

REGIONAL TRANSPORTATION PLAN
FOR SOUTHEASTERN CONNECTICUT

FY 2011 – 2040

Prepared in cooperation with the U.S. Department of Transportation, Federal Highway Administration and the Federal Transit Administration, and the Connecticut Department of Transportation. The opinions, findings, and conclusions expressed in this publication are those of the Southeastern Connecticut Council of Governments and its Regional Planning Commission and do not necessarily reflect official views or policies of the Connecticut Department of Transportation, the Federal Highway Administration or the Federal Transit Administration.

Adopted: April 20, 2011

SOUTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS
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TABLE OF CONTENTS

I.	Introduction	1
II.	Historical Perspective	5
III.	Population and Development	8
IV.	Goals and Objectives	27
V.	Transportation Facilities	32
	A. Highways	32
	B. Ridesharing and Commuting	57
	C. Pedestrian and Bicycle	61
	D. Intelligent Transportation System	69
	E. Rail	71
	F. Freight	73
	G. Marine	76
	H. Air	77
	I. Surface Transportation Program - Urban	80
	J. Intermodal	82
	K. Access Management	84
	L. Alternative Fuels	85
VI.	Transit	86
VII.	Locally Coordinated Public Transit- Human Service Transportation Plan (LOCHSTP)	94
VIII.	Security	97
IX.	Climate Change.....	102
X.	Environmental Justice and Public Participation	104
XI.	Air Quality	107
XII.	Environmental Mitigation	108
XIII.	Consultation	110
XIV.	Highest Priority Projects	111
XV.	FY 2011-2040 List of Transportation Projects	112
XVI.	Fiscal Constraint	118
XVII.	Assessment of Conformity with SAFETEA-LU	121
	Appendix A: Acronyms Relating to Transportation	124

LIST OF ILLUSTRATIONS

Figure 1	Population Growth, 1960-2005	10
Figure 2	Developed Land, 1962	13
Figure 3	Developed Land, 2005	14
Figure 4	Developed Land as a Percent of Total Area, 1960-2005	15
Figure 5	Area of Selected Land Uses, 1960-2005	16
Figure 6	Population Per Square Mile of Developed Area, 1960-2005	17
Figure 7	Significant Regional Traffic Generators	19
Figure 8	Major Highways	33
Figure 9	Percent Change in ADT, 1992-2008	42
Figure 10	Average Daily Traffic - Interstate 395 (Norwich)	43
Figure 11	Average Daily Traffic - Interstate I-95 (Groton)	45
Figure 12	High Frequency Accident Locations 2005-2007	47
Figure 13	Commuter Parking Lots	60
Figure 14	Proposed Bike and Pedestrian Routes	62
Figure 15	Inventory of Open Space with Trails	68
Figure 16	Proposed Intelligent Transportation Systems, Implemented, 2006	70
Figure 17	Proposed Bus Service Expansion Plan (SEAT)	88
Figure 18	Proposed Intermodal Tourist Transit System	90
Figure 19	Pedestrian Improvement Plan (TranSystems)	91
Figure 20	High Security Sites	98
Figure 21	Population Density by Census Block Group	99
Figure 22	Route 11 Greenway Corridor: Property Status.....	109

LIST OF TABLES

Table 1	Population Estimate	12
Table 2	Significant Regional Traffic Generators	20
Table 3	Vehicle Ownership, 1980, 1990, 2000 and 2008 (Estimated)	21
Table 4	Vehicle Availability, 2000	23
Table 5	Vehicle Commuting Patterns, 2000	25
Table 6	State and Local Road Mileage	26
Table 7	Traffic Volumes at Selected Locations, 1992-2008	38
Table 8	Traffic Congestion Sites by Town, 2009	49
Table 9	Local Bridge Program.....	54
Table 10	CONNDOT Bridge Program, 2006	56
Table 11	Place of Work, 2000	58
Table 12	Shipping Report Cargo Only Yearly Comparisons	75
Table 13	Proposed FY 2011-2040 Transportation Project Plan	113
Table 14	Allocation of Anticipated Funds to CT Planning Regions, 2011-2040	119



SOUTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS

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RESOLUTION NO. 11-03 CONFORMITY WITH THE CLEAN AIR ACT OZONE

WHEREAS, the Southeastern Connecticut Council of Governments is required to submit an Air Quality Conformity Statement to the US Federal Highway Administration (FHWA) and to the US Environmental Protection Agency (EPA) in accordance with the final conformity rule promulgated by EPA (40 CFR 51 and 93) when adopting an annual Transportation Improvement Program or when effecting a significant revision of the Region's Long Range Transportation Plan; and

WHEREAS, Title 42, Section 7506 (3) (A) states that conformity of transportation plans and programs will be demonstrated if:

1. the plans and programs are consistent with recent estimates of mobile source emissions;
2. the plans and programs provide for the expeditious implementation of certain transportation control measures;
3. the plans and programs contribute to annual emissions reductions consistent with the Clean Air Act of 1977, as amended; and

WHEREAS, it is the opinion of the Southeastern Connecticut Council of Governments that the plans and programs approved today, April 20, 2011 and submitted to FHWA and EPA conform to the requirements of Title 42, Section 7506 (3) (A) as interpreted by EPA (40 CFR 51 and 93); and

WHEREAS, The State of Connecticut has elected to assess conformity in the Connecticut portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Ozone Moderate Nonattainment area (Fairfield, New Haven and Middlesex Counties) and the Greater Connecticut Ozone Moderate Nonattainment Area (Hartford, New London, Tolland, Windham and Litchfield counties), and the Connecticut Department of Transportation has jointly assessed the impact of all transportation plans and programs in these Nonattainment areas (Ozone Air Quality Conformity Report January 2011); and

WHEREAS, The Connecticut Department of Transportation's assessment (above) has found that plans and programs jointly meet mobile source emission's guidelines advanced by EPA pursuant to Section 7506 (3) (A).

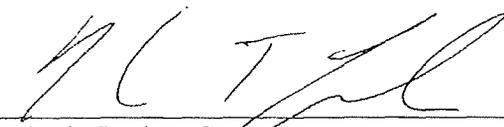
Member Municipalities: Bozrah * Colchester * East Lyme * Franklin * Griswold * City of Groton * Town of Groton * Ledyard * Lisbon * Montville * New London * North Stonington * Norwich * Preston * Salem * Sprague * Stonington * Stonington Borough * Voluntown * Waterford

BE IT RESOLVED, that the Southeastern Connecticut Council of Governments finds that the FY 2011-2040 Long Range Regional Transportation Plan and the FFY 2010-2013 Transportation Improvement Program conform to air quality requirements of the U.S. Environmental Protection Administration (40 CFR 51 and 93), related U.S. Department of Transportation guidelines (23 CFR 450) and with Title 42, Section 7506 (3) (A) and hereby approves the existing January 2011 Ozone Air Quality Conformity Determination contingent upon no major adverse comments are received during said period.

CERTIFICATE

The undersigned duly qualified and acting Secretary of the Southeastern Connecticut Council of Governments certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Southeastern Connecticut Council of Governments on April 20, 2011.

Date: 5/2/11

By: 
Kevin Lyden, Secretary

I. INTRODUCTION

The process of planning is defined as the rational allocation of resources to achieve certain specified objectives. The purpose of this planning document is to identify the long range transportation needs of the southeast region and to create a general policy guide for the future allocation of available public resources to address those needs.

Nationwide, responsibility for developing regional transportation policy under federal guidelines is vested with the Metropolitan Planning Organizations (MPOs). In 1973, the Southeastern Connecticut Regional Planning Agency (SCRPA) was designated by the Governor as the Metropolitan Planning Organization responsible for the transportation planning in the twenty-town Southeastern Connecticut Planning Region. In 1976, the first regional transportation plan was adopted by SCRPA. In 1993, the role of MPO was officially transferred from SCRPA to the Southeastern Connecticut Council of Governments (SCCOG) when the agency reorganized.

The nature of transportation planning has changed significantly over the past thirty five years into a process whose objectives and goals sometimes only appear peripherally related to transportation. For example, energy conservation, air quality, disabled accessibility and environmental justice have added complex new dimensions to transportation issues. *The Safe, Accountable, Flexible, Efficient, and Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) was signed into law in 2005. SAFETEA continued changes that were made in the preceding *Federal Transportation Act* (TEA-21) governing the way Metropolitan Planning Organizations conducted planning activities. Likewise, for those areas like Connecticut, which are not in compliance with the *Clean Air Act Amendments* (CAAA) of 1990, air quality mitigation continues to remain one of the key centerpieces of transportation planning. Finally, programs such as the *Americans With Disabilities Act* (ADA), the *Jobs Access and Reverse Commute Program*, and more recently *New Freedoms and Locally Coordinated Health and Social Services Transportation Plans* (LOCHSTP) impose major new service requirements on public transportation systems in order to serve the needs of special populations. For these reasons, this document examines not only the region's transportation needs but evaluates them against these and many other factors of national, state, regional and local concern.

In passing the CAAA and its subsequent revisions, Congress established a critical legislative mandate for transportation planning relative to achieving air quality standards. The passage of the *Intermodal Surface Transportation Equity Act* (ISTEA) in 1991 its successor, TEA-21, in 1998, SAFETEA-LU in 2005, reflects Congress's intent to redirect the transportation sector's efforts to address improvements in air quality through modifications in the means by which people and goods are transported. Since the MPO plays a role in this process, broad interpretation of this mandate at the federal and state levels has not only resulted in changes in the transportation related products we use, it may also change the way many people travel and the decisions enabling those changes.

Air quality in the northeastern section of the United States is heavily influenced by both fixed and mobile sources of air pollution, all of which are fossil fuel-based. The single greatest documented case of degraded air quality from fixed sources that affected the eastern part of the United States resulted from pollutant transport from mid-west electric power plants that continue to combust coal as a fuel source. In addition, for thirty years, mobile sources have been formally recognized as a major cause of air pollution. Each cycle of an internal combustion engine, using fossil fuel as an energy source, results in trace amounts of carbon monoxide, nitrous oxide, sulfur dioxide, particulate matter and hydrocarbons which, in the presence of sunlight, produces ozone. Air quality in cooler climates, like the northeast, is further compromised during the early phase of combustion when engines are cold. Expanded use of the automobile resulting from sprawl-induced land use tends to defeat the significance of efforts to reduce the overall number of auto trips. Likewise, energy pricing has had only marginal impact on reducing trip demand. The net result is that despite a steady annual increase of vehicle miles of travel, air quality has been steadily improving as a result of vehicle emission control technologies. The exceptions to this are oxides of nitrogen (NO_x) and sulfur dioxide that are produced inversely to hydrocarbons as a combustion by-product. These compounds are the precursors of acid rain and thus far appear less sensitive to the technological improvements to fuel or to the internal combustion engine that have been so effective in improving air quality in the face of increasing vehicle miles of travel.

Over the long term, low emission hybrid (clean) fueled vehicles will eventually replace portions of the present vehicle fleet. In the short term (20 years), there will be severe constraints on the degree to which the transportation sector will be able to build its way out of highway congestion through major capacity expansions that induce more travel. During FY 2010, financial constraints compelled the Connecticut Department of Transportation to review its priorities. When this process was completed, the Department found that it could no longer continue to carry projects (such as Route 11) that had no possibility for advancing given the financial outlook for at least the next six years.

In this discussion, congestion mitigation on I-95 stands out in several respects. First, it is a project that CONNDOT recently deemed unfundable in the next six years. Yet its status as an important project was highlighted in a 1999 report prepared by Michael Gallis and sponsored by the Connecticut Institute for the 21st Century. Gallis warned that failure to address key transportation issues could render Connecticut an “economic cul-de-sac” and cut it off from the major surrounding economic markets on which it is dependent. In this new economic context, if Connecticut cannot add capacity to I-95 or reduce demand, what can be done in order for the state to maintain its economic viability.

Expanding on this point, a primary means by which the Federal Transportation Act (SAFETEA-LU) affected the transportation planning process involved the notion of “fiscal constraint”. As a function of the funds available to underwrite the cost of many

“big ticket” transportation projects, both highway and transit, the federal requirement for fiscal constraint in planning has modified the nature of the projects to be formally included in a Regional Transportation Plan. Under these planning regulations, the Regional Transportation Plan must be constructed to cover a twenty-nine year period, but it must only contain those projects for which there is a reasonable expectation of funding through an identified source. Since the federal government has become the primary funding source for most transportation projects, the Fiscal Constraint Rule (FCR) limits the manner in which communities and regions can use the regional transportation planning process as a vehicle for the expression of a grand “future vision”. The FCR forces regions and the State to look more realistically at available financial resources and to focus efforts on financially achievable projects. During FY 2010, when CONNDOT surveyed statewide needs relative to projected levels of funding, it concluded that many of the “big ticket” items such as Route 11, I-95 expansion and a second span for the Mohegan Pequot Bridge and many other statewide projects on which work was proceeding, were simply not financially feasible in the projected fiscal environment.

Subsequent to a public hearing, this revised plan will be formally adopted by SCCOG. Prior to this, the Connecticut Department of Transportation (CONNDOT) will conduct an air quality and cost analysis. This is necessary to ensure that regional plans meet federal conformity requirements for both clean air and fiscal constraint. In this context, it is important to note that southeastern Connecticut represents a relatively small part of an air quality region that includes all of the state. This means that transportation activities in the southeast region become part of a larger air quality model that includes transportation activities in Hartford, New Haven and western part of the state.

As noted above, regional transportation plans are intended to function for 29-years from their date of adoption. They may be updated or revised as needed, but at a minimum be updated once every three years. Throughout this ongoing process, the public continues to be regularly consulted as specific projects are drawn from the plan for implementation. The actual implementation of projects recommended in the regional transportation plan requires a parallel, but entirely separate, administrative process that is largely dependent on available federal, state, and, in some cases, local funding as well as local political support. The document that summarizes the actual transportation project implementation process and schedule is called the *State Transportation Improvement Program* (STIP). Regionally, it is known as the TIP. The STIP/TIP lists those projects drawn from the Regional Transportation Plan to be implemented over the next four-year period (2010-2013). The TIP is updated regularly as amendments are needed. The TIP provides specific information about the public funding sources of projects underway as well as a schedule for implementation.

Some transportation projects may actually be privately funded. The recently constructed bypass of Route 2 by the Mashantucket Pequot Tribal Nation is a good case in point. Transportation projects that are privately funded fall outside of the purview of the regional planning and TIP process. Another example of such projects

are local roads that are constructed to serve subdivisions. Privately funded transportation improvements may also include large commercial or industrial development proposals. Large private transportation improvements above a threshold of 200 parking spaces and 100,000 square feet gross floor area generally follow a completely separate review process overseen exclusively by the State Traffic Commission (STC). Since the regional transportation planning process is a direct outgrowth of federal funding activities, the distinction between public and private funding is critical in differentiating between activities of the STC on the one hand and the SCCOG functioning as the MPO on the other. As major new private development occurs in southeastern Connecticut, the role of the STC in mitigating safety issues becomes increasingly more important as a factor in determining transportation system outcomes. An upcoming case in point will be whatever private development occurs at the Norwich Hospital site in Preston and at what intensity. A more recent example of a private developer improving a state highway are the turning lanes and traffic signals in the vicinity of Lisbon Landing.

Over the course of the last two decades, southeastern Connecticut has witnessed a large amount of development and a resultant pressure on its transportation systems. This pressure is largely the result of changes in the defense economy occurring at the same time as an explosion of Indian gaming and expanding tourism and commercial development. In response to these changing conditions, CONNDOT and SCCOG have initiated three major environmental impact studies: one to examine the completion of Route 11; another to examine the Routes 2/2A/32 corridors; and a third to address the growing congestion on I-95. Also initiated was a study to conduct marketing and feasibility analysis for expanding bus transit in southeastern Connecticut to coordinate with passenger, ferry and rail modes entering the region. This, too, has been completed, but the funding to conduct a pilot project was never secured. Finally, SCCOG recently completed a study of the Regional Intermodal Transportation Center in New London. The purpose of the study was to examine options for physical changes that would enhance intermodal connections between rail, bus, taxi, parking and ferry. This study also examined opportunities for transit-oriented development in New London. At this time, funding to implement recommendations in this plan have not been identified.

This discussion raises a critical point regarding the limits of the role of SCCOG. SCCOG, as the MPO, does not itself have the ability to implement its planning recommendations. As described above, the implementation of publicly funded transportation improvement projects are an exceedingly complex activity that depends on the active cooperation of federal, state and local governments as well as the citizens affected. It is in recognition of these limitations that this plan is being prepared.

II. HISTORICAL PERSPECTIVE

Historically, urban and village settlement patterns have been the preferred settings for efficient infrastructure development. But over the last five decades, southeastern Connecticut has been evolving into a highly suburbanized setting. In a 559 square mile area, there are 20 separate municipal governmental entities and two federally recognized sovereign Native American nations, each different from the others in socio-economic character. Supporting these characteristic differences is the independent power, subject to the General Statutes granted to municipalities, to zone land and to tax it. Therefore, in understanding the complex relationship between development and transportation, each of the 20 municipalities must be viewed as mini, sub-economic systems with each using its land resources to compete with the others to attract high quality, tax-generating, enterprises. A good property tax base is essential to underwrite the cost of providing high quality municipal services such as schools, police, fire protection as well as public health services. Consequently, in addition to new suburban residential development, each municipality has sought to attract its own mix of commercial and industrial activities that would help underwrite a tax burden that would otherwise be borne entirely by residential property owners. This zoning/land development/property tax cycle has, in turn, created entirely new patterns of travel demand, often unrelated to major, existing, urban-based transportation infrastructure. For this reason, the traditional efficiencies of urbanization, built upon that basic infrastructure, are rapidly changing in Connecticut through a uniquely small, municipally-based governmental structure.

Energy cost and availability is perhaps the single most critical, underlying, factor in this complex land development and transportation equation. The availability of ostensibly low cost energy has been, until relatively recently, an essential enabling ingredient in the suburbanization/development process that helps support the value of marketable land. Energy, in the form of electricity, fuel for automobiles and oil for heating, coupled with a reasonably well developed highway network, has enabled our nation and our region to achieve a level of personal mobility heretofore unimagined. Likewise, it has enabled those who wish to do so to move farther and farther away from problems of the inner city in order to insure the safety and security of their families and a generally higher "rural" quality of life. While urban issues are widely considered to be the social driving force behind suburbanization, the achievement of those social objectives in the form of suburbanization is really being enabled by national policies on energy, transportation, housing and is being underwritten by federally-backed bank lending policies which, for more than half a century, have favored suburban development. With its small town governmental structure based firmly in the values of home rule, Connecticut typifies the national geo-political environment in which the cycle of suburbanization has evolved. The cycle begins with the development of low cost, rural, outlying farmland for low density residential uses. This is followed by the need to support that development with both municipal and commercial services. In the last steps in the cycle, through a whole variety of

incentives, commercial and industrial uses are enticed to locate in rural settings to help offset the tax burden of the residential property owners. Finally, new jobs are created in outlying areas that require new housing, schools and infrastructure. And the cycle continues.

From the earliest history of the European settlement of southeastern Connecticut, growth and development clustered along rivers and estuaries. This was due largely to the inherent difficulty of overland travel. For this reason, it is not surprising to find early settlements along the shores of the region. While Native Americans inhabited most of the area known as southeastern Connecticut centuries before the first European migration, the earliest non-native, European settlement in Southeastern Connecticut was about 1645. It was located on the west side of the mouth of the Thames River and was founded by John Winthrop, Jr. The settlement, originally known as "Pequot," was later renamed New London. Several years later, the New London settlement was followed by a small settlement in Stonington, which was then followed by a third settlement located at the head of the Thames River, named Norwich.

These early 17th Century village settlements were primarily dependent on agriculture. Excess amounts of produce were shipped to Boston and New York and then bartered for other needed products. By the turn of the 18th Century, New London had already become one of the most important shipping and trading centers in the colony. During the early 18th Century, the foundations of the region's overland transportation system were being laid over what was then known as "paths." By the mid-18th Century there followed the creation of a coastal post road for mail delivery.

The industrialization of the 19th Century forever changed Southeastern Connecticut. At the beginning of the 19th Century, the area was primarily agricultural. However, as a by-product of the elaborate array of rivers and streams and other water bodies around the region which would be harnessed to supply a dependable source of power for mills, by the end of the century, the economic base of southeastern Connecticut would be almost entirely industrial, dominated by the textile industry.

Early in the 19th Century, the region's inland transportation infrastructure was already well established. As early as 1792, Congress had authorized a turnpike between Norwich and New London. During the 19th Century, steam powered vessels dominated shipping and passenger service, displacing sail power. By 1840, the rudiments of intermodalism were already in evidence as steamboats arriving at Norwich from New York connected with rail lines to Worcester and Boston. At the end of the century, the region was extensively covered by rail and trolley service.

Events of the 20th Century conspired to alter the well-ordered social and economic stability that was characterized by the numerous 19th Century mill villages that dotted the countryside. Domestic and foreign competition resulted in the eventual decline of New England's textile industries. Two world wars stimulated the U.S. Government to underwrite the development of a full-time defense industry in the region dedicated to

the production and support of submarines for the U.S. Navy. Following the Second World War, the construction of the Interstate Highway System began to exert enormous influence on the location of all forms of development and the diversity of the regional economy. Now, as we enter the second decade of the 21st Century, with the breakup of the Soviet Union and an end to the Cold War, the once robust market for submarines has been reduced. In the first decade of the 21st Century, with lower demand for submarines, the region experienced another major economic transition, this time toward Indian gaming and tourism as principal industries and employers. In the second decade, however, the economic pressures of conducting 2 wars in the Middle East has taken an enormous toll on the economic stability of the Nation, the state and the region.

While the capacity of some parts of the region's transportation system has already been exceeded, the region now finds itself contending with the notion of limits on growth as a function of severely depressed financial resources.

III. POPULATION AND DEVELOPMENT

The purpose of this section of the plan is to present the key functional premise upon which this document is built. For the most part, settlement patterns dictate travel patterns and travel demand. The inextricable link between land use and transportation is a fundamental element in regional planning because it compels the examination of land use patterns as one of the driving forces for transportation demand and vice versa. The link between regional transportation planning and regional land use planning has become central in this document as well as it was for the previous SCCOG project to update the Regional Plan of Conservation and Development. In that exercise, it was shown how the interstate highway system was the driving force for non-urban development in southeastern Connecticut. To a large extent, it continues to do so. One of the best examples of this is Lisbon Landing, initially a 500,000 sq. ft. commercial mall built at Exit 84 off I-395 in rural Lisbon. Due to its location immediately adjacent to the interstate, Lisbon Landing continues to expand.

In the preceding section on Historical Perspective, it was noted that until approximately the end of World War II, densely populated urban settlements were the prevailing patterns of development for a wide range of land uses, including residential, industrial, retail/commercial, as well as for recreation and entertainment. The following data in this section will demonstrate that southeastern Connecticut evolved its own unique urban settlement pattern around the dominant physical features of the Thames River and Long Island Sound. However, since the end of World War II, a distinctly new, non-urban settlement pattern has emerged. This new land use pattern has greatly altered almost every type of traditional travel pattern, including the home-to-work type trip that in most instances defines the major elements of our transportation infrastructure system. In fact, these cumulative land use changes have been of such magnitude that they appear to be changing the very nature and function of urban areas that have existed for several centuries. Urban communities like Norwich and New London, which were once the center of commerce and industry in the region, are now struggling to sustain themselves. Conversely, rural communities such as Lisbon, with available land in close proximity to the interstate, are now becoming major commercial destinations. The net result of all of this change in a very short period of time appears to be a growing public awareness and concern focused on the future of both transportation and land use. Most important is that old or pre-existing transportation infrastructure no longer functions to serve a growing portion of this new complex transportation demand. Rail service, which was once the premier vendor for freight, has been displaced by trucking. This represents yet another example of a major change that has taken place in transportation as a result of dispersed land use patterns. Likewise, with respect to the movement of people, where once it was possible to offer a large portion of the resident population the efficiencies of mass transportation, widespread suburban sprawl at this small, multi-municipal, scale renders the traditional format of fixed-route (bus) or fixed-guideway (rail) inefficient

for most trip types. Where the vast majority of trip types were once all urban-based, now this pattern has completely changed.

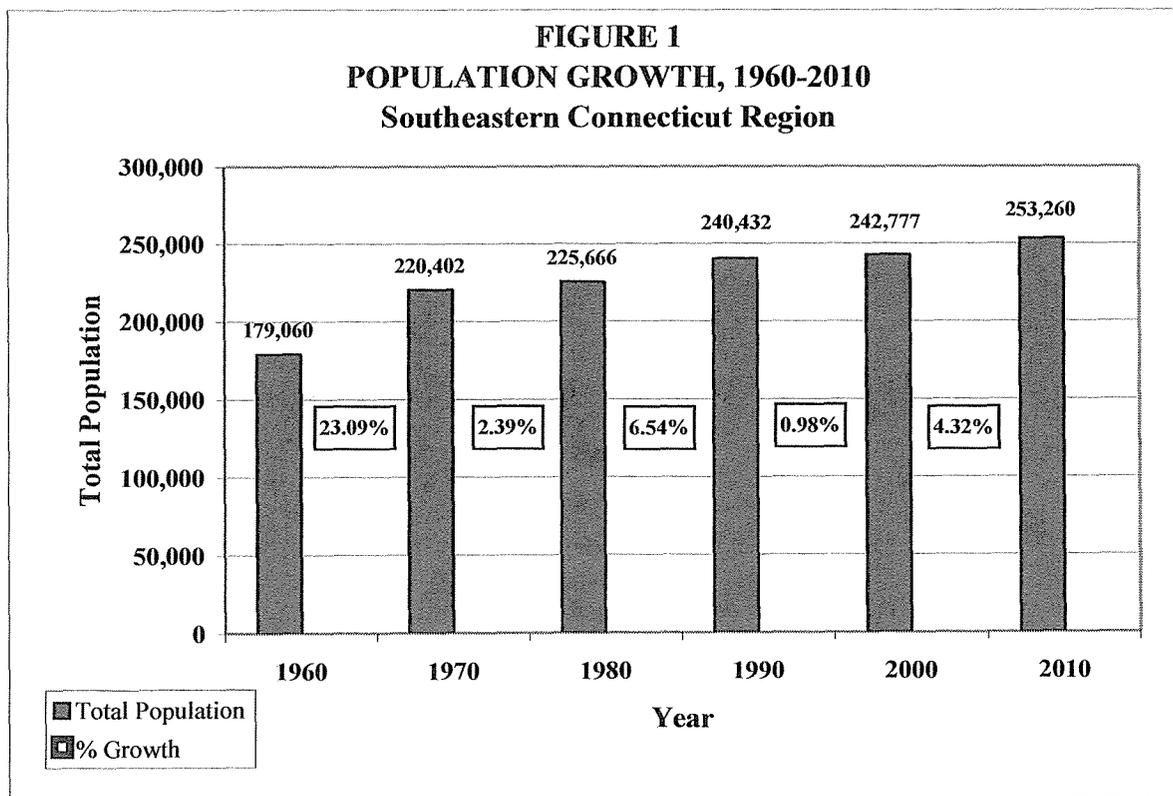
Added to these basic changing travel demand patterns in southeastern Connecticut is the pressure created by the gaming and tourism industry. In daily traffic terms, the creation of Foxwoods and Mohegan Sun Casinos, has been tantamount to creating two entirely new cities each about the size of the City of New London. The Route 32 corridor is seeing significant development as traffic increases. Likewise, Norwich is trying to position itself to become a major tourism and transportation hub with the construction of a regional transportation center. A large marine dock was constructed in the Norwich harbor with future potential rail and highway connections to points beyond. While these facilities are in proximity to freight rail, no such passenger service exists nor are there any immediate prospects for the development of such service. At the same time, New London continues to function as the region's primary transportation hub with its confluence of water, rail and highway systems.

From a larger perspective, the impact of these cumulative land use changes on aspects of the lives of many of the residents of southeastern Connecticut has been significant. While increased mobility is perhaps the most identifiable requirement of these decentralized land use changes, the quality of life benefits of this semi-rural lifestyle have not come without a financial price. Some of this price is privately borne while the rest is publicly shared. The requirement for private transportation, for example, has resulted in the necessity for virtually every family to have at least one car for each adult licensed driver. The costs of public services, too, have significantly increased. Some of it is a function of the inefficiencies of scale related to the less dense population distribution pattern. Evidence of this trend is, in some degree, reflected by increases in costs to local taxpayers to support such municipal services as education, police, fire protection, public health, water supply, waste collection, recreation and highway maintenance. Yet one of the most ominous, hidden prices of this low density lifestyle is air pollution. In a sense, the vagaries of New England weather combined with this new form of low-density development conspire to virtually eliminate walking and biking as suitable transportation modes for all but recreational purposes. Here again, local zoning and subdivision regulations have played a key role. By creating large-lot residential zones of low density and then segregating commercial, institutional and other land uses, there is no practical travel alternative for most trips except by car. Many subdivision regulations do not require sidewalks, preferring instead to vest the developer with the responsibility for building subdivision streets that exceed the design requirements of many of our state arterial highways. Likewise, fixed-route transit, once the staple of public transportation, now serves only people in urban areas whose means or age does not permit private transportation. Emerging from this pattern of auto-dependence is a renewed appreciation for the value of walking and biking and for the desire to create pedestrian "trails" to permit non-auto connections within our communities and greenways to protect fragile natural resources.

Over the course of the last four decades, it can be generally stated that the twenty towns in southeastern Connecticut have undergone major land use and lifestyle changes. As of this writing, there does not appear to be any significant abatement of this development explosion away from our traditional urban centers, especially of the residential and commercial type. It is a trend that, when combined with changes in the economy of the region, continues to burden the ability to meet travel demand.

This raises a rather fundamental question. In lieu of any sort of a statewide effort to alter the basic land taxation structure. Is there an answer to this changing land use and transportation pattern that will not require some significant changes in either lifestyle or a major investment in transportation infrastructure? Perhaps not.

Figure 1 presents population growth from 1960 to 2010. It shows that the actual net population increase (in-, versus out-migration, births vs. deaths) in southeastern Connecticut has been less than 1% per year, or about 41% between 1960 and 2010. The largest population shift has occurred in what have now become “suburban” towns, whereas towns once considered "rural" are now rapidly becoming suburbanized.



Source: U.S. Census (1960-2000), CT Department of Public Health (2010)

Table 1 depicts population projections, by town, through 2035. According to these projections, the regional rate of population growth between 2010 and 2035 will be about .3% per year for the next twenty five years. This represents a slight reduction in the rate of growth from 1960 through 2010. In fact, this average is comprised of several towns which are actually projected to see population reductions during this twenty-five year period. While a number of towns are only projected to see modest increases, Franklin and Waterford stand out as being projected to actually lose population over the next 25 years. On the higher growth side, Griswold and Colchester stand out with projected growth rates of 25% and 21% respectively between 2010 and 2035.

Figures 2 and 3 graphically depict changes in the pattern of development between 1962 and 2010. The pattern of low-density residential development is readily identifiable as suburban sprawl occurs on large lots with no sewers. Under this characteristic, on-site utility development pattern, water quality emerges as an important concern especially since there is considerable risk that over-development will require installation of high-cost, municipal sewage treatment systems. Consequently, the corollary to a market desire for rural, low density residential development is an equally strong public ethic of “sewer avoidance.”

Figure 4 graphically shows changes in the amount of land developed during this same 35-year time period. Between 1960 and 1990, the total amount of developed land was only 20.5%. But within the last two decades, with only 3% population growth, these data show the rate and scale at which sprawl is occurring in southeastern Connecticut resulting in an additional 4.5% of the region’s total land mass being developed.

Figure 5 highlights the growth of three types of developed land uses. These data show that while the amount of land devoted to residential, commercial and industrial uses have all increased, by far the greatest amount of land development in southeastern Connecticut has been dedicated to residential use. In this case, as Figures 2, 3 and 4 demonstrate, the majority of this new residential development is widely scattered.

Figure 6 integrates population data shown in Table 1 with land development data shown in Figure 4. From this, a new dimension of this sprawl pattern emerges. The picture is one of significant regional density reduction where development has occurred. The data confirm that almost 50 years of documented municipal zoning and subdivision activity, supported by financial lending institutional practices, has encouraged mostly low-density, large-lot residential development. When these municipal regulatory practices are coupled with low population growth and smaller household size, the result has been a measurable reduction in regional population density in relation to total developed land. The order of magnitude of this reduced density is more than half, from 3,826 people per developed acre to 1,734. At the same time, these figures are evidence of the quality of life/lifestyle conditions sought and

TABLE 1
POPULATION ESTIMATES, 2000 - 2035
Southeastern Connecticut Region

TOWN	2000 Pop	2005 Pop	2010 Est Pop	2015 Est Pop	2020 Est Pop	2025 Est Pop	2030 Est Pop	2035 Est Pop
Bozrah	2,358	2,399	2,447	2,488	2,545	2,608	2,679	2,692
Colchester	14,551	15,613	16,124	16,683	17,268	17,851	18,409	19,513
East Lyme	18,118	18,490	18,481	18,462	18,366	18,380	18,310	18,310
Franklin	1,846	1,865	1,870	1,860	1,853	1,840	1,818	1,818
Griswold	10,807	11,229	11,692	12,152	12,600	13,051	13,531	14,028
Groton	39,907	40,215	41,658	43,041	44,351	45,945	46,029	46,113
Ledyard	14,713	15,190	15,554	15,867	16,117	16,323	16,469	16,616
Lisbon	4,070	4,213	4,302	4,342	4,374	4,400	4,406	4,412
Montville	18,546	19,164	19,992	20,634	21,290	21,896	22,447	23,011
New London	25,671	26,281	26,739	27,151	27,548	28,000	28,425	28,856
No. Stonington	5,017	5,205	5,340	5,456	5,542	5,606	5,640	5,674
Norwich	36,117	36,629	37,138	37,599	38,130	38,709	39,319	39,938
Preston	4,688	4,851	5,007	5,138	5,254	5,413	5,504	5,596
Salem	3,863	3,985	4,077	4,165	4,238	4,295	4,333	4,371
Sprague	2,971	3,036	3,068	3,087	3,106	3,136	3,158	3,180
Stonington	18,174	18,418	18,457	18,440	18,431	18,518	18,586	18,654
Voluntown	2,530	2,582	2,614	2,631	2,649	2,652	2,655	2,658
Waterford	18,964	19,083	18,700	18,288	17,928	17,711	17,537	17,537
TOTAL	242,911	248,448	253,260	257,484	261,590	266,334	269,255	272,977

Source: U.S. Census, CT Data Center.

DEVELOPED LAND 2005

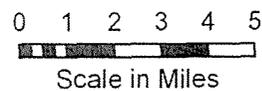
Southeastern Connecticut Region

LEGEND

-  Developed Land, 2005
-  Major Roads
-  Railroad
-  Town Boundary

Source:
SCCOG Staff, 2007

Note:
1) Developed land consists of residential,
industrial, institutional, governmental,
utility and transportation uses.



Prepared by:

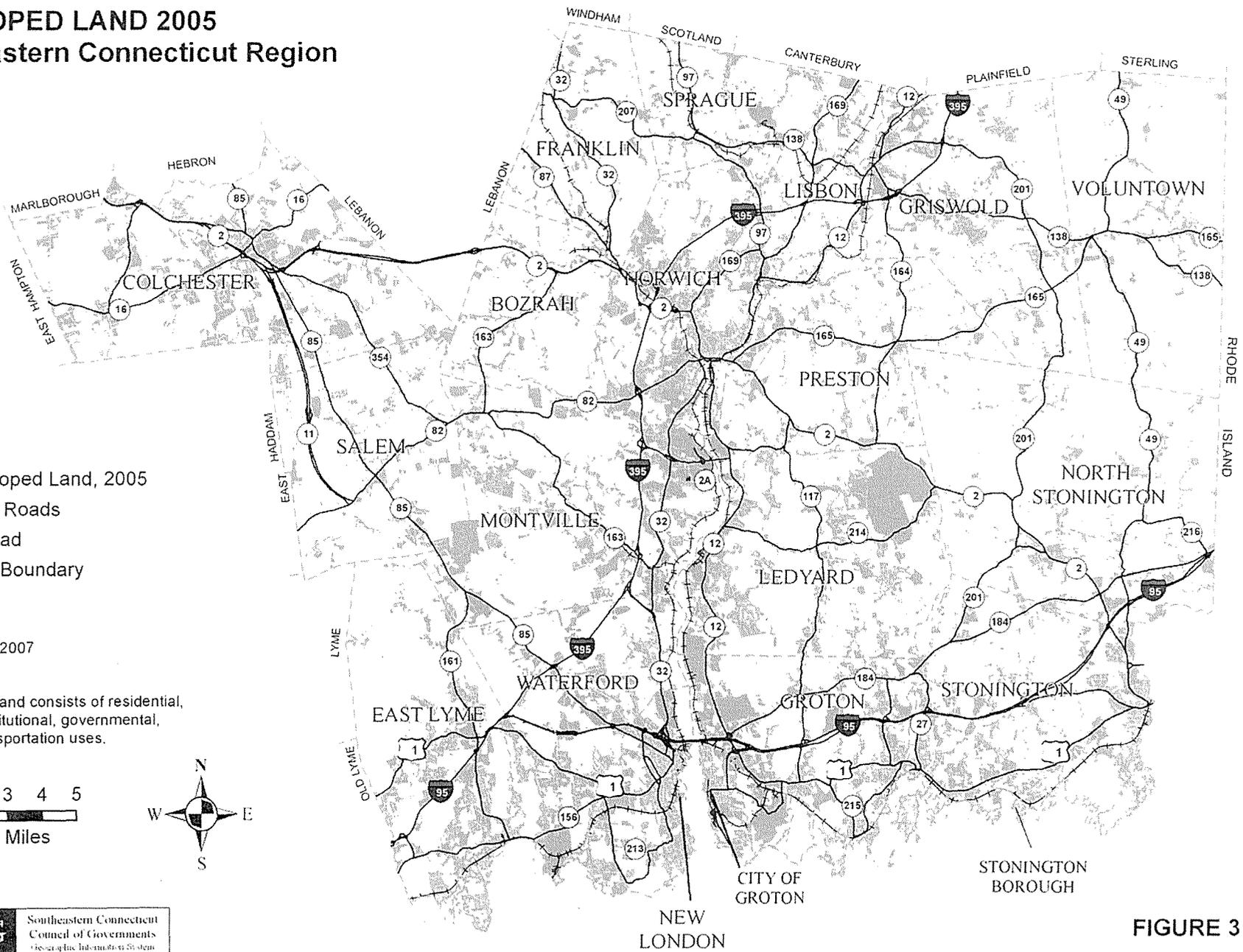
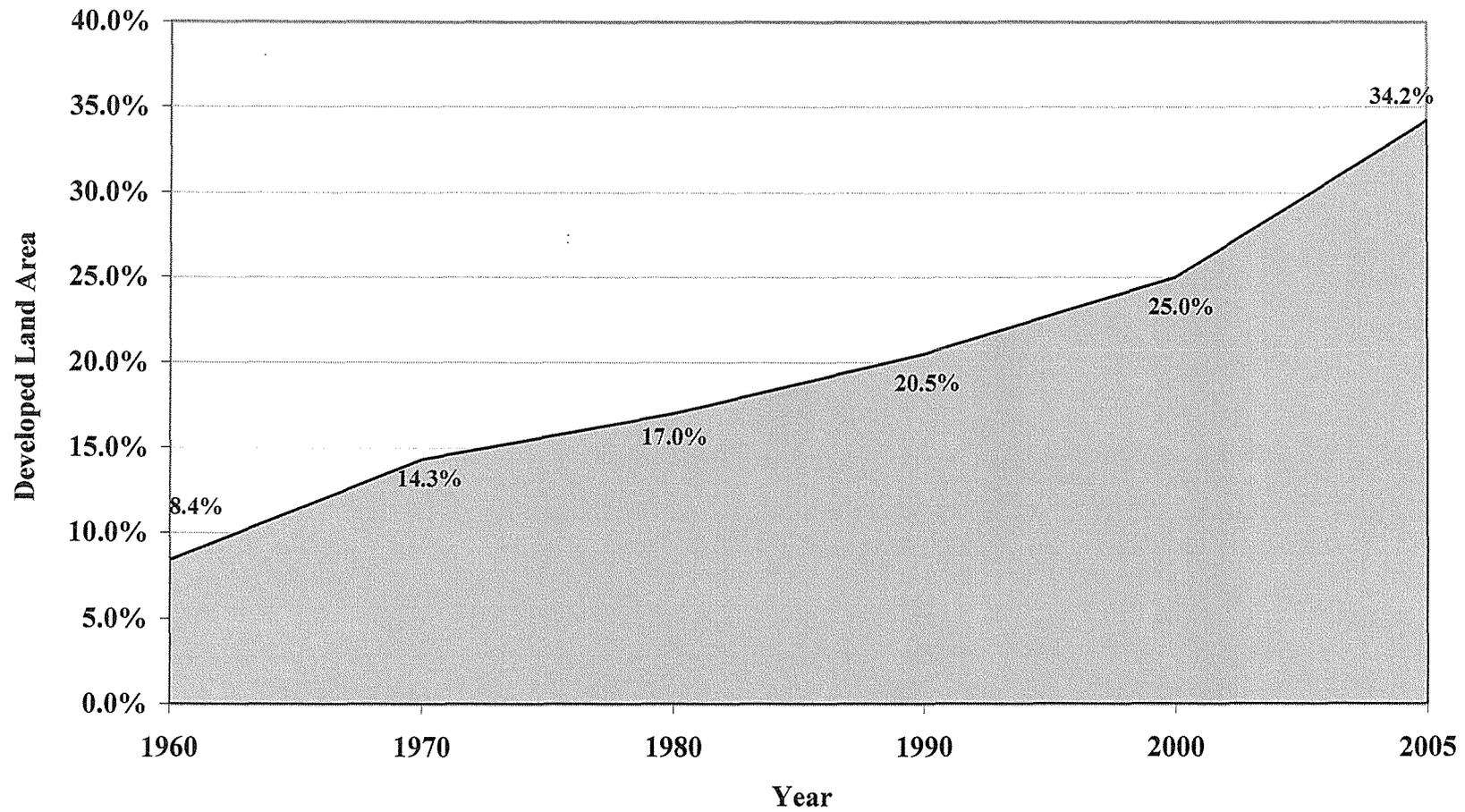


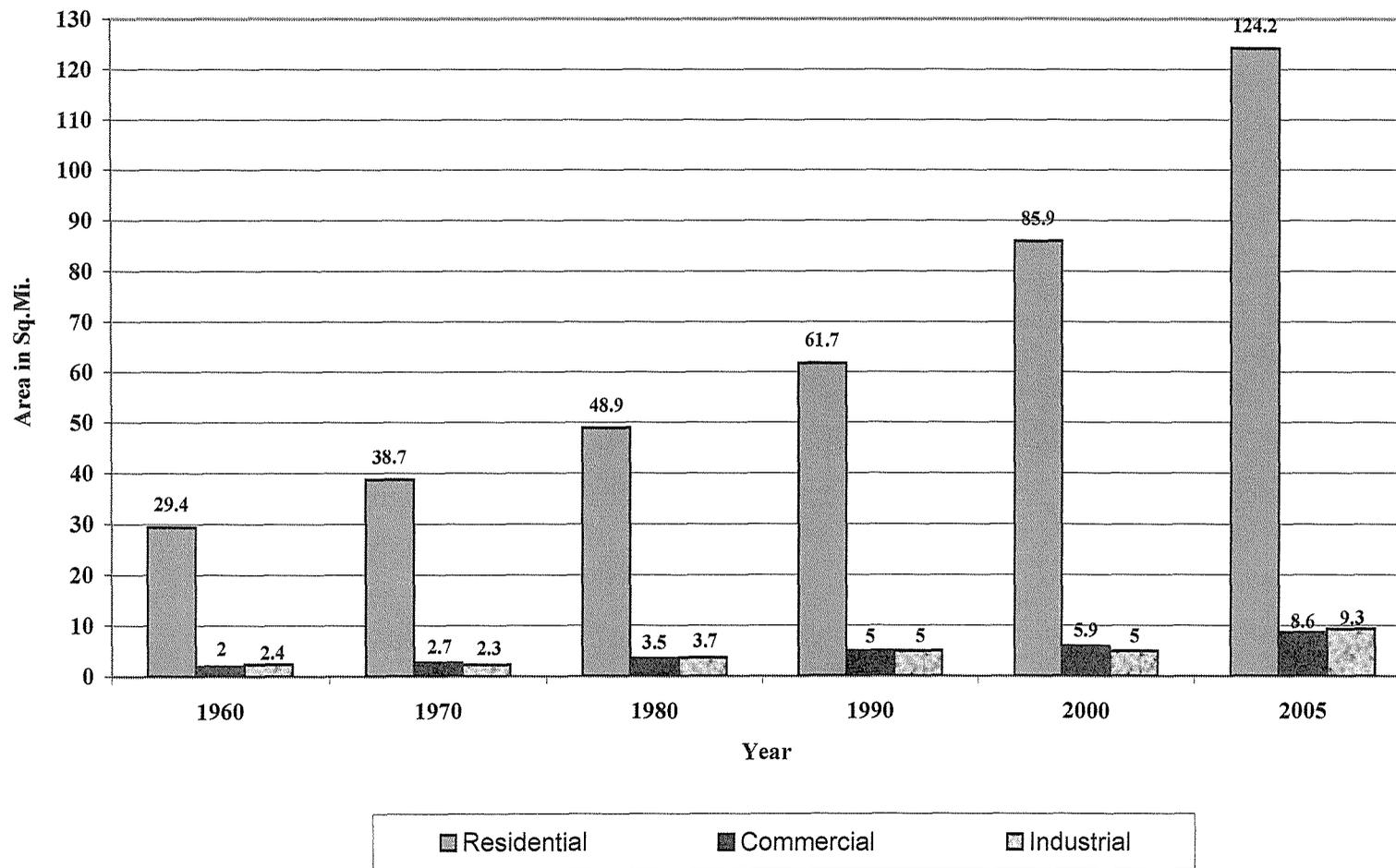
FIGURE 3

FIGURE 4
DEVELOPED LAND AREA AS A PERCENT OF TOTAL AREA, 1960-2005
Southeastern Connecticut Region



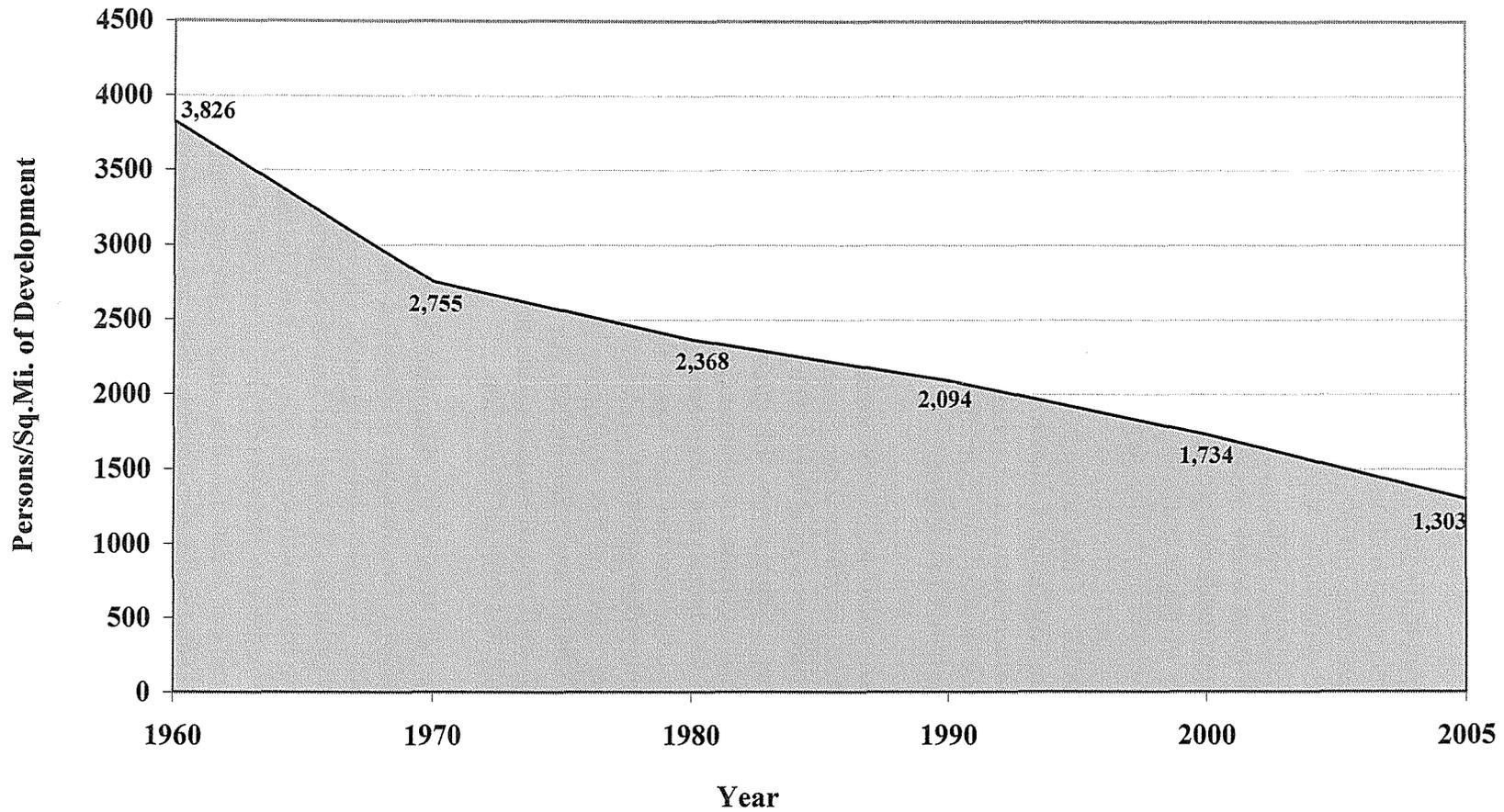
Source: SCCOG

FIGURE 5
AREA OF SELECTED LAND USES, 1960-2005
Southeastern Connecticut Region



Source: SCCOG

FIGURE 6
POPULATION PER SQAURE MILE OF DEVELOPED AREA, 1960-2005
Southeastern Connecticut Region



Source: SCCOG

defended by so many people in southeastern Connecticut, living in the state with the highest per-capita income and in the county that once had the highest per-capita defense expenditure in the nation. It is a quality of life built primarily on the large lot, single-family dwelling.

Figure 7 was developed to display the distribution of the region's most significant non-residential traffic generators, both in terms of employment and attractions. These are locations that generate over 1,000 trips/day. Table 2, which accompanies Figure 7, lists the major traffic generators. While Figure 7 shows that the urban core generally remains the area of largest traffic generation, it also tells us that there is a rapidly growing seepage of large traffic generators being located outside the urban core. Although the Waterford malls, Foxwoods Casino, and Mohegan Sun represent perhaps the biggest examples of major traffic generators that have located outside the urban core, other smaller commercial traffic generators are emerging all along state highways in every town in the region. The strip-commercial activity along West Main Street in Norwich is one example. Other examples include Cross Roads Mall in Waterford, Coogan Boulevard in Mystic and Lisbon Landing. Finally, with the proposed redevelopment of the former Norwich Hospital site in Preston and the new mall on Route 32 in Montville, the pattern of extra-urban commercial development is firmly established in southeastern Connecticut.

Earlier in this decade, state legislation enabling the creation of the rural Eastern Connecticut Enterprise Corridor Zone acted to institutionalize commercial and industrial suburbanization at a rural level. The Enterprise Zone was created to enable the towns of Sprague, Lisbon, Griswold, Plainfield, Killingly, Putnam, Sterling and Thompson to attract "their share" of commercial and industrial activity away from the urban core. While the underlying legislative purpose was simply to help these communities build non-residential tax base, this was accomplished by attracting development and employment activities, such as Lisbon Landing, away from the urban core. The long term effect of this legislation is to accelerate the trend of sprawl development so that smaller towns do, in fact, get "their fair share" of tax base. This example points to the institutional impact of the property tax as a major contributing factor to sprawl as manifest through legislation.

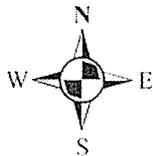
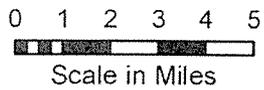
Another indicator that showcases the dominant, low density, suburban lifestyle that characterizes southeastern Connecticut is depicted in Table 3. This Connecticut Department of Motor Vehicle data compares changes in vehicle registrations (ownership) in the population 18 years old and older from 1990 to 2008. The 2008 data continue the upward growth trend in every town in the region. One important cautionary note with respect to interpreting this data involves vehicles used for other than residential purposes. That is, this data represents all vehicles, including commercial, industrial/agricultural vehicles, that are registered in each town in southeastern Connecticut. It should also be noted that the population data includes institutional inmates. This would affect the data for towns such as Montville and East

SIGNIFICANT TRAFFIC GENERATORS Southeastern Connecticut Region

LEGEND

- ▲ Significant Traffic Generators
- Major Roads
- +— Railroad
- - - Town Boundary

Source:
Connecticut DOT



Prepared by:

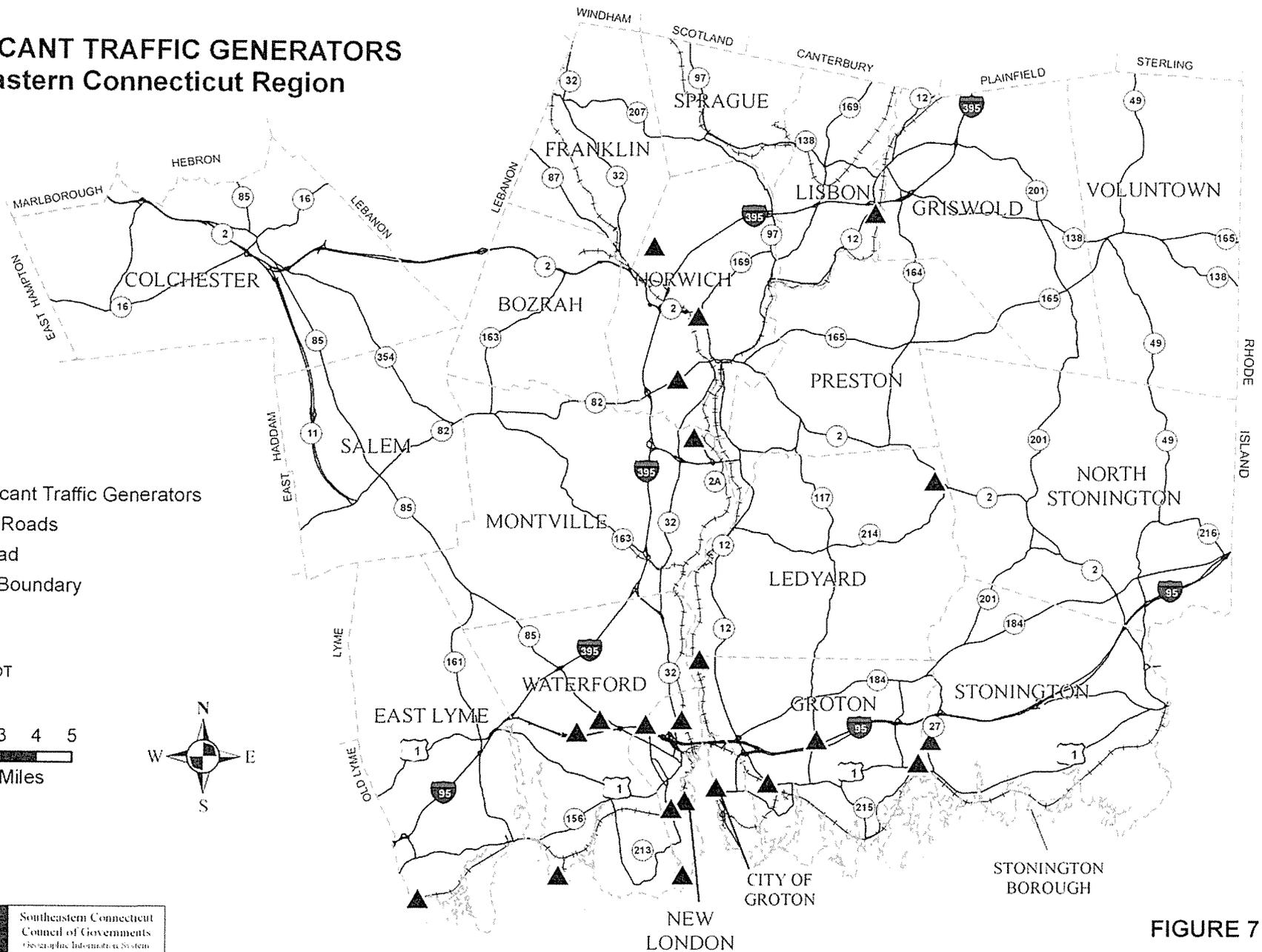


FIGURE 7

Lyme. While the addition of commercial and industrial vehicle registrations do modify the data interpretation somewhat, over time, the simple dominance of vehicles in private ownership establishes a clear relationship between vehicle ownership and suburbanization. These data tell us that one of the biggest private costs of living in southeastern Connecticut is the need for each resident over 18 years of age to have access to a private vehicle.

TABLE 2
SIGNICANT REGIONAL TRAFFIC GENERATORS
Southeastern Connecticut Region

1. Foxwoods Resort and Casino
2. Mohegan Sun Casino
3. Waterford Malls
4. New London Mall
5. Pfizer Global Research/Electric Boat *, New London
6. West Main Street Commercial Development, Norwich
7. Electric Boat/Pfizer, Groton
8. U.S. Naval Submarine Base
9. Mystic Aquarium/Seaport
10. Connecticut College/U.S. Coast Guard Academy
11. Millstone Nuclear Power
12. Norwich Business Park
13. Cross Roads Mall
14. Lisbon Landing
15. Rocky Neck State Park (Seasonal)
16. Ocean Beach Park (Seasonal)
17. William W. Backus Hospital
18. Lawrence and Memorial Hospital
19. Mystic Business Park
20. Long Hill Road Commercial Development, Groton
21. Village of Mystic

* Ownership/Use of Facility Changing

Regionally, the data show the progression of growth of registered vehicles/population more than 18 years of age, from 1.01 in 1990 to 1.22 in 2008. However, the extreme range of this data, especially between urban and rural communities, enhances the understanding that one of the basic costs of the suburban lifestyle is auto ownership. In this instance, the rural communities of Franklin and Bozrah stand out in that in these towns there are more than 1.8 registered vehicles for every person 18 years old and

TABLE 3
VEHICLE OWNERSHIP, 1980, 1990, 2000, and 2008 (Estimated)
Southeastern Connecticut Planning Region

	1980			1990			2000			2008-Estimated		
	Registered Vehicles	Population >18	Vehicle/Population >18	Registered Vehicles	Population >18	Vehicle/Population >18	Registered Vehicles	Population >18	Vehicle/Population >18	Registered Vehicles	Population >18	Vehicle/Population >18
URBAN TOWNS:												
Groton	22,584	29,607	0.76	27,161	34,107	0.8	26,571	29,993	0.89	30,424	31,076	0.98
New London	13,561	22,640	0.6	14,998	22,772	0.66	15,205	19,814	0.77	16,835	20,202	0.83
Norwich	23,306	28,034	0.83	27,174	28,406	0.96	27,857	27,412	1.02	29,975	27,777	1.08
Urban Totals:	59,451	80,281	0.74	69,333	85,285	0.81	69,633	77,219	0.9	77,234	79,060	0.98
SUBURBAN TOWNS:												
Colchester	5,669	5,419	1.05	9,897	8,115	1.22	13,366	10,209	1.31	16,342	10,797	1.51
East Lyme	10,331	9,809	1.05	13,094	11,991	1.09	14,899	14,149	1.05	16,900	14,415	1.17
Griswold	6,099	6,318	0.97	7,643	7,583	1.01	9,320	8,034	1.16	11,599	8,366	1.39
Ledyard	9,048	9,070	1	11,996	10,695	1.12	13,212	10,532	1.25	15,015	10,880	1.38
Lisbon	2,555	2,257	1.13	3,418	2,830	1.21	3,811	3,010	1.27	4,782	3,132	1.53
Montville	11,589	11,336	1.02	14,721	12,621	1.17	15,752	14,160	1.11	18,322	14,974	1.22
Preston	3,439	3,528	0.97	4,200	3,967	1.06	4,801	3,639	1.32	5,733	3,778	1.52
Sprague	2,194	2,106	1.04	2,682	2,208	1.21	2,863	2,199	1.3	3,130	2,215	1.41
Stonington	12,009	12,114	0.99	15,316	13,489	1.14	18,357	14,022	1.31	19,650	14,359	1.37
Waterford	14,939	13,353	1.12	17,890	14,448	1.24	19,361	14,967	1.29	21,305	14,801	1.44
Suburban Totals:	77,872	75,310	1.03	100,857	87,947	1.15	115,742	94,921	1.22	132,778	94,588	1.40
RURAL TOWNS:												
Bozrah	1,742	1,491	1.17	2,597	1,762	1.47	3,145	1,804	1.74	3,605	1,871	1.93
Franklin	1,657	1,128	1.47	2,193	1,369	1.6	2,371	1,392	1.7	2,616	1,453	1.80
No. Stonington	3,349	2,887	1.16	4,531	3,564	1.27	5,161	3,736	1.58	6,428	3,906	1.65
Salem	1,866	1,604	1.16	3,143	2,345	1.34	3,925	2,722	1.44	4,744	2,889	1.64
Voluntown	1,360	1,181	1.15	2,279	1,541	1.48	2,777	1,857	1.5	3,249	1,933	1.68
Rural Totals:	9,974	8,291	1.2	14,743	10,581	1.39	17,379	11,511	1.51	20,642	12,054	1.71
REGIONAL TOTALS:	147,297	163,882	0.9	184,933	183,813	1.01	202,754	183,651	1.1	230,654	188,886	1.22

Source: U.S. Census, 2000; CT DMV

over, up from 1.5 in 1990. This compares with a ratio of .98 for the three urban communities of Norwich, New London and Groton, up from .81 in 1990. New London, the most densely populated community in the region, had only .83 registered vehicles for each person 18 years old and over. Yet even in New London, the growth in the last decade of registered vehicles from a 1990 ratio of .66, is noteworthy. It should be noted, in this regard, that New London has the lowest per capita income in the region and this factor may also be influencing the number of registered vehicles.

A comparison of these ratios reveals several things: First, in the existing suburban and rural communities that are in transition from rural to suburban, there is a higher likelihood of younger, two-worker households, each needing their own private transportation, as opposed to the urban centers with more households with retirees. But at its core, the data reflect the need for a “back up” vehicle in the suburban and rural communities in the event that a primary vehicle is incapacitated. Overall, these data collectively emphasize that the region continues to increase its dependence on private vehicles as the primary form of personal transportation. This trend is evident even in the urbanized towns where, with perhaps the exception of New London, public transportation has not been able to make any significant impact on personal vehicle ownership. Finally, there appears to be no meaningful, consistent, relationship between income and the patterns of vehicle ownership at the municipal level. This means that the pattern of vehicle ownership is driven by the suburban life-style, not necessarily the variations in income level that accompany it.

Table 4 contains vehicle availability by town, by occupied housing unit. This table further reinforces the strong relationship between suburbanization and vehicle ownership seen in Table 3. In addition, it enhances that picture by documenting the number of households with no vehicle available. The most noteworthy example of this indicator is New London, which recorded 19% of its occupied housing units with no vehicle available, down from 22% in 1990. This continued level of “transit-dependency” can be compared with all of the rural communities which, as a group, have only 2% of the occupied housing units without any vehicles available and all of the suburban communities, which have a total of 3.7% with no cars available. These are trends that have remained virtually unchanged since 1990.

Table 4 indicates that most occupied housing units in the region have two or more cars available. Again, the universality of this pattern has significant negative implications for regional transit if for no other reason than it indicates the enormously high level of private investment that most of the region's households have in personal vehicles as a necessary by-product of this low density suburban lifestyle. Furthermore, the fact that almost one-third of the rural residences and more than 20% of the suburban residences have three or more cars available underscores and reinforces the historical trend toward personal transportation and highway utilization.

TABLE 4
VEHICLE AVAILABILITY, 2000
Southeastern Connecticut Planning Region

Total Occupied Housing Units (OHU)	OHU w/ No Car Available	%	OHU w/ 1 Car Avail	%	OHU w/ 2 Car Avail	%	OHU w/ 3+ Car Avail	%
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URBAN TOWNS:

Groton	15,476	1,188	7.7	6,008	38.8	6,449	41.7	1,831	11.8
New London	10,181	1,961	19.3	4,610	45.3	2,912	28.6	698	6.9
Norwich	15,091	1,930	12.8	5,990	39.7	5,230	34.7	1,941	12.9
Urban Totals:	40,748	5,079	12.5	16,608	40.8	14,591	35.8	4,470	11

SUBURBAN TOWNS:

Colchester	5,225	168	3.2	1,284	24.6	2,450	46.9	1,323	25.3
East Lyme	6,308	226	3.6	1,806	28.6	3,001	47.6	1,275	20.2
Griswold	4,194	176	4.2	1,320	31.5	1,759	41.9	939	22.4
Ledyard	5,283	131	2.5	1,237	23.4	2,677	50.7	1,238	23.4
Lisbon	1,525	33	2.2	389	25.5	719	47.1	384	25.2
Montville	6,426	208	3.2	1,961	30.5	2,934	45.7	1,323	20.6
Preston	1,837	65	3.5	528	28.7	834	45.4	410	22.3
Sprague	1,111	53	4.8	334	30.1	509	45.8	215	19.4
Stonington	7,665	366	4.8	2,716	35.4	3,321	43.3	1,262	16.5
Waterford	7,542	303	4	2,123	28.1	3,643	48.3	1,473	19.5
Suburban Totals:	47,116	1,729	3.7	13,698	29.1	21,847	46.4	9,842	20.9

RURAL TOWNS:

Bozrah	883	20	2.3	239	27.1	381	43.1	243	27.5
Franklin	687	26	3.8	123	17.9	309	45	229	33.3
No. Stonington	1,833	13	0.7	449	24.5	801	43.7	570	31.1
Salem	1,358	38	2.8	217	16.0	610	44.9	493	36.3
Voluntown	952	20	2.1	176	18.5	498	52.3	258	27.1
Rural Totals:	5,713	117	2	1,204	21.1	2,599	45.5	1,793	31.4

REGIONAL TOTALS:	93,577	6,925	7.4	31,510	33.7	39,037	41.7	16,105	17.2
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Source: U.S. Census

Table 5 expands the basic picture of vehicle availability into areas of vehicle utilization for commuting purposes. Table 5 reveals that almost 81% of the regional population 16 years old and older who commuted to work in 2000 did so by driving alone, according to the U.S. Census. This represents a 6% increase from 1990. In the suburban and rural communities, the data reveal that more than 85% of these commuters drive alone, an increase of 4% over 1990. As a corollary, use of public transportation in the region remains relatively low for commuting purposes, with 1.6% of the resident population using any form of public transportation. However, while this figure remains low, it represents an increase from 1990 when only 1% of the population used transit to commute to work. The advent of casino transit may have contributed to this growth. Yet, at these levels, the air quality and congestion mitigation benefits from transit are negligible.

Taken together, all this data tell us that regional highway congestion is the result of a number of complex factors. In addition to the huge daily influx of tourists/gamblers and the seasonal traffic demands created by the attractiveness of the shoreline, underlying all of this special traffic demand is the effect of suburbanization and the expanding spatial disconnection between numerous origins and destinations that accompany the suburban lifestyle.

Table 6 depicts comparative state and local road mileage in 18 municipalities in southeastern Connecticut. The City of Groton and Borough of Stonington are included with their respective towns. While state road mileage has remained static, growth in local road mileage results mostly from activity in the residential sector in those communities with new residential subdivision development. While the table divides the regions' municipalities into urban, suburban and rural categories, anomalies exist throughout the region since local road-building behavior does not neatly conform to superficial categorization. For example, the 6% growth in local road construction in Groton is only slightly less than the average for all of the ten suburban communities. Groton's higher than average ratio of state-to-local road mileage makes it appear more suburban, than urban, in character. Conversely, East Lyme, Ledyard and Stonington have such a proportionately low state-to-local road ratio that it makes them more urban in character. These low ratios should be contrasted with Franklin and Lisbon, for example, in which the ratio of state-to-local roads is 1: .79 and 1: .653 respectively. Yet Lisbon is classified as suburban, not rural. In fact, it is in the suburban classification where highway construction patterns are the most diverse with Ledyard at 19.5% and Lisbon at 65.3% state-to-local road ratios.

Finally, the main value of Table 6 is that it casts light on the prevailing myth that "the State" is the major builder of roads when, in fact, it is the towns that collectively account for 3 times the state and federal road mileage in the region.

TABLE 5
VEHICLE COMMUTING PATTERNS, 2000
Southeastern Connecticut Planning Region

	16 Years + Total Commuters	# Drive Alone	% Drive Alone	# Car Pool	% Car Pool	# Use Public Transportation	% Use Public Transportation	Mean Travel Time (Min.)
URBAN TOWNS:								
Groton	20,741	15,689	61.2	2,251	12.5	384	0.9	15
New London	12,201	8,149	56.2	1,484	14.6	378	3.1	15.2
Norwich	17,483	13,789	75.2	2,165	16.7	616	0.9	20.2
Urban Totals:	56,461	36,272	64	8,088	14	823	1.5	16.7
SUBURBAN TOWNS:								
Colchester	7,704	6,580	79.3	728	15.1	90	0.2	28.8
East Lyme	8,175	7,177	82.9	632	11.5	43	0.3	20.2
Griswold	5,871	4,767	75.8	844	18.4	7	0.6	24.9
Ledyard	7,463	6,591	81.2	611	12.4	28	0.3	19.3
Lisbon	2,157	1,918	79.5	151	16.7	0	0.6	24.8
Montville	8,900	7,771	83.8	831	11.4	46	0.7	22
Preston	2,363	1,977	83.8	191	10.9	10	0.5	22
Sprague	1,523	1,279	76.4	184	15.9	8	0.9	22.3
Stonington	8,910	7,475	80.2	602	12	208	1	19.4
Waterford	9,248	7,796	84.1	777	10.7	85	0.8	17.4
Suburban Totals:	58,726	47,804	81.4	7,484	12.7	345	0.6	21.3
RURAL TOWNS:								
Bozrah	1,249	1,012	82.7	133	11	7	0.4	23.8
Franklin	982	834	86.5	100	9.4	2	0.3	21.9
No. Stonington	2,723	2,277	83	238	11.8	40	0.2	23.3
Salem	2,153	1,891	83.4	171	12.8	8	0.7	25.5
Voluntown	1,332	1,105	74.2	138	19.5	0	0.6	31.2
Rural Totals:	7,587	6,165	81.3	964	12.7	32	0.4	24.8
REGIONAL TOTALS:								
	122,774	90,241	74	16,536	13.4	1,200	0.97	19.4

Source: U.S. Census, 2000

TABLE 6
STATE AND LOCAL ROAD MILEAGE
Southeastern Connecticut Region

1989	2005	1989-2005	2005	2005
Local Road	Local Road	Percent	State Road	State Road Miles
Miles	Miles	Change	Miles	as a Percent of
				Local Road Miles

URBAN TOWNS:					
Groton	118.22	127.44	7.8%	40.95	32.1%
New London	62.73	63.32	0.9%	15.38	24.3%
Norwich	154.91	160.49	3.6%	36.80	22.9%
Urban Totals:	335.86	351.25	4.6%	93.13	26.5%

SUBURBAN TOWNS:					
Colchester	94.05	113.09	20.2%	43.56	38.5%
East Lyme	103.23	110.90	7.4%	22.95	20.7%
Griswold	70.87	78.64	11.0%	30.61	38.9%
Ledyard	99.53	109.23	9.7%	21.06	19.3%
Lisbon	26.34	28.13	6.8%	18.38	65.3%
Montville	109.44	117.26	7.1%	30.78	26.2%
Preston	52.89	54.15	2.4%	22.44	41.4%
Sprague	25.46	25.71	1.0%	9.46	36.8%
Stonington	106.27	113.80	7.1%	36.81	32.3%
Waterford	113.92	119.85	5.2%	29.93	25.0%
Suburban Totals:	802.00	870.76	8.6%	265.98	30.5%

RURAL TOWNS:					
Bozrah	34.16	34.88	2.1%	14.33	41.1%
Franklin	22.03	21.81	-1.0%	17.24	79.0%
No. Stonington	63.11	68.97	9.3%	35.48	51.4%
Salem	36.55	39.31	7.6%	19.52	49.7%
Voluntown	28.69	29.91	4.3%	18.26	61.0%
Rural Totals:	184.54	189.88	2.9%	104.83	55.2%
Regional Totals:	1,322.40	1,411.89	6.8%	463.94	32.9%

Source: CONNDOT

IV. GOALS AND OBJECTIVES

Over the past decade, creating “liveable communities” through the notion of “smart growth” continues to be an idea of interest in southeastern Connecticut as well as the state and nation as a whole. The idea of something called “smart growth” reflects a growing recognition that development, mostly residential and commercial, is eating up increasingly large amounts of undeveloped farm and forestland that many people mistakenly view as “open space”. For this reason, smart growth has emerged as idealized development policy that is intended to do the following: (1) give priority to development locating where the infrastructure to support it already exists, (2) develop a new transportation strategy that more effectively moves people and goods, (3) give high priority to cleaning up brownfields and attacking blight, and (4) preserve undeveloped forest and agricultural land. Often, notions of “liveable communities” are intermingled with the phrase “quality-of-life”. As part of these explorations, more and more people are gradually beginning to appreciate the subtle difference between the phrases “standard of living” and “quality of life”, especially as it relates to the automobile. These differences mostly involve the time and cost demands of the suburban lifestyle. Smart growth, sometimes difficult to define, does at least attempt to focus attention on the need to balance conservation and development. The dilemma is that smart growth in Connecticut is inherently incompatible with the 169 town, independent, political structure in which each town needs a diverse and robust property tax base in order to support itself.

Given this setting, in order to develop goals to help guide regional planning for future transportation infrastructure investment, it becomes essential to ascertain some substance about a vision of a “liveable regional community” for the 21st Century and how that might be achieved. These are especially important questions in a diverse region like southeastern Connecticut that continues to undergo some rather extensive changes in economic development and land use. Some towns are trying to retain the quaintness of village character that for centuries has made them a desirable place to live and work, other towns are trying to accelerate growth and development to expand the tax base.

During the process of preparing the 2007 Regional Plan of Conservation and Development, a survey of local planning and zoning commission members, planners and the general public expressed universal concern about the advent of sprawl in the region. A comprehensive region-wide zoning study, *Zoning in Southeastern Connecticut*, November 1999, which utilized a Geographical Information System, a computer tool to analyze zoning relationships, found that 85% of the region is zoned for residential purposes. Furthermore, of the land zoned residential, 49% of the region is zoned for R-80 or higher. This translates to residential building lots that are just under two acres in size.

As previously noted, this large lot, residential, zoning pattern is generally characterized and supported by self-contained, on-site water and septic systems. Coupled with this residential pattern are large separations between residential, commercial, industrial and

institutional land uses in order to promote and protect residential property values. The need to functionally link these separate land uses and provide optimum access opportunities is now accomplished almost exclusively through use of the automobile and supported by a well-developed, somewhat well-maintained system of highways. In this typical suburban setting, auto use, even for incidental trips, has become the norm rather than the exception since it has become impractical, and in many instances unsafe, to walk, ride a bike or use traditional transit. It has now become widely recognized that the suburban land use pattern, with its dependence on the automobile, is the one of the many causes of degraded air quality.

At the same time, while continuing to support suburban development patterns through the legal powers of zoning, residents of southeastern Connecticut continue to express dissatisfaction with the fact that “their” highway capacity, air quality and personal safety is being consumed by those “outside” people visiting the region for gaming, tourism and recreational purposes, or simply passing through. For example, the notion of tolls has emerged as a way that the State can financially benefit or turn what otherwise would be viewed as a burden. In this example, the tension between residents of the region consuming highway capacity as a matter of right and non-residents doing the same as a matter of privilege creates confusion. Much of the confusion exists because the suburban lifestyle, with its large, legally imposed separation of land uses, continues to be dependent upon the automobile and a well-functioning regional highway network in order to enable people to conveniently get to their many varied destinations. Simply changing patterns of transportation investment into mass transit, without also changing land development patterns, will ultimately not prove effective.

For long range planning purposes, regional perceptions about the value of transportation infrastructure appear to be highly fragmented and localized. For example, many citizens in the eastern portion of the region surrounding the Route 2 corridor continue to oppose the proposal to construct a limited access by-pass of Route 2A, while citizens on the western side of the region remain equally adamant in support of the completion of a limited access by-pass of Route 85 in the form of Route 11. In each case, both groups cite “quality-of-life” issues to support their respective cause. Yet there is almost universal recognition that Connecticut’s “central artery”, I-95, is increasingly breaking down, from Greenwich to Stonington, and requires immediate attention. While this is especially critical for southeastern Connecticut’s economy, which has become increasingly dependent on tourism, even here there are strong divisions between mass transit advocates and those opting for highway capacity expansion.

How these differing views become reconciled into coherent planning goals with the new fiscal realities is unclear. Given the diverse political setting in which the MPO planning process exists and the need for it to be responsive through an active citizen involvement process, consensus of regional transportation planning goals and policies may simply become a function of popular local politics rather than being technically derived through analytical, performance-based criteria. In the wake of the September 11th, 2001 terrorist attack, matters of national security have compelled a re-examination

of old ways of thinking. In this new geo-political setting in which the region is viewed as a potential target, it is even more crucial that a transportation investment consensus be achieved. Given the order of magnitude of the cost of any one of the aforementioned projects, it is clear that the public resources will simply not be available to fund most of them, even over a thirty-year period, despite the fact that these needs are real. Quite simply, this means that either, a) new public-private financial partnerships will have to be created to share the financial burden of these projects, b) other sources of revenue, such as tolls, will have to be explored, or c) hard decisions will have to be made regarding the priorities for infrastructure investment. The State has recently gone a long way toward embracing the notion of fiscal constraint by eliminating projects for which there is no financially feasible way of accomplishing them in the foreseeable future.

A. GENERAL GOALS

1. Through the planning process, direct transportation infrastructure investments toward supporting public safety, maintaining the infrastructure, reducing congestion and where practical, long-term, sustainable, regional economic development growth.
2. Ensure that, to the fullest extent practicable, infrastructure investments are environmentally balanced, safe, efficient and modally integrated.
3. Develop a regional transportation system that meets the needs of all segments of the resident population as well as visitors, regardless of age, income, or disability, providing access to all parts of the region and to important points beyond its borders.
4. Reduce congestion and increase highway capacity by giving priority to non-automotive (transit) improvements.

B. OBJECTIVES

1. Safety

- Make public safety improvements for all existing transportation modes the highest priority.
- Eliminate all regional road locations from the State's high frequency accident list.
- Where necessary, provide traffic operations improvements for better and safer

traffic flow and for the efficient movement of people and goods on the region's highway system.

- For the interstate highway network, expand the Intelligent Transportation System to minimize response time for all accident events, to address any environmental contamination that may result and to alert drivers to use alternative roads to minimize disruptions to traffic flow.

2. Efficiency

- Insure that funding priorities are given to repair projects directed toward maintaining the highest level of functions of existing highways, bridges and transit as opposed to the construction of new infrastructure, except where absolutely necessary.
- Reduce the need for unnecessary trips by encouraging intelligent land use planning through a regional pattern of development that is both compatible with the natural environment and which can be serviced efficiently and economically with necessary public facilities.
- Develop alternative modes to single-occupant highway transportation, including minibuses, ferries, special vehicles, bicycle and pedestrian ways, and rail.
- Encourage the control of access on heavily traveled corridors through the use of shared driveways. Where possible, encourage and support municipal efforts to develop access management policies and plans, especially for land abutting the region's major arterial highways.
- Encourage local planning and zoning commissions to require larger frontage and setbacks for property along heavily traveled corridors.
- Strive to provide effective coordination of all modes of transportation through schedules and the provision of multi-modal terminals.
- Establish an efficient, affordable public transportation system that meets the needs of the regional population as well as the tourism industry.
- Improve signage on the region's highway network to reduce unnecessary travel time.
- Expand and improve SEAT service.
- Encourage the revival of passenger rail service on the N.E. Central and Providence and Worcester lines.

- Consider development of water taxis at the mouth of the Thames River in concert with existing ferry service.
- Expand Shoreline-East rail service to New London.
- Insure the continued operation of and work to improve the multi-modal transportation center in New London as recommended in SCCOG's 2010 "*Regional Intermodal Transportation Center Master Plan and Efficiency Study.*"

3. Effectiveness:

- To the extent practicable, ensure that infrastructure investments avoid adverse impacts on residential property values and on the quality-of-life of the residents of established neighborhoods.
- Ensure that transportation facilities avoid adverse impacts on historical, open space, recreational and watershed areas and structures, while at the same time providing accessibility to them.
- Promote the expansion of ridesharing through car-pooling, van pooling and the increased use of commuter parking lots.
- Encourage land use patterns that enable bicycling and walking wherever possible, or that may be served by public transit.
- Encourage innovations in work schedules, such as flex-time, staggered work hours, work at home and the four-day work week, where these appear to be feasible.
- Utilize the Council of Governments to develop a close working relationship among member communities for the purpose of identifying opportunities to deal effectively with transportation problems.
- Insure that there is effective citizen participation in all phases of the transportation planning process.

V. TRANSPORTATION FACILITIES

A. HIGHWAYS

The following text reviews the major highways in southeastern Connecticut. These are shown in Figure 8. The information was based on studies conducted by CONNDOT and SCCOG and on discussions with officials and citizens in the towns and cities of southeastern Connecticut.

North/South Corridor, West of Thames River: This corridor extends between Norwich and New London and is served by I-395 and the parallel Route 32. The interstate highway is the main north-south link in the system of four-lane facilities that connect the urban centers of Norwich and New London by way of Route 82 (West Main Street in Norwich), I-395 (through Montville), and Routes 693 and 32 (through Waterford and into New London).

Historically, traffic volumes on Route 32 through Montville declined somewhat when the tolls were removed on I-395 during the mid-1980's, but spin off casino-related development in eastern Montville in recent years has generated traffic to the extent that average daily volumes now exceed 14,000 vehicles on this section of arterial highway. Use of the road will continue to undergo extensive changes in the coming years largely as the result of new commercial development attracted to the area because of the synergy of Mohegan Sun Casino. Future improvement opportunities on Route 32 may include widening in isolated sections but will mainly be limited to access consolidations, channelization, signal improvements and, perhaps most important, the addition of adequate sidewalks for pedestrian safety in the Norwich area.

North/South Corridor, East of Thames River: Route 12 serves north/south local and through- traffic east of the Thames River between Norwich and Groton. Except for the section of the highway located in Norwich, the road can be considered a reasonably adequate arterial highway under present conditions of demand. However, the amount and type of future traffic growth will undoubtedly call for improvements in various locations along this important highway. While the opening of the bridge over Poquetanuck Cove marked a major step in the improvement of traffic flow and safety on this section of the highway, the future development of the Norwich Hospital property, at the intersection of Routes 12 and 2A, will probably have a major impact on this roadway. Development at the former hospital site will undoubtedly require improvements to the Mohegan-Pequot Bridge and may warrant the construction of a by-pass of Route 2A and development of mass transit to serve the site. Average daily traffic volumes in the Montville vicinity of Route 2A are now in excess of 23,800.

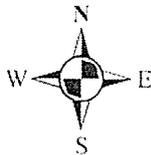
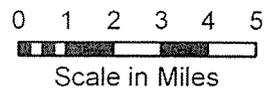
The section of Route 12 through Groton presently has the highest traffic volumes and highest number of accidents in this corridor. It also has four or more traffic lanes between Crystal Lake Road and Route 1. But congestion continues to occur because of

MAJOR HIGHWAYS Southeastern Connecticut Region

LEGEND

- Major Roads
- +— Railroad
- - - Town Boundary

Source:
Connecticut DOT



Prepared by:

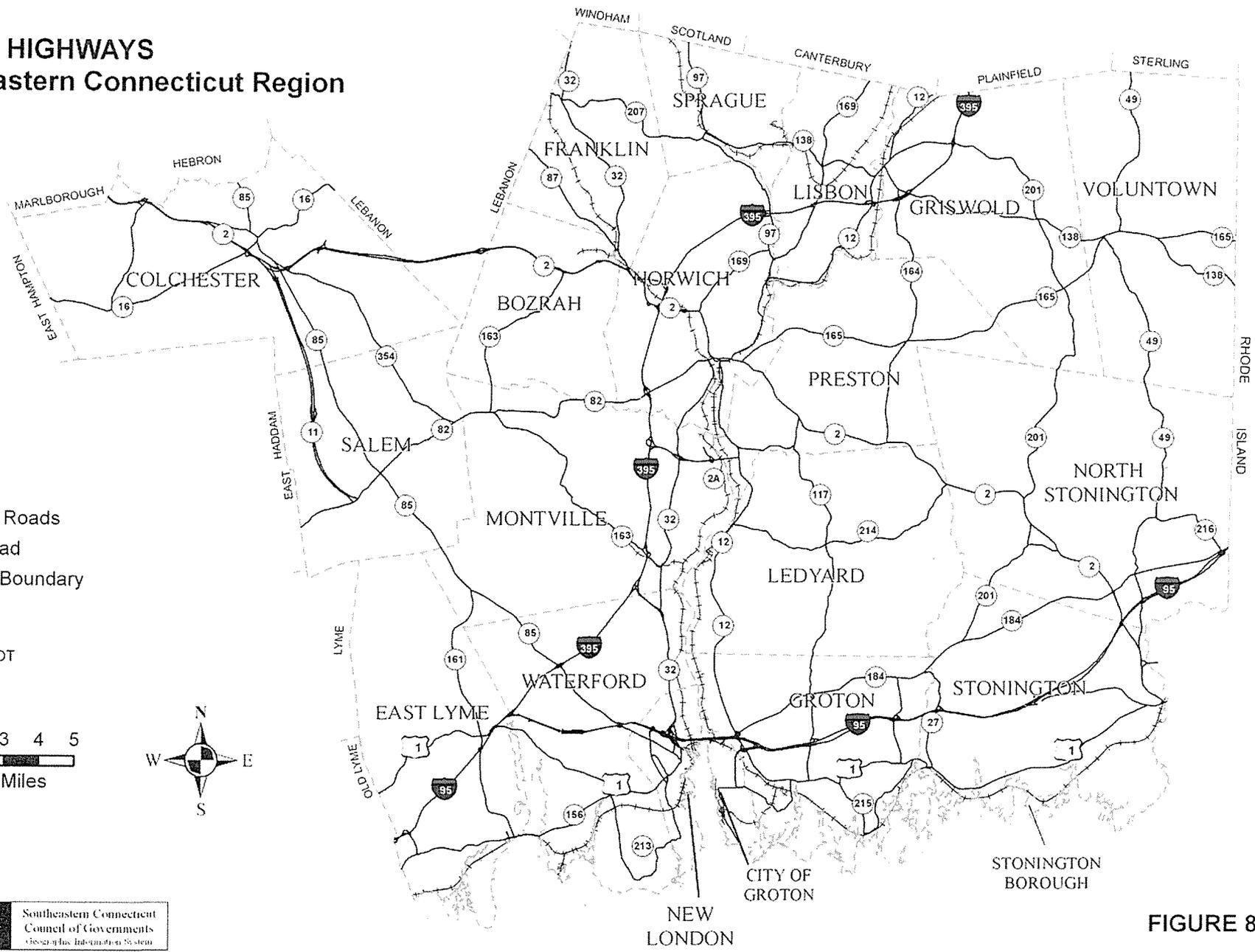
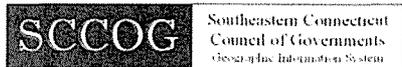


FIGURE 8

frequent turning movements at the numerous intersections and driveways to businesses and residential development along the frontage. Major traffic generators, such as the Groton Square shopping center, US Submarine Base and the USS Nautilus Memorial and Submarine Force Library and Museum have contributed to peak hour congestion in this corridor. Completion of the reconstruction of the interchange with Route 184 has helped alleviate some of the congestion at this point in the roadway. Other than driveway consolidations and access management techniques, future improvement opportunities in this section of Route 12 appear limited.

Another north/south route paralleling Route 12 east of the Thames River is Route 117. Land use along most of this road is mostly residential. It extends from Route 2 in Preston to Route 1 in Groton. The reconstruction of this route between Ledyard Center and Route 184 in Groton now provides a good alternative to the busy Route 12 for commuting workers and others traveling between Groton and towns to the north. With the completion of the Mystic Marriott at Exit 88, additional commercial development can be expected in the vicinity of I-95 although no major improvements to this roadway are envisioned at this time. Portions of Route 117, between Groton and Preston, have now become the focus of a bike and pedestrian pathway.

East/West Corridor: I-95 is the most heavily traveled corridor in the region. It is the main highway for travelers along the Atlantic coast from Florida to Maine. With future development potential all along this corridor, increases in congestion on this route are inevitable. Likewise, Routes 1 and 156, which at one time served as the main through-routes prior to the completion of I-95, also continue to see growth in traffic. As the volume-to-capacity ratio on I-95 slowly approaches 1.0, seasonal service levels will gradually continue to deteriorate. Serious consideration must now be given to providing funds over the next ten years to add lanes from the Connecticut River to the Rhode Island border such as providing transit solutions to reduce traffic. A 1999 CONNDOT study of the I-95 corridor from Branford to the Rhode Island border identified that capacity improvements all along I-95 were needed. This was followed by planning and environmental studies to determine the most practicable way to improve the capacity of I-95. I-95 improvements were among the top priorities of the Transportation Strategy Board and SCCOG. The fact that this needed and worthwhile project has been dropped by CONNDOT is an indicator of the seriousness of the State's financial condition.

In FY 1999-2000, safety concerns on I-95 resulted in the development of an Incident Management Program to insure continued traffic flow, the well-being of accident victims and the affected environment. This project was followed up by the development of an Intelligent Transportation System (ITS) to monitor traffic flow and alert drivers to disruptions in flow as a result of accidents. The installation of variable message signs and traffic monitoring cameras along I-95 and I-395 began in 2006. In addition, two high priority safety needs has been identified. The first is to eliminate the bottleneck on I-95 between Exits 82 and 82A. Solutions could include the addition of a third lane and/or closing the Vauxhall Street access and egress ramps. Action is also needed to modify the ramps at Exit 74 in East Lyme, especially the westbound

ramps.

Two other east/west corridors serve the more northerly part of the region. One of these is the Route 82/Route 165 corridor. This corridor passes through the entire northern part of the region, entering Salem in the west, passing through Montville, Bozrah, Norwich, Preston, Griswold, and Voluntown before exiting into Rhode Island. Generally, the corridor is not heavily traveled when compared with other travel corridors in the region. With the exception of Route 82 in Salem at the termination of Route 11 and Route 82 in Norwich east of the intersection of Route I-395, no major capacity improvements are envisioned. A roundabout is in the planning stages for the intersection of Route 82 and Route 85 in Salem. This is presently a high-frequency accident location.

The other east/west corridor serving the northern tier of the region's municipalities comprises Route 207 from the Franklin/Lebanon town line to Baltic, and Route 138 easterly from Baltic, through Sprague, Lisbon, Griswold and Voluntown. Traffic on this rural corridor is also light, attributable to low demand and perhaps in part to the poor condition of the road between Baltic and Jewett City. The intersection of Routes 138 and 169 in Lisbon needs to be reconstructed. However, relatively low traffic volumes and few accidents do not presently make this corridor a high priority.

Northwest/Southeast Corridors: Two major routes serve the region in this direction. These are Route 2 and Routes 11/85. Route 2 enters the region near its western extremity in Colchester and passes through eight towns before reaching its eastern terminus in the Pawcatuck section of Stonington. Routes 11/85 are the main routes of travel between Route 2 in Colchester and New London, passing through Salem, Montville and Waterford.

Through-traffic on Route 2 from the Hartford/Glastonbury area remains a difficult regional traffic problem to solve. This is due, in large part, to the huge demand created by the region's two Indian gaming casinos. One option is to by-pass the bottleneck in Norwich by re-routing traffic south on I-395 to Route 2A. While this ostensibly solves the congestion problem in Norwich, a second highway bottleneck exists in the village of Poquetanuck, in Preston. The solution to this problem, identified by CONNDOT as part of the *Route 2/2A/32 Environmental Impact Study*, is to add an additional span to the Mohegan-Pequot Bridge and build a limited access by-pass of Route 2A. However, while this solution continues to be opposed by the Town of Preston, the likelihood of redevelopment of the Norwich Hospital property may create the conditions to enable this project to go forward.

Since 1992, Foxwoods Casino has had a significant impact on traffic in the region from both an employee and patron perspective. The facility attracts an average of more than 25,000 vehicles per day. On peak days, this number can double. Routes 2 and 2A have clearly borne the brunt of the increased traffic but there is also a noticeable increase in volumes on other roads as well. Traffic going to the casino from the western part of the state uses I-395 and Route 2A through the Poquetanuck section of

Preston to get to Route 2, while traffic from the east, on I-95, uses Exit 92 at Route 2 in North Stonington to get to the reservation. Traffic approaching from the northeast, on I-395, exits at Route 164 in Griswold to get to Route 2. As the number of people employed both on and off the reservation increases (now about 13,000) and as patrons become more familiar with the area, the secondary road system has been exploited as offering less congested routes of travel to and from the gaming center. This is resulting in heavier volumes on these narrow roads. Likewise, local residents are increasingly using the secondary road system in order to avoid congestion on the main arterials. Citizen concern about the changing pattern of both the primary and secondary roadway use in this section of the region is widespread. However, while there continues to be some public resistance to making major highway improvements simply for the convenience of casino patrons, the resistance now tends to be isolated to one or two communities. Independently, the Town of Preston has expressed interest in developing the Preston City area in the vicinity of Routes 164 and 165 as a village center. While the long term development objective of retaining "village character" is somewhat in conflict with the volumes of gaming traffic on Route 164 passing through Preston City headed toward Foxwoods, Preston is recommending intersection modifications along Route 164, both above and below the intersection with Route 165. Of immediate concern will be the realignment of the intersection of Route 164 at Old Shetucket Turnpike and Amos/Northwest Corner Roads.

Route 2 is constructed to arterial standards between Norwich and Route 164 in Preston with 12-foot lanes and 8-foot shoulders in each direction. Easterly of Route 201, it lacks the needed lane or shoulder width and alignment to accommodate traffic in a safe and efficient manner. Recommendations for reconstruction between Route 201 in North Stonington and its intersection with I-95 in Stonington were part of an Environmental Impact Study. While there has been no local consensus to make major improvements to Route 2, in 2008/2009, the Mashantucket Pequot Tribe constructed a 1.8 mile elevated bypass of Route 2 from Lot 10 to east of the intersection with Milltown Road. Between I-95 and Route 78, Route 2 has been improved to four lanes. Again, access to and from Route 2 to abutting properties is of continuing concern as the volume of this roadway approaches its capacity.

As the region continues to develop as a major tourism and commercial destination, traffic is expected to more than double, and in some cases triple, on many area roads and to be substantially increased on others. Enterprises on property abutting I-95 in North Stonington (once proposed for a theme park) may heighten the need to consider improving other roads, especially those that link Mystic to Foxwoods. One of these is Route 201 in North Stonington between Route 2 and the Stonington town line.

The seasonal traffic congestion occurring on Route 85 in Salem, Montville, and Waterford is not likely to diminish significantly until Route 11 is completed. With the prospects diminished for the completion of Route 11, the condition of Route 85 becomes problematic. Although year-round traffic in the Route 85 corridor is presently moderate, with average daily traffic of less than 14,000 between Route 82 and the Montville town line, it reaches intolerable conditions on some summer

weekends when recreation traffic in this corridor reaches its peak. Improvements are needed all along the Route 85 corridor in Salem, Montville and Waterford. Of special concern is the intersection at Route 82, now planned as a roundabout and the intersection with Route 161.

Traffic Volumes: In FY 1998, SCCOG began to analyze traffic volumes on all the arterials and expressways in the region. The original study focused on traffic during the period from 1980 through 1996. Traffic volume data on 133 locations distributed through the region were identified in the 1998 study. Data for these same 133 locations have been updated annually as shown in Table 7. Figure 9 depicts the percentage change in traffic volumes on the region's major roads between 1992-2008. This sixteen-year period was chosen because it represents the period of greatest growth in traffic beginning with the opening of Foxwoods Casino in 1992, followed by the opening of the Mohegan Sun Casino in 1996. The data show that growth in traffic volumes on the Route 2 corridor, especially that section from Norwich to Stonington, were significant, beginning in 1992 when Foxwoods Casino opened. With the opening of Mohegan Sun in 1996, volumes on Route 2 began showing reductions whereas volumes on Route I-395 and Route 2A dramatically increased. However, further scrutiny of the data and the methodology for converting 24-hour traffic counts into ADT data reveals that 1996 CONNDOT dispensed with applying a "seasonal adjustment factor" to the traffic count data in the vicinity of Foxwoods Resort Casino. This was done when it became apparent that casino traffic had unusual peak-hour and peak-season characteristics that did not require a factor adjustment. The result of this adjustment in methodology has had the effect of inflating ADT data between 1992 and 1996 in the vicinity of Foxwoods Resort Casino.

Traffic volumes on Route 85 between Salem and Waterford are also of interest since this road segment was the subject of an Environmental Impact Study for Route 11. The data continue to show that average annual traffic volumes of critical segments of Route 85 steadily are increasing but remain relatively modest by comparison to comparable traffic volumes on Route 2, east of Norwich.

Figure 10 depicts the history of Average Daily Traffic Volume Growth just north of Exit 80 on Route I-395 in Norwich for a period from 1993 through 2010. These data were presented primarily to show the dramatic increase in traffic volumes on this roadway beginning in October, 1996 with the opening of the Mohegan Sun Casino. The figure shows a steep increase in daily traffic between September, 1996 where approximately 45,000 vehicles/day used the road, to a volume of about 53,000 vehicles/day after the casino opened in October. Traffic volumes dropped slightly for the remaining two months of the year. However, for each year thereafter, monthly volumes beginning in January are consistently clustered in a higher tier, now almost 60,000 cars/day. By August, ADT's now exceed 65,000 cars/day. This strongly suggests that the Mohegan Sun has had a lasting impact on the use of this roadway that, unlike I-95, shows no distinct seasonal pattern.

**TABLE 7
TRAFFIC VOLUMES AT SELECTED LOCATIONS, 1992-2008**

ROUTE	TOWN	LOCATION	1992 ADT	1996 ADT	2008 ADT	% Change 1992-2008
1	EAST LYME	UPPER PATTAGANSETT TO RTE 161	12500	11700	13100	5%
1	WATERFORD	CROSS RD TO AVERY LANE	13800	11700	14400	4%
1	WATERFORD	RTE 156 TO WILLETS AVE	25300	24900	22100	-13%
1	NEW LONDON	BECKWITH ST TO RTE 643	18300	15000	13500	-26%
1	GROTON	SOUTH RD TO DEPOT RD	16600	15000	14600	-12%
1	GROTON	FLANDERS RD TO ALLYN ST	6200	6200	5700	-8%
1	STONINGTON	FLANDERS RD TO E JCT 1A	6200	6300	6000	-3%
1	STONINGTON	LATHROP AVE. TO RTE 234	10400	9600	10300	-1%
1	STONINGTON	MORGAN ST. TO RT 2	16500	16300	15000	-9%
1	STONINGTON	RTE 2 TO RI STATE LINE	23200	21100	21000	-9%
2	COLCHESTER	EB FR RTE 149 TO MILL HILL RD	21000	26000	35400	69%
2	COLCHESTER	EB FR RTE 354 TO CHESTNUT HILL RD	12100	17000	25800	113%
2	LEBANON	COLCHESTER TL TO SCOTT HILL RD	12400	16800	25400	105%
2	BOZRAH	EB FR RTE 163 TO EB TO RTE 608	14500	19600	28500	97%
2	NORWICH	EB JCT RTE 2A EB EXIT I-395	21000	25900	30500	45%
2	NORWICH	LAFAYETTE ST TO BROADWAY	20700	20900	18100	-13%
2	PRESTON	NORWICH-PRESTON TL TO RTE 117	11200	14600	10000	-11%
2	PRESTON	RTE 117 TO RTE 164	16000	23500	18300	14%
2	LEDYARD	RTE 164 TO WATSON RD	16400	27200	24400	49%
2	NORTH STONINGTON	LEDYARD/NORTH STONINGTON TL TO RTE 201	14200	26200	13800	-3%
2	NORTH STONINGTON	ROCKY HOLLOW RD TO RTE 184	15700	25800	16500	5%
2	NORTH STONINGTON	RTE 184 TO RTE I-95	13300	21500	13200	-1%
2	STONINGTON	ROUTE 78 TO WHITEROCK RD	21000	21500	19700	-6%
2A	MONTVILLE	I-395 TO RTE 32	16800	20900	38800	131%
2A	MONTVILLE	MOHEGAN SUN BLVD TO PRESTON TL	15500	18800	24600	59%
2A	PRESTON	MIDDLE RD TO RTE 117	6800	9900	12400	82%
11	SALEM	WITCH MEADOW RD TO COLCHESTER TL	7100	6800	10300	45%
12	GROTON	GUNGYWAMP RD TO CRYSTAL LAKE RD	30000	26200	22300	-26%
12	GROTON	OHIO AVE TO LEDYARD TL	14100	13500	13900	-1%
12	LEDYARD	HURLBUT RD TO MILITARY HGWY	10600	11000	11700	10%
12	LEDYARD	ROUTE 214 TO PRESTON TL	12000	12400	12600	5%
12	PRESTON	JCT OF RTE 2A TO NORWICH TL	8400	8500	8000	-5%
12	NORWICH	HUNTERS RD TO RTE 97	14600	13800	12000	-18%
12	LISBON	LISBON TL TO LISBON LANDING	5300	4800	5400	2%
12	GRISWOLD	LILLY POND RD TO CANTERBURY TL	4900	5000	4500	-8%

**TABLE 7
TRAFFIC VOLUMES AT SELECTED LOCATIONS, 1992-2008**

ROUTE	TOWN	LOCATION	1992 ADT	1996 ADT	2008 ADT	% Change 1992-2008
27	STONINGTON	PLEASANT ST TO COOGAN BLVD	17400	14700	11400	-34%
27	STONINGTON	MAIN ST #2 TO GROTON TL	6600	6800	4700	-29%
32	WATERFORD	WATERFORD TL TO RTE 693	31300	28300	28600	-9%
32	MONTVILLE	PETER-PAUL SHOP CTR TO RTE 163	11100	10600	12600	14%
32	MONTVILLE	RTE 163 TO SERGIOS SHOPPING CENTER	12400	12200	13500	9%
32	NORWICH	DUNHAM ST TO RTE 82	6900	6000	8000	16%
32	FRANKLIN	NEW PARK AVENUE TO RTE 87	14500	19200	19400	34%
32	FRANKLIN	MURPHY RD TO RTE 610	10500	14100	13400	28%
32	FRANKLIN	PLAINS RD TO RTE 207	8400	10400	9400	12%
49	NORTH STONINGTON	STONINGTON TL TO I-95	3700	4000	4900	32%
49	NORTH STONINGTON	WYASSUP RD TO VOLUNTOWN TL	1000	1400	1600	60%
49	VOLUNTOWN	VOLUNTOWN TL TO RTE 165	1000	1400	1600	60%
49	VOLUNTOWN	BROWN RD TO STERLING TL	900	1000	1400	56%
82	SALEM	RTE 11 TO RTE 85	7800	8700	9500	22%
82	SALEM	MUSIC VALE ROAD TO RTE 354	3400	3800	4600	35%
82	MONTVILLE	BOZRAH TL TO CHERRY LANE #2	4700	5900	5200	11%
82	NORWICH	WALMART TO DOT DISTRICT 2	9800	15700	18200	86%
82	NORWICH	NEW LONDON TPKE TO DUNHAM ST	19800	22900	24000	21%
85	WATERFORD	JEFFERSON AVE TO PHILLIPS ST	18600	13900	15700	-16%
85	WATERFORD	I-95 TO CRYSTAL MALL	27900	23400	27200	-3%
85	WATERFORD	LAKES POND RD TO MONTVILLE TL	10400	10600	11400	10%
85	MONTVILLE	MONTVILLE TL TO ROUTE 161	10400	10600	11400	10%
85	SALEM	SALEM TL TO RTE 82	11100	12000	12000	8%
85	SALEM	RATTLSSNAKE LEDGE RD TO COLCHESTER TL	3400	3400	3000	-12%
87	FRANKLIN	BOZRAH TL TO MURPHY RD	3600	4300	5800	61%
95	EAST LYME	SOCIETY RD TO RTE 161	51300	60400	71200	39%
95	WATERFORD	NB FR PKWAY S TO NB EXIT TO PKWAY S	49200	53300	57200	16%
95	GROTON	NEW LONDON TL TO RTE1	109600	113800	113800	4%
95	GROTON	RTE 349 TO RTE 117	66100	71800	74100	12%
95	STONINGTON	RTE 654 TO RTE 234	44500	49600	52000	17%
95	STONINGTON	TAUGWANK RD TO RTE 2	36200	40800	43000	19%
95	NORTH STONINGTON	RTE 49 TO RTE 216	25400	28600	36000	42%
97	NORWICH	BEVAL STREET TO I-395	7200	6300	6300	-13%
97	SPRAGUE	SALT ROCK RD TO SCOTLAND TL	1000	1200	1500	50%
117	GROTON	HAZELNUT RD TO I-95	13400	13900	13900	4%

**TABLE 7
TRAFFIC VOLUMES AT SELECTED LOCATIONS, 1992-2008**

ROUTE	TOWN	LOCATION	1992 ADT	1996 ADT	2008 ADT	% Change 1992-2008
117	GROTON	LONG COVE TRAILER PK TO LEDYARD TL	8000	10500	8600	8%
117	LEDYARD	SANDY HOLLOW RD TO COL LEDYARD HWY	7300	9400	7400	1%
117	LEDYARD	ROSE HILL RD TO LEDYARD-PRESTON TL	3900	3900	4300	10%
117	PRESTON	RT 2A TO RT 2	6100	8400	9800	61%
138	SPRAGUE	KINSMAN RD TO RTE 660	1300	1000	1900	46%
138	LISBON	ROSS HILL RD TO RTE 12	4200	3700	4300	2%
138	GRISWOLD	CAMPBELL RD TO RTE 201	6800	7600	7600	12%
138	GRISWOLD	RTE 201 TO GRISWOLD-VOLUNTOWN TL	5800	5700	6400	10%
138	VOLUNTOWN	RTE 49 TO RTE 165	4000	5000	5200	30%
138	VOLUNTOWN	JAMES RD TO RI STATE LINE	1000	1100	1000	0%
156	EAST LYME	ROCKY NECK CON TO FAIRHAVEN RD	7400	9100	8300	12%
156	EAST LYME	MAIN BRACE SHP CTR TO RTE 161	11900	10200	9500	-20%
156	WATERFORD	GARDINER'S WOOD RD TO RTE 213	9400	9100	8200	-13%
161	EAST LYME	BEST WESTERN TO I-95	22200	22100	24300	9%
161	EAST LYME	WALNUT HILL RD TO MONTVILLE-EAST LYME TL	4100	4600	4800	17%
163	MONTVILLE	RTE 32 TO I-395	6800	7100	7900	16%
163	MONTVILLE	RAND-WHITNEY TO CHESTERFIELD RD	4800	4800	5400	13%
163	BOZRAH	HOUGH RD TO GAGER RD	2400	2500	0	-100%
164	PRESTON	RTE 2 TO RTE 605	6300	10300	10400	65%
164	PRESTON	RTE 165 TO PRESTON-GRISWOLD TL	6400	8400	9400	47%
164	GRISWOLD	BREWSTER RD TO RTE 630	4100	9700	11300	176%
165	PRESTON	FLEMING'S SHP CTR TO RTE 605	4100	4400	4100	0%
165	GRISWOLD	RIXTOWN RD TO RT 201	2700	3200	2200	-19%
165	VOLUNTOWN	FORGE HILL RD TO JAMES RD	2000	2400	3100	55%
169	NORWICH	WASHINGTON ST TO OX HILL RD	10500	10200	10400	-1%
169	LISBON	NORWICH TL TO BLISSVILLE RD	2700	2600	2100	-22%
169	LISBON	RT 138 TO KINSMAN RD	4900	5100	5800	18%
169	LISBON	MEADOWBROOK CIR TO CANTERBURY TL	3600	3700	3700	3%
184	GROTON	RTE 12 TO WINDING HOLLOW RD	16400	16800	13500	-18%
184	GROTON	PACKER RD TO COW HILL RD	10100	9000	9400	-7%
184	STONINGTON	STONINGTON TL TO LANTERN HILL RD	5100	5400	5400	6%
184	STONINGTON	RTE 201 TO N.STONINGTON TL	2800	2900	2900	4%
184	NORTH STONINGTON	NORTH STONINGTON TL TO RTE 2	2800	2900	2900	4%
201	NORTH STONINGTON	STONINGTON TL TO JEREMY HILL RD	3000	3300	2500	-17%
201	NORTH STONINGTON	MILLER RD TO GRISWOLD TL	1000	1200	1300	30%

**TABLE 7
TRAFFIC VOLUMES AT SELECTED LOCATIONS, 1992-2008**

ROUTE	TOWN	LOCATION	1992 ADT	1996 ADT	2008 ADT	% Change 1992-2008
201	GRISWOLD	GRISWOLD TL TO RTE 165	1000	1200	1300	30%
201	GRISWOLD	RTE 138 TO BITGOOD RD	1300	1200	1400	8%
201	GRISWOLD	STONE HILL RD TO I-395	3000	3200	3200	7%
201	GRISWOLD	I-395 TO RTE 12	3600	3000	2900	-19%
207	FRANKLIN	PAUTIPAUG HILL RD TO SPRAGUE TL	2500	2300	3100	24%
207	SPRAGUE	FRANKLIN-SPRAGUE TL TO PLAIN HILL RD	1300	3600	3100	138%
213	WATERFORD	LAMPHERE RD TO GOSHEN RD	5100	4100	4300	-16%
213	NEW LONDON	TOBY MAY FIELD TO PLANT ST	8300	7800	7600	-8%
214	LEDYARD	WHALEHEAD RD TO RTE117	4600	4400	5200	13%
214	LEDYARD	SHEWVILLE RD TO CASINO	3200	5400	3600	13%
215	GROTON	RTE 1 TO BROOK ST	7900	9100	8000	1%
215	GROTON	MOSHER ST TO WEST MYSTIC AVE	4800	4900	4700	-2%
216	NORTH STONINGTON	AMERICAN AUTO SHOP TO RTE 184	1200	1400	1600	33%
234	STONINGTON	BILLINGS STREET TO RTE 1	6100	7600	6600	8%
349	GROTON	MERIDIAN ST EXT TO RTE 1	24000	24200	22700	-5%
354	COLCHESTER	STANAVAGE RD TO SALEM TL	2700	2600	2400	-11%
354	SALEM	RATTLESNAKE LEDGE RD TO RTE 82	2700	2600	2900	7%
395	WATERFORD	EAST LYME-WATERFORD TL TO RTE 85	10000	19400	26000	160%
395	WATERFORD	RTE 85 TO WATERFORD-MONTVILLE TL	16000	26700	35800	124%
395	MONTVILLE	RTE 163 TO RTE 2A	37400	44000	56500	51%
395	MONTVILLE	RTE 2A TO MONTVILLE-NORWICH TL	38300	47200	62400	63%
395	NORWICH	RTE 82 TO RTE 2	37700	47200	59900	59%
395	NORWICH	RTE 642 TO RTE 97	29100	33500	42700	47%
395	GRISWOLD	RTE 138 TO RTE 201	19900	25500	31600	59%
610	FRANKLIN	RTE 32 TO RTE 207	2200	2200	2200	0%
614	GROTON	PACKARD RD TO RTE 184	5700	5600	5900	4%
649	GROTON	POQUONNOCK RD #1 TO POQUONNOCK RD #2	11200	8100	8800	-21%

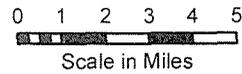
Source: CONNDOT

PERCENT CHANGE IN ADT 1992 - 2008 Southeastern Connecticut Region

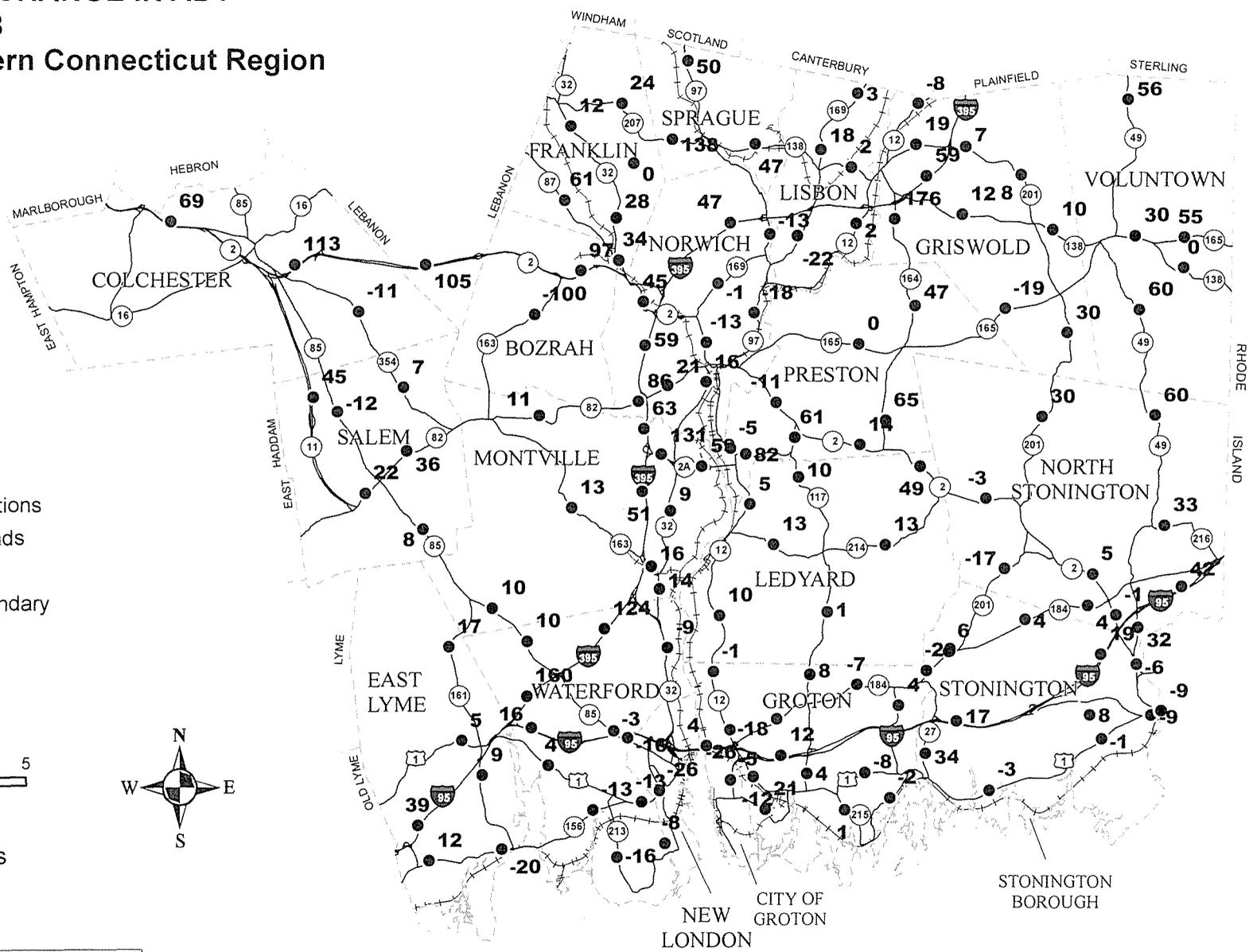
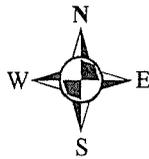
LEGEND

- ADT Locations
- Major Roads
- +—+— Railroad
- - - - Town Boundary

Source:
Connecticut DOT



1 in = 4 miles

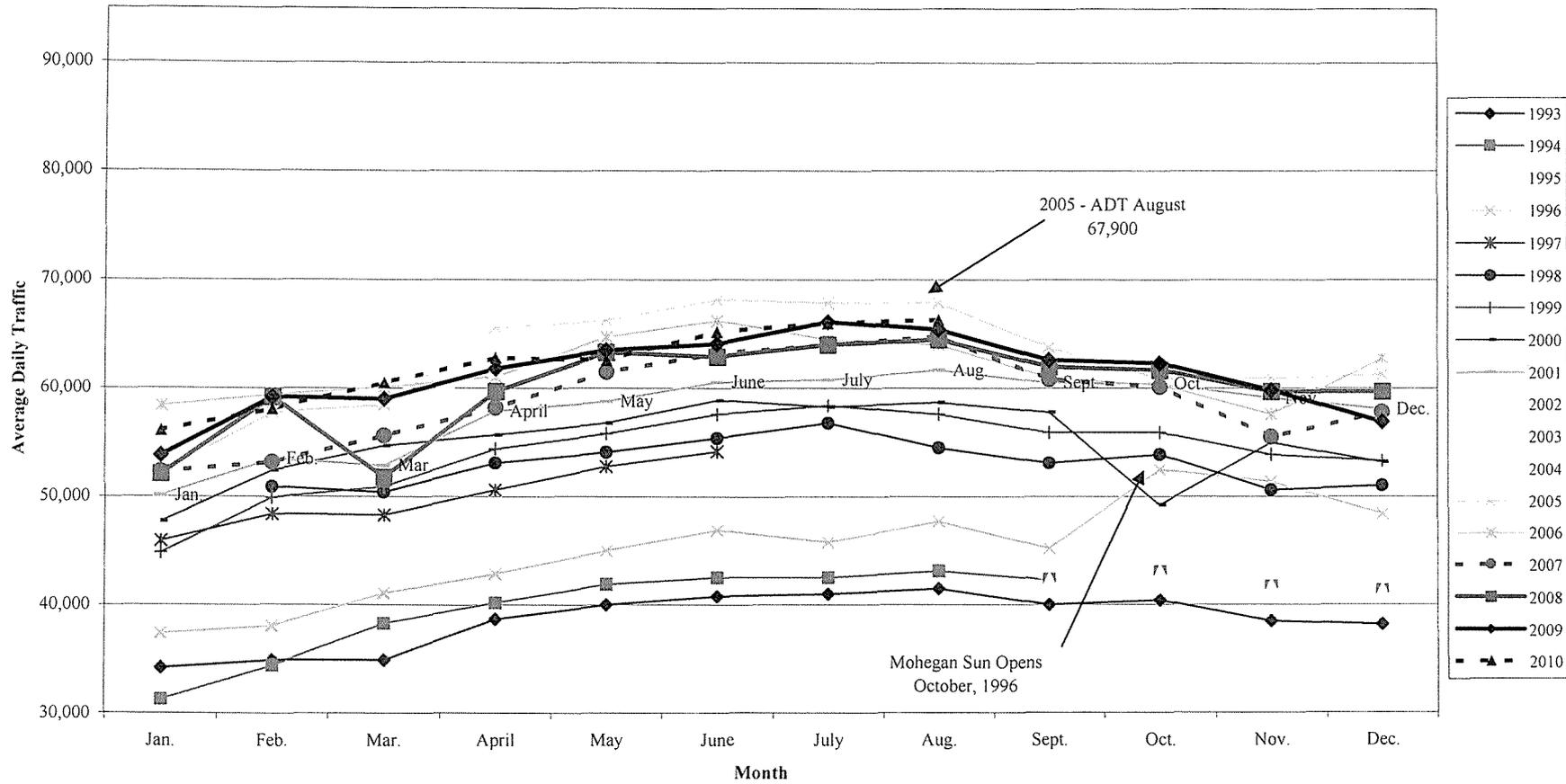


Prepared by:



FIGURE 9

FIGURE 10
AVERAGE DAILY TRAFFIC
INTERSTATE I-395 (NORWICH)
JANUARY, 1993 - AUGUST 2010



SOURCE: CONNDOT

By comparison, Figure 11 depicts Average Daily Traffic Volume trends just south of Exit 89/Allyn Street on I-95 in Groton for the period between 1991 through December, 2010. These data represent the highest traffic volumes in the region and show a distinct seasonal trend in summer growth in traffic. The seasonal growth in traffic in August represents an increase of 60% over the month of January.

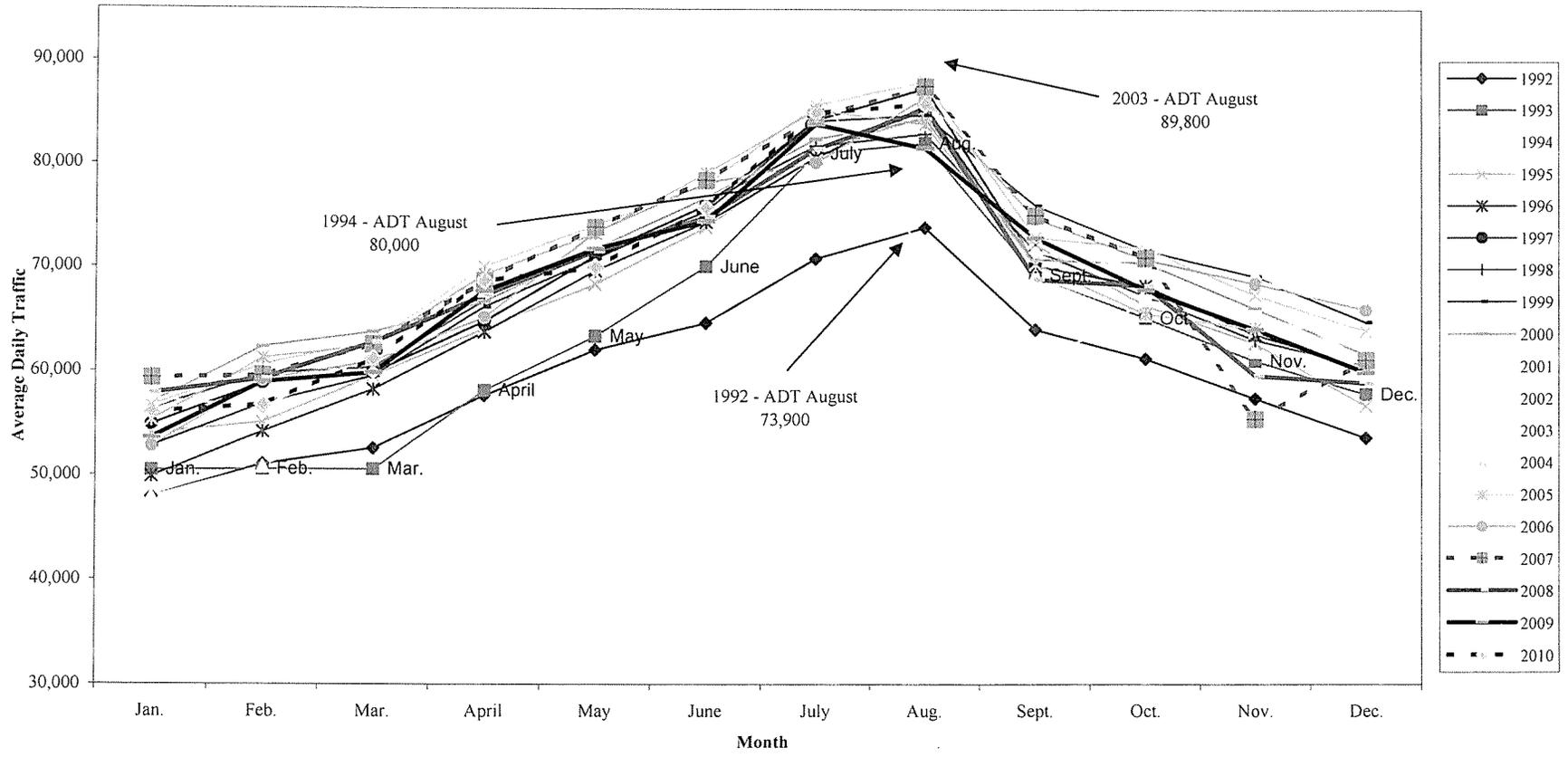
Like Figure 10, Figure 11 shows that the opening of Foxwoods Casino in 1992 resulted in a stepped, or tiered, growth pattern relative to the use of I-95 at this location. Traffic volumes for each subsequent year following 1991 and 1992 are clustered at the upper portion of the figure. This suggests that Foxwoods, like Mohegan Sun on I-395, has had a lasting impact in this vicinity of I-95 despite the fact that each successive year has not resulted in a significant increase in traffic volumes over the preceding year.

There are other road segments in the region with notable increases in traffic volumes in the time period being studied. These include Routes 164 in Griswold (132%), 82 in Norwich (77%), 2A in Montville (118%) and 207 in Sprague (154%). Increases in traffic volumes on these routes indicate residential and commercial growth in outlying areas, some of which may very well exist outside the southeast region. In this respect, shifts in employment destinations and employee origins could also explain some of this emerging traffic growth.

Significant daily traffic volumes were recorded on Sections of Routes 1, 12, and 32 which range from almost 24,000 to over 30,000 vehicles/day. Collectively, these segments show little or no percentage change when compared to traffic volumes in previous years. As a result of many years of commercial development, these road segments appear to be approaching their effective carrying capacity and may actually represent travel obstacles that drivers try to avoid. This is also true of segments of I-95 that typically carry volumes of 65,000 to 70,000 vehicles/day. The region's highest Average Annual Daily Traffic Volumes's (AADT) were recorded at the Gold Star Bridge crossing the Thames River on I-95. This segment of highway carries not only through-traffic but also serves the Groton Industrial Area. At this station, AADT's of 116,800 vehicles/day were recorded in 2003. But when compared to the previous year, this traffic volume represents only a 1.9 percent increase. Generally, these levels of traffic volume suggest a condition of strained capacity warranting a high degree of future concern.

High Frequency Accident Locations: High Frequency Accident Locations (HFALs) are defined as highway sites where the actual number of accidents is 15 or more and where this number exceeds the expected number of accidents. The concept of an expected number of accidents may appear alien. CONNDOT uses a complex methodology to establish HFALs that is built on an assumption about the relationship between traffic volume, the physical characteristics of the roadway segment, or intersection, and the resultant number of accidents. Based on CONNDOT experience, in this type of study setting it is assumed that a certain number of accidents will occur each year. However, when the thresholds are exceeded by both the number of accidents in relationship to the accident target, it triggers a process where the site is

FIGURE 11
AVERAGE DAILY TRAFFIC
INTERSTATE I-95 (GROTON)
JANUARY, 1991 - AUGUST 2010



SOURCE: CONNDOT

identified for further study.

The accident data displayed in Figure 12 grossly depicts sites within the southeast region where there were 15 or more accidents for the 3-year period between 2005-2007. The source data show that for this time period, there are 128 HFAL sites in the southeast region. As a general rule, these accident location clusters tend to occur where there are high traffic volumes and numerous turning movements. Turning movements are generally associated with commercial activity along state highways where the land was once used for residential purposes and where the small property boundaries have limited frontage on the highway. Salem Turnpike (Route 82) in Norwich is perhaps one of the more typical examples of this setting in the region, but it is not unique. Also included in this category is the Coleman Street/Jefferson Avenue shopping area in New London, the Route 85 Crystal Mall area in Waterford as well as the Route 12/Route 1 shopping area in Groton. Route 82 in Norwich has undergone extensive study for the addition of turning lanes. This project is moving into a design phase but its implementation will be delayed due to funding constraints.

In and of itself, high/speed does not necessarily result in accidents. The more likely pattern is a location where high speed through-traffic is utilizing the same roadway as slower speed, local traffic. Given the high traffic volumes on Route 2, east of Norwich, the relatively small number of high frequency accident locations can be attributed to the lack of abutting commercial development. Likewise, with the obvious exception of the Crystal Mall area, the majority of Route 85 through Salem and Montville is free of high frequency accident locations except in the vicinity of the intersection of Route 82 where turning movements associated with commercial development is in conflict with through-traffic.

This pattern of automobile accidents is one of the best examples of the linkage between certain types of abutting land uses and transportation. It also reinforces the notion of shared responsibility for highway safety with local land use regulatory agencies, specifically planning and zoning commissions, which approve site plans for commercial development abutting state highways. Often, in the rush to generate tax revenue through commercial development, issues of highway access management are overlooked or ignored by local commissions. In the short term, adoption and implementation of strict access management plans by local commissions will go a long way toward alleviating the potential for unsafe highway conditions. This is especially important for emerging strip commercial development along arterial highways.

In selected areas, highway improvement projects have been completed to help address some of these problem accident areas. For instance, improvements have been completed to the Routes 85 and I-95 intersection area in Waterford as well as the Route 32 section in Waterford, south of the access to I-395. This should result in fewer accidents in these areas. CONNDOT also issues service memos through its Traffic Division for relatively simple and inexpensive corrections, such as pavement markings or warning and directional signs, to improve the safety of some high frequency accident locations.

In the broadest scope, the Regional Transportation Plan is intended to address highway safety concerns and suggest improvements. Some of the high frequency accident locations cited above have been addressed in this document. As one example, efforts were underway for the reconstruction of the Route 82 in Norwich to enter the preliminary design stage. A second example is the Route 2/Route 1 intersection in Stonington which has been reconstructed. Both of these areas were previously identified as high frequency accident locations. SCCOG also annually participates in the Local Road Accident Reduction Program where local communities compete for federal funds to address demonstrated safety issues at intersections or roadway segments. Since safety constitutes the most important objective of this plan, SCCOG will be focusing its attention on HFAL's as part of the STP-U and Local Road Accident Reduction programs.

Traffic Congestion: Traffic congestion sites are recognized when traffic flow begins to break down and results in delays in movement of traffic. Sometimes this may be so severe that there is no movement through several cycles of a traffic light. The relative ability of a roadway or intersection to adequately function to move a certain volume of traffic is called "level of service (LOS)." LOS is expressed as a grade, from A-F, with "A" being the best (free flow) and "F" being the worst (gridlock). LOS is directly related to the capacity of the roadway to manage a certain volume of traffic.

Traffic volumes-to-highway capacity ratios (V/C) are the theoretical measurement that forms the basis for the determination of LOS. Data provided by CONNDOT on congestion management indicate that there are 108 congested highway sections in the southeast region with V/C ratio of .8 to .99. These are highway sites where capacity of the roadway is only marginally adequate to manage the traffic at all times and flows are beginning to break down. The same data source indicates that there were 37 additional sites in the southeast region with V/C ratios in excess of 1.0. Clearly, sites with V/C ratios in excess of 1.0 are the most critical of all since the traffic volumes regularly exceed the capacity of the section and traffic operations regularly break down.

Traffic congestion site locations are listed on Table 8. Combining this data with the traffic volume data as depicted in Table 7 and Figure 9, a clear picture emerges for the major projects once considered to be high priority. This continues to be true for I-95, 2/2A/32 and Route 11. However, there are several new areas or "hot spots" that warrant consideration. The first appears to be the road segments in the vicinity of Lisbon Landing on Route 12. Additional development in this vicinity is going to exacerbate what is quickly becoming a high traffic volume destination.

The second hot spot is the I-395 corridor in the vicinity of Routes 163, 2A and 82 in Montville. The later two areas are feeding high-traffic, high employment areas. Overall, I-395 is beginning to show signs of stress, especially at the interchange areas.

Finally, the eastern portion of Groton (City of Groton) as well as downtown Norwich

TABLE 8
TRAFFIC CONGESTION SITES BY TOWN, 2009
Southeastern Connecticut Region

Serious Volume to Capacity Ratio: .8 to .99								
Critical Volume to Capacity Ratio: > 1.0								
Town	Rte	Begin	End	2009 ADT	2009 Peak Hour	2009 V/C	2030 ADT	2030 V/C
Colchester	16	11.5	11.62	13800	731	0.84	18630	1.14
Colchester	85	18.24	18.54	11100	599	0.87	14985	1.17
Colchester	85	18.54	18.92	13400	663	0.91	18090	1.23
Colchester	85	18.92	18.96	13400	663	0.91	18090	1.23
Colchester	16	12.02	12.09	15700	832	0.96	21195	1.3
Colchester	85	18.96	19.04	16900	913	1.33	22815	1.8
East Lyme	95	84.13	85.95	69000	3105	0.82	85560	1.02
East Lyme	95	88.48	88.61	56300	3097	0.82	69812	1.01
East Lyme	161	1.32	2.02	14200	703	0.82	19312	1.12
East Lyme	1	92.54	92.64	14200	852	0.84	19312	1.14
East Lyme	161	2.95	2.97	25100	2510	0.84	34136	1.14
East Lyme	95	83.67	83.76	67500	3341	0.86	83700	1.06
East Lyme	95	83.76	83.92	67600	3346	0.86	83824	1.06
East Lyme	95	83.92	84.13	66400	3287	0.86	82336	1.06
East Lyme	95	87.1	87.37	66200	3310	0.86	82088	1.07
East Lyme	95	85.95	86.11	68400	3420	0.88	84816	1.09
East Lyme	95	86.11	86.92	69300	3465	0.89	85932	1.1
East Lyme	95	87.96	88.16	70100	3505	0.89	86924	1.11
East Lyme	161	1.13	1.21	15500	767	0.89	21080	1.21
East Lyme	95	86.92	87.1	69300	3465	0.91	85932	1.13
East Lyme	95	87.46	87.96	72900	3645	0.92	90396	1.14
East Lyme	95	87.37	87.46	72900	3645	0.93	90396	1.16
East Lyme	95	88.16	88.48	80300	4015	1.01	99572	1.25
East Lyme	161	2.57	2.61	19400	960	1.12	26384	1.52
Franklin	32	17.97	18.6	13500	1350	0.82	16335	0.99
Franklin	32	16.84	17.06	19500	1950	0.98	23595	1.19
Franklin	32	16.65	16.84	20200	2020	1.02	24442	1.23
Griswold	12	20.58	20.82	11600	557	0.81	15544	1.09
Griswold	138	7.89	8.31	12300	1230	0.83	16482	1.12
Griswold	12	20.82	21.05	12100	581	0.85	16214	1.13
Griswold	138	7.27	7.89	13500	1350	0.92	18090	1.23
Groton	95	100.29	100.93	62300	3427	0.8	77252	1
Groton	12	0.43	0.53	27300	1351	0.81	31668	0.94
Groton	95	94.97	95.09	89900	4945	0.82	111476	1.01
Groton	1	105.11	105.26	15600	1404	0.83	18096	0.96
Groton	95	94.94	94.97	89900	4945	0.84	111476	1.05
Groton	95	99.95	100.29	60300	3317	0.85	74772	1.05
Groton	184	0.69	1.31	12100	759	0.89	14036	1.04
Groton	12	0.33	0.43	28400	2840	0.96	32944	1.11
Groton	12	0	0.09	23000	1311	0.97	26680	1.12
Groton	12	0.09	0.17	23000	1311	0.97	26680	1.12
Groton	117	1.07	1.24	11000	858	0.99	12760	1.15
Groton	184	0.46	0.51	13400	840	0.99	15544	1.15

TABLE 8
TRAFFIC CONGESTION SITES BY TOWN, 2009
Southeastern Connecticut Region

Serious Volume to Capacity Ratio: .8 to .99								
Critical Volume to Capacity Ratio: > 1.0								
Town	Rte	Begin	End	2009 ADT	2009 Peak Hour	2009 V/C	2030 ADT	2030 V/C
Groton	184	0.6	0.69	13400	840	0.99	15544	1.15
Groton	184	1.31	1.78	13500	846	1	15660	1.16
Groton	349	2.3	2.43	20500	1353	1.05	23780	1.22
Groton	349	2.43	2.98	20500	1353	1.05	23780	1.22
Groton	12	0.17	0.33	26400	1505	1.11	30624	1.29
Groton	184	1.78	2.7	15700	984	1.16	18212	1.35
Groton	349	3.51	3.81	17900	1611	1.16	20764	1.35
Groton	349	3.92	4.17	7700	801	1.16	8932	1.34
Groton	117	0	0.86	13000	1014	1.17	15080	1.36
Groton	117	0.86	0.89	13800	1076	1.24	16008	1.44
Ledyard	12	5.06	5.27	13500	1350	0.82	17415	1.06
Ledyard	117	6.63	7.12	11000	1320	0.89	14190	1.15
Lisbon	12	19.76	20.43	11500	552	0.81	15180	1.06
Lisbon	12	20.43	20.58	11600	557	0.81	15312	1.07
Lisbon	12	19.69	19.71	15000	720	1.05	19800	1.39
Lisbon	12	19.75	19.76	15000	720	1.05	19800	1.39
Montville	395	6.33	6.34	55700	3342	0.81	69068	1
Montville	395	6.34	6.55	55700	3342	0.81	69068	1
Montville	395	5.48	5.8	58700	3522	0.83	72788	1.03
Montville	395	6.3	6.33	58700	3522	0.83	72788	1.03
Montville	395	6.55	7.64	59000	3540	0.83	73160	1.03
Montville	395	8.88	8.95	59000	3540	0.83	73160	1.03
Montville	395	9.26	9.29	59000	3540	0.83	73160	1.03
Montville	395	5.8	6.3	58700	3522	0.85	72788	1.06
Montville	395	9.79	9.87	53200	3724	0.86	65968	1.07
Montville	32	5.3	5.58	12500	750	0.88	16750	1.18
Montville	85	6.96	7.12	15200	1520	0.88	15200	0.88
Montville	395	9.87	10.44	65200	3912	0.9	80848	1.11
Montville	32	9.77	9.8	13100	786	0.93	17554	1.24
Montville	32	6.97	8.48	17800	977	0.96	23852	1.29
Montville	32	9.23	9.58	18000	988	0.97	24120	1.3
Montville	32	9.58	9.77	18000	988	0.97	24120	1.3
Montville	2A	4.59	4.61	38800	2134	0.98	51992	1.31
Montville	2A	4.61	4.66	38800	2134	0.98	51992	1.31
Montville	32	9.18	9.23	22300	1224	1.2	29882	1.61
New London	1	99.6	99.99	13800	828	0.81	16836	0.98
New London	95	93.45	93.48	83800	4609	0.81	103912	1.01
New London	1	100.84	101.03	14100	846	0.82	17202	1
New London	1	99.99	100.18	14600	876	0.85	17812	1.04
New London	95	92.37	92.55	61600	3388	0.86	76384	1.06
New London	1	98.56	98.58	17300	934	0.88	21106	1.08
New London	635	0	0.12	12100	871	1.01	14762	1.23
New London	638	0	0.1	4400	484	1.01	5368	1.23

TABLE 8
TRAFFIC CONGESTION SITES BY TOWN, 2009
Southeastern Connecticut Region

Serious Volume to Capacity Ratio: .8 to .99								
Critical Volume to Capacity Ratio: > 1.0								
Town	Rte	Begin	End	2009 ADT	2009 Peak Hour	2009 V/C	2030 ADT	2030 V/C
New London	1	98.7	98.74	20300	1218	1.27	24766	1.55
New London	641	1.68	1.72	16200	1069	1.27	19764	1.55
Norwich	395	11.35	11.64	62600	3380	0.81	77624	1.01
Norwich	642	2.11	2.16	9700	698	0.81	12125	1.01
Norwich	97	2.21	2.87	9100	710	0.82	11375	1.03
Norwich	169	0.52	1.51	9100	710	0.82	11375	1.03
Norwich	2	38.97	39.33	10900	719	0.83	15042	1.15
Norwich	82	28.2	28.29	21700	1432	0.85	27125	1.06
Norwich	2	38.81	38.97	10900	719	0.86	15042	1.18
Norwich	2	39.82	39.87	16500	1188	0.86	22770	1.18
Norwich	32	16.47	16.51	20200	1000	0.87	25250	1.09
Norwich	32	16.51	16.65	20200	1000	0.87	25250	1.09
Norwich	12	12.74	12.94	11800	605	0.88	14750	1.1
Norwich	395	13.66	13.8	54500	3815	0.88	67580	1.09
Norwich	2	40.3	40.46	14700	1176	0.89	20286	1.23
Norwich	395	10.44	10.87	65200	3912	0.9	80848	1.11
Norwich	2	39.87	39.88	16500	1188	0.92	22770	1.27
Norwich	2	40.21	40.3	14700	794	0.92	20286	1.27
Norwich	32	9.8	9.83	13100	786	0.93	16375	1.16
Norwich	32	9.83	9.89	13100	786	0.93	16375	1.16
Norwich	169	0	0.52	10300	803	0.93	12875	1.16
Norwich	395	11.64	13.57	62600	3756	0.93	77624	1.15
Norwich	12	13.95	14.26	10900	654	0.95	13625	1.19
Norwich	12	12.43	12.74	12800	657	0.96	16000	1.2
Norwich	642	1.47	2.11	11500	828	0.96	14375	1.2
Norwich	2	39.33	39.44	12800	845	0.98	17664	1.35
Norwich	2	39.48	39.57	18800	1354	0.98	25944	1.35
Norwich	82	28.29	28.33	25000	1650	0.98	31250	1.23
Norwich	2	40.46	40.49	14700	794	1	20286	1.38
Norwich	642	2.59	2.65	12200	878	1.01	15250	1.27
Norwich	2	40.49	40.52	14700	794	1.03	20286	1.42
Norwich	12	15.12	15.2	11900	714	1.04	14875	1.3
Norwich	82	25.93	26.05	15500	884	1.05	19375	0.66
Norwich	642	0.97	1.2	12600	907	1.05	15750	1.31
Norwich	2	39.57	39.61	20500	1476	1.07	28290	1.47
Norwich	2	39.73	39.82	20500	1476	1.07	28290	1.47
Norwich	12	12.12	12.43	14500	744	1.09	18125	1.36
Norwich	642	1.31	1.47	13500	972	1.12	16875	1.4
Norwich	12	14.26	15.03	13300	798	1.16	16625	1.46
Norwich	642	1.2	1.31	15800	1138	1.32	19750	1.64
Norwich	2	38.15	38.19	23800	1178	1.36	32844	1.88
Norwich	2	38.24	38.27	23800	1178	1.36	32844	1.88
Preston	12	9.09	9.22	20100	2010	0.85	29547	1.25

TABLE 8
TRAFFIC CONGESTION SITES BY TOWN, 2009
Southeastern Connecticut Region

Serious Volume to Capacity Ratio: .8 to .99								
Critical Volume to Capacity Ratio: > 1.0								
Town	Rte	Begin	End	2009 ADT	2009 Peak Hour	2009 V/C	2030 ADT	2030 V/C
Preston	12	8.42	9.08	14400	1440	0.87	21168	1.28
Preston	2	43.58	45.4	18300	1464	0.88	26901	1.29
Preston	12	9.22	9.24	20100	2010	0.91	29547	1.34
Preston	12	9.24	9.32	20100	2010	0.91	29547	1.34
Preston	2	45.7	46.15	24500	1715	0.96	36015	1.41
Preston	12	9.08	9.09	20100	2010	0.98	29547	1.44
Salem	85	8.46	11.26	13700	1781	0.86	13700	0.86
Stonington	1	116.87	117.25	14900	1341	0.8	16837	0.91
Stonington	95	100.93	101.08	62300	3427	0.8	77252	1
Stonington	95	101.29	101.68	49900	2994	0.8	61876	0.99
Stonington	95	101.68	102.19	51800	3108	0.82	64232	1.01
Stonington	95	103.04	104.02	51800	3108	0.82	64232	1.01
Stonington	1	117.25	117.37	20800	1123	1.3	23504	1.47
Waterford	85	0.93	0.98	23000	1380	0.8	23000	0.8
Waterford	85	0.98	1.08	23000	1380	0.8	23000	0.8
Waterford	95	91.67	91.94	55000	3025	0.8	68200	1
Waterford	95	88.61	88.88	56300	3097	0.82	69812	1.01
Waterford	95	88.88	89.23	56700	3119	0.82	70308	1.01
Waterford	95	89.23	89.75	57000	3135	0.82	70680	1.02
Waterford	85	2.61	3.29	25700	1442	0.83	25700	0.83
Waterford	1	93.49	94.7	10400	572	0.84	13208	1.07
Waterford	95	90.01	91.67	59800	3289	0.84	74152	1.05
Waterford	95	92.26	92.37	61600	3388	0.86	76384	1.06
Waterford	85	0.67	0.84	16900	1521	0.89	21463	0.56
Waterford	85	1.08	1.1	26900	1614	0.93	26900	0.62
Waterford	85	3.62	4.64	14400	950	0.96	14400	0.96
Waterford	85	0.84	0.88	16900	913	1.06	21463	0.67
Waterford	95	91.94	92.26	72400	4344	1.09	89776	1.36
Waterford	32	2.47	2.51	29300	1905	1.11	37211	1.41
Waterford	32	1.89	2.47	29300	1905	1.15	37211	1.46
Waterford	32	2.51	3.25	29300	1905	1.15	37211	1.46
Waterford	32	3.99	4.04	29300	1905	1.15	37211	1.46

and Norwichtown stand out as major hot spot areas laboring under high traffic volume stress. The downtown harbor area is especially noteworthy. Relief of this stress may be realized if a 2A bypass is completed and non-destination traffic is routed around the downtown area. However, immediate prospects for these improvements appear dim.

Bridges: Since the collapse of the Mianus River Bridge in 1983, there has been a continuing statewide emphasis on bridge reconstruction by CONNDOT. In the past several decades, special appropriations were made by the legislature for this purpose resulting in numerous bridges located within southeastern Connecticut being rebuilt or identified as needing improvement. Work is completed or underway on most of them.

In 1984, the General Assembly enacted P.A. 84-254 (now known as Section 13a-175q of the Connecticut General Statutes). This Act provides state financial assistance to municipalities for the removal, replacement, reconstruction, rehabilitation or improvement of local bridges. Under this program, a municipality may qualify for a grant ranging from 10% to 33%, and a loan of up to 50%, to cover eligible project costs.

To qualify for the program, a bridge must carry a certified public road and be structurally deficient according to criteria developed by the Federal Highway Administration. In general, bridges are considered to be structurally deficient if the physical condition of the deck, superstructure or substructure is rated “poor” or below, or if the appraisal ratings for structure condition or waterway adequacy are rated as requiring a high priority for replacement. In the case of a culvert, it is considered structurally deficient if the overall condition of the culvert is poor.

Section 13a-175s of the Connecticut General Statutes requires the Commissioner of Transportation to maintain a list of deficient bridges and establish a priority list of eligible bridge projects for each fiscal year. The purpose of the prioritized list is to rank the bridges on the basis of need, statewide. Local bridges are those structures which are maintained exclusively by municipalities rather than the State. Table 9 presents the status of locally maintained bridges. The list of State maintained bridges is presented in Table 10.

Despite more than two decades of attention paid to bridge repair, the vulnerability of a number of bridges in the region was demonstrated in March 2010 as a result of a storm that deposited 9” of rain in a 24-hour period. Two bridges stand out in this regard; North Stonington Village and Route 184 in Stonington. More than a year will pass before there is full restoration of these important linkages. This condition suggests the need for a contingency or revolving loan fund to at least cover the costs for emergency bridge repairs.

**TABLE 9
STATUS OF LOCAL BRIDGES, 2011
Southeastern Connecticut Region**

Bridge No	Town	Feature Carried	ADT (29)	Structure Length (49)	Project No.	Structurally Deficient	Functionally Obsolete	State Eligible	Federal HRRP Eligible	Overall Condition
04590	Bozrah	Stanton Road	340	58.0	0013-0087	Y	N	N	N	Poor
04591	Bozrah	Stanton Hill Road	340	64.0	0013-0088	Y	N	N	N	Poor
013002	Bozrah	Bashon Hill Road	100	10.0		N	Y	N	N	Fair
013003	Bozrah	Scott Hill Road	500	22.0		N	Y	N	N	Fair
03899	East Lyme	Columbus Avenue	2,318	63.0		N	Y	N	Y	Fair
05661	East Lyme	Hill Top Road	78	34.0		N	Y	N	N	Fair
044004	East Lyme	Society Road	2,500	23.0		Y	Y	Y	N	Serious
044007	East Lyme	Roxbury Road	2,000	22.0		N	Y	N	N	Fair
04668	Griswold	Bitgood Road	300	45.0	0057-0111	Y	N	N	N	Poor
04669	Griswold	Bitgood Road	300	38.0	0057-0109	Y	Y	N	N	Failed
04671	Griswold	Carol Road	460	87.0		Y	Y	Y	Y	Poor
04673	Griswold	Edmund Road	460	58.0	0057-0110	Y	Y	N	N	Poor
05568	Griswold	Norman Road	590	43.0		Y	N	Y	Y	Poor
03662	Groton	Bridge Street No. 1	9,000	184.0	0058-0252	N	Y	N	N	Fair
03665	Groton	Groton Long Point Rd	2,900	136.0		N	Y	N	N	Fair
03903	Groton	Mosher Street	3,172	106.0	0172-0203	N	Y	N	Y	Fair
04675	Groton	Groton Long Point Rd	5,300	56.0		Y	N	Y	N	Poor
058003	Groton	Packer Road	1,000	19.0		Y	N	Y	N	Poor
058008	Groton	Beach Road	500	10.0		Y	N	Y	N	Poor
05736	Ledyard	Hurlbutt Road	150	157.0		N	Y	N	N	Good
071001	Ledyard	Shewville Road	25	19.0		N	Y	N	N	Serious
071002	Ledyard	Shewville Road	600	20.0		Y	Y	N	N	Poor
071003	Ledyard	Stonybrook Road	500	9.0		Y	N	Y	N	Poor
04022	Lisbon	Ross Hill Road	400	35.0		N	Y	N	Y	Fair
072002	Lisbon	Blissville Road		11.0		Y	N	Y	N	Poor
03966	Montville	Pink Row	1,416	28.0		N	Y	N	Y	Fair
03967	Montville	New London Turnpike	6,501	47.0		Y	Y	Y	Y	Poor
085002	Montville	Montville Road	300	8.0		Y	Y	Y	N	Failed
085003	Montville	Cherry Lane	50	14.0		N	Y	N	N	Fair
085006	Montville	Fitch Hill Road	950	19.0		N	Y	N	N	Fair
085008	Montville	Derry Hill Road		14.0		Y	N	N	N	Poor
085009	Montville	Raymond Hill Road	950	24.0		N	Y	N	N	Fair
085011	Montville	Beckwith Road	50	8.0		N	Y	N	N	Good
085012	Montville	Chester Road	900	15.0		Y	Y	Y	N	Poor
085014	Montville	Moxley Road	500	16.0		N	Y	N	N	Good
085015	Montville	Bridge Street	2,500	19.0		N	Y	N	N	Fair
085016	Montville	Silver Falls Road	20	22.0		Y	Y	Y	N	Failed
085017	Montville	Meeting House Lane	1,200	27		Y	Y	N	N	Serious
04744	N. Stonington	Boom Bridge Road	525	121.0	0101-0112	Y	Y	N	N	Failed
101002	N. Stonington	Puttker Road		10.0		Y	N	Y	N	Poor
04001	Norwich	Sherman Street	5,300	15.0		N	Y	N	N	Fair
04047	Norwich	Sherman Street	4,600	101.0	0103-0259	Y	Y	N	N	Poor
04077	Norwich	Eighth Street	7,200	77.0		N	Y	N	N	Fair
04078	Norwich	Wawecus Street	2,670	113.0	9103-4078	N	Y	N	N	Good
04096	Norwich	New London Turnpike	10,200	142.0		N	Y	N	N	Fair
04097	Norwich	Eighth Street	7,080	361.0	9103-4097	N	Y	N	N	Fair
04745	Norwich	Pleasant Street	1,674	131.0	0103-0258	N	Y	N	N	Fair
04746	Norwich	Sunnyside Street	410	166.0		N	Y	N	N	Fair
103001	Norwich	Old Salem Road	100	20.0		N	Y	N	N	Fair
103012	Norwich	Pleasant Street	3,000	13.0		N	Y	N	N	Fair
103016	Norwich	East Town Street		10.0		Y	N	Y	N	Poor
103018	Norwich	Hunters Road		14.0		Y	N	Y	N	Poor

TABLE 9
STATUS OF LOCAL BRIDGES, 2011
Southeastern Connecticut Region

Bridge No	Town	Feature Carried	ADT (29)	Structure Length (49)	Project No.	Structurally Deficient	Functionally Obsolete	State Eligible	Federal HBRRP Eligible	Overall Condition
06085	Preston	Cook Town Road	104	32.0		N	Y	N	Y	Good
04767	Salem	Darling Road	690	56.0		N	Y	N	Y	Fair
120001	Salem	Witch Meadow Road	250	18.0		N	Y	N	N	Fair
120004	Salem	Forsyth Road	200	6.0		N	Y	N	N	Fair
04444	Sprague	Parkwood Road	230	152.0		N	Y	N	N	Good
04773	Sprague	Potash Hill Road	575	70.0	0133-0092	N	Y	N	N	Good
133003	Sprague	LaCroix Road	0	15.0		Y	Y	N	N	Failed
03904	Stonington	Mason's Island Road	2,875	68.0	0137-0139	N	Y	N	Y	Good
03906	Stonington	Alpha Avenue	2,300	625.0	0137-0132	N	Y	N	N	Fair
03908	Stonington	Green Haven Road	3,110	51.0	0172-0203	N	Y	N	N	Good
04158	Stonington	Stillman Avenue	4,838	124.0		Y	Y	Y	Y	Poor
05447	Stonington	Noyes Road	580	65.0		N	Y	N	N	Good
05526	Stonington	Palmers Neck Road	1,425	35.0	0137-0129	N	Y	N	Y	Fair
137001	Stonington	Lantern Hill Road	600	21.0		N	Y	N	N	Fair
137002	Stonington	Wolf Neck Road	10	18.0		N	Y	N	N	Good
137003	Stonington	Wolf Neck Road	200	9.0		N	Y	N	N	Good
137008	Stonington	Holmes Street		17.0		Y	N	N	N	Poor
137009	Stonington	Collins Road	200	14.0		N	Y	N	N	Fair
137010	Stonington	Masons Island Road	1,000	20.0		N	Y	N	N	Fair
04805	Voluntown	Forge Hill Road	400	22.0		N	Y	N	Y	Fair
04075	Waterford	Jordan Cove Road	1,659	55.0		Y	Y	Y	Y	Serious
05518	Waterford	Old Mill Road	630	43.0	9152-5518	N	Y	N	N	Good
152006	Waterford	Osweggatchie Road	600	12.0		N	Y	N	N	Fair
152011	Waterford	Spithead Road	400	10.0		N	Y	N	N	Good

**TABLE 10
CONNDOT BRIDGE PROGRAM, 2010
Southeastern Connecticut Region**

Town	Bridge Number	Route	Location	PE Project Number	Percent Design	Advertise Date	Award Date	Constr Complete	Const Cost Including Incidentals
Bozrah	04590	TR	Yantic River	0013-0087	111	2/8/12	4/4/12		\$625,000
Bozrah	04591	TR	Yantic River	0013-0088	111	2/8/12	4/4/12		\$625,000
Colchester	01914	SR 616	Brook	0170-2310	111	11/11/11			\$1,747,200.00
Colchester	02830	N/A	Comstock Bridge over Salmon River	0028-0192	333	8/19/09	10/7/09	10/23/10	\$1,086,893
Colchester	03388	2	Mill Hill Road over Rte 2	0028-0196	111	9/8/10			\$2,603,500.00
Colchester	06669	2	unnamed brook	0170-2815	111	7/20/11			\$515,829
East Lyme	00249	I-95	Society Road over I-95		111	scoping	scoping	scoping	scoping
East Lyme	00368	US 1	Niantic River	00440147PE	111	planned	planned	planned	scoping
East Lyme	02973	US 1	Pattagansett River	00440148PE	111	planned	planned	planned	scoping
Franklin	06678	207	Bellows Brook	0170-2815	111	7/20/11			\$681,300
Franklin	06777	207	Beaver Brook		111	7/20/11			
Griswold	00294	I-395	I-395 over Roode Road	0172-0377	111	11/17/10			\$72,000
Griswold	01411	165	Pachaug Pond	0057-0113	111	11/11/11			\$3,038,000.00
Griswold	04668	TR	Hopeville Pond	0057-0111	111	11/2/11	1/27/12		\$1,965,000
Griswold	04669	TR	Pachaug River	0057-0109	333	2/24/10	5/21/10		\$1,441,000
Griswold	04673	TR	Pachaug River	0057-0110	111	10/20/10	1/14/11		\$1,834,000
Groton	00362	US 1	Mystic River	0170-2003	333	5/31/07			\$1,735,000
Groton	00362	US 1	Mystic River	0170-1227	111	11/4/09			\$16,655,000.00
Groton	01783	I-95	Flanders Rd. over I-95 SB	0172-0380	222	2/10/10			\$150,000
Groton	01784	I-95	I-95 SB		111	scoping	scoping	scoping	scoping
Groton	01784	I-95	Flanders Rd. over I-95 SB	0172-0380	222	2/10/10			\$150,000
Groton	01785	I-95	I-95		111	scoping	scoping	scoping	scoping
Groton	01785	I-95	Noank-Ledyard Rd. over I-95	0172-0380	222	2/10/10			\$150,000
Lisbon	00283	I-395	I-395 over Rt. 169	0172-0377	111	11/17/10			\$72,000
Montville	02728	163	Fox Brook	0085-0138	111	11/11/11			\$564,625.40
Montville	02729	163	Brook	0085-0139	111	11/11/11			\$808,109.20
Montville	03426	2A	Rte 2A of Thames River	0172-0381	111				
Montville	06732	I-395	unnamed brook	0170-2815	111	7/20/11			\$233,700
Montville	085005	TR	Old Colchester Road over Oxoboxo Lake	9085-0005	333	10/14/09	1/13/10		\$955,616
New London	02572	US 1	US Rt. 1 EB over I-95 Ramp 310 & SR 641 SB	0172-0380	222	2/10/10			\$150,000
New London	02602	I-95	SR 908 (Colman St.)over I-95	0172-0380	222	2/10/10			\$150,000
New London	02603	I-95	SR 636 (Briggs St.)over I-95	0172-0380	222	2/10/10			\$150,000
New London	02611	I-95	Rt. 32 EB Ramp 002 over I095 & SR 623	0172-0380	222	2/10/10			\$150,000
New London	02612	32	US Rt. 32 SB over I-95	0172-0380	222	2/10/10			\$150,000
New London	02833	32	Rt. 32 NB over I-95	0172-0380	222	2/10/10			\$150,000
New London	02846	32	US Rt. 32 NB over I-95 TR 818	0172-0380	222	2/10/10			\$150,000
New London	02864	I-95	I-95 TR 819 over SR 641	0172-0380	222	2/10/10			\$150,000
New London	03820	I-95	I-95 NB over SR 635 (Williams St.)	0172-0380	222	2/10/10			\$150,000
North Stonington	02781	184	Shunock River	0101-0113	111	11/11/11			\$2,322,000.00
North Stonington	04744	TR	Pawcatuck River	0101-0112	111	2/8/12	5/4/12		#REF!
North Stonington	05457	216	Spaulding Brook	0101-0114	111	1/23/08	6/26/08	10/16/09	\$1,364,925
Norwich	00276	I-395	I-395 over CVRR and Yantic River	0172-0377	111	11/17/10			\$72,000
Norwich	00408	2	McClellan Avenue		111	scoping	scoping	scoping	scoping
Norwich	00661	12	U.S. Rte 12 of Shetucket	0172-0381					
Norwich	02588	97	Byron Brook	0103-0256	111	10/27/10			\$2,095,500.00
Norwich	04745	TR	Yantic River	0103-0258	111	10/20/10	1/12/11		\$695,000
Norwich	04746	TR	Yantic River		111	4/1/11	6/26/11		\$843,750
Norwich	06586	SR 642	RT 642 & CT 32 over CT 2	0172-0381	111				
Preston	06675	2	Myers Brook	0170-2815	111	7/20/11			\$158,000
Sprague	01550	207	Beaver Brook	0133-0094	111	scoping	scoping	scoping	scoping
Sprague	04773	TR	Potash Hill Road over Little River	0133-0092	333	5/12/04	8/24/04		\$1,041,000
Sprague	133003	TR	LaCroix Road over Beaver Brook	9133-0003	333	10/2/09	12/25/09		\$231,500
Stonington	01898	US 1	Stony Brook	0170-2058	111	09/22/10			\$2,857,250.00
Stonington	01900	US 1	Quana duck Cove	0170-2058	111	09/22/10			\$2,338,500.00
Stonington	03822	78	Pawcatuck River		111	scoping	scoping	scoping	scoping
Waterford	01903	US 1	Stony Brook	0152-0147	111	11/11/11			\$3,807,256.75
Waterford	01904	US 1	Jordan Brook		111	scoping	scoping	scoping	scoping
Waterford	05518	TR	Hunts Brook	9152-5518	333	4/27/09	8/8/09		\$700,000
Waterford	00352A	I-95	Oil Mill Road	0170-2309	111	scoping	scoping	scoping	scoping

Source: CONNDOT

111 - In Design
222 - Design Complete
333 - In Construction
444 - Construction Complete

* Denotes an Adopted Bridge
** Denotes an Orphan Bridge

B. RIDESHARING AND COMMUTING

Place of Work data from the 2010 Census was not available for this analysis. Table 11, data from the 2000 Census, shows that 85% of job-related commuting in southeastern Connecticut is intra-regional. Among other things, this indicates the need for a strong, continuing, commuter ridesharing promotion and parking program with amenities to make the lots as user-friendly as possible.

Ridesharing, in conjunction with the construction of commuter parking lots, remains one of the most, if not the most cost-effective strategy in dealing with air quality, fuel conservation and highway congestion. During the 1980's, ridesharing promotion was focused on the region's largest employers (those with more than 150 employees). With the advent of casino gaming and other tourist activities, coincident with reductions in manufacturing activities, the emphasis of this activity has shifted and expanded.

Traditional commuter parking lots of various sizes and amenities have been located along the region's major commuting arteries based on need, land and funding availability. Since the initial thrust of commuter lot development activity of the past two decades, planning technology has been adapted by ridesharing brokerage organizations. Organizations such as the Rideshare Company, which are now well established throughout the state using a combination of public and private funding, help us better evaluate the impact of these programs.

Quarterly evaluation of the region's commuter parking lots by SCCOG has revealed considerable variation in their utilization as well as in the amenities provided. These amenities can include any combination of paving, lighting, telephones, shelters, bus and rail service. The region's 17 commuter lots now provide a total of 1,734 spaces. Through 2010, average use throughout the region was 680/day or about 37% of capacity. This represents a 17% reduction from 2009. In 1996, construction of more than 470 of these spaces were paid for by the Mashantucket Pequot for their employees at lots located in the vicinity of Route 2 and I-95. Employees of Foxwoods Resort and Casino had become some of the region's most productive users of commuter parking lots until recently when the Mashantucket discontinued shuttle service to state commuter lots.

The original concept of commuter parking lots was both limited to, and predicated on, the notion that most commuting was job-related and that the primary purpose of the lots was to serve employees who had regular patterns of travel. Due to dramatically changing economic circumstances, the region now finds itself in need of expanding the original commuter parking lot concept to include large parking lots in strategic locations that can also be used by tourists. These lots, and their larger counterparts, intermodal transportation centers, are of special importance in the expanded public transit program. This program proposes creating direct shuttle links from lots to high-demand tourist and gaming destinations. The challenge of creating major parking lots is now viewed as one of the most critical elements in the long-range development of the regional transportation system. Without them, the region will be at a distinct

TABLE 11
PLACE OF WORK, 2000
Workers 16 Years and Over

Total Workers 16 and Over	Worked in Connecticut							
	In New London County		Outside New London County		Worked Outside of Connecticut		Worked in Town of Residence	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent

URBAN TOWNS:

Groton	20,741	19,165	92.4	904	4.4	672	3.2	11,797	56.9
New London	12,201	11,374	93.2	669	5.5	158	1.3	5,069	41.5
Norwich	17,483	15,342	87.8	1,823	10.4	318	1.8	6,583	37.7
Urban Totals:	50,425	45,881	91.0	3,396	6.7	1,148	2.3	23,449	46.5

SUBURBAN TOWNS:

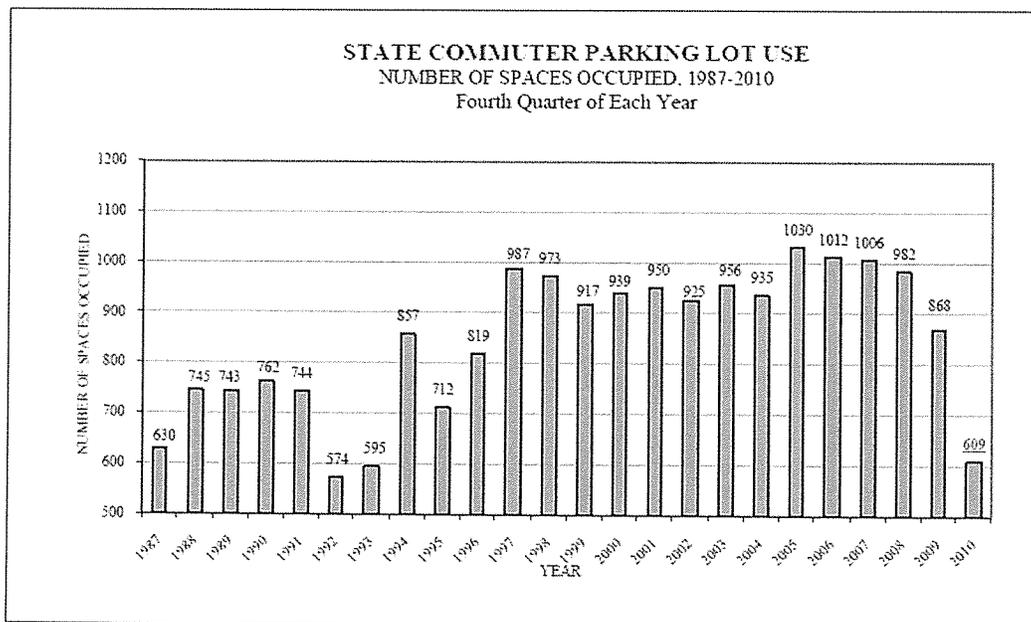
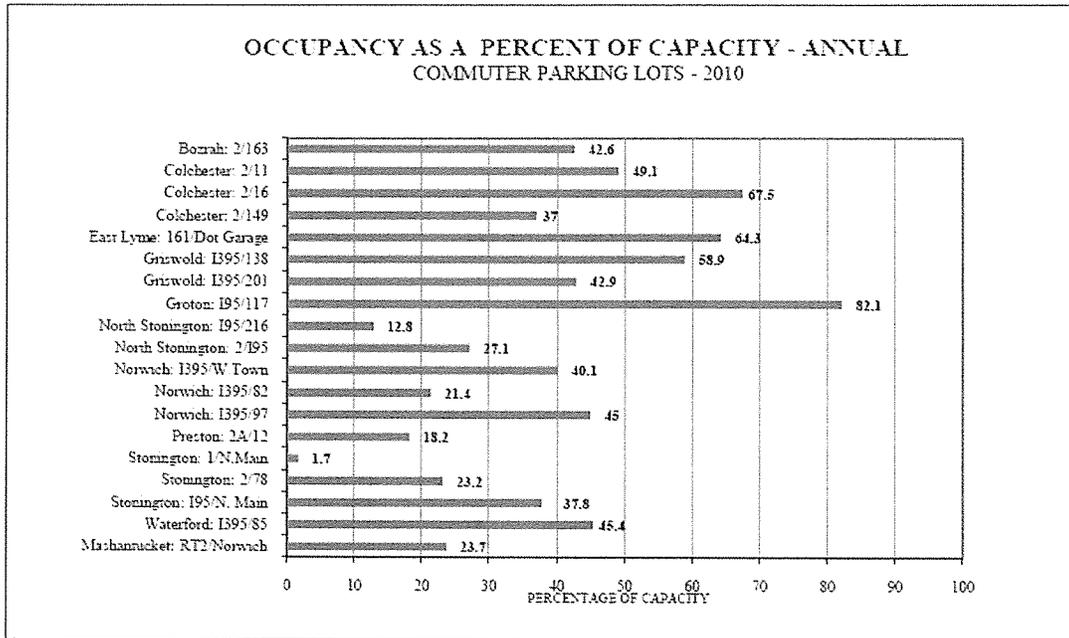
Colchester	7,704	3,249	42.2	4,341	56.3	114	1.5	1,614	21.0
East Lyme	8,175	6,635	81.2	1,305	16.0	235	2.9	1,702	20.8
Griswold	5,871	4,882	83.2	884	15.1	105	1.8	965	16.4
Ledyard	7,463	6,858	91.9	371	5.0	234	3.1	1,612	21.6
Lisbon	2,157	1,771	82.1	331	15.3	55	2.5	254	11.8
Montville	8,900	7,898	88.7	880	9.9	122	1.4	2,125	23.9
Preston	2,363	2,095	88.7	225	9.5	43	1.8	423	17.9
Sprague	1,523	1,283	84.2	215	14.1	25	1.6	162	10.6
Stonington	8,910	7,456	83.7	344	3.9	1,110	12.5	2,814	31.6
Waterford	9,248	8,153	88.2	921	10.0	174	1.9	2,575	27.8
Suburban Totals:	62,314	50,280	80.7	9,817	15.8	2,217	3.5	14,246	22.9

RURAL TOWNS:

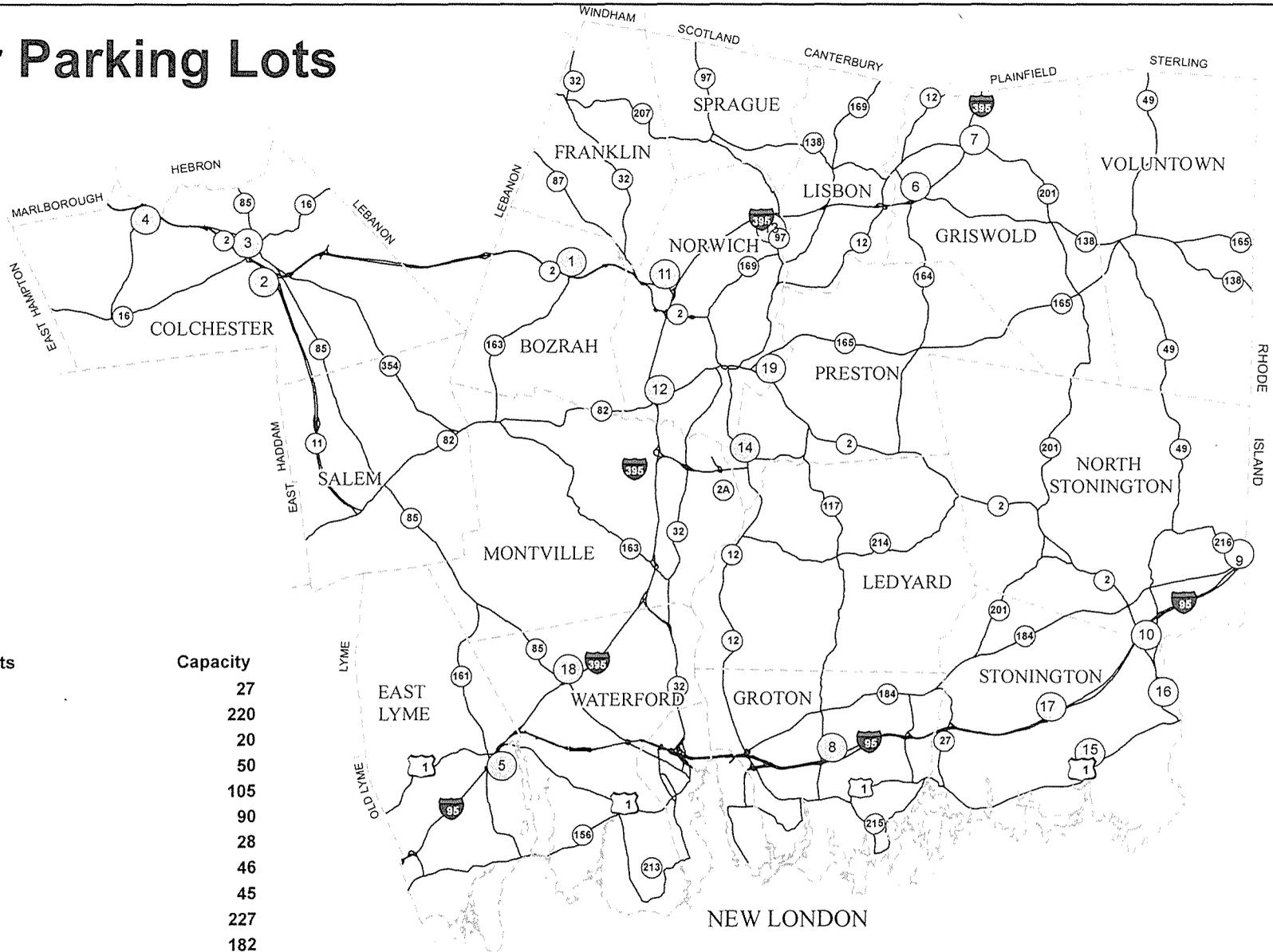
Bozrah	1,249	953	76.3	270	21.6	26	2.1	140	11.2
Franklin	982	762	77.6	210	21.4	10	1.0	177	18.0
No. Stonington	2,723	2,231	81.9	170	6.2	322	11.8	424	15.6
Salem	2,153	1,613	74.9	508	23.6	32	1.5	233	10.8
Voluntown	1,332	1,126	84.5	129	9.7	77	5.8	169	12.7
Rural Totals:	8,439	6,685	79.2	1,287	15.3	467	5.5	1,143	13.5
Regional Totals:	121,178	102,846	84.9	14,500	12.0	3,832	3.1	38,838	32.1

Source: Census 2000

disadvantage in its quest to address the issue of congestion without greatly expanding the capacity of the region's highway network. While prior environmental studies examined the most appropriate locations for these large parking lots, there remains a tension between local zoning and economic development needs. These forces contend that high value property should not be used for these non-economically productive purposes. Local needs will somehow have to be balanced with transportation system needs in order to accomplish these objectives.



Commuter Parking Lots



Commuter Lots

Commuter Lots	Capacity
1. Bozrah	27
2. Colchester	220
3. Colchester	20
4. Colchester	50
5. East Lyme	105
6. Griswold	90
7. Griswold	28
8. Groton	46
9. North Stonington	45
10. North Stonington	227
11. Norwich	182
12. Norwich	144
13. Norwich	90
14. Preston	70
15. Stonington	44
16. Stonington	247
17. Stonington	39
18. Waterford	60
19.** owned by Mashantucket Pequot Tribe	1700
Total Capacity-	1734

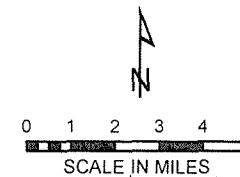


Figure 13

C. PEDESTRIAN AND BICYCLE

According to a United States Department of Transportation Policy Statement of 3/15/10, *“The establishment of well-connected walking and bicycling networks is an important component for livable communities, and their design should be a part of Federal-aid project developments. Walking and bicycling foster safer, more livable, family-friendly communities; promote physical activity and health; and reduce vehicle emissions and fuel use.”*

In the years to come, several factors will influence the effectiveness of this policy for southeastern Connecticut. One key factor relates whether the purposes of the policy are aimed at bicycling and walking for recreation or as a means to replace auto usage and to promote the use of transit. If it is the former, southeastern Connecticut, with its vast amount of open space, has ample off-road hiking and biking opportunities. In fact, the 1997 Regional Land Use Policy Guide Map recommends additional flat areas along the major rivers where trails and walkways could occur. However, these are viewed as adjuncts to the region’s open space resources and are not primarily intended to enhance mobility. Assuming it is the latter, the issue immediately reverts to the inter-relationship between land use and transportation, suburbanization and lack of real transit alternatives. Expanding biking and pedestrian facilities would strengthen the region as a historic, cultural, and eco- tourism destination.

As shown in earlier sections of this plan, the suburbanization of the southeast region over the past forty years has diminished opportunities for bike and pedestrian linkages between residential settings and other basic community activities, such as schools, shopping, employment, religious institutions, banks, post office, and health care facilities, to name but a few. Added to this is the natural geology of the region, with its many hills and steep inclines, is an impediment for all except a hardy cyclist intent on making such trips.

Given this background and in keeping with this federal policy to promote bicycling and walking, Figure 14 and the accompanying text present recommended routes for the purpose of promoting these activities. Roadway sections included in this plan are those that have a comparatively low volume level of traffic and/or have shoulders or sidewalks where bicyclists and pedestrians can be accommodated. The text lists the routes in alphabetical order, by town. The objective is to link each town in the region with as many other contiguous towns as reasonably possible, considering the various roadway conditions. A secondary objective was to have most of these routes lead into, or away from, population centers, e.g. Norwich, New London, and Groton and prime recreational attractions.

Recommended Routes:

Bozrah

1. From Franklin: Route 87 to Stockhouse Road to Fitchville (S.R. 608, Old RT.2/Colchester Tnpk.) To the towns of Lebanon and Colchester.
2. From Norwich: Wawecus Hill Road to Gager Road to Bozrah Street. (RT. 163) to Scott Hill Road to Salem. South Road may be taken from Bozrah Street to connect with Norwich bicycle routes or Lake Road to connect with Salem.

Colchester

3. From Lebanon: Windham Avenue to Lebanon Avenue to Main Street (RT. 85) to Lake Hayward to Fedus Road to West Road (in Salem) to Mill Lane Road (in East Haddam) to Lake Hayward Road (back in Colchester) to Main Street.
4. From Salem: Route 354 to Marvin Road to Route 85 (north) to Main Street Colchester.
5. From center of town: Old Route 2 east (Norwich Ave.) Through Lebanon, Bozrah.

East Lyme

6. a. East Lyme Town line - Grassy Hill Road to Whistletown Road to Upper Pattagansett to Route 1 to Chesterfield (Route 161) to Route 85 (North) to Grassy Hill Road.
7. b. Montville: East Lyme Town line - Grassy Hill Road to Route 85, Montville.
8. East Lyme Town line or Route 85 Montville to Grassy hill Road to Whistletown Road to Scott Road to Route 1 (west) to North Bride Brook to West Main Street (RT. 156) east to Fair Haven Road to Old Black Point Road to the Great Wight Way and back to Niantic.

Franklin

9. From Lebanon Town Green: Route 207 to Under the Mountain Road to Plains Road to either east on Plains Road to Baltic Road to Route 207 to Sprague, or from Plains Road (east) to Baltic Road (south) to Route 32 (north) and back to Plains Road.
10. From Lebanon Town Green: Route 87 to Stockhouse Road to Bozrah.

Griswold

11. From Jewett City: Route 138 to Bethel Road to Sam Chikan Road to Lewis Road (Preston)
Route 165 (north) to Brown School Road to Colonel Brown Road to Bethel Road (north) to Route 138 (east) to the Voluntown Town line.
12. Route 138 to Bitgood Road to Route 201 to Hopeville Road to Hopeville Pond State Park.
13. Route 12 to center of Jewett City to Route 201 to Hopeville Pond State Park.
14. Route 201 to Route 165 toward Preston.
15. Route 201 to North Stonington Town line.

Groton

15. Pleasant Valley Road to Lestertown Road to Military Highway to Fairview Avenue #2 to Bridge Street #1 to Mitchell Street to Benham to Eastern Point Road to Shennecossett Road around Avery Point to Plant Street to Shennecossett Road to Thomas Road to Tower to South Road to Route 1 to either Route 215 to Mystic Village, or West Mystic Avenue to Allyn Street to Mystic Street to Cow Hill Road to Route 184 (east) to Route 27 to River Road to Mystic Village.
16. Gungywamp Road to Route 184 to Stonington.

Note: The Groton 2002 Plan of Conservation and Development included the following additional routes:

- Poquonnock Road from Thames Street to Thomas Road
- Plant Street between Eastern Point Road and Shennecossett Road
- The bike path location between South Road and Route 215
- Toll Gate Road and Grove Avenue between Route 184 and Military Highway
- Colonel Ledyard Highway from Route 184 north into Ledyard
- Pearl Street, Grove Avenue, and River Road from Route 1 to Route 27 (Mystic)
- Route 1 from Poquonnock Road north and east to its intersection South Road

Ledyard

17. Shewville Road from Preston Town line to Groton Town line to River Road to Mystic Village.
18. Silas Dean Road to Shewville to Route 214 (east) (Iron St.) To Shewville Road #2 to Gallup Hill Extension to Lambtown Road to Route 117 (north) to Silas Dean or Route 117 (south) to Groton bike route.
19. Circular route: Silas Dean Road to Shewville Road to Route 214 (east) to Shewville Road #2 to Gallup Hill Road to Spicer Hill Road #2 to Spicer Hill Road #1 to Church Hill Road to Silas Dean Road.

Lisbon

20. From Occum (Sprague) to Kendall Road to Preston Allen Road (north) to Kinsman Hill Road to Route 169 (north) to Kimball Road to Sullivan Road to Westminster Road (south).
21. Route 169 to Preston Allen Road to Kendall Road (east) to Route 169 (north) to Route 138 (Newent Road) to Jewett City.

Montville

1. Old Colchester Road from Salem to the Waterford Town line.
2. Grassy Hill Road to Route 85 (south) to Turner Road to Vauxhall Street Extension to Waterford.
3. Circular route: New London Turnpike (RT. 32) from Norwich to Fitch Hill Road to Gallivan Lane to Route 32 (north) to Fort Shantok Road to Massapeag Side Road Derry hill Road to Kitemaug Road to Massapeag (west) to Route 32 (north) to Raymond Hill Road to Fitch Hill.

4. Raymond Hill Road to Lynch Hill Road to Route 163 (west) to Maple Avenue to Jerome Road to Moxley Road to Unger Road to Hunts Brook Road to Vauxhall Street Extension in Waterford.

New London

1. From Waterford: Niles Hill Road to Ocean Avenue (south) to Neptune Avenue to Pequot Avenue to Monauk Avenue to Bank Street (east) to Blinman Street #2 to Blackhall Street to Connecticut Avenue (north) to Vauxhall Street (west) to Vauxhall Street Extension to Waterford.

North Stonington

1. From Griswold: Route 201 to Northwest Corner Road to Route 164 in Preston.
2. From Griswold: Route 49 to Babcock Road to Wyassup Road to Main Street to Rocky Hollow Road to Stony Brook Road in Stonington.
3. Route 201 to Ryder Road to Wyassup Lake Road (south) to Rocky Hollow Road (in North Stonington) to Route 184 (New London Tpke.) to Stonington Town line.
4. Route 201 to Ryder Road to Wyassup Lake Road (south) to Rocky Hollow Road (in North Stonington) to Route 184 (west) to Route 201 to Mystic Road which turns into North Stonington Road in Stonington. Follow to Borough of Stonington.

Note: North Stonington's Plan of Conservation and Development identifies the Old Norwich/ Westerly Trolley line as a potential hike/pike path with connecting overpasses on either side of Route 2.

Norwich

1. a. From Marina: Shetucket Avenue to Main Street to Franklin Street to Bath Street to Broadway to Rockwell Street to McKinley Avenue to Reynolds Road to Mahan Drive to Ox Hill Road around Spaulding Pond to Mohegan Park Road to Hunters to Harland Road (RT. 169) to Old Canterbury Turnpike to Lawler Lane to Scotland Road to High Street to Baltic Street to Route 207 to Franklin to link with Town Green: Follow above directions to Ox Hill Road; follow Ox Hill Road (west) to Canterbury Turnpike (west) to East Town Street.
b. To Lisbon: Follow above directions to Harland Road (RT. 169) at Hunters Road and follow Hunters Road to intersection with Route 97 and Route 169 (Ponemah Mill) to Newent Road across the Lisbon Bridge.
2. To Preston: From Marina to Shetucket Street to Main Street to Franklin Street To McKinley Avenue to Broad Street to Boswell Avenue to 10th Avenue to Central Avenue (south) to 8th Avenue over the bridge to Roosevelt Avenue to Preston.
3. To Bozrah: From Norwichtown Green (East Town Street) to New London Turnpike to Dudley Street to Cranberry Pond Road to Wawecus Hill Road to Bozrah.

Preston

1. From Norwich: Roosevelt Avenue to Old Jewett City Road to River Road to Old Jewett City Road to Krug Road to Route 164 to Route 165 (west) to Benjamin Road to Branch Hill Road to Ross Road to Route 2 (east) to Shewville Road.
2. From Griswold: Route 201 to Route 165 to Route 164 to Route 2 to Shewville Road to Ledyard.

Salem

1. From the Colchester Town line take West Road to Route 82 (east) to Darling Road to Gungy Road to East Haddam.
2. Route 354 (Old Colchester Tpke.) from Colchester to Montville.
3. West Road to Witch Meadow Road to Route 85 (south) to Rattlesnake Ledge Road to Witter Road to Scott Hill in Bozrah.

Sprague

1. Route 207 from Franklin to Route 97 at Baltic; follow to Occum across river to Kendall Road in Lisbon.
2. Route 138 to Hanover-Versailles Road to Salt Rock Road to Route 97 (south) to either Occum or Route 207 to Franklin or High Street to Norwich.

Stonington

1. From North Stonington Town line: Jeremy Hill to Taugwonk Road to North Main Street to Route 1A to Alpha Street to Water Street.
2. From North Stonington: Route 201 to Al Harvey Road to Pequot Trail to Flanders Road to Route 1A to Alpha Street to Water Street.
3. Route 201 to North Stonington Road to Route 27 to Jerry Browne Road to Mistuxit Avenue to Willow St. to Cottrell St. to Route 1 to downtown Mystic.
4. Greenhaven Road to River Road to Mechanic Street to West Broad Street to Route 1 to Auguilla to Pequot Trail.

Voluntown

1. From Griswold: Route 138 to Route 49 south toward North Stonington. (Trails through Pachaug State Forest are not paved but can be cycled on).
2. From Route 49 (south): Fish Road leads to Green Falls Pond, which has a picnic area, camping area, and a boat launch.

Waterford

1. From New London: Niles Hill Road to Great Neck Road to Goshen to Shore Road to Jordan Cove Road to Gardners Wood Road to Rope Ferry Road (west) to Niantic River Road to Oswegatchie to Route 1 (west) to Oil Mill Road to Way Road to Route 85 (south) to Douglas Lane to Vauxhall Street Extension.
2. Chapman Avenue to Pilgrim Road to Gallows Lane to Old Norwich Road to Old Colchester Road to Montville.

Other Existing and Proposed Walkways and Bikeways

1. Norwich: Pedestrian walkway/bikeway along the Yantic River from Sherman Street to the harbor area and up the Shetucket River to Railroad Avenue to Greeneville.
2. Groton: pedestrian walkway/bikeway along Military Highway between Crystal Lake Road at the U.S.S. Nautilus to the City of Groton line just above the Gold Star Bridge. Haley Farm State Park between Noank and Poquonnock Bridge.
3. East Lyme: Pedestrian walkway/bikeway from the “bar area” by the Niantic River Bridge to Smith Street in Niantic.
4. New London: Proposed pedestrian walkway connecting Connecticut College to downtown New London.
5. Proposed Route 11 Bike/Pedestrian Trail as part of the Route 11 Greenway.
6. Proposed Bluff Point to Preston Bike/Pedestrian trail through Groton Utilities watershed land.

Trails: During FY 2003, SCCOG conducted an inventory of open space with public trails and parking. The objective of the study was to identify existing large open space holdings in the southeast region that could potentially be linked through the development of a trail network. Figure 15 graphically depicts the study findings and conclusions. As shown, southeastern Connecticut already has a significant amount of open space with trails and parking that has enormous potential for linkage through a recreational trail network.

INVENTORY OF OPEN SPACE WITH TRAILS

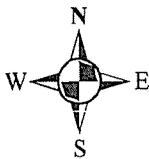
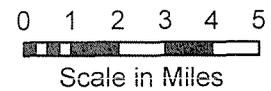
Southeastern Connecticut Region

LEGEND

-  Open Space with Public Trails and Parking
-  Blue Blazed Trails
-  Major Roads
-  Town Boundary

Source:
CT DEP, Municipalities and Land
Trusts, 2002

Notes Land areas are approximate;
they are not based on parcel data.
Data unconfirmed for Preston and
Avalonia Land Trust. Some areas
may require a fee for access.



Prepared by:

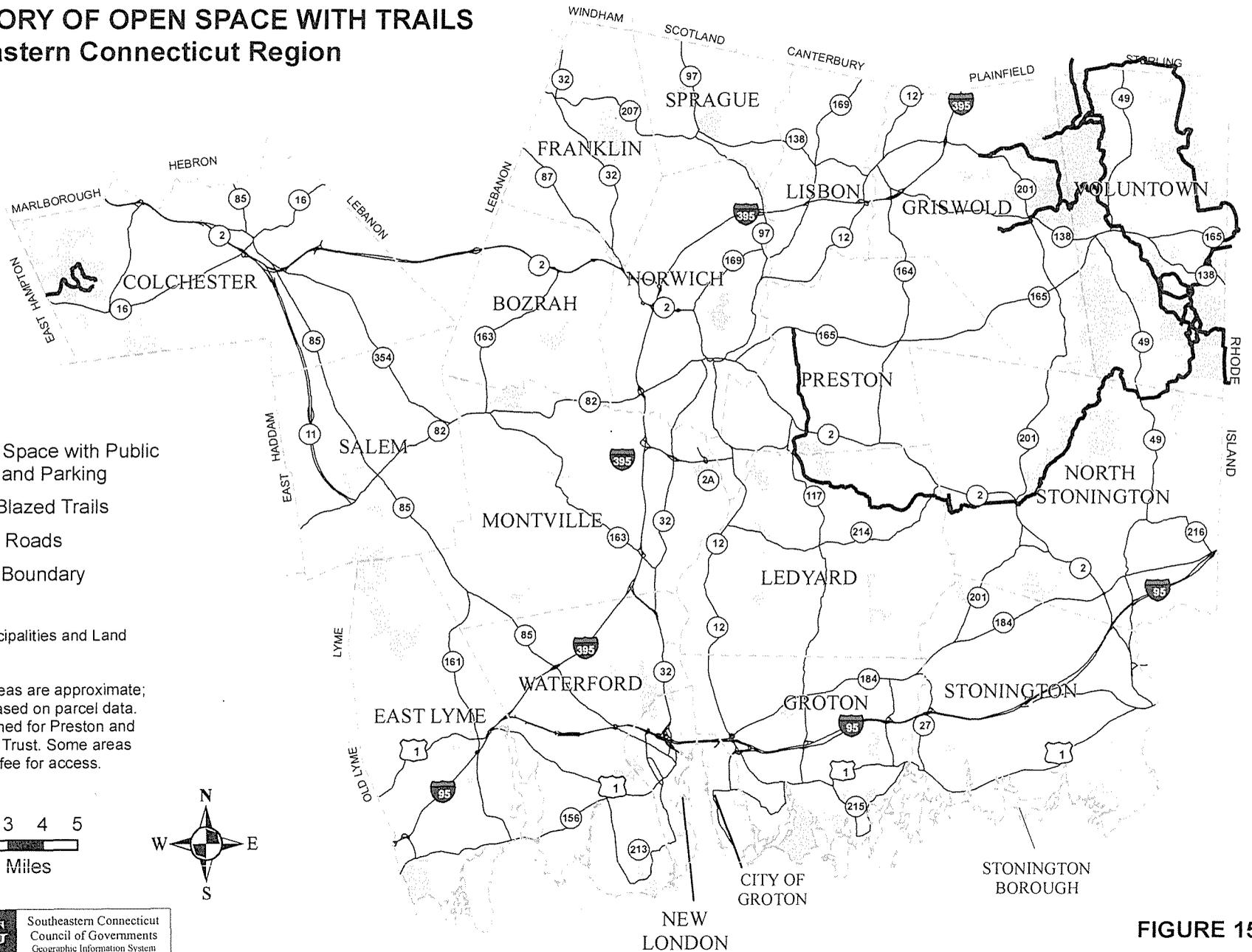


FIGURE 15

D. INTELLIGENT TRANSPORTATION SYSTEM

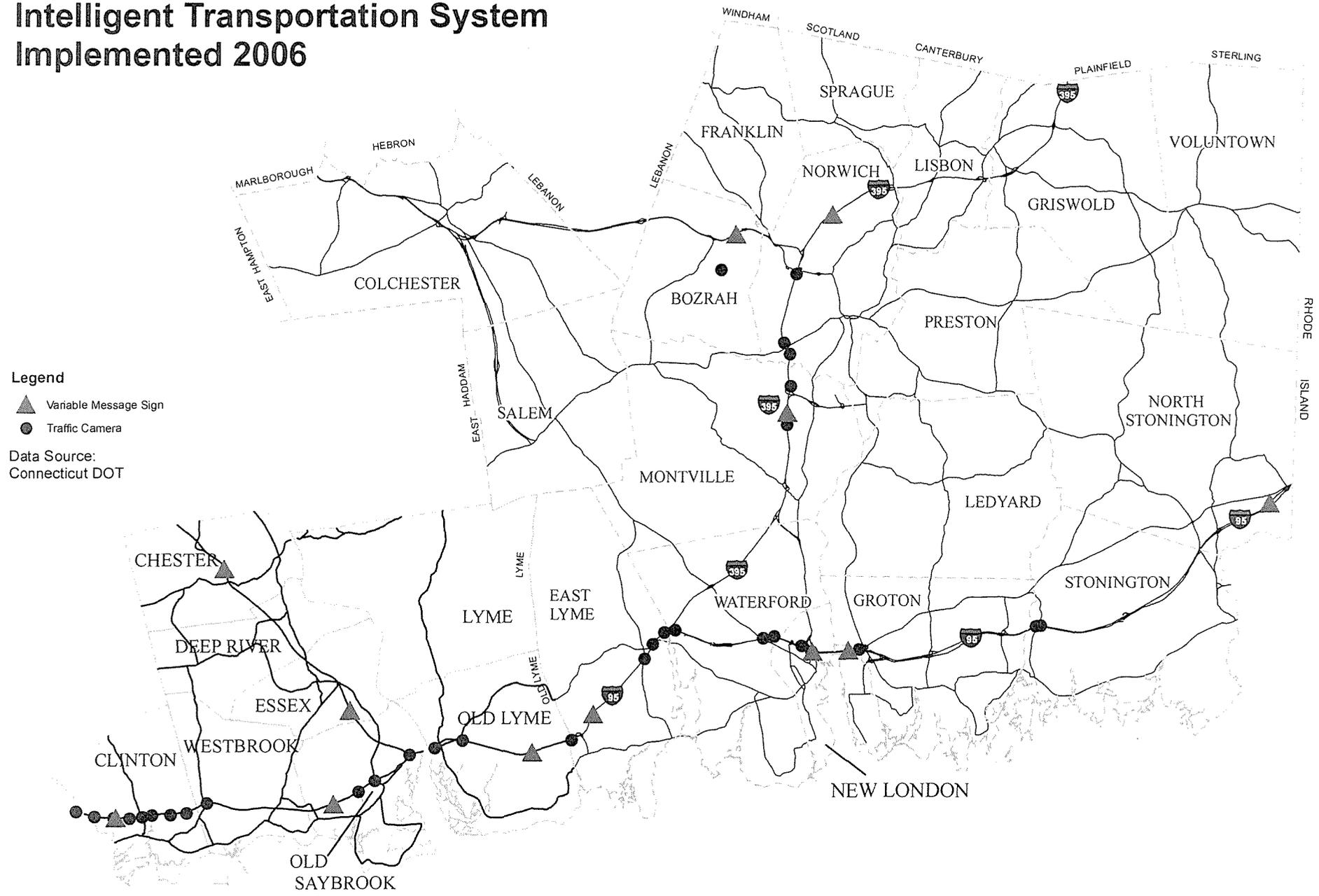
As previously noted, there has been a dramatic increase in vehicular traffic on the region's highways over the past decade, especially on the interstate system. This increase in traffic, coupled with fiscal and environmental constraints on new highway construction, is compelling the utilization of emerging technologies to better manage our highway system. These emerging technologies are falling under the umbrella of what is becoming known as Intelligent Transportation Systems (ITS). While these technologies cover a wide range of sophistication, they all begin from a base of effective management of accident events, or incidents, which jeopardize traffic flow. The main building block in the process of addressing incident management is what is known as Highway Diversion Plans (HDPs). These plans presume that serious traffic disrupting incidents on the interstates will occur and when they do, plans must identify alternative traffic routes. In addition, these HDP's must assign responsibility for managing traffic on the diversion routes. This includes responsibility for signal timing, signage and to monitor particular traffic locations.

ITS builds on the base of HDP's by adding closed circuit TV cameras that enable traffic at specific locations to be monitored from afar. Added to this are variable message signs that allow individuals monitoring the traffic via the remote cameras to advise motorists of upcoming disruptions and to recommend alternative/diversion routes at pre-determined exits. Finally, the addition of low wattage radio transmitters allow motorists to monitor radio stations that will give them continuous traffic information and advise them of any tie-ups.

ITS in southeastern Connecticut is now well developed. In FY 2000, SCCOG coordinated the preparation of an HDP for the 10 towns in the region abutting I-395 and I-95. This was followed by the development of 3-phased ITS programs for the interstate corridors which, for planning purposes, extends along I-95 from the Rhode Island border westerly through Clinton. During 2005, a statewide ITS "architecture" was developed that identified an information structure which establishes linkages between providers and consumers of highway operations information and which conforms to the nation ITS architecture standard. This information architecture is intended to identify all the various types of information that is available, all the various types of users of information, and create ways to enable linkages where they are appropriate and preclude them where they are not. A good example of this relates to the cameras now being placed on highways to monitor traffic. Privacy issues, to date, preclude the State Police from identifying individual drivers.

Figure 16 depicts Phase I of the ITS project which was implemented beginning in 2006. It shows the location of closed circuit TV cameras, variable message signs and coverage for highway advisory radio broadcasts. Subsequent phases of the ITS program will enhance the concentration of each of the above elements. It is expected that Phase II and III of the ITS program will be implemented over the course of the next 10-12 years as funds become available.

Intelligent Transportation System Implemented 2006



- Legend**
- ▲ Variable Message Sign
 - Traffic Camera

Data Source:
Connecticut DOT

Prepared March, 2011

SCCOG Southeastern Connecticut
Council of Governments
Geographic Information System

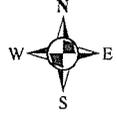
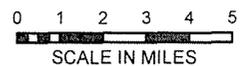


Figure 16

E. RAIL

North-south rail freight service is provided in the region's development core by the New England Central Railroad on the west side of the Thames River and by the Providence and Worcester Railroad on the east side of the Thames. Operating east-west, passenger service is provided along Long Island Sound by AMTRAK, with stops at New London, Mystic, and Westerly, Rhode Island as part of the Northeast Corridor service between Washington, D.C., and Boston.

Given the historical demands for both passenger and freight services, for many years the region was considered reasonably well served by the heavy rail system as a result of the proximity of the rail lines to southeastern Connecticut. However, economic conditions within the region are rapidly changing and the levels and types of passenger service may no longer be adequate. The addition of Shoreline East Service beginning in 1996 is slowly proving to be an important addition to the array of rail services available to the region. Continuing expansion of this service, with heavy subsidies to attract riders, has been identified as a priority and is being viewed as an important technique to reduce vehicle traffic on I-95. As of May, 2010, ten trips per day service New London (5 eastbound and 5 westbound) but there is no weekend service. As expected, Shoreline East ridership data over the past several months shows steady increases. However, an anomaly is occurring between eastbound and westbound trips. Between May and August, 2010, eastbound passenger trips totaled 3,457 whereas westbound passenger trips totaled only 2,093. Proportionally, westbound passengers comprise 38% of the total vs. eastbound passengers which comprise 62% of the total. SCCOG supports the strengthening of this service as well as the potential for Metro North assuming administrative and operational responsibility for this service. This will enable Metro North electric cars to be deployed into service for efficiency and environmental reasons.

Measurable benefits from improved rail service resulting from AMTRAK's electrification program have been slow to be realized even though travel demand is potentially increasing from gaming and tourism. The cost structure of AMTRAK is not at a competitive level that would induce families to abandon using a car. In the future, every opportunity to promote this service through a subsidy program should be pursued.

There continues to be interest and possible benefit to reviving passenger rail on the New England Central line. A recent proposal cites a capital improvement cost of \$100 million. However, over the long term, rail service along the Thames River connecting to AMTRAK with service into Massachusetts and Vermont may prove feasible. However, operating expenses for passenger rail are significant and present daily ridership demand is undoubtedly insufficient to support these costs. This experience is being proven with Shoreline East rail service where: 1) passenger service exists; 2) no additional capital costs are required; and 3) demand has been established.

Likewise, with the potential redevelopment of Norwich Hospital for some high intensity use creates the potential for renewed passenger rail service on the Providence and Worcester rail line, especially as it might serve to connect the hospital property with the Norwich Transportation Center and various housing sites within the city-serving employees at the hospital site.

Maintaining AMTRAK as a tenant of New London's Union Station has become an issue of significant importance as the region confronts the reality of the private ownership of the building and the assumption that the building serves a public purpose. SCCOG clearly supports the notion that AMTRAK rail service remain in the rail station building. While SCCOG recognizes the prerogatives of the private owner of the facility, it supports the principle that the State is going to have to financially assume control of the facility, since, at present, it is the only privately owned rail station on the northeast corridor.

F. FREIGHT

Southeastern Connecticut has three primary sources of moving freight into and out of the region: truck; rail, and ship. Historically, the region's experience with movement of goods generally mirrors that of the rest of the nation with perhaps two exceptions: a) The southeast region has a deep water port with direct access to Long Island Sound and markets throughout the western hemisphere; and, b) That Connecticut has a somewhat lower volume of freight moved by rail than other parts of the country.

Truck: Large trucks are now the mode of choice for the majority of freight moved into and out of the region. A prior study completed by the Connecticut Department of Transportation revealed that 17% of the daily vehicles on Interstate 95 are freight-moving trucks. Recognition of the magnitude of the volume of truck traffic on the Connecticut interstate system prompted several statewide responses to promote alternative modes in order to reduce highway congestion. None of these alternative modes have proven successful to date.

Trucks are clearly considered the mode of choice for freight movement. Connecticut acknowledged this by previously undertaking a Statewide Rest Stop Study in which one of the key underlying issues is the need for trucks passing through the state to lay over because of one of two reasons: 1) Drivers are in jeopardy of exceeding their 11-hour maximum daily driving time allotment; or, 2) Trucks are stopping in Connecticut to enable them to make just-in-time deliveries at a pre-established time. Data gathered for the Statewide Rest Stop Study indicated that Connecticut already has an existing deficit of over 1,000 spaces for trucks and that this deficit is projected to increase to 1,400 spaces in the future. This study, and the recommendations to follow, will have a significant impact on the management of freight-bearing truck traffic passing through the state for the foreseeable future. The outcome of the study will have land use as well as air quality implications since a majority of trucks at rest continue to keep their engines at idle in order to power compressors that provide cooling for refrigeration and electricity for the comfort of the driver. Management of truck freight is therefore one of the most ominous tasks that faces the state. Opportunities exist for the state to create truck rest stops with electrical and other utility hook-ups that will eliminate truck idling while at rest. However, in order for this to be effective, once an adequate number of these truck stop facilities are constructed in the proper locations throughout the state, it will be necessary to support the full utilization of the facilities with legislation making non-utilization a traffic offense. At present, the deficit in adequate truck rest stops is compelling truckers to seek the safest spontaneous roadside locations they can find despite the fact that these locations have not been designed or constructed for this use. Police are reluctant to give citations under the present circumstances knowing that existing truck stop facilities are inadequate to manage the demand. SCCOG recognizes that providing adequate rest stop facilities for trucks moving freight is one of the high priority problems facing the region and the state. SCCOG recognizes that this is a highway safety as well as land use problem and is committed to making the region a "freight-friendly" environment.

Rail Freight: Rail freight opportunities are abundant in the southeast region. Two main rail lines carry freight into the region: 1) the Providence and Worcester line on the east side of the Thames River; 2) the New England Central line on the west side of the Thames River.

1. **Providence and Worcester Line:** The Providence and Worcester line is one of the oldest rail lines in the country having been incorporated in 1844. In 1892, P&W leased its line to the New York, New Haven and Hartford Railroad, for 99 years. In 1972, the ICC approved a request by the P&W to separate from that lease and operate independently. Since that time, the P&W owns or provides extensive freight service through lease on a variety of lines throughout southern New England, most notably in Massachusetts, Rhode Island and Connecticut. P&W provides extensive freight services on over 500 miles of track.

P&W has positioned itself as the premier carrier of municipal and other solid waste in New England. Containerized linkages with South Carolina landfills are now economical due to the exhaustion of such waste disposal facilities in New England. Movement of this freight over this distance is enabled by agreement with the CSX Corp.

2. **New England Central:** The New England Central line runs north-south from the State Pier in New London to White River Junction in Vermont, essentially running parallel to I-91. In White River Junction, it heads northwest to Burlington, Vermont, essentially following I-89. At Burlington, the line continues north along Lake Champlain until it reaches East Alburg, Vermont.

In 1995, the Central Vermont Railway sold the line to Rail Tex Corp. And was renamed New England Central. In 2000, Rail Tex was purchased by Rail America. Recently, Rail America entered into a merger agreement with Fortress Investment Group, LLC. During 2010, TIGER grants were prepared to upgrade this rail line.

3. **Admiral Harold F. Shearer State Pier:** This state-owned, deep water port located at the mouth of the Thames River in Long Island Sound is potentially one of the region's most valuable freight assets. The facility was completely rebuilt during the late 90's including the entire bulkhead surrounding the land mass. A second pier, originally owned by the railroad, was also purchased by the State and is now part of the same complex.

Market forces and competition from other deep-water ports on the east coast with better upland assets has limited the freight-handling activity of the port. This is to say that there is excess capacity at the port that the state and the region recognize and are actively trying to find ways to fill. With direct access to I-95 and a New England Central rail line terminus on site, the port has enormous freight-handling potential. One opportunity that continues to be

explored is the shipping of freight from New York Harbor up Long Island Sound to one of the three Connecticut ports for downloading onto trucks. The concept is based on the dual notion that this will better utilize port capacity and reduce truck traffic in the western portion of the state where congestion is the greatest. Freight handling, energy consumption and overall costs of equipment have not yet made this process feasible to the point where it has become widely embraced. The bulk of the freight that is imported and exported at the pier is primarily forest products/lumber, and secondly copper. Table 12 lists cargo activity at the State Pier from 2004-2009. As a matter of policy, SCCOG supports all efforts to increase the efficiency and utilization of the State Pier for freight movement.

Table 12
Shipping Report – Cargo Only Yearly Comparisons

Year	Number of Cargo Ships	Forest Products Tonnage	Copper/Steel Tonnage	Total Tonnage
2010	13*	0	46,391.000	54,097.000
2009	5	30,139.000	0	30,139.000
2008	14	99,216.240	6,677.800	105,894.040
2007	30	81,420.718	89,352.904	170,773.622
2006	10	34,154.574	14,217.120	48,371.694
2005	9*	28,143.508	10,157.810	38,301.318
2004	10*	15,880.120	13,021.000	28,901.120

* 1/26/05 – Ship with Heavy Lift Cargo – 81,000 tons not included in total tonnage

* 1/2004 – 3 Ships with Heavy Lift Cargo – tonnage not reported

* 2010 – One ship w/Transformers (230 mt); One ship w/Calcium Chloride (7,476 mt)

G. MARINE

The region's coastline abounds with harbors and inlets used extensively by pleasure and commercial craft of all types and sizes. In addition to a small commercial fishing fleet located in Stonington harbor and a day-charter party fishing fleet in Niantic, there is regular commercial ferry service to Fishers Island and Block Island as well as regular and high speed ferry service to Long Island. Cross Sound Ferry operates six regular ferries that carry vehicles as well as passengers plus a seventh vessel, a "Sea Jet" which carries up to 400 passengers. Service from New London to Orient Point varies from between 8 to 15 round trips daily depending on the day of the week or season. The Sea Jet makes between 4 to 6 round trips daily.

Large industrial, commercial and military facilities for marine transport are limited to the Thames River which, because of its channel depth, can support such heavy marine traffic from its mouth on Long Island Sound to its head at Norwich.

The Admiral Shearer State Pier in New London and the adjacent New England Central Railroad Pier are the region's most important commercial marine facilities. The State Pier has been the focus of considerable study as well as the focal point of a statewide effort to remove trucks from I-95 in order to reduce congestion. Given the close proximity of the Pier to I-95, exploration of the potential for the shipping of certain types of non-time sensitive goods via barge along the Connecticut coast should continue to be explored. This also brings into focus the utilization of the New England Central Pier immediately to the west of the State Pier with the potential for container and break-bulk distribution by rail throughout New England.

Over the long term, the viability of the State Pier, in so far as increasing the number of ships and amount of cargo entering the port, is dependent on its marketing as a first class facility. Land mass, for loading/unloading, storage and berthing, is of critical importance, because land availability is highly constrained for all of the above uses, SCCOG supports the continued development and expansion of the Pier as a key economic investment strategy for the region.

Major marina and harbor improvement projects are in varying planning stages in both New London and Norwich. Improvements to the Norwich harbor have been made to enable Norwich to become a berthing place for a high speed ferry or other large tour boats. In New London, there are plans to improve the Cross Sound Ferry site with bulkheading, piers, a new passenger terminal and some form of safe pedestrian access over the AMTRAK line. Future marina and water taxi opportunities exist at various locations along the Thames River. The Thames River, with its direct access to Long Island Sound and the Atlantic Ocean is perhaps one of the region's greatest natural assets. Maintaining adequate channel depth, through dredging, is perhaps one of the region's highest priorities, especially with respect to the function of U.S. Submarine Base in Groton.

H. AIR

Southeastern Connecticut's public airport is Groton-New London Airport (KGON). It is one of 3,332 airports listed in the FAA's 2010 National Plan of Integrated Airport Systems. These airports are considered significant to national air transportation making them eligible for federal grants.

The Airport was established as the first state-owned airport in 1929. Originally named Trumbull Airport after Governor Jonathan Trumbull, the name was changed to Groton-New London Airport in 1980. Operation of the Airport was transferred to the United States Navy during World War II. The Navy built the runway and taxiway system before the State resumed ownership in 1949. The Airport is now one of six State airports operated by the Bureau of Aviation & Ports in the Connecticut Department of Transportation (CONNDOT). Groton-New London Airport has held a Federal Aviation Administration (FAA) certificate to operate commercial passenger service since 1984. Historically, several commercial airlines operated at the Airport. The most well known was Pilgrim Airlines based in Groton during the '70s and '80s. Later U.S. Airways flew commuter service shuttles to and from Philadelphia until 2003.

Airport business climates, both domestically and internationally, have changed substantially since 2001. Today, Groton-New London Airport's primary role is that of a general aviation (GA) airport. Flight takeoff and land operations involve scheduled corporate air shuttles, other businesses, charter, military, recreational and student instruction flights. In keeping with the recent global economic downturn and air traffic trend for GA airports in the U.S., total flight operations have declined while the number of passengers traveling on corporate-owned and/or operated air shuttle aircraft and planes based at the Airport has remained flat. As such, there were 38,582 total flight operations directed by air traffic specialists at the FAA's federal contract control tower in 2009. Fifty four (54) aircraft were based at KGON at year's end. Approximately 580 full and part time personnel worked on-Airport; and the two Fixed-Base Operators (FBOs) pumped a total of 1.2 million gallons of aircraft fuel in 2009.

The newest tenant facilities at the Airport include passenger lounges, jet pods, multi-use hangars, individual T-hangars and a self-serve fueling station. Current multiple services are aircraft sales and refueling, airplane maintenance and repair, avionics, rental car, rental aircraft and flight instruction. The Army National Guard's east coast helicopter repair facility and the corporate world headquarters of a water crash survival training firm are also located at the Airport.

KGON is situated on a peninsula of 489 acres in the Town of Groton. It serves coastal residential and industrial communities within a 25 mile radius of the Town of Groton and City of New London. Customers find easy access four miles from U.S. Interstate 95.

There are two runways at the Airport, configured in a crossing design. Runway 5-23 is 5,000 feet long by 150 feet wide and is the preferred runway for most operations. Runway 15-33 is 4,000 feet long by 100 feet wide. The crosswind runway is essential for both safety and operational viability of the Airport; that is, it makes the airport available during most wind conditions for all aircraft, at a higher level of safety. These two airfield runways and their supporting taxiways meet current and forecasted airport capacity requirements. Additional infrastructure features maintained by the FAA and State DOT at the Airport are:

- Airport-wide 24-hour electronic surveillance and security system;
- Medium intensity approach lighting system;
- Visual Flight Range FAA-contracted control tower with some radar services;
- Instrument landing system (ILS);
- 2 automated weather observation stations;
- Marked helipad;
- Seven aircraft parking and fueling ramps;
- Auto parking lots with no fees; and
- Main terminal building.

In 2009, Connecticut DOT revised and published the Airport Minimum Standards – designed to positively influence the future economic impact of KGON. These revised standards were established for airport businesses engaged in commercial aeronautical activities.

Also in 2010, KGON is in varying stages of the following four (4) key projects for the Airport:

1. Airport Master Plan Update (AMPU)

A majority of the projects planned in the last Airport Master Plan (published 1999) are now built. The Update will provide planning guidelines for future property development of KGON. New development needs identified by the AMPU will be intended to satisfy present and future aviation demand while being compatible with the environment, community development and other transportation systems. Analyses are being used to develop realistic forecasts of aviation activity which reflect current trends. The AMPU final product will include a list of projects for the Airport that is fiscally and environmentally feasible. To ensure a strong operating base, primary attention will be given to accommodating and enhancing the Airport to meet the upper end of the general aviation fleet; that is, larger corporate class turboprop and turboprop aircraft. By doing so, KGON will support both forecasted demand while positioning itself to handle limited air carrier commercial operations, should the need arise.

2. Airport Business Plan

A scope of services was developed to provide the DOT with expert professional services, data analysis and recommendations necessary to define and implement a Business Plan for KGON. The goal of the plan will be to define operational and

economic development opportunities, as well as constraints, that will assist DOT to optimize the overall benefits of the Airport to the communities it serves, in the most cost effective manner possible.

1. Airport Wildlife Hazard Assessment (WHA)

First published in 2004, a new assessment of the wildlife that frequent KGON today is needed. To accomplish this goal, DOT contracted with a consultant to review the former assessment, conduct wildlife surveys, develop a Wildlife Hazard Management Plan and to train airport staff. The WHA will aid the Airport in providing a safe environment for the operation of aircraft and for the protection of human health and safety while meeting agencies' permitting requirement.

2. Runway 5-23 Safety Area Improvement Project for Installation of EMAS

An EMAS is a light-weight, concrete block system used to assist in stopping aircraft that may overrun the runway. Two Engineered Material Arresting Systems (EMAS) have been specifically designed for KGON using federal guidelines to achieve runway end safety on its primary runway. Groton-New London Airport will be the first airport in the State to install EMAS, due in large part to the Airport being constrained by geographically limited safety areas and surrounded by environmentally sensitive zones. The blocks will be placed at both ends of Runway 5-23. While EMAS installation at KGON Will bring the number of systems in New England to ten, there are currently fifty-five such systems installed at thirty-seven airports worldwide. It is anticipated that the project will be constructed in ten months, commencing in the summer of 2011 and ending in the spring of 2012.

I. SURFACE TRANSPORTATION PROGRAM - URBAN

Federal formula funding for various transportation projects annually comes to the southeast region through the urban section of the Surface Transportation Program known as the STP-U. Annually, the region expects to realize between \$3 - \$3.5 million. Since 1991, these funds have been made available under provisions of the respective Umbrella Federal Transportation Acts. These include: SAFETEA-LU (Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users); TEA-21 (Transportation Equity Act for the 21st Century); and ISTEA (Intermodal Surface Transportation Equity Act).

Due to the annual nature of the STP-U Program and the fact that funds cannot be carried over from one year to the next, SCCOG has begun regular (annual) solicitations of its member municipalities for highway, bridge and other types of projects that can be underwritten by the available funds. The intensive solicitation of projects is necessary to build out the STP-U Program for future years. Achieving major long-term regional transportation needs with an annual funding allocation of approximately \$3.0 million becomes problematic. While it is reasonable to assume that the economy will improve somewhat in the next 5 years, it is not reasonable to assume that major, "big ticket" projects that once comprised the region's top priorities, are attainable. This new financial reality has not only helped guide the SCCOG management of the STP-Urban program but has also helped refocus the entire regional transportation planning process.

To date, SCCOG has made three solicitations for STP-U projects in an attempt to build out the program into future years.

The project list below represents a summary of the status of the STP-U projects and the year they are scheduled for implementation. SCCOG will continue to solicit new projects as well as draw from projects from Table 13.

STP-U PROJECT SCHEDULE

FFY 2011

Town	Location	Description	Cost
Salem	CT 85	Sidewalk Installation, PE	\$25,000
	CT 85	Sidewalk Installation, C	\$130,000
Sprague	CT 97	Safety & Sidewalk Improvements, PE	\$275,000
	CT 97	Safety & Sidewalk Improvements, C	\$560,000
Norwich	Canterbury Tpke.	Pavement Rehabilitation, PE	\$40,000
	Canterbury Tpke.	Pavement Rehabilitation, C	\$682,000
Stonington	Taugwonk Rd.	Pavement Rehabilitation, PE	\$25,000
	Taugwonk Rd.	Pavement Rehabilitation, C	\$500,000
Griswold	CT 138 & 164	Sidewalks, PE/C	\$450,000
New London	Montauk Ave.	Pavement Rehabilitation, PE/C, Phase I	\$1,228,460

FFY 2012

Town	Location	Description	Cost
New London	Montauk Ave.	Pavement Rehabilitation, C, Phase II	\$1,481,540

FFY 2013

Town	Location	Description	Cost
Norwich	Sherman St./Yantic Rvr.	Bridge Rehabilitation, C	\$3,560,000
Sprague	CT 97	Safety & Sidewalk Improvements, C	\$560,000

FUTURE YEAR PROJECTS

Town	Project Description	Cost
East Lyme	Reconstruction of Exit 74 Interchange on I-95 at Rt. 161	\$3,800,000
Groton	Submarine Base Gateway and Multipurpose Path Project	\$4,250,000
Lisbon	River Road Sidewalk Extension on Route 12	\$2,120,000
Montville	Route 85 at Chesterfield Road; Intersection Improvements	\$132,000
Montville	Replace undersized culvert on Old Colchester Road	\$338,800
New London	Reconstruct Ocean Ave. from Niles Hill Rd. to Neptune Ave.	\$1,672,876
New London	Bank St. Improvements from Shaw/Truman to Tilley St.	\$1,210,905
Norwich	Mill and Pave: Connecticut and Wisconsin Avenues	\$285,220
Stonington	Reconstruction of Route 27/Route 1 Intersection	\$3,375,037
Waterford	Mill and Pave: Willets Avenue	\$267,834
Total		\$17,452,672

J. INTERMODAL

Presently, major opportunities for intermodal connections in the region are expanding. In New London, an intermodal transportation center was created in the 1980's to provide a hub for ferry, rail, parking, cab as well as inter-city and regional bus service. Although privately owned, the refurbished New London Union Station has become the region's defacto main gateway for intermodal travel where inter-city rail service (AMTRAK) continues to be linked with both long-haul bus service (Greyhound) as well as regional bus service (SEAT) and ferry service to Block Island, Fishers Island and Long Island. Additionally, area taxicab operators extensively serve the intermodal facility. Adequate parking facilities are operated and maintained by the City of New London within a short walking distance. Pedestrian safety improvements linking the parking garage with the AMTRAK Rail Station and Cross Sound Ferry Terminal are needed. Funds originally programmed for an overhead walkway were re-programmed in 2006 for a reconstruction of the Parade area on Water and State Streets; now complete. Expansion, maintenance and safe functioning of the multi-modal facility are of extreme importance to the region.

In August 2008, SCCOG initiated a \$750,000 CONNDOT funded study of the Union Station/Regional Intermodal Transportation Center in New London. This study was managed by SCCOG and was completed in the spring of 2010. The study made recommendations involving improvements to both the physical and operational connections between the various modes of transportation. At the request of CONNDOT, SCCOG engaged its consultant to perform additional work analyzing the costs of operation and maintenance of the transportation and City-owned parking garage. The study advocated for CONNDOT assuming some type of role in managing and operating the train station, in order to ensure that the RITC is a world class facility.

A second intermodal center has entered the construction stage in Norwich. It is located on Hollyhock Island and is expected to be operational by 2012. The objective of the Norwich center will be to combine high-speed ferry, rail, auto, pedestrian, taxi, limousine and SEAT bus service into one inter-modal facility. In addition to the Norwich and New London transportation centers, the SEAT plan for future expansion of public transportation identified several other locations where intermodal transportation centers will be necessary. These include: North Stonington at Exit 92 in the vicinity of I-95 and Route 2; Mystic, in the vicinity of Exit 90 of I-95 and Route 27; East Lyme, in the vicinity of Exit 74 of I-95, and Norwich Hospital, at Routes 12 and 2A.

In March 2011, the 18-month long Mystic Mobility Study looked at all of the access, parking and intermodal needs that accompany the great spring, summer and fall tourist influx in both the Groton and Stonington sections of Mystic. Heretofore, attempts had been made to address pieces of the problem but not until the conduct of this study have the problems been addressed comprehensively. In addition to recognizing the need to institutionalize and make permanent a bus/trolley shuttle service connecting all of the key tourist nodes, the study also made recommendations for improvements to the

Route 27/1 intersection, pedestrian improvements and bicycle travel lanes along Coogan Boulevard and Route 27, the use of mobility hubs as a means for tying together the various modes, and streetscape and way finding improvements.

Opportunities for intermodal freight connections are highest at the State Pier in New London where marine, rail, and highways converge. Better marketing and coordination between marine, rail and truck freight at the State Pier could help reduce truck traffic on I-95. The weakest of the major intermodal linkages centers is presently at the Groton-New London Airport. There is no bus or rail linkage with Groton-New London Airport for either passengers or freight, although SEAT's long range plan for expanded service would eventually connect the Airport with the rest of the bus system. However, with no commercial air carrier service at the airport, the urgency for this type of intermodal service is low.

Other than United Parcel Service located in Bozrah and Waterford, the region presently lacks a major trucking terminal which could, in the future, provide the necessary ingredient in the highway-rail-marine-air configuration to make the region a more viable freight distribution center. Intermodal connections, such as rail to high-speed ferry, will also become more important as the region's tourism industry matures.

K. ACCESS MANAGEMENT

Access management is a regulatory and planning process which attempts to balance safe traffic flow operations with the need to access abutting developed land. While primary responsibility for constructing and maintaining major highways rests with CONNDOT, achieving the goals of access management ultimately rests with local planning and zoning officials.

As a by-product of development, a natural conflict may arise between aggressive municipal and private development interests and the need to preserve the traffic flow function of key roadways. This results from the dichotomy between the state's role to ensure safe traffic operations on the one hand and the land use regulatory authority given exclusively to municipalities by the state under the planning and zoning statutes on the other.

Examples of poor access management abound throughout the region largely because of disconnect between the towns and CONNDOT. While some of the region's towns have done a good job managing highway access through the site plan review process, many towns choose not to pursue access management because of the perception that traffic is "CONNDOT's" problem due to the fact that most major commercial developments are located along state highways. The general unwillingness of the municipalities to control access, coupled with the inability of CONNDOT to minimize highway access to abutting development, usually results in unsafe conditions as exemplified by a plethora of high frequency accident locations. One means of addressing this problem would be through an improvement of the timing of project coordination between CONNDOT and towns. Typically, CONNDOT does not review projects until they are approved at the local level. Earlier coordination between CONNDOT and town staff would result in improved access management and would be beneficial to the developer who would be able to better plan and budget for both local and State access requirements, including any offsite traffic improvements.

As the consumption of the capacity of the various roadways is accelerated, poor access management practices will require more traffic controlling devices, further deteriorating the primary through-travel mobility function of the roadway. SCCOG actively supports access management and for the foreseeable future will pursue efforts to address access conflicts on all of the region's major arterial roadways. In FY 1998 and 1999, SCCOG sponsored major access management studies conducted on segments of Route 1, 2, 2A, 12, 32, 117, and 164 in the Towns of Stonington, North Stonington, Ledyard, Preston, Montville and Waterford. Those studies contain recommendations for improvements. In the future, access management projects should be undertaken in other communities.

L. ALTERNATIVE FUELS

SCCOG believes that there is a significant role for alternative fuels as a way for the region to meet the air quality standards and energy needs. Consequently, SCCOG actively supports efforts to promote the use of alternative fuels through the Clean Cities Program. Furthermore it will encourage the creation of markets for alternative fuels through the conversion of public fleet vehicles and supports the Clean Cities Alternative Fuels Demonstration Project to integrate alternative fuel vehicles (AFVs) into the SEAT system. A \$2.215 million demonstration project was awarded as part of the authorization of SAFETEA-LU. The project was designed to become a component of the SCCOG Intermodal Tourist Transit System using several different types of advanced technology AFV's in a manner that will provide comparative operational data on various alternative fuel vehicles. Also under consideration as part of the project is a direct bus link from Norwich to Bradley International Airport in Windsor Locks, Connecticut. While SEAT was unable to bring this project to fruition, it pointed the way toward achieving useful information on alternative fuels.

For large construction projects in urban areas, the Connecticut Department of Environmental Protection (DEP) typically recommends the use of construction equipment with air pollution control devices. Equipment such as diesel oxidation catalysts or particulate filters, or the use of "clean" fuels, can be effective in reducing exhaust emissions. "Clean" fuels include ultra-low sulfur diesel fuel (15ppm sulfur), compressed natural gas, or emulsified fuels (i.e. Purinox, approved by the California Air Resources Board). Contract specifications, of the Connecticut Department of Public Works, should contain vehicle emissions control language requiring certain non-road construction equipment to be retrofitted with emissions control devices.

The City of Norwich is presently involved in a project that will potentially combine the goals of economic development, revival of manufacturing and clean fuels. The project proposes to establish a manufacturing site to retrofit vehicles for clean fuel/hybrid thereby creating jobs, improving the tax base through clean fuels.

VI. TRANSIT

In 1980, nine towns in southeastern Connecticut joined together to form a public bus system called Southeast Area Transit (SEAT). The existing state statutes that govern transit districts were developed almost five decades ago when regionalism was in its infancy, when development patterns and transit needs were different and when public-private partnerships were virtually non-existent. Under the statutes, a transit district is comprised of only representatives of the municipalities in which state subsidized (fixed route, fixed schedule) bus transit service is provided. No provisions exist in the statutes for regional transit districts to manage other modes. Towns through which transit passes can choose not to join a transit district. Of those towns that do join, board representation is weighted toward urban centers with towns over 25,000 population having twice the number of board representatives as smaller towns. At present, the state requires that bus transit systems, other than those served by Connecticut Transit, generate at least 33% of the annual operating costs in revenue. The inequity of this arrangement has been a long-standing issue for the state for almost 40 years. If the non-Connecticut Transit regional transit system, which is comprised of many smaller municipal units of service, fails to reach this revenue threshold, then the individual (non-Connecticut Transit) transit district member towns each become financially liable for their total share of the revenue shortfall up to the 33% level. This municipal financial exposure is derived from the service levels that each town selects from a “menu” of available services. This selection is based both on a desire to provide transit to their constituents and the ability to pay.

Gaps in service frequently result from this process of municipal menu selection and problems related to provision of service is exacerbated when individual towns must decide how much financial burden can be encumbered when the 33% level is not achieved by the whole system. Taken together, the self-selective, municipally-based financial structure, coupled with a state operating subsidy program that is not linked to transit performance at the route level, has created narrow decision-making policy boards whose mission, over the past two decades, has become primarily focused on minimizing municipal financial exposure and only secondarily on providing transit. As noted, this outcome is largely related to the disparity in both municipal financial exposure and differences in municipal ability or desire to provide financial support for transit. Yet when these basic municipal financial disparities are coupled with a state subsidy program unrelated to transit performance, it often results in the continuation of lower productive services, underwritten by those communities that can afford to pay, while more highly productive services are sometimes sacrificed.

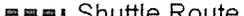
In 1990, the decline in defense industry economic activity and the advent of full-scale gambling casino operations in southeastern Connecticut created unprecedented challenges and opportunities for public transportation. These economic changes prompted exploration of a variety of new forms of public transportation. In addition to buses, public interest over the course of the last decade has been drawn to fixed-guideways, including a light rail or monorail system as well as the restoration of passenger rail service on existing freight rail lines. The feasibility of these modes were

examined in detail as part of Environmental Impact Studies (EIS) conducted to address congestion in the Routes 2, 2A and 32 corridors as well as Route 85. In 1999, CONNDOT examined the potential for passenger rail in eastern Connecticut and revisited rail service in eastern Connecticut as part of the recent state legislative package "Roadmap for Connecticut's Economic Future." Despite the significant influx of tourists, fixed-guideway is just beginning to emerge as a potentially feasible transit option. Redevelopment of the Norwich Hospital property, at a sufficient scale, could help create the critical mass to make rail feasible especially with connections to downtown Norwich where housing will be located and to New London where an inter-connect with AMTRAK could be made.

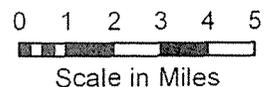
In light of the above-noted economic changes, SCCOG staff conducted a comprehensive analysis of SEAT's operating characteristics. This study revealed that upon the abatement of the energy crisis in the 1980s, the primary mass market of prospective transit users abandoned public transportation and returned to using cars. This had the effect of depleting the mass market for public transportation leaving only a sub-market of transit-dependent people, a minority sector of the population in a generally suburbanized region such as southeastern Connecticut. Without widespread public support for transit, both in terms of regular users and federal, state and local financial support to underwrite the cost of service growth, SEAT service levels naturally deteriorated over the years. Furthermore, stabilization of gasoline prices during this period fueled a major housing boom that by the late 1980's resulted in even greater levels of suburban development in the region. This had the further effect of separating residential populations from the urban destinations commonly served by transit. Gradually, SEAT began to realize that the basic economic and demographic conditions that set the stage for the original development of the transit system at the height of the energy crisis in 1975 had significantly changed so that it was time to re-direct the focus of the transit system. Subsequently, SEAT devised a new transit plan to address the region's expanding public transportation needs, meeting local needs as well as the new demand created by the gaming and tourism industry. The 1997 SEAT Transit Plan, graphically summarized in Figure 17, called for 65 new compressed natural gas (CNG) buses to be added to the existing fleet of 25 Diesel buses for a total fleet of 90 buses. Under the plan, service levels throughout the system would have been improved from 1 or 2-hour headways to ½ hour headways. In addition, the geographic area of service would have been expanded to include the towns of Colchester and Salem along Route 85, Bozrah on Route 82 and Preston and North Stonington on Route 2 (Note: Proposed major transportation center in North Stonington at Route 2 and I-95 requires a modification in zoning). The total project capital cost, in 1996 dollars, was estimated to be \$33 million of which the vehicle purchase price would be \$23.5 million. Expanding the existing SEAT building, including the addition of a CNG refueling facility, accounted for an additional \$7 million while the remaining area amount was dedicated to the creation of a third regional transportation center in the vicinity of Exit 92 on I-95. Annual operating costs were estimated to be about \$20 million. Little, if any of this plan has been implemented.

PROPOSED BUS SERVICE EXPANSION PLAN 1997 Southeastern Connecticut Region

LEGEND

-  Major Transportation Center
-  Minor Transportation Center
-  Park and Ride Facility
-  Airport
-  Train Station
-  Corridor Route
-  Shuttle Route
-  Major Roads
-  Railroad
-  Town Boundary

Source:
Southeast Area Transit



Prepared by:

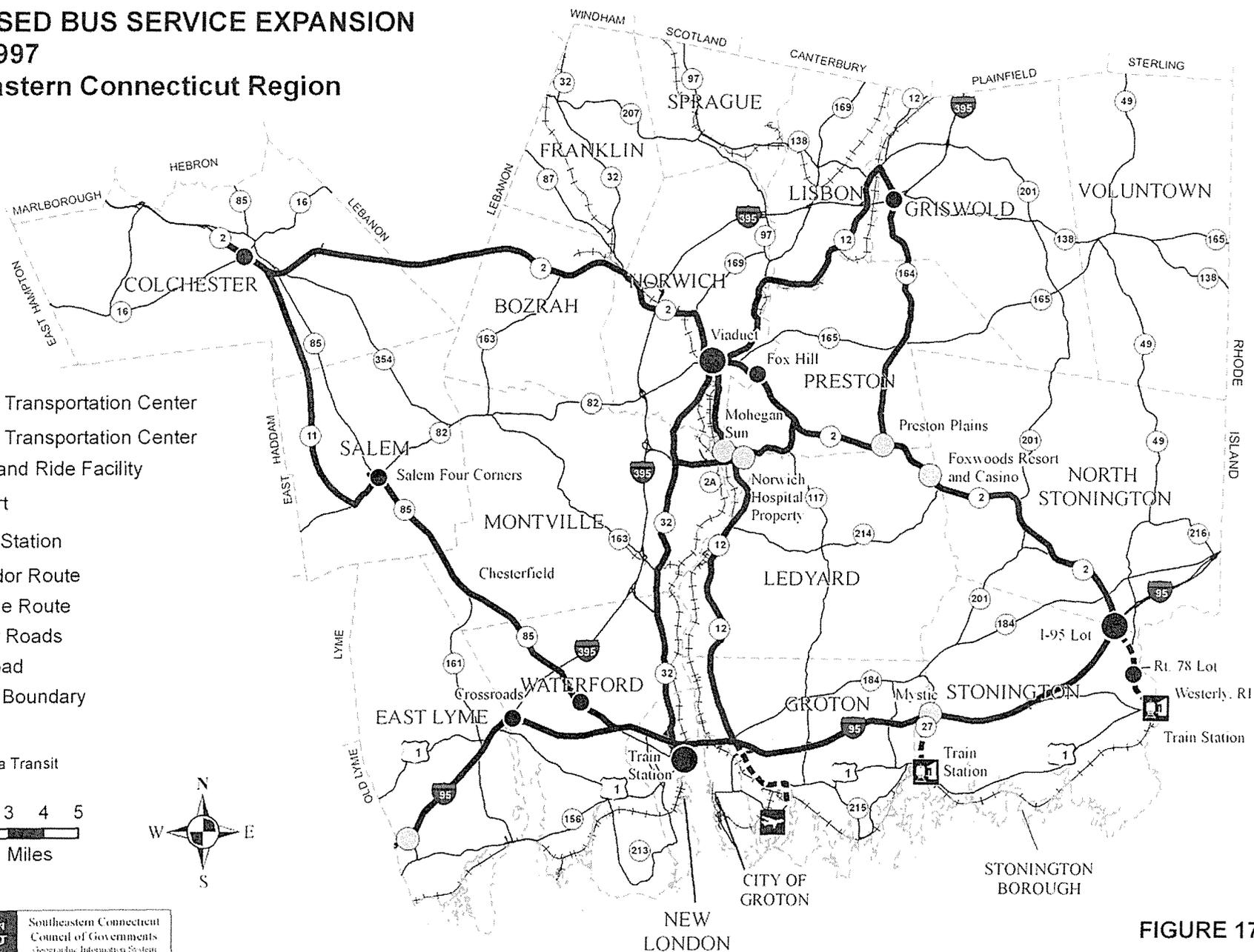


FIGURE 17

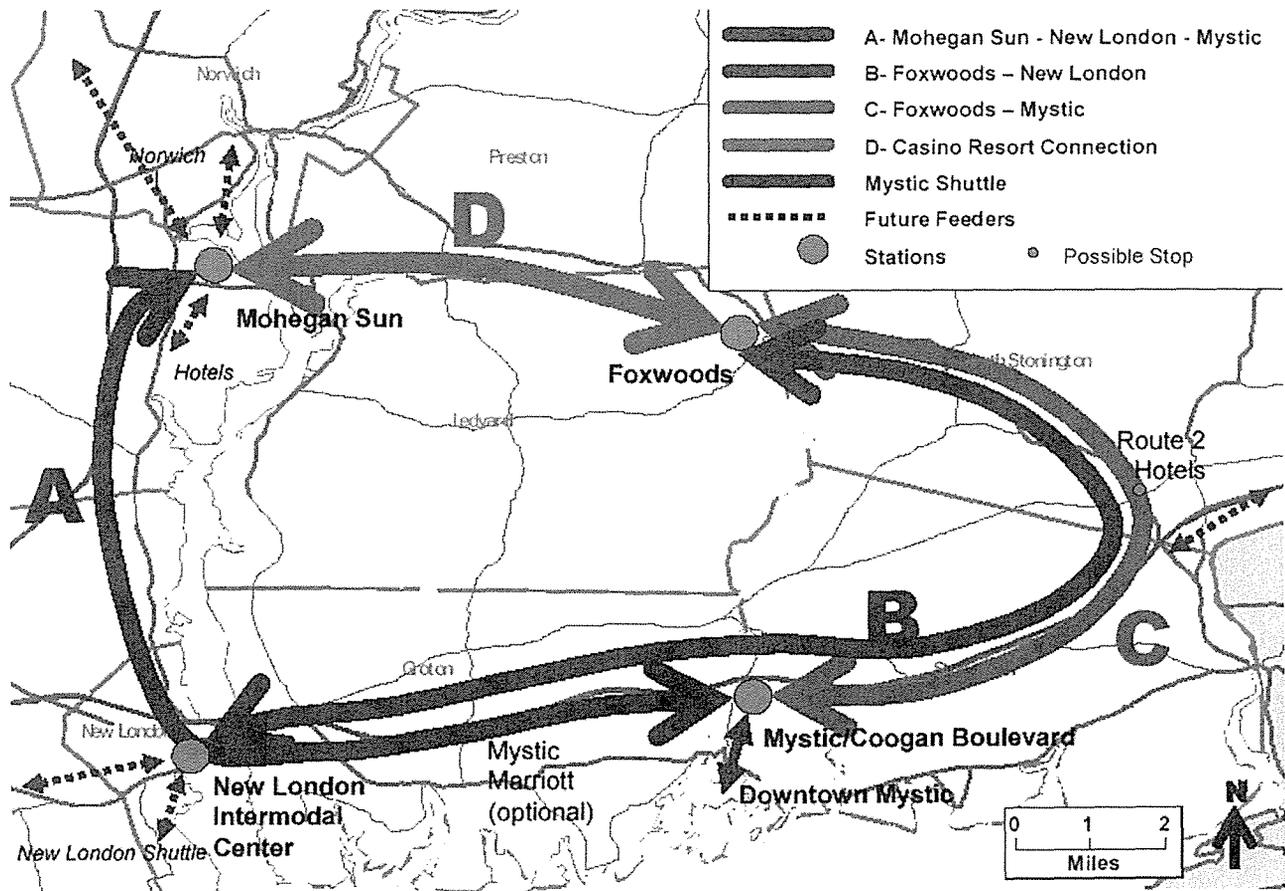
During FY 2001, conceptual plans were developed to tie together regular and high-speed ferry, rail and regional bus service through the New London Transportation Center. In a white paper entitled *Proposed Congestion Mitigation: Southeastern Connecticut Intermodal Transit Program*, SCCOG first suggested the development of an expanded bus system that would meet visitors arriving in New London and convey them to the region's tourist attractions and casinos. The white paper became the basis for a \$500,000 appropriation by the Transit Strategy Board (TSB) to SCCOG to conduct a two-year study that examined the business and marketing aspects of such a tourist-oriented system.

The study, entitled, *Intermodal Connections Study Southeast* was completed in 2005. The study developed a business plan for a high-quality, dependable, seamless, bus-based transportation system linking rail, ferry and buses to the region's major tourist centers. A market analysis showed that enough people would use the proposed service to make the investment in the system pay for itself. If well marketed, the system would boost tourism in three ways: 1) More people would visit the region; 2) The length of stay would increase; and, 3) People would visit more attractions if linkages were better. Added visitors would lead to more revenue spent at restaurants, hotels, shops, casinos and area attractions as well as generate tax revenue for the state. According to the study, a well-designed tourist bus system as shown in Figure 18 would have a ridership of between 1.7 and 3.5 million people annually.

A 2-year demonstration pilot project was proposed. A request for financial support was made to the Transportation Strategy Board to underwrite the \$12 million capital and operating cost of the pilot. The project was also recommended in the 2006 report of the Governor's Commission on the Economic Diversification of Southeastern Connecticut. It was hoped that the success of the pilot project will attract major long-term stakeholder investment. With the recent economic downturn, there has been no forward progress on this proposal due to the inability to secure funding of the pilot project.

Ultimately, major institutional changes will need to be made in order to bring together all the public and private entities to support regional transit. During FY 2006, this need manifested itself with respect to the physical and institutional relationships in and around the rail station in New London where ferry, rail, bus and taxi all converge. In March, 2010, a Master Plan was completed for the New London Transportation Center. It recommended both significant physical and institutional changes. The Plan recognizes New London as the region's multi-modal center due to the convergence of all the modes in close proximity. The Master Plan recommended the changes shown in Figure 19. This Plan includes a new configuration for parking SEAT and Greyhound buses as well as pedestrian walkway connecting the parking garage over Water Street and the railroad tracks and touching down on the Cross Sound Ferry parking lot. The Plan strongly recommended that CONNDOT participate in the future management and financing of the operation of the railroad station.

**FIGURE 18
PROPOSED INTERMODAL TOURIST TRANSIT SYSTEM
FULL ROUTE INCLUDING FUTURE FEEDERS**



Source: Intermodal Connections Study Southeast, SCCOG

Para-transit: In 1992, SCCOG's predecessor, SCRPA, prepared the first inventory of paratransit vans and small buses owned and operated by more than thirty different public and private nonprofit agencies in the region and underwritten by a number of different grant agency sources. A follow-up inventory conducted by SCCOG in 2002 concluded that both municipal systems for the elderly and private non-profit health and social service agency services had grown considerably in the past decade. Coordination of this transportation resource continues to pose one of the region's most perplexing transportation challenges. This is due largely to the costs of maintaining a system characterized by so much fragmentation and duplication of service as well as strong local support for continuation of these services. This is especially apparent in the area of capital equipment where the vast majority of these vehicles, many underwritten by public funds, not only sit idle a significant portion of the day but have become the exclusive property of particular agencies that have mandates to only serve a limited clientele.

Historically, efforts to address this problem have met with limited success. This is especially true in the area of transportation for senior citizens, which, beginning in 1970, evolved exclusively at the municipal level. It is also true for the distribution of Federal Transit Administration capital funds for elderly and handicapped vehicles although agencies which coordinate or combine with other agencies are generally the first to be awarded vehicles.

In order to address the problem of regional coordination of paratransit, in 1992 a public and private partnership was formed. At its formation, the Eastern Connecticut Transportation Consortium, Inc. (ECTC) consisted of the major private and public funding agencies that agreed to discontinue their practice of underwriting the cost of vehicle replacement for individual health, social service and senior citizen agencies. Instead, they agreed to redirect those funds to a single operating agency, ECTC. Under this single operator model, paratransit, like regular transit in southeastern Connecticut, was expected to be reasonably well coordinated. SCCOG is a major supporter of ECTC and the concept of a single operating agency for paratransit. SCCOG continues to view the development of a unified, regional, paratransit system to be of vital importance to the region. At present, SEAT subcontracts with ECTC to operate paratransit service under the Americans With Disabilities Act (ADA) as well as coordinating the Jobs Access Reverse Commute Program for all of eastern Connecticut.

Jobs Access and Reverse Commute Program: For several years, coordination of transit resources in all of eastern Connecticut has been a top priority of SCCOG and the Eastern Connecticut Workforce Investment Board as regions around the nation address the need to provide transportation to those getting off welfare and in need of job training as well as day care for their children.

The *Jobs Access and Reverse Commute Program* (JARC) utilizes a variety of federal, state, and private funding sources to identify individuals in need of employment as

well as employers in need of labor. Overall, this cooperative effort is commonly referred to as the “to”, in the Welfare-to-Work program. Large employers in the southeast region, with difficult-to-fill second and third shift employment needs, have proven an invaluable employment resource willing to hire individuals recently off welfare with minimal job experience. Working cooperatively with transit providers, new transportation services have been initiated that link northeastern Connecticut, Windham County and southeastern Connecticut, the latter of which has become the state’s largest importer of labor.

VII. LOCALLY COORDINATED PUBLIC TRANSIT-HUMAN SERVICE TRANSPORTATION PLAN (LOCHSTP)

In an effort to enhance transportation options for individuals with disabilities, older adults, and individuals with limited income, SAFETEA-LU calls for the development of a Locally Coordinated Public Transit-Human Service Transportation Plan (LOCHSTP) process. The plan is to be developed through a local process that requires participation by public, private and non-profit transportation and human services providers along with public participation. LOCHSTP's mission is to identify comprehensive, unified strategies for public transportation service delivery that address customer needs including: cost effective service delivery to serve unmet needs; improved quality and accessibility of service; identifying service priorities, and eliminating duplication of services through coordination. Funding for the targeted population includes: Section 5310, Elderly Individual and Individuals with Disabilities Program; Section 5316, Job Access and Reverse Commute Program (JARC), and Section 5317, New Freedom Initiative.

The JARC program has been in operation in eastern Connecticut since 1999 with the support of five regional partnerships that have been developed throughout the state. Each region had created a program of services specific to the region's needs and resources. This effort included the development of a broad public/private partnership to examine the location of existing transportation services, in relation to employment opportunities and where low-income workers resided. The components were examined to identify any gaps in transportation services specific to the employment-related needs of low-income workers. Transportation services were then developed to fill those gaps.

The SAFETEA-LU, LOCHSTP process has built upon the five statewide regions created under the JARC program. As a result of a broader mandate, the process had exposed new gaps as well as potential solutions. This has been accomplished through the creation of a broadly representative planning process involving many state and local agencies serving low-income, elderly and disabled individuals. As part of the planning process, a broad survey of needs was created that gave direction to the program by identifying gaps, overlaps, lack of coordination, boundary, information and training issues, and other resource needs, as well as insurance and other barriers to providing cost efficient and effective service to the client base. Funding limitations compelled that these identified needs be prioritized.

Having completed its initial planning phase, questions are emerging about the future of the specialized LOCHSTP process. Questions include: the possibility of expanding the process to include additional special needs groups; financial and governance issues related to the continued separation of state provided public transit and other forms of transportation merely supported by the state. In the interim, the following list of eleven gaps has been identified by the LOCHSTP planning process.

1. There is insufficient transportation available in the Northeast corner of Connecticut
2. There is insufficient transportation available to get out of the Northeast Region.
3. Social Services Block Grant recipients are no longer eligible for funding for Car Based Solutions, mileage reimbursement, 60 days of rides to work, job search.
4. There is insufficient evening and weekend transportation in Groton.
5. There is a lack of a single, up-to-date source of information on how to access services.
6. The quality of service in Pawcatuck (link to Westerly) is lacking.
7. There is no service to Westerly, RI.
8. Fixed route only covers a small area of Jewett City and cannot be accessed with a large bus.
9. The senior center van has a limited schedule, which restricts access to shopping and medical appointments.
10. There is no public transportation targeting tourists in Mystic.
11. There is no public transportation available in Plainfield.

These needs continue to be addressed through the LOCHSTP process as funding allows. What has evolved is that under the new Freedoms Program, the Eastern Connecticut Transportation Consortium (ECTC, Inc.) has partnered with the Northeastern CT Council of Governments, Southeastern CT Council of Governments, Windham Region Council of Governments and Windham Region Transit District to create a Mobility Ombudsman located at ECTC.

The major areas of responsibility of the Mobility Ombudsman would include, but are not limited to:

1. **Mobility Handbook** – Overseeing the preparation of an updated handbook for riders with disabilities containing public and private transportation and commute options with emphasis on the accessibility features of each service. The product would be similar to the "Getting on Board" and "Disabled Commuter's Handbook" prepared by CONNDOT Commuter Services. The documents could contain special information relevant to a number of market segments (high school students transitioning to work, job developers, veterans, seniors, commuters, those traveling across the state, etc.)
2. **Outreach and Training** – Coordinating the distribution of the newly developed handbook for riders with disabilities. Prepared in 2011, the handbook, recently published, is being widely distributed. This task will focus on the establishment of a network of distribution points identified by agencies that support and advocate for riders with disabilities. Once the network is established, an ongoing process will be developed to maintain fulfillment. The Ombudsman will also coordinate group training sessions throughout the regions (similar to PT 101) for various constituencies. The Ombudsman will also facilitate resource sharing (i.e. driver training, mechanic/vendor service

coordination, procurement, travel training). The creation of a website will also be a major component of the proposal.

3. **New Services and Programs** – Exploring the need for new services amongst the 3 regions for persons with disabilities. The Ombudsman must become knowledgeable in all areas of mobility through the regions and identify areas of demand not met by current services. Areas lacking geographic coverage or accessible modes will be identified along with service span and operating day limitations. The Ombudsman will focus on inter-town, inter-regional and special purpose mobility not currently served by transportation services. In addition, the Ombudsman will review industry best practices related to assistance programs (reduced fares, travel companions, voucher programs). This information, through the guidance of the oversight committee, will lead to a detailed, multi-regional priority list of services and programs for which the Committee will pursue funding. The Ombudsman will also look for opportunities for coordinating services.
4. **Tracking Barriers** – The Ombudsman will act as a central depository of information pertaining to barriers to accessible transportation. Beyond service and program limitations identified above, the Ombudsman will develop a process for identifying and addressing deficiencies or other barriers to mobility for riders with disabilities (defective equipment, unaffordable fares, limited accessible taxi service, and physical barriers at transportation facilities). This task will also focus on enhancements that could be made to existing mobility systems to improve accessibility (see ITS below). The Ombudsman will also identify features to accommodate and facilitate travel by persons with all types of disabilities, including sight and hearing impairments.
5. **Equipment** – Creating a complete, prioritized list of vehicle needs throughout the regions. While current (FTA) resources for the procurement of buses to be used for the transportation of riders with disabilities and seniors is limited (5310 funding), a complete listing of demonstrated vehicle needs will be compiled in the event that additional funding becomes available. The goal is to ensure the continued operation of services throughout the region.
6. **Transportation for Veterans** – Evaluation of regional demand for transportation to the VA Healthcare System in the regions, with the goal of ensuring that all demand for these services is met and that transportation services are not duplicated.
7. **Intelligent Transportation Systems (ITS)** – Consider existing and possible ITS systems that could lead to improved coordination of existing services and the application of ITS systems to aid in mobility for riders with disabilities (trip planning, real-time tracking, enunciators, GIS mapping and computer aided dispatch).

VIII. SECURITY

Subsequent to the events of September 11, 2001, the issue of national security has taken on added importance. This is especially so in a region such as southeastern Connecticut where security needs prior to 9/11/01 have long been recognized and practiced by specialized sectors, including the military and nuclear utilities. Facility-centered disaster planning occurs even more widely across the region, ranging from Groton-New London Airport to incident management on the interstate system. Clearly, security is not a new issue in southeastern Connecticut.

This section of the Regional Transportation Plan is intended to explore infrastructure elements that provide redundancy in the event of a disaster. This approach is based on the assumption that the region contains strategic assets that could theoretically make it the site of a terrorist attack.

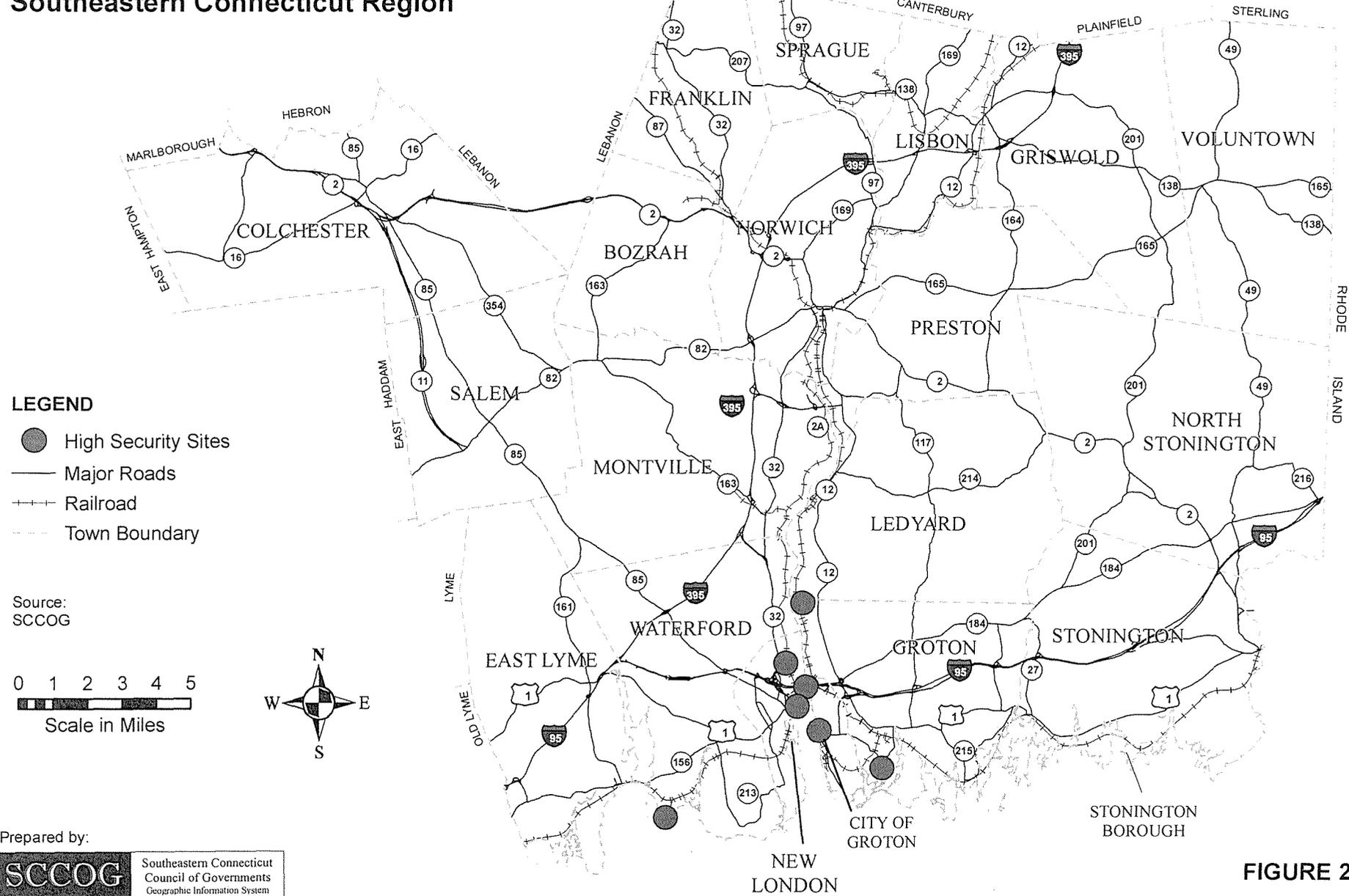
The analysis accompanying this discussion utilizes three data layers: existing infrastructure; population distribution, and high security sites. Figure 20 depicts High Security Sites in the southeastern region. These include: Millstone Nuclear Power Plant; the U.S. Submarine Base; Electric Boat Division of General Dynamics; the Groton-New London Airport; the Gold Star Bridge/AMTRAK Bridge; the U.S. Coast Guard Academy, and the Port of New London. An eighth site, Plum Island, is located nine miles off shore in Long Island Sound. While it is technically not in southeastern Connecticut, at one time, its proximity to the region could not be ignored. Numerous other potential sites exist (schools, hospitals, churches, casinos, etc.), yet none are considered having as much national or international significance as the above sites.

While the significance of an attack on each site is clearly quite different, it is immediately apparent from Figure 20 that the sites are all clustered in the southern portion of the region. When the clustering of high security sites is compared with Figure 21, Population Distribution, the full magnitude of the problem presents itself. Less apparent is the shift in population during employment hours where many workers living in outlying, suburban areas are employed in the greater New London/Groton area. Thus, while the full impact of an attack at any one or more of the high security sites can only be approximated, these figures very strongly suggest that a large portion of the region's population lives and works in relatively close proximity to these sites.

The question then becomes: Is the existing infrastructure adequate for evacuation purposes? If not, how will planned infrastructure modifications contribute to improving evacuation capacity? Finally, are there reasonable infrastructure needs that should be considered given some unknown degree of risk of attack? The discussion below addresses the adequacy of the existing transportation system to move large numbers of people in the event of some type of disaster.

I-95: Interstate 95 is the major evacuation route in the southern sector of the region. The existing inadequacy of I-95 has been well documented. Unfortunately efforts to

HIGH SECURITY SITES Southeastern Connecticut Region



POPULATION DENSITY BY CENSUS BLOCK GROUP (2000)

Southeastern Connecticut Region

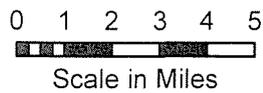
LEGEND

Population Density, Persons per acre

- 0.1 - 1.0
- 1.1 - 3.0
- 3.1 - 6.0
- 6.1 - 10.0
- 10.1 - 17.7
- Town Boundary

Source:
U.S. Census Bureau 2000

Note:
The generalized coastline reflects the
the resolution of the U.S. Census data



Prepared by:

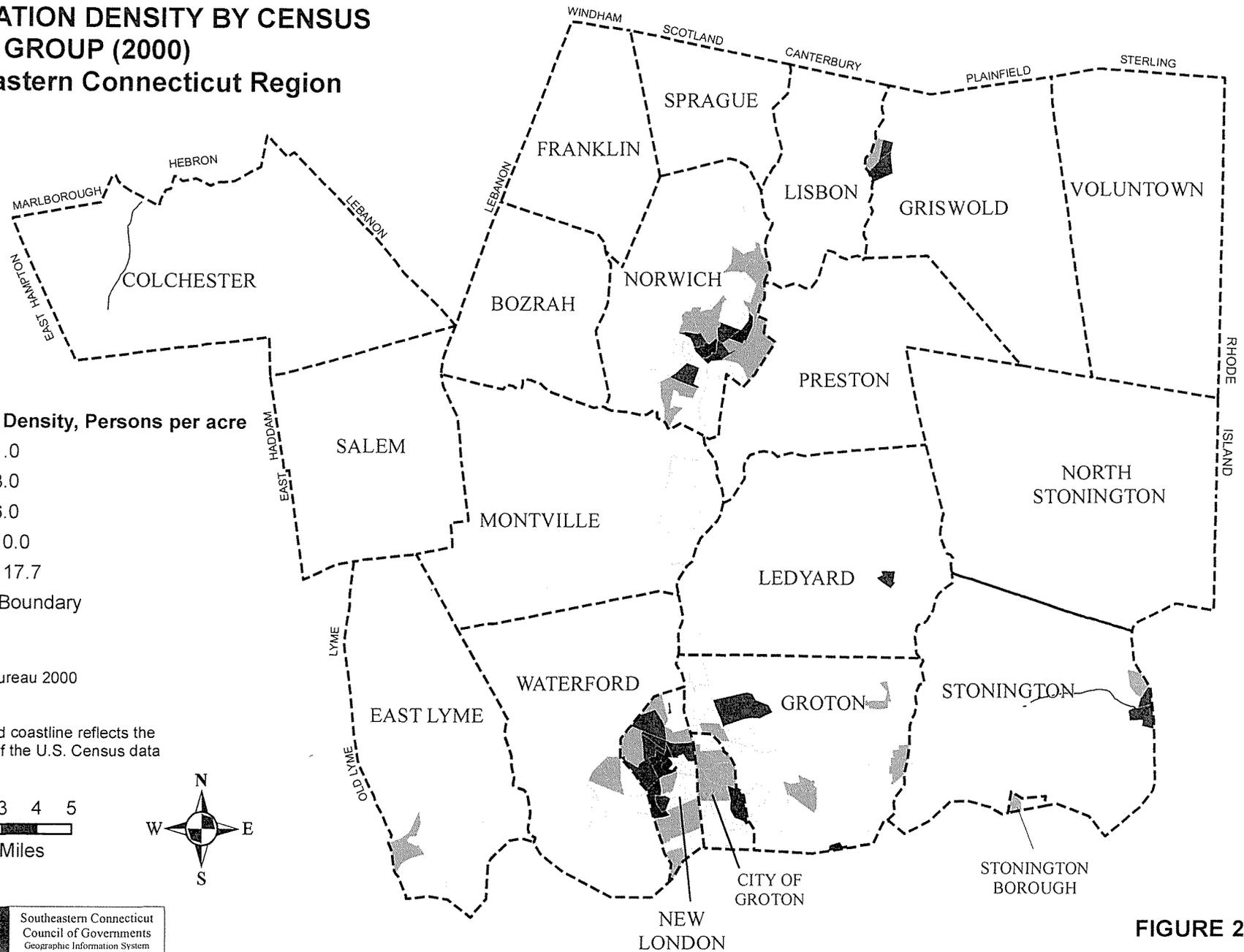
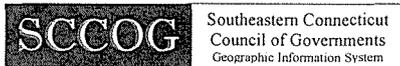


FIGURE 21

make capacity improvements to this section of highway have been indefinitely delayed due to financial constraints.

Serious consideration should be given to adding additional lanes. In the event of a need for evacuation prior to expansion of the roadway, it will be necessary to invoke a plan whereby I-95 temporarily becomes one-way for the duration of the evacuation.

Route 11: Like Route I-95, the planned completion of Route 11 has been indefinitely delayed due to financial constraints. This represents a serious setback in the development of needed infrastructure to address potential evacuation needs. If for no other reason, Route 11 needs to be placed back on the State's "build" list.

I-395: (See I-95 discussion above)

Routes 1, 156, 32, 12, 85: It is doubtful that sufficient capacity improvements could be made to these roads given the level of abutting development. The exceptions to this are the western-most portions of Routes 1 and 156 where future widening could occur. However, east of the intersection of these two highways, development abuts the road thereby creating an evacuation bottleneck in the highway network. Perhaps the most critical of these is Route 85 which would take the brunt of traffic moving northward, underscoring the need for moving Route 11 back onto the "build" list.

Water Evacuation: The coastal location of the region presents an access barrier by other than airplane or boat. It also represents an evacuation barrier by other than the same modes. The impracticality of significant air evacuation at Groton-New London Airport all but eliminates that as an option. Capacity does, however, exist for temporary evacuation by ferry and other marine craft from New London via Cross Sound Ferry, Fox Navigation and the Fishers Island Ferry. Given the proximity of the large employment base in New London and Groton, temporary evacuation by water may prove to be a feasible option. The 9/11/01 evacuation of Wall Street in New York City by ferry is an example where this was successfully applied.

Bus Transit: Over the course of the past 30 years, an additional consideration in the purchase of large urban-type buses for the SEAT bus system has been the prospect of their deployment for evacuation of the population. However, even a cursory review of the capacity of the entire fleet, if it were deployed in such a manner, would suggest severe limitations in meeting the need. In 2004-2005, a new fleet comprised of eight 40-foot buses, eight 35-foot buses and eight 30-foot buses was purchased by the SEAT system. This yields a total fleet capacity of 968 seats. While not insignificant, it does present the current limits of the public bus transit system in meeting this potential need. It also pre-supposes adequate highway capacity to enable the buses to move. The experience in New Orleans with hurricane Katrina suggests that evacuation of this magnitude would require several days advance warning in order to be completed in a full and safe manner.

Reducing a national carbon footprint will require a multitude of changes in the way we use energy and the political will to implement these actions. With the nation split on the uncertainty of the reality of climate change, the conditions for developing a unified political response do not yet exist, yet ideas abound. One approach is a heavier tax on gasoline. Another approach is “Cap and Trade,” a regulatory technique that essentially sets a ceiling price on carbon output. How high or low that price is set will largely determine the “success” of the program. In the transportation sector, techniques such as telecommuting and a 4-day work week still hold promise with the proviso that people actually reduce/eliminate travel on the 5th day. Even the use of furlough days, where work is suspended, will make a small contribution toward reducing the carbon footprint.

Over the long term, technological innovation holds perhaps the greatest promise to reduce the carbon footprint. Cleaner burning engines and alternative fuels, coupled with incentives to develop them by industry and consume them by the public will be necessary. However, if economic growth and development continue in the same way it has since the end of World War II, then the contribution of the transportation sector will ultimately be offset by the energy inefficiencies of expansion.

In summary, many of the region’s transportation assets are located in areas along the coastline that are vulnerable to coastal storms and sea level rise. Specific areas include portions of Route 1, and Route 117, and Route 649 at the Amtrak railroad underpass in Groton. There is a need to adapt to, or prepare for, climate impact in both the physical sense and in the program funding sense. Future funding of urban system improvements should consider this changing condition and should evaluate and plan to mitigate a project’s susceptibility to climate threats.

IX. CLIMATE CHANGE

At present, there is no federal requirement for state's or MPOs to address climate change, per se, in any substantive way. Nevertheless, it is clear that the trilogy of climate change, availability of petroleum-based fuels and air quality are the most important issues that the transportation sector faces.

While these issues are global in nature and not solvable by any individual state or MPO, each entity must begin to address it in order for progress to be made. Numerous times throughout this document, reference has been made to the growth model that underlies our economy and the role of the transportation sector in supporting it. At its smallest, most identifiable element, the municipal property tax is the single output measure, the "metric" which represents the most important impediment to addressing climate change at the MPO level in this country. Why this is so is because the economic survival of municipalities is dependent on the continued growth of their property tax base. Removing this incentive would alter, in perhaps the single most significant way, one of the key building blocks in the growth-model based economy at the municipal level where most of the development decisions are made. In other words, to the extent that MPOs are creatures of the municipalities that support them, MPOs are consigned to continue to support the growth-economics model that contributes to climate change.

This raises an important and fundamental question. Is the current economic growth model sustainable? How do communities which are depleting their supply of developable land continue to compete? If major transportation infrastructure investments endow some communities with greater development potential, how will communities with little developable land and little or no transportation infrastructure survive? If energy availability overtakes transportation as a function of depletion of accessible reserves, what are the consequences for climate change and the growth model on which the economy is based?

Globally, climate change has been linked to the combustion of petroleum since the Industrial Revolution (200 years). For the same period in time, the economic (industrial) growth model has been based on the discovery of new oil reserves. However, with projected peaking/depletion of oil reserves targeted to 2020, it could be argued that as the amount of combusted petroleum, worldwide, begins to be reduced simply as a function of reduced supply, climate change should be affected as well. There are numerous other ways to reduce petroleum consumption. In either a market-based or regulatory setting, the question is whether the rate of reduction of petroleum consumption will be sufficient to alter the rate at which climate change is occurring. It appears to be not only a race against time but also one in which many of the important elements of the race are unknown. Most important is how much of a reduction in our carbon footprint is enough to slow down/reverse the process of climate change that has already begun?

Reducing a national carbon footprint will require a multitude of changes in the way we use energy and the political will to implement these actions. With the nation split on the uncertainty of the reality of climate change, the conditions for developing a unified political response do not yet exist, yet ideas abound. One approach is a heavier tax on gasoline. Another approach is "Cap and Trade," a regulatory technique that essentially sets a ceiling price on carbon output. How high or low that price is set will largely determine the "success" of the program. In the transportation sector, techniques such as telecommuting and a 4-day work week still hold promise with the proviso that people actually reduce/eliminate travel on the 5th day. Even the use of furlough days, where work is suspended, will make a small contribution toward reducing the carbon footprint.

Over the long term, technological innovation holds perhaps the greatest promise to reduce the carbon footprint. Cleaner burning engines and alternative fuels, coupled with incentives to develop them by industry and consume them by the public will be necessary. However, in the final analysis, if economic growth and development continue in the same way it has since the end of World War II, then the contribution of the transportation sector will ultimately be offset by the energy inefficiencies of expansion.

X. ENVIRONMENTAL JUSTICE AND PUBLIC PARTICIPATION

It has been the Federal Highway Administration's (FHWA's) longstanding policy to actively ensure nondiscrimination under Title VI of the 1964 *Civil Rights Act* in federally funded activities. Under Title VI and related statutes, each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion.

The National Environmental Policy Act of 1969 (NEPA) stressed the importance of providing for "all Americans safe, healthful, productive, and esthetically pleasing surroundings, and provided a requirement for taking a "systematic, interdisciplinary approach" to aid in considering environmental and community factors in decision making.

This approach was further emphasized in the Federal-Aid Highway Act of 1970: *23 United States Code 109(h)* established further basis for equitable treatment of communities being affected by transportation projects. It requires consideration of the anticipated effects of proposed transportation projects upon residences, businesses, farms, accessibility of public facilities, tax base, and other community resources.

On February 11, 1994, President Clinton signed *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Executive Order requires that each federal agency shall, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

As the MPO, it is SCCOG's responsibility to ensure that minorities and low-income individuals have equal opportunity to participate in the transportation planning process (See Goal #3). Furthermore, in order to implement this goal, there needs to be continued monitoring to insure the following:

- That the benefits of the funds made available for transportation are equitably distributed.
- That the adverse impacts of projects are not disproportionately distributed to low income and minority individuals or neighborhoods.

SCCOG's general planning strategies to ensure compliance with Title VI include the following:

1. Public Involvement

Since 1976, SCCOG and its predecessor, the Southeastern Connecticut Regional Planning Agency (SCRPA), have been responsible for regional transportation

planning. Numerous strategies have been developed to ensure that all population and demographic segments of the region have equal opportunity to participate in the planning process, that benefits are widely distributed, and that no segment absorbs a disproportionate burden. Population segments of special concern include the elderly, children, disabled, minority, low income and others either directly or indirectly affected by proposed expenditures of public funds. Over this time period, the four public involvement techniques that have proven most successful are as follows:

a. Regular meetings. The SCCOG holds regular monthly meetings that are open to the public. These meetings are advertised and the public is welcome to attend. In order to fully optimize opportunities for public participation, during FY 2004, SCCOG participated in a federal Title VI review that resulted in action to formally encourage public participation at its regular meetings by setting aside a specified portion of the agenda for this purpose.

b. Distribution of printed material. As part of SCCOG's Affirmative Action/EEO Employment provisions, an extensive network of organizations dealing with special demographic sectors has been developed. Draft copies of reports are made available throughout this network. Additionally, this network has been significantly expanded under the Welfare-to-Work/Jobs Access and Reverse Commute Program as well as the Route 11 Greenway Authority Commission.

c. Formal public hearings. Annually, SCCOG conducts formal public informational meetings on the following:

- Proposed work program for the upcoming fiscal year.
- Proposed update of the long range Regional Transportation Plan.
- Proposed update of the Regional Transportation Improvement Program.
- Proposed update of the State and Regional Transportation Improvement Program.
- Proposed update of the Air Quality Conformity Statement.
- Proposed significant modifications to any of the above at various times during the year.

e. Website: During FY 2003-2004, a SCCOG website was developed as an adjunct to a study being conducted. The initial focus of the website was to keep the public informed of progress of the study. However, upon the termination of the study, SCCOG began work on expanding the focus of the website to include other SCCOG activities. SCCOG now has a fully developed website on which documents, meeting minutes, agendas and announcements are posted (www.seccog.org). The website is now fully maintained by SCCOG staff and has emerged as a primary vehicle for communicating with the public.

2. Monitoring

All outside public input received from any source, at any time, is given immediate attention not only for its content but for its source. This process provides the feedback necessary to enable staff to evaluate the effectiveness of various outreach techniques. In some cases, where organizational linkages exist, feedback is derived through the network of organizations with whom SCCOG works on a particular project. SouthEast Area Transit, the regional bus system, is one example where this may occur. The Thames Valley Council for Community Action, the regional anti-poverty agency, is another. Like most public agencies which are dependent on public support, SCCOG is particularly sensitive to media feedback about its activities.

Ongoing monitoring of benefits and burdens occurs at two levels: regional and local. At the regional level, it is SCCOG staff's primary responsibility to monitor benefits and burdens of major large-scale projects. At the local level, this responsibility is vested in the individual chief elected officials who serve as the voting members of the Metropolitan Planning Organization (MPO) and who represent the "first line" with respect to their constituents. Additionally, local projects that emerge from the long-range transportation planning to the TIP are also subject to local hearings, as details emerge. A good example of this process was a 1995 ISTEA High Priority project for a regional transportation center in Norwich. Between 1995 and the present, various sites were considered. Prior to the selection of the present site on Hollyhock Island, burdens and benefits were considered as new sites were identified. Burdens and benefits were measured as part of the transit operational changes that would accompany different sites. The success of the SCCOG Title VI activities can, therefore, be established by the fact that this project continued to advance largely as a result of the interplay of the ongoing analysis of benefits and burdens as it affects transit users.

XI. AIR QUALITY

The *Clean Air Act Amendments of 1990* (CAAA) established a requirement that all long-range transportation plans, *Transportation Improvement Programs* (TIPs), and projects conform to the air quality goals set forth in the *State Implementation Plan* (SIP). The transportation conformity requirement, along with provisions first contained in the *Intermodal Surface Transportation Efficiency Act* of 1990 (ISTEA), reauthorized under the *Transportation Equity Act for the Twenty First Century* (TEA-21), and now the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) created fundamental changes to the practice of transportation and air quality planning for non-attainment areas.

The *Clean Air Act* and its regulations created six non-conformity categories that were related to the date to which conformity must be achieved. These are: Extreme (2010); Severe (2007); Severe (2005); Serious (1999); Moderate (1996), and Marginal (1993). Southeastern Connecticut is designated as non-attainment with respect to the 8-hour ozone ambient air quality standard. The Clean Air Act requires that the transportation plans in such non-attainment areas must conform to air quality plans.

The U.S. Environmental Protection Agency's (EPA) transportation conformity rule applies only to areas designated as being non-attainment or maintenance for transportation-related criteria pollutants such as oxides of nitrogen, volatile organic compounds, carbon monoxide, and particulate matter. The conformity rule established the regional emissions analysis as the tool for determining emissions from the Regional Transportation Plans and TIPs. In regional emissions analysis, the effects of regionally significant projects are analyzed, then their emissions effects summed. The results of the regional emissions analysis are used to perform the conformity test of plans and TIPs. The most recent conformity analysis has been completed.

The federal rule imparts greater responsibilities to Metropolitan Planning Organizations (MPOs) in the development of transportation plans and TIPs and for the selection of federally funded highway and transit projects. The rule includes a requirement that plans and TIPs be fiscally constrained. It also made provisions for project prioritization, public participation, and interagency consultation. The CAAA included the transportation conformity requirement to ensure that transportation plans, TIPs, and projects conform to national air quality standards. If transportation plans, TIPs, and projects do not conform to the emissions projections of the SIP, then they cannot be approved or funded until they are revised to do so. As part of the legal process of adopting the Regional Transportation Plan, the MPO must certify conformity of the plan with air quality standards.

Finally, attainment of the NAAQS will compel the adoption of strategies such as DEP's ant-idling initiative, which seeks to reduce idling through enforcement of the DEP's 3-minute idling limit regulation and the DEP's diesel retrofit program, which seeks to reduce diesel emissions through retrofitting emission controls on diesel truck and bus fleets.

XII. ENVIRONMENTAL MITIGATION

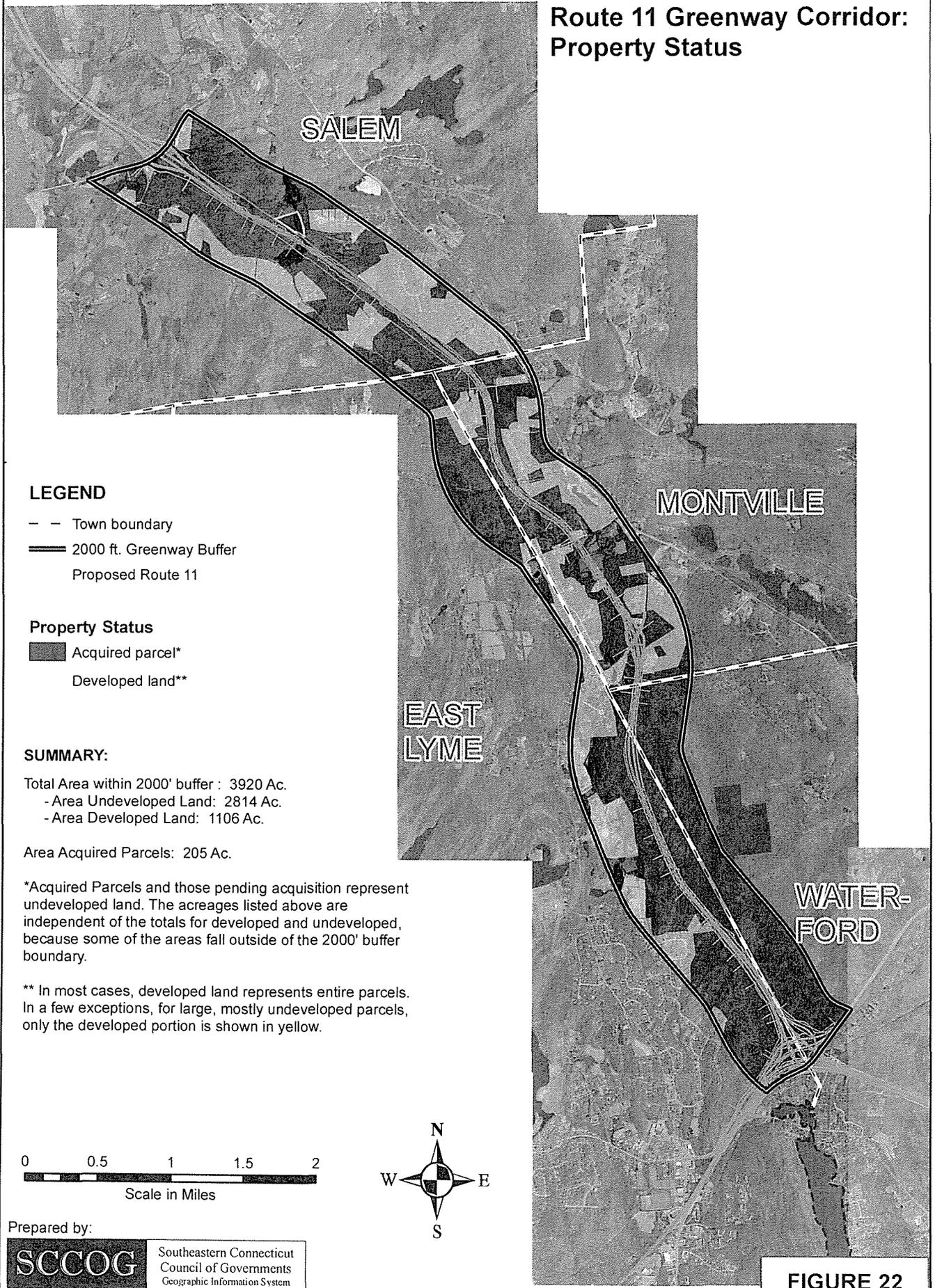
As an integral part of the planning process, consideration is given to the environmental impact of each major project included in the plan. As an example, central to the completion of Route 11 is the Environmental Mitigation Plan that will accompany the Section 404 water quality permits to enable the project to go forward. The unique approach to mitigation that was developed as a by-product of this project is beginning to gather national recognition for its innovative approach. The region recognized that the natural resources in the area in which the road is to be built were being jeopardized by encroaching development. Consequently, a major initiative was undertaken to both protect those resources and mitigate impacts from the roadway construction through the development of a greenway. Through enabling legislation, a Route 11 Greenway Authority Commission (GAC) was created with the power and financial resources to purchase and own land. The Commission is comprised of the chief elected officials of the four towns through which the highway project passes, the Connecticut Department of Transportation, the Connecticut Department of Environmental Protection and the Southeastern Connecticut Council of Governments. A copy of the Route 11 Greenway Plan is made part of this plan, by reference. The Route 11 Greenway Plan represents a regional effort for environmental mitigation of national and historical proportion.

Figure 22, prepared for use by the Route 11 Greenway Authority Commission, depicts all property within 2,000 feet of either side of the proposed roadway alignment. Approximately 2,000 acres of undeveloped land are potentially available for acquisition for the Greenway. However, while there is no functional or direct link between the property acquisition activities of the Greenway Commission and the environmental mitigation requirements of the State for the ACOE permits for Route 11, recent efforts by the GAC with FHWA may act to close that gap. FHWA has agreed to consider high resource value properties acquired by the Greenway as potential properties to be considered for meeting the federal mitigation requirement for the Route 11 project. As of this writing, the GAC owns a total of four parcels representing approximately 190 acres.

SCCOG, which is a member of the Route 11 GAC, firmly and actively supports the notion of environmental mitigation and will continue to participate in the process of acquiring high value natural resource land so as to protect it from encroaching development. However, with the decision by the State to terminate the development of Route 11 indefinitely, there is no longer an incentive to develop a mitigation package for a road that may never be built.

Another future project where environmental mitigation will have to be considered is the Route 2/2A/32 project. A Record of Decision was issued for this project in November, 2005. Two key elements in this project are a second bridge span over the Thames River of Route 2A and a continuation of Route 2A easterly to connect with Route 2. The environmental impact of the project involves new piers in the Thames River as well as the potential taking of prime usable, productive farmland. Mitigation efforts for this major project have yet to be defined.

Route 11 Greenway Corridor: Property Status



LEGEND

- - - Town boundary
- ==== 2000 ft. Greenway Buffer
- Proposed Route 11

Property Status

- Acquired parcel*
- Developed land**

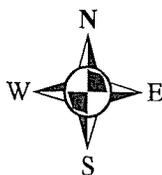
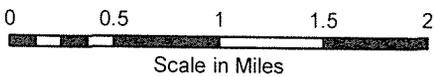
SUMMARY:

- Total Area within 2000' buffer : 3920 Ac.
- Area Undeveloped Land: 2814 Ac.
- Area Developed Land: 1106 Ac.

Area Acquired Parcels: 205 Ac.

*Acquired Parcels and those pending acquisition represent undeveloped land. The acreages listed above are independent of the totals for developed and undeveloped, because some of the areas fall outside of the 2000' buffer boundary.

** In most cases, developed land represents entire parcels. In a few exceptions, for large, mostly undeveloped parcels, only the developed portion is shown in yellow.



Prepared by:

SCCOG Southeastern Connecticut Council of Governments
Geographic Information System

FIGURE 22

XIII. CONSULTATION

Federal: Considerable consultation continues to take place on specific projects being planned or considered for southeastern Connecticut. Given the advent of Indian gaming, the region is unique on the entire eastern seaboard as a result of the sudden influx of casino gamblers and patrons who are drawn to the area. Since 1995, technical assistance and extensive consultation has been sought and received from the Army Corps of Engineers; Bureau of Fish and Wildlife; FEMA; the Environmental Protection Agency; and FHWA on major projects and environmental impact studies directly related to projects in the region. These include Route 11, Routes 2/2A/32 and I-95 Hazard Mitigation. Perhaps the best example of the high level of federal consultation was the committee comprised of federal, state and regional agencies that had been working to resolve locational and mitigation issues with respect to Route 11. The Route 11 project was once one of 10 such projects nationwide that was on President Bush's list of high priority projects, thereby representing the highest level of consultation among federal, state and regional agencies.

State: As a small state, the consultative relationship between state and regional agencies is daily, if not more often. Plans, projects, TIP amendments and actions require constant reciprocal communication with the Connecticut Department of Transportation. In addition, the Departments of Health, Emergency Services, Social Services, Office of Policy and Management, Environmental Protection and Public Safety in addition to the Mashantucket and Mohegan Tribal Nations who play integral roles in a variety of transportation and transportation related projects. These include: Incident Management; Jobs Access and Reverse Commute; Regional Conservation and Development Plan; Route 11 Greenway Advisory Commission; LOCHSTP; Public Transportation ALT-Fuels Project and Emergency Management Planning.

Municipal: The southeastern Connecticut region is comprised of 20 municipalities. In addition to the U.S. Naval Submarine Base and the U.S. Coast Guard Academy, there are two federally recognized Native American Indian tribal nations located within the region. In the process of preparing the Long Range Regional Transportation Plan, the initial consultation that drives the rest of the remaining planning process is with the above entities. Input is individually sought from each of these regional entities on the content of the plan as far as the identity of projects to be included. In addition to the above, consultation also occurs with Groton New London Airport and with SEAT, the regional transit system as well as ECTC, the provider and coordinator of much of the region's demand-response transit services. Finally consultation for the LOCHSTP and 5310 portions of the plan included more than 20 local health and social service agencies as well as agencies serving senior citizens and disabled persons.

From this, SCCOG is confident that every effort has been made to initiate and incorporate input from those individuals and organizations who have a stake in the regional transportation planning process.

XIV. HIGHEST PRIORITY PROJECTS

Regionally, SCCOG holds as its highest long-term priorities the following six projects (not in any priority order):

- Completion of Route 11 from Salem to I-95 in Waterford.
- Capacity improvements to I-95 from Branford to the Rhode Island state line.
- Improvements to Routes 2, 2A, 32 including new Route 2A bridge over the Thames River
- Expansion of the regional bus system to address the region's expanding public transportation needs, both local and tourism related.
- Provide regular route, frequent Shoreline East (SLE) passenger rail service from New London to New Haven.
- Preserve and enhance Union Station in New London as a regional, multi-modal, transportation facility, and improve the linkage between various transportation providers in the vicinity of the station, with CONNDOT assuming an ownership or managerial role in the operation of the station.

For years the SCCOG has had as one of its top priorities the completion of Route 11 from Salem to I-95 in Waterford. Although listed in this Regional Transportation Plan as a highest priority, the Plan makes note of the State's decision in 2010 to suspend the preparation of the Preliminary Engineering and Environmental Mitigation Plan for Route 11, with that project being classified by CONNDOT as a major long-term unfunded initiative. However, in 2011, several events including Governor Malloy's stated interest in this project, a proposed bill before the General Assembly which could create a new source of funding through tolls on new highways, and a meeting held in late March by the Governor and Congressman Courtney with officials from CONNDOT and FHWA concerning the preparation of required environmental and financial studies, have led the SCCOG to continue listing this project as one of its highest priority projects at this time.

XV. FY 2011-2040 LIST OF TRANSPORTATION PROJECTS

For the purpose of presentation, projects depicted in Table 13 are organized by town, and represent those projects that will receive or are eligible to receive federal funding. SCCOG solicits project nominations primarily on a municipal basis. Many of the projects listed in Table 13 were identified by towns in years past and due to funding limitations, are simply carried over from year to year. Within the above noted format, projects are further organized under 3 different schedule categories covering the 29-year time period of this plan. First, projects shown as scheduled within a 1-3 year period do not necessarily represent the highest priority. Instead, they depict those projects that are actually in the process of implementation because funds have already been committed to them. These projects also appear in the region's Transportation Improvement Program (TIP) which is the accompanying funding document to this plan. Fiscal constraint of projects scheduled for implementation in the TIP is a matter established in a parallel accounting process by CONNDOT and approved by FHWA. For this reason, the sum in the 1-3 year column is assumed to be fiscally valid. Projects shown in the 4-10 and 11-29 year categories will be subject to future fiscal constraint analysis based upon available funding.

Estimating the cost of a project and identifying a future funding source are also done by the town as part of the solicitation process. While this is an important ingredient in establishing fiscal constraint, projecting the long-term cost of projects and funding sources more than 20 years from now is problematic. In this context, projects listed with no cost attached are considered "courtesy" projects for their respective communities. The majority of these projects are identified as Unfunded; in a few cases a funding source is named where there is thought to be the potential for that funding source to be applied at some point in the future. In the event that a future source of funding surfaces, the identification of the project in the Long Range Plan fulfills the need for project identification. Section XVI of this Plan provides an explanation of how fiscal constraint will impact the implementation of these projects.

**TABLE 13
PROPOSED FY 2011-2040 TRANSPORTATION PROJECT PLAN (FEDERALLY FUNDED)**

Project	Description	Period in Years	Funding Source	Estimated Cost (\$000)		
				1 to 3	4 to 10	11 to 29
HIGHWAY:						
BOZRAH						
Route 163	Intersection modifications at Route 163 and Route 2 ramps	11 to 29	Unfunded			\$ 250
Route 82	Improve sight lines at Wawecus Hill Road	11 to 29	Unfunded			\$ 1,500
Route 608	Improve drainage, various locations	11 to 29	Unfunded			\$ 1,000
COLCHESTER						
Route 16	Climbing lanes, various locations west of the Borough	11 to 29	Unfunded			
Route 2	Interchange improvements at Exit 17, add eastbound on-ramp, westbound off-ramp	4 to 10	Unfunded		\$ 500	
EAST LYME						
I-95	Ramp realignment at Exit 74 (southbound)	4 to 10	STP-U/Other		\$ 8,000	
Route 1	Add bike lane from Route 161 to Old Lyme town line	11 to 29	Unfunded			\$ 2,500
Route 161	Tourist Information Center	11 to 29	Unfunded			
	Add bike lane from Route 1 to Montville town line	11 to 29	Unfunded			
Route 156	Railroad Underpass for Intermediate Access to Walkway	11 to 29	Unfunded			
FRANKLIN						
Route 32	Install traffic signal at intersection of Route 610	4 to 10	SAFETEA-LU		\$ 80	
Route 87	Improve intersection sight lines at Murphy Road	4 to 10	SAFETEA-LU		\$ 150	
GRISWOLD						
Stone Hill Road	Intersection Improvements, Stone Hill Road at Roode Road	1 to 3	SAFETEA-LU	\$ 390		
Route 138	Intersection w/ Rte. 12 - Establish right turn lane onto Route 12	11 to 29	Unfunded			
	Sidewalks, Intersection of 138/164, Jewett City	1 to 3	STP-U	\$ 450		
Route 201	Realign from Rte. 395 (Exit 86) to Rte. 201/Rte. 138 Intersection	11 to 29	Unfunded			\$ 3,000
	Improve Sight Lines & Make Geometrical Improvements at Rte. 201/Edmond Rd Intsec.	11 to 29	Unfunded			\$ 500
	Realign Rte. 201/Rte. 138 Intersection	11 to 29	Unfunded			\$ 500
	Replace Stop Signs with Caution Light at Rte. 201/Rte. 165 Intersection	11 to 29	Unfunded			\$ 150
	Realign from Rte. 165 Intersection South to No. Stonington town line	11 to 29	Unfunded			\$ 3,500
GROTON (TOWN)						
Route 1	Reconstruct from vicinity of intersection with Poquonnock Road North to Ring Drive	11 to 29	Unfunded			\$ 10,200
	Geometric improvement at intersection of Fishtown Road	4 to 10	SAFETEA-LU		\$ 250	
	Intersection improvements at Kings Highway to eliminate left turns	4 to 10	SAFETEA-LU		\$ 100	
Route 1 & 215	Downtown Mystic and Route 215 Streetscape Project (High Priority Funding)	In Prog	SAFETEA-LU	\$ 3,125		
	Downtown Mystic & Route 215 Utility Underground Project (Phase II TCSP Funding)	In Prog	SAFETEA-LU	\$ 1,000		
Route 12	Intersection modification at Crystal Lake, Gungywamp and Tollgate Rds.	4 to 10	STP-U		\$ 600	
Route 614	Reconstruct from Cow Hill Road to Route 184	29-Nov	Unfunded			\$ 5,500
Route 649	Reconstruct roadway from Tower Avenue north to Route 1	11 to 29	Unfunded			\$ 1,900
	Reconstruct from Rainville Ave. to Tower Ave., including Bike Route signage improvemt	11 to 29	Unfunded			\$ 3,300
	Improve South Road underpass	11 to 29	Unfunded			\$ 2,000
Railroad Underpasses	Eliminate height limitation at Poquonnock Road	11 to 29	Unfunded			\$ 3,000
	Eliminate height limitation at Depot Road	11 to 29	Unfunded			\$ 750
Military Highway	Construct walkway/bikeway along west side of road, south of Nautilus Memorial	11 to 29	Unfunded			

TABLE 13

PROPOSED FY 2011-2040 TRANSPORTATION PROJECT PLAN (FEDERALLY FUNDED)

Project	Description	Period in Years	Funding Source	Estimated Cost (\$000)		
				1 to 3	4 to 10	11 to 29
Thomas Road	Construct bikeway/walkway from Shennecossett to High Rock Rd.	1 to 3	SAFETEA-LU	\$ 875		
Crystal Lake Road	Submarine Base Gateway and multi-purpose path project	4 to 10	STP-U		\$ 4,250	
Poquonnock Road	Reconstruct from Route 1 to Route 649, & include Bike Route signage from Rainville Avenue intersection to Benham Road	11 to 29	Unfunded			\$ 2,400
GROTON (CITY)						
Bridge Street	Reconstruct from 100' east of Monument Street to Thames Street	11 to 29	Unfunded			\$ 1,600
Shennecossett Road	Reconstruct from Eastern Point Road to Thomas Road	11 to 29	Unfunded			\$ 300
LEDYARD						
Route 12	Add climbing lane south of Long Cove Road	11 to 29	Unfunded			\$ 500
	Whalehead Road intersection improvements	11 to 29	Unfunded			\$ 750
Route 117	Access management in Ledyard Center	11 to 29	Unfunded			\$ 1,600
Route 214	Safety improvements including sight line improvements at Spicer Hill Rd. intersection	11 to 29	Unfunded			
LISBON						
Route 12	River Road Sidewalk Extension	4 to 10	STP-U		\$ 2,120	
Route 138	Realign and widen between Route 660 and Route 12	11 to 29	Unfunded			\$ 4,500
Route 138	Reconstruct intersection with Route 169	11 to 29	Unfunded			\$ 750
Route 169	Realign and widen between I-395 and the Shetucket River Bridge	11 to 29	Unfunded			\$ 2,500
MONTVILLE						
Route 32	Construct sidewalks from Powerhouse Rd. To Route 163	11 to 29	Unfunded			
Route 85	Complete spot safety improvements	4 to 10	Unfunded			
	Intersection Improvements at Chesterfield Road	4 to 10	STP-U		\$ 132	
Route 163	Realign access to transfer station	11 to 29	Unfunded			\$ 200
NEW LONDON						
Route 1	Improve turning radius at northeast corner of intersection of Colman Street and Jefferson Avenue	4 to 10	Unfunded		\$ 450	
	Sidewalks, various locations	11 to 29	Unfunded			
I-95	Install noise barrier along south side between Norwood Avenue and Briggs Street	11 to 29	Unfunded			
Route 213	Reconstruct between Willetts Ave. and Bank St. including installation of storm drains	11 to 29	Unfunded			\$ 300
	Reconstruct between Plant St. and Niles Hill Rd. including installation of storm drains	11 to 29	Unfunded			\$ 350
	Sidewalks, various locations; Streetscape improvements	11 to 29	Unfunded			
Bank Street	Improvements from Shaw/Truman to Tilley Street	11 to 29	STP-U			\$ 1,211
Montauk Avenue	Pavement Rehabilitation	1 to 3	STP-U	\$ 2,710		
Route 641/Route 1	Bank/Montauk/Ocean: Roadway widening and turning lane improvements	4 to 10	STP-U		\$ 12,000	
Willetts Avenue	Right turn lane to Ocean Avenue (southbound) from Willetts Avenue	11 to 29	Unfunded			\$ 150
Vauxhall/Vauxhall Ext./Phillip/NL Shopping Ctr.	Reconfigure intersection and entrance to the New London Shopping Center	11 to 29	Unfunded			\$ 500
Tilley/Bank Street	Realign Tilley to connect with S. Water St. & reconfigure intersection of Bank St. to provide double right turn from Tilley St. to Bank St. & new synchronization	11 to 29	Unfunded			\$ 350
Williams Street	Hodges Square Area (Streetscape Improvements)	11 to 29	Unfunded			\$ 3,000
Pequot Avenue	School Street to Thames Street (Streetscape Improvements)	11 to 29	Unfunded			\$ 2,000
Ocean Avenue	Roadway Improvements from Niles Hill Road to Neptune Avenue	11 to 29	STP-U			\$ 1,673
Waterfront Park (Downtown)/Ft. Trumbull Riverwalk	Pedestrian Bridge/Connector, Shaws Cove between downtown and Fort Trumbull	4 to 10	Unfunded		\$ 12,000	

**TABLE 13
PROPOSED FY 2011-2040 TRANSPORTATION PROJECT PLAN (FEDERALLY FUNDED)**

Project	Description	Period in Years	Funding Source	Estimated Cost (\$000)		
				1 to 3	4 to 10	11 to 29
NORTH STONINGTON						
Route 2	At Route 627, add left hand turn lanes from Route 2 onto Main St. and Old Mystic Road with raised island on Mystic road side.	4 to 10	Unfunded		\$ 225	
	East of Main Street south end to Tim Horton: widen on south side and add a center left turn lane eastbound.	11 to 29	Unfunded			
	At Holly Green, remove obstructions on curve.	11 to 29	Unfunded			\$ 100
	Holly Green to Route 201, south, correct drainage.	11 to 29	Unfunded			
Route 184	At Boombridge Road, addition of overhead caution, 4-way, blinking traffic light.	11 to 29	Unfunded			\$ 100
Route 216	Reconstruct intersection at Route 184 at southbound I-95 off ramp.	11 to 29	Unfunded			
Vicinity of Route 184	Construct perimeter access road. (As per Access Management Plan)	11 to 29	Unfunded			
NORWICH						
Route 2/32	Sidewalk replacement on Washington St., Harland Rd. to Route 82	11 to 29	Unfunded			
Route 82	Widen and provide turning lanes, I-395 to Route 32	11 to 29	Unfunded			
Route 12	Improve intersections at north and south ends of Central Avenue	11 to 29	Unfunded			\$ 1,000
	Improve drainage near intersection with Boswell Avenue	11 to 29	Unfunded			\$ 250
	Construct sidewalks in various locations at Laurel Hill	11 to 29	Unfunded			\$ 100
Route 97	Intersection improvements at School Avenue	11 to 29	Unfunded			\$ 60
	Modify intersections at Route 169, Baltic Road, Bridge St., Occum Rd. & Canterbury Tpke.	11 to 29	Unfunded			\$ 3,000
Route 642	Improve bridge over New England Central Railroad	4 to 10	Bridge		\$ 2,000	
Route 32	Sidewalks, Thamesville to Trading Cove	11 to 29	Unfunded			\$ 1,000
	Sidewalks, Route 82 to Bozrah town line	11 to 29	Unfunded			
Dunham Street	Reconstruct from West Thames Street to Elizabeth Street	11 to 29	Unfunded			
Heritage Walkway	Continue Heritage Walkway from Howard Brown Park to Railroad Place	11 to 29	Unfunded			\$ 300
Canterbury Tpke.	Pavement Rehabilitation	1 to 3	STP-U	\$ 608		
	Reconstruct from I-395 to Occum	11 to 29	Unfunded			
Pleasant St. Bridge	Repair water damage on bridge abutment	4 to 10	Bridge			
Sherman St. Bridge	Rehabilitation of bridge over Yantic River	1 to 3	STP-U	\$ 3,560		
PRESTON						
Route 2	Widen between the bypass and Route 164	11 to 29	Unfunded			
Route 2A	Route 2A bypass, between 2A bridge & Rte. 2, contingent upon the resolution of the disposition of the Norwich Hospital property	11 to 29	Unfunded			
SALEM						
Route 82	Improve drainage between Route 85 and Hagen Road	11 to 29	Unfunded			\$ 350
Route 85	Improve traffic control at intersection with Rattlesnake Ledge Road	11 to 29	Unfunded			\$ 80
	Correct surface drainage conditions north of Salem Firehouse	11 to 29	Unfunded			
	Safety Improvements vicinity of Salem Country Gardens to No. Skyline Drive	4 to 10	SAFETEA-LU		\$ 19,800	
	Safety Improvements from Forsythe to Horse Pond Road	4 to 10	SAFETEA-LU		\$ 10,100	
Route 85	New Sidewalk from Salem School to Town Hall	1 to 3	STP-U	\$ 155		
	Roundabout at Route 82 Intersection	1 to 3	SAFETEA-LU	\$ 5,000		
Route 354	Modify curve one-half mile south of Witter Road intersection	11 to 29	Unfunded			\$ 800
SPRAGUE						
Route 97	New Sidewalk on Route 97, Baltic	1 to 3	STP-U	\$ 835		

TABLE 13

PROPOSED FY 2011-2040 TRANSPORTATION PROJECT PLAN (FEDERALLY FUNDED)

Project	Description	Period in Years	Funding Source	Estimated Cost (\$000)		
				1 to 3	4 to 10	11 to 29
STONINGTON						
Route 1	Improve roadway, including underpass and intersections, from Route 2 to state line	11 to 29	Unfunded			\$ 6,000
	Reconstruction of Route 1/Route 27 Intersection	11 to 29	Unfunded			\$ 3,375
Route 184	Improve sight lines at intersection with Route 201	11 to 29	Unfunded			\$ 500
Route 234	Improve sight lines at intersection with Farmholme Road	11 to 29	Unfunded			\$ 500
	Make drainage and spot safety improvements in various locations	11 to 29	Unfunded			\$ 1,500
Taugwonk Road	Pavement Rehabilitation	1 to 3	STP-U	\$ 525		
VOLUNTOWN						
Route 49	Realign curve in vicinity of Hodge Pond Road	11 to 29	Unfunded			\$ 1,000
	Reconstruct entire length	11 to 29	Unfunded			\$ 4,000
WATERFORD						
Route 85	Widen four lanes, plus turning lanes, from Harvey Avenue to Jefferson Avenue and construct pedestrian walkways from Jefferson Avenue to Harvey Avenue	11 to 29	Unfunded			\$ 2,500
	Extend north Frontage Roads to connect to Route 85, north of Crystal Mall	11 to 29	Unfunded			
I-95	Improve expressway and extend frontage roads from I-395 to New London consistent with DOT plans	11 to 29	Unfunded			
Route 1	Improve intersection at Cross Road	4 to 10	Unfunded		\$ 500	
	Improve intersection at Avery Lane	11 to 29	Unfunded			\$ 1,500
	Reconstruct from Willetts Avenue to New London town line	11 to 29	Unfunded			
Route 1	Replace bridge over Jordan Brook	4 to 10	Bridge			
	Pedestrian safety improvement, access management, intersection alignment, turning radaii in vicinity of Avery Lane to New London town line	11 to 29	Unfunded			\$ 1,500
Route 32	Pedestrian Safety Improvements	11 to 29	Unfunded			
Route 156	Pedestrian and safety improvements from Route 1 to Avery Lane	11 to 29	Unfunded			
PROJECTS OF REGIONAL SIGNIFICANCE:						
Route 11	Completion from Salem to I-95 in Waterford	11 to 29	Unfunded			\$ 1,000,000
Route 2A	New parallel 2-lane Route 2A bridge	4 to 10	SAFETEA-LU		\$ 90,560	
TOTALS:				\$ 19,233	\$ 163,817	\$ 1,093,699
Note: The totals are for known and estimated project costs. It is noted that some unfunded projects do not have project costs identified.						

**TABLE 13
PROPOSED FY 2011-2040 TRANSPORTATION PROJECT PLAN (FEDERALLY FUNDED)**

Project	Description	Period in Years	Funding Source	Estimated Cost (\$000)		
				1 to 3	4 to 10	11 to 29
AIR:						
Groton-New London Airport, CONNDOT	Construct Runway Safety Area Improvements (including EMAS Blocks)	1 to 3	FAA, State	\$ 6,843		
	Reconstruct taxi way Delta	1 to 3	FAA, State	\$ 800		
INTERMODAL:						
Regional Intermodal Transportation Center (New London)	RITC Study Implementation: Preserve and enhance as a regional, multi-modal, transportation facility, preserve linkage between transportation providers, with CONNDOT assuming an ownership or managerial role in operation of Union Station	4 to 10	Unfunded		\$ 20,000	
Intermodal Center (Norwich)	Construct Regional Transportation Center & supplemental parking lots (High Priority Funding)	In Prog	ISTEA	\$ 22,000		
Mystic Mobility Study Implementation (Groton, Stonington)	Pedestrian, Streetscape & Bicycle Improvements; shuttle bus and mobility hubs	11 to 29	Unfunded			
MARINE:						
Thames River	Dredging from river mouth to SUBASE	11 to 29	Unfunded			
RAIL:						
Shoreline East (SLE)	Provide regular route frequent passenger rail service from New London to New Haven	1 to 3	FTA			
New England Central Corridor	Provide passenger rail service from New London to Brattleboro, VT	11 to 29	Unfunded			\$ 100,000
TRANSIT:						
Southeast Area Transit	Improvements to SEAT Facility	4 to 10	FTA		\$ 4,000	
	Purchase various support vehicles, other facility improvements	1 to 3	FTA	\$ 2,327		
	Expand system to address region's expanding public transportation needs	4 to 10	Unfunded			
Eastern CT Transp. Consortium	Purchase ADA Vans	1 to 3	FTA	\$ 50		
TOTALS:				\$ 32,020	\$ 24,000	\$ 100,000
Note: The totals are for known and estimated project costs. It is noted that some unfunded projects do not have project costs identified.						

XVI. FISCAL CONSTRAINT

The *Regional Transportation Plan* primarily focuses on matters related to system improvements. These types of projects are defined as those that are intended to improve safety, mobility, increase system productivity or, as a by-product, promote economic growth. The emphasis on improvement-type projects, as opposed to maintenance type projects, is related to parallel responsibility of CONNDOT. Maintenance projects primarily address such needs as repaving, bridge repair or replacement and any other form of reconstruction, in place. While the bulk of the funds available under SAFETEA-LU will be for maintenance projects, these type of improvement projects tend to be managed at the state level according to need and funding availability and therefore become the primary emphasis of the state transportation planning process.

The preparation of a long-range regional transportation plan follows a format set forth in federal regulation. Central to this format is the federal requirement for “fiscal constraint” over the multi-year life of the plan. The requirement for fiscal constraint compels a general analysis of anticipated revenues to meet the project expenses of projects depicted in the plan. Table 14, prepared by CONNDOT, presents estimated gross revenue thresholds, by region, over a 29-year period (2011-2040) based on present allocations.

As shown in Table 14, the Connecticut Department of Transportation estimates that a grand total of \$1,895,478,384 will be expended in southeastern Connecticut over the next 29 years. Further, CONNDOT estimates that this funding will be made available in the following amounts for the following categories of expenditure: \$527,456,452 for system improvements; \$1,253,541,933 for system maintenance; and \$114,480,000 for projects of major statewide significance.

The total estimated cost of all highway projects shown in Table 13 for the 4-10 year period is \$163,817,000 while the total estimated cost of all projects in the 11-29 year period is \$1,093,699,000. It should be noted that there are several projects shown in the plan known to be of high, or very high, capital and/or operating cost. While these high cost projects collectively represent the expressed desires of the people of southeastern Connecticut as established through the public participation process, special funding will be needed for these projects beyond the regular finding available through traditional means.

As can be seen, the cost of projects shown in the 4-10 and 11-29 year periods far exceeds the amount of funds that CONNDOT projects will be available for the region. As stated in Section XV, these projects are shown because they have been submitted by the region’s municipalities. It is recognized by SCCOG that for projects to be funded in the future, they will have to conform to the region’s fiscal constraint requirements.

The issue of fiscal constraint and limited public funding for many needed projects represents a highly sensitive “weakness” to the planning process. The notion of

TABLE 14
ALLOCATION OF ANTICIPATED FUNDS TO CONNECTICUT PLANNING REGIONS, 2011-2040

	System Improvements	System Preservation		
Distribution	Weights			
Vehicle Miles of Travel	0.25	0.25		
Congested Vehicle Miles of Travel	0.75	0		
Lane Miles	0	0.75		
Planning Regions			Major Projects of Statewide Significance	Totals
Southwestern	1,534,253,607	772,781,361	1,555,260,000	3,862,294,968
Housatonic Valley	627,376,551	601,599,965	66,180,000	1,295,156,516
Northwestern Conn.	161,052,958	535,268,342	-	696,321,299
Litchfield Hills	157,114,970	529,864,714	-	686,979,684
Central Naugatuck Valley	434,576,855	580,238,962	1,904,200,000	2,919,015,817
Valley	178,687,550	353,285,310	27200000	559,172,860
Greater Bridgeport	958,229,312	438,601,841	353,068,400	1,749,899,553
South Central	1,286,428,197	1,365,892,242	1,105,184,697	3,757,505,136
Central Connecticut	228,058,977	481,940,265	13,500,000	723,499,242
Capitol	1,174,630,330	2,154,180,922	419,415,000	3,748,226,252
Midstate	231,632,107	497,239,103	320,000,000	1,048,871,211
Connecticut River Estuary	144,754,404	394,954,129	207,000,000	746,708,532
Southeastern	527,456,452	1,253,541,933	114,480,000	1,895,478,384
Windham	247,982,957	479,153,144	-	727,136,101
Northeastern	109,862,256	589,583,780	-	699,446,035
Undefined Towns	44,581,813	157,628,795	-	202,210,608
Totals	8,046,679,295	11,185,754,807	6,085,488,097	25,317,922,199

Source: CONNDOT

Note: System Improvements are projects which enhance safety, improve mobility, increase system productivity or promote economic growth. System Preservation are projects such as re-paving roadways, bridge repair or replacement and any other form of reconstruction in place.

exclusive dependence on public funding for projects will need to be revisited with an eye toward public-private partnerships, as fewer and fewer public funds are available for an increasing number of projects. An example of the success of this type of partnership is the Connecticut Turnpike, which in the 1950's, was financed privately through private bonds issued through a bonding authority. There are similar examples in other parts of the country where highways and transit projects are creatively financed through a variety of public-private mechanisms and arrangements. These new types of arrangements will become more necessary and acceptable as it becomes increasingly clear that public funds are insufficient to underwrite many proposed or desired projects. In this respect, the use of tolls has been proposed as a way to finance a portion of the State's share of the construction of Route 11. Further study will be required to test the financial feasibility of this particular proposal. However, it is presented here as another example of a financial technique that may grow in popularity as a financial technique to move some of the larger projects forward.

XVII. ASSESSMENT OF CONFORMITY WITH SAFETEA-LU

1. AIR QUALITY/CONFORMITY [23 USC 134 (i)(3)]

Required Element:

- Planning requirement to determine conformity every 4 years.

Response: The air quality conformity element requirement will be met by CONNDOT at the specified interval.

2. ANNUAL LIST OF PROJECTS [23 USC 134 (j)(7)(B)]

Required Elements:

- New project element to be included - pedestrian walkways and bicycle transportation facilities.
- Added requirement for cooperative development by MPO partners (i.e., State and transit operators)

Response: See Section XVI, List of Projects.

3. CONSULTATION

- **Transportation Plans** [23 USC 134(g) & 23 USC 135 (f)2]
- **TIP and STIP** [23 USC 135 (g)(2)]
- **Land Use Management and other Resource Agency** [23 USC 134(i)(4) & 23 USC 135 (f)(2)(D)]

Required Elements:

- Consultation with Metropolitan Plan and TIP coordination.
- Consultation with local non-metro and tribal governments in the development of Statewide Plan and STIP
- Requires MPOs/State and DOTs consult with local/state land use mgmt., natural resource, historic and other agencies in development of transportation plan.

Response: See Section XIII, Consultation.

4. CYCLES

- **Non-attainment and Maintenance Areas** [23 USC 134(i)(1)]
- **TIPs and STIPs** [23 USC 134(j)(1)(D); 23 USC 135(g)(1)]

Statewide Transportation Plan

- Update as need or as appropriate (no change).

Metropolitan Transportation Plan for non-attainment and maintenance areas

- Update every 4 years.
Metropolitan Transportation Plan for attainment areas
- Update every 5 years.
Transportation Improvement Program (TIP)
- Update every 4 years.
Statewide Transportation Improvement Program (STIP)
- Update every 4 years or more frequent if Governor so elects.

Response: SCCOG will meet the interval cycle requirements for each of these elements.

5. **ENVIRONMENTAL MITIGATION** [23 USC 134(i)(2)(B); (l)(4) & 23 USC 135(f)(4)]

Required Elements:

- Metro and statewide plans includes discussion.
- Developed with Federal, State and Tribal wildlife, land management, and regulatory agencies.
- Linking Planning and NEPA (no change).

Response: See Section XII.

6. **FISCAL CONSTRAINT** [23 USC 134 (i)(2)(C); (j)(1)(C); (j)(2)(B); (j)(3)(D) & 23 USC 135 (f)(5); (g)(4)(E); (g)(4)(F)]

Required Elements:

- No Changes.

Response: See Section XIV.

7. **PLANNING FACTORS** [23 USC 134(h)(1); 23 USC 135 (d)(1)]

Required Elements:

- Increase the safety of the transportation system for motorized and non-motorized users.

Response: See Section IV, Goals. See also Section XVI, List of Projects.

- Increase the Security of the transportation system for motorized and non-motorized users.

Response: See Section VIII, Security.

- Promote consistency of plan and transportation improvements with State and local planned growth and economic development pattern.

Response: SCCOG is the MPO and is also the designated regional agency for the Regional Plan of Conservation Development (RPOCD). The RPOCD is in the final stages of being updated. Coordination of RPOCD elements and elements of this document are the responsibility of SCCOG staff. This is a

matter of internal consultation. Likewise, SCCOG staff consults and coordinates with their State counterparts on matters pertaining to economic development and consistency with State plans. Such consistency is now a state requirement and SCCOG participates in this process.

8. **PUBLIC PARTICIPATION** [23 USC 134 (i)(5), (i)(6); (j)(4) & 23 USC 135 (f)(3); (g)(3)]

Required Elements:

- Public Participation Plan
 - Publish or make available for public view transportation plans, STIPs and TIPs
 - Hold public meetings at convenient and accessible times and locations
- Publication of the Plan, STIP and TIP. . . to the maximum extent practicable
 - Make information available in electronically assessable format
- Employ visualization techniques

Response: See Public Participation under Section IX, Environmental Justice. A public hearing on the Plan was held on April 9, 2007. Comments and responses are presented below.

9. **PUBLIC TRANSIT ELEMENT**

Required Elements:

- Coordinated Public Transit Human Services Transportation Plan.

Response: See Section VI, Transit. See Section VII, LOCHSTP.

10. **TRANSPORTATION FACILITIES** [23 USC 134(i)(2)(D) & 23 USC 134 (k)(3); 23 USC 135 (f)(7); 23 USC 135(i)]

Required Elements:

- Operations and Management Strategies.
Response: See Section V, Subsections A, B, E, & K

- Congestion Management Process
Response: See Section V, Subsection B, Traffic Congestion Sites.

APPENDIX A: ACRONYMS RELATING TO TRANSPORTATION

ADA Americans With Disabilities Act. A 1991 Federal Act that provided special rights to the disabled population that included a new form of transportation related to the public fixed-route transit available in an area.

CAAA Clean Air Act Amendments of 1990. A law establishing new national ambient air quality standards (NAAQS) and a timetable for their achievement. The CAAA imposes different attainment requirements on different areas of the country depending on the degree of deviation from the standard. In Connecticut, the western portion of the state, which has the worst air pollution problem, is designated under the Act as “severe” while the remainder of the state, which has less of an air pollution problem, is only designated as “serious “. Under this complex administrative structure, transportation infrastructure projects that occur in New Britain, for example, affect us in southeastern Connecticut, and vice versa.

CMAQ Congestion Mitigation and Air Quality. A Federal transportation funding program that promotes transportation projects that address such activities as ridesharing and related activities.

COG or SCCOG Southeastern Connecticut Council of Governments. A regional public organization created under the Connecticut General Statutes comprised of the chief elected officials of the twenty towns and boroughs in southeastern Connecticut.

CONNDOT Connecticut Department of Transportation. ConnDot is the primary planning, administrative and implementation arm of the State of Connecticut for all matters relating to transportation infrastructure, including public transit. The SCCOG regional transportation planning program is conducted in cooperation with ConnDot.

ECTC Eastern Connecticut Transportation Consortium. A non-profit corporation established by SCCOG and SEAT to coordinate and provide demand-response transportation for elderly, handicapped and low income populations.

EIS Environmental Impact Statement. A requirement of the National Environmental Policy Act triggered by major infrastructure projects of both potentially high cost and high environmental and social impact.

FAA Federal Aviation Administration. The FAA is a branch of the Federal Department of Transportation responsible for the regulation, administration and, for certain purposes, funding of airport-related planning, construction, and operations.

FHWA Federal Highway Administration. The FHWA is a division of the Federal Department of Transportation. It is the main source of funding for the regional transportation planning program and for the implementation of highway infrastructure improvements.

FTA Federal Transit Administration. Like FHWA, the FTA is a division of the Federal Department of Transportation. It, too, is a source of funding for both planning and project implementation. However, the primary focus of FTA is public transit.

ISTEA Intermodal Surface Transportation Efficiency Act. The 1991 umbrella federal transportation act that preceded “TEA-21,” the Transportation Efficiency Act for the Twenty-First Century.

JARC Jobs Access and Reverse Commute Program. A transportation program linking low income people with job training and employment.

LOCHSTP Locally Coordinated Public Transit- Human Service Transportation Plan. A major new SAFETEA-LU initiative that combines the Jobs Access and Reverse Commute Program (JARC), the FTA 5310 Program that provides capital assistance for vehicles serving the elderly and disabled and the New Freedoms Program which is an expansion of the Americans With Disabilities Act Transportation Program (ADA).

MPO Metropolitan Planning Organization. An MPO is a public body, designated by the Governor, which operates under federal regulations. It is empowered to carry out the regional transportation planning responsibilities as set forth in the ISTEA. In 1974, the Southeastern Connecticut Regional Planning Agency (SCRPA), the predecessor to SCCOG, was designated the MPO for southeastern Connecticut. In 1993, this designation was transferred to the Council of Governments.

RPC Regional Planning Commission. The RPC is the subunit of the Council of Governments which is responsible for conducting the council’s planning program. However, final ratification of RPC proposals rests with the COG.

RTP Regional Transportation Plan. The Regional Transportation Plan is a document which identifies highway, transit and other transportation needs over a twenty-year period. Its primary function is to act as the background document for the Transportation Improvement Program (TIP). Like the TIP, it is annually updated. New federal regulations restrict the inclusion of transportation projects included in the RTP to those for which there is reasonable probability that funding will be available (fiscal constraint). Regional transportation plans must not include any project that jeopardizes the state’s ability to achieve conformity with the national ambient air quality standards under the State Implementation Plan (SIP).

SEAT Southeast Area Transit. The transit district organization established under State statute to operate public transportation.

SAFETEA-LU Safe, Accountable, Flexible, Efficient Transportation Efficiency Act: A Legacy for Users. The most recent federal umbrella transportation act.

Enacted in August, 2005. The act is the primary source of funds for surface transportation projects for the nation.

SCRPA Southeastern Connecticut Regional Planning Agency. The Regional Planning Agency organized in 1961 that was the pre-cursor to SCCOG.

SIP State Implementation Plan. A state plan, prepared by the Connecticut Department of Environmental Protection, which depicts how the state will achieve the National Ambient Air Quality Standards (NAAQS).

STIP State Transportation Improvement Program. The STIP is a five-year implementation schedule of highway and transit improvement projects for the entire state for which funding has been earmarked. Federal regulations mandate that the STIP be annually updated and be consistent with the State Transportation Plan. STIP's must also be both fiscally constrained and be in conformance with the State Implementation Plan (SIP) for air quality.

STP Surface Transportation Program. A Federal transportation funding program that underwrites the cost of transportation improvement projects in urban areas.

TEA-21 Transportation Equity Act for the 21st Century. TEA-21 is the 1998 umbrella Federal Transportation Act which is the legal mechanism through which Federal transportation funds are received by states.

TIA Transportation Investment Area. A new regional transportation planning organization created by the Connecticut Legislature in 2000-2001. The State is divided into five planning regions (TIA's) based on the five major interstate highway corridors that divide the state. Southeastern Connecticut is in two TIA's due to its location relative to I-95 and I-395.

TIP Transportation Improvement Program. The TIP is a five-year implementation schedule of regional highway and transit improvement projects for which funding has been earmarked. Federal regulations mandate that the TIP be annually updated and be consistent with the regional transportation plan. TIP's must also be both fiscally constrained and be in conformance with the State Implementation Plan (SIP) for air quality.

TSB Transportation Strategy Board. A 15-member statewide transportation policy board which oversees transportation infrastructure investments. The TSB was created by the Connecticut Legislature in FY 2000-2001. One member of each TIA serves on the TSB in addition to the Commissioners of Transportation, Public Safety, Economic and Community Development, Environmental Protection and Motor Vehicles. Five additional members-at-large who are appointed by the Legislature also serve.