

Chapter 1

INTRODUCTION

The Connecticut Department of Transportation (ConnDOT), and the Council of Governments of Central Naugatuck Valley (COGCNV) have identified peak hour traffic congestion and safety deficiencies along Interstate 84 (I-84) as major concerns for the West of Waterbury (WOW) corridor between the Housatonic River in Southbury and Interchange 23 in Waterbury. To address these concerns and to evaluate the effectiveness of different transportation improvement alternatives, these agencies are jointly undertaking a Needs and Deficiencies Study for the WOW corridor.

The mobility and economic vitality of the corridor is of critical importance to its communities, the Central Naugatuck Valley Region (CNVR), and the state as a whole. In addition, because the corridor includes Interstate 84, all of New England will be impacted by the proposed transportation improvements. The ability to continue to move safely and efficiently through the corridor will influence the competitive position of businesses in the region.

This report identifies the existing and future needs and deficiencies in the WOW corridor and recommends alternatives that will best meet the needs of the towns, the region, and the state. The study alternatives were developed as a result of input from the citizens and representatives of the study area communities. The suggested alternatives were evaluated on their ability to satisfy the study goals and objectives and to accommodate future traffic and land use projections. The selected improvements were identified by their overall effectiveness in contributing to safety, reducing congestion, improving air quality, and by their economic feasibility.

1.1 Transportation Goals and Objectives

Transportation Goals and Objectives are the cornerstones for evaluating alternative transportation improvements. Goals are defined as:

- Aims or aspirations that direct the intent of implementing strategies. Broader than merely seeking to improve transportation, goals are expressions of "why" transportation strategies are implemented. They may represent changes in overall corridor conditions that will result from transportation improvements of all types. Goals are typically not quantifiable, but represent the expression of overriding societal values. Job creation, environmental protection, education, or recreation can be included into this category.

Objectives represent a separation of defined goals into component elements. They are defined as:

- Supporting components that enable the achievement of targeted goals. Objectives should lead to logical, quantifiable performance measures and focus on singular issues. Objectives may contribute to the achievement of more than one goal for the study.

Performance Measures (or Measures of Effectiveness) enable the quantification of the degree or achievement of defined objectives. They may be applicable for more than one objective.

An Advisory Committee (AC) was established which assisted in evaluating the potential for success of these alternatives. The AC members were asked to define the goals and objectives for the study. At the AC Meeting on the evening of January 26th, 2000, the members were assigned the task of developing a set of goals upon which the study would be asked to address. Each municipality was represented at the meeting and allowed the opportunity to define goals based on their needs and priorities. A uniform set of goals was developed that would govern the process by which the study would proceed.

In response to this exercise, the study team developed a set of corresponding objectives that would be used to satisfy the goals. Table 1.1 lists the goals and objectives that have been identified for this study. In addition, performance measures are listed that will allow the team to determine the relative anticipated ability of the alternatives to address the corridor needs and deficiencies, considering the study goals and objectives.

Table 1.1
Study Goals and Objectives

Goals	Objectives	Performance Measures
<p>Reduce Peak Hour Congestion</p> <p>The goal is to reduce peak hour vehicular congestion, both in the A.M. and P.M. periods.</p>	<ul style="list-style-type: none"> • Eliminate operational or physical constraints on I-84 and adjacent arterial roads • Reduce vehicle hours of travel (VHT) during peak travel periods • Utilize Intelligent Transportation Systems (ITS) strategies to more effectively manage transportation services and demand 	<ul style="list-style-type: none"> • Vehicle delay • Level of service • Travel time savings • Transportation user benefit and cost • Hours of congestion • Traffic volume • Average speed
<p>Public Health and Safety</p> <p>The goal is to improve public health and safety associated with transportation.</p>	<ul style="list-style-type: none"> • Reduce the accident potential and hazard associated with the corridor. • Reduce the potential for truck related accidents and enhance overall truck safety in the state and region • Control traffic speed in conformance with legal limits. • Upgrade roadway to eliminate or reduce physical conditions contributing to unsafe movements. • Reduce emissions associated with mobile sources, especially those near sensitive receptors. • Reduce noise impacts to sensitive receptors. 	<ul style="list-style-type: none"> • Number, type and severity of accidents • Median and 85th percentile speed • Truck parking in undesignated areas • Conformance of roadway segments with AASHTO and ConnDOT design standards • Number of sensitive air and noise receptors exposed • Automobile emissions

Table 1.1 continued

Goals	Objectives	Performance Measures
<p>Economic Development</p> <p>The goal is to increase opportunities for local and region-wide economic development by improving transportation mobility.</p>	<ul style="list-style-type: none"> • Facilitate truck movement through and within the corridor. • Enhance transportation access to areas designated for industrial and economic development. • Increase the economic viability of existing public infrastructure investments, such as roadways, parking facilities, and transit facilities. • Increase the potential for economic viability in terms of regional and state productivity, jobs, and property tax base. 	<ul style="list-style-type: none"> • Number and location of major employment centers served • Number and type of underutilized infrastructure facilities • Economic benefits and costs of transportation improvements • Truck flows and facilities
<p>Community Livability and Quality of Life</p> <p>The goal is to enhance the livability and quality of life for corridor towns, neighborhoods and communities</p>	<ul style="list-style-type: none"> • Reduce air and noise impacts on neighborhoods and sensitive receptors. • Discourage traffic diversion from the interstate and maintain through traffic on I-84. • Improve traffic flow on arterial highways. • Preserve and enhance aesthetics. • Avoid or mitigate impacts to environmental resources. • Minimize impacts to low-income populations through Environmental Justice. 	<ul style="list-style-type: none"> • Traffic volume on local roads and neighborhoods • Average travel speed on local roads • Watercourses crossed • Acres of wetlands impacted • Numbers of sensitive air and noise receptors impacted • Number of low income households impacted

Source: I-84 Advisory Committee, Wilbur Smith Associates

1.2 Study Area

The study corridor limits are illustrated in [Figure 1.1](#). These limits can be described as: Interstate 84 from the Housatonic River (Interchange 13) in Southbury to Interchange 23 in Waterbury, including the interchange of Route 8 and its associated ramps, the Oxford Airport, the intersection of Routes 63 and 64, and approximately 2000 feet of land on both the north and south sides of the Interstate.

1.3 Study Process

The statement of Existing and Future Conditions (Technical Memorandum # 1) constituted the first step in the Needs and Deficiencies process. It documented transportation system performance, and it identified environmental and social conditions that would affect the viability of various improvement alternatives.

Transportation Alternatives (Technical Memorandum # 2) documented the preliminary alternative improvement strategies that have been put forward by ConnDOT for review by the Advisory Committee. These range from the 'No-Build' Scenario to the construction of an additional lane on each direction of I-84. This report also served as the preliminary screening of feasible alternatives.

This final report in the study process summarizes the documentation presented in Technical Memorandums #1 and #2, presents the results of the transportation alternatives refinement process, and recommends a corridor action plan based on comments from the public and the Advisory Committee.

1.4 Public Participation

A comprehensive public involvement program was developed for the study to bring local organizations and citizens up to date on specific issues and to listen to their concerns. The public involvement program incorporated the following elements:

- Six (6) public meetings of the AC held on January 26th 2000, March 21st 2000, June 26th 2000, October 11th 2000, May 22nd 2001, and November 7th 2001;
- Nine (9) Public Information Meeting held on March 29th 2000, July 19th 2000, January 24th 2000, January 25th 2001, June 6th 2001, June 7th 2001, October 4th 2001, October 9th 2001, and October 15th 2001;
- Twelve (12) presentations to the study area towns and their elected officials;
- Three (3) meetings with COGCNV;
- Four (4) meeting with the Greater Waterbury Chamber of Commerce;
- Several local meetings with private developers and local community groups; and,
- Compilation and maintenance of a mailing list.

The Appendix at the end of this report contains the public comments that were collected at the various Public Informational Meetings.

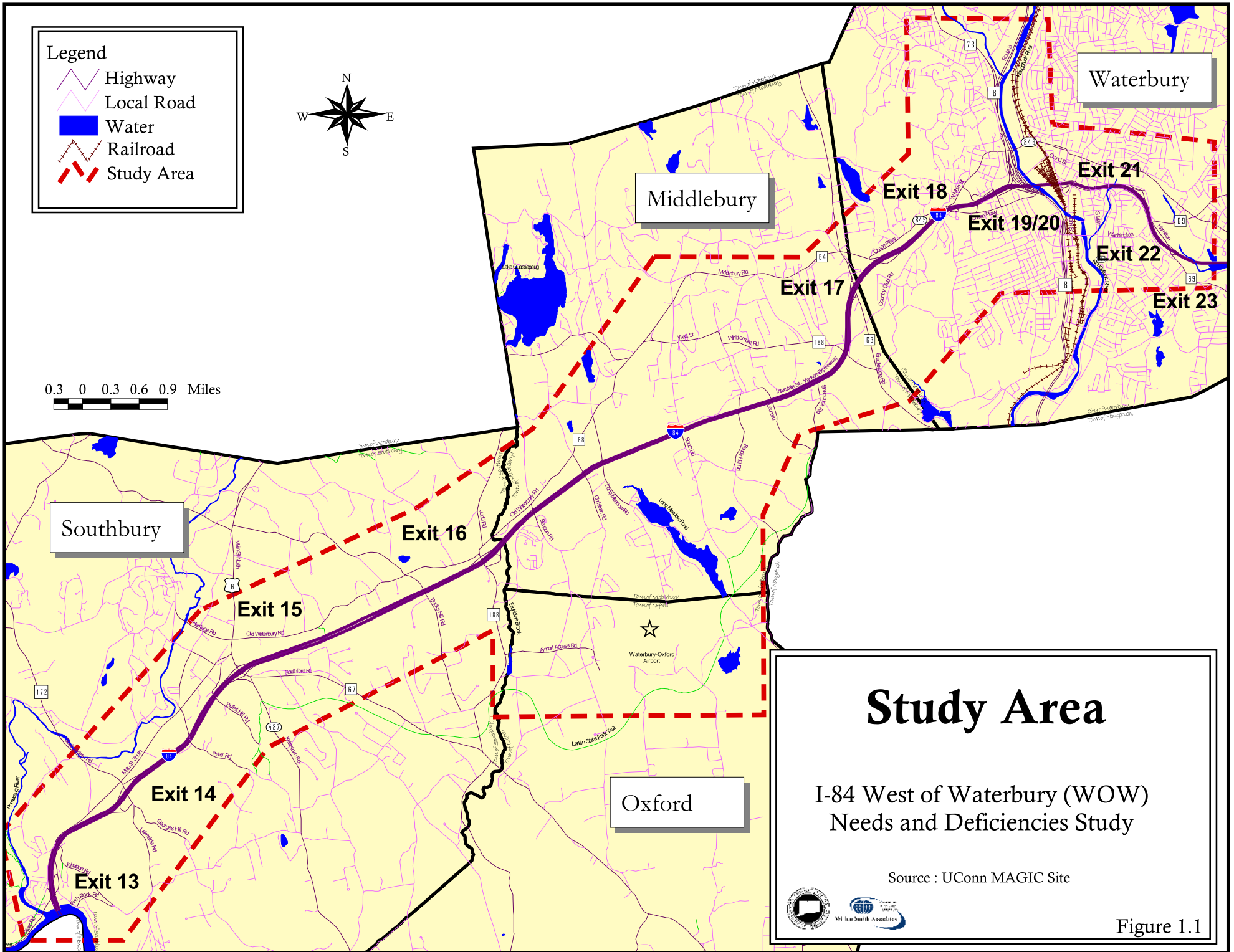
1.5 Study Team

Wilbur Smith Associates (WSA) was contracted by ConnDOT to perform the study and facilitate public outreach. WSA is a multi-disciplinary transportation engineering and planning firm with extensive experience in multi-modal transportation studies. WSA sub-contracted with two additional firms to aid in the analysis:

- Fitzgerald and Halliday (FHI), specializing in land use planning and environmental analysis.
- GM², specializing in structural analysis.

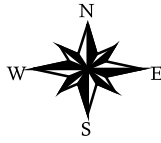
In addition to these firms, an important component of the study team was the Advisory Committee (AC). The AC consisted of representatives from each of the towns and cities within the study corridor and from state and federal public agencies. The group was responsible for assisting in the data collection, analysis review, and public outreach to their respective constituents. Participating agencies and municipalities included:

- Council of Governments of Central Naugatuck Valley (COGCNV)
- City of Waterbury
- Town of Middlebury
- Town of Southbury
- Town of Oxford
- North East Transportation Company
- Rideworks
- Greater Waterbury Transit District
- Country Club Neighborhood Association
- Housatonic Valley Association
- Greater Waterbury Chamber of Commerce
- Federal Transit Administration
- Federal Highway Administration
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Office of Policy and Management
- Connecticut Department of Economic and Community Development
- U.S. EPA, Region I
- Department of Environmental Protection
- State Historic Preservation Office
- Connecticut Motor Transport Association



Legend

- Highway
- Local Road
- Water
- Railroad
- Study Area



0.3 0 0.3 0.6 0.9 Miles

Southbury

Middlebury

Waterbury

Oxford

Study Area

I-84 West of Waterbury (WOW)
Needs and Deficiencies Study

Source : UConn MAGIC Site



Figure 1.1