

#### **IV. PROJECTED TRENDS AND IMPACTS**

##### **A. Projected Trends and Impacts on Transportation Needs**

###### **1. Population**

Population projections are an important part of forecasting future transportation demands. ConnDOT developed population projections through 2025 for the travel demand projections described in the next section.

In 2005, the U.S. Census Bureau estimated the population of the Central Naugatuck Valley Region (CNVR) at 281,879. The Connecticut State Data Center (CSDC) released new state and municipal population projections in May 2007. The projections tend to reflect demographic demand rather than likely growth trends because the projections do not reflect availability of land for residential development and redevelopment.

From previous projections, higher population growth is anticipated for the southwestern part of the region. Projections of population growth rates are lower for the eastern and central portions of the CNVR. Some of the projected growth in southwestern CNVR can be attributed to people coming to the region from Fairfield County, in search of more affordable housing. If housing costs continue to rise in southwest Connecticut, more in-migration into the region can be expected, especially along the Route 8 corridor. Waterbury's population is also expected to increase slightly in the next few decades, although movement out of Waterbury will continue as more residents choose to live in less densely developed communities, away from the region's central city.

The population of the state is aging. According to the 2007 CSDC statewide projections, the proportion of pre-school and school age children will decrease. Young adults will increase, while the proportion of older workers will remain fairly stable. The number of people 65 and over will rise markedly, as post World-War II baby boomers reach retirement age. The increase in older residents will affect transportation services. While this generation of older Americans is expected to be more independent and active than past generations, many seniors cannot or choose not to drive, relying on public or private transportation. Land use decisions and institutional developments will reflect this as well. Elderly housing developments, as well as active adult, age restricted housing developments should consider locating on bus routes or close to town services to ensure that residents are not isolated from the services that will they need.

###### **2. Transportation Challenges**

Cars are the most convenient way to travel in the CNVR. Fewer people (with the exception of the elderly) are using public transportation, and costs for operating public transportation continue to rise. While the number of households is growing, household size is shrinking and the density of

population continues to spread outward with Waterbury's density decreasing over the last decade (from 3,816 to 3,757 persons per square mile). On the other hand, the twelve suburban municipalities' densities are increasing, but at much lower levels (rising from 542 to 589 persons per square mile).

Businesses, services, and the jobs associated are also relocating from the region's central core to surrounding the suburban towns. At the same time, the number of vehicles per household is at an all time high. This combination of factors will mean the region will become even more car dependent leading to more vehicle trips per household, more cars on the road, possibly longer trips, and new or worsening traffic congestion. The trend also has a significant impact on the approximately twenty percent of Waterbury households that do not have access to an automobile. These elderly, disabled, or lower income households are facing increased transportation barriers as jobs, stores, and services relocate to areas in the suburbs that cannot be accessed via public transit or ADA paratransit services.

Implementing relatively inexpensive programs can lead to significant improvements in certain areas. Some examples include: traffic signal timing to ensure smooth and efficient traffic flow; pavement management programs which help towns allocate money for road improvements while taking deterioration rates and costs of repair into consideration; local bus studies to determine the best bus routes for serving people efficiently; and access management techniques to control curb cuts and driveways.

## **B. Travel Demand Projections**

COGCNV uses the traffic projection results from the 2006 *Congestion Screening and Monitoring Report* prepared by ConnDOT to identify projected congestion problems. The report identifies congested segments of the state highway system, by calculating the ratio of traffic volume-to-road capacity (v/c) ratios for each road segment. Future year traffic projections are based on the statewide travel demand model.

ConnDOT uses the *Highway Capacity Manual* to estimate the road capacity of state highways. The concept of capacity is defined as the maximum hourly rate at which persons or vehicles can be reasonably expected to pass a point or uniform segment of roadway during a specified time period under prevailing road, traffic, and traffic control conditions. The capacity values are based on system-wide planning assumptions, and serve as a first-cut planning analysis.

Using the capacity values and traffic volumes projected for each segment, the ConnDOT report calculates volume-to-capacity (v/c) ratios. Segments with v/c ratios above 1.00 are defined as over capacity, where traffic signals, signal timing, road geometry, or a combination of these

factors, are inadequate for projected peak hour traffic volumes.<sup>7</sup>

Table IV-B1 and Figure IV-B1 illustrate which state-maintained road segments in the CNVR are expected to be at or over capacity by 2025. The most congested segments in 2025 for the region, are identified below. All of the locations listed below are projected to have severe congestion (v/c ratios over 1.3) in 2025.

**1. Route 10 in Cheshire**

- Southern Cheshire — Cook Hill Road to Wallingford Road
- Maple Avenue to Sandbank Road
- I-691 Interchange area — I-691 to Southington townline

**2. East Main Street in Waterbury**

- Oak Street Avenue to Scott Road
- Harpters Ferry Road to east of Scott Road (Meriline Avenue)

**3. Route 6 in Thomaston**

- Route 8 to Prospect Street

**4. Route 64 in Middlebury and Waterbury**

- Middlebury-Waterbury townline to I-84
- Tucker Hill Road to Route 63
- Route 63 to Middlebury-Waterbury townline

**5. Route 69 in Waterbury**

- Harpers Ferry Road to I-84
- Frost Road to Pritchard Road

**6. Route 70 in Cheshire**

- I-84 to Marion Road
- Peck Lane to Route 10 North Junction

**7. Route 73 to Oakville and Watertown**

- Davis Street to Hillside Anveue in Oakville
- Buckingham Street to Watertown-Waterbury townline
- Gertrude Avenue to Tompkins Street in Waterbury

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<sup>7</sup>Transportation Research Board, Highway Capacity Manual Special Report 209, 1997, pg. 9-31.

**8. Meriden Road in Waterbury**

- Frost Road to Alexander Avenue

**9. Interstate 84 in Waterbury**

- Route 69 and the Exit 23 Interchange
- Route 8 North Ramp to Meadow Street (Exit 21)

**10. Route 63 in Southern Watertown**

- Bunker Hill Road to the Middlebury townline

**11. Route 63 in Naugatuck**

- At Cherry Street
- Water Street to Route 68

**12. Route 63 in Middlebury**

- I-84 to Route 64

**13. Route 68 in Naugatuck**

- Directly east of Route 8

**14. Route 73 in Waterbury**

- Irvington Avenue to Deerfield Avenue

**15. Meriden Road on Waterbury**

- Frost Road to National Avenue

**16. Chase Parkway (SR845) in Waterbury**

- At the I-84 overpass

**Table IV-B1. Severely Congested State Highway Segments in the CNVR, by Volume to Capacity Ratio: 2025**

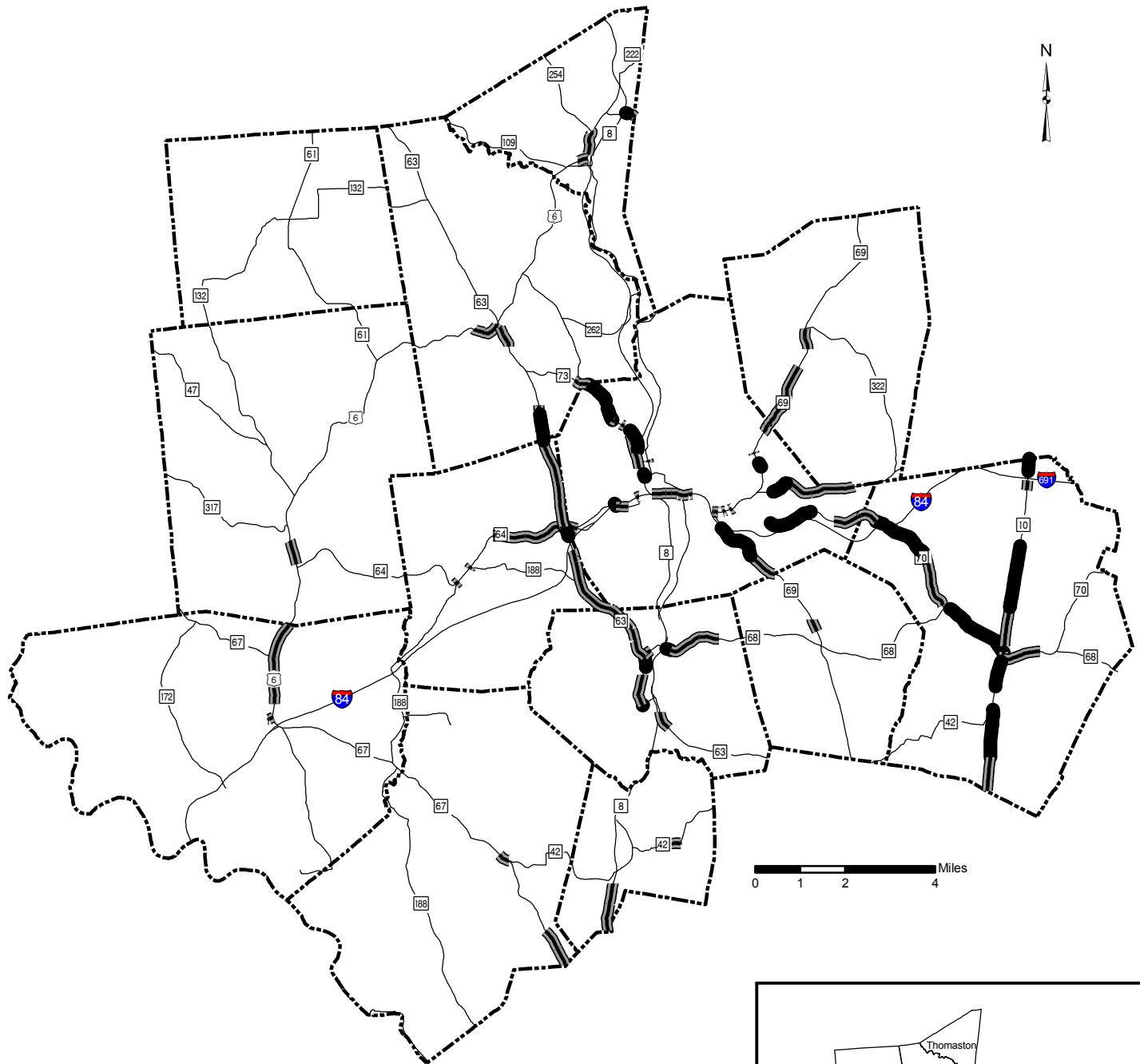
<b>Rte</b>	<b>Town</b>	<b>Description</b>	<b>V/C ratio 2025</b>	<b>V/C ratio 2005</b>	<b>Percent Change</b>
<i>Volume to capacity ratio of 1.3 or greater</i>					
10	Cheshire	At Route 42	2.10	1.69	24%
10	Cheshire	Elmwood to Wallingford Rd	1.96	1.58	24%
70	Cheshire	Lynwood Drive Ext. to Carter Lane	1.95	1.57	24%
70	Cheshire	Willow St to Maple Ave	1.79	1.45	23%
801	Waterbury	E Main St: Harpers Ferry Rd. to Whitecroft Lane	1.75	1.43	22%
69	Waterbury	Edgewood Ave to Access to EB I-84	1.74	1.43	22%
8	Waterbury	At Rte 73 junction	1.66	1.36	22%
10	Cheshire	Exit from WB I-691 to Southington TL	1.62	1.31	24%
70	Cheshire	Exit from WB I-84 to access to WB I-84	1.61	1.30	24%
70	Cheshire	Carter Lane to Willow St.	1.60	1.29	24%
69	Waterbury	Harpers Ferry Rd to Edgewood Ave	1.58	1.29	22%
10	Cheshire	Creamery Rd to Sandbank Rd	1.55	1.25	24%
68	Naugatuck	Union & Golden St to Prospect St School (W of Eagle St)	1.51	1.22	24%
69	Waterbury	Frost Rd to Pritchard Rd.	1.50	1.23	22%
70	Cheshire	Access to EB I-84 to Marion Rd	1.50	1.21	24%
801	Waterbury	E Main St: Whitecroft Ln to Meriline Ave	1.49	1.22	22%
63	Naugatuck	At Cherry St	1.46	1.17	25%
846	Waterbury	Riverside St NB to start of one-way access to NB Rte 8	1.44	1.18	22%
10	Cheshire	Maple Ave to Creamery Rd	1.41	1.14	24%
6	Thomaston	Rte 222 to Prospect St	1.41	1.10	28%
63	Watertown	State St to Bunker Hill Rd	1.40	1.14	23%
73	Waterbury	Deerfield Ave to Gertrude Ave #1	1.38	1.14	21%
73	Waterbury	Gertrude Ave #1 to Irvington Ave	1.38	1.14	21%
845	Waterbury	West Main St to Country Club Rd	1.38	1.13	22%
73	Waterbury	East Aurora St to junction with I-84	1.35	1.11	22%
63	Watertown	Middlebury-Watertown TL to State St	1.34	1.09	23%
69	Waterbury	Harpers Ferry	1.33	1.09	22%
70	Cheshire	Maple Ave to Horton Ave.	1.32	1.07	23%
63	Middlebury	Woodside Ave to Rte 64	1.32	1.05	26%
801	Waterbury	E Main St: Meriline Ave to Stonegate Apts driveway	1.31	1.07	22%
844	Waterbury	Frost Rd to National Ave	1.31	1.07	22%
73	Waterbury	Eastern Ave to Madeline Ave	1.31	1.07	22%
10	Cheshire	Cook Hill Rd to Rte 42	1.31	1.06	24%
63	Naugatuck	Water St to Rte 68	1.30	1.05	24%
<i>Volume to capacity ratio of 1.20 to 1.29</i>					
801	Cheshire	Waterbury Rd: Waterbury-Cheshire TL to I-84	1.29	1.04	24%
68	Naugatuck	Prospect St School (W of Eagle St) to Union City Rd	1.29	1.04	24%
42	Beacon Falls	At Cook Ln	1.29	1.01	28%
64	Waterbury	Middlebury-Waterbury TL to Interchange 17 on I-84	1.28	1.05	22%
63	Middlebury	Park Rd to Middlebury-Watertown TL	1.28	1.02	25%
801	Waterbury	E Main St: Austin Rd to Waterbury-Cheshire TL	1.27	1.04	22%
844	Waterbury	Meriden Rd: National Ave to Alexander Ave	1.27	1.04	22%

**Table IV-B1. Severely Congested State Highway Segments in the CNVR, by Volume to Capacity Ratio: 2025**



<b>Rte</b>	<b>Town</b>	<b>Description</b>	<b>V/C ratio 2025</b>	<b>V/C ratio 2005</b>	<b>Percent Change</b>
70	Cheshire	Marion Rd to Moss Farms Rd	1.27	1.03	23%
63	Watertown	French St to Echo Lake Rd #1	1.26	1.02	24%
69	Wolcott	5 Mi N of MacCormack Dr to Longmeadow Dr	1.25	1.07	17%
845	Waterbury	Chase Pkwy: Country Club Rd to Exit from EB I-84(053)	1.25	1.02	23%
492	Southbury	Main St South at Rte 6/67	1.25	0.99	26%
63	Middlebury	Country Club Rd East	1.25	0.99	26%
69	Wolcott	Longmeadow Dr to Rte 322	1.24	1.06	17%
6	Southbury	At Pinehill Rd	1.24	0.99	25%
846	Waterbury	Watertown Ave: Robbins St to Bunker Hill Ave	1.22	1.00	22%
10	Cheshire	Jct Rtes 68 & 70 (Main St)	1.22	0.98	24%
6	Thomaston	Prospect St to Plymouth TL	1.22	0.95	28%
845	Waterbury	84(054)	1.21	0.99	22%
10	Cheshire	To Maple Ave(NB)	1.21	0.98	23%
63	Middlebury	I-84 to Woodside Ave	1.21	0.96	26%
69	Wolcott	Waterbury-Wolcott TL to Nichols Rd	1.20	1.03	17%
73	Watertown	Davis St to Hillside Ave	1.20	0.98	22%
73	Waterbury	0.02 Mi W of Madeline Ave to Deerfield Ave	1.20	0.98	22%

Source: *Congestion Management System: 2006 Congestion Screening and Monitoring Report* (2006).

**Figure IV-B1. Highway Congestion in the Central Naugatuck Valley Region: 2025**



**Highway congestion**  
**volume-to-capacity ratios: 2025**

 1.00 (at capacity) to 1.29  
 1.30 and higher

