HOUSATONIC RIVER NATURAL RESOURCES RESTORATION PROJECT
CONNECTICUT SUBCOUNCIL REQUEST FOR PROPOSALS (RFP)

Part A: RESPONDER AND PROJECT SUMMARY FORM

Please read "RFP: Overview of Selection Process" before completing this form.

Part A must be completed using Submittal Form A.
Responses may be entered electronically using the Microsoft Word version of Part A of this form available on the Housatonic River Basin Natural Resource Restoration Project in Connecticut website (www.housatonicrestoration.org), saved and printed. Alternatively, the responder may print the form and complete it with black ink.
An Adobe Acrobat version of the entire from (Part A and Part B) is also available on the Housatonic River Basin Natural Resource Restoration Project in Connecticut website

Project Name Provide a brief working name.

Transylvania Brook Culvert Crossing at East Flat Hill Road

Responder – if there is more than one party involved in the project, please provide the information for the primary or lead party.

Mark A. R. Cooper
Name

First Selectman
Title

501 Main Street South
Address

Address

Southbury CT 06488
City State Zip

203-262-0647
Phone

selectman@southbury-ct.gov
Email

Type of Entity
Check the box that best describes the primary respondent.

- ☐ Private individual
- ☐ Non-profit organization
- ☒ Municipal government
- ☐ State government
- ☐ County government
- ☐ Federal government
- ☐ Tribal government
- ☐ Corporation or Business
- ☐ Academic Institution
- ☐ Other (explain)

RECEIVED
JAN 18 2007
INLAND FISHERIES

Project Implementation
Does the responder plan to be the Project Sponsor and respond to the Request for Supplemental Information (RSI) pending approval of this Proposal?
☒ Yes ☐ No
If yes, please list any other project participants. _____

If the responder does **NOT** plan to be the Project Sponsor and does **NOT** intend to respond to the Request for Supplemental Information (RSI), is the responder interested in being a project participant and assisting a different Project Sponsor on this project?
☐ Yes ☐ No

Restoration Priority Funding Category *See Sec. 3 of "RFP: Overview of Selection Process" for category descriptions.*

Primary Restoration Category. *Check the restoration category that is the primary goal of the project.*
Check one box.
☒ Aquatic Natural Resources Restoration/Enhancement
☐ Riparian & Floodplain Natural Resources Restoration/Enhancement
☐ Restoration/Enhancement of Recreational Uses of Natural Resources

Secondary Categories. Check all relevant boxes.
☐ Aquatic Natural Resources Restoration/Enhancement
☐ Riparian & Floodplain Natural Resources Restoration/Enhancement
☐ Restoration/Enhancement of Recreational Uses of Natural Resources

List Specific Injured Natural Resources and/or Impaired Natural Resource Services to Benefit from Project

Impove fish population in Transylvania Brook by eliminating obstacle to upstream migration.

Project Location (if known) See directions and *"RFP: Overview of Selection Process"* for additional materials to provide (maps, aerial photographs)

Municipality/ies:
Town of Southbury

Longitude for approximate center of project area: 73.25735 N

Latitude for approximate center of project area: 41.47246 W

Project Budget Estimate (if known)

Total Project Cost Estimate: $ 450,000

Housatonic River NRD Fund Estimate: $

Project Narrative: Transylvania Brook Culvert Crossing at East Flat Hill Road

Location:

The Town of Southbury encompasses approximately 40 square miles of land area in southwestern Connecticut. The town is bounded on the west by the Shepaug River and about 9 miles of the Housatonic River (forming Lake Zoar and Lake Lillinonah), on the east by the Eight Mile Brook, and has the Pomperaug River running diagonally through town from north to south. The East Flat Hill Road culvert over Transylvania Brook is located approximately 0.3 miles west of the intersection of East Flat Hill Road and CT Rte 172(South Britain Road). The culvert discharges directly into the Pomperaug River roughly 2.3 miles upstream of its confluence with the Housatonic River.

Problem Statement:

The existing culvert consists of two corrugated metal pipe arches, approximately 10'x 15', without headwalls or endwalls. The inlet and outlet embankments are stabilized with large rip rap. Transylvania Brook has a channel width of approximately 26 ft. and an average depth of 6"-18" at the culvert site. The invert of the pipe arches at the culvert outfall is approximately 12" above the normal water surface of the Pomperaug River creating a waterfall condition at the confluence of the watercourses. This seriously restricts upstream fish migration into the waters of Transylvania Brook.

Additionally the channel sides in the stretch of Transylvania Brook immediately upstream of the culvert are experiencing a significant erosion problem and have areas that are undercut and unstable. The erosion along this portion of the brook is caused by the flow of water meandering through its natural alignment. The combination of the stream's meandering nature and the prevalent sandy soils has resulted in a serious stream bank erosion problem. The erosion is contributing to sedimentation of Transylvania Brook, the Pomperaug River and the Housatonic River, degrading their water quality and creating adverse ecological, recreational, and economic impacts.

Project Goals and Objectives:

The Pomperaug River and its tributaries, including Transylvania Brook, are recognized as prime fishing streams for cold water species. The primary goals of the project are the elimination of the artificial waterfall at the existing culvert to allow the natural movement of fish upstream and the stabilization of stream embankments to reduce sedimentation in downstream portions of the Pomperaug River and the Housatonic River. This project will help to rehabilitate, restore, and enhance the watershed's natural resources by supporting and encouraging a larger and more diverse fish population and making the isolated and protected upstream environment more available for spawning and development of young fish.

The stabilization of the stream embankments in the project vicinity will make the watercourse more viable for aquatic species by reducing the level of turbidity during runoff events. Reduction in sedimentation will prevent deep pools and holes in streambed from being filled resulting in elimination of preferred habitat. In addition to negatively impacting aquatic organisms, the

ultimate deposition of this sediment in Lake Zoar decreases its recreational value for fishing and boating, as well as its storage capacity.

Project Benefits:

Replacement of the existing culvert will provide an immediate benefit of allowing fish and other aquatic species unrestricted access to Transylvania Brook. Over time this improvement should enrich the entire ecosystem of the brook and sustain an environment that encourages a diversity of wildlife making it an attractive site to interact with nature. Stabilization of the embankments will also provide immediate and sustained benefits to the Housatonic River watershed. The immediate benefits of this stabilization project will be reduction in the sediment load entering the river resulting in improved water quality for aquatic life and its habitat. Over time, a sustained benefit of the improved aquatic habitat will result in healthier aquatic life, including sport fish. With less erosion, the rivers natural flow channel will clear, restoring and enhancing recreational opportunities such as fishing, kayaking, canoeing, hiking and enjoying nature.

General Implementation Tasks:

To implement the Transylvania Brook Culvert Crossing at East Flat Hill Road Project, the Town of Southbury would engage a contractor with culvert replacement and river embankment restoration experience to install a new culvert and remediate the erosion problem incorporating bio-engineering techniques that use native materials and vegetation to protect the river bank. Based on a preliminary investigation remediation of stream bank erosion would likely include the following steps:

- Removal of debris in the stream channel that restricts or diverts the natural flow of the stream at this location.
- Stabilizing the slope by regrading the face of any vertical banks, to obtain a bank with a 1' vertical to 2' horizontal slope.
- Protecting the toe of the slope by integrating bio-engineered structural protection, wherever possible.
- Re-establishing native vegetation on the slope that will strengthen and protect it from further erosion.

Follow-up and Monitoring

Once the culvert is in place and the embankments are stabilized, the Town of Southbury will utilize Land Use staff to check the embankment to ensure its continued stability, and in collaboration with allied groups such as the Pomperaug Watershed Coalition, will observe changes in fish population within the brook and monitor water quality down stream to quantify sediment reduction.

The cost of the proposed project is relatively expensive but is not overly difficult to implement. Recent cost estimates have been attached and made part of this submittal.

Criteria Statements: Transylvania Brook Culvert Crossing at East Flat Hill Road Project

1. YES. The proposal for replacing the Transylvania Brook Culvert Crossing at East Flat Hill Road and restoring the upstream embankments contains the information as set out in the "Instructions for the Preparation and Submission of Restoration Project Proposals". Included and made part of this submittal:
    - Part A: Responder and Project Summary Form.
    - Project narrative.
    - Project locational maps.
    - Criteria statements.

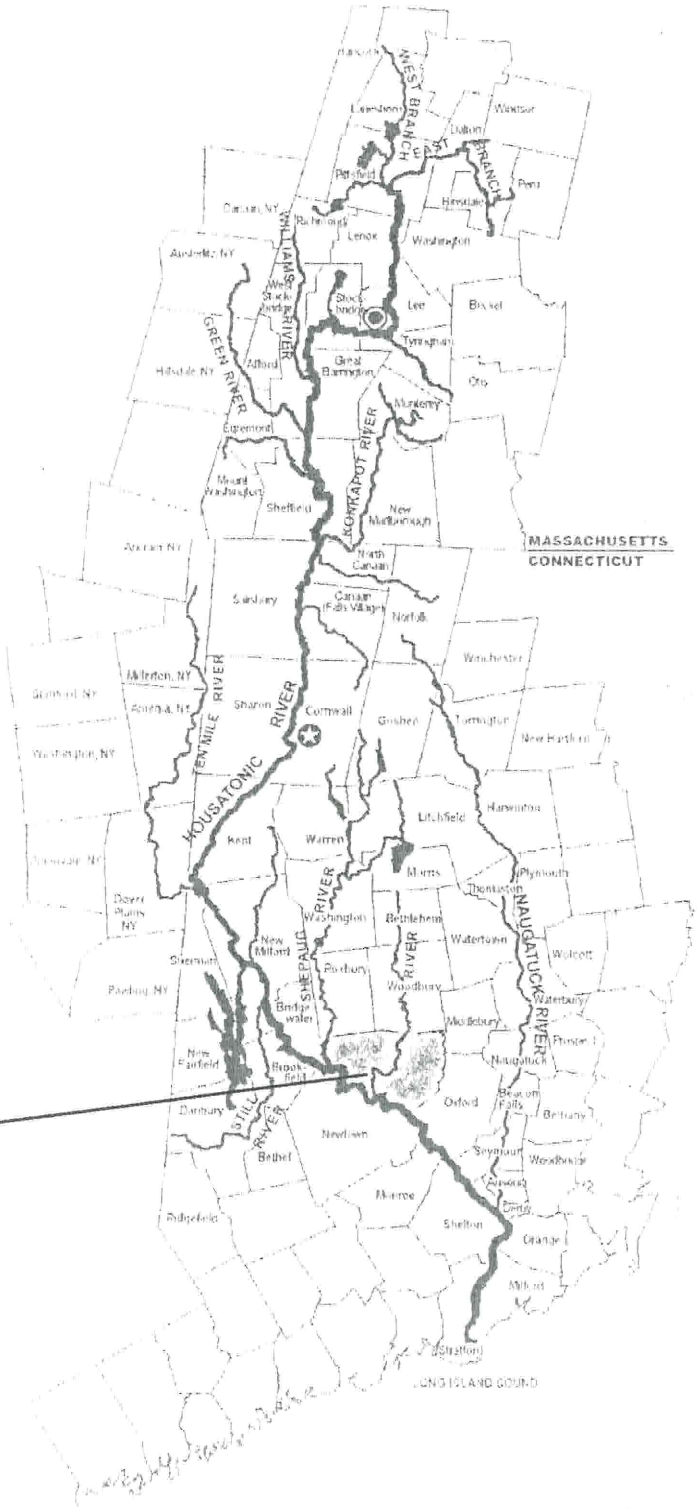
2. YES. This proposal will help to restore, rehabilitate, and/or replace natural resources or natural resources services equivalent to those that were injured by the release of PCBs or other hazardous substances from the GE facility at Pittsfield, MA. The replacement of the culverts will lead to an increase the quantity of sport fish in the watershed area. The reduction of sediment into the Housatonic Watershed will upgrade water quality for aquatic life, will improve available habitat, will enhance recreational opportunities, and extend the economic viability of the Housatonic River.

3. NO. This proposal is not an action that is presently required under federal, state, or local law, including, but not limited to, enforcement actions.

4. NO. This proposal in not inconsistent with any federal, state, or local law or policy. The project goal is to restore and enhance the Housatonic River Watershed's water quality and habitat by reducing the level of sedimentation and to increase the opportunities for recreational fishermen to enjoy productive fishing in the watershed..

5. NO. This proposal is <u>not</u> inconsistent with any ongoing or anticipated remedial actions in the Housatonic River Watershed. The project will serve to augment and compliment other ongoing remedial actions. This project is ideal for coordination and integration with similar projects and will increase public outreach and community involvement by engaging local service organizations and environmental groups in the follow-up and monitoring.

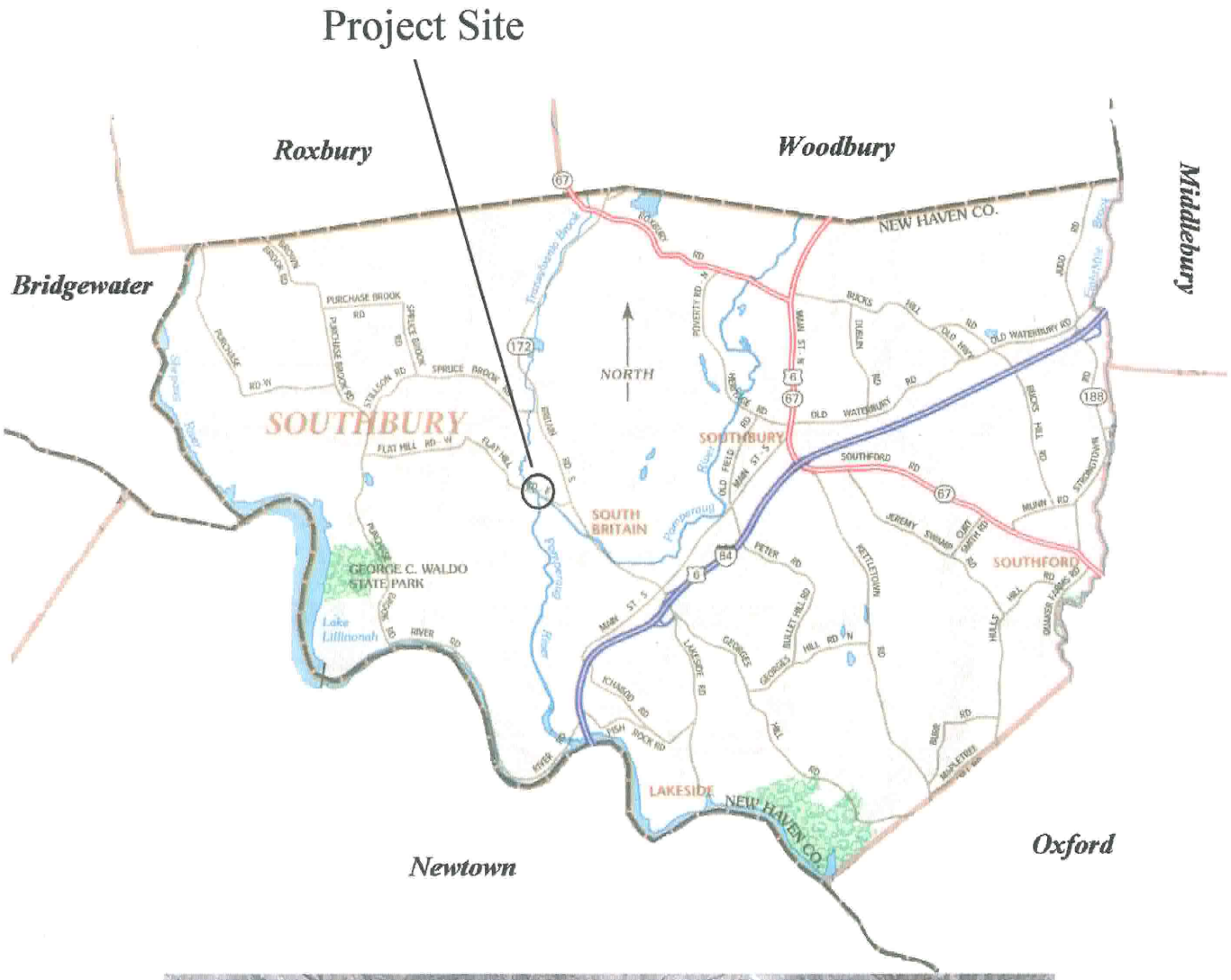
Southbury's Location In The Housatonic Watershed

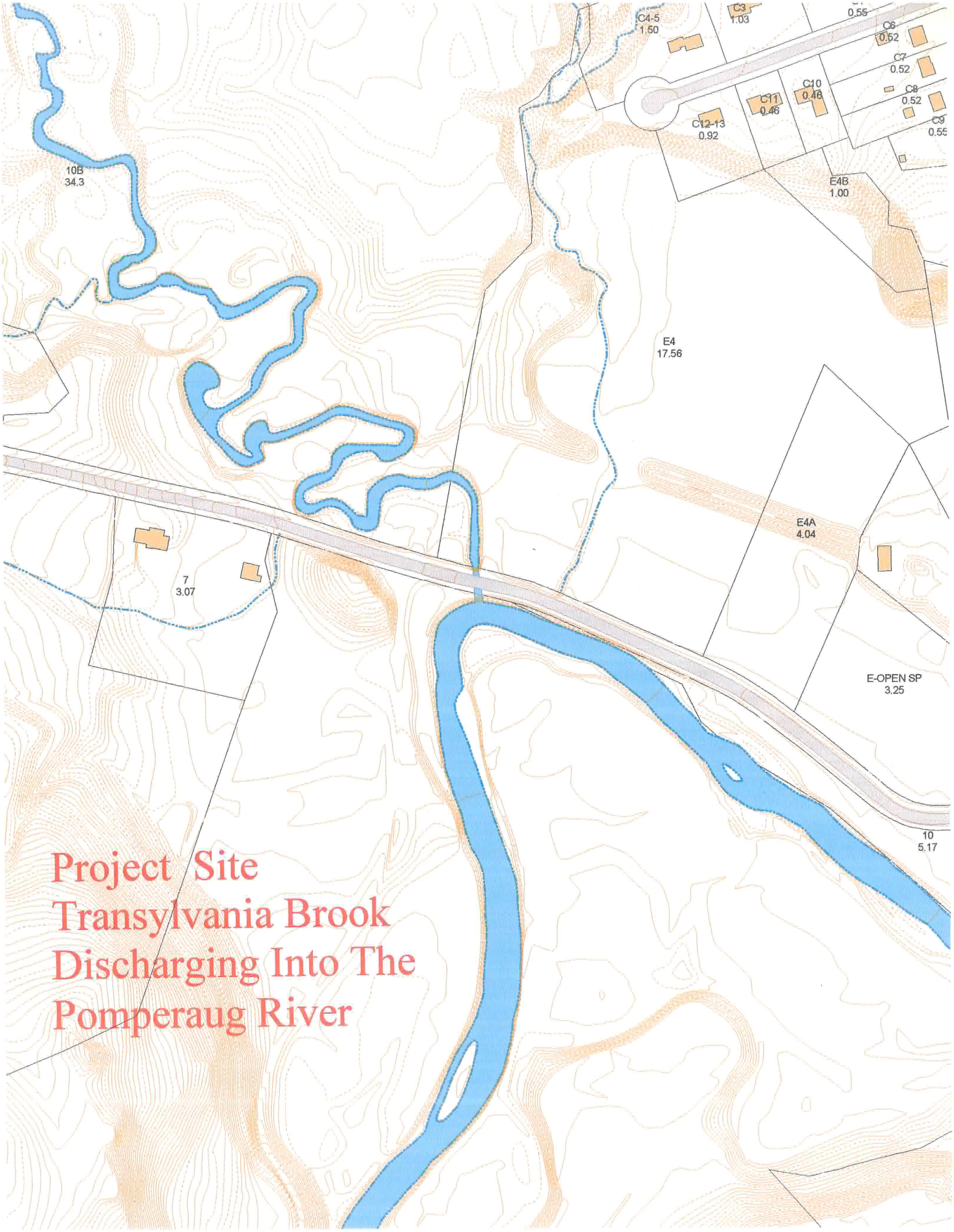


Southbury

Town Of Southbury

Transylvania Brook Culvert Crossing At East Flat Hill Road




C4-5
1.50
C3
1.03
0.55
C6
0.52
C7
0.52
C10
0.46
C8
0.52
C11
0.46
C12-13
0.92
C9
0.55
10B
34.3
E4B
1.00
E4
17.56
E4A
4.04
7
3.07
E-OPEN SP
3.25
10
5.17
Project Site
Transylvania Brook
Discharging Into The
Pomperaug River


C3
C11
0.46
0.46
0.52
C8
E4B
1.00
E4A
4.04
E-OPEN SP
10

TOWN OF SOUTHBURY

DEPARTMENT OF PUBLIC WORKS

501 Main Street South

Southbury, Connecticut 06488-2295

(203) 262-0622

Fax: (203) 262-1588

January 9, 2007

Michael J. Powers
CTDEP – Inland Fisheries Division
Housatonic River Natural Resources Restoration Project
79 Elm Street
Hartford, CT 06106-5127

Re: Transylvania Brook Culvert Crossing at East Flat Hill Road

Dear Mr. Powers:

Respectfully submitted for your and the CT SubCouncil's consideration, is a proposal to replace the culvert crossing at East Flat Hill Road and Transylvania Brook in Southbury. Once funding is secured for the project, the Town is ready to proceed and would schedule the necessary work during a period of low flow to reduce any adverse environmental impacts.

Included as part of this submittal are the following documents:

- Project narrative including a brief description of the project that includes the project's goals and objectives, project benefits, and a general outline of the tasks needed to implement the project.

- Project location maps showing the location of the culvert and its location relative to the Pomperaug River, a GIS map of the surrounding area, and an aerial photograph of the surrounding area.

- Statement page addressing each of the Eligibility Criteria listed in Section 6.1 of the "RFP: Overview of Selection Process".

Thank you for your consideration of this proposal. Should you have questions or comments concerning this submittal, please feel free to contact me.

Very truly yours,

Thomas F. Crowe Jr., P. E.
Public Works Director