PURPOSE AND NEED

2.1 SUMMARY OF PROJECT PURPOSES AND NEEDS

Routes 82, 85 and 11 serve a vital transportation function in southeastern Connecticut as major travel routes between the capital region and the southeast shoreline area. However, this travel corridor is regarded as inadequate to safely and efficiently accommodate the volume of traffic utilizing these roadways. Routes 82 and 85 are, primarily, two-lane arterials that connect multi-lane, limited-access expressways at either end of the corridor study area. These roads currently serve both long-distance and local-access functions.

Route 85 experiences congested conditions on a regular basis and has, over the years, been the site of frequent accidents. The Southeastern Connecticut Regional Transportation Plan – FY2004-2005 cites this route as a continuing regional problem. The Plan indicates that a major corridor improvement would be required in order to realize a meaningful reduction in accidents and congestion relief. Through the combined MIS and EIS processes, current and anticipated future transportation deficiencies, as well as several potential improvement alternatives, have been identified. Each potential alternative is evaluated, herein, relative to its ability or inability to adequately address the established project purposes and needs.

The following six key points summarize the purpose and need for transportation improvements in the Route 82/85/11 corridor:

- HIGHWAY SYSTEM LINKAGE

  To complete the final link in the limited-access highway between the southern terminus of Route 11 in Salem and I-95/I-395 in Waterford.

- ROADWAY FUNCTION AND USE

  To reduce conflicts between increased mobility/efficiency and access to local properties by separating through and local traffic.

- ROADWAY SAFETY AND ACCIDENT REDUCTION

  To improve motorist, pedestrian and bicycle safety in the corridor and reduce roadway hazards contributing to accident frequency and/or severity.

- ROADWAY CAPACITY

  To provide transportation system improvements that are capable of meeting current and projected future peak traffic demands for all vehicle classes.

- REGIONAL GROWTH AND DEVELOPMENT

  To sustain community character in evaluating long-term transportation options.

- COMPATIBILITY WITH PLANS OF DEVELOPMENT

  To meet local, regional and statewide transportation needs while observing local growth and development goals and attempting to reduce excess burden on the corridor municipalities.

Through the MIS and EIS processes, the condition, performance and limitations of the existing roadway system are examined relative to existing and estimated future regional and statewide transportation demands. This document identifies the transportation factors and dynamics in southeastern Connecticut affecting the corridor and evaluates alternative strategies aimed at increasing the safety and efficiency of the subject travel routes, while complying with all state and federal regulations.

The MIS/EIS research and analysis has focused on the ability of various alternative strategies to achieve the stated project purposes. The six fundamental purposes for conducting this study are more fully described in the following pages. Although ConnDOT and FHWA are fundamentally committed to issues regarding roadway function, capacity and safety, several purposes that are peripheral to the transportation objective, but nevertheless important local issues, have also been included. The order in which the six purposes/needs appear does not reflect a specific priority.

2.1.1 HIGHWAY SYSTEM LINKAGE (STATEWIDE AND NATIONAL)

The existing Route 11 is a four-lane limited-access expressway extending in a northwest-southeast alignment from Route 2 in Colchester to Route 82 in Salem. Route 82, an east-west route, carries through traffic between Route 11 and Route 85. Route 85

generally parallels and lies east of the existing Route 11 expressway and the proposed Route 11 corridor from Colchester to the New London area. I-95 and I-395 pass through East Lyme and Waterford in west-east and southwest-northeast directions, respectively. These major expressways provide direct access to Rhode Island, New York, Massachusetts and the interior of Connecticut. They are also inter-town travel routes for trips originating and ending within the corridor area and the region.

Route 11 is regarded as a missing link in the statewide roadway network. Drivers utilizing Routes 82 and 85 as a through route to connect with Route 11, I-95 and I-395 experience the discontinuity between the higher, constant speeds on the expressways and the less predictable conditions due to the local access purposes served by these routes. Indeed, it is not only a missing link, but the final link in an established network of expressways linking southeastern Connecticut with central and northern Connecticut.

2.1.1.1 *National Highway System*: Routes 11, 82 and 85 are all designated as part of the National Highway System (NHS) network; as such, these routes form an integral link in serving statewide and national commerce, defense, public safety and general transport needs. Most of the NHS-designated roads are principal arterial highways that are able to provide direct, efficient access to destinations serving important state interests. Routes 82 and 85 are not typical of the majority of NHS roadways but, nevertheless, have been designated as such because they provide an essential link in the overall road system.

Routes 11, 82 and 85 are all designated as part of the National Highway System (NHS) network; as such, these routes form an integral link in serving statewide and national commerce, defense, public safety and general transport needs… One of the important aspects of the National Highway System Designation Act of 1995 (PL 104-59) is to promote a cohesive network of intermodal transportation facilities.

Routes 82 and 85 provide access to government services in the capital region and employment and shopping destinations in both the Hartford and New London areas. Some of the primary destinations in southeastern Connecticut include major employers, such as Electric Boat and Pfizer, and numerous other industrial and professional employment locations; the Naval Base; Coast Guard Academy; tourist attractions such as Mystic Seaport, Mystic Marinelife Aquarium and the Foxwoods and Mohegan Sun casinos; Lawrence & Memorial Hospitals and other medical facilities; a number of colleges; and shopping areas including the Crystal Mall which directly abuts Route 85. The mall, which draws traffic from throughout the region, experiences obvious weekly and seasonal peaks. The most notable congestion problems occur, logically, during the peak holiday season; at this time it is often difficult for emergency vehicles to get through this area.

One of the important aspects of the National Highway System Designation Act of 1995 (PL §104-59) is to promote a cohesive network of intermodal transportation facilities. The ability of a specific roadway to serve as a connector to air, rail, public transit and port facilities is a factor that is considered in granting NHS designation. The capital region and Bradley

International Airport are linked to intermodal facilities in the New London Area via Routes 11, 82 and 85. New London's downtown transportation center functions as a terminal for major bus lines and as a primary stop along Amtrak's Boston-New York-Washington route. The nearby Groton-New London Airport provides commuter service to various cities in the Northeast. New London also serves an important statewide commercial port function. The State Pier, which was recently upgraded, supports shipping and cargo activities, and passenger ferries based in New London provide daily service to Long Island and Fisher's Island, NY and Block Island, RI.

2.1.2 ROADWAY FUNCTION AND USE

The state system of streets and highways is designed to maximize efficiency and mobility, as well as provide access to individual properties. A fundamental transportation planning goal is to ensure that individual roads within the overall system are able to accommodate varied and complementary transportation functions. In order to efficiently serve a full range of needs, it is important that the overall roadway system include principal arterials, to achieve the greatest degree of mobility and minimize travel time, and also a network of secondary and rural roads to serve local access needs.

The hierarchal structure of the roadway system recognizes that all roadways are not equally suited to perform all functions. Under current conditions, Routes 82 and 85 are not able to accommodate both local and through traffic efficiently during certain peak periods and, without modification, roadway efficiency is likely to further decline.

Limited-access facilities are constructed to accommodate high volumes and high speeds, thus, they provide the greatest mobility. These major arterial routes cater to longer-distance travelers and must be able to accommodate all vehicle classes…
Local roads are designed to provide access to neighborhoods, businesses and community facilities; they are not as well-suited to serving through traffic.

Specific design criteria have been established for the various roadway classifications to ensure that both mobility and local access needs are met effectively. Limited access facilities are constructed to accommodate high volumes and high speeds, thus, they provide the greatest mobility. These major arterial routes cater to longer-distance travelers and must be able to safely accommodate all vehicle classes. They are typically multi-lane facilities with sufficient shoulder areas, clear lines of sight and relatively consistent horizontal and vertical geometric alignment throughout.

Local roads are designed to provide access to neighborhoods, businesses and community facilities; they are not as well-suited to serving through traffic. Roads that primarily serve local-access needs are often constructed as narrower roads with steeper grades, tighter curves and reduced sight distances. Typically, there are also numerous side roads and driveways intersecting uncontrolled access roadways, adding to their ineffectiveness at accommodating high volumes of through traffic.

There are several road classifications in addition to these two examples; the standards associated with each roadway class are based on the anticipated volumes and types of traffic that will utilize the roadway. Design standards that apply to the various classifications are specified in the publication, *A Policy on Geometric Design of Highways and Streets,* prepared by the American Association of State Highway and Transportation Officials (AASHTO). Federally-funded state highway projects must conform to these standards unless a specific design exception is granted where certain unusual circumstances exist.

Mobility and access functions are not necessarily mutually exclusive; however, as traffic volumes become heavier on multi-purpose roadways and/or more properties along the highway are developed, uncontrolled access from abutting properties contributes to congestion, slower traffic and reduced mobility; such is the case with Route 85. Historically, Route 85 was able to accommodate both through and local access functions, however, as traffic and development have increased, conflicts between local and through traffic have intensified.

Drivers attempting to turn into or out of the numerous commercial and residential driveways… encounter hazardous and/or frustrating conditions. During certain peak periods when traffic is heavy, there are few breaks in the steady stream of traffic to allow vehicles to enter the main traffic flow. During lower traffic volume times, vehicle speeds generally increase, posing a greater risk....

Drivers attempting to turn into or out of the numerous commercial and residential driveways and local streets occurring along the entire length of Routes 82 and 85 tend to encounter hazardous and/or frustrating conditions. During certain peak periods when traffic is heavy, there are few breaks in the steady stream of traffic to allow vehicles to enter the main traffic flow. During lower traffic-volume times, vehicle speeds generally increase, posing a greater danger than during congested periods. Due to high speeds, traffic accessing local roads or individual properties experiences greater risk of accident at these low volume times.

Additional conflicts arise for pedestrians and cyclists and for school children being picked up or dropped off by school busses. The high speeds, narrow shoulders, congestion, conflicts at intersections, turning traffic and similar factors effectively prohibit safe bicycle and pedestrian travel along Routes 82 and 85.

Providing a greater pavement width and additional lanes to carry higher volumes of traffic may address part of the problem, but conflicts caused by the residences and businesses having direct access to Routes 82 and 85 would continue to exist. Experience indicates that the quality of service on a four-lane undivided highway often tends to be lower than on a two-lane road where there are many commercial and residential access points. Without reconciliation of the inherent conflicts between efficient traffic movement and local land use, residents and business owners are faced with the possibility of reduced quality of life, reduced property values, lost customers and other similar adversities. Where traffic volumes warrant, the most effective way to accommodate both mobility and access functions would be to provide separate facilities for through and local traffic.

2.1.3 ROADWAY SAFETY AND ACCIDENT REDUCTION

Route 82 generally consists of two 3.6-meter (m.) (12-foot (ft.)) lanes with variable narrow shoulders, except in the immediate area of the Route 11 interchange. Route 85 is two-lane arterial through most of the corridor area, however, a 4-kilometer (km.) (2½-mile (mi.)) section of Route 85 between I-95 and I-395 in the Town of Waterford has been widened to four lanes. At several locations, additional lanes have been provided to accommodate left-turning traffic.

The variations in roadway geometry, class and conditions between the expressways, four-lane and two-lane roadways require that drivers transition accordingly. Driver expectation can cause difficulty in adjusting to the presence of interrupted traffic flows, traffic control devices, pedestrians, cyclists and reduced geometric standards on the local-access roadway. The discontinuity that typically occurs in transitioning between different roadway classes is considered undesirable and creates a potentially unsafe roadway condition.

Deficiencies in roadway alignment, numerous curb cuts, excess speeds, and congested conditions have all contributed to the numerous accidents that occur each year along Routes 82 and 85. Many of these accidents have resulted in fatalities.

Deficiencies in roadway alignment, numerous curb cuts, excess speeds and congested conditions have all contributed to the numerous accidents that occur each year along Routes 82 and 85. Many of these accidents have resulted in fatalities. Accident data for the most recent three-year period available at the time of the analysis, (1994-1996) indicates the number of accidents occurring at various corridor intersections. The total numbers of accidents over this period are shown in Table 2-1. Updated information for the period 2003-2005 is also provided.

TABLE 2-1
ACCIDENT DATA SUMMARY - SELECTED INTERSECTIONS ALONG ROUTE 85

INTERSECTION	NUMBER OF RECORDED ACCIDENTS	
	1994-1996	2003-2005
Route 85 / Route 82	31	30
Route 85 / Forsyth Road	22	2
Rt 85 / Grassy Hill / Chesterfield Road	15	5
Route 85 / Route 161	10	7
Route 85 / I-395	85	41
Route 85 / Cross Road	44	44
Route 85 / I-95 southbound ramps	38	150 (1)

Source: ConnDOT (1994-1996 and 2003-2005 data)
(1) southbound and northbound ramps

Figures available for 1992 and 1994 (ConnDOT Suggested List of Surveillance Study Sites (SLOSSS)) compare the actual number of accidents at various locations to the state-established "critical rate." The critical rate describes the relative frequency of accidents as compared with other state routes.

Of the 1,345 highest-ranked accident locations listed in the SLOSSS, the critical rates were exceeded at six locations along Route 85. In the Town of Waterford, south of the I-395 interchange (ranked #977), the Dayton Road (#1307), Cross Road and Douglas Lane (#707) intersections were noted. Accident rates at the intersection of Chesterfield Road/Grassy Hill Road with Route 85 in the Chesterfield section of Montville (#1171), slightly exceeded the critical rate. In Salem, the actual accident rate exceeded the critical rate by a substantial margin on the section of Route 85 between Woodland Drive and Route 82 (#415) and at Salem Four Corners (Route 85/82 intersection) (#507).

2.1.4 ROADWAY CAPACITY

The existing Routes 82 and 85 are both considered substandard based on current highway design standards and the volumes of traffic these roads convey. The traffic carrying capability of Route 85 is diminished by the presence of local street intersections, numerous driveways, some steep grades, which lack truck-climbing lanes, sections with narrow pavement widths, and narrow shoulder widths. These factors impede traffic flow, reduce capacity, and increase the potential for accidents. In addition, there are substandard stopping and passing sight distances at several locations. Each of these problems is likely to worsen with increased traffic demands in the future.

Traffic forecasts used in the analysis of roadway capacity were reviewed by the ConnDOT traffic forecasting division as part of the 2006 reevaluation of the DEIS (Appendix A). Traffic volumes projected for 2020 were evaluated in light of recent (2004) traffic counts collected by ConnDOT at several locations on Routes 82 and 85. A comparison of the 2004 counts with the projections provided in this analysis determined that the traffic volume projections are consistent with projections based on current recorded volumes and are still valid for use in this FEIS.

A roadway improvement project is currently being coordinated with Salem and Montville to upgrade portions of Routes 82 and 85 to acceptable arterial standards. These proposed improvements are directed toward addressing existing needs. They are not intended to address the full range of corridor deficiencies and will not obviate the need for a substantial corridor-wide transportation improvement program to address the broader, long-term issues. The current improvements focus on shoulder widening near a number of intersections to allow traffic to safely pass turning vehicles and to afford a greater margin of safety for vehicles entering the main traffic flow from side streets and

driveways. These improvements are intended to address some of the identified safety problems in the corridor, but would not increase capacity or accommodate future demand. For purposes of this document, this planned reconstruction is considered part of the existing (i.e., "no build") conditions in the corridor.

2.1.4.1 *Current and Future Traffic Volumes*: During certain peak periods, traffic in the corridor is presently heavy and increasing yearly. It reaches heavy levels during commuter peak periods year round. On summer weekends, when recreation traffic in the corridor reaches its peak, conditions are considered intolerable by many corridor residents. Beaches, marinas and other recreational and tourist opportunities and attractions are abundant throughout southeastern Connecticut and nearby Rhode Island. The addition of the Mashantucket and Mohegan casino complexes in recent years has further contributed to the growth of tourism, and resulting increases in traffic in the southeastern region.

During certain peak periods, traffic in the corridor is presently heavy and increasing yearly… On summer weekends, when recreation traffic in the corridor reaches its peak, conditions are considered intolerable by many corridor residents.

Local-access problems, particularly those associated with properties directly abutting Route 85, are most pronounced during periods of high traffic flows. This is not uncommon on substandard arterial facilities, which must serve abutting land uses as well as handle heavy through volumes.

Average daily traffic (ADT) data, based on traffic volume counts updated in 1998, indicate the ADT in the two-lane section of Route 85 between Salem and Chesterfield ranged from 12,200 to 12,800 vehicles per day. Between Chesterfield and I-395, ADT ranged from 10,800 to 15,400 and between I-395 and Cross Road, from 20,800 to 21,000. ADT from I-95 to Cross Road was 29,100. ADT counts at five of the higher-volume locations are shown on Table 2-2.

TABLE 2-2
1998 ADT COUNTS (SELECTED LOCATIONS)

LOCATION	ADT COUNTS
Route 11 north of Route 82	7,200 vehicles
Route 82 west of Hagen Road	8,400 vehicles
Route 85 north of Route 161	15,400 vehicles
Route 85 north of Cross Road Ext.	21,000 vehicles
Route 161 west of Route 85	5,000 vehicles

Source: Wilbur Smith Associates/Fitzgerald & Halliday, Inc.

2.1.4.2 *Projected Future Traffic Volumes:* Future traffic demands in the Route 82/85/11 corridor from Salem to Waterford were projected for the year 2020, based on the updated 1998 counts. ConnDOT's statewide travel demand model was used to relate current and future population and employment trends and derive future travel demand. The forecast indicates future ADT (2020) ranges from 7,000 vehicles on Route 161 west of Route 85 to 40,800 on Route 85 north of I-95. Table 2-3 presents 2020 ADT projections at the same five corridor locations.

TABLE 2-3
2020 ADT PROJECTIONS (SELECTED LOCATIONS)

LOCATION	ADT COUNTS
Route 11 north of Route 82	10,800 vehicles
Route 82 west of Hagen Road	11,800 vehicles
Route 85 north of Route 161	21,600 vehicles
Route 85 north of Cross Road Ext.	29,400 vehicles
Route 161 west of Route 85	7,000 vehicles

Source: ConnDOT/Wilbur Smith Associates

Comparison of the 1998 and 2020 projected traffic volumes indicates traffic can be expected to grow from between 33 to 50 percent over the next twenty-two years, depending on location. The greatest increases in traffic are expected on Route 11 north of Route 82, Route 85 north of Route 161, Route 85 north of I-95, and Route 161 west of Route 85.

ROUTE 11'S CURRENT TERMINUS AT ROUTE 82 (EXIT 4 OFF-RAMP) PHOTOGRAPHED ON JULY 3, 1998

2.1.4.3 *Projected Future Levels of Service*: Based on the 2020 volume projections, many intersections within the corridor study area will experience either poor or barely acceptable Level of Service (LOS) ratings in the future year. LOS is the term used to qualitatively describe operating conditions on a given roadway facility under various traffic volume demands. Letter designations, ranging form LOS A to LOS F, are used to describe average vehicle delay times at a specific location with LOS A representing the best operating conditions and LOS F the worst LOS is more fully described in Section 4.1.8 and summarized in Tables 4-8 and 4-9.

Generally, an LOS of D, E or F, based on the standard A through F classification, would be considered barely acceptable or poor; according to standard engineering practice, LOS D is

considered the minimum acceptable LOS for an existing roadway. Tables 2-4 and 2-5 present existing and projected conditions at several of the higher-volume signalized and unsignalized intersections on Route 82 and 85.

TABLE 2-4
1998 AND 2020 LEVELS OF SERVICE (SELECTED LOCATIONS)

LOCATION	1998 & 2020 LOS (SIGNALIZED INTERSECTIONS)			
	1998 AM	1998 PM	2020 AM	2020 PM
Route 85 / Route 82	B	B	C	D
Route 85 / Grassy Hill	B	B	E	F
Route 85 / Route 161	B	B	B	C
Route 85 / I-395	B	B	B	B
Route 85 / Cross Road Ext.	B	B	B	B
Route 85 / I-95	B	B	C	F

Source: ConnDOT/Wilbur Smith Associates

TABLE 2-5
1998 AND 2020 LEVELS OF SERVICE (SELECTED LOCATIONS)

LOCATION	1998 & 2020 LOS (UNSIGNALIZED INTERSECTIONS)			
	1998 AM	1998 PM	2020 AM	2020 PM
Route 82 / Route 11 off-ramp	B	C	E	F
Route 85 / Forsyth Road	B	D	C	F
Rte 85 / Salem Tnpk. / Beckwith	C	B	E	D
Route 85 / Turner Road	C	C	D	F
Route 85 / I-395 (n/b ramps)	D	F	F	F
Route 85 / Way Hill / Industrial	D	F	F	F

Source: ConnDOT/Wilbur Smith Associates

The increases in average traffic volumes that have been experienced, and are expected to continue each year, result in constant daily pressures on the existing roadway facilities. However, the commuter peak hours, year round, and the recreational peaks result in increased congestion more often. In the future, these conditions can be expected to intensify if no relief is provided.

Past studies investigated mass transit and ridesharing opportunities to determine the effect that these options might have upon relieving traffic in the corridor. ConnDOT and the Southeastern Connecticut Council of Governments (SCCOG), along with major employers in the southeastern Connecticut region, have encouraged the use of ridesharing and mass transit. However, it is generally recognized, and studies undertaken for the FEIS have indicated, that the positive effects that could be realized through promotion of transit options are insufficient to offset the need for other improvements in the corridor.

2.1.5 Regional Growth and Development

Portions of southeastern Connecticut have seen a surge in population and general growth in recent years. The towns of Salem and Colchester have been among the fastest growing in the state. The increase in residential development within the corridor has resulted in construction of several new subdivision roads, each serving multiple residences, and construction of additional driveways accessing lots fronting on Route 85. There is currently limited land area held in reserve for potential future roadway development or improvement. Most of the land, both developed and undeveloped, within the corridor study area is held in private ownership.

The increase in residential development within the corridor has resulted in construction of several new subdivision roads, each serving multiple residences, and construction of additional driveways accessing lots fronting on Route 85.

The towns of Montville, Ledyard, Preston and North Stonington have been the focus of the casino-related activity and growth in the region, but the effects of these developments have been experienced throughout southeastern Connecticut. Both the Foxwoods and Mohegan Sun casinos have contributed to a marked increase in traffic in the region, caused not only by their tremendous tourist draw, but also in that they employ large numbers of people from throughout the entire region.

While issues related to growth and development are not traditional transportation-related project purposes, these issues have been underscored by the corridor Advisory Committee (AC) as having substantial local importance and, therefore, have been included along with the primary transportation purposes.

2.1.6 Compatibility with Plans of Development

Similar to the consideration given to growth and development issues, noted above, compatibility with local planning objectives has also been included among the project purposes and needs, although not a standard transportation-related purpose. The corridor AC has stressed that a major transportation improvement is likely to influence and shape local development. This secondary purpose is, therefore, included to assure specific consideration of local compatibility issues.

The study area towns, in their respective Plans of Development, all anticipate some improvements or changes being made within the Route 82/85/11 corridor. Route 85 in Waterford and the Waterford "Business Triangle" (bordered by I-395 on the north, I-95 on the southwest and Route 85 on the northeast) have great potential for growth and development due largely to good access from the south, east and west and the expressed desire of the towns involved to develop the area in an appropriate manner.

The study area towns, in their respective Plans of Development, all anticipate some improvements or changes being made within the Route 82/85/11 corridor.

Waterford's Draft Plan of Preservation, Conservation and Development (1998) expresses the need and desire to work with the state on several projects of local importance; among these, the Plan specifically identifies completion of Route 11 from Salem to an interchange at I-95/I-395 on its priority list of projects. Montville, in its 1996 Plan of Development, cites a number of transportation-related goals including to "promote completion of Route 11 in such a manner that the long-term economic and environmental goals of Montville are ensured." East Lyme's Plan of Development states support for the completion of Route 11 and expresses a specific desire for Route 11 to extend to I-95/I-395. Salem's 1991 Plan of Development stresses the traffic problems on Route 85, noting both public inconvenience and safety concerns; the Plan further states that "the urgency and importance of the proposed Route 11 extension through Salem by ConnDOT cannot be overstated."

Policy initiatives set forth in the *Conservation and Development Policies Plan for Connecticut 1998-2003* strive to balance human, environmental, and economic needs in a manner which best suits the future of Connecticut (OPM).

Issues the Plan addresses include: population, employment, transportation, energy, housing, poverty and the environment. Regarding transportation initiatives in the state, the Plan's goal is "to provide an integrated, efficient, and economical transportation system that provides mobility, convenience, and safety for all citizens, including the transit-dependent and people with disabilities." Specific policies established in support of transportation goals are as follows:

- Maintain the condition of, and encourage efficient use of, existing transportation systems and support alternatives to single-occupancy vehicle use;
- Improve relationships between transportation and land use decisions, emphasizing direction of new industrial, commercial, and residential development to transit accessible locations;
- Foster and coordinate public and private transit and non-conventional approaches that serve the basic needs of all segments of the population;

- Expand the state's integrated transportation system, in accordance with available public resources, where justified by the need for improved safety, choice of mode, mobility, and convenience; and
- Coordinate transportation, air quality, water quality, and energy planning.

The Plan notes that the "ConnDOT Strategic Plan guides discretionary funding towards projects that ensure safety, maintain and operate the existing system, increase the productivity of the existing system, and promote economic development. Although critical capacity improvements will be provided where feasible, transportation resources will be focused primarily on preservation of the existing system."

The plan acknowledges that the low-density living arrangements common in suburban towns throughout the state rarely support modes of transportation other than the automobile and further states that changing demographics and growth in automobile travel has led to congestion on many state routes, including those in southeastern Connecticut. The Route 11 corridor from Salem to Waterford is included in the list of major transportation studies to be conducted in order to ensure that all prudent and feasible alternatives are identified in advance and assessed in accordance with their economic, social, and environmental implications. The Plan emphasizes use of the existing transportation system in a more productive manner without compromising safety. The plan further urges the use of Transportation System Management (TSM) techniques, such as access controls, incident management and coordinated traffic signals; these should be coupled with active promotion of transit services, ridesharing, and other support strategies.

The Route 11 corridor from Salem to Waterford is included in the list of major transportation studies to be conducted in order to ensure that all prudent and feasible alternatives are identified in advance and assessed in accordance with their economic, social, and environmental implications.

The Plan also identifies other relevant goals such as promotion of a strong and diverse economy; establishment, protection and management of sufficient high quality water supply sources and facilities to meet existing and future needs; preservation of prime agricultural lands; and management of waters of the state for water supply, water-based recreation, and for the protection and propagation of fish, shellfish, and wildlife.

2.2 Army Corps of Engineers' Determination of Basic Project Purpose

The ACOE is charged with developing a Basic Project Purpose for projects coming under their jurisdictional oversight (relative to §404 of the Clean Water Act); this statement differs from the more comprehensive NEPA statement of purpose and need developed by ConnDOT and FHWA, with input from the AC.

The Basic Project Purpose for the Route 82/85/11 corridor has been defined by the ACOE… "to address existing and future year (2020) safety and capacity deficiencies in the existing Route 82 and 85 corridor."

The Basic Project Purpose, once established, serves to guide the ACOE review and permitting processes to ensure that the alternatives under consideration are focused and reasonably relate to the reason for the permit request. All of the alternatives presented in this FEIS will be examined by ACOE to determine how well each alternative meets the Basic Project Purpose. The FEIS compares each of the alternatives relative to their ability to meet both the NEPA purpose and need and the ACOE Basic Project Purpose. The ACOE has defined the Basic Project Purpose for the Route 82/85/11 corridor improvements as follows: "to address existing and future year (2020) safety and capacity deficiencies in the existing Route 82 and 85 corridor."

THIS AERIAL PHOTO, TAKEN IN NOVEMBER OF 1997, SHOWS THE TERMINUS OF ROUTE 11 AT ROUTE 82 IN SALEM. THIS VIEW CLEARLY SHOWS THE AREA THAT WAS PREPARED AND GRADED IN THE 1970S FOR CONTINUATION OF THE EXPRESSWAY TO I-95/I-395.