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Introduction

The Connecticut Department of Transportation (ConnDOT) and the Housatonic Valley Council of Elected Officials (HVCEO) identified the need to evaluate deficiencies and define long-term transportation improvements needed along the I-84 corridor from the New York State line to the Housatonic River (Interchanges 1 to 11). This corridor spans the communities of Danbury, Bethel, Brookfield and Newtown.

This report documents the findings of the study and presents the existing conditions assessment, future conditions analyses (projected to the year 2025), the improvement alternatives considered, and the final recommendations and plan of action for the corridor.

1.1 Project Goals and Objectives

Key underlying issues and objectives of the I-84 Corridor Deficiencies/Needs Study include the following:

- **Preserve the capacity of I-84.** The improvement alternatives identified for the I-84 interchanges must preserve the capacity of the mainline. This requires careful consideration of changes to ramp merge and diverge locations and weave conditions within the corridor.

- **Address each interchange's unique operating conditions and placement in the overall system**. The study will need to examine opportunities to improve safety conditions within the interchanges and to eliminate and/or consolidate traffic movements through them while maintaining access to the local communities and major attractions.

- **Enhance arterial street system operations.** The tight geometry of the interchanges and close proximity of adjacent intersections constrain operations and potentially affect safety along both the arterial street system and the Interstate. This study needs to look creatively at all options to enhance arterial street system operations. This might include modifications in circulation or traffic control at the upstream and downstream signalized intersections, or may include elimination of some ramp movements.

- **Provide for future growth.** The I-84 system is tremendously important to provide access to existing and developing land uses. Future improvements need to keep open the options for development and accommodate growth in traffic flows, both regionally and locally.

1.2 Study Area

The study area for this project extends along the I-84 corridor from the New York State line in Danbury east approximately 18.5 miles to the Housatonic River in Newtown through the communities of Danbury, Bethel, Brookfield, and Newtown. There are 11 interchanges within the study area limits (Exits 1 through 11) that provide access to both local and major regional roadway corridors. Locally (i.e., within the Housatonic Valley region), I-84 is the only interstate facility. In the Housatonic Valley Regional Transportation Plan, I-84 was referred to as the modern "Main Street" of the region– providing a critical economic asset to all of the 10 municipalities of the Housatonic Valley.

Regionally, I-84 is a critical east-west corridor linking Boston and other parts of Massachusetts through Hartford, Waterbury, and Danbury, Connecticut and continuing westward through southern New York State to Scranton, Pennsylvania. Along its length, I-84 provides connections with major interstate highways such as I-90, I-91, I-684, and I-380.

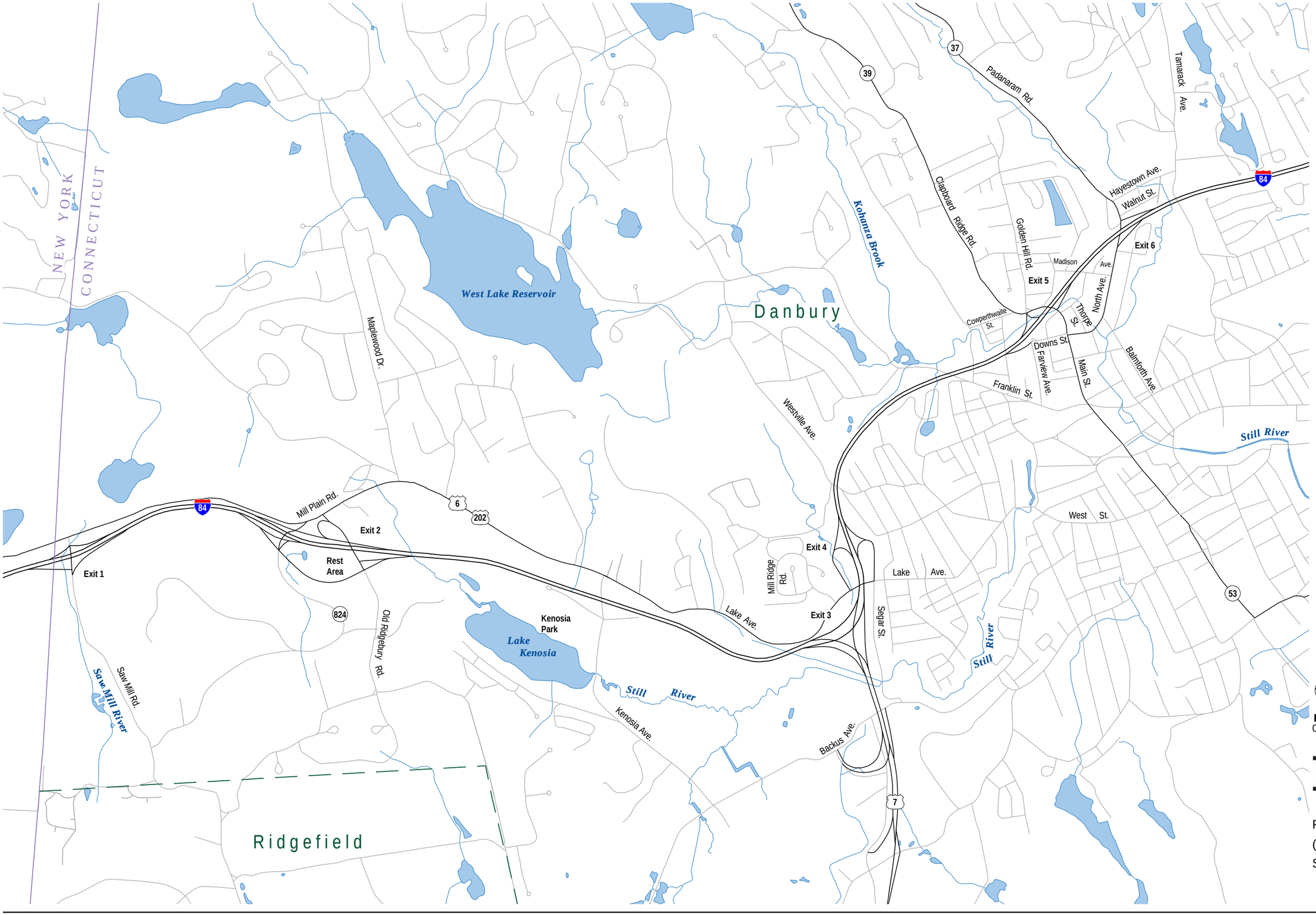
Within the study area, I-84 is a limited access, divided highway that varies from four to eight lanes. From the New York State line to Exit 2, I-84 is four-lane highway that widens to a six-lane highway between Exits 2 and 3. Between Exits 3 and 4, I-84 is an eight-lane cross-section. From Exit 4 to 8, and between Exits 10 to 11, I-84 is a six-lane cross-section. From Exit 8 to Exit 10, I-84 varies from four to six-lanes. The study area encompassed by this project is depicted in Figure 1-1.

1.3 Study Process

Similar to most engineering and planning studies, a structure or "process" for this study has been established at the onset. The study process, depicted in Figure 1-2, provides a general overview of the project goals, task sequences, and deliverables.

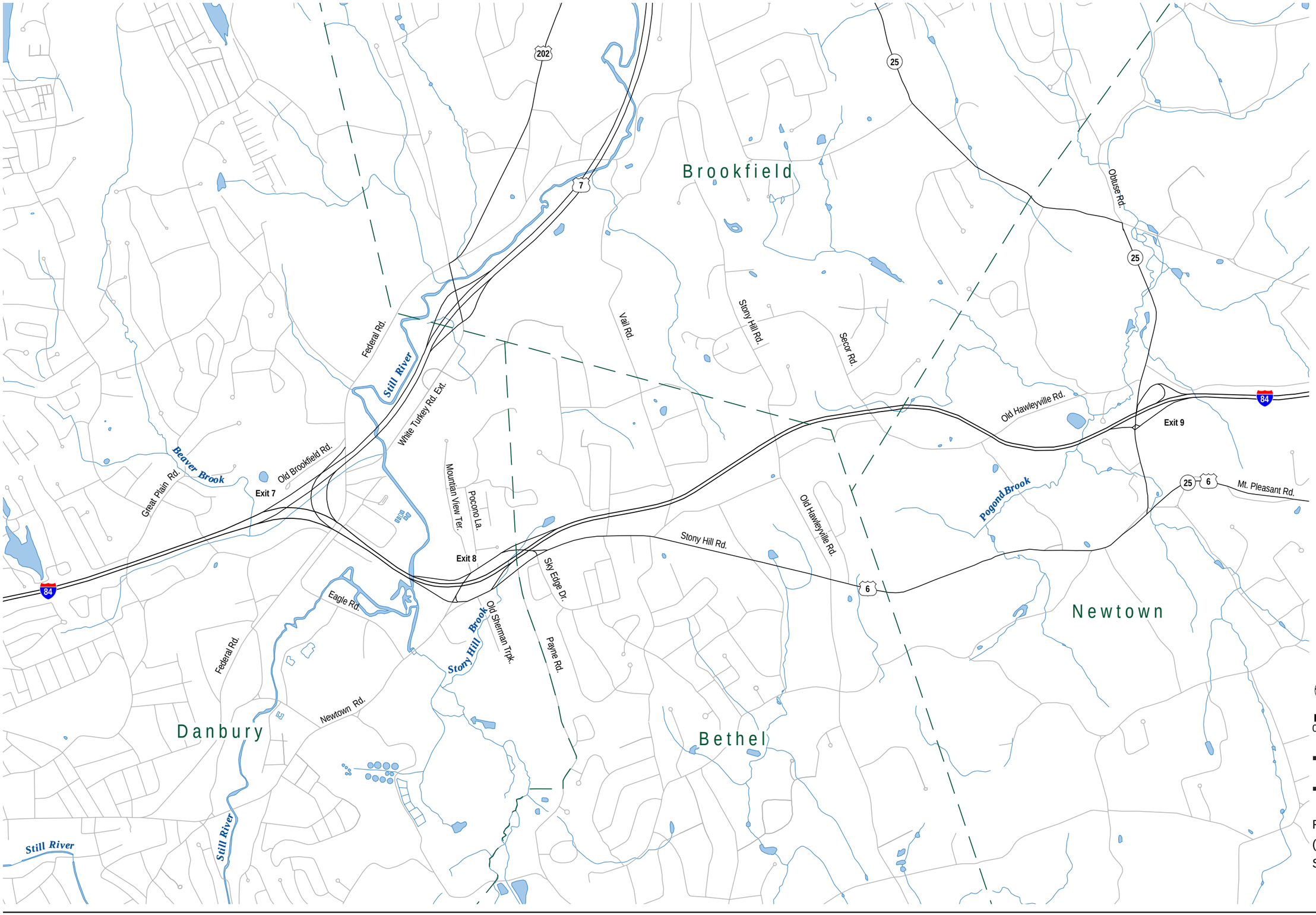
These tasks are as follows:

- Task 1—Study Management/Public Participation
- Task 2—Project Initiation/Mobilization
- Task 3—Analysis of Existing Conditions
- Task 4—Analysis of Future Conditions



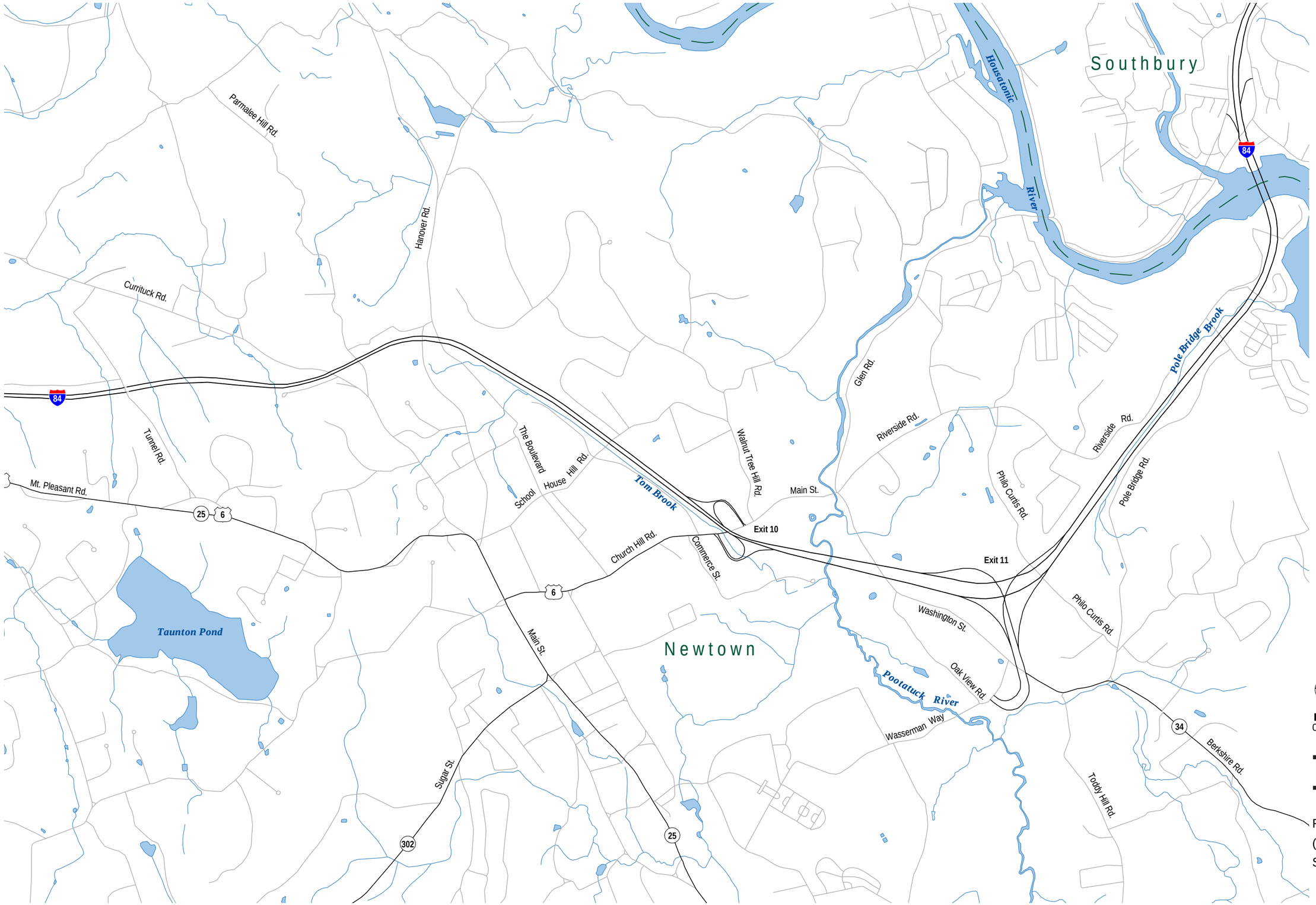
I-84 Exits 1-11

Figure 1-1
(Sheet 1 of 3)
Study Area Map



I-84 Exits 1-11

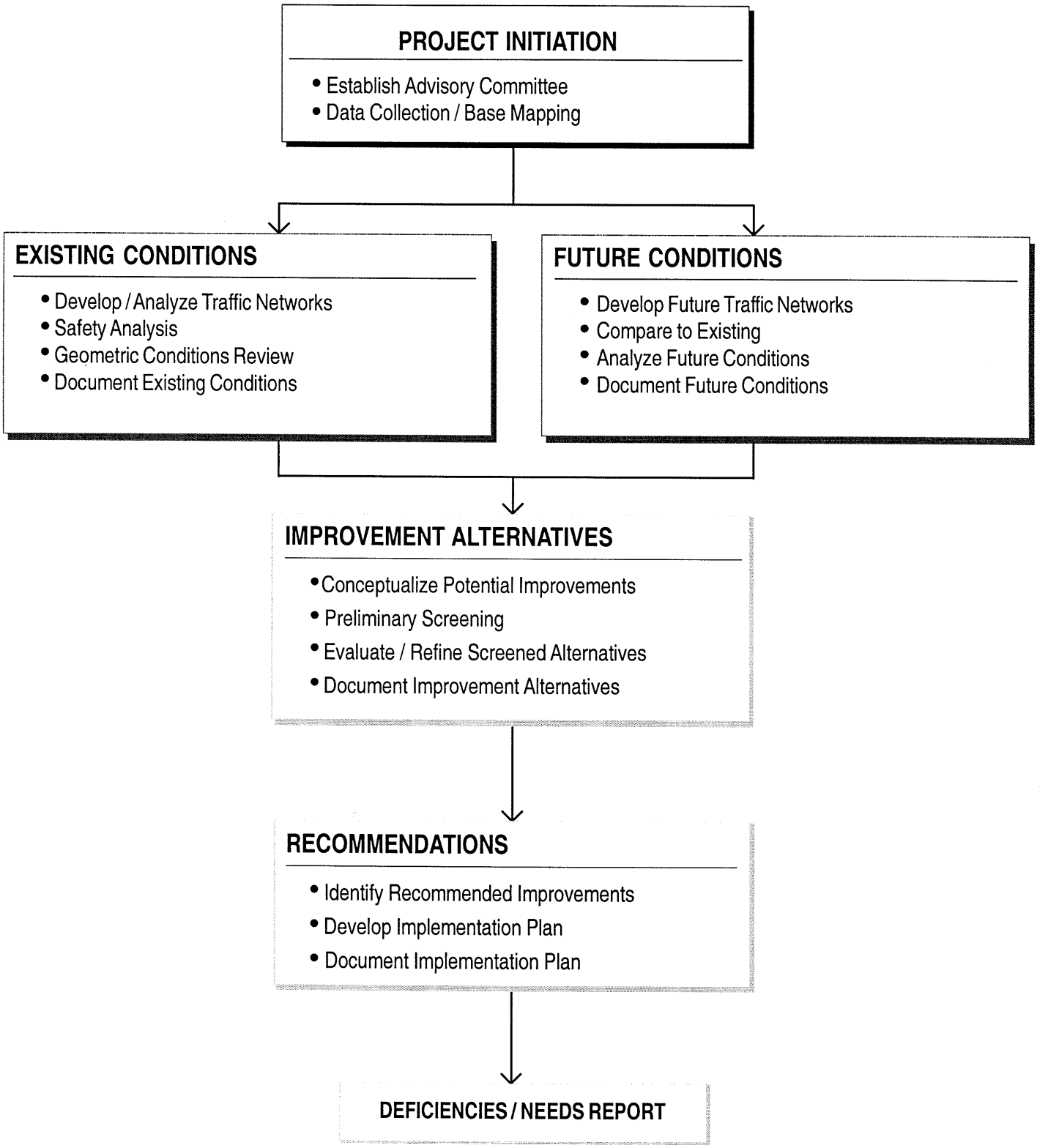
Figure 1-1
(Sheet 2 of 3)
Study Area Map



I-84 Exits 1-11

Figure 1-1
(Sheet 3 of 3)
Study Area Map

Figure 1-2
Study Process



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- Task 5—Identify Preliminary Alternatives
- Task 6—Alternative Refinement
- Task 7—Development of Recommendations
- Task 8—Implementation Plan
- Task 9—Draft Deficiencies/Needs Report
- Task 10—Final Deficiencies/Needs Report

Part of the initial stages of this project involved the establishment of an Advisory Committee (AC) for this study. The 28-member AC is comprised of various transportation "stakeholders" in the Housatonic Valley Region who were asked to participate by ConnDOT and HVCEO. A stakeholder is defined as a person, municipality, agency, business, or group with interest in the corridor. The purpose of the AC is to guide ConnDOT and VHB through the duration of the study, review all technical documents, and provide direct input on alternatives. Most importantly, the AC will help foster regional cooperation and consensus for the study. Throughout the course of the project, a total of 8 AC meetings are planned to take place at critical decision points. The Appendix to this report provides a list of AC members.

1.4 Public Participation

A major component of this project was public participation. Aside from AC meetings, public input was solicited through local outreach meetings and public informational meetings. Local outreach meetings were targeted meetings with key stakeholders to discuss specific issues and the viability of solutions. Public informational meetings were informal, "open-house" meetings where input is solicited broadly from the public. Six informational meetings were held during the course of the study.

The public informational meetings were conducted in the early evenings to accommodate work schedules and to encourage attendance. These meetings were publicized extensively and scheduled well in advance to provide early notice to the public. The timing for Public Informational Meetings coincided with key project milestones as follows:

- Public Informational Meetings 1 and 2 – Study Initiation/Scoping
- Public Informational Meetings 3 and 4 – Preliminary Alternatives
- Public Informational Meetings 5 and 6 – Draft Recommendations

Table 1-1 presents a summary of the timing, location and purpose of the advisory committee and public informational meetings that were held throughout the study. In total, 8 AC meetings and 6 public meetings were held. The public meetings consisted of a brief 30-minute presentation followed by an informal public input session where representatives from ConnDOT and VHB were posted at various stations where plans were displayed to answer questions and record public reaction and input.

Table 1-1
I-84 Project Meeting Schedule

Meeting	Location	Date	Agenda / purpose
Advisory Committee Meeting #1	Danbury City Hall	February 25, 1999	• Overview of goals and objectives of project • Overview of the role of the AC and HVCEO • Review of project scope and schedule • Summary of preliminary corridor issues • Summary of outreach program
Public Informational Meeting #1 Public Informational Meeting #2	Danbury City Hall Newtown High School	April 5, 1999 April 6, 1999	• Presentation of existing conditions • Community input on existing issues and solutions
Advisory Committee Meeting #2	Booth Library, Newtown	April 6, 1999	• Presentation of existing conditions • Presentation of land use issues by communities and Region
Advisory Committee Meeting #3	Danbury City Hall	June 2, 1999	• Discussion of existing conditions analysis • Guest speakers from ConnDOT District 4 and AAA • Presentation of future 2025 conditions • Overview of environmental constraints mapping
Advisory Committee Meeting #4	Booth Library, Newtown	August 18, 1999	• Review of future 2025 conditions findings • Working sessions on future improvement alternatives
Advisory Committee Meeting #5	Danbury City Hall	October 28, 1999	• Preliminary screening of transportation alternatives • Update of mainline widening analysis • Status report on short-term improvements
Advisory Committee Meeting #6	Danbury City Hall	Jan 19, 2000	• Preliminary screening of transportation alternatives • Update of mainline widening analysis
Public Informational Meeting #3 Public Informational Meeting #4	Danbury City Hall Newtown High School	February 14, 2000 February 15, 2000	• Presentation of future conditions assessment and preliminary improvement alternatives • Community input on preliminary improvement alternatives
Advisory Committee Meeting #7	Bethel Municipal Center	March 29, 2000	• Presentation of mainline widening assessment • Selection of preferred interchange improvement concepts
Advisory Committee Meeting #8	Booth Library, Newtown	June 7, 2000	• Review of draft corridor action plan
Public Informational Meeting #5 Public Informational Meeting #6	Newtown High School Danbury City Hall	June 19, 2000 June 20, 2000	• Presentation of draft recommendations, construction costs, and action plan • Community input on draft recommendations

1.5 Project Staff

The "Project Team" involved in the completion of this study consists of staff from the Connecticut Department of Transportation (ConnDOT), the Vanasse Hangen Brustlin, Inc. (VHB) consultant team, and the Housatonic Valley Council of Elected Officials (HVECO). Key project staff include:

- Mr. Bruce Garrett, Director, Intermodal Policy and Planning (ConnDOT)
- Mr. Carmine Trotta, Assistant Director, Intermodal Policy and Planning (ConnDOT)
- Mr. Francis Zapatka, Project Manager (ConnDOT)
- Mr. James Andrini, Transportation Planner II (ConnDOT)
- Mr. David Head, Transportation Planner II (ConnDOT)
- Mr. Wayne DeCarli, Transportation Planner I (ConnDOT)
- Mr. Jonathan C. Chew, Executive Director (HVCEO)
- Ms. Peg Daley, Director (HVEDP)
- Ms. Ruth Bonsignore, Project Manager (VHB)
- Mr. Chris Faulkner, Transportation Task Manager (VHB)
- Mr. Robert Nagi, Senior Traffic Engineer (VHB)
- Mr. Joseph Wanat, Senior Traffic Engineer (VHB)
- Mr. David Hewett, Environmental Task Manager (VHB)
- Mr. John Prenosil, Environmental Scientist (VHB)