

EXPANDING BUS TRANSIT

TO BRIDGEPORT
AND WATERBURY

DANBURY

WATERBURY

BRIDGEPORT

FINAL REPORT
DECEMBER 2007

Prepared for HVCEO by:



Housatonic Area Regional Transit

Eric C. Bergstraesser, Chief Executive Officer

Report Authors:

Richard A. Schreiner, Director of Service Development

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INTRODUCTION

Study Purpose

The Purpose of this study is to determine the need for and possible structure of public transit connections between the Housatonic Valley Region and the urban centers of Waterbury and Bridgeport.

The benefits of public transit are widely recognized, and range from reduced congestion and accidents to social and economic benefits. According to the *2007 Bus Transit Needs Analysis* completed by Transit for Connecticut:

Public transportation has long been recognized as an efficient, environmentally sound means of travel, particularly in relation to the single-occupant automobile. In addition to the efficiency offered by bus transit on a per-trip basis, multi-modal connections such as those between rail and bus enhance the use of transportation modes other than the automobile. Public transit can enhance the efficiency of the entire transportation network as more individual person trips are combined in fewer vehicles. This increased efficiency and connectivity can help manage overall traffic congestion and by extension lessen environmental impacts.

Reduced traffic congestion and fewer vehicle trips reduce pollution. Similarly, clean diesel engine technology will further reduce particulate and greenhouse emissions and increased ridership encourages alternatives to the single occupant automobile.

The Transit for Connecticut document explains that the state is underinvested in transit per capita when compared to nearby northeastern states. The Danbury area is noted in particular as having far less than the optimal levels of transit.

Connecticut inter-city bus services

Inter-regional bus transit routes, often operated in coordination by multiple agencies, began in earnest in the late 1990's in Connecticut as part of jobs access initiatives. They have become a cornerstone in efforts to improve transit services statewide over the past ten years.

These interregional bus services include:

- the I-Bus, between Stamford and White Plains, NY,
- the Coastal LINK, operated between Milford and Norwalk,
- GBTA's route 15 operated between Bridgeport, Shelton and Derby.
- and, the Route 7 LINK, between Danbury and Norwalk.

All these routes are success stories. The longer 7 LINK and Coastal LINK routes employ multiple providers for operating efficiency, and all have improved connections between rail and bus systems in neighboring jurisdictions. The Coastal LINK is most successful, with three transit systems operating the route in tandem and over 2,800 daily riders.

These positive developments, demographic trends, discussions with job developers and ridesharing agencies suggest that expansion of inter-regional connections outside the Housatonic Region are warranted and could successfully attract State subsidy.

Two major cities near Danbury with limited transit connections are Waterbury and Bridgeport. The Housatonic Valley is the fastest growing region of the state, Bridgeport is its largest city, and Waterbury its fifth largest.

No direct public or privately operated transit connection between Danbury and Bridgeport has existed since the mid 20th century. Limited intercity bus service exists between Waterbury and Danbury, and is not coordinated with local systems.

Danbury-Waterbury Corridor

HART first proposed a publicly supported bus service between Danbury and Waterbury in its 1994 Waterbury/Danbury Express Bus feasibility Study. This service predated welfare reform efforts that spurred expansion of bus routes, and was not funded.

- A few years later, Michael Gallis, writing in Connecticut Business Magazine called the I-84 corridor “one of the most underutilized assets of the state.” Gallis further discusses the need for Danbury and Waterbury to combine resources to develop the critical mass to compete economically.
- Waterbury is becoming a bedroom community for adjacent regions, so that the number of workers in the Central Naugatuck Region is less than the number living there that are employed. This gap has increased since the 1990 census.
- Over 7000 commuters travel each day from the Central Naugatuck Valley Region to work in the Housatonic Valley Region.
- According to ConnDOT, the stretches of I-84 in Waterbury and Bethel are among the most congested segments of Connecticut’s interstate highway system. Only the Hartford area is considered more heavily congested.

Danbury-Bridgeport Corridor

The census journey to work data for 2000 identified an increasing commuter linkage between the Housatonic Region and Bridgeport.

- During the past ten years, regional population in the Housatonic region grew 13% to over 212,000. The town of Newtown grew by nearly 21% to over 25,000 persons and has a population density equivalent to that of New Milford, which has enjoyed fixed route service for 20 years. There are twelve employers serving over 100 employees and a major shopping center in the municipality that receive no fixed route transit services.
- According to census figures, daily work trips from Greater Bridgeport to Bethel, Brookfield, Newtown and Danbury totaled 2138 in 1990. The figure in 2000 jumped to 4051, an increase of over 89%.
- Current census figures show 943 daily work trips to Newtown, or 11% of total work trips, which originate in the Greater Bridgeport Region. This number increased 10% in the past ten years. 861 daily work trips to Newtown originate in Danbury, up from 457 in 1990.
- There is only limited transportation to the community of Monroe, with a population of over 19,000. Monroe is the fastest growing municipality in the Greater Bridgeport Region, with a population increase of 14% since 1990. Route 25 is a major commercial corridor in Monroe and includes a large shopping center not served by transit.

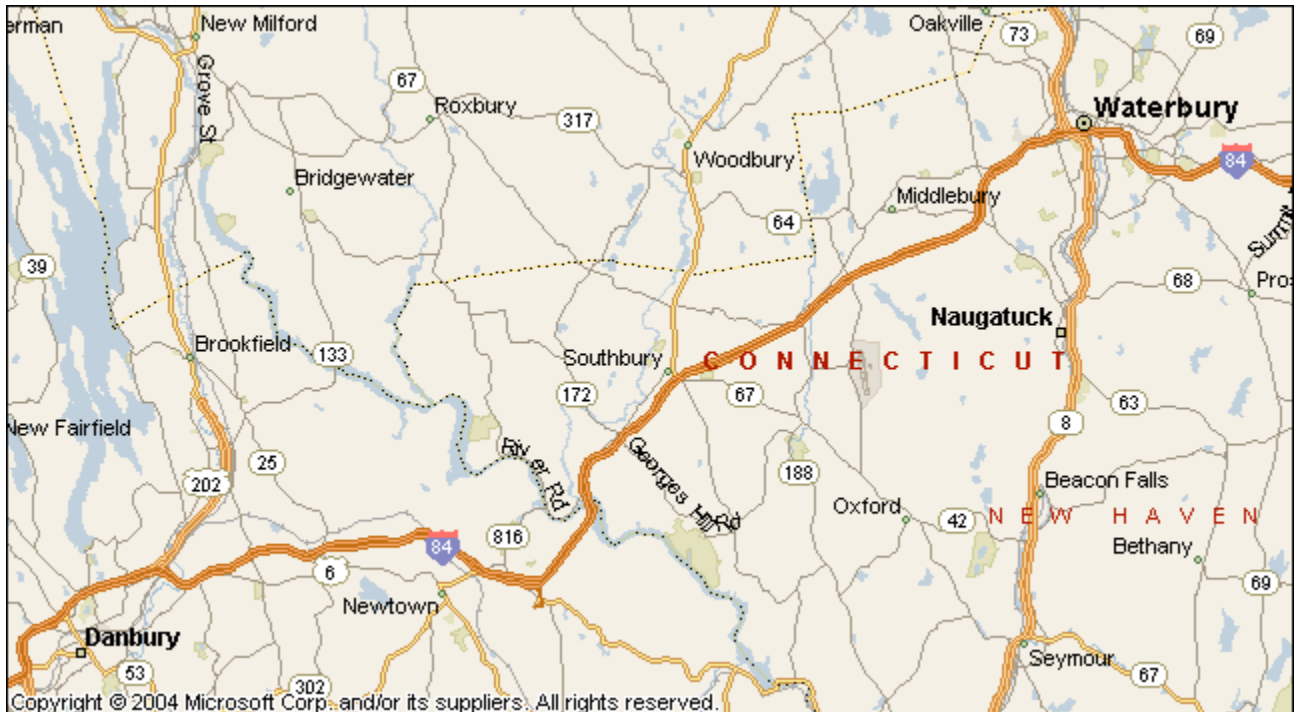
EXISTING CONDITIONS

Danbury-Waterbury Corridor

I-84

Interstate 84 provides a 27 mile link between the central business districts of Danbury and Waterbury. Seven municipalities including Danbury, Bethel, Brookfield, Newtown, Southbury, Middlebury and Waterbury are served directly by the highway in this segment.

From the New York State line to exit 7 in Danbury (the intersection of Route 7 and I-84), six lanes are provided. Between exit 7 and Bank Street, Waterbury, the highway is four lanes.



I- 84 between Waterbury and Danbury, CT.

In 2000, the Connecticut Department of Transportation (ConnDOT) completed a study of improvements to the interstate from the state line to the Housatonic River. The study recommended a phased plan for improvements to this segment of I-84. Phases one and

two involve small scale interchange upgrades for a total cost of almost \$22 million. Phase three, at a projected cost of just over \$83 million, calls for major capacity changes at most interchanges. Ultimately, phase four, at a cost of \$163 million, will add an additional travel lane creating eight lanes from the New York border to exit 7 and six lanes to the Housatonic.

Another ConnDOT study recommended widening and improvements to interchanges and adjacent arterials in the segments between exit 13 in Southbury and 23 in Waterbury, including the massive interchange with Route 8. The implementation of these projects is awaiting the completion of an environmental assessment by the State.

Park and Ride Lots

ConnDOT maintains several park and ride facilities in the study area. Most are lighted and paved, and some have shelters and telephones.

State Park and Ride Lot Locations, I-84 Waterbury-Danbury

<i>Municipality</i>	<i>Lot Location</i>	<i>Spaces</i>	<i>Usage 2006</i>	<i>Occupancy rate</i>
Danbury	I-84 exit 1	160	59	37%
Danbury	Route 7 @ Miry Brook Road	171	51	30%
Danbury	I-84 exit 2	112	71	63%
Danbury	Route 7 @ White Turkey Extension	75	35	47%
Danbury	Route 7 @ Federal Road	115	31	27%
Danbury	I-84 exit 4	50	6	12%
Newtown	I-84 exit 9	53	38	53%
Newtown	I-84 exit 11	78	25	32%
Southbury	I-84 exit 14	43	21	49%
Southbury	I-84 exit 15	27	10	37%
Naugatuck	Route 8 @ Cotton Hollow Road	50	32	64%
Middlebury	I-84 @ Route 63	61	48	79%
Waterbury	I-84 @ chase parkway	123	78	63%
Waterbury	I-84 exit 23	178	54	30%
Waterbury	I-84 exit 25	19	3	16%
Waterbury	Route 8@ South Main Street	46	30	65%

Sources: ConnDOT, COGCNV and HART data

Prior Transit Studies—1994 HART Waterbury Express Bus study

The 1994 HART bus study was spurred by the 1991 Statewide Transit Study, which called for foresight in planning to promote and advance alternatives to single occupancy vehicles. The 1991 study identified the Waterbury to Danbury corridor as one that held high potential for transit ridership, and recommended service implementation by 2006-2010.

The proposed operating plan was derived from the 1990 census journey to work data which reports that commutes from Waterbury to Danbury outweigh the commutes from Danbury to Waterbury. The Waterbury to Danbury route is thus considered the predominate commuter direction and Danbury to Waterbury is considered the “reverse” commute. Approximately 22 daily service hours per weekday would have been operated under the proposed service scenario.

The planned route began at the I-84 exit 2 Mill Plain Road park and ride location in Danbury and followed the 84 corridor eastward. A stop in Newtown at the exit 11 park and ride would connect with a shuttle service, operating four hours per weekday, to allow commuters to travel to points within Newtown and Route 25, terminating at the Sand Hill Plaza Shopping Center in southern Newtown.

The Waterbury Bus would continue from the exit 11 park and ride, making stops at the Southbury Travel Center, Downtown Waterbury and the Waterbury Route 69 park and ride location.

The fare structure for the service was to be a tiered fare system, with the lowest fare set at \$1.50 for a trip from Route 34 (exit 11) to Duracell in Bethel. The highest fare was set at \$3.50 for the “reverse commute” from Danbury’s exit 2 park and ride to Route 69 park and ride at I-84 exit 17 in Waterbury.

Early cost estimates for the Danbury to Waterbury express bus service were \$428,823 annually, including the cost for leasing coach buses. It was suggested that the service would rely upon \$372,572 through federal congestion mitigation/air quality (CMAQ) funds and \$56,250 from passenger fares. Initial plans called for HART to operate the service in its entirety.

A formal proposal to ConnDOT, submitted after the study was completed in 1995, was unsuccessful. ConnDOT cited costs and competition with the existing privately-operated bus line as reasons for its low priority.

Existing Corridor Transit Service - PeterPan/Bonanza Bus

Intercity bus service is provided between Danbury and Waterbury by Bonanza Bus, a subsidiary of Springfield, Massachusetts based Peter Pan Bus Lines. Peter Pan Bus Lines is the largest privately owned intercity bus company in the nation. The company operates 400 buses which serve more than 100 cities in the northeast and Mid-Atlantic States.

Peter Pan employs large, over the road coaches. The vehicles, typical for those used in long distance bus service, are equipped with high backed seats and amenities including television and bathrooms.



The company provides 8 daily trips Monday-Thursday and Saturday from Waterbury to Danbury, and 9 Fridays and Sundays. From Danbury to Waterbury 9 daily trips are provided Monday through Thursday and Saturday, with a tenth on Friday and Sunday, with a stop in Southbury as shown below, as part of a New York - Hartford route. Other stops made on the Hartford to New York line allow trips between Danbury and Southbury, Waterbury, and Farmington.

A stop in Newtown on Church Hill Road off Exit 10 of I-84 was discontinued many years ago.

This line also provides part-time service between Danbury and White Plains, Yonkers, New York City, Manchester, Willimantic, Danielson, and Providence, Rhode Island. Connections to other intercity services are possible through any other carrier serving the Port Authority Bus Terminal in New York City, the South Station Bus terminal in Boston, or Union Station in Hartford.

2007 Danbury-Waterbury Bus Schedule

<i>Danbury</i>	<i>Southbury</i>	<i>Waterbury</i>	<i>Frequency</i>
6:00 AM	6:20 AM	6:40 AM	M-Sa
10:30 AM	10:50 AM	11:10 AM	M-Su
11:25 AM	11:45 AM	12:05 PM	M-Su
1:30 PM	1:50 PM	2:10 PM	M-Su
3:30 PM	3:50 PM	4:10 PM	M-Su
5:30 PM	5:50 PM	6:10 PM	M-Su
6:30 PM	6:50 PM	7:10 PM	M-Su
7:30 PM	7:50 PM	8:10 PM	M-Su
9:25 PM	9:45 PM	10:05 PM	M-Su
11:25 PM	11:45 PM	12:05 PM	F,Su

2007 Waterbury-Danbury Bus Schedule

<i>Waterbury</i>	<i>Southbury</i>	<i>Danbury</i>	<i>Frequency</i>
5:45 AM	6:05 AM	6:25 AM	M-Sa
7:15 AM	7:35 AM	7:55 AM	M-Su
8:45 AM	9:05 AM	9:25 AM	M-Su
10:45 AM	11:05 AM	11:25 AM	M-Su
12:45 PM	1:05 PM	1:25 PM	F,Su
2:45 PM	3:05 PM	3:25 PM	M-Su
4:45 PM	5:05 PM	5:25 PM	M-Su
6:45 PM	7:05 PM	7:25 PM	M-Su

Fare Structure

Bonanza has a distance-based fare structure depending on origin and destination. Adult cash fares between Waterbury and Danbury are as follows:

- Waterbury-Danbury: \$8.50 one way
- Danbury-Southbury: \$6.50 one way
- Southbury-Waterbury: \$6.50 one way.

One child under age two per fare paying adult can ride free if not occupying a seat. A second child receives a 40% discount. Children ages 2-14 receive a 40% discount when accompanied by another passenger 15 years or older.

Peter Pan provides a 5% discount for senior citizens age 62 or older. Active or retired military personnel and their dependant family members receive a 10% discount.

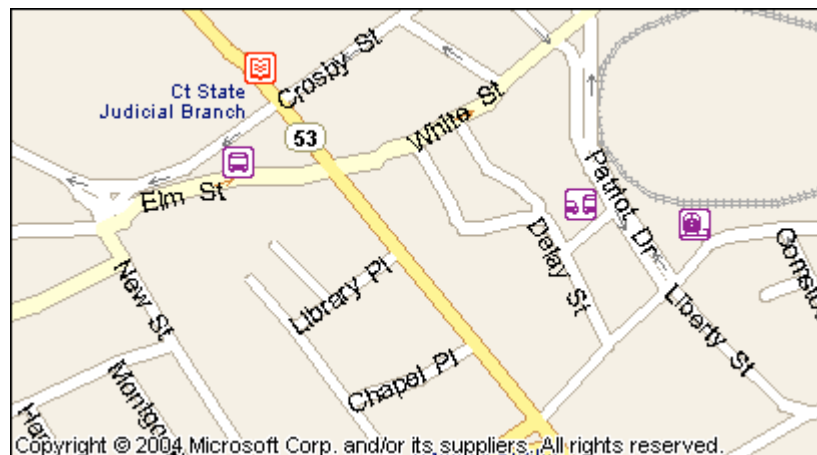
Other discounts are provided to high school and college students, but these do not apply to those boarding and alighting between Danbury and Waterbury.

Regional Intercity Bus Stops

Danbury

The Danbury Bonanza Bus Station is located in a store front on Elm Street in downtown Danbury, just west of Main Street. The facility amenities include a ticket agent, waiting area with chairs and climate control, clock, restrooms, public telephones and a luggage cart. The facility is adjacent to a convenience store and directly across Kennedy Park from the HART Pulse Point.

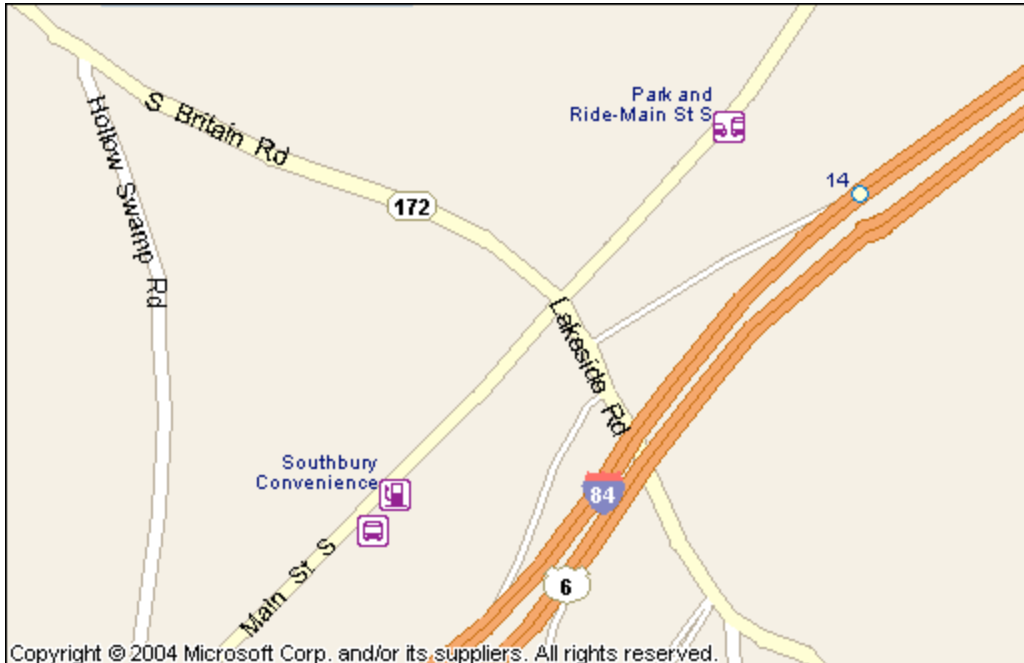
There is on-street metered parking available adjacent to the facility. A public parking lot is located on Main Street just north of the HART Pulse Point. Additional parking is available at the Patriot Garage approximately 3/10 mile away.



Downtown Danbury, CT, with intercity and local bus stations, Patriot Garage and MTA train station locations shown.

Southbury

Southbury Travel Center is located at 999 Main Street in Southbury. The facility is just off Exit 14 of I-84, in a small roadside strip that includes a Mobil station, restaurant and Dunkin Donuts. An indoor waiting area with a clock, chairs, restrooms and concession is provided. This location has short and long term surface parking with a fee by the hour. A state park and ride lot is nearby, but there is no local transit service here.

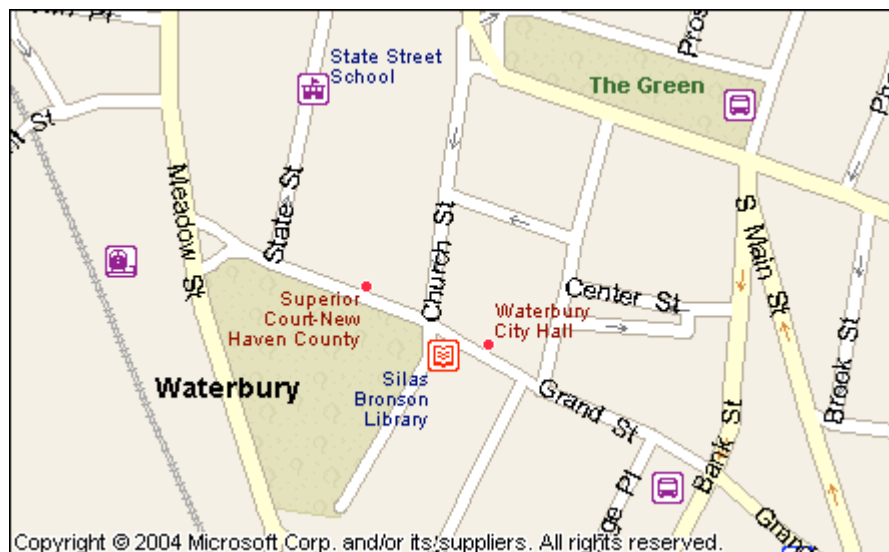


Southbury Travel Center and park and ride locations, Southbury, CT.

Waterbury

The Waterbury Travel Center is located on 188 Bank Street in Waterbury, having moved away from the Green some years ago. The travel center is located approximately two blocks away from the NET's exchange place, and roughly the same distance from the rail station.

The site features a waiting room with benches, restrooms, ticket agent and vending machines. A large parking structure with hourly fees is adjacent to the facility.



Rail Station, intercity bus and local bus stations in Waterbury, CT.

An intermodal transportation center is in the concept stage in Waterbury. The proposed center would create a centralized local bus, intercity bus and passenger rail station for the city in the Freight Street area. The Waterbury Development Corporation is the lead agency on the intermodal center.

A completed draft environmental impact evaluation is expected by 2008.

Other Inter-regional services

Danbury Hospital van service

Danbury Hospital provides free transportation to any Southbury resident that requires transportation to Danbury Hospital or any affiliated medical provider. The service operates weekdays only, with several round trips per day. Locations served in Southbury include Heritage Village, East Hill Woods, Grace Meadows, Pomperaug Woods, Kensington Green and The Southbury Medical Building.

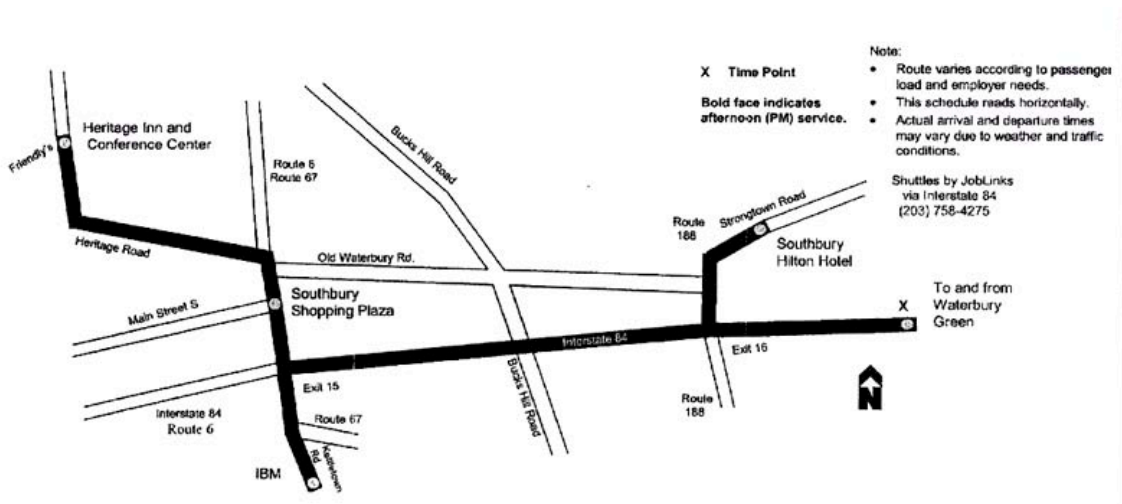
JobLinks Waterbury-Southbury service

JobLinks is a regional transportation/jobs access collaborative for Waterbury, Danbury and Torrington. JobLinks services in the Central Naugatuck Region include evening service to employment in Cheshire, Watertown, Naugatuck, Southbury, Brass Mill Center, Beacon Falls and Waterbury. JobLinks also provides transportation to childcare facilities and evening transportation to Waterbury adult education.

The Southbury service began operation in the summer of 2000, and carries approximately 250 trips per month.

The service was initially proposed as a voucher with the Bonanza Bus service and a connecting circulator bus operating in Southbury. This model was dropped in favor of a direct van service from Waterbury to major employers in Southbury.

Southbury JobLinks Service Map



Monday through Friday, Managed Transportation (MTS) departs the Waterbury Green and stops at the following employment sites: Southbury Hilton, Southbury Shopping Plaza, Heritage Inn and Conference Center, IBM, East Wood Hills and Lutheran Home.

Morning arrivals begin at 7:15 A.M. The return trip from these Southbury sites begins at 4:00 P.M. and arrives at the Waterbury Green by 4:40 P.M. Saturdays, the MTS van departs for Southbury at 7:50 A.M. and returns to Waterbury at 5:00 P.M.

Existing Waterbury-Based Transportation Resources

Northeast Transportation/ CTTRANSIT Waterbury Division

Regional bus service in the Central Naugatuck Valley Region is provided by Northeast Transportation (NET) as the operator of the Waterbury Division of CTTRANSIT, under contract with ConnDOT. NET is headquartered on Thomaston Avenue in Waterbury.

The company operates 21 urban fixed routes on a pulse system centered at the Waterbury Green, referred to by the system as exchange place. This form of scheduling allows passengers to easily transfer from one route to another at the same place without long waits.

Routes are paired or “interlined” together, so some passengers may travel from one route to another without physically transferring from one bus to another. Pulse times occur at the top and bottom of the hour, with routes on hourly pulses arriving at the green at 30 minutes after the hour.

Bus service operates Monday-Saturday between 5:30 AM and 6:00 PM.

Waterbury bus routes and major destinations

<i>Route Number</i>	<i>Route Name</i>	<i>Major Destinations</i>	<i>Municipalities Served</i>
11	Overlook	Mattituck Museum, Carlton Towers, Temple B’Nai Shalom	Waterbury
12	Hill Street	NOW Inc., Mattituck Museum	Waterbury
13	Oakville	Temple Beth El, Lewis Fulton Park, Nottingham Tower Apts., Waterbury Industrial Commons, Fort Hill Park	Waterbury
15/16	Bucks Hill	Waterbury Plaza, St. Mary’s Russian Orthodox Church, Bucks Hill Park	Waterbury
18	Long Hill	UConn Waterbury Campus, Berkeley Heights	Waterbury
20	Walnut	Police Station, WOW Center	Waterbury
22	Wolcott	Brass Mill Center, Bouley Manor, Mattituck Plaza, Naugatuck Valley Shopping Center, Wolcott Industrial Park	Waterbury Wolcott
25	Hitchcock Lake	East Gate Shopping Center, Hamilton Park, Meridian Manor, Easter Seals, Waterbury Company, Sunrise Gardens.	Waterbury
26	Fairlawn	Fairlawn, Waterbury Boys Club	Waterbury

Waterbury bus routes and major destinations (continued)

<i>Route Number</i>	<i>Route Name</i>	<i>Major Destinations</i>	<i>Municipalities Served</i>
27	Reidville/East Main	Reidville, Police Station, Industrial Park, UConn Waterbury Campus	Waterbury, Cheshire
28	Scott Road	Reidville, East Gate Apartments, Prospect	Waterbury, Prospect
31	East Mountain	Brass Mill Center, East Mountain	Waterbury
32	Hopeville/Sylvan	Washington Hill, Hopeville, St. Mary's Hospital	Waterbury
33	Hopeville/Baldwin	Washington Hill, Hopeville, St. Mary's Hospital	Waterbury
35/36	Town Plot	Home Depot, Brooklyn, Town Plot, Mt. Carmel Church	Waterbury
40	Town Plot/Highland	West Side Hill, MTA Rail Station, Town Park, Kennedy HS	Waterbury
42	Chase Parkway	Middlebury, Naugatuck Valley Community College, Harold Leever Cancer Center, Oronoke	Waterbury, Middlebury
44	Bunker Hill	Bunker Hill, Health Center of Greater Waterbury, Bunker Hill ES, Waterbury Hospital	Waterbury
45	Watertown	Watertown, Taft School, Watertown Shopping Plaza, Municipal Stadium, Kaynor Tech, Brookside Industrial Park.	Waterbury Watertown
N1	Naugatuck/Millville	Naugatuck HS, Mountainview Shopping Plaza, Risdon, Library, Seale Factory	Naugatuck
N2	Naugatuck/New Haven Road	Salem Square, Crosspointe plaza, Peter-Paul, Wal Mart, Straitsville	Naugatuck

The bulk of urban fixed route service is operated in Waterbury with limited service to Middlebury, Naugatuck and Watertown. The system operates 31 vehicles in maximum service, with an average productivity level a very respectable 25 passengers per hour.

Total annual unlinked passenger trips for the Waterbury bus system exceeded 1.8 million in fiscal year 2005.

Fare Structure

CTTRANSIT offers a variety of discounted fare options. Seniors and students with valid ID are eligible for discounted 10 ride tickets based on their cash fares. Discounted unlimited ride passes are validated by the electronic farebox using a magnetic swipe card system, similar to MTA’s MetroCard.

NET Fare Structure

<i>Fare Class</i>	<i>Cash</i>	<i>10 Ride Pass</i>
Full Fare/Adult	\$1.25	\$11.25
Youth (5-18)	\$1.00	\$9.00
Senior or Disabled	\$0.60	\$5.40

In lieu of a monthly pass, CTTRANSIT offers unlimited ride passes that are activated on their first use, according to the schedule below. There is no additional discount for senior or youth riders on unlimited ride passes:

- All Day Pass: \$3.25
- 3 –Day Pass: \$7.50
- 5-Day Pass: \$11.25
- 7-Day Pass: \$15
- 31-Day Pass: \$45

Transfers are issued free of charge.

Other Waterbury Bus services

CTTRANSIT New Haven Division

The J Route of CT Transit’s New Haven division runs from the Waterbury Green to New Haven via Route 10 in Cheshire. This service is operated with the same fare structure as the NET-operated service in Waterbury.

Weekdays, buses arrive from New Haven at approximately 15 minutes after the hour, between 6:15 A.M. and 7:15 P.M., with hourly headways. Buses depart for New Haven at the bottom of the hour. On Saturdays, headways are reduced to once every other hour. Saturday arrivals in Waterbury occur between 6:25 A.M. and 6:15 P.M., and buses depart for New Haven at 50 minutes after the hour between 6:50 A.M. and 6:30 P.M.

Housatonic Region Transportation Resources

Housatonic Area Regional Transit (HART)

HART operates fixed route bus service in the Housatonic Valley Region. The majority of service is radial in nature with seven routes extending outward from the central business district of Danbury. HART carries over 2200 unlinked passenger trips per weekday on its fixed route services; productivity averages between 15 and 16 passengers per hour.

As in Waterbury, much of the HART fixed route bus system operates in a pulse or timed-transfer mode, with all routes meeting at the Pulse Point on Kennedy Avenue and Main Street in Danbury at the same time at regular intervals throughout each day.

Bus frequencies of every 60 minutes are provided on routes 1-7 Monday through Saturday with 30 minute frequencies provided during the morning and afternoon peak periods (6:00 A.M. to 9:00 A.M. and 3:00 P.M. to 6:00 P.M.), Monday through Friday. The span of service is from 6:00 A.M. to 6:00 P.M. on routes 1-7 Monday through Friday. The Saturday span of service ranges from approximately 8:00 A.M. to 5:30 P.M.

Jobs Access LOOP services are provided with hourly headways on the Mall Hospital LOOP and Newtown Road-South Street LOOP, and two hour headways on the New Milford LOOP. LOOP services operate Monday-Friday 6:30 to 10:30 P.M., Sunday 5:30-10:30 P.M. and Sundays between 9 A.M. and 7 P.M.



Front bays at HART Kennedy Avenue Pulse Point, looking towards Main Street, Danbury.

Harlem Line rail shuttle services are timed to meet Metro-North commuter trains on the Nearby Harlem Line in New York State, and are not part of the pulse system. Only three morning Danbury-Brewster Shuttle trips and two evening trips serve the Pulse Point

The Danbury-Norwalk Route 7 LINK bus provides service between Norwalk and Danbury via Route 7, operated jointly with the Norwalk Transit District. The service is operated weekdays between 6:00 and 11:50 A.M. and from 3:00 to 8:45 P.M.

HART bus routes and major destinations

<i>Route Number</i>	<i>Route Name</i>	<i>Major Destinations</i>	<i>Municipalities Served</i>
1	Medical Center/Golden Hill	Danbury High School, North Street Shopping Center, Danbury Hospital, Sand Pit Medical Center	Danbury
2	Stony Hill	Berkshire Shopping Center, Eden Drive, Commerce Park, Berkshire Corporate Park, Ability Beyond Disability	Bethel Danbury
3	Mill Plain	Mill Ridge Road, Super Stop&Shop, Boehringer Ingelheim, Union Carbide, Brewster Village, NY	Brewster Danbury
4	Brookfield	Germantown Plaza, Sand Pit Medical Center, Loews Theater, Stew Leonards, Costco, Regional YMCA	Brookfield Danbury
5	Bethel Center	Main Street Danbury, Francis Clarke Industrial Park, Bethel High School, Bethel Center, Reynolds Ridge	Bethel Danbury
6	Lake Avenue/ Danbury Fair Mall	Danbury City Hall, Mill Ridge, Barden Corporation, Danbury Fair Mall, Danbury Square Mall, Cartus, LORAD	Danbury
7	New Milford	WCSU, Federal Road, Brookfield Municipal Center, Kimberly Clark, New Milford Green, New Milford Hospital	Brookfield Danbury New Milford
	Danbury-Brewster Shuttle	Park and ride lots at I-84 exits 7, 2 and 1, Danbury Fair Mall, Brewster Village	Brewster Danbury
	Mall-Hospital LOOP	Danbury Fair Mall, Danbury Square Mall, Main Street, Danbury Hospital, Mediplex, WCSU	Danbury
	Newtown Road – South Street LOOP	Berkshire shopping Center, Bethel Center, WCSU downtown campus,	Bethel Danbury
	New Milford LOOP	Federal Road, Stew Leonards, New Milford Hospital, New Milford Green, Shop Rite	Brookfield Danbury New Milford
	Ridgefield-Katonah Shuttle	Katonah, NY, Ridgefield Central Business District, South Salem, NY.	Ridgefield Lewisboro, NY Bedford, NY
	Danbury-Norwalk Route 7 LINK	Danbury Fair Mall, Wilton Center, Merritt 7, Norwalk Central Business District, Georgetown, Branchville	Danbury Redding Ridgefield Wilton Norwalk
	CityCenter Danbury Trolley	Rogers Park, Main Street Danbury, Danbury Fair Mall, Kenosia Park	Danbury

The CityCenter Trolley operates a downtown circulator route Wednesday through Friday, with 60 minute headways. Service operates between 9:30 AM and 3:00 P.M.

Fare Structure

HART offers ten ride punch passes and unlimited ride passes as shown below. Unlike CTTRANSIT, HART does not have fareboxes that are set up to read magnetic swipe passes. HART's unlimited ride pass is a simple flash pass good for the period of any given month.

<i>Fare Class</i>	<i>Cash</i>	<i>10 Ride Pass</i>	<i>Monthly Pass</i>
Full Fare/Adult	\$1.25	\$11.00	\$45
Student K-12	\$0.90	\$8.25	\$32
Senior or Disabled	\$0.60	\$5.50	\$22.50

Valid transfers from any HART service are accepted on fixed route buses. Transfers are issued free of charge.

Service changes in the winter of 2008 are expected to reduce the headways on the New Milford LOOP to hourly.

A third shuttle route between New Fairfield and the Southeast, NY station is anticipated to begin in spring 2008. This service is not planned to connect with the HART Pulse Point.

New Haven Line Rail Services

Both Danbury and Waterbury are served by northward branches of the New Haven Line, which runs along coastal Connecticut between Grand Central Terminal in New York and New Haven, Connecticut. ConnDOT provides the subsidy for passenger rail service, which is operated by MTA Metro-North Railroad. ConnDOT owns all rolling stock and infrastructure used in the Branch Line services.

Danbury Branch Line

The Danbury Branch Line is a single-tracked spur of the New Haven Line that runs for 24.2 miles between South Norwalk and Danbury. In the Housatonic Valley, there are stations located in Ridgefield, West Redding, Bethel and Danbury. An additional station stop is planned in Georgetown near the Wilton, CT line as part of the redevelopment of the former Gilbert and Bennett wire mill. The service carries approximately 1200 boardings per day.

The future of the Branch Line and the Route 7 Corridor has been the subject of some 14 studies by the Housatonic Valley Council of Elected Officials (HVCEO), the Connecticut Department of Transportation (ConnDOT) and the Southwestern Regional Planning

Agency (SWRPA) since 1987. ConnDOT is currently engaged in the second phase of a federally funded study that will provide recommendations for improvements and possible re-electrification of the line.



MTA Metro-North Railroad Station on Patriot Drive, Danbury

Weekdays, a total of ten trips per day operate from Danbury to Grand Central Terminal (GCT). Three peak period trips per weekday are through trains to GCT. All other trips require transfers to mainline trains in South Norwalk. In the opposite direction, ten trips per weekday originate at GCT with arrivals at Danbury Station. Three trips in the opposite direction are through trains requiring no transfer in South Norwalk.

Service is oriented to a southbound commute with A.M. peak departures from Danbury between 5:34 A.M. and 7:57 P.M. and evening peak arrivals between 6:18 P.M. and 8:59 P.M. Reverse commutes are problematic as the first northbound train arrives in Danbury after 10:00 A.M.

On weekends and holidays, six trips are provided in each direction between South Norwalk and Danbury. All trains require transfers in South Norwalk for those that wish to travel to points west or to GCT. The Danbury train station is accessible via Patriot Drive in Downtown Danbury, opposite the Patriot Garage.

Access to the 140-space parking area is by permit. There are sidewalks to the site, which is within walking distance to the HART Pulse Point.

Waterbury Branch Line

The 27 mile Waterbury Branch Line, also single tracked, provides station stops in Waterbury, Naugatuck, Beacon Falls, Seymour, Ansonia and Derby with connections to the mainline in Bridgeport and Stratford.

A 1.2 million dollar ConnDOT-sponsored study of the Waterbury Branch is pending. The study will examine possible infrastructure improvements, ways to increase ridership, station accessibility, bus connections to stations and parking.

Historically, the Waterbury Branch has shown the lowest ridership and farebox recovery of Connecticut's rail services (only 108 boardings per day in 2001, according to a ConnDOT study). The line lacks any major passing sidings, which limits the ability to provide significant levels of rail service. The stations on the line have no ticket agents or vending machines.

Weekdays, seven trips per day are provided from Waterbury to GCT, with the same number in the opposite direction. All trips require transfers in Bridgeport or Stratford. Weekends and holidays, four trips are provided in each direction.

The Waterbury Metro-North train station is located on Meadow Street, adjacent to historic Waterbury Union Station, now the home of the *Republican-American* newspaper. The station is approximately a third of a mile from the Waterbury Green and exchange place.



The Waterbury, CT, MTA Metro-North Railroad Station. I-84 is visible in the background.

EXISTING CONDITIONS

Bridgeport-Danbury Corridor

This section details the existing conditions along the Route 25 corridor. The Danbury-based transit resources are detailed in the Existing Conditions for Danbury-Waterbury chapter of this report, on pages 16-19.

Route 25

Route 25 is the primary arterial connection between the cities of Bridgeport and Danbury. The roadway originates at I-95, and runs northwest for almost 29 miles to Route 7 in Brookfield. Route 25 can be easily accessed from Danbury via Route 6 at I-84 exit 9 in Newtown, or off of I-84 exit 11 in Newtown via Wasserman Way, through the former Fairfield Hills Hospital campus.



Route 25 between Newtown and Bridgeport

Beginning at its intersection with I-95, Route 25 extends for 3.75 miles as an eight lane expressway where it overlaps with Route 8. A six-lane section continues through Trumbull for 2.5 miles, transitioning at its intersection with Route 111 into a two lane road.

Several intersections along the roadway are scheduled for improvements. According to GBRPA, design of intersection improvements in Trumbull and Monroe are at or near completion, with construction expected in the next several years.

Park and Ride locations

There are a few park and ride locations in this corridor, as shown below. The largest on the corridor is the Route 111 and 25 lot in Trumbull, at the transition between the limited access and two lane segments of the roadway. The Daniels Farm Road lot is adjacent to the Route 25 expressway, just north of its junction with Route 8.

State Park and Ride lots in the Route 25 Corridor

<i>Municipality</i>	<i>Lot Location</i>	<i>Spaces</i>	<i>Usage 2006</i>	<i>Occupancy rate</i>
Newtown	I-84 exit 9	53	38	53%
Newtown	I-84 exit 11	78	25	32%
Trumbull	Route 25 and Route 111	100	25	25%
Trumbull	Route 25 and Daniels Farm Road	89	10	11%

Employment along the Route 25 corridor, Trumbull to Newtown

The two lane segment of Route 25 between Newtown and Trumbull is characterized by numerous commercial strip developments along its length, and includes several major employers and shopping centers.

Beginning at the southern end of the two lane section, a cluster of major employers is located at MP 9.87, at the intersection of Routes 25 and 111. Less than 300 yards away from the intersection, at 48 Monroe Turnpike, is the corporate headquarters of the Oxford Healthplans division of United Health Care, an HMO.

Less than a mile northwards at the intersection of Spring Hill Road at MP 10.5, a second United Health Care location is located directly on Route 25. Schweppes beverages and Gardner Denver, a manufacturer of pumps and compressors, are a half mile away on Trefoil Drive along with several other smaller employers.

Reaching Monroe at MP 10.75, the entrance to the recently constructed Swiss Army Victorinox North American Headquarters building is located here, just north of the town line at Victoria Drive. Vishay Vitramon, a semiconductor manufacturer, and O'Keefe Controls, a manufacturer of specialty fluid control products, front Route 25 and are within a quarter mile.

The Clocktower Square Shopping Center is located at MP 12.87, on the corner of Routes 59 and 25 in the Stepney area. Route 25 then becomes Main Street in Monroe, with M-cubed Technologies located on Route 25 just south of the Newtown line, at approximately MP 15.

Continuing, Route 25 then transitions to South Main Street, then Main Street in Newtown. The Sand Hill Plaza shopping center is located on South Main Street at roughly MP 16.8. This shopping center, at over 159,000 square feet, includes multiple retail facilities such as TJ Maxx and Stop and Shop and is the largest in Newtown. Approximately one third mile from here on Route 25, just past Ethan Allen Road, is the entrance to Blue Linx building supplies.

In the vicinity of milepost 17.49 at Huntingtown Road, there are several large employers. Kendro Laboratory products, a bio-pharmaceuticals firm is located on Pecks Lane, less than 400 yards from its intersection with Route 25. Hubbell Plastics, a thermoset plastics manufacturer, operates a work location on the corner of Route 25 and Prospect Drive.

At MP 18.3, Fairfield Processing, a leading textile manufacturer, has a facility on Route 25 opposite the intersection with Apple Blossom Lane. The location of the Taunton Press, a magazine publishing company, is less than a mile north, on Route 25 adjacent to the intersection with Mile Hill Road at MP 19.10.

The Central Business district of Newtown, at the intersection of Routes 6 and 25, is at MP 20.16. There are multiple employers within a two mile radius, including three schools and municipal offices. Many are within a half mile of Church Hill Road/Route 6 which intersects with Route 25 here.

- A shopping center, including a Big Y, is located less than a half mile away on nearby Queen Street.
- Pitney Bowes, the leading manufacturer of postage meters, and Rand Whitney container company have work locations on Edmund Road, under two miles away.
- Charter Communications and TR Paul are located on Commerce Drive, a mile away.

Route I-84 is located at MP 23.20.

Prior Studies and transit planning work in Route 25 Corridor

Newtown/New Fairfield Fixed Route feasibility plan

In 1993 HART prepared a Newtown fixed route bus expansion study. The study recommended bus service that would have two operating regimens, both based off the route 25 corridor from the Bethel town line to Sand Hill Plaza in Southern Newtown. A variety of service spans and headways were suggested, with the recommended option being the same level of service provided on the HART urban fixed route system (30 minutes peak, 60 off-peak). The service would operate as an extension of HART's existing 2 Stony Hill Route, which terminates at the Big Y in Bethel.

- Before 9 A.M. and again after 3 P.M., service would be provided off the trunk route to employment locations on Church Hill Road and to Fairfield Hills Hospital (no longer operating, and now owned by the Town of Newtown).
- From 9 A.M. to 3 P.M., buses would service Sandy Hook, Newtown Senior Center and the Nunnawauk Meadows Senior housing complex for shopping trips.

Total drive time between the Pulse Point in Downtown Danbury and Sand Hill Plaza in Newtown was estimated at 55 minutes.

As an alternative to the service described above, a peak period express bus service to employment locations in the area of exit 10 was suggested. The service would operate between 7 and 8:30 A.M. and 3:30 – 5 P.M. with 30 minute headways.

Route 25 Corridor Congestion Management Study

The Greater Bridgeport Regional Planning Agency released this study in December, 1999. The study examined the recurring congestion in the Route 25 corridor from Route 111 and the end of the Route 25 Expressway and the Monroe-Newtown line.

The study reported that traffic volumes were very high, generally over 20,000 daily vehicles. Severe, recurring congestion occurs in the northbound direction in the evening peak period. Accidents occur at a rate greater than expected given the type of road and traffic volumes.

Data analysis suggested a wide range of potential improvements that were incorporated into an Immediate and Short Term Transportation Action Plan. This Action Plan provided a framework for planning by the MPO and ConnDOT regarding improvements to Route 25.

Transit improvements were among the recommended actions. These included the extension of GBTA bus routes beyond the Route 111 intersection, as well as shuttle service between employment and residential areas that would improve transit connectivity with the Bridgeport rail station.

Connecticut Statewide Bus Study

In July 2000, ConnDOT released the Connecticut DOT Statewide Bus System Study. The study provided an in-depth analysis of the performance of all the state's bus systems and made recommendations for improvement.

One of the long term recommendations for the HART system was an extension of fixed route service to Newtown. The proposed route would express from the pulse point via I-84 to exit 8. There it would provide some local service, then continue towards Newtown via Stony Hill Road/Route 6.

It was proposed that the bus deviate off the trunk route as needed in Newtown to pick up or drop off passengers in designated catchment areas.

The extension would be weekday only, and operated hourly during peak periods. A smaller paratransit style bus was suggested.

Inter-regional Transit Connections

There is no direct public or privately operated transit connection between the Bridgeport and the Housatonic Region. Historically, intercity bus and rail operated between the regions, but these services ceased decades ago.

There are several indirect ways to get from the Greater Bridgeport Transit Authority hub to the HART hub in downtown Danbury via public transit, but all require many transfers and long travel times. As an example, one could leave the Bridgeport Hub at 7:05A.M. on the Coastal Link and arrive at the Norwalk Hub at 8:05, to then transfer to the Danbury-Norwalk LINK bus for an 8:30 departure and arrive at the HART pulse point at 9:50.

In total, the trip would take 2 hours and 45 minutes. On the positive side, the transfer is free and the entire trip would only cost \$1.50.

Bridgeport-Based Transit Services

Greater Bridgeport Transit Authority

Since 1979, the Greater Bridgeport Transit Authority (GBTA), as the successor to the Greater Bridgeport Transit District, has been the mass transit operator in the Greater Bridgeport Area. It provides bus transit services in the Connecticut communities of Bridgeport, Fairfield, Stratford and Trumbull through 17 fixed routes operated by a fleet of 61 transit buses, with limited services to Monroe, Shelton and Derby.

Additionally, in conjunction with Milford and Norwalk transit agencies, the GBTA operates the Coastal Link, (CL) bus service, providing frequent local service between Milford, Stratford, Bridgeport, Fairfield, Southport, Westport and Norwalk.

The GBTA also provides extensive service for the elderly and disabled of the Bridgeport Region through its GBTAcess program. Eligible riders are provided door-to-door service by a fleet of 28 minibuses.

GBTA receives funding from a variety of sources including the United States Department of Transportation, the Federal Transit Administration, the Connecticut Departments of Transportation and Social Services, as well as its member municipalities of Bridgeport, Fairfield, Stratford and Trumbull.

Through its various resources, the GBTA carries 18,000 passengers per day by operating its services 365 days per year, 18 hours per day on weekdays and Saturdays and 13 hours on Sundays.

GBTA Routes and Major Destinations

<i>Route Number</i>	<i>Route Name</i>	<i>Major Destinations</i>	<i>Municipalities Served</i>
1	Hollister Heights/PT Barnum Apartments	Black Rock, Downtown Bridgeport	Bridgeport, Stratford
2	Dock Shopping Center/Westport Town Line	Downtown Bridgeport, Dock Shopping Center	Westport, Fairfield, Bridgeport, Stratford
Coastal Link	Dock Shopping Center/Norwalk Wheels Hub	Norwalk Wheels Hub, Downtown Bridgeport, Dock Shopping Center, Westfield Shoppingtown Connecticut Post	Norwalk, Westport, Fairfield, Bridgeport, Stratford, Milford
3	Downtown Bridgeport/Westfield Shoppingtown via Madison Avenue	Westfield Shoppingtown Trumbull, Madison Avenue	Bridgeport, Trumbull
4	Downtown Bridgeport/Westfield Shoppingtown via Park Avenue	Westfield Shoppingtown Trumbull, Park Avenue	Bridgeport, Trumbull
5	Seaside Park/Hawley Lane Mall	Hawley Lane Mall, North Stratford	Bridgeport, Stratford
6	Seaside Park/Trumbull Avenue	Trumbull Gardens	Bridgeport
7	Carolton Hospital/ Commerce Drive	Carolton Hospital, Home Depot	Bridgeport, Fairfield
8	Downtown Bridgeport/Westfield Shoppingtown Trumbull via Main	Main Street Bridgeport, Westfield Shoppingtown Trumbull, Saint Vincent's Hospital	Bridgeport, Trumbull
9	Downtown Bridgeport/Trumbull center.	Downtown Bridgeport, Trumbull Center, Trumbull Library	Bridgeport, Trumbull

GBTA Routes and Major Destinations (continued)

<i>Route Number</i>	<i>Route Name</i>	<i>Major Destinations</i>	<i>Municipalities Served</i>
10	Downtown Bridgeport/Stratford Square	Southern Stratford, Stratford Square Shopping Center, Stratford Crossing.	Bridgeport, Stratford
11	Downtown Bridgeport/Black Rock Turnpike	Downtown Bridgeport, Black Rock Turnpike Shopping Area	Bridgeport, Fairfield
12	Downtown Bridgeport/Westfield Shoppingtown Trumbull	Department of Motor Vehicles, Trumbull Gardens, Westfield Shoppingtown Trumbull	Bridgeport, Trumbull
13	Downtown Bridgeport/Success Village	Success Village	Bridgeport
14	Westfield Shoppingtown Trumbull/ Local Trumbull Service	Trumbull Center, Westfield Shoppingtown Trumbull, Quality Street, Stern Village	Trumbull
15	Downtown Bridgeport/Derby Train Station	Downtown Bridgeport, Derby Train Station, Hawley Lane Mall	Bridgeport, Stratford, Shelton Derby
16	Downtown Bridgeport/Dock Shopping Center	Dock Shopping Center, Paradise Green	Bridgeport, Stratford
17	Downtown Bridgeport/Success Village.	Success Village	Bridgeport

Most GBTA routes meet at the central bus transfer station in downtown Bridgeport on Water Street. Headways on routes vary, with some service as frequent as every 20 minutes.

Fare Structure

The cash fare for the GBTA system is \$1.50, seniors and persons with disabilities pay 75¢. There is no student or youth discount for cash fares. GBTA sells full-fare tokens for \$1.50 each. While GBTA’s fares are the highest in Connecticut, they are still below those of the bus systems in nearby New York State.

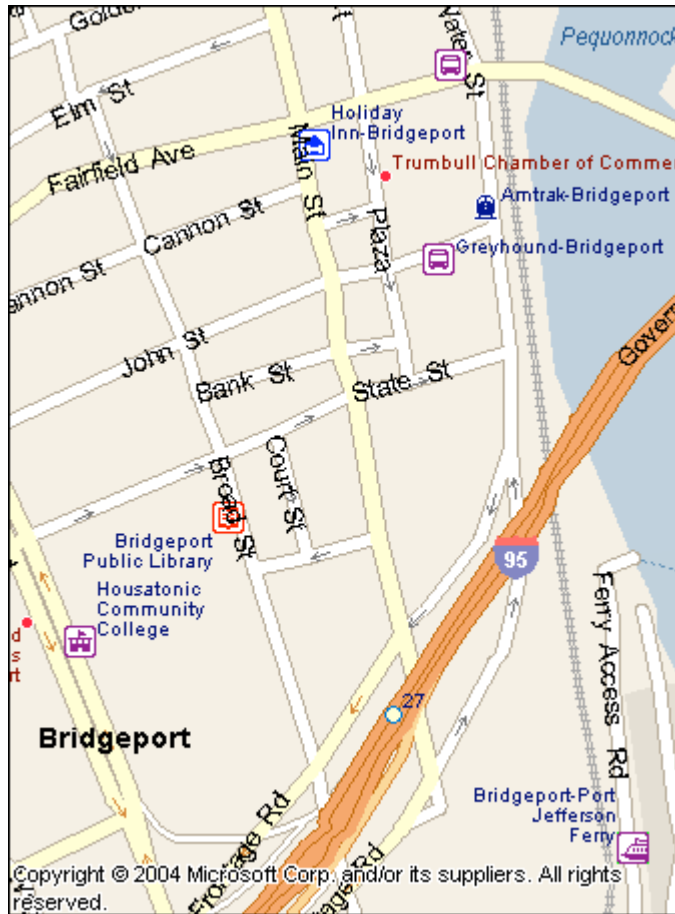
The GBTA bus pass -- known as ziptrip – offers several unlimited ride options on any bus in any direction for the duration of the pass. The program is somewhat different than others used in the state, and is described below:

- 90 minute ziptrip: \$1.50
- 1-Day ziptrip: \$3.00
- 7-Day ziptrip: \$15.00
- 31-Day ziptrip: \$60.00

Seniors may purchase passes at half fare. A 31 day youth ziptrip pass may be purchased for \$40.

GBTA Restructuring in FY 2008

It is noteworthy that the GBTA relocated its transfer station from 35 John Street in Bridgeport to the Northeast corner of Stratford Avenue and Water Street in September 2007.



Map of downtown Bridgeport, CT with locations of the rail station, ferry and bus stations marked.

The historical bus transfer station is located on John Street. The new bus transfer location, shown on the upper right section of the map, is on the corner of Water Street and Stratford Avenue.

The new facility is comprised of a 17-bay bus terminal for GBTA, PeterPan, Trailways and Greyhound buses. The intermodal center will include covered walkways to the train station and parking garage.

The relocation resulted in a significant restructuring of routes and schedules. Most routes now pulse at 10 minutes before the hour and 20 minutes after the hour.



Artist's conception of the new GBTA bus station (Bridgeport Special Services District Website)

Other Bridgeport Transportation Services

Bridgeport Intercity Bus Services

Privately operated intercity buses service the John Street bus terminal in Bridgeport daily, providing 17 scheduled stops.

New Britain-based DATTCO operates the NY/Connecticut Shoreline route, traveling along the coast between Westchester County, NY and the Mohegan Sun Casino in Eastern Connecticut. Peter Pan and Greyhound also provide service in the I-95 corridor that serves Bridgeport, with stops in Stamford, New Haven and New London.

Founded in 1914, Greyhound Lines, Inc. is the nation's largest provider of intercity bus transportation, serving more than 3,100 destinations with 16,000 daily departures across North America. Transfers to other routes allow for travel to many inland locations in Connecticut and Northern New England.

Coastal LINK

The Coastal LINK operates on the Route 1 corridor between Bridgeport and Norwalk, seven days per week. This service, created as part of the state's jobs access initiatives in the late 1990's, is operated jointly by GBTA, Norwalk Transit and Milford Transit. It provides a one-seat ride over a route that had required several transfers between systems.

Coastal LINK buses depart Bridgeport with 20 minute headways during weekday peak periods. Service operates between 5:50 AM and 9:50 PM.

Rail Services

The Bridgeport Railroad Station, a large concrete structure built in 1974 straddling Water Street, is the busiest station stop on the New Haven Line between Stamford and New Haven. The location includes a concession, vending machines, rest rooms and a ticket agent. Ticket vending machines are located on the platforms.



Bridgeport, CT Train Station (MTA website)

The facility is also the home of the Greater Bridgeport Regional Planning Agency.

New Haven Line

MTA Metro-North Railroad's New Haven Line is one of the most used in the country, carrying over 120,000 daily commuters. Service is provided along the New Haven Line between New York City and New Haven around the clock. Frequency varies from approximately hourly to less than 15 minutes between some trains in the peak periods.

Bridgeport is the southern terminus of the Waterbury Branch Line, with six round trips in the weekday period.

Fares are based on distance, with discounts for group travels, seniors, persons with disabilities and off-peak travelers.

Amtrak/Shore Line East

Amtrak provides intercity service through Bridgeport with seven weekday westbound and eastbound trains stopping at the station. Shoreline East (SLE) commuter service is available with local station stops east of New Haven to New London.

Amtrak operates SLE service between New London and New Haven and Metro-North operates it west of New Haven to Bridgeport and Stamford. Equipment used in SLE service is owned by ConnDOT. The service carries approximately 2000 passengers per day.

Shore Line East offers commuters three monthly ticket options.

- A monthly rail pass is offered.
- The “Monthly Plus” pass includes fare for connecting bus services
- The UniRail Ticket provides a discounted monthly pass to those that travel via Shoreline East and Metro-North operated service on the New Haven Line.

Ten trip tickets, good for 90 days, are also offered.

Ferry Service

The Bridgeport-Port Jefferson Steamboat Company on the Water Street Dock is within walking distance of the rail and bus stations (current and future). Ferry’s operate with 90 minute headways between Long Island, New York and Connecticut, departing daily between 6 AM and 9 PM. Arrivals occur between 7:15 AM and 10:15 PM.

During the peak travel season a third vessel is added to the schedule, providing a higher level of service Friday through Sunday. According to the greater Bridgeport Regional Planning Agency (GBRPA), the ferry carries over 996,000 passengers and 470,000 vehicles annually.

A variety of fares based on vehicle type are charged for the ferry services. Discount fares are provided for seniors traveling without vehicles, and children under 12 are free. A monthly pass for walk-on riders is offered, as well as a special rate for multiple passengers boarding in the same vehicle.

DEMOGRAPHIC ANALYSES

Overview

Analysis of the commute patterns between the Housatonic Valley Region and Central Naugatuck Valley Region, as well as the Housatonic and Greater Bridgeport Regions are provided in this section. Emphasis is placed on those communities adjacent to I-84 and Route 25.

A comprehensive information source available for analysis purposes is the US Census journey to work data. The charts are created by the Bureau of the Census to document the travel patterns of people who live in specific municipalities and the municipalities to which they commute. These data are gathered each decade.

Three communities that border other planning regions, Newtown, Monroe and Southbury have minimal transit connections within their own regions. Transit improvements within the Route 25 or 84 corridor would thus improve intraregional connections for these three towns as well as promote extra-regional travel. A discussion of the journey to work data for these three communities within their respective regions is detailed.

Lastly, regional employment trends and representative employee journey to work data for three major employers in the Greater Danbury Area are discussed.

Central Naugatuck Valley to Housatonic Region Journey to Work

Commuters from the Central Naugatuck region account for 7% of the total labor force in the Housatonic Region. The number of daily commuters grew from 6258 to 7103 between 1990 and 2000, an increase of over 13%.

The tables below provide detailed journey to work information for communities adjacent to I-84. These results present a more mixed picture than the overall trend.

Journey to work sites in the Housatonic Region - 1990				
	Destination			
Origin	Danbury	Bethel	Brookfield	Newtown
Waterbury	1012	209	138	415
Southbury	516	138	83	476
Naugatuck	350	94	45	160
Watertown	104	69	60	102
Oxford	108	29	10	107
Middlebury	176	23	11	41

Journey to work sites in the Housatonic Region - 2000				
	Destination			
Origin	Danbury	Bethel	Brookfield	Newtown
Waterbury	773	136	86	285
Southbury	833	178	129	364
Naugatuck	400	92	81	223
Watertown	234	21	30	70
Oxford	161	15	53	84
Middlebury	84	0	12	69

Percent Change in Work Trips 1990 - 2000				
	Destination			
Origin	Danbury	Bethel	Brookfield	Newtown
Waterbury	(24%)	(35%)	(38%)	(31%)
Southbury	60%	29%	55%	(23%)
Naugatuck	14%	(2%)	80%	(40%)
Watertown	125%	(70%)	(50%)	(31%)
Oxford	49%	(48%)	430%	(21%)
Middlebury	(54%)	(100%)	1%	68%

The biggest loss is described in the Middlebury to Bethel commute, where there were 23 commuters in 1990, and none in 2000. The Waterbury to Danbury commute fell from 1012 in 1990 to 773 in 2000, a 24 percent decrease. The largest increases were for those living in Watertown and commuting to Danbury, and those living in Oxford commute to work in Danbury. Commutes from Southbury increased overall, with strong growth in trips to Danbury, Bethel and Brookfield.

Housatonic Region to Central Naugatuck Valley Journey to Work

Data suggests growing numbers are commuting from Danbury to Waterbury, but still dramatically less than those commuting in the opposite direction.

“Transportation Trends and Characteristics of the CNVR: 2000”, a 2004 report from the Council of Governments of the Central Naugatuck Valley Region (CNVR), notes low levels in commuting patterns from Danbury to Waterbury. In analyzing the residences of CNVR workers, the greater Danbury area is not listed as one of the locations from which

their workers originate. Only areas that include 4% or more of the CNVR are listed, leading to the conclusion that the Greater Danbury area provides less than 4 percent of the CNVR workforce or less than 3,845 people.

The CNVR report did not compare these data to data from the 1990 census. However, it does note in the summary findings that the length and time of the journey to work is increasing for residents of this region.

The tables below show that work trips of those living along the I-84 corridor in the Housatonic Region making a commute to the Central Naugatuck Valley had net gain of 416 commuters, a 10 percent increase, between 1990 and 2000, The biggest gain was in the commute from Newtown to Southbury, with a 103 percent increase. Another cohort that gained large numbers were commuters living in Newtown traveling to Middlebury.

Journey to work sites in CNV Region - 1990						
	Destination					
Origin	Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
Danbury	104	525	25	22	173	26
Bethel	49	83	9	5	14	13
Brookfield	42	102	16	0	41	9
Newtown	86	101	17	7	12	41

Journey to work sites in CNV Region - 2000						
	Destination					
Origin	Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
Danbury	149	333	45	61	75	12
Bethel	66	101	6	7	13	23
Brookfield	49	71	21	0	15	0
Newtown	93	206	8	0	24	63

Percent Change in Work trips to CNV Region 1990-2000						
	Destination					
Origin	Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
Danbury	43%	(37%)	80%	64%	(56%)	-53%
Bethel	34%	21%	(33%)	40%	(7%)	77%
Brookfield	16%	(30%)	31%	no change	(63%)	-100%
Newtown	8%	103%	(53%)	(100%)	100%	53%

Commutes from Newtown to Watertown decreased 100 percent. The same is true for work trips from Brookfield to Oxford. Such a large change is explained in part by the fact that journey to work data is based on a sample of household surveys, not all.

Greater Bridgeport to Housatonic Region Journey to Work

In 2000, the Housatonic region drew 5% of its work force from Greater Bridgeport, up two percentage points over 1990. The number of commuters from Greater Bridgeport working in the Housatonic Region grew from 2356 in 1990 to 5142 in 2000, an increase of 118%.

Origin	Destination				
	Danbury	Bethel	Brookfield	Newtown	
Bridgeport	307	109	30	238	238
Fairfield	142	38	12	68	68
Trumbull	110	50	7	109	109
Stratford	105	8	5	52	52
Monroe	222	74	7	214	214

Origin	Destination				
	Danbury	Bethel	Brookfield	Newtown	
Bridgeport	998	130	218	385	385
Fairfield	399	74	42	59	59
Trumbull	279	55	62	129	129
Stratford	428	99	35	165	165
Monroe	292	57	7	200	200

Origin	Destination				
	Danbury	Bethel	Brookfield	Newtown	
Bridgeport	225%	19%	626%	62%	
Fairfield	180%	95%	250%	(13%)	
Trumbull	153%	10%	785%	18%	
Stratford	307%	1137%	600%	217%	
Monroe	31%	-23%	0%	(6%)	

The tables show that the work trips from Bridgeport Area to Housatonic Area communities near the Route 25 Corridor show a significant net gain of 3532 total commuters, or an 80 percent increase between 1990 and 2000.

The biggest increase by percent arises in the Stratford to Bethel trip, which had 8 total in 1990 and increased to 99 in 2000, a 1137% increase. Other notable changes include the increase in the number of people commuting from Bridgeport to Danbury, which increased by 691 individuals or 225 percent.

Journey to work sites in Greater Bridgeport Region - 1990					
	Destination				
Origin	Bridgeport	Fairfield	Trumbull	Stratford	Monroe
Danbury	175	173	98	106	45
Bethel	82	95	70	29	16
Brookfield	89	67	29	31	23
Newtown	465	233	179	262	233

Journey to work sites in Greater Bridgeport Region - 2000					
	Destination				
Origin	Bridgeport	Fairfield	Trumbull	Stratford	Monroe
Danbury	370	402	225	251	102
Bethel	112	106	72	119	52
Brookfield	82	64	65	43	37
Newtown	450	319	324	256	302

Percent Change 1990-2000					
	Destination				
Origin	Bridgeport	Fairfield	Trumbull	Stratford	Monroe
Danbury	111%	132%	130%	137%	127%
Bethel	37%	12%	3%	310%	225%
Brookfield	(9%)	5%	124%	39%	61%
Newtown	(3%)	37%	81%	(2%)	30%

Journey to work from the Route 25 corridor of the Housatonic Region to Greater Bridgeport shows solid growth for most commutes, especially those from Danbury. Overall, the tables show trips to Greater Bridgeport increased by over 50% from 1500 in 1990, to over 3700 in 2000.

Intraregional journey to work for Newtown, Monroe and Southbury

The municipalities of Monroe, Southbury and Newtown all suffer from a lack of transit connections to their own planning regions. Transit service between Danbury and Bridgeport, or Danbury and Waterbury would thus also provide for improved connectivity between these communities and their local regions.

Monroe – Journey to Work within the Greater Bridgeport Region

The data shows strong growth in work trips from Monroe to work locations within the Greater Bridgeport Region. Trips within the town itself are the largest fraction of trips, and grew by 41% over the ten year period. Trips to Fairfield increased by the greatest percentage. Those to Trumbull increased by the smallest percentage - but still a healthy 28% and representing a higher fraction of commuters than those traveling to Fairfield or Stratford.

Monroe Journey to Work Sites in Greater Bridgeport Region - 1990				
Destination				
Monroe	Bridgeport	Fairfield	Trumbull	Stratford
1498	396	100	384	121

Monroe Journey to Work Sites in Greater Bridgeport Region - 2000				
Destination				
Monroe	Bridgeport	Fairfield	Trumbull	Stratford
2112	735	253	492	233

Percent Change 1990 - 2000				
Destination				
Monroe	Bridgeport	Fairfield	Trumbull	Stratford
41%	86%	153%	28%	93%

By contrast, work trips to Monroe from other communities in the Greater Bridgeport Region declined over the 10 year period. Trips from Bridgeport showed the greatest decline in numbers, with a loss of 372 commuters. Fairfield residents working in Monroe were the only numbers that increased in this group, a slight 2% rise over 1990.

Journey to Work Sites in Monroe from Greater Bridgeport Region - 1990				
Origin				
Bridgeport	Fairfield	Trumbull	Stratford	
1552	575	890	618	

Journey to Work Sites in Monroe from Greater Bridgeport Region - 2000				
Origin				
Bridgeport	Fairfield	Trumbull	Stratford	
1180	589	756	435	

Percent Change 1990-2000				
Origin				
Bridgeport	Fairfield	Trumbull	Stratford	
(24%)	2%	(15%)	(42%)	

Newtown – Journey to Work within the Housatonic Region

Newtown, although within the Housatonic Region and a member of HART, has no regular public bus service. Existing transit is limited to the SweetHART senior/disabled dial-a-ride service.

Newtown Journey to Work Sites in Housatonic Region - 1990						
Destination						
Newtown	Danbury	Bethel	Brookfield	Ridgefield	New Milford	New Fairfield
3039	2070	322	229	186	163	44

Newtown Journey to Work Sites in Housatonic Region - 2000						
Destination						
Newtown	Danbury	Bethel	Brookfield	Ridgefield	New Milford	New Fairfield
2998	1606	361	323	314	151	79

Although there are some losses over the ten year period, the commute from Newtown to other municipalities in the Housatonic Region is still significant. In 2000, some 2834 trips or nearly one quarter of total work trips in Newtown were made to neighboring Housatonic Valley municipalities.

Percent change 1990-2000						
Destination						
Newtown	Danbury	Bethel	Brookfield	Ridgefield	New Milford	New Fairfield
(1%)	(22%)	12%	41%	69%	(12%)	80%

The trend shows a shift away in trips made to Danbury and New Milford to other municipalities, especially Ridgefield and Brookfield. Trips to Danbury, however, still account for 13% of work trips from Newtown. Work trips within Newtown fell slightly during the period, continuing a decades-long decline, but still account for 35% of total work trips made.

Journey to Work Sites in Newtown from Housatonic Region -1990				
Origin				
Danbury	Bethel	Brookfield	New Fairfield	New Milford
457	167	107	126	153

Journey to Work Sites in Newtown from Housatonic Region -2000				
Origin				
Danbury	Bethel	Brookfield	New Fairfield	New Milford
861	233	187	126	257

There is strong growth in work trips to Newtown from neighboring municipalities in the Housatonic Valley Region. Commute trips from Danbury increased by 88%, or over 400 trips. New Fairfield work trips to Newtown showed no change over the period.

Percent Change 1990-2000				
Origin				
Danbury	Bethel	Brookfield	New Fairfield	New Milford
88%	40%	75%	0%	68%

Southbury – Journey to Work within the Central Naugatuck Valley Region

Southbury, on the western border of the CNV planning region, has only limited transit service between the communities eastward that make up the rest of the Region.

Southbury Journey to Work Sites in the CNV Region - 1990					
Destination					
Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
447	1807	60	128	155	112

Southbury Journey to Work Sites in the CNV Region - 2000					
Destination					
Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
600	2140	53	65	221	127

Percent Change 1990-2000					
Destination					
Waterbury	Southbury	Naugatuck	Watertown	Middlebury	Oxford
34%	18%	(11%)	(49%)	42%	13%

The two municipalities with both the greatest percentage growth and actual increase in work trips from Southbury were Waterbury and Middlebury. Trips within Southbury account for the greatest number of commutes, and grew by 18% over the ten year period. The most significant drop occurred for trips to Watertown, down 18%.

Journey to Work Sites in Southbury from CNV Region - 1990				
Origin				
Waterbury	Naugatuck	Watertown	Middlebury	Oxford
447	60	128	155	112

Journey to Work Sites in Southbury from CNV Region - 2000				
Origin				
Waterbury	Naugatuck	Watertown	Middlebury	Oxford
600	53	65	221	127

Percent Change 1990 - 2000				
Origin				
Waterbury	Naugatuck	Watertown	Middlebury	Oxford
34%	(12%)	(49%)	43%	13%

Workers from Waterbury and Middlebury supply a significant percentage of workers in Southbury from the Central Naugatuck Region. The census data indicates increases in work trips to Southbury from Waterbury of 34% and Middlebury of 43% over the ten year period.

Waterbury alone supplies more workers to Southbury than the remaining communities combined.

Regional Employment

Danbury-Waterbury Corridor

According to the Connecticut Labor Department, employment in the corridor has remained stable since 2000, with total jobs at roughly 114,000. In 2006, Waterbury and Danbury both provided the most jobs, at just over 43,000 respectively, followed by Southbury at 9,545. The greatest job growth in the seven year period occurred in the town of Bethel, which added 867 jobs; an increase of almost 18%.

The table below illustrates the trend.

Total Employment by Municipality, Danbury-Waterbury Corridor

	2000	2001	2002	2003	2004	2005	2006	% Change 2000-2006
Danbury	44,750	43,910	43,799	42,799	42,664	43,573	43,707	-2.3%
Bethel	5,920	6,220	6,406	6,500	6,618	6,790	6,787	+17.8%
Newtown	7,530	7,420	7,380	7,392	7,591	7,300	7,507	-0.3%
Southbury	9,550	9,760	9,595	9,534	9,631	9,060	9,545	+0.1%
Middlebury	3,640	3,510	3,571	3,465	3,419	3,342	3,446	-5.3%
Waterbury	42,640	42,460	41,648	41,117	41,617	42,082	43,320	+1.6%
TOTAL	114,030	113,280	112,399	110,807	111,540	112,147	114,312	+0.2%

Source: Connecticut Labor Department

Danbury-Bridgeport Corridor

Total employment in the Danbury Waterbury Corridor stands at almost 128,000 jobs, and has changed little since 2000. As in the Danbury-Waterbury Corridor the two major cities, in this case Danbury and Bridgeport, provide comparable numbers of jobs, with Bridgeport providing slightly more at 44,926 in 2006.

Over the six year period, the greatest growth in jobs took place in the towns of Bethel, Monroe and Trumbull. Employment in each town grew at over 15%, and in the case of Trumbull, by almost 23%.

Total Employment by Municipality, Danbury-Bridgeport Corridor

	2000	2001	2002	2003	2004	2005	2006	% Change 2000-2006
Danbury	44,750	43,910	43,799	42,799	42,664	43,573	43,707	-2.3%
Bethel	5,920	6,220	6,406	6,500	6,618	6,790	6,787	+17.8%
Newtown	7,530	7,420	7,380	7,392	7,591	7,300	7,507	-0.3%
Monroe	6,170	6,300	6,545	6,836	6,981	7,274	7,293	+18.2%
Trumbull	14,200	13,900	14,762	16,475	16,624	16,865	17,425	+22.7%
Bridgeport	48,650	48,270	47,849	46,654	45,561	47,159	44,926	-7.7%
TOTAL	127,220	126,020	126,741	126,656	126,039	128,961	127,645	+3.3%

Source: Connecticut Labor Department

Newtown had the fewest jobs of those in the Danbury-Bridgeport corridor at 7507 in 2006. The town showed the smallest variation of those listed over the period, with a scant drop of less than one percent.

Origins of Housatonic Region Employees by Selected Employers

HART received employee commute information through MetroPool, the regional ridesharing brokerage, from three of the largest employers in the area that were also used in the data analysis. The Danbury Hospital, Goodrich and Cartus (formerly Cendant Mobility) provided the following tables for this study.

Danbury Hospital

Danbury Hospital Employee Commute Data

Employee Origin	
Southbury	157
Newtown	148
Waterbury	105
Naugatuck	36
Watertown	26
Greater Bridgeport	25

Danbury Hospital is located On Hospital Avenue in Danbury, approximately one mile from exit 6 of I-84. Data from the 3000-employee facility show a large number of workers commuting from Greater Waterbury to Danbury. According to these data, there are 324 employees (over 10% of the entire workforce), making the commute from the CNV Region area to the Hospital.

The Hospital reports that 148 individuals reside in Newtown. There are only 25 listed as originating from the Greater Bridgeport Region.

Cartus

Cartus Employee Commute Data

Employee Origin	
Newtown	44
Sandy Hook	35
Southbury	39
Watertown	31
Woodbury	24
Greater Bridgeport	49

Cartus is a corporate relocation company that has over 1800 employees at its Danbury headquarters on Apple Ridge Road, near the Danbury Fair Mall. According to the data provided by the company there are 105 employees, or approximately 6% of the total employee population, from the Waterbury Region making a commute to Danbury each day.

The number of employees commuting from the Bridgeport area each day totals 49, or approximately 3% of all of their employees or 63 if Redding is included in the count.

Note that 79 employees originate in the Town of Newtown.

Goodrich

Goodrich Employee Commute Data

Employee Origin	
Newtown	33
Southbury	31
Waterbury	12
Other CNV	17
Greater Bridgeport	38

Goodrich is located on Wooster Heights Road, a short distance away from Danbury Airport. The company, one of the nation's largest aerospace firms, has over 500 employees at its Danbury location.

Company data shows that over 11% of employees originate in the Central Naugatuck Valley Region. Those from the Greater Bridgeport Region make up approximately 7% of the workers employed at Goodrich, with most originating from Monroe.

Newtown residents make up a greater percentage of employees than those that live in either the Central Naugatuck or Greater Bridgeport Regions.

CONCLUSIONS AND RECOMMENDATIONS

Overview

This section provides a discussion of potential options to improve connections between the Housatonic Region and the neighboring regions in Greater Bridgeport and the Central Naugatuck Valley.

There are multiple factors that have implications for design of bus transit connections between the regions:

- **Changing commute patterns**

Work trips to employment within municipalities and home regions are trending downward, while work trips to other regions are increasing. The number of work trips into the Housatonic Region from Greater Bridgeport and the Central Naugatuck Valley continue to grow.

The dominant travel pattern between Central Naugatuck to the Housatonic Valley is in the Danbury-bound direction. Likewise commutes between the Greater Bridgeport Region to Danbury are primarily in a Danbury-bound direction.

- **Disparate operating regimens of existing services**

The four existing bus operators, Peter Pan, NET, GBTA and HART, have unrelated fare structures and service schedules. There is no existing universal fare payment program in the state analogous to New York's MetroCard.

Rail, intercity bus and public transit terminals in the regional core cities of Bridgeport, Danbury and Waterbury are not in direct proximity with each other.

- **Roadway network**

I-84, being a limited access highway presents different opportunities and obstacles than Route 25, with two lanes over most of its length and a large number of commercial, residential and industrial properties around it.

- **Employment**

Employment locations are dispersed throughout the study area. While much major employment is located on existing fixed routes, the additional time required

for a connecting local bus trip after an intercity bus trip is a disincentive. Overall employment in the two corridors is stable, with the strongest growth by municipality outside of the core urban areas.

State-funded express services

By way of comparison, the Connecticut Department of Transportation currently funds several intercity bus lines including the New Haven to Hartford express and the Meriden to Hartford Express. The New Haven line is operated by DATTCO and the Meriden service is operated by Peter Pan.

Each line collects passengers at several points in the downtown, which takes approximately 30 minutes of the trip (in the case of New Haven) and then proceeds to run express on an interstate highway making one or two strategic stops to pick up passengers from park and ride locations.

When the bus arrives in Hartford, it makes four or five stops around the downtown to let passengers off. These same stops are used for the reverse trip.

Passengers can use these express services to commute between the two towns either way, New Haven to Hartford or Hartford to New Haven. The cost of the trips is split into zones with the cheapest one way fare costing \$2.25 and the most expensive is \$4.30. These buses are run by Peter Pan, the same company that runs a route between Danbury and Waterbury now.

There are vital differences between how the current Danbury to Waterbury route is set up and the Meriden Express bus set up. Currently, the Meriden bus has 6 stops in downtown Meriden and then when the bus gets to Hartford; it follows a circular route downtown to drop passengers at major employment centers.

The current Waterbury and Danbury service by Peter Pan serves one point in the city area. In Danbury, the Peter Pan stop is across the street from the HART Pulse Point which would allow for easy transfer between services. However, in Waterbury, the bus station is several blocks away from the Waterbury Green, the pulse point for Waterbury transit service, making any kind of connections a little more difficult.

Another difference between the Meriden Service and the Peter Pan service in the Danbury-Waterbury corridor is the price. Currently, a one way trip between Danbury and Waterbury is \$8.00 while the most a one way trip would cost on the Meriden service is \$4.30. In addition, riders on the Meriden service are allowed free transfers to city buses once they arrive at their downtown Hartford destination.

Recommended Transit Enhancements: Waterbury – Danbury Corridor

Additional trips on PeterPan/Bonanza bus service

While the existing intercity bus service provides a good foundation for commutes between Waterbury and Danbury, additional bus service could cut down on the commute times of those making this trip and open up opportunities for additional work shifts. HART recommends that the current Bonanza schedule be expanded to include additional peak period express bus trips.

The table below illustrates a potential enhancement to the existing schedule that would provide three additional AM round trips and four additional PM round trips between Danbury and Waterbury Monday through Friday. An additional route stop, off exit 10 in Newtown (potentially at the Blue Colony Diner) is added on these trips.

Waterbury-Danbury Service Enhancement

Waterbury	Southbury	Newtown	Danbury
6:05	6:25	6:35	6:50
6:35	6:55	7:05	7:20
7:35	7:55	8:05	8:20
3:05	3:25	3:35	3:50
4:05	4:25	4:35	4:50
5:05	5:25	5:35	5:50
6:05	6:25	6:35	6:50

P.M. times in bold

Danbury-Waterbury Service Enhancement

Danbury	Newtown	Southbury	Waterbury
7:05	7:20	7:30	7:50
7:35	7:50	8:00	8:20
8:35	8:50	9:00	9:20
3:05	3:20	3:30	3:50
4:05	4:20	4:30	4:50
5:05	5:20	5:30	5:50
6:05	6:20	6:30	6:50

P.M. times in bold

The service as proposed would require three buses in the morning, all departing and returning to Waterbury. Afternoon service requires two buses; one originating in Danbury, the second in Waterbury. Based on employment estimates for municipalities in the corridor and HART’s ridership experience on the Danbury-Norwalk Route 7 LINK, 171 daily passenger trips could be expected after the first full year of service.

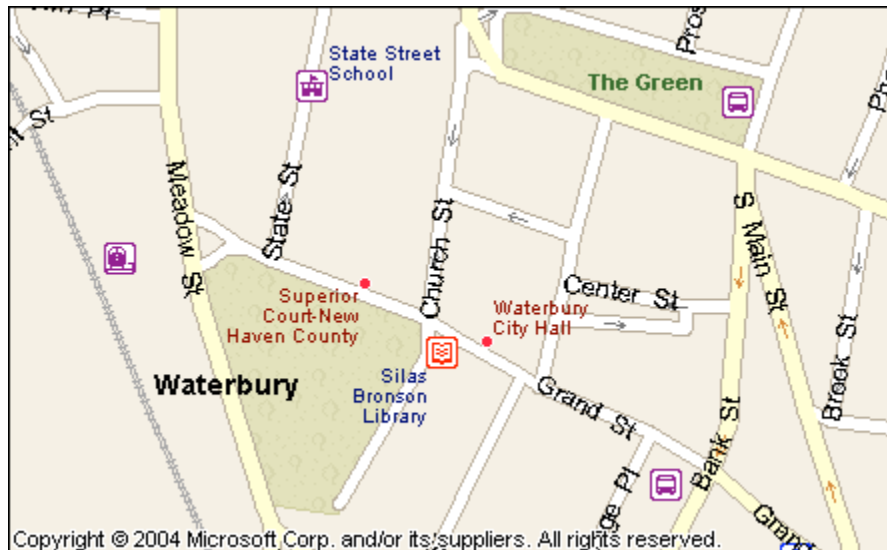
This addition, in combination with the existing schedule, would allow for arrivals in Danbury every half hour during the morning peak between 6:30 and 8:30 A.M. The combined service would now provide half hour service between 3:00 P.M. and 6:30 P.M., except for the 4:30 departure from Danbury. Adding this trip would require a third vehicle.

For reverse commuters, three additional arrivals in the morning would allow for transfers to CTTRANSIT Waterbury at 8:00, 8:30 and 9:30 A.M. Afternoon service returning to Danbury would be enhanced hourly between 3 and 6 P.M., with the existing service providing departures at 2:45, 4:45 and 6:45 P.M.

It is envisioned that the buses used in the operation of the service would be over-the-road coaches as currently operated on Bonanza's regular intercity bus service.

Routing modifications to existing Peter Pan/Bonanza Service

Bonanza does not currently provide direct service to Exchange Place in Waterbury. The existing location is a short distance from the Waterbury Green. A routing change that allowed for a stop at the green for buses arriving in Waterbury and departing for Danbury would be advantageous for passengers wishing to transfer between Bonanza and NET.



Rail Station, intercity bus and local bus stations in Waterbury, CT.

Eventually, if the Waterbury intermodal center moves forward, buses local and intercity buses would presumably arrive at the same location.

A second modification to Bonanza routing would be an additional stop in the Church Hill Road area of Newtown, off exit 10 of I-84. Subject to final review, the Blue Colony Diner or one of several nearby gas stations are potential locations for this new stop.



Exit 10 of I-84, showing location of diner and gas stations.

These locations are located directly off the exit ramp, affording easy access to buses. Alternatively, the park and ride location at I-84 exit 11 may also be an appropriate location.

Fare policies

A major disincentive to a traveler using transit between Waterbury and Danbury is the fare, currently \$8.50. If a passenger used the local service at either end, the additional cost would be \$1.25 per for each transit system.

It is recommended that sufficient subsidy be provided to Peter Pan to allow for a zone fare structure for those boarding or alighting between Waterbury and Danbury. The structure should be comparable to that of existing commuter services operated in the state. A suggested cash fare structure is described below:

	<i>Newtown</i>	<i>Southbury</i>	<i>Waterbury</i>
<i>Danbury</i>	\$1.25	\$2.00	\$2.50
<i>Newtown</i>		\$1.25	\$2.00
<i>Southbury</i>	\$1.25		\$1.25
<i>Waterbury</i>	\$2.00	\$1.25	

Free transfers should be provided between arriving intercity buses and the fixed route systems at transfer points, e.g., from Bonanza buses arriving in Danbury to HART buses.

Frequent rail riders can purchase a UniTicket - a combined bus/train pass that provides a substantially reduced bus fare attached to a weekly or monthly train pass. These passes are purchased through Metro-North. A similar bus/bus UniTicket program could be instituted for those arriving at a transfer point via local fixed route service to connect with intercity bus service.

Commuter Connection Shuttle to Cartus from Danbury Pulse Point

Although Cartus attracts a substantial number of Central Naugatuck Region as well as local employees, HART service levels to the worksite are negligible, with only a single morning trip to the facility morning and afternoon.

A morning and afternoon peak-period shuttle, providing five morning arrivals at Cartus and five afternoon departures is recommended.

A draft schedule is provided below.

Cartus Commuter Connection Shuttle

Pulse	Arr. Cartus	Lv. Cartus	Pulse
6:30	6:42	6:43	6:55
7:00	7:12	7:13	7:25
7:30	7:42	7:43	7:55
8:00	8:12	8:13	8:25
8:30	8:42	8:43	
	3:12	3:13	3:25
3:30	3:42	3:43	3:55
4:00	4:12	4:13	4:25
4:30	4:42	4:43	4:55
5:00	5:12	5:13	5:25

P.M. times in bold

This service could be operated with one bus, morning and evening, for total of approximately 6 daily platform hours. A 20 passenger small bus could be used for the service depending on demand.

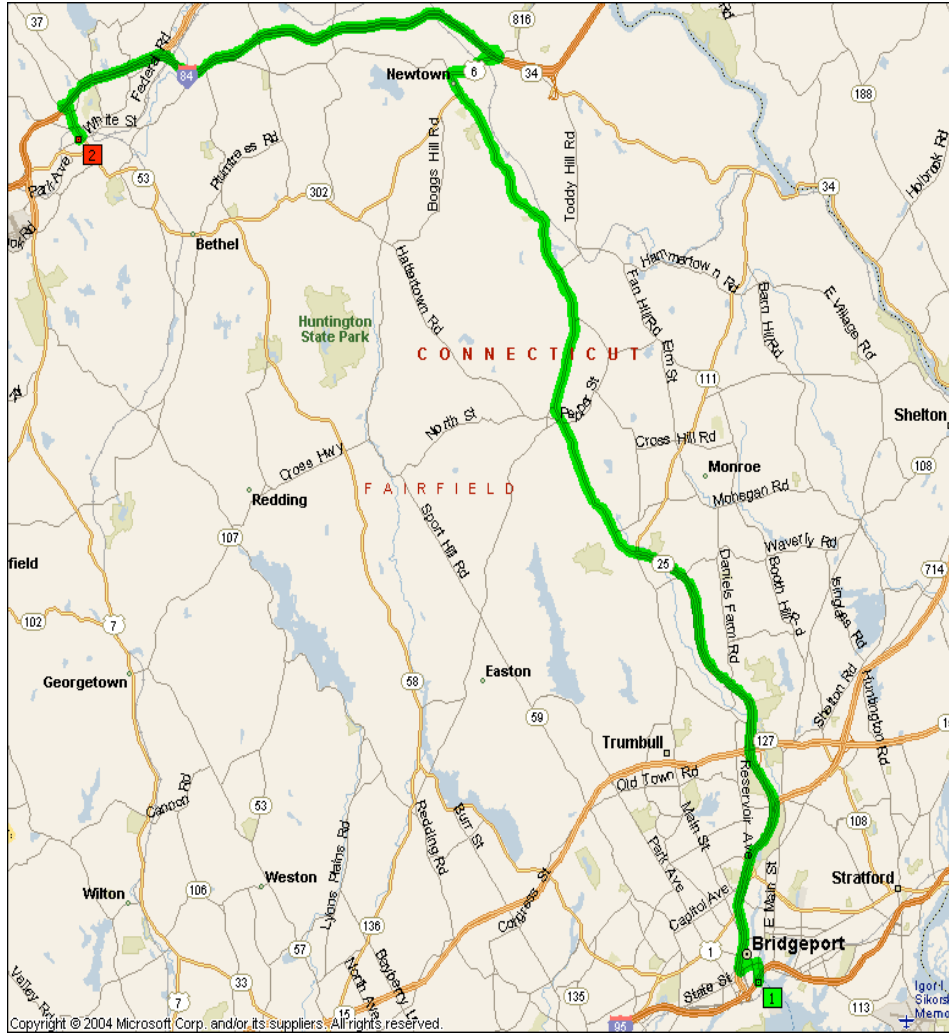
Based on the number of employees at this facility and the rate of transit usage in the Housatonic Region according to US Census Journey to work data, 40-60 trips per day could be expected in the first full year of operation.

Summary of Recommendations Waterbury-Danbury Corridor:

- **Provide additional bus service in the AM and PM peak to round out existing Peter/Pan Bonanza Service. Add a stop in Newtown at exit 10.**
- **Intercity buses arriving in Waterbury should service Exchange Place in addition to the Travel Center.**
- **A discounted fare structure should be established for all Danbury-Waterbury travel, including an intercity/local bus UniTicket.**
- **Institute a commuter shuttle between the HART Pulse Point and Cartus.**

Danbury – Bridgeport Corridor Bridgeport – Danbury Route 25 LINK Service

HART recommends the creation of an inter-regional bus route for the Bridgeport – Danbury corridor. The service could be operated jointly by GBTA and HART.



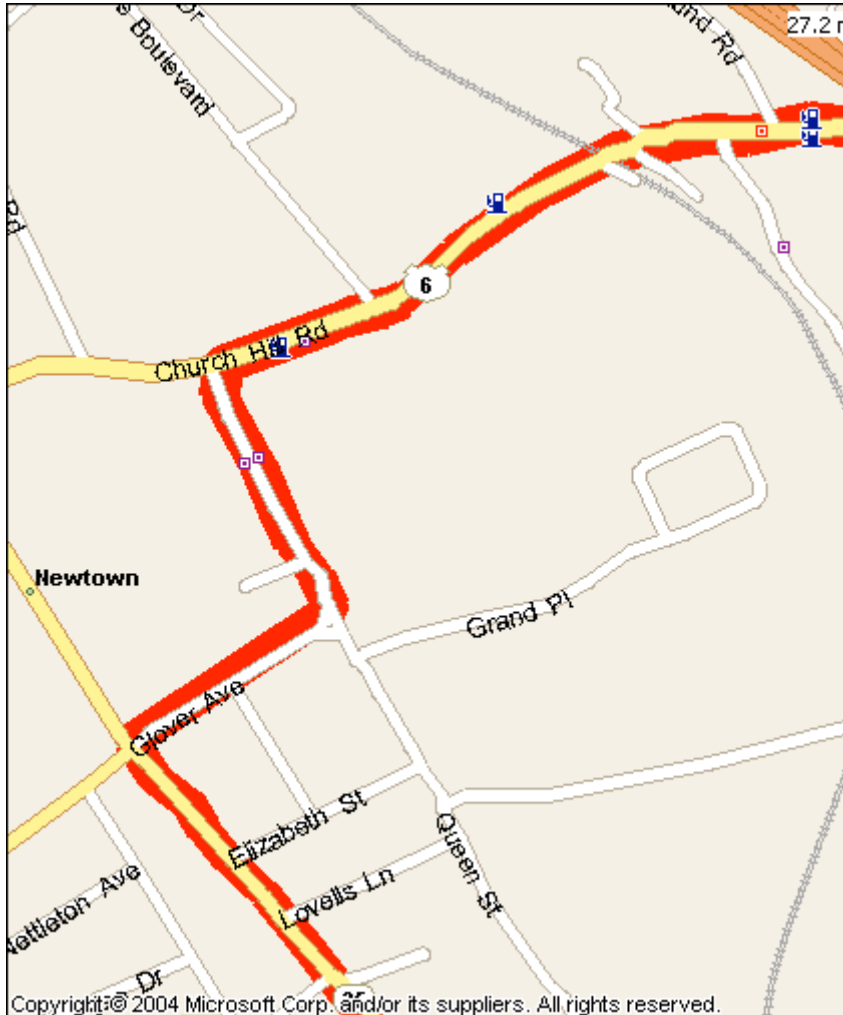
Proposed Danbury-Bridgeport Route 25 LINK Route

The Norwalk LINK service that currently runs along Route 7 as a joint effort between Norwalk Transit District and HART is a good example of this type of successful collaborative effort.

The Bridgeport to Danbury service would provide trips for people working and living on either end of the route and provide local service to points along the corridor at retail, office and manufacturing locations. The service could also act as a shuttle from the park and ride lot at the junction with Route 111 in Trumbull to the MTA Metro-North Railroad’s New Haven Line station in Bridgeport.

Recommended Routing

Leaving Danbury, buses would depart the HART Pulse Point on Kennedy and Main and travel northward on Main Street to the I-84 exit 5 Interchange. The bus will then express on I-84 East as far as exit 10, where it will exit onto Church Hill Road.



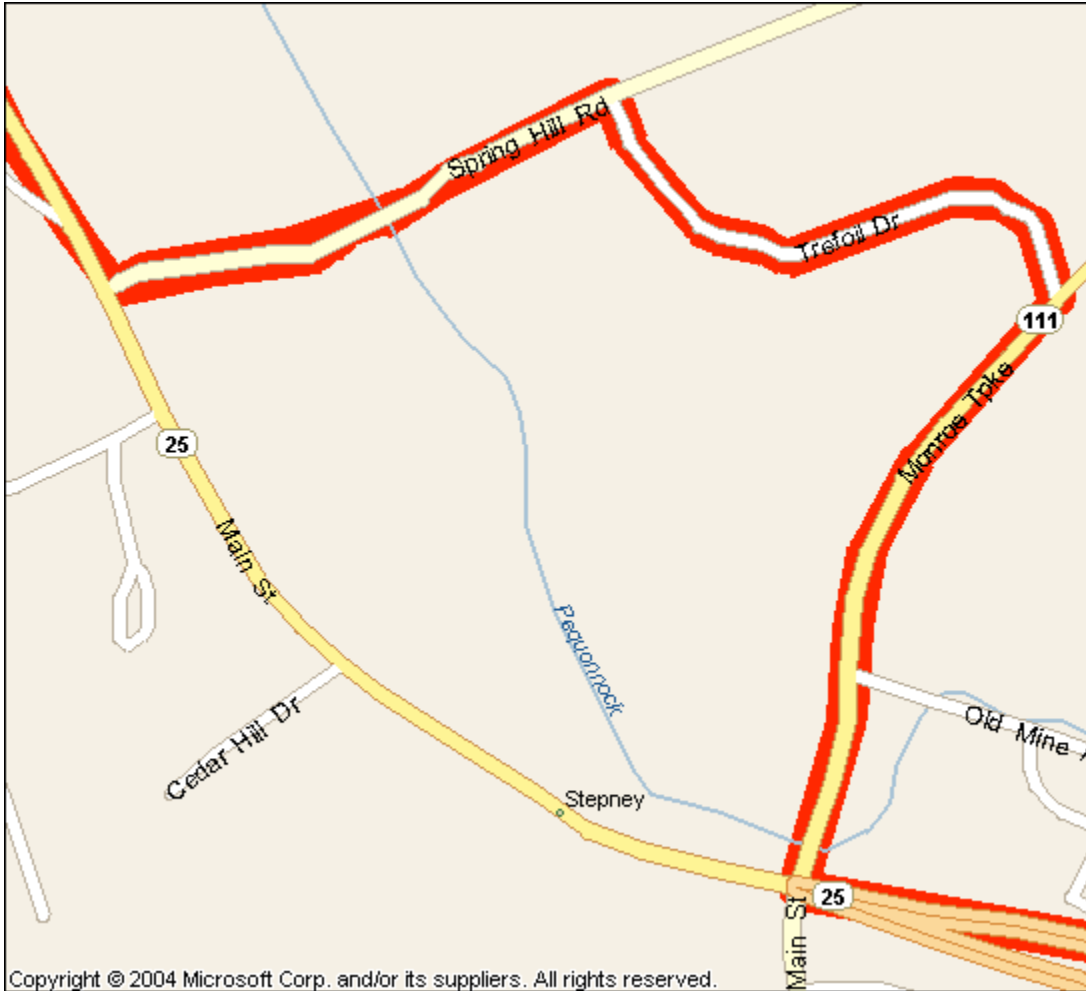
Church Hill Road segment of the proposed Danbury-Bridgeport LINK Route

This routing has the added advantage of providing service to a portion of Main Street in Danbury not currently served by transit which includes a major low-income housing development

At exit 10, Buses would travel on Church Hill Road as far as Queen Street and take the left turn onto Queen, passing the Big Y Shopping Center. The route continues on Queen Street to Glover, and then left onto Route 25 south, as shown.

The bus route would continue on Route 25 south until Sand Hill Plaza, where direct service into the shopping center would be provided, then continue southward until the

intersection of Spring Hill Road and Route 25 in Trumbull, just past United Health Care.



Proposed routing through Trumbull, deviating from 25 to serve employers along Trefoil Drive

The route continues onto Spring Hill Road and Trefoil Drive to serve the YMCA, Schweppes, Gardner Denver and several other employment locations here. At the intersection with Route 111, the bus would turn right, cross Route 25 to serve the Route 25/111 commuter lot, and express on the limited access highway portion of Route 25 to exit 3 in Bridgeport.

At exit 3, buses would take Main Street to Fairfield Avenue to Water Street to the GBTA bus station.

In the Danbury-bound direction the route would be the same, with an additional stop off exit 8 of I-84 heading into Danbury. The bus would pull off I-84 briefly to drop off passengers at the stop in front of the Mobil gas station on Newtown Road, to allow

passengers to transfer here to the 2 Stony Hill Route. Buses would then rejoin I-84 westbound, travel to exit 5 and follow Main Street Danbury to the HART Pulse Point.

While it is desirable to serve this location for workers arriving in the area of Stony Hill Road from Newtown and points south along Route 25, the one-way nature of the I-84 interchange at exit 8 makes a drop off heading to exit 5 much simpler than a pick up for buses heading east on I- 84.

Buses heading west to Danbury need only pull off the exit, serve the gas station, and continue straight to rejoin I-84 west. Buses heading east must exit to the left off 84, and follow the interchange through several signals before returning via I-84 eastbound, a significant difference in travel time. For this reason, this location would be served in the peak direction only.

The last two buses arriving in Danbury would terminate at the Wal-Mart location off exit 8 to allow for a timed transfer to HART’s evening LOOP bus routes.

A suggested service schedule is provided below.

To Bridgeport from Danbury

<i>HART Pulse Point</i>	<i>I- 84 Exit 8</i>	<i>I-84 Exit 10</i>	<i>Sand Hill Plaza</i>	<i>Route 111/ Route 25</i>	<i>Bridgeport Intermodal Center</i>
6:00	--	6:20	6:40	7:00	7:15
7:00	--	7:20	7:40	8:00	8:15
8:00	--	8:20	8:40	9:00	9:15
10:00	--	10:20	10:40	11:00	11:15
1:15	1:30	1:45	2:05	2:25	2:40
2:15	2:30	2:45	3:05	3:25	3:40
3:15	3:30	3:45	4:05	4:25	4:40
4:15	4:30	4:45	5:05	5:25	5:40
5:15	5:30	5:45	6:05	6:25	6:40
6:15	6:30	6:45	7:05	7:25	7:40

P.M. times in Bold

To Danbury from Bridgeport

<i>Bridgeport Intermodal Center</i>	<i>Route 111/ Route 25</i>	<i>Sand Hill Plaza</i>	<i>I-84 Exit 10</i>	<i>I-84 Exit 8</i>	<i>HART Pulse Point</i>
5:30	5:50	6:00	6:20	6:35	6:50
6:30	6:50	7:00	7:20	7:35	7:50
7:30	7:50	8:00	8:20	8:35	8:50
8:30	8:50	9:00	9:20	9:35	9:50
12:50	1:10	1:20	1:40	--	2:15
2:50	3:10	3:20	3:40	--	3:15
3:50	4:10	4:20	4:40	--	4:15
4:50	5:10	5:20	5:40	--	5:15
5:50	6:10	6:20	6:40	6:55*	--
7:50	8:10	8:20	8:40	8:55*	--

P.M. times in Bold

**Connects with evening LOOP service at Wal-Mart, Berkshire Shopping Center.*

The above service would require three buses; two buses originating in Bridgeport and one in Danbury for the morning peak, and two originating in Danbury and one in Bridgeport in the afternoon peak.

Each system would thus need two additional transit buses respectively to operate the service.

Based on actual employment data in the corridor provided by ConnDOT and historical ridership patterns on the Danbury-Norwalk LINK, 180 daily passenger trips could be expected in the first full year of operation.

Fare Policies

It is recommended that a unified cash fare be instituted on the service equivalent to the current GBTA fare structure, with a base adult fare of \$1.50. Transfers from either system, cash or GBTA tokens would be accepted at either transit station, as is the practice on the 7 LINK.

Linkage with Danbury-Waterbury Service

It is recommended that if both Danbury-Waterbury enhancements and Danbury-Bridgeport Service are implemented, a transfer point in Newtown off exit 10 of I-84 for the two services be designated. As described in the section above, the Blue Colony Diner on Church Hill Road has good potential for this location.

Summary of Recommendations Bridgeport-Danbury Corridor:

- **A weekday peak-period bus service between the Bridgeport and Danbury Central Business districts should be created.**
- **A unified fare structure should be instituted for the service.**
- **If Danbury-Waterbury enhancements are implemented, a stop in Newtown should be used as a transfer point between the two services.**