taking public transportation instead of driving and living with one less car in the household

Public Transportation gets Individuals Where They Need To Go

- In 2010, Americans took 10.2 billion trips on public transportation
- The American public supports increased funding for public transportation. Even as the economy slowed, 77 percent of all transit ballot initiatives passed throughout the country in 2010

Public Transportation is the Responsible Environmental Choice

- US Greenhouse gasses from transportation represent 28 percent of total US emissions
- If an individual switches a 20-mile round trip commute to public transportation, his or her annual CO₂ emissions will decrease by 4,800 pounds per year, equal to a 10 percent reduction in a two-car household's carbon footprint
- Expanded public transportation strategies coordinated with travel activity, land use development and operational efficiencies can reduce greenhouse gases (GHG) by 24 percent. The annual savings in vehicles costs to consumers will exceed the cost of enacting these strategies by as much as \$112 billion



Public Transportation Reduces our Dependence on Foreign Oil

- Public transportation saves the US an equivalent of 900,000 automobile fill ups every day
- According to the most recent Texas Transportation Institute report on congestion, individuals who live in areas served by public transportation save 640 million gallons of fuel annually

Public Transportation Gives Individuals Affordable, Energy Efficient Choices

- An individual can achieve an annual savings of more than \$9,900 by taking public transportation instead of driving and living with one less car
- Household residents living within the proximity of public transportation drive an average of 4,400 fewer miles annually compared to those with no access to public transportation
- The average household in which one member used public transportation on a given day drives 16 fewer miles per day to a household that does not use public transportation

Connecticut Projects

An important component of studies such as this is to estimate some economic value from projects which are in development and those being proposed. In order to prepare these estimates, we used numbers which have been identified throughout this study. These include updated national transit trend information which has been provided by the American Public Transportation Association and the Texas Transportation Institute. These numbers are used to estimate benefits which can be of value to decision-makers in Connecticut as they conduct their review of programs and projects throughout the State.

The study first provides estimates of four active capital projects:

- New Haven to Springfield Commuter Rail project
- New Britain Hartford Busway
- New Haven Rail Station, and
- West Haven Rail Station

Finally, the report provides economic benefit information from 13 proposed transit corridors in currently underserved corridors, which have been identified most recently through the **Missing Links Report**, prepared in conjunction with the Regional Plan Association and Transit for Connecticut.

New Haven Springfield Commuter and Intercity Rail Project

This project proposes the reinstallation of double track and station improvements on the NHHS corridor between New Haven, CT and Springfield, MA. Improvements to this corridor have been recognized as a key component in meeting the goals of improving and sustaining the regional economic viability and improving regional livability in Connecticut. This was further recognized by the Connecticut Transportation Strategy Board as an important step in implementing a statewide strategic plan.

This corridor will be utilized for both passenger and freight service over a 62-mile route. Passenger station stops on the existing route are in New Haven, Wallingford, Meriden, Berlin, Hartford, Windsor, Windsor Locks, and Springfield, MA. These stations will continue to be served as part of the improved Intercity and new Commuter service. Commuter stations will be added at New Haven State Street, North Haven, Newington, West Hartford, and Enfield. The project will add necessary track infrastructure in order to provide increased passenger service and allow for growth in freight service without negatively impacting the ability of freight operators to provide delivery services to local industry.



This corridor may ultimately serve as the nation's starting point for the development of high speed rail infrastructure.

- 5,000 average daily new riders –
 - Average of \$750 annual is the cost of congestion of CT drivers in the New Haven, Bridgeport and the New York region- Total Savings \$3,750,000 in congestion costs
 - 175, 000 hours in delay saved for these new commuters

- \$9,900 total savings per household if the new riders eliminate the need for a second car in household
- Employment
 - Overall, employment impacts are estimated to amount to 4,710 direct job-years in the study area. The operations related job-years in 2019 will recur in the same magnitude for each year thereafter given the operations and maintenance expenditures are assumed to remain constant into the future.

Job-Years or FTE Jobs										
	Time Horizon									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Construction & Engineering	70	200	330	520	580	530	520	250	110	3110
Operations & Maintenance	0	0	0	0	0	400	400	400	400	1600

- Estimated Incremental Capital Cost \$479 million
 - Can lead to \$1,916,000, 000 in benefits to the State, including investment in the corridor, TOD and increased local property tax benefit at the stations, increased tax revenue from workers and operators.

New Britain - Hartford Busway

This project is one of the original 10 federal pilot projects looking to initiate the Bus Rapid Transit mode in the nation. The idea of bus rapid transit is to provide customers with a fast, convenient service similar to rail service, with lower capital investment than rail as the service is operated with buses. The service is designed to reduce travel time for customers using techniques such as few stops, traffic signal priority, off board fare collection, identifiable branding and marketing.

The busway project in this corridor will have more flexibility and convenience to customers as the service will have the ability, once off the fixed guideway, to provide direct service to employment and the Hartford city center using a one seat ride.

- 5,000 to 6,000 new daily riders in the corridor
 - Average of \$541 annual is the cost of congestion of CT drivers in the Hartford region- Total Savings \$2,705,000 in congestion costs
 - 5,000 daily hours of delay saved for these new commuters
 - \$9,900 total savings per household if the new riders eliminate the need for a second car in household
- Employment
 - 4710 added total FTE jobs for project planning design and construction
- Project Capital cost \$567,000,000

- Can lead to \$2,268,000, 000 in benefits to the State, including investment in the corridor, TOD and increased local property tax benefit in downtown Hartford in the vicinity of Union Station, and increased tax revenue from workers and operators.

New Haven Train Station Parking

- Projected Capital Cost
 - \$4,000,000 design
 - \$40,000,000 construction
- Employment impact
 - Additional FTE 1,584 jobs
- Economic impact
 - Can lead to \$176,000,000 in benefits to the State, including investments in the station area, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending

West Haven Rail Station

- Projected Capital Costs
 - \$140,000,000 total
- Employment impact
 - Additional FTE 5,040 jobs
- Economic impact
 - Can lead to \$560,000,000 in benefits to the State, including investments in the station area, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending



13 Priority Transit Routes – Missing Links Report

The **Missing Links** Report completed for *Transit for Connecticut* listed 13 priority transit routes for investment in the state. These routes provide essential “walkable links” to centers currently underserved by public transportation routes, but whose development would provide critical links to employment, healthcare and other quality of life benefits to the communities and their residents, as described in the earlier sections of this report.

From an economic impact perspective, the following information has been derived from existing sources, including the Connecticut DOT and the Census Transportation Trip Package for average daily commuting traffic information. The source of information for projected operating costs was based on estimates from the **Bus Transit Needs Study**, completed in 2007. From an operating cost perspective these estimates are low using the rate of \$41 as the average annual operating cost of service. In today’s market this number should range between \$65 and \$90 as the average annual subsidized operating rate for service, therefore the estimated economic impacts are conservative.

1. **New Haven to Meriden corridor**- approximately 23 miles connecting two communities. Total daily commuting in the corridor is 15,144 daily vehicle trips.
 - Total annual cost of service projected to be \$607,602; total annual hours of service is 14,820.
 - Estimates benefits:
 - Additional employees- Full time equivalent (FTE) 7.2 operators
 - Economic impact- project could provide additional \$2,430,408 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.

2. **Newington to Buckland Hills**- approximately 18 miles of service connecting two suburban centers. Total daily commuting in the corridor is 10,251.
 - Total annual cost of the service projected to be \$562,980; total annual hours of service is 13,780.
 - Estimates of benefits:
 - Additional employees- FTE 6.6 operators
 - Economic impact- project could provide additional \$2,259,920 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.

3. **Coastal Link expansion north to New Haven**, an expansion of 15 miles from the successful regional coast link service which currently operates south from Milford. Total daily commuting in the corridor is 8,086.
 - Total projected annual operating cost of the service is \$362,440; total annual hours- 8,840.
 - Estimated benefits:
 - Additional employees- FTE 4.25 operators
 - Economic impact- project could provide additional \$1,449,760 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.

4. **Hamden to North Haven Spur**, an extension of 3.9 miles of service in active suburban centers. Total daily commuting in the corridor is 7,406.
 - Total annual projected operating cost of the service is \$202,540; total annual operating hours for the service is 4,940.
 - Estimated benefits:



- Economic impact- project could provide additional \$810,160 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
- Additional employees- FTE 2.4 operators

5. **Rocky Hill to Glastonbury Express**, an extension of 9.1 miles of service in an active suburban corridor. Total daily commuting in the corridor is 4,802.

- Total annual projected operating cost of the service is \$362,440; total annual operating hours for the service is 8,840.
- Estimated benefits:
 - Economic impact- project could provide additional \$1,449,760 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 4.25 operators



6. **New Canaan to Merritt 7**, an extension of 5.7 miles of service in active suburban corridor connecting into the center of Norwalk. Total daily commuting in the corridor is 4,160.

- Total annual projected operating cost of the service is \$202,540; total annual operating hours for the service is 4,940.
- Estimated benefits:
 - Economic impact- project could provide additional \$810,160 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 2.4 operators

7. **Bradley International Airport to Windsor Locks**, an extension of 4.5 miles of service connecting from the airport to its closest urban center. Total daily commuting in the corridor is 3,204.

- Total annual projected operating cost of the service is \$202,540; total annual operating hours for the service is 4,940.
- Estimated benefits:
 - Economic impact- project could provide additional \$810,160 in benefits to the region, including investments in the airport and station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 2.4 operators

8. **Ansonia to Orange**, an extension of 13.6 miles of service connecting active suburban centers. Total daily commuting in the corridor is 2,703.
 - Total annual projected operating cost of the service is \$405,080; total annual operating hours for the service is 9,880.
 - Estimated benefits:
 - Economic impact- project could provide additional \$1,620,320 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 4.75 operators

9. **Meriden to Bristol**, an extension of 14.9 miles of service in active suburban centers. Total daily commuting in the corridor is 2,091.
 - Total annual projected operating cost of the service is \$405,080; total annual operating hours for the service is 9,880.
 - Estimated benefits:
 - Economic impact- project could provide additional \$1,620,320 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 4.75 operators

10. **Plainville to Southington**, an extension of 5.6 miles of service in active suburban centers. Total daily commuting in the corridor is 1,884.
 - Total annual projected operating cost of the service is \$202,540; total annual operating hours for the service is 4,940.
 - Estimated benefits:
 - Economic impact- project could provide additional \$810,160 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 2.4 operators

11. **Pawcatuck (Stonington) to Foxwoods**, an extension of 11.6 miles of service in an active corridor serving one of the CT casinos from a large suburban community with extensive tourist traffic. Total daily commuting in the corridor is 1,601.
 - Total annual projected operating cost of the service is \$405,080; total annual operating hours for the service is 9,880.
 - Estimated benefits:
 - Economic impact- project could provide additional \$1,620,320 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 4.75 operators

12. **New Britain to West Hartford**, an extension of 7.9 miles of service in active suburban commercial centers. Initial routing would stop at CCSU and Westfarms Mall. Ultimately, this route would travel via the planned busway, connecting downtown New Britain with West Hartford center. Total daily commuting in the corridor is 1,422.
- Total annual projected operating cost of the service is \$362,440; total annual operating hours for the service is 8,840.
 - Estimated benefits:
 - Economic impact- project could provide additional \$1,449,760 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 4.25 operators
13. **Extending the GBTA Route 15 to Shelton and Ansonia**, an extension of 6.3 miles of service connecting active suburban centers. Total daily commuting in the corridor is 7,406.
- Total annual projected operating cost of the service is \$202,540; total annual operating hours for the service is 4940.
 - Estimated benefits:
 - Economic impact- project could provide additional \$810,160 in benefits to the region, including investments in the station areas, TOD, and increased local property tax benefit from development opportunity costs, taxes, and local and regional spending in and around the corridor.
 - Additional employees- FTE 2.4 operators