

CONNECTICUT
DEPARTMENT OF TRANSPORTATION

LOCAL BRIDGE PROGRAM

FISCAL YEAR 2006



HON. M. JODI RELL, GOVERNOR

STEPHEN E. KORTA, II, COMMISSIONER

About the cover: This year's cover features Bridge No. 03645, River Street over the Wepawaug River, in the City of Milford. This bridge reconstruction and rehabilitation project was designed by DeCarlo & Doll, Inc., of Hamden, Connecticut, and was constructed by Blakeslee Arpaia Chapman, Inc., of Branford, Connecticut.

Extensive rehabilitation work was required on the reinforced concrete intrados arches, piers and abutments. Large portions of the reinforced concrete arches were removed and replaced. The overlying pavement, curbing and sidewalks were removed to allow repairs to the top of the arches, then new pavement, curbing and sidewalks were constructed. The masonry fascia and parapets were cleaned and repointed, and the river channel was cleaned out and stabilized.

This bridge, which was originally constructed in 1934, is named the "Jefferson Bridge", in honor of Thomas Jefferson, during whose presidency the first bridge on the site was built in 1802, as part of the Milford-New Haven Turnpike.

Construction work began in May 2003, and was completed in April 2004 at a construction cost of approximately \$ 1.1 million. Funding was provided by the City of Milford and the State of Connecticut Local Bridge Program.

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INTRODUCTION

In Connecticut, there are thousands of bridges and culverts on municipally maintained roads. Construction and maintenance of these often-expensive structures is solely the responsibility of the municipalities. Recognizing the difficulty that municipalities have in meeting this responsibility, in 1984 the General Assembly enacted P.A. 84-254 (now known as Sections 13a-175p through 13a-175w of the Connecticut General Statutes) as part of the State's Infrastructure Renewal Program. This program provides for State financial assistance to municipalities for the removal, replacement, reconstruction or rehabilitation 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. In addition, ConnDOT has endeavored to make Federal funding available for municipal bridge projects as much as possible.

ABOUT THIS BOOK

This manual has been created to guide municipalities through the process of developing bridge projects and applying for grants and loans under the Local Bridge Program. It is aimed at both those with non-technical orientations, such as Mayors and Selectmen, and those with technical backgrounds, such as engineers and public works directors. We have attempted to give an overview of the program, with additional coverage given to those subjects which have proven troublesome, confusing, or have resulted in frequent questions. This manual is updated annually to incorporate new information, updated procedures, and lessons learned over previous years.

There are five major sections to this manual:

- **BRIDGE EVALUATION** explains how bridges are rated. Because bridge ratings determine both eligibility for funding and project priority, an understanding of the process was believed to be important.
- **FUNDING PROGRAMS** gives an overview of the funding programs administered by the Local Bridge Program unit.
- **PROJECT DEVELOPMENT** gives a general overview of the process of project development, with additional information given on areas which have proven to be troublesome, such as environmental permits.
- **GUIDELINES FOR OBTAINING FUNDS** gives a step-by-step outline of path that a Local Bridge Program project will follow. The process is much more involved when Federal Funding is involved, so there are separate sections provided for State and Federal projects.

- **APPENDICIES** contain lists of eligible bridges, grant percentages for each municipality, various State Statutes related to municipal bridge projects, Program regulations, and hydraulic analysis guidelines.

The Department strives to make the Local Bridge Program as user-friendly as possible, and this manual is part of that effort. Comments or suggestions for its improvement are welcomed. A mail-in comment sheet is included at the back of this book for your convenience.

DEFINITIONS

To aid in understanding some of the terms used in this manual, some definitions are given below. The definitions are based on usage common in the field, but are not intended to be legally governing. In the event that any definition conflicts with a definition given in the Regulations or Statutes, the definition given in the Regulations and/or Statutes shall govern.

AASHTO: The American Association of State Highway and Transportation Officials.

AENGLC: The adjusted equalized net grand list per capita of a town, prepared as of the immediately preceding January 1 by the State pursuant to Section 10-261 of the General Statutes.

ADT: The Average Daily Traffic; the average number of vehicles which pass over a given structure on a typical day.

Bridge: A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying vehicular traffic and having an opening measured along the center of the roadway of more than 6 feet¹ between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes.

Bridge Design Manual: The Connecticut Bridge Design Manual, dated December 2003, published by the Connecticut Department of Transportation (this supercedes the metric version dated 1997).

Bridge Replacement: The complete replacement of a structure, including any necessary approach work.

Coding Guide: The most recent edition of the "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges", prepared by the Federal Highway Administration. This manual is available from the Federal Highway Administration, Bridge Division HNG-33, 400 7th Street S.W., Washington, DC 20590.

Commissioner: The Commissioner of the Department of Transportation, or his authorized representatives.

Commitment To Fund: A commitment issued to a municipality by the Commissioner to fund the project costs of an eligible bridge project through a project grant, a project loan, or both, in accordance with Section 5 of the regulations.

¹ Federal definition is at least 20 feet.

Culvert: A drainage opening or similar passageway beneath a roadway embankment with no definite distinction between superstructure and substructure, with an interior span length of 6 feet or more. It may also include multiple pipes which carry the same body of water, in which the clear distance between openings is less than half of the smaller contiguous opening or which share a common headwall, provided the overall structure length is 6 feet or more.

Deck Replacement: The complete replacement of that portion of a superstructure which provides a smooth traveling surface for vehicles, including subdecking and wearing surface, if any, and includes curbing within the limits of the replacement.

DEP: The Connecticut Department of Environmental Protection.

Deficient Bridge: A bridge or culvert which been determined to be structurally deficient or functionally obsolete.

Department: The Connecticut Department of Transportation.

Drainage Manual: The Connecticut Department of Transportation Drainage Manual, prepared by the ConnDOT Hydraulics and Drainage Section, dated October 2000.

Eligible Bridge: A bridge or culvert owned and/or maintained by a municipality, carrying a certified public road, which has a condition rating of 4 or less given to any of the components specified in the regulations, or an appraisal rating of 2 or less given to the Structure Evaluation or Waterway Adequacy, *and which has not received assistance* from the Local Bridge Program within the last 20 years (10 years for Federal funding).

Erosion and sedimentation control measure: A specific design for vegetative, nonstructural or structural means for controlling erosion and sedimentation described in the Connecticut 2002 Guidelines for Soil Erosion and Sediment Control published by the Connecticut Council on Soil and Water Conservation pursuant to Section 22a-328 of the General Statutes. This manual should be used as a guide for developing proper temporary E & S control measures to be utilized during construction.

Erosion and Sedimentation Control Plan: A scheme that minimizes soil erosion and sedimentation and includes, but is not limited to, a map and narrative. The map must show topography, cleared and graded areas, proposed area alterations and the location of and detailed information concerning erosion and sediment measures and facilities. The narrative shall describe the project, the schedule of major activities on the land, the application of conservation practices, design criteria, construction details and the maintenance program for any erosion and sediment control facilities that are installed.

Fiscal Year: The fiscal year of the State, July 1 to June 30.

FEMA: The Federal Emergency Management Agency.

FHWA: The U. S. Department of Transportation, Federal Highway Administration.

Functionally Obsolete: A bridge or culvert with one of the measures of its ability to serve its intended purpose rated as intolerable, requiring high priority of corrective action. A functionally obsolete structure may or may not also be structurally deficient.

Highway Design Manual: The Connecticut Highway Design Manual, dated December 2003, published by the Connecticut Department of Transportation (this supercedes the metric version dated January 1999).

Inventory Rating: The rating, in tons, denoting the safe sustained load capacity of a structure, determined in accordance with the Load Factor Method (Strength Design Method) described in the AASHTO Manual for Condition Evaluation of Bridges.

Municipal Road: Any road accepted, owned and maintained by a municipality and open to motor vehicle traffic.

Municipality: Any town, city, borough, consolidated town and city, consolidated town and borough, district, commission, authority or other political subdivision of the State, owning or having responsibility for the maintenance of all or a portion of an eligible bridge.

Orphan Bridge: Any bridge which carries a municipal road and spans a railroad right-of-way not owned by the State.

Rehabilitation: The major work required to restore the structural integrity of a bridge as well as work necessary to correct major safety defects.

Scour: Erosion or removal of streambed or bank material from bridge foundations due to flowing water.

Scour Critical: A bridge with abutment or pier foundations which are rated as unstable due to: 1) observed scour at the bridge site, or 2) a scour potential as determined from a scour evaluation study.

Stormwater Quality Measures: Measures ranging from proper site planning to specific engineered measures as described in the 2004 Connecticut Stormwater Quality Manual published by the Connecticut Department of Environmental Protection. This manual should be used as a guide to design permanent Stormwater Quality Measures for inclusion into projects.

Structurally Deficient: A bridge or culvert with a major structural component rated “poor” or below.

Structure Evaluation: An overall rating of the structure which takes into account all major structural deficiencies, and evaluates a bridge in relation to the level of service it provides, as compared with a new bridge built to current standards. Important factors considered in this appraisal are the inventory rating and the condition ratings of the superstructure and substructure.

Sufficiency Rating: The numerical rating of a bridge based on its structural adequacy and safety, essentiality for public use, and its serviceability and functional obsolescence.

Superstructure: Bridge structural members above the top of the piers and abutments.

Superstructure Replacement: The complete replacement of the superstructure, including deck, wearing surface, parapets, curbing and sidewalk, on the existing abutments piers and/or bents, and also includes replacement of fencing and guide rail beyond the limits of the superstructure as necessary for an integral system.

Substructure: Structural components which support the superstructure, such as piers, abutments, piles, fenders, footings, etc.

Waterway Adequacy: The evaluation of the adequacy of waterway opening with respect to the passage of flow through the bridge. Important factors considered include the backwater depth, the likelihood of overtopping, and the resultant impact on traffic.

BRIDGE EVALUATION

Though the specific eligibility criteria differ between the State and Federal assistance programs, the main factor determining eligibility for funding under both programs is the bridge's physical condition. Therefore, it is necessary to have an understanding of how a numerical rating is applied to a bridge in order to understand how funding priority is established. To aid in that understanding, the rating system is explained in the following sections.

The Connecticut Department of Transportation's Bridge Safety and Evaluation Section inspects all State and municipally owned bridges with spans greater than 20 feet on a regular basis. Municipally-owned bridges with spans less than 20 feet are, as a rule, not inspected by ConnDOT. There was a one-time inspection of these "under 20" bridges performed to comply with Public Act 87-584, "Local Bridge Study of Town-Owned Structures Less Than Twenty Feet But Greater Than or Equal to Six Feet In Span Length." This study was completed on April 30, 1992 and a final report was forwarded to the Connecticut General Assembly in June 1993. The Department's inspection of town-owned structures less than 20 feet will not be repeated unless mandated and funded by the Legislature. Therefore, ConnDOT's data on the "under 20" bridges can be quite old (usually more than a decade old), and should not be relied upon.

During the inspections, the bridge inspectors carefully evaluate each component of a bridge, then assign a numerical rating to each component. The ratings range from 0 to 9, with "9" being the best, and "0" being the worst rating (see the tables in the Sufficiency Rating section for more explanation).

In general, bridges are considered to be "structurally deficient" if the physical condition of any of the major structural components (deck, superstructure and substructure) are rated as "poor" or below (a numerical rating of 4 or less), or if the appraisal ratings for the structure condition or waterway adequacy are rated as requiring a high priority for replacement (a numerical rating of 2 or less).

Because culverts do not have distinct decks, superstructures and substructures, these components are not rated as such when evaluating a culvert. Instead, a "culvert rating" is assigned which takes into account the overall condition of the culvert. A culvert is considered structurally deficient if the overall condition of the culvert is rated as "poor" or below (a numerical rating of 4 or less).

A bridge or culvert which is structurally deficient may not carry full legal loads, and if left unchecked, will continue to decay until it is unsafe for any load.

A bridge is considered "functionally obsolete" if the structural evaluation, deck geometry, under-clearances, approach roadway alignment, or waterway adequacy is rated as "intolerable requiring high priority of corrective action" (a numerical rating of 3 or less). A functionally obsolete structure may or may not be able to carry all legal loads, but its configuration impairs its ability to carry traffic or pass high water. A functionally obsolete structure contributes to traffic accidents and/or flooding, representing a liability to the municipality and a potential hazard to the public.

A. SUFFICIENCY RATING

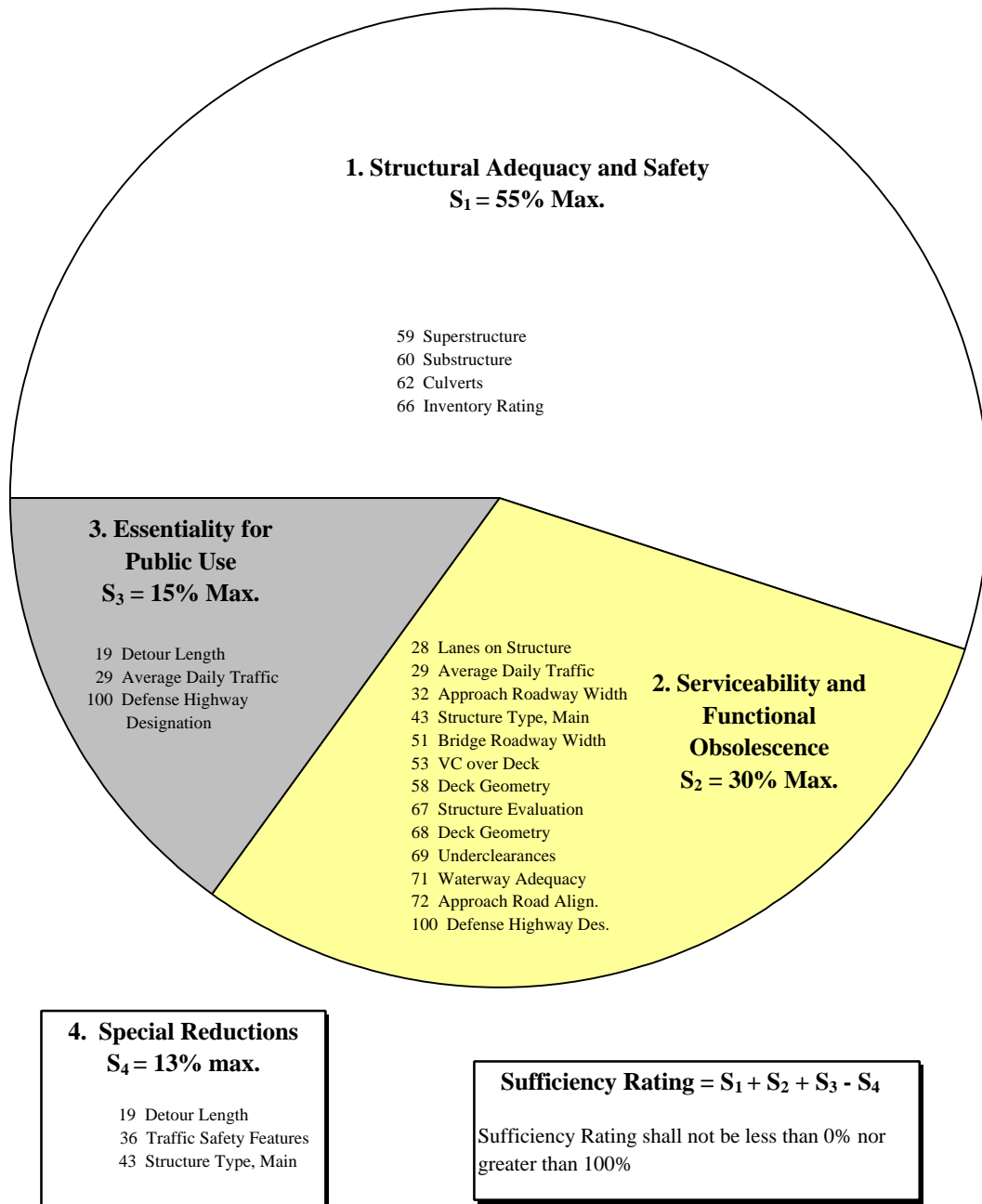
Paramount in the rating process is the sufficiency rating of the bridge. The sufficiency rating formula is a method of rating the structural integrity of a bridge by calculating four separate factors to obtain a numeric value which is indicative of bridge sufficiency. The result of this calculation is a percentage in which 100% would represent an entirely sufficient bridge and 0% would represent an entirely deficient bridge. Condition ratings of the superstructure, substructure (or culvert, if applicable) and the inventory rating (load carrying capacity of the structure), have the most impact in the sufficiency rating calculation.

Serviceability, functional obsolescence, and essentiality for public use are also considered in the sufficiency rating calculation. Loss of accessibility to schools, homes, businesses, etc., due to a load-restricted or closed bridge, constitutes an undue hardship to the public, not to mention the reduction or loss of essential services such as, fire protection, police, and medical services. Also, lengthy detours due to a closed or posted structure present ecological and financial hardship.

All these factors combine to produce the sufficiency rating. The sufficiency rating is based on a formula in which 55% of the total is based on structural adequacy and safety, 30% on serviceability and functional obsolescence, and 15% on essentiality for public use. A graph depicting the sufficiency rating criteria is shown in Figure 1. For a more complete explanation of how the sufficiency rating is calculated, see Appendix B of the Coding Guide.

The following figure 1 illustrates the relative weight of factors comprising the sufficiency rating:

Figure 1. Summary of Sufficiency Rating Factors



For evaluating the structural components such as decks, superstructures, substructures and culverts, the following numerical condition rating system is used:

Code Description

- N NOT APPLICABLE
- 9 EXCELLENT - no noticeable deficiencies or deterioration.
- 8 VERY GOOD - no problems requiring attention.
- 7 GOOD - some minor problems; potential exists for minor maintenance.
- 6 SATISFACTORY - structural elements show some minor deterioration; potential exists for major maintenance.
- 5 FAIR - all primary structural elements are sound, but may have minor section loss, cracking, spalling or scour; potential exists for minor rehabilitation.
- 4 POOR - advanced section loss, deterioration, spalling or scour; requires major rehabilitation.
- 3 SERIOUS - loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present. Rehabilitation or repair required immediately.
- 2 CRITICAL - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Need for immediate repair or rehabilitation is urgent; unless closely monitored it may be necessary to close the bridge until corrective action is taken.
- 1 IMMINENT FAILURE - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put it back in light service.
- 0 FAILED - out of service - beyond corrective action.

For rating the overall structural evaluation, deck geometry (width), under-clearances, approach roadway alignment, and waterway adequacy, the following rating system is used:

Code Description

- N Not Applicable
- 9 Superior to present desirable criteria
- 8 Equal to present desirable criteria
- 7 Better than present minimum criteria
- 6 Equal to present minimum criteria
- 5 Somewhat better than minimum adequacy to tolerate being left in place as-is
- 4 Meets minimum tolerable limits to be left in place as-is
- 3 Basically intolerable requiring high priority of corrective action
- 2 Basically intolerable requiring high priority of replacement
- 1 (*this value not used*)
- 0 Bridge closed

The types of defects which are characteristic of each numerical rating are explained in detail in Chapter 10 of the ConnDOT Bridge Inspection Manual.

B. PRIORITY RATING

Section 13a-175s of the Connecticut General Statutes requires the Commissioner of Transportation to maintain a list of eligible bridges and establish a priority list of eligible bridge projects for each State fiscal year. The purpose of the prioritized list is to rank the bridges statewide on the basis of need, and to determine which bridges will be funded if not enough funds are available to fund all applications. To accomplish this, each bridge is assigned a "Priority Rating", using the methods explained below. In general, the structures in the worst condition will have the lowest Priority Ratings, with the lowest rating being the highest priority for funding, with exceptions possible in emergency situations.

The Priority Rating represents the physical condition of the structure, based upon the sufficiency rating (as discussed above), with additional "weight" given to the ratings of the main structural components and the structure's load carrying capacity. The following formulas are used, depending upon whether the structure is a bridge or a culvert. These formulas are used to define the "physical condition" as required in Section 13a-175p of the Connecticut General Statutes. The data for the formulas is taken from the rating reports developed by the bridge inspectors using the Coding Guide.

1. For Structures with Abutments and Piers

$$\text{Priority Rating} = \text{SR} - 2 [1 - (\text{DC} + \text{SUB} + \text{SUP}) / 27] - 4 [1 - (\text{IR}) / 36]$$

SR = Sufficiency Rating

DC = Deck Condition Rating (0-9)

SUB = Condition Rating of Substructure (0-9)

SUP = Condition Rating of Superstructure (0-9)

IR = HS-20 Gross Inventory Rating in Tons (Tractor semi-trailer combinations inventory rating - Max. 36)

Note: The factors of 27 and 36 are the maximum ratings for deck, substructure and superstructure conditions (9 x 3) and the acceptable load limit for a structure (36 tons) respectively.

2. For Culverts and Arches

$$\text{Priority Rating} = \text{SR} - 2 [1 - (\text{CUL}) / 9] - 4 [1 - (\text{IR}) / 36]$$

CUL = Culvert Condition Rating (0-9)

C. PRIORITY LISTS

A preliminary list of eligible bridges with span lengths greater than 20 feet (measured along the centerline of the road carried) is provided in Appendix 1. This list is updated annually

and utilizes the most recent data gathered by the Department of Transportation during the Department's regular inspections of Town-owned and maintained structures. *Bridges which have received funding under the Local Bridge Program within the last 20 years are not included on the eligible bridge list*, even though they may again be deficient. The chart will indicate if the bridge is eligible for State funding, Federal funding, or both.

A preliminary list of eligible bridges with span lengths less than 20 feet is provided in Appendix 1A. This list was developed primarily from data collected during the one-time inspections performed to comply with Public Act 87-584, "Local Bridge Study of Town-Owned Structures Less Than Twenty Feet But Greater Than or Equal to Six Feet In Span Length." The Department recognizes that structures which were identified in the original study to be in fair condition or better will experience continued degradation due to age and use, and may currently be in worse condition than the Department's records indicate. A municipality may submit a report as outlined below to document the degraded condition which may enable a structure to qualify for funding. Bridges with span lengths less than 20 feet are generally **not** eligible for Federal bridge funding, so there is no column for "Federal Funding" on the list of eligible bridges with spans less than 20 feet.

If a municipality wishes to have a bridge added to the eligible bridge list, it may use staff professionals or engage a consulting professional engineer to conduct an inspection to provide updated information that may enable a structure to qualify for funding. The inspection report must be developed using the Federal Coding Guide and the ConnDOT Bridge Inspection Manual, be signed and sealed by a Connecticut-registered professional engineer experienced in highway bridge inspection, and be submitted to the Department of Transportation for review and approval. If the bridge is found to be deficient, it will be added to the list of eligible bridges and a priority rating will be assigned. A bridge inspection report may be submitted for review at any time during the year, but the bridge will not be considered for funding until the inspection report has been reviewed.

Before June 30 of each year, the Department will establish a priority list of eligible bridge projects for which applications have been submitted. Authorization for funding is determined by the project's ranking on that list, and the extent of the funding available. Projects for which applications were submitted in one fiscal year, but due to program funding limitations were not accepted into the Program, may be resubmitted for funding consideration in a subsequent fiscal year, provided that construction has not yet begun.

D. EMERGENCY CONDITIONS

The legislation permits the Commissioner to approve projects without regard to the priority list if a public emergency exists. A public emergency is interpreted to mean a situation in which the physical condition of a bridge requires it to be closed, or its load limit reduced substantially, resulting in the isolation of people or a significant delay in the availability of services to such an extent that the safety of people is jeopardized.

If a municipality wishes to have an application processed under the emergency provision, a letter to that effect should accompany the application, with the reasons for the emergency noted.

FUNDING PROGRAMS

STATE FUNDS

Two basic types of State financial assistance are available to municipalities under the Local Bridge Program for municipal bridges listed on the eligible bridge lists: grants and loans. Grant percentages vary depending upon the assessment of the town's ability to pay, as measured by the "Adjusted Equalized Net Grand List Per Capita (AENGLC)" method, compiled by the Connecticut Department of Education. Each town's ranking on that list and the corresponding grant percentages are listed in Appendix 2. AENGLC factors are used to compute a grant percentage for each municipality, ranging from 10% to 33% of the total cost of the project. This list is updated annually and grant percentages are adjusted accordingly.

Towns may also apply for a loan covering up to 50% of the eligible project costs from the Local Bridge Revolving Fund. Loans are made at an interest rate of 6% per year, with the interest payable quarterly and the principal payable annually, maturing no later than 10 years from the date that the loan is made. Project loans are made pursuant to a loan agreement and promissory note between the State and the borrowing municipality which specifies the terms of the loan.

To qualify for State funding, a bridge must carry a certified public road, be municipally owned and/or maintained, and be structurally deficient according to criteria developed by the Federal Highway Administration in the Coding Guide.

Many types of projects are eligible for funding. The scope of the project may include reconstruction, rehabilitation, modifications or improvements such as widening, complete replacement, or complete removal, as long as the project corrects the deficiencies which made the bridge eligible for funding. The project may use standard materials such as steel and concrete, traditional material such as timber, or innovative materials such as plastics and aluminum, as long as sound engineering practices are used. Any reasonable structure type may also be used, including timber trusses, if conditions permit.

Bridges which have previously received funding under the Local Bridge Program are not eligible for additional funding until at least 20 years after the completion of the earlier project. Projects which construct a new bridge in a new location (not built as a replacement for an existing bridge) are also not eligible.

Applications for financial aid will be evaluated only for those projects which are anticipated to be under way during the upcoming fiscal year. Time extensions can be granted provided that the municipality demonstrates that it is vigorously pursuing the project.

If the municipality submits all required documentation on schedule, funding for eligible projects is made available at approximately the time of construction contract award. Preliminary studies, engineering and property acquisition costs are eligible, subject to certain restrictions, and

are reimbursed retroactively. Under exceptional circumstances, municipalities may apply for an advance grant to fund the preliminary engineering phase of a project. *Construction costs incurred prior to the Commitment to Fund are **not eligible** for reimbursement.*

In the event of multiple municipal involvement in a bridge project (such as a bridge on a town line), a decision must be made by the governing bodies of each involved municipality as to which municipality will be the “lead” relative to contact with the Department. The lead municipality will be responsible for overall prosecution of the project, including coordination with other municipalities, meeting all requirements of the Statutes, regulations and the Department's administrative documents. Agreements between municipalities defining concurrence in the selection of the lead municipality must be submitted to the Department at the preliminary application stage. Subsequent agreements defining financial responsibility must be submitted at the supplemental application stage. Grants will be made for the project costs using either: (1) each municipality's percentage as determined by formula for the percentage of cost attributable to each municipality; or (2) the grant percentage of the lead municipality. In the event costs are not divided evenly between municipalities, the Department must approve the rationale.

ConnDOT may, however, deem the lead municipality to be the only municipality eligible for financial aid, without regard to the ownership or other interests of any other municipality in the eligible bridge. In this case, agreements will be made with, and grant and loan disbursements will be made to, the lead municipality only.

The Local Bridge Program does not prohibit the use of other State funding sources, such as Town Aid for Roads (TAR) or Local Capital Improvement Program (LoCIP) grants, in conjunction with Local Bridge Program funding. However, any other funding programs being used should be checked to see if *they* prohibit funding from other sources. In any event, no municipality may receive a grant and/or loan amount which exceeds the allowable percentage of eligible project costs. Since the Local Bridge Program grant is based on the municipality's share of construction costs, participation in other aid programs which pay for 100% of construction costs will render the project ineligible for a grant from the Local Bridge Program for the same project.

Grant Percentages

Municipal grant percentages are based on the Adjusted Equalized Net Grand List Per Capita (AENGLC) of a municipality at the time of printing. Since the AENLC factors are not finalized until the annual session of the General Assembly has adjourned, the grant percentages are usually based on the preliminary AENGLC factors.

AENGLC is defined as a combination of property tax base per person and income per person. Property tax base is used because it is the form of wealth taxed by Connecticut's towns. Per Capita Income (PCI) is used because the income from which taxes are paid has an important effect on town taxing capacity. ENGL is the Equalized Net Grand List which represents the value of taxable real and personal property (net grand list) at 100 percent fair market value.

The determination of AENGLC is computed as follows:

$$\frac{\text{ENGL}}{\text{Population}} \times \frac{\text{PCI}}{\text{HPCI}}$$

Where: **ENGL** = Equalized Net Grand List (CT Office of Policy and Management)
PCI = Per Capita Income (U.S. Bureau of the Census)
HPCI = Highest Town PCI
Population = Total Population (U.S. Bureau of the Census)

Per statute, grant percentages vary from 10% to 33% based on the following formula:

$$\text{Municipal Grant \%} = 33 - (\text{MUNICIPAL AENGLC} - \text{LOW AENGLC}) / \text{FACTOR}$$

$$\text{Where FACTOR} = (\text{HIGH AENGLC} - \text{LOW AENGLC}) / (33-10)$$

Example:

$$\text{HIGH AENGLC} = \$347,635.98$$

$$\text{LOW AENGLC} = \$8,554.29$$

$$\text{MUNICIPAL AENGLC} = \$27,137.84$$

$$\text{FACTOR} = (\$347,635.98 - \$8,554.29) / 23 = 14,742.68$$

$$\text{Grant \%} = 33 - (27,137.84 - 8,554.29) / 14,742.68 = \mathbf{31.74\%}$$

Eligible Costs

Program regulations require that only those costs of a bridge project which are determined to be necessary and reasonable are reimbursable. In general, a cost is necessary and reasonable if, in its nature or amount, it does not exceed that which would be incurred by a prudent person in the conduct of a competitive business. In any given project the reasonableness or necessity of certain items of cost may be difficult to determine. In order to avoid a possible subsequent disallowance or dispute based on a cost being found unnecessary or unreasonable, the municipality is encouraged to seek advance approval from the Local Bridge Program Administrator as to the treatment to be accorded such cost.

Examples of items which will ordinarily be considered eligible costs include, by category:

Preliminary Engineering:

- Engineering studies and inspections undertaken to determine whether a bridge is eligible for the Local Bridge Program;
- Preliminary surveys;
- Preliminary engineering activities, including type studies, preparation of project plans, specifications, and cost estimates;
- Preparation of bid documents;
- Preparation of permit applications;
- Soil borings and other subsurface investigations used for design;
- Public hearings and legal notices;
- Historical reviews and archeological studies prior to construction;

Rights-of-Way:

- Property and easement acquisition;
- Property appraisals;
- Title searches;
- Legal fees for eminent domain proceedings;

Utilities:

- Engineering costs related to municipally owned utility relocation;
- Municipally owned utility adjustment and relocation costs;

Construction:

- Construction costs (those payments made to the construction contractor) for work on the bridge, including approach roadway work necessitated by the bridge project, and any extra work required to properly complete the project;
- If a bridge is removed and not replaced, demolition and road closure costs;
- Where a municipality undertakes a project using its own labor, equipment and material: payroll costs of municipal employees directly working on the project, burden and fringe costs, such as FICA, vacation pay, sick leave pay, and pension contributions, of such employees so long as such costs can be audited; documented costs of materials; costs per hour of an item of equipment so long as such costs can be audited; if such costs cannot be audited then the then current equipment charges published by the Federal Emergency Management Agency, or calculated in accordance with the Form 816.
- Costs generally recognized as reasonable and necessary for the performance of the project taking into account established contracting or construction practices;
- Costs incurred to comply with Federal and State laws and regulations, and contract terms and specifications;

Construction Engineering/Incidentals to Construction:

- Construction inspection;
 - Materials testing;
 - Construction advertising;
 - Construction bid review and analysis;
 - Review of shop, construction and working drawings;
 - Engineering support and consultation during construction;
 - Inspector's field office costs;
 - Archeological studies after beginning construction;
 - Construction staking and surveying not performed by the construction contractor;
 - Other costs generally recognized as reasonable and necessary for the performance of the project to the standards used on ConnDOT projects
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Costs which ordinarily will *not* be eligible for State local bridge program funding include:

- Bridges not usable by motor vehicles;
- General municipal administration costs, including the wages or salaries of municipal employees not working directly on the project;
- Overhead costs of a municipality performing construction on its own account;
- Interim or final audits;
- Preliminary engineering (design) and/or construction engineering (inspection) costs in excess of 15% of the construction cost for *each* activity;
- Construction costs incurred prior to the commitment to fund;
- Costs for connecting roadways, interchanges, ramps, and other roadway work not necessitated by the bridge project;
- Costs of long approach fills, causeways, and other extensive earth structures, when constructed beyond the attainable touchdown point;
- Expenses for relocation of utilities not owned by a municipality;
- Legal fees, except for bond counsel on projects with loan agreements;
- Premiums for insurance;
- Costs specifically excluded by the Form 816;
- Any costs generally *not* recognized as reasonable and necessary for the performance of the project to the standards used on ConnDOT projects.

FEDERAL FUNDS

HBRRP

From time to time, ConnDOT has been able to make funding available from Connecticut's allotment from the Federal Highway Administration's Highway Bridge Rehabilitation and Replacement Program (HBRR or HBRRP). This program provides reimbursement of up to 80% of eligible project costs, for all phases of a project.

To be eligible for Federal funding, the bridge must be municipally owned and/or maintained, be structurally deficient or functionally obsolete, have a sufficiency rating less than 80, and must also carry a public road classified by Federal guidelines as being either a "urban local" road, a "rural local" road, or a "rural minor collector", and be deemed "significantly important" by the municipality.

The types of costs which are eligible or not eligible for Federal participation are for the most part similar to the State program, but there are some differences. For example, HBRR funds may not be used for demolition of a bridge which will not be replaced. HBRR funds may be used for:

- The total replacement of a structurally deficient or functionally obsolete highway bridge on any public road with a new facility constructed in the same general traffic corridor,
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- The rehabilitation that is required to restore the structural integrity of a bridge on any public road, as well as the rehabilitation work necessary to correct major safety (functional) defects,
 - The replacement of ferryboat operations in existence on January 1, 1984, the replacement of bridges destroyed before 1965, low-water crossings, and bridges made obsolete by Corps of Engineers (COE) flood control or channelization projects and not rebuilt with COE funds, and
 - Bridge painting, seismic retrofitting, or installing scour countermeasures.

Deficient highway bridges eligible for replacement or rehabilitation must be over waterways, other topographical barriers, other highways, or railroads. They must also, however, as determined by the State and the Secretary of Transportation, be “significantly important” and unsafe because of structural deficiencies, physical deterioration, or functional obsolescence. A bridge which has been closed for an extended period of time (5 or more consecutive years) would be considered to be “not significantly important”, and thus would not be eligible for funding.

Because Federal funds are involved, additional requirements and procedures come into play. To ensure that municipalities do not run afoul of the Federal requirements, ConnDOT works closely with the municipality during the course of a federally-aided project. Once a commitment to fund a qualifying municipal bridge project is issued by ConnDOT, the municipality is provided guidance by ConnDOT in developing the contract plans, specifications and estimates. The municipality must stay in close contact with ConnDOT to ensure compliance with all program requirements. Failure to follow these rules may result in the municipality being responsible for some or all project costs. Cancellation of a project by a municipality after Federal funds have been expended may also result in the municipality being required to reimburse the Federal government for some of the costs incurred prior to cancellation.

It is important to note that this is a reimbursement program. This means that the municipality must be prepared to pay project expenses “up front”, and then be reimbursed after the fact. Thus, the municipality should budget enough local funding to cover several months of project costs, which may be considerable during the construction phase. In addition, because of declining funding levels, and the fact that federal funds are released to the State in a piecemeal fashion over the lifespan of the Transportation Bill, it may take several years for a particular bridge to receive funding.

Some other significant differences caused by Federal funding requirements are outlined in the section “Guidelines for Obtaining Funds Under the Local Bridge Program”.

Costs which ordinarily will *not* be eligible for Federal local bridge program funding include:

- General municipal administration costs, including the wages or salaries of municipal employees not working directly on the project;
 - Overhead costs of a municipality performing construction on its own account;
 - Interim or final audits;
-

-
- Consulting engineer fees, if the engineer was not selected by a qualification-based procedure and approved by ConnDOT;
 - Construction costs incurred prior to the commitment to fund;
 - Costs for connecting roadways, interchanges, ramps, and other roadway work not necessitated by the bridge project;
 - Costs of long approach fills, causeways, and other extensive earth structures, when constructed beyond the attainable touchdown point;
 - Expenses for relocation of utilities not owned by a municipality;
 - Legal fees;
 - Premiums for insurance;
 - Extra work performed without prior approval by ConnDOT;
 - Costs for ornamental treatments not approved by ConnDOT;
 - Any costs specifically excluded by the Form 816;
 - Any costs generally *not* recognized as reasonable and necessary for the performance of the project to the standards used on ConnDOT projects.

Other Federal Programs

For information on other Federal funding programs, please contact your regional planning agency (RPO or COG).

PROJECT DEVELOPMENT

Each year, the Department updates and publishes this program manual and solicits applications for the upcoming fiscal year. The current State Fiscal Year runs from July 1, 2005 to June 30, 2006, and hence is known as Fiscal Year 2006.

The municipality, as the structure's owner, is ultimately responsible for all phases of the project. This may include, but is not limited to, survey, studies, preliminary and final design, material testing, utility relocation, rights-of-way activities, permit acquisition, construction work, construction supervision and inspection. If a municipality does not diligently pursue the project, no progress will be made. For Federally-funded projects, ConnDOT will provide considerable oversight and guidance in completing these tasks, and if requested, the Department may perform rights-of-way activities. On State funded projects, much less oversight is provided.

These activities may be accomplished either in-house by municipal staff, or by consulting engineers and contractors solicited for that purpose. When selecting a consultant engineer for a project which is not Federally funded, the municipality may use its normal procedure for purchasing outside services. When Federal funds are used for a project, a "qualification based" selection procedure must be employed, and the consultant's activities will be governed by the latest edition of the ConnDOT Consulting Engineers Manual. Preliminary engineering (design) and construction engineering (inspection) must not exceed 15% of the construction cost for each activity.

Should the municipality opt to accomplish the construction using its own employees (the "force account" method), the municipality may use equipment rental rates determined in accordance with the ConnDOT Standard Specifications (Form 816), or current F.E.M.A. (Federal Emergency Management Agency) schedule of rates for rental of equipment. Hourly rates for personnel and the pre-bid prices for materials from the current "Town Aid" schedule will also be allowed. The necessary guidelines for equipment rate charges, material certification and municipal payroll costs will be made available to the municipalities.

INITIATION/PRELIMINARY APPLICATION

A project is initiated by the municipality determining that it desires to repair or replace an eligible bridge. Bridges which are known by ConnDOT to be in poor condition *and* meeting other program requirements (and thus known to be eligible) are listed in Appendices 1 and 1A; additional bridges may also be considered for addition to the eligible bridge list if the municipality submits an inspection by a qualified professional engineer revealing them to be in poor condition, and the Department agrees with the results of the inspection report.

The municipality begins by estimating the scope of work needed to return the bridge to good condition, and preparing a preliminary cost estimate for this work. At the preliminary

application stage, cost estimates are generally based on “rule of thumb” estimates for similar types of work; detailed plans and specifications are not required at this point.

Once preliminary plans and specifications have been developed, the municipality should have a rough idea of the project’s scope and cost, and is ready to submit a Preliminary Application. The preliminary application must be submitted by the deadline established by the Commissioner; for State Fiscal Year 2006 the deadline has been extended until May 13, 2005. The Local Bridge Program Administrator will review the preliminary application, and if sufficient funding is available, ConnDOT will issue a “Commitment to Fund” around July 1 of the same year. Once a commitment to fund a project is made, subsequent priority list revisions will not alter the commitment, and the Department will participate in the applicable portion of all eligible project costs, up to the limit of available funding. Engineering costs incurred prior to the commitment to fund date *are* reimbursable under the State program, but construction costs incurred prior to the commitment to fund are *not*. Therefore, construction should not begin until after the commitment to fund is signed.

After the commitment to fund is issued, the subsequent development of the project will be determined by whether or not Federal funds are involved. Federally-funded projects will follow the path outlined in the section entitled “Procedures for Federally Funded Projects”. Projects not Federally-funded will follow the path outlined in the section entitled “Procedures for State Funded Projects”.

PERMITS

The municipality is responsible for obtaining all permits required by federal, state and local regulatory agencies, including local Inland Wetlands and Watercourses. Any project which impacts a waterway or wetlands will require a permit from the U.S. Army Corps of Engineers, *regardless of the funding source*. Almost all bridge projects will also require Flood Management Certification from the DEP.

Some projects, especially those involving larger waterways, may also require additional State and Federal permits, such as U.S. Army Corps of Engineers Individual permits, and U.S. Coast Guard Bridge Permit Application (and/or navigation lighting approval or waiver). Projects impacting tidal, coastal or navigable waters may require permits from the DEP’s Office of Long Island Sound Programs. Construction sites disturbing one acre or more will also require a National Pollutant Discharge Elimination System (NPDES) permit under the Federal Clean Water Act. For construction projects with a total disturbed area (regardless of phasing) between one and five acres, the Town must provide a review and written approval of the erosion and sedimentation control measures and concur that the plan follows the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. If no review is conducted by the Town, the permittee must register and comply with Section 6 of the DEP **General Stormwater Discharge Permit for Construction Activities and Dewatering of Wastewater**, Modified: April 8, 2004. Copies of all permit applications and approvals must be included in the contract documents.

Following is a list of regulatory approvals which may be required, depending upon the particulars of the project:

-
- DEP Flood Management Certification, submitted via the Department of Transportation;
 - Municipal Inland Wetlands and Watercourses Permit under the Inland Wetlands and Watercourses Act (CGS Sections 22a-36 to 22a-45(a), inclusive),
 - Water Diversion Permit under the Connecticut Water Diversion Policy Act (CGS Sections 22a-365 to 22a-378(a), inclusive),
 - DEP Stream Channel Encroachment Lines Permit (CGS Sections 22a-342 to 22a-349(a), inclusive),
 - Dam Safety Construction Permit (CGS Sections 22a-401 to 22a-411, inclusive),
 - DEP Structures, Dredging and Filling Permit (CGS Sections 22a-359 to 22a-363f, inclusive),
 - DEP Tidal Wetlands Permit under the Tidal Wetlands Act (CGS Sections 22a-28 to 22a-35a inclusive),
 - DEP Certificate of Permission (CGS Section 22a-363b),
 - Long Island Sound General Permits (CGS Sections 22a-28 to 22a-35 and Sections 22a-359 to 22a-363f inclusive),
 - Coastal Area Management Review (CAM) (CGS Section 22a-90 to 22a-113b, inclusive)
Note: not required if obtaining a COP, Structures & Dredging or Tidal Wetland Permit approval from DEP OLISP. Some Towns have a local CAM program - please contact the appropriate municipal commission or agency.
 - U.S. Army Corps of Engineers Permit Application (typically a Programmatic General Permit concurrence).
 - U.S. Coast Guard Bridge Permit Application and/or navigation lighting approval or waiver.
 - Department of Health Services Change in Land Use Permit Application.
 - DEP Section 401 Water Quality Certificate Application.
Note: An individual 401 WQC approval is needed only when an individual permit is required by the USACOE.

Flood Management Certification

Because State funds are involved, Section 25-68d of the Connecticut General Statutes requires that a State Flood Management Certificate be obtained from the DEP. The municipality must prepare the application for the Floodplain Management Certification, and forward it to the Local Bridge Program Administrator for signature. The Administrator will then forward the application to DEP. **DO NOT** submit the permit application directly to DEP. *Applications submitted directly to DEP by the municipality or its consultant, instead of by the DOT, will be returned by DEP without review, resulting in delays.* Also, please note that the application package must use the DEP forms dated October 29, 2004 or later. Applications made on the wrong forms will be rejected.

Permit applications should be sent in early in the project development, in case regulatory agencies require design revisions. Like most State agencies, DEP is doing more work with fewer employees than in the past. Therefore, they are far less tolerant of incomplete or inadequate applications. In the past, DEP would often hold an application open for an extended period while waiting for additional submittals. Now, unless a deficiency can be quickly resolved, the application will be rejected, and the application process will have to start all over again. Because most correspondence regarding permit applications is now done electronically, it is vital that the engineer preparing the Flood Management Certification application package provide an e-mail address to the Administrator of the Local Bridge Program.

When completing the Flood Management Certification application, a set of half-size plans (full-size if the drawings are very congested) is preferred over plates to accompany the application. DEP developed new forms for FMC in late 2004. One of the major changes to the new format includes the need for E & S control plans for the entire project. Plans should include all information as listed in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control's E & S Plan Checklist, which can be found on pages 3-12 and 3-13 of the manual. Water handling plans consisting of a narrative as well as graphical depictions are necessary. If the designer feels there may be many feasible options to handle water, the engineer must still provide *at least one* constructable method. All floodway, 100 year, and 500-year floodplain boundaries and elevations must be shown on all appropriate views. If any activity or placement of fill will occur below the 100-year floodplain elevation, a full hydraulic analysis will likely be required. The hydraulic package should include the following:

- Natural, existing, and proposed models based on appropriate discharge
- Computer diskette or CD (preferred) with input
- Adequate narrative
- Hydraulic Data Sheets
- Profiles – One page per discharge
- Cross Sections
- Tables – one per discharge
- Plans including erosion and sediment controls and water handling (see notes above)

More guidance on the requirements for Hydraulic Analysis is included in Appendix 5.

In the case where an inland wetlands permit, stream channel encroachment line permit or State 401 Water Quality Certification is also required, DEP will process an application for flood management certification approval jointly with that permit application.

All communications with DEP must be made through the Local Bridge Program office. Calling DEP staff engineers or sending supplemental information directly to DEP will result in delays and mis-filed documents.

Flood Management General Certification

For certain minor activities within regulated floodplain, the Department of Transportation has been granted a "General Certification" by DEP. When all work on a project falls into the

categories described below, ConnDOT's Hydraulics and Drainage Section will certify that the project is covered by the general certification, and no separate FMC application to DEP will be needed. The eleven approved activities are described in detail below:

- 1. Minor Safety Improvements and Streetscape Projects:** Projects which include minor grading and minor safety improvements including but not limited to traffic signals, signs, sidewalks, landscaping and light poles. This item does not include fencing or sound barriers.

Landscape plantings will be in accordance with the most current version of the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, as revised by the latest supplements, and also in accordance with the State of Connecticut Department of Environmental Protection's Non-Native Invasive plant Species Policy dated November 13, 1998. Obstructions such as poles, signs and plantings may be placed in the floodplain, but not in the floodway. Any grade changes will be limited to 2.0 feet maximum over the existing ground elevation and must further be limited to the outer 20% of the floodway fringe as depicted on the relevant FEMA Floodway map. The length of the encroachment as measured longitudinally along the stream corridor will not exceed 500 feet.

- 2. Roadway Repaving, Maintenance & Underground Utilities:** Milling, repaving and associated regrading to roadsides. Also included are roadway patching and repairs to existing grade and work to the subgrade of the roadway such as utility work, underdrain and storm drain installation, exclusive of storm drainage outfalls.

Construction under this category will allow up to a 4-inch increase in pavement height in a floodway fringe but no increase in pavement height in a floodway. This item will allow for the roadside to be graded to meet the new pavement grade. Also included are roadway patching and repairs to existing grade, and work to the subgrade of the roadway, such as utility work, underdrain and storm drain installation when such work does not affect the elevation of the roadway within the regulated area.

- 3. Minor Stormwater Drainage Improvements:** Replacement with equivalent diameter pipe of drainage outfalls, replacement or placement of riprap splash pads or plunge pools set no higher than existing grade at existing outfalls. Placement of a flared end as a replacement for an endwall is acceptable provided the fill matches adjacent slope limits. The design of rip rap splash pads and plunge pools shall conform to the guidelines in the ConnDOT Drainage Manual and/or FHWA Publication No – FHWA-RD-94-096, "Culvert Repair Practices Manual", Volumes 1 & 2, May 1995. *Any change in outlet pipe size will necessitate an individual Flood Management Certification.*
- 4. Removal of Sediment from a Floodplain:** Removal of sediment from a floodplain including pond and ditch cleaning. Removal of fill also includes the cleaning of ponds when all other necessary Inland or Coastal wetland permits are approved. Sediment shall be disposed of in accordance with Best Management Practices as outlined in Section 1.10 of the Connecticut Department of Transportation Standard

Specifications for Roads, Bridges and Incidental Construction, Form 816, as revised by the latest supplements.

- 5. Wetland Creation or Enhancement:** Removal of material and placement of organic soils and wetland plantings. This item shall include actions necessary for creating wetland mitigation sites, such as placement of organic soils and wetland plantings. Any placement of material for soil amendment shall be an amount less than or equal to the material which was removed from the floodplain.

- 6. Scour Repairs at Structures:** Scour repairs which bring the streambed back to original grade, as either depicted on original as-built plans or as determined in the field by the Engineer. *Note: Municipal projects which require no other State permit approvals do not qualify for the General Certification under this item.*

Fill will be placed to an appropriate level which is at an elevation no higher than the original grade at either bridge face or points beyond the influence of local or contraction scour. The placement of riprap or alternate counter-measures must be limited to local scour holes adjacent to the bridge substructure units, retaining walls, wingwalls or culvert termini.

- 7. Guide Rail Installation:** Installation, replacement or repair of guide rails including minor clearing and grubbing which may be necessary to place a new system and allow for its deflection and the use of appropriate materials under guiderail to prevent erosion. Jersey-type solid safety barriers may not be placed under this item.
- 8. Deck and Superstructure Replacements:** Replacement of the superstructure or deck of a structure where both the existing and proposed low chord elevations are above the floodway elevation. Temporary impacts for construction may include but are not limited to: scaffolding, ladders, sandbags, cofferdams and sedimentation control devices necessary to perform the work. This item includes necessary modifications to the substructure to accommodate the new superstructure if the modifications are above the floodway elevation.

No modifications below the floodway elevation are included in this item. No decrease in hydraulic capacity will occur as a result of any work under this item. Any temporary impact items will be able to be removed in a timely manner from the site in case of a flood warning, except for items designed under the ConnDOT Drainage Manual as temporary structures, and will allow for the passage of fish, with minimal disturbance to the streambed.

- 9. Minor Bridge Repairs:** Repairs to bridges, culverts or pipes including such actions as repairs to spalling concrete, repointing, painting, replacement of wood on wooden bridges, or other maintenance activity which would not diminish the hydraulic capacity of the structure. Temporary impacts for construction may include but are not limited to: scaffolding, ladders, cofferdams, sandbags and sedimentation control devices necessary to perform the work.

10. Fisheries Enhancements: Work in waterways to create or enhance fisheries habitat. Such work may include placement of boulders, riparian plantings, vortex rock weirs, log structures, wing deflectors, channel blocks, cover logs and rootwads, bank cribbing and other enhancements such as scour pool excavation and stream bank stabilization. This item includes any temporary impacts necessary for construction. This item may not be used for construction of fishways or fish ladders.

All enhancements must be approved by the DOT Hydraulics and Drainage Section. Boulders or groupings of boulders placed will be no wider than 20% of the stream width and there will be no more than one boulder or boulder grouping per 300 square feet of channel. Boulders will be placed only downstream of any bridge structure. Riparian plantings will be conducted in accordance with the State of Connecticut Department of Environmental Protection's Non-Native Plant Species Policy dated November 13, 1998. Temporary floodplain impacts for construction necessary to perform the work shall be allowed.

11. Surveying and Testing: This item includes activities such as field survey, excavation of utility test pits, physical testing or the installation of monitoring devices to determine surface or subsurface engineering site data.

Conventional land survey activities will be accomplished in accordance with standard ConnDOT practice. Minor manual clearing of brush or undergrowth will be allowed to establish lines of sight necessary for geodetic survey. Soil borings using mechanical drill rigs will be allowed provided that no fill is placed for access to the drilling site. The installation or use of temporary or permanent monitoring devices to record or provide real time data relative to bridges, culverts, streams or subsurface characteristics will be allowed providing that there is no resultant permanent reduction in hydraulic capacity at a waterway crossing site. Any devices shall be approved by the Hydraulics and Drainage Unit of DOT. The excavation of utility test pits using mechanical excavators is acceptable providing that there is no change in the final ground elevation at the test pit site.

The following practices shall be followed for **ALL** activities covered under this General Certification:

- *Proper erosion and sedimentation controls will be utilized in conjunction with Best Management Practices as outlined in Section 1.10 of the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816, as revised by the latest supplements.*
 - *Any temporary facilities or equipment requiring work in, or placement in a waterway, must be able to be removed in a timely manner from the site in case of a flood warning, except for items designed as temporary structures, in accordance with the guidelines outlined in the ConnDOT Drainage Manual for Temporary Hydraulic Structures.*
 - *Temporary facilities will allow for the passage of fish with minimal disturbance to the streambed.*
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- *Unconfined in-stream work must be limited to the period June 1 to September 30th.*

When seeking Flood Management Certification under the general permit procedure, the town's engineer should put together a package of information including, but not limited to, the following:

- Project description with a statement of hydraulics and drainage involvement.
- Location plan.
- Design plans.
- Copy of flood map.
- Justification of why the request qualifies under FM General Certification.
- Available supporting reports, computations, hydraulic analyses, etc.

This package must be sent to the Administrator of the Local Bridge Program, who will forward it to the Hydraulics and Drainage Section for review and approval. Any questions regarding the general certification status should be addressed to the Administrator of the Local Bridge Program.

Stream Channel Encroachment Lines

This program, administered by DEP's Bureau of Water Management's Inland Water Resources Division, regulates the placement of encroachments and obstructions riverward of stream channel encroachment lines, to lessen the hazards to life and property due to flooding. Stream channel encroachment lines have been established for about 270 linear miles of riverine floodplain throughout the State, and are shown on stream channel encroachment line maps, which are on file in the Town Clerk's office in the affected town. An index to the maps is available from DEP. In making a decision on a stream channel encroachment line permit application, DEP must consider the impact of proposed activities on the floodplain environment, including wildlife and fisheries habitats, and on flooding and the flood hazards to people and property posed by such activity.

Any person proposing to place an encroachment or obstruction riverward of stream channel encroachment lines must obtain a permit, even if all the activity is above the applicable flood elevation. Activities which require a permit when conducted riverward of such lines include the removal or deposition of material, any alteration of the land or watercourse or construction of structures, filling, dredging, clearing, grubbing, grading, piping, culverting, channelizing, diverting, damming, dewatering, construction of structures, and any other activity that temporarily or permanently alters the character of the floodplain or watercourse. Additionally, major repair of structures that existed before the stream channel encroachment lines were established may require a permit.

Note that in many cases, the requirement for an SCEL permit can be satisfied by one of DEP's General Permits for construction activities.

U.S. Army Corps of Engineer Permits

Any project which impacts a federally-regulated waterway or wetlands (which are almost all waterways) will require a permit from the U.S. Army Corps of Engineers. It is the responsibility of the Town's designated agency or commission (for example Inland Wetland or Conservation Commission) to pursue these permits and provide the necessary documentation to the USACOE.

Programmatic General Permits

The New England District of the U.S. Army Corps of Engineers issued a programmatic general permit (PGP) on May 15, 2001, to expedite review of minimal impact work in coastal and inland waters and wetlands within the State of Connecticut and lands located within the exterior boundaries of an Indian reservation. Most Local Bridge Program projects will have impacts small enough that they will be covered under Category I or Category II of the Connecticut Programmatic General Permit. Activities with minimal impacts are specified by the terms and conditions of this PGP and the **DEFINITION OF CATEGORIES** sheets. Minimal impact activities either meet Category I (eligible without screening, non-reporting), or Category II (may be eligible, determination of eligibility made during a screening meeting by the Corps, representatives of the Federal resource agencies, and the Connecticut Department of Environmental Protection.) In both cases, the PGP is valid only after the applicant receives all of the necessary state and local approvals listed under the **Procedures** section. The Corps individual permit review process, and activities exempt from Corps jurisdiction are not affected by this PGP.

ACTIVITIES COVERED:

Work and structures identified in the **DEFINITION OF CATEGORIES** sheets that are located in, or that affect, navigable waters of the United States (regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899), and the discharge of dredged or fill material into waters of the United States, including wetlands (regulated by the Corps under Section 404 of the Clean Water Act) are eligible for consideration under the PGP. For clarification, the term "discharge of dredge or fill material" also includes certain discharges resulting from excavation (pursuant to 33 CFR PART 323.2 (iii), as revised January 17, 2001, the term "discharge of dredged material" means any addition of dredged material into & including any redeposit of dredged material within the waters of the United States, except discharges that meet the definition of "incidental fallback").

PGP PROCEDURES:

Once it has been determined that a project will likely fall under the PGP, an ACOE Category Determination Form must be completed and should become part of the contract documents. For convenience, such a form is shown below:

Army Corps of Engineers Programmatic General Permit Category Determination Form

Project Number: _____ Submittal Date: _____

Project Description: _____

Town: _____ Coordinates: N _____ meters

Waterway: _____ E _____ meters

Permanent Wetland Impact: _____ acres *(Include all fill & excavation in wetlands & watercourses)*

Temporary Wetland Impact: _____ acres *(Include temporary structures, access to site, etc.)*

Total Wetland Impact: _____ acres

Description of Permanent and Temporary Wetland Impacts: _____

Contact person: _____

THIS SECTION TO BE COMPLETED BY MUNICIPAL INLAND WETLAND OR CONSERVATION COMMISSION

This project has been determined to qualify for:

- Category I** – Less than 5,000 s.f. of inland wetland impacts (both temporary and permanent). Unconfined in-stream work will be limited to **July 1 through September 30th**. No new tidal wetland fills are allowed under this category. This category does not apply to projects on the main stem of the CT River or to those occurring on or within 0.25 mile up or downstream of the main stem or tributaries to a National Wild and Scenic River System.
- Category II** – Wetland impacts are between 5,000 s.f. and 1 acre. This project must be presented to the ACOE. The ACOE application Form ENG 4345 must be prepared and submitted for approval. The monthly Project Manager’s meeting at DOT Headquarters may be used as an opportunity to meet with the ACOE and present this project for approval.
- Category III** – Wetland impacts are over 1 acre. Individual Corps Permit is required.

If the project scope changes, affecting water resource impacts, the project must be resubmitted for review.

Special conditions/ Notes: _____

Authorized Signature: _____ Date: _____

It is important to note that the 401 Water Quality Certification is directly connected to the ACOE PGP permitting process. For projects qualifying for Category I, the 401 WQC approval is considered automatic. For Category II projects, the DEP Addendum form should be submitted along with the ACOE permit application. If Flood Management Certification is being sought through the DOT, much of the supplemental information required by the addendum sheet is no longer required. An individual 401 WQC approval is needed from DEP *only when an individual* permit is required by the USACOE.

A. State and Local Approvals:

When any of the following state or local approvals are required for activities eligible under the PGP, such approvals must be obtained in order for this PGP authorization to be valid. (Refer also to PGP Condition No. 1):

- (1) Inland Wetlands and Watercourses Permit under the Inland Wetlands and Watercourses Act (Connecticut General Statutes (CGS) Sections 22a-36 to 22a-45(a), inclusive),
- (2) Water Diversion Permit under the Connecticut Water Diversion Policy Act (CGS Sections 22a-365 to 22a-378(a), inclusive),
- (3) Stream Channel Encroachment Lines Permit (CGS Sections 22a-342 to 22a-349(a), inclusive),
- (4) Dam Safety Construction Permit (CGS Sections 22a-401 to 22a-411, inclusive),
- (5) Structures, Dredging and Filling Permit (CGS Sections 22a-359 to 22a-363f, inclusive),
- (6) Tidal Wetlands Permit under the Tidal Wetlands Act (CGS Sections 22a-28 to 22a-35a inclusive),
- (7) Certificate of Permission (CGS Section 22a-363b),
- (8) Long Island Sound General Permits (CGS Sections 22a-28 to 22a-35 and Sections 22a-359 to 22a-363f inclusive),
- (9) Approvals for marine based aquaculture activities required by Connecticut General Statutes Section 22-11h.

B. State Administered Federal Laws:

(10) Water Quality Certification (WQC) under Section 401 of the Federal Clean Water Act (33 U.S.C. Sec. 1341). Section 401(a)(1) of the Clean Water Act requires that applicants obtain a water quality certification or waiver from the state water pollution control agency (CT DEP or EPA for Indian reservation lands) to discharge dredged or fill materials into waters of the United States.

On May 15, 2001, CT DEP:

- (1) Conditionally granted WQC for Category I activities in inland waters.

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- (2) Denied WQC for bank stabilization projects with a length of greater than 200 linear feet.
 - (3) Denied WQC Category I for activities that involve the construction, modification, or alteration of dams or dikes and for other projects regulated as water diversions under the Connecticut Water Diversion Policy Act. (These projects must be screened under the provisions of Category II.)
 - (4) Denied WQC for new fill/excavation discharges under Category I for projects with impacts to special wetlands (See item (5) under Definitions in the Definitions of Categories attachment to the PGP), and for projects with impacts to threatened or endangered species, species of special concern, or significant natural communities (See item (6) under Definitions in the Definitions of Categories attachment to the PGP), and
 - (5) Conditionally granted WQC for Category II activities provided that the CT DEP finds that the activity is consistent with Connecticut's water quality standards and is reasonably likely to have no more than minimal impact on water quality individually or cumulatively.

In order for the CT DEP WQC to be valid, the applicant must obtain the required state and local authorizations listed under PGP Section A Items (1-4).

For Category I and II activities in tidal, coastal and navigable waters, the PGP is not valid until and unless CT DEP Office of Long Island Sound Programs (OLISP) authorization is granted. CT DEP authorizations for individual activities in tidal, coastal and navigable waters include a substantive evaluation by OLISP regarding consistency with state water quality standards. As a result, a WQC is inherent in the OLISP permit process under **Section A** approvals numbers (5), (6), (7) and (8) and a separate WQC application is not required for these activities.

(11) Coastal Zone Management Consistency (CZM) Concurrence under Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.

Section 307(c) of the Coastal Zone Management Act of 1972, as amended, requires applicants to obtain a certification or waiver from CT DEP that the activity complies with the state's coastal zone management program for activities affecting a state's coastal area.²

CT DEP authorizations for individual activities in the state's coastal area include a substantive evaluation by the Office of Long Island Sound Programs (OLISP) regarding consistency concurrence with the coastal zone management program. As a result, CZM consistency concurrence is inherent in the OLISP permit process under Section A (5), (6), (7)

² *The state's Coastal Area is statutorily defined as: all lands and waters within the municipalities of Greenwich, Stamford, Darien, Norwalk, Westport, Fairfield, Bridgeport, Stratford, Shelton, Milford, Borough of Woodmont, Orange, West Haven, New Haven, Hamden, North Haven, East Haven, Branford, Guilford, Madison, Clinton, Westbrook, Deep River, Chester, Essex, Borough of Fenwick, Old Saybrook, Lyme, Old Lyme, East Lyme, Waterford, New London, Montville, Norwich, Preston, Ledyard, Groton (city, Town and Long Point Borough) and Stonington (Town and Borough) [Section 22a-94(a) CGS].*

and (8) of the PGP, and a separate application to the Corps of Engineers is not required for these activities.

C. Corps Authorizations:

PGP authorizations consist of both Category I and II type activities. Eligibility, application and screening procedures described below for these Categories are contingent on State programs and procedures currently in place, as well as agreements with Indian tribes for projects on lands located within the exterior boundaries of an Indian reservation. If there are changes in any of these programs that may affect the terms and conditions of the PGP (prior to its expiration date), then modifications to this PGP may be necessary.

D. Programmatic General Permit Conditions:

The following conditions apply to activities authorized under this PGP, including all Category I (non-reporting) and Category II (screening) activities:

- 1. Other Permits.** Authorization under the general permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- 2. Applicability of this general permit shall be evaluated with reference to Federal jurisdictional boundaries.** Applicants are responsible for ensuring that the boundaries used satisfy the federal criteria defined at Title 33 CFR 328-329.
- 3. Minimal Effects.** Projects authorized by this general permit shall have minimal individual and cumulative adverse environmental impacts as determined by the Corps.
- 4. Discretionary Authority.** Notwithstanding compliance with the terms and conditions of this permit, the Corps of Engineers retains discretionary authority to require an application for an individual permit for any project based on concerns for the aquatic environment or for any other factor of the public interest. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposed activity warrant individual review based on the concerns stated above. This authority may be invoked for projects with cumulative environmental impacts that are more than minimal, or if there is a special resource or concern associated with a particular project, that is not already covered by the remaining conditions of the PGP, that warrants greater review. Whenever the Corps notifies an applicant that an individual permit may be required, authorization under this general permit is void, and no work may be conducted until the individual Corps' permit is obtained, or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this general permit.
- 5. Single and Complete Projects.** This general permit shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single project shall be treated together as constituting one single and complete project. All planned phases of multi-phased projects shall be treated together as constituting one single and complete project. This general permit shall not be used for any activity that

is part of an overall project for which an individual permit is required. Note that modifications to State permits do not constitute a separate project.

- 6. Historic Properties.** Any activity authorized by this general permit shall comply with Section 106 of the National Historic Preservation Act. Information on the location and existence of historic resources can be obtained from the Connecticut Historical Commission and the National Register of Historic Places. If the permittee, during construction of work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the area subject to Corps jurisdiction that might be eligible for listing in the National Register of Historic Places, he shall immediately notify the District Engineer.
 - 7. National Lands.** Activities authorized by this general permit shall not impinge upon the value of any National Wildlife Refuge, National Forest, or any other area administered by the U.S. Fish and Wildlife Service, U.S. Forest Service, or National Park Service.
 - 8. Endangered Species.** Any activity that may affect a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA); or which is likely to destroy or adversely modify the critical habitat of such species; or which would result in a “take” of any threatened or endangered species of fish or wildlife, or which would result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants **IS** not eligible under Category I, but must be reviewed for eligibility under Category II. Applicants shall notify the Corps if any listed species or critical habitat is in the vicinity of the project and shall not begin work until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the U.S. Fish and Wildlife Service and National Marine Fisheries Service.
 - 9. Essential Fish Habitat.** As part of the PGP screening process, the Corps will coordinate with the National Marine Fisheries Service (NMFS) in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed “essential fish habitat (EFH),” and is broadly defined to include “those waters and substrate necessary to fish for spawning, breeding, feeding and growth to maturity.” All species managed under the MSFCMA have had EFH designations. There are 56 species with EFH in the coastal waters of southern New England. Applicants may be required to describe and identify potential impacts to EFH. For instance, in Connecticut, Atlantic salmon (*Salmo salar*) habitat is protected by this act. Any work in the mainstem or tributary streams of the Connecticut River watershed that are being managed for Atlantic salmon may not be authorized under Category I of the CT PGP and must be screened for potential impacts to EFH. Conservation recommendations made by NMFS will normally be included as a permit required by the Corps. Information on the location of EFH can be obtained from NMFS.
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- 10. Wild and Scenic Rivers .** Any activity that occurs in a component of, or within 0.25 miles up or downstream of the main stem or tributaries of a river segment of the National Wild and Scenic River System, must be reviewed by the Corps under the procedures of Category II of this PGP regardless if it meets the Category I size of impact thresholds. This condition applies to both designated wild and scenic rivers and rivers designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. The Corps will consult with the National Park Service (NPS) with regard to potential impacts of the proposed activity on the resource values of the wild and scenic river. The culmination of this coordination will be a determination by the NPS and the Corps that the work: (1) may proceed as proposed; (2) may proceed with recommended conditions; or (3) could pose a direct and adverse effect on the resource values of the river, and an individual permit is required. If pre-application consultation between the applicant and the NPS has occurred whereby the NPS has made a determination that the proposed activity is appropriate for authorization under the PGP (with respect to wild and scenic river issues), this determination should be furnished to the Corps with submission of the application.
- 11. Federal Navigation Project.** Any structure or work that extends closer to the horizontal limits of any Corps navigation project than a distance of three times the project's authorized depth shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys.
- 12. Navigation.** There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. If future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- 13. Federal Liability.** In issuing the permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this general permit; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.
- 14. Minimization.** Discharges of dredged or fill material into waters of the United States shall be avoided and/or minimized to the maximum extent practicable.
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- 15. Work in Wetlands.** Heavy equipment working in wetlands shall be avoided and if required shall be placed on mats to minimize soil/ vegetation disturbance. Disturbed areas in wetlands shall be restored to preconstruction contours upon completion of the work.
- 16. Temporary Fill.** Temporary fill in waters and wetlands authorized by this general permit (e.g. access roads, cofferdams) shall be properly stabilized during use to prevent erosion. Temporary fill in tidal, navigable or inland waters of the United States shall consist of a material that minimizes impacts to water quality (e.g. sandbags or clean, gravel and/or stone). Temporary fill in wetlands shall be placed on geotextile fabric that is laid on the existing wetland grade. Temporary fills shall be disposed of at an upland site and suitably contained to prevent erosion and/or transport to a waterway or wetland. Temporary fill areas shall be restored to their original elevations. No temporary fill shall be placed in waters and/or wetlands unless specifically authorized by the Corps.
- 17. Sedimentation and Erosion Control.** Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences or other devices, shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. These devices shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment. These devices shall be removed upon completion of work, and the disturbed areas shall be stabilized. The sediment collected by these devices shall be removed and placed at an upland location, in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.
- 18. Waterway Crossings.** (a) All temporary and permanent crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, and to maintain existing low flows, and so as not to obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction. (b) No open trench excavation shall be allowed in flowing waters unless a special condition is added that allows this as a result of a Category II screening meeting. (c) Temporary bridges, culverts, or cofferdams shall be used for equipment access across streams (**Note:** areas of fill and/or cofferdams must be included in total waterway/ wetlands impacts to determine applicability of this general permit). (d) For projects that otherwise meet the terms of Category I, in stream construction work shall be conducted during the low flow period July 1 – September 30 in any year; projects that are not to be conducted during that time period are ineligible for Category I and shall be screened pursuant to Category II, regardless of the waterway and wetland fill and/or impact area.
- 19. Discharge of Pollutants.** All activities involving any discharge of pollutants into waters of the United States authorized under the general permit shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1251), and applicable state
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- and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this permit, the authorized work shall be modified to conform with these standards within 6 months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the Environmental Protection Agency. Applicants may presume that state water quality standards are met with issuance of the Section 401 Water Quality Certification (applicable only to the Section 404 activity).
- 20. Spawning Areas.** Discharges into known: a) fish and shellfish spawning or nursery areas; and b) amphibian and waterfowl breeding areas, during spawning or breeding seasons shall be avoided, and impacts to these areas shall be minimized to the maximum extent practicable during all other times of the year.
- 21. Storage of Seasonal Structures.** Coastal structures such as pier sections, floats, etc., that are removed from the waterway for a portion of the year shall be stored in an upland location, located above mean high water and not in a vegetated wetland.
- 22. Environmental Values.** The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner so as to maintain as much as is practicable, and to minimize any adverse impacts on, existing fish, and wildlife, and natural environmental values and to discourage the establishment or spread of plant species identified as non-native invasive species by any federal or state agency.
- 23. Inspections.** The permittee shall permit the District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with the terms and conditions of this permit. The District Engineer may also require post-construction engineering drawings for completed work, and post-dredging survey drawings for any dredging work. **To facilitate these inspections, a work notification form shall be filled out and returned to the Corps for all Category II projects.**
- 24. Maintenance.** The permittee shall maintain the work or structures authorized herein in good condition, including maintenance to ensure public safety. Note that this does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds described on the DEFINITION OF CATEGORIES sheets and/or any conditions included in a written Corps authorization.
- 25. Property Rights.** This permit does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations.
- 26. Modification, Suspension, and Revocation.** This permit may either be modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7; and any such action shall not be the basis for any claim for damages against the United States.
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- 27. Restoration.** The permittee, upon receipt of a notice of revocation of authorization under this permit, shall restore the wetland or waterway to its former conditions, without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.
- 28. Special Conditions.** The Corps may impose other special conditions on a project authorized pursuant to this general permit that are determined necessary to minimize adverse environmental effects or based on any other factor of the public interest. These may be based on concerns from CT DEP or Federal resource agency. Failure to comply with all conditions of the authorization, including special conditions, will constitute a permit violation and may subject the permittee to criminal, civil, or administrative penalties or restoration.
- 29. False or Incomplete Information.** If the Corps makes a determination regarding the eligibility of a project under this permit, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the permit shall not be valid, and the U.S. government may institute appropriate legal proceedings.
- 30. Abandonment.** If the permittee decides to abandon the activity authorized under the general permit, unless such abandonment is merely the transfer of property to a third party, he may be required to restore the area to the satisfaction of the District Engineer.
- 31. Enforcement cases.** This general permit does not apply to any existing or proposed activity in Corps jurisdiction associated with a Corps of Engineers or EPA enforcement action, until such time as the enforcement action is resolved or the Corps determines that the activity may proceed independently without compromising the enforcement action.
- 32. Duration of Authorization.** Activities authorized under Category I of this general permit that have commenced (i.e., are under construction) or are under contract to commence in reliance upon this authorization will remain authorized provided the activity is completed within twelve months of the date of the general permit's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2). Activities authorized under Category II of the PGP that are not fully completed prior to the expiration date of this PGP, will remain authorized in accordance with the project specific date provided in writing by the Corps of Engineers to the permittee. Activities completed under the authorization of the PGP will continue to be authorized after the PGP expires.
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CATEGORY I (Non-reporting/Minimal Impacts)

Activities in Connecticut that are subject to Corps jurisdiction and meet the definition of Category I on the DEFINITION OF CATEGORIES sheets, as well as all of the other conditions of this PGP, **do not** require separate application to the Corps. The municipal inland wetlands agency must concur that the project meets the criteria for Category I of the PGP, and documentation of that concurrence must be retained in the project records.

Category I is non-reporting for activities located on lands within the exterior boundaries of an Indian reservation or activities that are regulated by the CT DEP (Office of Long Island Sound Programs/Inland Water Resources Division) or the Connecticut municipal inland wetlands agencies. Activities not regulated by either of these agencies, as well as activities located on lands within the exterior boundaries of an Indian reservation that are regulated by the Corps, will be subject to the Category II screening requirements of the PGP.

Note that the review thresholds under Category I apply to single and complete projects only. Also note that Category I does not apply to projects occurring in a component of, or within 0.25 mile up or downstream of the main stem or tributaries of a river segment of the National Wild and Scenic River System, projects with impacts to special wetlands, threatened or endangered species, species of special concern, or significant natural communities identified by the CT Natural Diversity Database, dams, dikes, or other projects regulated under the CT Water Diversion Policy Act.

Although Category I projects are non-reporting, the Corps reserves the right to require either screening under Category II or an individual permit review if there are concerns for the aquatic environment or any other factor of the public interest.

CATEGORY II (Reporting/Minimal Impacts)

Activities in Connecticut that are subject to Corps jurisdiction and appear to meet the definition of Category II on the Definition of Categories sheets will be reviewed at Federal/state joint screening meetings to determine whether such activities may be eligible under this PGP. To be eligible, an activity must meet all the terms and conditions of the PGP, and result in minimal impacts to the aquatic environment.

In order to satisfy Section 106 of the Historic Preservation Act, applicants with projects eligible for Category II must coordinate with the State Historic Preservation Officer (SHPO) and when necessary (projects located east of the Thames River to the Rhode Island border and inland to Montville and Ledyard) the Tribal Historic Preservation Officer (THPO) of both the Mashantucket Pequot Tribe and the Mohegan Tribe.

Applicants must submit a copy of their application materials to the State Historic Preservation Officer (SHPO), to be reviewed for the presence of historic/archaeological resources in the permit area that may be affected by the proposed work. The Corps will then be notified by the SHPO if there are State concerns that the proposed work will have an effect on historic resources. The applicant should include with their application, either a copy of their cover letter, a statement of having sent their application materials to the SHPO, or a letter from the SHPO.

For projects located east of the Thames River to the Rhode Island border and inland to Montville and Ledyard, applicants must submit copies of their application materials to the Tribal Historic Preservation Officer (THPO) of both the Mashantucket Pequot Tribe and the Mohegan Tribe. The applicant should include with their application a copy of their cover letter or a statement of having sent their application materials to the THPOs.

Category II Application and Screening Procedures for activities regulated under the CT DEP's Office of Long Island Sound Programs (OLISP). (Work affecting tidal wetlands and tidal, coastal or navigable waters pursuant to the authorities listed under numbers 5, 6, 7, 8, 10 and 11 of Section A of this PGP.)

The CT DEP, OLISP will forward copies of application packages and OLISP approvals to the Corps of Engineers on a weekly basis. If a project meets Category I, no further action is required.

For projects involving dredging with open water disposal, applicants must send the required information listed on the attached list of additional information to the CT DEP, OLISP and the Corps. This information is necessary for determining the suitability of the material to be dredged with respect to the requested disposal site and will also be reviewed at the screening meeting.

State application packages, COPs and tentative determinations for these activities will be screened by the Corps, the Federal resource agencies, and CT DEP during the PGP screening meetings. The Federal resource agencies include the U.S. Fish and Wildlife Service (FWS), the U.S. Environmental Protection Agency (EPA) and the National Marine Fisheries Service (NMFS). The screening meetings are held on a monthly basis and will most always occur during the state's tentative determination public notice period or during their Certificate of Permission review period.

Category II Application and Screening Procedures for activities regulated by the CT DEP Inland Water Resources Division as well as activities NOT regulated under the Office of Long Island Sound Programs. (Work affecting inland waters/waterways and wetlands, waters of the United States, as well as activities exempt from state review.)

A separate Corps application form (ENG Form 4345) is required for these activities. Applicants must submit 4 copies of the application and the CT DEP addendum to the Corps of Engineers, New England District, Regulatory Division, 696 Virginia Road, Concord, MA 01742-2751. To expedite the review process, the Corps will then send three copies of the application package to CT DEP, Bureau of Water Management, Inland Water Resources Division and to CT DEP, OLISP for state exempt and Indian land activities in a coastal area. **NOTE:** It is very important that applicants supplement the ENG 4345 Application Form with appropriate and adequate drawings that accurately illustrate the work described.

All drawings should be submitted on 8-1/2 x 11-inch white paper and include a vicinity map, plan view, and elevation/cross section views of the activity. Since drawings must be reproduced, heavy dark lines should be used with no color shading. All jurisdictional boundaries must be clearly delineated. Refer to the Corps New England District's "Guide for Permit Applicants" publication for a complete description of sample drawing requirements. Failure to

submit the appropriate information could result in processing delays and/or administrative closure of the file. The CT DEP, Inland Water Resources Division has 60 days from receipt of a complete application to make a determination on their water quality certification.

Applicants must also ensure that the following supplemental information required by the Corps is submitted with the application: (1) documentation of federal wetland delineation, (2) documentation of coordination with the Connecticut Historical Commission and Tribal Historic Preservation Officers, when appropriate.

CT DEP, Inland Water Resources Division will review the activity for compliance with state water quality standards, and CZM consistency with the state's coastal program (coastal area projects) that are not already being reviewed by OLISP under the authorities listed in Section A (5, 6, 7, 8, 10 and 11) of the PGP. The joint screening meetings will occur for all Category II activities. Screening meetings will be held regularly either at the Corps or CT DOT offices. Representatives from the CT DEP, the Corps, the EPA, the FWS, and the NMFS will have an opportunity to attend and comment.

Coordination Procedures for ALL Category II Projects:

At the screening meeting, the Corps, the CT DEP and the federal resource agencies, will determine if Category II applications: (1) require additional information; (2) are eligible under the PGP as proposed; (3) are ineligible under the terms and/or conditions of the PGP; (4) will require project modification, mitigation or other special conditions to minimize impacts and protect the aquatic environment to be eligible for the PGP; or 5) require individual permit review irrespective of whether the terms and conditions of the PGP are met, based on concerns for the aquatic environment or any other public interest factor.

The comments from the Federal resource agencies to the Corps may be verbal initially, and must be made within 10 working days of the screening meeting. These comments must then be confirmed in writing, by the Branch Chief or Field Supervisor, within 10 calendar days of the verbal response if the Federal Resource Agency (ies) expresses a concern whereby the Corps will require an individual permit. Federal resource agency comments must be clearly identified and reflect a concern related to the aquatic environment within their area of expertise; state the species or resources that could be impacted by the activities, and describe the impacts that either individually or cumulatively will be more than minimal. The Corps will coordinate these comments with the applicant in a timely manner.

If any one of the agencies expresses and identifies a concern related to the aquatic environment within their area of expertise within the specified time frame, the Corps will contact the applicant to discuss the concerns raised. If the applicant is unable to resolve the concerns, the Corps, independently or at the request of either the CT DEP or one of the Federal Resource Agencies, will require an individual permit for the activities. The applicant will be notified of this in writing, and provided information about submitting the necessary application materials.

If the activity is eligible for the PGP as determined by the Federal/state screening meeting, then a Corps PGP authorization will be sent directly to the applicant. If the activity is not eligible, then the Corps will contact the applicant to discuss the concerns raised. In either

case, the Corps will notify the applicant, in writing, within 45 days of the Federal/state screening meeting.

Category II projects may not proceed until written notification is received from the Corps. This written approval will be in the form of a Corps PGP authorization letter sent directly to the applicant.

See below for an addendum form which must be submitted to DEP for a Category II PGP.

ADDENDUM - ADDITIONAL REQUIRED INFORMATION

CATEGORY II OF THE CONNECTICUT PROGRAMMATIC GENERAL PERMIT

CT DEP, BUREAU OF WATER MANAGEMENT, INLAND WATER RESOURCES DIVISION

1. Provide an Executive Summary which includes: a brief description of the proposed activity; a synopsis of the environmental and engineering analyses conducted and the results of such analyses; the anticipated time frame for initiating, conducting and completing the proposed activities; and any other information the applicant deems relevant to an understanding of the proposed activity.

2. Provide the 4-digit basin code for the natural drainage basin in which the project is located: _____

Basin codes are identified on the map entitled, "Natural Drainage Basins in Connecticut" published by the CT DEP, Natural Resources Center.

3. Is the proposed activity located within a shaded area of concern on the "State and Federally Listed Species and Significant Natural Communities Maps"? _____. Date of map? _____

4. Has a field survey been conducted of the project area to identify any presence of endangered, threatened, or special concern species? No.

If yes, submit a copy of the field survey and include the biologist's name and contact information.

The Natural Drainage Basin and Listed Species Maps references above are available in the CT DEP File Room or the DEP Store located on the store level at 79 Elm Street, Hartford. Information is also available on the DEP web site at www.dep.state.ct.us.

5. *Plans have been submitted as part of the State permit process.*

6. *An engineering hydrology/hydraulic report has been submitted as part of the State permit process.*

7. Application Certification: "I have personally examined and am familiar with the information submitted in this application and documentation attached thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

SIGNATURE OF APPLICANT

DATE

NAME OF APPLICANT (PRINTED OR TYPED)

TITLE

SIGNATURE OF PREPARER

DATE

NAME OF PREPARER (PRINTED OR TYPED)

TITLE

INDIVIDUAL PERMIT

Work that is in the INDIVIDUAL PERMIT category as listed in the DEFINITION OF CATEGORIES sheets, or that does not meet the terms and conditions of either Category I or Category II of the PGP, will require an application for an individual permit to the Corps of Engineers (see 33 CFR Part 325.1). The screening procedures outlined above will only serve to delay individual permit review in such cases. The applicant should submit the appropriate application materials (including the Corps application form) at the earliest possible date. General information and application forms can be obtained by calling the Corps New England District at 1-800-343-4789 (outside Massachusetts) and 1-800-362-4367 (within Massachusetts). Individual WQC and/or CZM consistency concurrence will be required from the CT DEP.

DEFINITION OF CATEGORIES**Sheet 1/4****1. INLAND WATERS/WATERWAYS AND WETLANDS (WATERS OF THE U.S.) (1)**

Activities must be regulated by the CT DEP or a CT Municipal Inland Wetlands Agency

	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
<p>(A) NEW FILL/ EXCAVATION DISCHARGES.</p> <p>Impact area includes all temporary & permanent fill & excavation discharges.</p> <p>Secondary impacts include areas drained, flooded or cleared.</p> <p>Projects with impacts to special wetlands (5), threatened or endangered species, species of special concern, or significant natural communities identified by the CT Natural Diversity Database (6) must be screened under Category II.</p> <p>Dams, dikes or water diversion fills must be screened in Cat. II. (f)</p>	<p>Less than 5,000 s.f. of inland Waterway and/or wetland fill & secondary impacts.</p> <p>Unconfined in-stream work (cofferdam structures/fills included) is limited to July 1 through September 30.</p> <p>Culverts for roadway Crossings, provided (a) the culvert invert elevations are set at least 6 inches below the elevation of the natural streambed, (b) the culvert does not impede the passage of fish and other aquatic organisms indigenous to the watercourse, and (c) the culvert and associated fill does not by design or default function to provide stormwater detention.</p> <p>Does not include piping of waters/waterways.</p> <p>Does not include streambank Stabilization (see B below).</p>	<p>5,000 s.f. to 1 acre (c,d) inland waterway and/or wetland fill and secondary impacts.</p> <p>Culverts for roadway crossings that do not meet Category I.</p> <p>Time of year restrictions Determined case-by-case.</p> <p>Inland waterway or wetlands restoration projects with any amount of impact can be reviewed under Category II. The Corps, in consultation with State and Federal agencies, must determine that net adverse effects are minimal.</p>	<p>Greater than 1 acre (c, d) inland waterway and or wetland fill and secondary impacts.</p>
<p>(B) BANK STABILIZATION PROJECTS</p> <p>Does not include channelization.</p> <p>Length includes the sum of bank stabilization involving one or both banks of a section of stream.</p>	<p>Inland bank stabilization less than 500 ft. in length and less than an average of 1 c.y. fill per linear foot below ordinary high water, provided no wetland fill, limited to July 1 through September 30. (e)</p>	<p>Bank stabilization exceeding Category I.</p>	
<p>(C) REPAIR & MAINTENANCE WORK</p>	<p>Repair/maintenance of existing, currently serviceable, authorized fills with no expansion or change in use.</p>	<p>Replacement of non-serviceable fills, or repair/maintenance of serviceable fills, with expansion of any amount up to 1 acre, or change in use.</p>	

DEFINITION OF CATEGORIES		Sheet 2/4	
2. TIDAL WATERS AND NAVIGABLE WATERS (2) (Includes all of the Connecticut River)			
	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(A) FILL	No provisions for new or previously unauthorized fills in Category I.	<p>Up to 1 acre (d) waterway/wetland fill and secondary impacts (e.g. areas that are drained/ flooded/ cleared.)</p> <p>Includes temporary and permanent waterway fill.</p> <p>Allows beach nourishment projects with sand being placed above mean high water with compatible grain size.</p> <p>No permanent fill and/or excavation in special aquatic sites (3), except when associated with a proactive restoration project.</p> <p>Proactive restoration projects with any amount of impact can be reviewed under Category II. The Corps, in consultation with State & Federal agencies, must determine that net adverse effects are minimal.</p>	<p>Greater than 1 acre (d) waterway fill and secondary impacts (e.g., areas that are drained/flooded/ cleared.) Includes all temporary & permanent waterway fill.</p> <p>Temporary or permanent fill or excavation, any amount, in special aquatic sites (3), other than as specified in Category II.</p>
(B) REPAIR AND MAINTENANCE WORK	Repair/maintenance of existing currently serviceable grandfathered or authorized fills and structures with no expansion or change in use.	Repair of any non-serviceable structures or fills, or repair/maintenance of serviceable structures or fills, with expansion up to 1 acre, or change in use.	Replacement of non-serviceable structures or fills, or repair and maintenance of serviceable fills, greater than 1 acre.
(C) DREDGING	Maintenance dredging with contained upland disposal; proper siltation controls used; limited to work between Nov 1 - Jan 15, (b), provided no impacts to special aquatic sites. (3)	Maintenance dredging that doesn't meet Category I, as well as new or improvement dredging. Disposal includes upland, open water or beach nourishment (above mean high water), provided material is determined suitable by the Corps, is < 25,000 c.y. and no impacts to special aquatic sites. (3)	Any dredging of greater than 25,000 cubic yards of material with open water disposal; or dredging any amount in or affecting special aquatic site. (3)

DEFINITION OF CATEGORIES		Sheet 3/4	
	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(D) MOORINGS	Private, non-commercial, non-rental single boat moorings not associated with any boating facility (4) provided not located in Federal Navigation Project, and no interference with navigation and with harbormaster approval.	Moorings that do not meet the terms of Category I or moorings that meet the terms of Category I that are located within a Federal anchorage.	Moorings within the horizontal limits, or with moored vessels that extend within the limits, of Corps Federal navigation projects, except those in Federal anchorages under Category II.
(E) PILE-SUPPORTED STRUCTURES AND FLOATS No interference with navigation.	<p>1. Reconfiguration of existing authorized docks provided those structures do not extend beyond the existing perimeter of the facility, and floats supported off substrate at low tide. No dredging, additional slips or expansion allowed.</p> <p>2. Construction of private residential docks that extend no further waterward of MHW than to a depth of -4 feet, or which extend 40 feet, whichever is less. In either case above, no docks/floats shall be located over submerged aquatic vegetation or over tidal wetlands.</p> <p>3. Osprey platforms that meet CT General Permit.</p>	<p>1. Private piers and floats for navigational access to waterway other than those docks as described in Category I.</p> <p>2. New structures within an existing boating facility (4) provided those structures do not extend beyond the existing perimeter of the facility.</p>	Structures/piers/floats that extend, or with docked/moored vessels, that extend within horizontal limits of a Federal Navigation Project. Structures, including piers/floats, associated with a new or previously unauthorized boating facility. (4)
(F) AQUACULTURE PROJECTS All must be marked and maintained in conformance w/ 33 CFR 64, and receive U. S. Coast Guard Permission for Aids to Navigation. No impact to special aquatic site.		<p>All on-bottom shellfish rearing devices and all off-bottom suspended systems (include longlines, lantern nets, rafts, and associated work floats) for the culture of shellfish or seaweed.</p> <p>Installation of intake and discharge structure for land-based hatchery with once through circulation system.</p>	Shellfish rearing systems that do not meet Category 2.

DEFINITION OF CATEGORIES		Sheet 4/4	
	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(G) MISCELLANEOUS	Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed w/in 30 days of their use. Coast Guard approved aids to navigation. Oil spill clean up. Temporary structures/ fill. Fish/ wildlife harvesting structures/ fill (As defined by 33 CFR 330, App A-4). Scientific measurement devices and survey activities, such as exploratory drilling, surveying/ sampling. Does not include oil/ gas exploration and fills for roads/ construction pads.	Structures/work in affecting tidal/navigable waters that are not defined under any of the previous headings. Includes, but not limited to: utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, bridge fills/ abutments, etc.	EIS required by the Corps. Activities within the horizontal limits of Corps Federal navigation projects, or with docked or moored vessels that extend within those limits.

Definitions

(1) Waters of the U.S. in inland areas: Inland rivers, streams, lakes, ponds and wetlands. [Refer to Title 33 CFR 328.4]

(2) Navigable Waters: Waters that are subject to the ebb and flow of the tide and Federally designated navigable waters which, in Connecticut, include the Connecticut River to the Massachusetts state line. [Refer to Title 33 CFR Part 329]

(3) Special Aquatic Sites: Include wetlands (inland and salt marsh), mud flats, vegetated shallows (permanently inundated areas that support rooted aquatic vegetation such as eelgrass), coral reefs, and riffle and pool complexes. [Refer to 40 CFR Part 230 Subpart E]

(4) Boating facilities: Facilities that provide, rent, or sell mooring space, such as marinas, yacht clubs, boat yards, town facilities, dockominiums, etc.

(5) Special Wetlands: vernal pools, bogs, fens, cedar swamps, spruce swamps, calcareous seepage swamps, and wetlands which provide habitat for threatened or endangered species or species of special concern as designated by the State of Connecticut Natural Diversity Database. The following definitions for vernal pools, bogs, fens, cedar swamps, spruce swamps, and calcareous seepage wetlands apply for the purposes of this PGP:

Bog: a peat accumulating wetland dominated by sphagnum moss. Typical plant species include sphagnum moss, leatherleaf, black spruce, pitcher plant and sundew.

Fen: a peat accumulating wetland dominated by sedges and/or ericaceous shrubs. Typical plant species include low sedges, ericaceous shrubs, sphagnum and other mosses.

Vernal Pool: an often temporary body of water occurring in a shallow depression of natural or human origin that fills during spring rains and snow melt and typically dries up during summer months. Vernal pools support populations of species specially adapted to reproducing in these habitats. Such species may include wood frogs, mole salamanders (*Ambystoma* sp.), fairy shrimp, fingernail clams, and other amphibians, reptiles and invertebrates. Vernal pools lack breeding populations of fish.

NOTE: The Corps will determine on a case by case basis which vernal pools are within their jurisdiction.

Cedar Swamp: a forested wetland characterized by the presence of Northern White Cedar/Atlantic White Cedar.

Spruce Swamp: a forested wetland characterized by the presence of Red/Black Spruce.

Calcareous Seepage Swamp: a forested wetland characterized by the discharge of groundwater with a chemistry influenced by the underlying limestone geology.

(6) Threatened and Endangered Species, Species of Special Concern; Significant Natural Communities: Species listed by CT DEP pursuant to Chapter 495 of the Connecticut General Statute as threatened or endangered species or species of special concern. Known locations of threatened and endangered species and species of special concern, and significant natural communities are identified on maps entitled "State and Federal Listed Species and Significant Natural Communities", as amended. These maps are available at city or town clerk offices and in the CT DEP File Room located on the store level of 79 Elm Street, Hartford.

Exclusions

(a) Category I does not apply to projects occurring in a component of, or within 0.25 mile up or downstream of the main stem of tributaries of a river segment of, the National Wild and Scenic River System.

(b) Projects located on the main stem of the CT River must be screened under Category II.

(c) Projects involving widenings, expansions and enhancement that impact between 1-3 acres of degraded or low value wetlands that have been assessed as such by either CT DEP or COE personnel, may be approved under Category II, subject to the Federal screening.

(d) The 1 Acre limit does not apply to wetland restoration projects provided that impacts to the aquatic resources are minimal and there is a preplanning component to the project that includes review and representation from all federal and state agencies on the screening committee.

(e) Section 401 Water Quality Certification is denied for Bank Stabilization Projects involving a length of greater than 200 feet. Length includes the sum of bank stabilization involving one or both banks of a section of stream. Projects involving bank stabilization with a length of greater than 200 feet will require individual Section 401 Water Quality Certification.

(f) Activities regulated by the CT DEP under Connecticut General Statutes Section 22a-368 (Water Diversion Policy Act) or Section 22a-403 (Dam Construction/Safety) screened in Category II.

PROJECT DESIGN

With the commitment to fund in hand, the municipality is ready to proceed with the design stage, where the scope and estimated costs will be more accurately defined. As a part of the design process, a public hearing must be held to solicit public input. The purpose of the public hearing is to give the public an opportunity to comment on the project. The forum is intended to be more along the lines of what the Department refers to as a "public informational meeting" where the project is presented and explained, then the public is given an opportunity to ask questions and make comments, rather than a rigidly formal public hearing. Minutes summarizing the public comments must be kept, but it is not necessary to have a word-by-word transcript prepared by a stenographer.

As the project develops, the municipality must inform the Department of any major changes in the cost of the project (in excess of 10%), so that the Department can allocate sufficient funding to the project. Failure to notify the Department of increases in the cost of a

project may result in the State not participating in any costs beyond the amount of the original Commitment to Fund.

The individual responsible for the project's design must be a professional engineer licensed in Connecticut, and must sign and seal the plans and specifications. Design criteria should be consistent with the Standard Specifications for Highway Bridges of the American Association of State Highway and Transportation Officials (AASHTO), the ConnDOT Bridge Design Manual, and the ConnDOT Highway Design Manual. The guidelines have considerable flexibility built into them, and also have provisions for deviating from standards when conditions warrant. Additional consideration should be given to remaining fatigue life, hydraulic analysis, and scour susceptibility.

If the municipality deviates from the AASHTO or Highway Design Manual guidelines, it must consider and document all of the factors listed in CGS Section 13a-86a (formerly Public Act 97-214 – see Appendix 3). This documentation should be retained in the project's file, and need not be submitted to the Department unless Federal funds are involved. For projects with Federal funding, the designer will be required to comply with all ConnDOT standards where possible; any deviations from the AASHTO or ConnDOT design guidelines *must* be approved by the Department. A life expectancy of at least 20 years after construction completion will be required for all projects. HS-20 load capacity must be achieved on the structure, except that in the case of a rehabilitation project, a municipality may opt for a lesser load limit. In all cases, a minimum load capacity of at least 12 tons must be obtained. Designs must also consider fatigue on existing structural elements in accordance with the AASHTO Guidelines for Fatigue Evaluation of Bridges. Guide railing of a safe and responsible design will be required at the leading ends to bridges. Consideration should be given to upgrading the bridge railings to current AASHTO standards.

Scour

Reasonable and prudent hydraulic analysis of a bridge design requires that an assessment be made of the proposed bridge's vulnerability to undermining due to potential scour. Because of the extreme hazard and economic hardships posed by a rapid bridge collapse, substructures for bridges over waterways should be designed to safely support the structure subjected to the design scour.

With regard to abutment or pier foundations, two basic approaches to achieving this goal are available to the designer, listed as follows in order of preference:

a) Design the foundation to resist the effects of scour from a superflood.

Foundations subjected to scour should be designed with footings supported on piles, footings founded on rock or deep footings (located below the maximum estimated scour). Structural tremies (concrete poured under water which directly supports the foundation loads) should be used only where no other solution is feasible. Preference for foundations adjacent to or within waterways will be for pile-supported footings or direct foundations on rock. For pile foundations, the top of footing should be set below the sum of the long-term degradation and contraction scour.

b) Protect the substructure units with riprap or similar armoring layers.

In general, the use of riprap to provide scour protection for new bridges is discouraged and should be used only where it has been demonstrated that alternate, preferred means of designing bridges to be safe from scour related failures are not feasible. On bridge rehabilitation projects where the substructure is being repaired and incorporated in the reconstruction of the bridge, riprap scour countermeasures may be an effective solution for protecting the bridge from scour.

The designer should explore and incorporate into the design all reasonable methods of minimizing local scour, such as the use of embankment or "stub" abutments placed at the top of a protected slope. These types of abutments are much less susceptible to scour than full height abutments. The use of stub abutments does not relieve the requirement for founding on piles or directly on rock. Piers which may experience local scour should be flow aligned and should have streamlined end sections.

Reconstructed or Rehabilitated Bridges

Generally, scour evaluations should be performed for all bridges which are to be reconstructed or rehabilitated where significant capital investment is involved, and where the bridge has been classified as scour susceptible or scour critical. A significant capital investment correlates to the following improvement categories:

- Deck Replacement
- Superstructure Replacement or Widening
- Modification or Major Repairs to Substructure Units

Bridges which have been classified as scour susceptible or scour critical should have hydrologic, hydraulic and scour evaluations performed which are sufficiently detailed to satisfy all applicable design and permitting requirements. All necessary scour countermeasures for scour susceptible or scour critical bridges should be incorporated into the overall project plans.

Further information on designing for scour can be found in the Department's Drainage Manual, and the FHWA document entitled "Evaluating Scour at Bridges" (HEC-18).

SUPPLEMENTAL APPLICATION

Once the final design, rights-of-way acquisition, utility coordination, permits, and public hearing are completed, the municipality is ready to submit the Supplemental Application. The Supplemental Application must be filed within 270 days from the Commitment to Fund date, unless an extension of that deadline is requested. To request an extension, the municipal official overseeing the project must send a letter to the Administrator of the Local Bridge Program, requesting an extension of time to submit the Supplemental Application, giving the revised project schedule and an update of estimated costs.

The Supplemental Application must be made on the current form supplied by the Department, and must include the final plans, specifications, detailed cost estimates, public hearing notice and minutes, and the following certifications:

- 1) By a professional engineer licensed in Connecticut that the design conforms to the minimum AASHTO and Highway Design Manual requirements. By statute, the municipality has the responsibility for approving any digressions from AASHTO or Highway Design Manual guidelines, for projects funded solely under the State Local Bridge Program.
- 2) By an appraiser that all property values assessed on the project are fair and reasonable. If no property was acquired for the project, a letter to this effect should be submitted.
- 3) By an authorized municipal official that property acquisition is complete or will be complete at the time construction starts.
- 4) By an authorized municipal official that public utility companies are aware of the project and prepared to relocate or adjust facilities as necessary to construct the project, and that estimates for the relocation or adjustment of municipally-owned utilities are realistic for the project need.

On projects which are not Federally funded, the Department requires plans and specifications to be submitted primarily for data collection purposes, load rating, and for planning inspections, so that the official files maintained on each bridge can be kept up to date. The Department does not routinely review or approve any plans or specifications (except for those projects which are federally funded); that responsibility lies solely with the municipality. The Department may, however, offer comments on the proposed design, as workload permits. The plans should show structural members in sufficient detail to enable load rating calculations to be performed (if structural details are left to a vendor, shop drawings must be submitted as well).

AGREEMENTS

All payments to the municipality by the State must be made in accordance with a formal State/Municipal agreement. This agreement will be a standard form agreement, approved by the Attorney General, which the municipality will not be allowed to add, delete, substitute, or modify any portion of. For Federally funded projects, there will be separate agreements for each phase of the project (design, rights-of-way, and construction). For State funded projects, there will normally be only one agreement covering all phases of the project. If the scope of the project changes significantly, a supplemental agreement may be needed.

Upon review and acceptance of the Supplemental Application, the Department will prepare and forward a State/municipal agreement to the municipality for signatures. The grant and/or loan amounts in the agreement are based on the data submitted as part of the Supplemental Application. Two copies of the agreement will be prepared by the Local Bridge Program office, and forwarded to the municipality along with instructions for signature by the

municipal official. Once signed by the municipality, both copies of the agreements, along with attachments, must be returned to the Department to be signed by the State.

When the agreements are fully executed, one copy of the agreement will be returned to the municipality, and a Tax Exempt Proceeds Fund account will be established by Reich & Tang Mutual Funds. A checkbook will be sent to the municipality by Reich & Tang to allow the municipality to withdraw the funds when due. The account will be funded to the value of the grant (and loan if applicable) when all required documents have been submitted and the project is ready for closing.

Upon receipt of bids, the municipality will certify the bids, select the successful bidder, and submit certified copies of the bids to DOT. In the event that the municipality selects a bidder other than the “low bidder”, documentation substantiating the selection must be submitted for approval.

Once all administrative requirements are complete and all required documents have been submitted, the Attorney General’s office will be notified that the project is ready for “closing”. The closing involves the submission of several documents by the municipality and its attorney for review by the Attorney General’s Office. Upon conclusion of the closing, the Attorney General’s office will notify the Local Bridge Program Administrator, and the funds in the account will be made available to the municipality. If construction is not yet complete, the funds will be transferred into the Tax Exempt Proceeds Fund account, where the municipality may write checks against the account to cover project costs. If construction has been completed, the municipality may request that the State send a check for the entire grant and/or loan amount directly to the municipal treasurer.

PROJECT COMPLETION

When construction is nearly completed, the Town should notify the Department as to the date of the semi-final inspection, so that representatives of ConnDOT can be present for the inspection. Once construction has been finished and the final inspection completed, the municipality must certify to the Department that the project has been completed, within 90 days of the completion of construction. It is important that the project be certified as complete as soon as possible after construction is completed, since the certification date will be used to determine future funding eligibility. When available, the municipality should also submit shop drawings and a set of “as-built” plans to the Department, to be included in the Bridge Safety & Evaluation Section’s file on each bridge. The shop drawings and as-built plans will be used to establish a load rating for the bridge, and in planning any future inspections.

The municipality must obtain an audit of the total cost of the project by a Certified Public Accountant (either a project-specific audit, or as part of the applicable annual municipal audits) and forward the audit to the Department for the purpose of adjusting the final grant and/or loan amounts and closing out the project, with the exception of the pay-back of any loan issued by the State. Failure to provide an audit is an event of default under the project agreement, and may result in the Department requesting the return of the grant and loan, and the municipality becoming ineligible for future financial assistance.

The contents of the audit report must be in accordance with government auditing standards issued by the Comptroller General of the United States, and the requirements as outlined in the OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations" and the State Single Audit Act, as applicable.

If the audit will be performed as part of the municipality's annual single audit, the auditor should be given notice that the municipality has a Local Bridge Program project. The auditor can then identify and separate out all expenditures directly related to specific bridge projects, in supplementary schedules with program/grant information such as the bridge number and location, account numbers, ConnDOT project number (if any), project phase (design, construction, etc.), and expenditures broken down by phase. A sample supplemental schedule will be attached to the Project Agreement. The sum of project expenditures should agree, in total, to the program/grant expenditures as shown in the annual audit report. Any costs which are not supported by the audit report and supplemental schedules will not be eligible for reimbursement. A copy of the supplemental schedule is below:

SUPPLEMENTARY PROGRAM FINANCIAL INFORMATION

FEDERAL PROJECT No.¹ _____

CONNDOT PROJECT No.: _____

BRIDGE No.: _____

LOCATION: _____

PERIOD COVERED: _____

PROGRAM/GRANT IDENTIFICATION No. ²	PHASE ³	CURRENT PERIOD EXPENDITURES, BY PHASE ⁴	TOTAL EXPENDITURES TO DATE, BY PHASE ⁴
	PE		
	ROW		
	UTILITY		
	CONST		
	CE		
	OTHER:		

¹ For projects with Federal funding.

² The number used by the municipality to identify the account in financial records, such as the Tax-Exempt Proceeds Fund account number, or capital project number.

³ Preliminary Engineering (PE), Rights of Way (ROW), Municipally-Owned Utilities (UTILITY), Construction (CONST), Construction Engineering/Inspection/Incidentals (CE), Other – provide explanation (OTHER)

⁴ The sum of the project expenditures should agree, in total, to the program/grant expenditures.

The municipality must retain all records for at least seven years after issuance of the project's certification of acceptance, or three years after receipt of the final payment, whichever is later, provided there is no pending litigation. These records include the contract, contractor's monthly and final estimates and invoices, construction orders, correspondence, field books, computations, contractor's payrolls, EEO/AA records/reports, and any other project related records. **The audited Municipality must obtain written approval from the Connecticut Department of Transportation prior to destruction of any records and/or documents pertinent to the project.**

Upon review by the Department's audit staff, the municipality will be notified by letter of its eligibility for additional grant and/or loan funds, or that reimbursement is due the State. The Department will also take actions necessary to close out the Tax Exempt Proceeds Fund account established for the project.

GUIDELINES FOR OBTAINING FUNDS UNDER THE LOCAL BRIDGE PROGRAM

The following guidelines outline, in typical order, those steps that municipalities must follow to obtain funding under the Local Bridge Program. These guidelines are general, and are intended only to give an overview of the process. ConnDOT will give additional guidance to the municipality as the project progresses. Please see Section 21 for additional procedures which must be followed when a bridge is owned or maintained currently by more than one municipality.

ALL APPLYING MUNICIPALITIES SHOULD REVIEW THESE PROCEDURES WITH THEIR MUNICIPAL ATTORNEYS AND BOND COUNSEL, WHEN APPROPRIATE, IN ORDER TO PLAN FOR THEIR LOCAL BRIDGE PROJECTS. NOTE THAT A PARTICIPATING MUNICIPALITY MUST APPROPRIATE MONIES FOR THE FULL AMOUNT OF LOCAL BRIDGE PROJECT. WHEN A LOCAL BRIDGE PROJECT IS TO BE FINANCED BY BORROWING, THE MUNICIPALITY MUST AUTHORIZE BONDS FOR EITHER OR BOTH OF THE FOLLOWING AS APPLICABLE: (i) THE PORTION OF TOTAL PROJECT COSTS TO BE FINANCED BY A LOAN UNDER THE LOCAL BRIDGE PROGRAM; (ii) MUNICIPALITY'S SHARE OF THE TOTAL COSTS.

PROCEDURES FOR STATE FUNDED PROJECTS

1. Municipality submits a Preliminary Application (see Appendix 6) to the State by the deadline. The deadline for State Fiscal Year 2006 is May 13, 2005.
2. ConnDOT reviews the Preliminary Application. If accepted, the State issues a Commitment to Fund to the municipality on or about July 1 of the same year that the application is filed. If rejected, the municipality may reapply in any future fiscal year.
3. Municipal official signs and returns the Commitment to Fund letter to the State. Once the Commitment to Fund has been issued, the project may proceed with construction as soon as it is ready.
4. The municipality's engineer prepares plans and specifications for the project. If preliminary plans and specifications were not ready at the time of preliminary application, they should be furnished to the Department when the design is 30% complete. ConnDOT does not "approve" these plans, but may offer suggestions.
5. Municipal legislative body sets date for public hearing on bridge project. Municipality publishes a legal notice NOT LESS THAN 5 DAYS in advance of the public hearing in a newspaper of general circulation. Legislative body holds public hearing.

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6. When the final design is complete, the municipality submits the Supplemental Application (a Supplemental Application form will be included with the Commitment to Fund letter, and is also available on ConnDOT's Web Site) within 270 days of the Commitment to Fund letter, unless a time extension has been granted, along with the following:
 - (a) Final plans (2 copies; half-size is preferred for at least one of the copies) and specifications certified by a Connecticut Professional Engineer, including any design exceptions, and a copy of any hydraulic studies or scour analysis done for the project;
 - (b) Final estimates;
 - (c) Proposed project schedule;
 - (d) Municipal certifications as to:
 - Completion of property acquisition;
 - Ownership of or responsibility for bridge;
 - Coordination for relocation of public utilities;
 - (e) Appraiser's certificate as to property acquired, if applicable;
 - (f) Amount of grant and/or loan requested;
 - (g) A resolution from the municipality's legislative body authorizing the municipal official to submit the Supplemental Application.
 7. ConnDOT reviews supplemental application package. When complete, ConnDOT prepares and delivers two copies of a Project Agreement to the municipality.
 8. Municipal legislative body votes to approve Local Bridge Project and to authorize the financing in accordance with statutory and charter requirements for issuance of its indebtedness as follows:
 - (a) Authorizes municipal official to execute project agreement;
 - (b) Appropriates funds to meet total estimated cost of bridge project;
 - (c) Authorizes bonds, including project loan general obligation promissory note, if necessary.
 9. Authorized Municipal official executes (signs and seals) and returns two copies of the Project Agreement (with attachments) together with the following to the State:
 - (a) Newspaper affidavit of publication of notice of public hearing/informational meeting;
 - (b) Certified minutes of public hearing/informational meeting (word-for-word transcript is not required);
 - (c) Certified copies of authorizing proceedings.
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10. ConnDOT reviews Agreement package and authorizing proceedings. State then executes the Project Loan and/or Grant Agreement and returns one original copy to the municipality.
 11. Within 180 days from the date of the Project Agreement (unless an extension is granted), the Municipality must submit the following to the State:
 - (a) Certified copies of all contractor's bids, including written justification for awarding the construction contract to any bidder other than the lowest bidder;
 - (b) Evidence that the Municipality and the contractor have entered into a legally binding construction contract.
 - (c) Evidence that the Municipality has funds available to pay its share of the total project costs;
 - (d) An inquiry as to whether or not the State has funds available to finance, in part, any increase in cost should the total project cost exceed the total project cost stated in the Supplemental Application.
 12. Once all the above requirements have been met, ConnDOT notifies the municipality that the file is ready for closing, and instructs the municipality to have their legal counsel complete and return the closing documents.
 13. Counsel to the municipality prepares the following according to forms provided as exhibits to Project Loan and Grant Agreement or Project Grant Agreement, as of the closing date, and returns them to the Local Bridge Program Administrator:
 - (a) For loan and grant (to be prepared by bond counsel):
 - i) Opinion of nationally recognized bond counsel;
 - ii) General Obligation Promissory Note;
 - iii) Signature and no litigation certificate and incumbency certificate with bank's certification;
 - (b) For grant only:
 - i) Opinion of municipal attorney;
 - ii) Signature and no litigation certificate and incumbency certificate;
 14. Upon satisfaction of above items, the Assistant Attorney General closes the loan and/or grant. Upon completion of the closing, the funds are released to municipality. If construction is not complete, the funds will be transferred into the TEPF account established for the project; the municipality may then write checks against this account. If construction work is complete, the municipality may request that a check for the full amount due be sent directly to it.
 15. At the close of every fiscal year during which expenditures were made on the project, the municipality forwards a copy of its annual single audit, along with supplemental schedules, to ConnDOT.
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16. When the project is deemed to be substantially complete, the Town notifies ConnDOT of the date of the semi-final inspection.
 17. Within 90 days of the completion of construction, the municipality must certify to ConnDOT that the project has been completed in accordance with the submitted plans and specifications.
 18. After the final payment to the contractor has been made, the municipality forwards an audit of the project to ConnDOT to adjust the grant and/or loan amounts.
 19. As soon as possible after construction is complete, the municipality (or its Engineer) submits as-built plans to the Local Bridge Program Administrator.
 20. ConnDOT reviews the project audit, and notifies the municipality of the findings. If the project costs exceed those in the original agreement, the Department will send a supplemental grant to the municipality. The municipality may also request a supplemental loan. If the project costs are less than those in the original agreement, the Department will invoice the municipality for the balance due.
 21. For any bridge owned or maintained by more than one municipality, the following additional procedures govern funding under the Local Bridge Program:
 - (a) One municipality (the “lead” or “managing” municipality) may assume responsibility under the Local Bridge Program for maintenance of the entire bridge under an interlocal agreement approved by its legislative body entered into with another municipality whose legislative body must also approve such agreement. Upon entering into such interlocal agreement, the lead municipality may file a preliminary application for the total project costs, may borrow up to 50% of the total project costs, and may be awarded a grant based upon its grant percentage as applied to such total project costs;
 - (b) In the absence of an interlocal agreement allocating responsibility for maintenance, each municipality may apply for a loan for 25% (50% of 50%) of the total project costs and for a grant based upon its grant percentage applied to 50% of the total project costs;
 - (c) Under either of the above scenarios, evidence that each municipality is legally bound to complete its respective portion of the project must be delivered to the State before funds may be disbursed.

PROCEDURES FOR FEDERALLY FUNDED PROJECTS

1. Municipality submits a Preliminary Application (see Appendix 6) to the State by the deadline. The deadline for State Fiscal Year 2006 is May 13, 2005.

2. ConnDOT reviews the Preliminary Application. If accepted, the State issues a Commitment to Fund to the municipality on or about July 1 of the same year that the application is filed. If rejected, the municipality may reapply in any future fiscal year.
3. Municipal official signs and returns the Commitment to Fund letter to the State.
4. Following acceptance of a project, a concept meeting is scheduled by ConnDOT, between representatives of ConnDOT and the municipality, to review the program requirements and to discuss the steps required to move forward with the project following Federal and State guidelines. At this point, the municipality should begin to inform the public of the project by publishing a press release, and by sending notification letters to abutting property owners and other interested parties.
5. An agreement between ConnDOT and the municipality for the design phase of the project is prepared and forwarded to the municipality for signature.
6. Municipal legislative body votes to approve Local Bridge Project and to authorize the financing in accordance with statutory and charter requirements for issuance of its indebtedness as follows:
 - (a) Authorizes municipal official to execute project agreement;
 - (b) Appropriates funds to meet total estimated cost of bridge project;
7. Authorized Municipal official executes (signs and seals) and returns two copies of the Project Agreement (with attachments) together with the resolution authorizing the appropriate municipal official to execute the agreement, and certified copies of authorizing proceedings to the State.
8. The following pre-design activities are initiated by ConnDOT:
 - (a) Environmental Review
 - (b) State Historic Preservation Office (SHPO) Review
 - (c) Natural Resources Review
 - (d) Preliminary Fisheries Review and coordination
 - (e) Hazardous/Contaminated Materials Screening

Consultant Selection

1. After the concept meeting, the municipality initiates the selection of a designer. Municipalities may undertake the design phase themselves if they have appropriate staff, or may hire a consulting engineer. If a consultant is to be engaged, the selection process is started by publishing a legal advertisement to solicit letters of interest (“RFQ”) to perform the design work from engineering firms. The RFQ must be published in at least one (1) newspaper having substantial circulation within Connecticut, and 1 professional trade journal. The deadline for submitting RFQs must be at least 1 month after the date of publication.
2. The municipality must establish a Consultant Selection Committee (Committee) consisting of at least three (3) municipal officials. One (1) member of the Committee shall be the Town

Engineer, Director of Public Works or a municipal official with considerable engineering experience possessing substantial knowledge about the project. The Chairman of the Committee shall be the individual who would sign the municipal/State and municipal/consultant agreements on behalf of the municipality (normally the chief official).

3. The Committee shall give fair and impartial consideration to all responses received within the stipulated time period from prospective consultants. Firms that did not make a submission in accordance with the legal notice may be disqualified, and consultants must be registered with the Secretary of State and the State Board of Examiners for Professional Engineers and Land Surveyors. Each member shall independently rate, using the consultant selection rating form, all firms that the Committee has determined to merit further consideration. The total score of each Committee member from the consultant selection rating form should be totaled for each firm under consideration.
 4. The top five firms (the “short list”) as determined by the Committee shall be requested to attend a personal interview with the Committee. The Committee shall interview and rate the five (5) firms utilizing the attached Consultant Rating Form. If five (5) or less firms respond, all of the firms shall be interviewed. Each Committee member shall independently evaluate and rate each consulting firm during or immediately following the interview. Following the completion of the interviews, the Committee may discuss their conclusions and adjustments may be made by any member based on these discussions. The Committee may also agree to secure additional information, based on comments from the interview, prior to finalizing their ratings of the most qualified firms.
 5. Following the completion of the interviews, the Committee shall proceed to furnish a list of the most qualified consultant firms to the Chairman. The Chairman shall make the final selection from the list of most qualified firms submitted by the Committee. In the process of making the final selection of the most qualified consultant for a specific assignment, the Chairman shall be guided by the evaluation criteria set forth in the rating form. The Chairman may request additional information from other sources or individuals that he may deem appropriate to assist him in the final selection process.
 6. Once the municipality has made its recommendation, the municipality submits copies of all the rating sheets, including the summary, all of the information reviewed by the municipality for the selected firm, along with a recommendation for the consultant chosen to ConnDOT for review and approval. If a municipality selects a consultant other than the top-ranked one, a written explanation will be required. *The municipality must receive written approval of its selection from the Department* prior to notifying any consultant of the selection.
 7. After ConnDOT approves the selection of the consultant, the municipality shall prepare a written notification to the Consultant advising that the firm has been selected.
 8. After notification of the consultant, an assignment meeting between representatives of the municipality, the selected consultant, and ConnDOT is scheduled by ConnDOT. The purpose of the assignment meeting is to discuss the project issues and to establish the required scope of services to be provided by the consultant. The consultant is notified to submit information to ConnDOT to review and establish a current audited BF&O rate.
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Negotiations

1. Following the assignment meeting, the consultant prepares a detailed narrative work scope. Once the work scope is agreed to by the Municipality, the consultant, and ConnDOT, the consultant prepares a fee proposal for submission to the municipality. A certified payroll list is submitted to the municipality and ConnDOT for use in calculating the lump sum fee. At the municipality's request, ConnDOT will prepare an independent man-hour counterproposal estimate for use by the municipality as a guide during negotiations. The CLE is not a party to the negotiations. It is imperative that negotiations be a fair and open process. This means that if the Negotiations Committee is unable to negotiate a contract with the firm selected, at a fee that the Committee determines to be fair and reasonable, negotiations with that firm shall, with prior Department approval, be formally terminated. The municipality should then select the next lower ranked firm, and submit all of the firm's information to the Department for review and approval. The Negotiations Committee must comply with the requirements of Agreement Bulletin 91-3, Pre-Award Auditing of Consultants.
2. Upon completion of negotiations, the municipality forwards a request for approval of the negotiated lump sum fee to ConnDOT along with the following:
 1. Consultant's fee proposal
 2. Town's fee proposal
 3. Negotiated fee
3. ConnDOT reviews the fee, and if acceptable, prepares an approval letter. Upon receipt of the Department's written approval of the negotiated fee, the municipality shall prepare a written notification to those consultants that were not selected.
4. A draft agreement between the municipality and the consultant is prepared by ConnDOT and is forwarded to the parties for signature. Four (4) copies of the fully executed agreement are forwarded to ConnDOT for distribution, along with a copy of the Notice to Proceed issued by the municipality to the consultant.

Design Tasks

Following is a partial list of references which may be used during the design phase:

- (1) Consulting Engineer's Manual (CE Manual)
 - (2) Standard Specifications for Roads, Bridges, and Incidental Construction – Form 816 & Supplemental Specifications
 - (3) Guidelines for Highway Design
 - (4) Location Survey Manual
 - (5) Specifications for Checking Photogrammetric Mapping
 - (6) Specifications for Aerial Photography & Photogrammetric Mapping
 - (7) Policies and Procedures for Property Maps
 - (8) Guide for Preparation for 13a-57 Plans
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- (9) Bridge Design Manual
 - (10) Bridge Design Standard Practices
 - (11) Drainage Manual
 - (12) Bridge Scour Analysis – Technical Approach
 - (13) Water Resources Coordination and Permit Processing Manual
 - (14) On-Site Mitigation for Construction Activities
 - (15a) Soils & Foundations Guide for Design for Consultant
 - (15b) Sample Contract Guide for Soil Borings
 - (16a) Manual of Traffic Control Signal Design
 - (16b) Catalogue of Signs
 - (16c) Guide MP&T Special Provision and Traffic Control Plans
 - (17) Utility Mailing List
 - (18) A Policy on the Accommodation of Utilities on Highway Rights of Way
 - (19a) Standard Roadway Drawings & List of Road Standards
 - (19b) Standard Traffic Drawings
 - (20) Design Aids (Factors for Estimating Quantities)
 - (21) Bid Description Master File
 - (22) Weighted Unit Prices
 - (23) Product Use Status Lists
 - (24a) Index of Recurring Special Provisions and Index of Guide Special Provisions
 - (24b) Index of “Non Structural” Design Directives and Recurring Special Provisions
 - (25) CADD Manual
 - (26) Microstation file package for ConnDOT projects
 - (27) Design/Constructability Review Guidelines
 - (28) 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control.

Following is an outline of design stage activities on a typical Federal Local Bridge Program project:

Survey

1. The consultant performs the topographic field survey and delineation of wetland boundaries (state and federal).

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2. A title plan Mylar is prepared by the consultant from the topographic field survey. In addition, property lines, street lines, and property owner names and addresses are shown. A survey or construction base line should also be shown for reference.
 3. A Schedule of Property Owners is prepared by the consultant to indicate the probable properties that are anticipated to be directly impacted by the project.
 4. The ConnDOT Office of Rights-of-Way, if so requested by the municipality, undertakes the title search based upon the information contained on the title plan Mylar and the Schedule of Property Owners.
 5. Following acceptance of the preliminary design, if rights-of-way are required, the consultant prepares individual property taking maps. (See Item #1 under Final Design.) For further information, refer to the manual entitled, "Rights-of-Way Acquisitions, A Procedure Guide for Design/Rights-of-Way Coordination for the Federal Local Bridge Program".

Preliminary Engineering

1. Hydrology is developed by the consultant for use in the hydraulics analyses. The calculated flows are compared to previously published data (e.g., FEMA and S.C.E.L. studies).
2. Hydraulics are analyzed for the project by the consultant for the 2 –year, 10 year, 50 year, 100 year and 500 year storms. On designs which convey watercourses greater than 1 square mile, the engineer performing the analysis must be approved by ConnDOT on a project by project basis. The procedure for Department approval is outlined in the CE Manual. Approval requests for previously qualified engineers to work on other State projects will not require the resubmission of a resume. However, an approval request for the current project together with a copy of the Department's prior approval letter and an updated list of hydraulic designs performed by the candidate is required.
3. A scour analysis is performed by the consultant to determine the contraction and local scour depths, and to recommend scour countermeasures.

The following narrative will set forth a policy concerning the need and nature of bridge scour evaluations for new and rehabilitated bridges.

Scour Evaluation Studies

Department of Transportation design practice states that substructures for bridges over waterways shall be designed to safely support the structure subjected to the design scour. *All bridge scour evaluations shall be conducted in conformance with the procedures contained within the FHWA document entitled "Scour at Bridges" (HEC-18) and the Department's Drainage Manual.*

Bridges over water must be classified into one of three general categories: Low Risk (NBIS Item 113 Rating of 8 or 9), Scour Susceptible (NBIS Item 113 Rating of 4, 5 or 7³) or Scour Critical (NBIS Item 113 Rating of 3 or below). Following is an explanation of the categories of scour reports:

- *Detailed (Level II) Bridge Scour Evaluations and Re-evaluation Reports* – These are comprehensive studies accomplished in conformance with the requirements of HEC-18 and the Department’s Drainage Manual.
- *Comparative Scour Evaluations* – These studies are developed using the data obtained from Level II evaluations as a basis for determining the scour vulnerability of bridges having similar characteristics. Comparative evaluations are not as detailed as Level II reports, however they do provide NBIS ratings and the associated general scour classification.
- *USGS Screening Reports* – These studies, conducted by the United States Geological Survey, were undertaken to identify low risk bridges and to prioritize the remaining structures for further study. They are less detailed than either Level II Reports or Comparative Evaluations.

New Bridges over Waterways

Level II Scour Evaluations shall be performed for all new bridges over waterways unless one or more of the following conditions apply:

- The bridge has been designed to span the entire floodplain for the superflood (500-year recurrence interval) or the critical design event if less than the 500 year flood.
- The structure foundations will be set directly on sound bedrock.
- The abutment footings will be protected with riprap designed in accordance with the methods outlined in the latest version of “Bridge Scour and Stream Instability Countermeasures” (HEC-23) or successor documents. It should be noted that the use of riprap as the sole means of providing scour protection for new bridges is discouraged and should be used only where it has been demonstrated that alternate, preferred means of designing bridges to be safe from scour-related failure are not feasible. (Refer to the ConnDOT Bridge Design Manual for preferred foundation types).

³ The NBIS Item 113 rating of 7 is reserved for bridge locations at which countermeasures have been installed to mitigate a previous scour problem. If the structure is a clear span bridge (no piers) and if the countermeasures have been designed in accordance with the procedures contained within HEC-23, the bridge may be considered "low risk." When countermeasures are placed adjacent to piers to correct a previous scour condition, the bridge is classified as "scour susceptible."

Reconstructed or Rehabilitated Bridges

Generally, scour evaluations shall be performed for all bridges, which are to be reconstructed or rehabilitated where significant capital investment is involved and where the bridge has been classified as scour susceptible or scour critical. A significant capital investment correlates to the following improvement categories:

- Deck Replacement
- Superstructure Replacement or Widening
- Modification or Major Repairs to Substructure Units

Scour evaluations will not be required where structures to be reconstructed or rehabilitated have previously been classified as low risk under the Department's Bridge Scour Evaluation Program or for scour susceptible bridges which are not undergoing substructure modification and have had countermeasures installed following a Level II study.

Bridges which have been classified as scour susceptible or scour critical shall have hydrologic, hydraulic and scour evaluations performed which are sufficiently detailed to satisfy all applicable design and permitting requirements. If a detailed (Level II) scour evaluation has already been performed, the designer shall modify the results of this document as necessary to incorporate the "Modified Abutment Equations" contained within the Department's Drainage Manual. All necessary scour countermeasures for scour susceptible or scour critical bridges shall be incorporated into the overall project plans, as appropriate.

Scour Report Format

All bridge scour evaluation reports must be presented using the following format:

A. Table of Contents

B. Executive Summary – The following items must be included:

- 1) A brief description of the report findings as well as the engineer's recommendations regarding scour countermeasures or countermeasure design.
- 2) Executive Summary Table containing the items listed below:
 - a) Recommend NBIS Item 113 Rating (Scour Critical Bridges)
 - b) Recommend NBIS Item 71 Rating (Waterway Adequacy)
 - c) Recommend NBIS Item 61 Rating (Channel and Channel Protection)
 - d) Scour Risk Designation (Low Risk, Scour Susceptible or Scour Critical)
 - e) Depth of Potential Scour (Provide the range of values computed for the various flood events analyzed.)
 - f) Foundation Type (Known/Unknown)
 - g) Recommendation(s) (Monitor, Install Countermeasures or Design Foundation for Predicted Scour)

- 3) Other Relevant Data – Any additional information which, in the consultant’s judgement, is valuable as a quick reference within this capsule summary should be included in the narrative.

C. Background/Site Conditions – Provide a narrative description of the existing structure (if applicable), the stream reach adjoining the bridge site and any other relevant information obtained from data gathering efforts..

D. Hydrology and Hydraulics – Provide a description of the watershed properties, hydrologic methods used in the determination of peak flows and a tabulation of the maximum flow rates for the various return frequencies. At a minimum, the 10, 50, 100 and 500-year floods shall be presented for scour evaluations of existing bridges. With respect to new bridges, it is normally acceptable to evaluate only the 100 and 500 year floods unless a flood of lesser magnitude is the maximum scour-producing event.

With respect to the hydraulic analysis, a description of the program employed to develop design water surface profiles, flow depths and velocities should be provided. Further, methodologies used in the determination of the starting water surface elevations or boundary conditions must be described.

E. Scour Results – Describe the findings of the scour evaluation in narrative and tabular formats.

F. Structural Review/Foundation Stability Analysis – Provide a narrative description, as appropriate.

G. Conclusions and Recommendations – Summarize the findings of the Bridge Scour Evaluation and provide recommendations with respect to countermeasure or foundation design.

H. Report Graphics

1. Location Plan
2. Site Plan
3. Scour Depth Cross Sections – For each flood event analyzed, provide a cross section (Elevation View) at the upstream face of the bridge on which the various components of total scour have been depicted for all substructure units. Where foundation information is available, the depth and configuration shall also be depicted. This section must be drawn to scale and must indicate the design flood elevation, the low chord elevation and the overtopping elevation.

I. Technical Appendices

1. Field Evaluation Notes or Sketches (as appropriate)
2. Photographs
3. Hydrologic Computations
4. Water Surface Profile Computations
5. Scour Calculations

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6. Geotechnical Data – Riverbed and soil sample characteristics and/or subsurface investigation findings
 7. Countermeasure Design Computations and Sketches (as appropriate)
 8. Pile Stability Computations (as appropriate)
4. A geotechnical evaluation, including soil borings, is conducted by the consultant to determine the requirements for the bridge foundation design, and to determine the location and depths of existing footings for abutments to be left in place.
 5. A preliminary engineering report is prepared by the consultant to summarize the results of the above preliminary engineering studies, and in certain instances, to recommend a scope of work for either replacing or rehabilitating the structure. Included in the report should be a summary of the appropriate Connecticut Geometric Highway Design guideline parameters (required, existing and proposed) and justification for any items that require a design exception.
 6. A structure type study is prepared by the consultant, subsequent to the determination and approval of the scope of work, to evaluate a minimum of three alternate designs for replacing or rehabilitating the bridge structure.

Preliminary Design

1. A design/rights-of-way meeting is conducted between the municipality, the consultant and ConnDOT to discuss the probable rights-of-way requirements for the project.
 2. ConnDOT prepares a rights-of-way agreement between ConnDOT and the municipality if the municipality requests that ConnDOT acquire any necessary rights-of-way for the project. The municipality may acquire rights-of-way on their own provided the acquisitions are made in accordance with the federal “Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970”. For those municipalities which choose to handle rights-of-way work themselves, a manual is available entitled “Rights-of-Way Acquisitions Manual, An Information Guide to ConnDOT Procedures”.
 3. Section 106 historic documentation, if required, is prepared by the consultant and sent to obtain approval by ConnDOT, the State Historic Preservation Office, FHWA and the Advisory Council on Historic Preservation.
 4. Archaeological resources investigations are conducted by a specialist contracted by ConnDOT.
 5. A programmatic Section 4(f) evaluation (if required) is prepared by the consultant and forwarded to ConnDOT for further processing.
 6. A Section 6(f) evaluation (if required) is coordinated by ConnDOT.
 7. The consultant submits a 30% complete design plan package to ConnDOT for review and approval prior to the scheduling of a public information meeting.
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8. Upon approval by ConnDOT of the 30% design plans, the municipality schedules a public information meeting to be conducted by the consultant and the municipality.
9. Following the public information meeting, the ConnDOT prepares the necessary request for a waiver of the design public hearing requirement.
10. A categorical exclusion request memorandum is prepared by ConnDOT and forwarded to FHWA for approval.
11. If any of the appropriate Connecticut Geometric Highway Design and/or AASHTO design guidelines (as applicable) cannot be achieved with the proposed design, a request for a design exception is prepared by the consultant with assistance provided by ConnDOT. The design exception request must be signed by the appropriate municipal official.
12. A request for design approval is prepared by the ConnDOT using information supplied by the consultant, and the municipality requests permission from ConnDOT to proceed to final design.

Regulatory Approvals

The following documents, as appropriate, are prepared by the consultant to obtain the required regulatory approvals for the project:

1. DEP Flood Management Certification.
2. Municipal Inland Wetlands and Watercourses Agency Permit Application.
3. DEP Tidal Wetlands and/or Structures and Dredging Permit Application.
4. DEP Certificate of Permission Application.
5. DEP Stream Channel Encroachment Line Permit Application.
6. Corps of Engineers Permit Application (typically a Programmatic General Permit concurrence).
7. U.S. Coast Guard Bridge Permit Application and/or navigation lighting approval or waiver.
8. Department of Health Services Change in Land Use Permit Application.
9. DEP Section 401 Water Quality Certificate Application (if required).

ConnDOT reviews all of the above, prior to their submission to the appropriate government agency, with the exception of Item #2.

Final Design

1. As soon as possible after design approval has been received (see Item #12 under Preliminary Design), property taking maps (if required) are prepared by the consultant and reviewed by

ConnDOT. When approved, an unsigned vellum of each map is sent to the ConnDOT Office of Rights-of-Way to continue with the rights-of-way acquisition process.

2. Rights-of-Entry, if required, are obtained by the consultant or the municipality.
3. Utility coordination is handled by the consultant.
4. The agreement between ConnDOT and the municipality for construction, inspection and maintenance is prepared by ConnDOT and forwarded to the municipality for signature. Processing of the agreement is handled in the same fashion as for the design agreement.
5. The consultant submits four (4) copies each of the contract plans, specifications and cost estimates (PS&E) at the 70% and 90% complete stages of final design, and two (2) copies of the PS&E package at the 100% complete stage, for review by ConnDOT. The cost estimates must separate federal and state participating contract pay items from the non-participating contract pay items.
6. The CLE compiles the final contract document package and prepares the Detailed Estimate Sheet and the final Proposal Estimate sheets.
7. ConnDOT reviews the above submittals, and if acceptable, authorizes the construction phase based on availability of funds. The following prerequisites must be completed before construction funds are committed:
 - (a) ConnDOT Office of Rights-of-Way issues a Rights-of-Way Certificate when required. A Rights-of-Way certificate is issued by the ConnDOT Office of Rights-of-Way when all of the required acquisitions are completed (maps filed and instruments recorded in the municipality's land records).
 - (b) ConnDOT certifies that all Federal, State, and Local Permits have been acquired.
 - (c) ConnDOT prepares PS&E Approval memorandum which initiates the requests for FHWA authorization to advertise.
 - (d) ConnDOT requests FHWA authorization to advertise.
 - (e) FHWA authorizes advertising of project.
8. At this stage, the design and rights-of-way phases of the project are complete and the municipality prepares to advertise the project for construction bids. (See manual entitled, "Guidelines for Municipalities, Advertising, Bidding and Award of Contracts for the Federal Local Bridge Program").
9. ConnDOT issues the authorization to advertise letter to the municipality.

Construction Advertising

1. Final Preparation for Advertising:

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- (a) ConnDOT meets with the Municipality and/or its Consultant Engineer to forward the following documents and to discuss the requirements for advertising, bidding and award of the project:
 - (1) Complete contract special provisions (originals).
 - (2) Original Mylar construction plans.
 - (3) Reduced scale prints of any standard drawings referenced on the plans.
 - (4) Complete schedule of Prices for inclusion with Bid Proposal Documents and reduced versions for inclusions with Notice to Contractors.
 - (5) Design Report
 - (6) Engineer's Final Estimate (CONFIDENTIAL)
 - (7) Calendar Days Chart
 - (b) Municipality (or its Consultant Engineer) requests State Wage Schedules from State Labor department. Request must be made no sooner than 20 days nor later than 10 days prior to the advertising date. State Wage Schedules are included at the back of the contract special provisions. Note: Federal Wage Schedules are amended frequently and federal regulations require that the latest version be used.
 - (c) Municipality (or its Consultant Engineer) prepares the following:
 - (1) Legal Notice.
 - (2) Notice to Contractors.
 - (3) Bid Proposal Documents.
2. Municipality forwards to the ConnDOT copies of the resumes of (a) the municipal personnel administrating the construction contracts, and (b) the consultant inspection personnel for approval by the ConnDOT Office of Construction.
 3. Municipality publishes legal notices advertising the project in at least two newspapers having a substantial circulation in the project area, and notifies ConnDOT of scheduled bid opening (date, time and place). A 28-day advertising period is recommended (a minimum of at least 21 days is required). The Disadvantaged Business Enterprises (DBE) set-aside percentage shall be included in the legal notices.
 4. Municipality issues Bid Proposal documents to any prospective bidder who submits a written request. Municipality maintains a log of all contractors who have been issued Bid Proposal documents and/or plans and specifications.
 5. Any addenda to the project must be submitted to ConnDOT for approval prior to being issued. Municipality issues any addenda to the project no later than ten (10) calendar days preceding the scheduled bid opening date to all prospective bidders who have Bid Proposal documents. Addenda must be sent via Certified Mail or by FAX with an acknowledgement of receipt. Note: Addenda must be issued to incorporate amendments to the Federal Wage Schedules which are published in the Federal Register 10 days prior to the opening of bids.
 6. Municipality publicly opens and announces bids.
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7. Municipality forwards pre-Award documents to the apparent low bidder. The Municipality shall send copies of the completed pre-Award documents to ConnDOT.
 8. Municipality audits all bids computations and forwards the following to ConnDOT:
 - (a) Certified copies of all bids received and a Statement of correctness of bids.
 - (b) Detailed bid breakdown by items of the lowest three bids with the names of the bidders.
 - (c) List of all bidders with the names of bidders and total bid amounts.
 - (d) A bid analysis and a justification for accepting (or rejecting) the low bid if the lowest responsible bid is less than 20 percent under or more that 10 percent over the Engineer's Construction Estimate.
 - (e) Statement of low Bidder's Qualifications.
 - (f) Statement that the affirmative action and disadvantaged business enterprise aspects of the contract have been complied with.
 - (g) Statement that the low bidder is a firm registered with the Secretary of State.
 - (h) Recommendation to accept (or reject) the low bid.
 - (i) Copies of the transmittal letters for all of the above documents shall be sent to ConnDOT.
 9. ConnDOT reviews documents submitted per above items. ConnDOT also obtains final funding approval.
 10. Municipality authorized to award Contract per letter from ConnDOT.
 11. Municipality prepares Contract documents, awards and executes contract, and arranges with ConnDOT for the time, place, and date of the pre-construction meeting. Municipality notifies contractor to provide copy of Builder's Risk Insurance certificate at the pre-construction meeting.

Representatives of the following parties are notified to attend the pre-construction meeting:

- The municipality (including a traffic official);
- Consultant designer;
- Consultant inspector;
- Local Bridge Program (Tel. 860-594-3389);
- ConnDOT District Construction office;
- All affected utility companies;
- Any affected railroads;
- ConnDOT Laboratory (Tel. 860-258-0321);
- State Labor Department (Tel. 860-240-4288).

12. Municipality submits to ConnDOT:
 - Two copies of the letter awarding the Contract.
 - Five conformed copies of Contract.
 - Notice of pre-constructing meeting.

13. Pre-Construction meeting is held, and contractor is ordered to proceed by the municipality.
14. Construction begins. Municipality pays contractor's invoices and requests reimbursement from ConnDOT's Office of Construction District office.

Note: Field changes, contract time extensions, change in liquidated damages or other actions which will change the project cost or duration must receive advance approval in writing from the ConnDOT District Construction Office. Significant changes in the project will require a supplemental agreement.
15. Periodically throughout the project, ConnDOT personnel will visit the project to review the project's progress, and monitor compliance with record-keeping procedures.
16. When it appears that the construction work is substantially complete, the municipality or its consultant must arrange a semi-final inspection to determine if any additional work is needed to satisfactorily complete the project. ConnDOT representatives *must* be invited to participate in the semi-final inspection.
17. Upon completion of the work identified in the semi-final inspection, the municipality schedules a final inspection. ConnDOT representatives must be invited to participate in the final inspection. As-built drawings should be completed, or nearly so, by the time of the final inspection.
18. ConnDOT audits the project, adjusts accounts, and notifies the municipality of the findings.

INSTRUCTIONS FOR COMPLETING THE PRELIMINARY APPLICATION

Completing the Preliminary Application (see attachment) is the first step in the application process. Because there are specific legal requirements that must be met, application must be made using the attached form, or a photocopy of the form. Other forms are not acceptable, and may delay processing of the application. It must contain the following information:

Town/City/Borough of: Name of the municipality responsible for the bridge project.

Bridge Location: The name of the road that the structure carries and the feature (road, river, railroad, etc.) that the bridge crosses.

Bridge Number: The 5 or 6 digit number assigned to the structure by ConnDOT's Bridge Safety & Evaluation Section.

Length of Span: The clear span between abutment faces or culvert sides, measured along the centerline of the road that the bridge carries.

Sufficiency Rating: The sufficiency rating calculated from the most recent bridge inspection report.

Priority Rating: The priority rating can be found on the list of eligible bridges in the appendices. If there is no priority rating shown in the list of eligible bridges, it can be computed from the inspection report using the formula found in Section 2 of the Program Regulations, or it can be left blank, and the Department will compute it.

Evaluation & Rating Performed by: Check “*State Forces*” if the rating data shown and the description of existing conditions given was performed by ConnDOT (an inspection conducted by a consultant under contract to perform bridge inspections for ConnDOT’s Bridge Safety & Evaluation Section should be shown as being accomplished by State forces). Check “*Others*” if the rating data shown and the description of existing conditions given was performed by someone other than ConnDOT, such as the Town Engineer or a consulting engineer. If the rating is based on an inspection by someone other than ConnDOT, a copy of the inspection report must be included.

If Others, Name of Professional Engineer: The name of the Connecticut-Licensed Professional Engineer who actually evaluated the bridge, if the evaluation was not done by ConnDOT.

Connecticut Professional Engineers License Number: The license number of the Professional Engineer who actually evaluated the bridge, if the evaluation was not done by ConnDOT.

Engineer’s Address: The address of the Connecticut-Licensed Professional Engineer who actually evaluated the bridge, if the evaluation was not done by ConnDOT.

Description of Existing Condition of Structure: Attach a description of the current condition of the bridge. This should generally include the latest inspection report.

Description of Scope of Project: Attach a description of the proposed work to be done. At this point in the project, which may be before detailed engineering is performed, only rough estimates may be available. If available, preliminary plans (2 copies), specifications, quantity estimates and hydraulic data should be included. One or more of the following codes can be used to describe the scope of the project:

Bridge Repair Codes

Letter Code	Description
A	Bridge replacement (in place)
B	Bridge replacement (New Alignment)
C	Superstructure replacement
D	Superstructure repair or strengthening
E	Deck replacement
F	Deck repair
G	Substructure repair / modification
H	Full field painting (abrasive blast cleaning or overcoating)
I	Bridge demolition
J	Bridge railing / sidewalk repair
K	Culvert repair / extension / rehabilitation
L	Bridge widening
M	Temporary bridge
N	Bearing replacement or repair
O	Peen cover plates
P	Pin-and-hanger repair or replacement
Q	Field touch-up painting
R	Bridge drainage system repair or replacement
S	Pin-and-hanger elimination-splice plates
T	Pin-and-hanger fail safe system
U	Joint repair or replacement
V	Waterproof membrane w/ bituminous concrete overlay
W	Cathodic protection
X	Other overlays (bituminous, latex modified concrete, thin polymer, etc.)
Y	New bridge on new roadway system
Z	Install environmental or structural monitoring system
AA	Install / repair Incident Management System
BB	Install / repair lighting system
CC	Raise superstructure
DD	Install / repair sign supports
EE	Scour protection
FF	Seismic retrofit
GG	Install / repair fire suppression system
HH	Install / repair inspection equipment
II	Install fencing (use only when fencing is installed onto existing bridge)
JJ	Install structure mounted noise barrier
KK	Mechanical rehabilitation on moveable bridges
LL	Electrical rehabilitation on moveable bridges

Name of Municipal Official to Contact: The name of the municipal official who will be responsible for administering the project, and who can be contacted if any questions arise. Copies of all correspondence will be sent to this person.

Mailing Address: The mailing address for the municipal official who will be the official contact. This will be the address where all agreements and legal notices are sent.

Telephone Number: The telephone number, with area code, for the listed municipal official.

FAX Number: The facsimile telephone number with area code, for the listed municipal official.

E-mail: The e-mail address for the municipal official who will be handling administration of the project. E-mail will only be used for informal, “unofficial” contacts. All formal notices will be sent by U.S. mail.

Preliminary Cost Figures:

Preliminary Engineering Fees: The estimated cost of designing the project; include a breakdown of fees. This cost may not exceed an amount equal to 15% of the Estimated Construction Costs.

Rights-of-Way Cost: The estimated cost of acquiring any property, easements, rights, etc. needed to construct the project.

Municipally-Owned Utility Relocation: The cost of relocating any utilities owned by a municipality. Costs are eligible for reimbursement if the utilities are owned by any municipality in the State, including regional authorities. Privately owned utilities (such as CL&P, SNET, Yankee Gas, etc.) are not eligible.

Estimated Construction Costs: The engineer’s estimate of construction costs, based upon the preliminary plans and specifications. A detailed estimate with estimated quantities and unit prices should be attached, if available.

Construction Engineering: The estimated cost of engineering and related services needed during construction, such as construction inspection, materials testing, review of shop drawings, etc. This amount may not exceed an amount equal to 15% of the Estimated Construction Costs.

Contingencies: The amount to be set aside for unforeseen problems and extra work. This amount may not exceed an amount equal to 10% of the Estimated Construction Costs.

Total Estimated Project Cost: The grand total of all above eligible costs.

Financial Aid Data:

Project Reimbursement Request: This is the Total Estimated Project Cost, from the bottom of page #1 of the Preliminary Application, multiplied by 0.8 (80%). Please note that only a limited number of bridges will qualify for Federal funding; qualifying bridges will be denoted by a “Y” in the “Federal Eligible” column of Appendix 1. This should remain blank if a State grant is being requested.

Allowable Grant Percentage: The grant percentage that the municipality is eligible for. This percentage can be found in Appendix 2. This grant percentage will remain fixed for the life of the project, regardless of changes in future fiscal years. This should remain blank if Federal Reimbursement is being requested.

Project Grant Request: The dollar amount of the grant request. This amount is the Total Project Cost multiplied by the Grant Percentage.

Project Loan Request: The amount of the loan that is being requested, if any. The maximum amount that may be requested is an amount equal to 50% of total project costs, (6% interest, 10-year life, payable quarterly).

Schedule:

Note: Dates may be actual or estimated, depending upon circumstances, but all dates should show month, day and year. For example, state "April 30, 2008", not "Spring 2008" or "mid-2008", etc. It is understood that estimated dates for future events are approximate and subject to change.

Public Hearing Held: The date that a public meeting is planned to inform the public of the project. This does not have to be a "formal" hearing with a word-for-word transcript, as long as the public is provided an opportunity to comment on the project and minutes are kept.

Design Completion: The date that all final plans, specifications and estimates will be completed.

Property Acquisition Completion: The date that all Rights-of-Way activities will be completed.

Utilities Coordination Completion: The anticipated date that all arrangements with utility companies will be completed.

Advertising: The anticipated date that the invitation for construction bids will be made.

Supplemental Application Submission: The anticipated date that the supplemental application and all of its support documentation will be submitted. This date can be any time after the final design is complete. Please note that this date must be within 270 days of the Commitment to Fund date. This item does not apply to Federally-funded projects.

Start of Construction: The date that construction is anticipated to begin.

Completion of Construction: The date that construction is anticipated to completed.

Signature: The Application must be signed by the Chief Executive of the municipality, unless another municipal official has been authorized by the municipality's legislative body or charter. If the application is submitted by someone other than the chief executive, proof of authorization must be submitted along with the application.

APPENDIX 1 – ELIGIBLE BRIDGES OVER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible	Federal Eligible
04474	Berlin	Farmington Avenue	Sebethe River	7	3	6	7	N	3	4	6	38.23	36.86	Y	N
04181	Bethel	Walnut Hill Road	Limekiln Brook	5	3	4	3	N	3	2	6	33.01	30.29	Y	N
05169	Bethlehem	Wood Creek Road	Weekeepeemee River	6	6	5	6	N	5	4	8	69.43	69.13	N	Y
05170	Bethlehem	Falls Road	Nonnewaug Brook	N	N	N	4	1	0	N	0	20.99	15.21	Y	Y
05737	Bethlehem	Crane Hollow Road #3	Weekeepeemee River	7	7	7	7	N	7	3	7	77.86	79.42	N	Y
05956	Bethlehem	Magnolia Hill Road	East Spring Brook	5	5	7	6	N	5	4	7	64.38	63.42	N	Y
06121	Bethlehem	Nonnewaug Road	East Spring Brook	7	7	7	6	N	7	3	8	69.36	68.69	N	Y
05611	Bolton	Shoddy Mill Road	Burnap Brook	7	7	6	6	N	6	2	7	71.45	70.71	N	Y
04590	Bozrah	Stanton Road	Yantic River	8	4	7	7	N	4	4	6	52.91	51.04	Y	Y
04083	Branford	Bridge Street	Amtrak	6	6	7	N	N	6	4	N	70.35	69.76	N	Y
04848	Branford	School Ground Road	Notch Hill Brook	4	5	7	7	N	5	3	7	55.30	54.26	Y	Y
05832	Branford	Pleasant Point Road	Abandoned Trolley Line	8	8	7	N	N	7	3	N	73.04	74.97	N	Y
06033	Branford	Indian Neck Avenue	Branford River	6	8	7	7	N	7	3	7	78.99	78.99	N	Y
06034	Branford	Waverly Park Road	Brook	N	N	N	8	7	7	3	7	63.80	63.13	N	Y
06127	Bridgewater	Hemlock Road	Clapboard Oak Brook	N	N	N	6	5	5	3	8	58.42	57.31	N	Y
06128	Bridgewater	Wewaka Brook Road	Wewaka Brook	7	6	5	6	N	5	3	9	58.37	57.48	N	Y
05377	Brooklyn	Fitzgerald Road	Blackwell Brook	7	4	6	8	N	4	2	8	52.95	52.76	N	Y
06005	Brooklyn	Mason Road	Blackwell Brook	8	8	6	6	N	6	2	7	73.72	74.79	N	Y
05196	Canaan	Water Street	Housatonic River	7	4	6	7	N	4	3	5	45.67	43.15	N	Y
05498	Canaan	Dublin Road	Northeast Utility Canal	6	6	6	8	N	0	7	8	29.87	25.20	Y	Y
04424	Canterbury	Miller-Goodwin Road	Little River	7	6	7	7	N	6	4	6	76.96	75.49	N	Y
04600	Canterbury	Woodchuck Hill Road	Little River	6	6	7	7	N	6	3	6	69.45	68.19	N	Y
05413	Canterbury	Tracy Road #1	Kitt Brook	7	6	7	7	N	6	5	5	72.80	72.28	N	Y
05222	Canton	Town Bridge Road	Farmington River	7	5	6	7	N	3	3	7	37.39	33.83	N	Y
05822	Canton	Humphrey Road No. 2	Cherry Brook	8	8	7	7	N	7	3	4	72.01	73.49	N	Y
05823	Canton	West Road	Cherry Brook	8	8	7	7	N	7	4	7	77.94	79.75	N	Y
04609	Clinton	Pleasant Valley Road	Menunketesuck River	5	6	6	6	N	6	3	7	68.17	67.21	N	Y
06296	Clinton	Waterside Lane	Hammock River	7	7	5	8	N	3	2	8	42.60	40.87	N	Y
05140	Colebrook	Sandy Brook Road	Sandy Brook	8	6	5	6	N	5	4	5	61.13	60.76	N	Y
05147	Colebrook	Bunnel Street	Loon Brook	7	7	7	7	N	7	3	7	69.35	68.68	N	Y
05627	Cornwall	River Road #1	Mill Brook	8	7	7	7	N	7	2	6	70.89	70.30	N	Y
04446	Coventry	Hop River Road	Hop River	7	4	6	6	N	4	2	8	51.80	50.65	N	Y
04630	Coventry	Brigham Road	Willimantic River	4	8	7	6	N	7	5	8	92.99	93.84	Y	N
05989	Coventry	Depot Road	Willimantic River	6	7	7	6	N	7	2	8	74.23	73.71	N	Y
05094	Danbury	Kenosia Avenue	Mill Plain Swamp	5	6	6	7	N	5	2	6	71.34	71.27	N	Y
05103	Danbury	Eagle Road	Still River	6	6	6	6	N	6	2	8	76.26	77.26	N	Y
05990	Danbury	East Franklin Street	Padanaram Brook	7	8	4	3	N	4	4	7	60.84	60.03	N	Y
04995	Darien	Old Tokeneke Road	Five Mile River	3	3	1	4	N	0	0	9	18.24	12.76	Y	N
05826	East Hartford	Walnut Street	Hockanum River	7	7	7	6	N	7	3	7	79.26	78.70	N	Y
04641	Eastford	Mill Bridge Road # 1	Bungee Brook	7	7	4	6	N	4	N	8	60.42	64.75	Y	Y
05220	Easton	Silver Hill Road	Aspetuck River	5	5	6	6	N	5	2	9	67.66	66.40	N	Y

APPENDIX 1 - ELIGIBLE LOCAL BRIDGES OVER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible	Federal Eligible
04611	Essex	Dennison Road	Conn. Valley Railroad	7	6	6	N	N	6	4	N	73.45	72.52	N	Y
04660	Essex	Walnut Street	Falls River	N	N	N	5	3	3	N	7	47.37	45.81	Y	Y
03697	Fairfield	Brookside Drive	Mill River	7	5	4	4	N	2	4	6	33.84	30.23	Y	N
04196	Fairfield	Congress Street #2	Mill River	5	5	4	4	N	4	3	7	49.03	49.18	Y	N
04952	Fairfield	Sturges Road	Mill River	4	5	7	7	N	5	4	7	66.55	65.51	Y	N
04953	Fairfield	Duck Farm Road	Mill River	6	5	4	4	N	4	5	8	64.97	62.95	Y	Y
04956	Fairfield	Valley Road	Horse Tavern Brook	6	4	5	4	N	4	4	6	47.25	46.14	Y	Y
04121	Glastonbury	Addison Road	Salmon Brook	6	6	4	6	N	4	2	6	44.45	43.41	Y	N
04509	Glastonbury	Mill Street	Salmon Brook	7	7	7	7	N	7	2	7	70.16	69.49	N	Y
05154	Goshen	East Street South	Bantam River	7	6	7	6	N	6	4	3	78.89	79.15	N	Y
04519	Granby	Wells Road	East Branch Salmon Brook	7	7	7	7	N	6	3	7	77.57	79.13	N	Y
04525	Granby	Simsbury Road	West Branch Salmon Brook	5	7	6	6	N	5	3	8	75.23	77.34	N	Y
04527	Granby	Fox Road	West Branch Salmon Brook	4	4	7	6	N	4	5	7	48.30	47.19	Y	Y
04530	Granby	Doherty Road	Carson Pond Brook	N	N	N	6	4	4	N	7	54.70	54.03	Y	Y
03954	Greenwich	Sound Beach Avenue	Cider Mill Brook	6	4	6	6	N	4	4	7	60.12	59.08	Y	N
03958	Greenwich	Palmer Hill Road	Mianus River	4	4	5	5	N	5	2	5	45.37	44.33	Y	N
05011	Greenwich	Shore Road No. 1	Horseneck Brook	4	4	6	7	N	4	4	9	46.95	45.99	Y	Y
05014	Greenwich	Riversville Road	East Branch Byram River	5	4	4	4	N	4	3	7	49.06	46.58	Y	N
05604	Greenwich	Lake Avenue	Horseneck Brook	6	5	6	7	N	5	3	7	66.24	65.69	N	Y
04671	Griswold	Carol Road	Pachaug River	5	6	5	7	N	5	3	4	55.39	54.35	N	Y
05568	Griswold	Norman Road	Pachaug River	7	7	4	7	N	4	4	5	59.79	59.57	N	Y
04859	Guilford	Clapboard Hill Road	East River	8	6	4	6	N	4	3	8	43.88	42.99	Y	Y
04861	Guilford	Twin Bridge Road	Iron Stream	7	6	7	6	N	6	2	7	70.32	69.58	N	Y
04863	Guilford	Saw Mill Road	West River	6	6	6	7	N	6	4	7	70.60	69.71	N	Y
04872	Guilford	Stoneboat Road	Little Meadow Brook	N	N	N	6	3	3	N	7	50.95	50.15	Y	Y
06003	Guilford	Vineyard Point Road	Abandoned Trolley Line	4	4	7	N	N	4	3	N	44.46	42.79	Y	Y
05515	Haddam	Jail Hill Road	Beaver Meadow Brook	8	8	7	8	N	7	3	7	71.18	70.66	N	Y
04014	Hamden	Treadwell Street	Private Property	4	5	6	N	N	5	4	N	77.25	76.58	Y	N
04895	Hamden	River Road #2	Mill River	3	6	7	7	N	4	3	8	70.87	70.94	Y	Y
04896	Hamden	Willow Street	Willow Brook	8	3	6	4	N	3	3	7	50.93	50.03	N	Y
05059	Harwinton	Bogue Road #1	Naugatuck River	4	6	7	6	N	5	4	7	74.86	76.45	Y	Y
05932	Harwinton	Swimming Hole Road	Leadmine Brook	7	8	7	7	N	7	2	7	78.99	79.29	N	Y
04453	Kent	Bulls Bridge Road	Housatonic River	6	6	7	7	N	6	2	9	76.80	77.21	N	Y
04700	Killingly	Peep Toad Road	Whetstone Brook	5	5	5	6	N	4	3	4	59.30	56.19	N	Y
04702	Killingly	North Street	Five Mile River	7	7	6	7	N	7	2	7	78.16	79.42	N	Y
04704	Killingly	Attawaugan Ballouville Rd	Five Mile River	6	6	6	7	N	6	2	6	69.81	69.14	N	Y
04705	Killingly	Ballouville Road	Canal	7	6	6	6	N	6	3	6	77.42	77.05	N	Y
04708	Killingly	River Road	Five Mile River	6	6	6	7	N	6	3	5	79.78	79.34	N	Y
04711	Killingly	North Road	Five Mile River	8	8	7	7	N	7	3	6	74.28	73.98	N	Y
05567	Killingly	Chestnut Hill Road	Canal	7	7	7	8	N	7	3	6	70.38	69.71	N	Y
04712	Killingworth	River Road	Brook	4	7	7	6	N	5	4	7	78.88	78.21	Y	Y
04719	Lebanon	Waterman Road	Pease Brook	N	N	N	6	3	3	N	7	44.70	43.14	Y	Y
04721	Lebanon	Taylor Bridge Road	Bartlett Brook	N	N	N	6	3	3	6	7	34.82	33.26	Y	Y
05341	Lebanon	McGrath Lane #2	Yantic River	3	3	5	7	N	3	3	7	34.50	32.16	Y	Y
06071	Lebanon	Mack Road	Pease Brook	N	N	N	5	3	3	5	7	33.95	32.39	Y	Y

APPENDIX 1 - ELIGIBLE LOCAL BRIDGES OVER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible	Federal Eligible
04723	Lyme	Mount Archer Road	Eight Mile River	7	7	7	8	N	7	4	8	75.65	74.98	N	Y
04726	Lyme	Macintosh Road	Eight Mile River	7	6	7	6	N	6	3	7	75.06	72.76	N	Y
05818	Lyme	Day Hill Road	Roaring Brook	7	6	7	6	N	6	3	7	77.98	81.91	N	Y
06039	Lyme	Salem Road	East Br Eight Mile River	8	7	7	8	N	7	3	8	77.88	78.18	N	Y
05270	Madison	Fort Path Road	Amtrak	4	5	7	N	N	4	4	N	60.89	59.85	Y	Y
04149	Manchester	Spring Street	Birch Mountain Brook	4	4	4	6	N	4	2	8	40.95	39.62	Y	N
04731	Mansfield	Stonemill Road #1	Fenton River	5	4	5	6	N	4	7	8	58.08	58.41	Y	Y
05366	Mansfield	Laurel Lane	Mount Hope River	6	4	6	6	N	4	2	8	37.82	34.51	Y	Y
05940	Meriden	Baldwin Avenue	Spoon Shop Brook	N	N	N	6	2	2	N	7	37.94	36.38	Y	Y
05407	Middlebury	Shadduck Road	Hop Brook	8	7	6	7	N	6	2	8	72.25	71.58	N	Y
04190	Middletown	River Road No. 1	Sumner Brook	7	5	6	6	N	5	2	7	65.50	67.17	N	Y
04540	Middletown	Lee Street	Prout Brook	6	6	6	6	N	6	3	7	69.41	68.52	N	Y
04942	Milford	Flax Mill Lane	Wepawaug River	6	6	7	5	N	6	4	3	75.89	75.41	N	Y
04741	Montville	Meeting House Lane	Cove River	7	6	4	4	N	4	2	6	50.61	49.61	Y	Y
04214	Naugatuck	Maple Street	Naugatuck River	4	4	4	6	N	4	2	7	39.87	36.88	Y	N
04095	New Canaan	Old Norwalk Road	Five Mile River	7	3	5	6	N	4	3	9	27.40	26.29	Y	N
05001	New Canaan	Nursery Road	Five Mile River	3	6	6	6	N	5	6	7	88.09	86.87	Y	N
05104	New Fairfield	Sawmill Road #1	Ball Pond Brook	7	7	7	7	N	7	2	7	69.01	68.34	N	Y
03997	New Haven	Prospect Street	Canal Line (Abandoned)	4	4	6	N	N	4	5	N	63.56	62.26	Y	N
04258	New Milford	Wellsville Avenue	East Aspetuck River	3	4	6	6	N	4	4	6	49.41	47.82	Y	N
05118	New Milford	Merryall Road	West Aspetuck River	4	4	4	6	N	4	6	6	58.11	58.55	Y	N
05263	New Milford	Sand Road	West Aspetuck River	7	6	6	6	N	7	3	9	77.92	80.36	N	Y
05314	New Milford	Mill Street	Great Brook	5	6	5	7	N	6	2	9	66.92	68.66	N	Y
05655	New Milford	Aspetuck Road	West Aspetuck River	4	6	7	7	N	6	4	6	77.94	76.42	Y	Y
06531	Newtown	Lands End Road	Pond Brook	5	5	7	6	N	0	0	0	31.26	26.52	Y	N
05150	Norfolk	River Place	Blackberry River	4	7	6	6	N	6	5	8	77.11	76.88	Y	Y
03961	North Haven	Spring Road	Muddy River	3	5	7	6	N	4	4	6	62.25	60.77	Y	N
04152	Norwalk	West Cedar Street	Five Mile Brook	6	6	3	3	N	3	2	8	31.37	30.48	Y	N
04745	Norwich	Pleasant Street	Yantic River	7	7	7	5	N	7	3	3	74.49	76.60	N	Y
04915	Oxford	O'Neill Road	Eight Mile Brook	7	7	7	6	N	7	4	7	75.92	78.03	N	Y
04751	Plainfield	Sterling Hill Road	Ekong Brook	7	6	4	7	N	4	3	5	49.98	49.07	Y	Y
04545	Plainville	Stillwell Drive	Quinnipiac River	N	N	N	4	4	4	6	6	61.06	59.73	Y	Y
01677	Redding	Cross Highway	Little River	7	5	6	6	N	5	2	7	65.84	65.28	N	Y
05322	Redding	Valley Road #2	Aspetuck River	6	6	6	8	N	6	3	9	73.88	74.55	N	Y
05887	Ridgefield	Mountain Road	Wataba Lake	5	6	6	5	N	5	2	6	75.95	75.65	N	Y
05888	Ridgefield	Topstone Road	Norwalk River	6	5	5	5	N	5	2	6	58.42	57.38	N	Y
05071	Roxbury	River Road	Little Jacks Brook	8	6	6	6	N	6	2	9	69.18	68.44	N	Y
04767	Salem	Darling Road	East Brook	6	7	6	7	N	6	3	7	77.48	78.00	N	Y
05362	Sharon	River Road	Guna Brook	8	8	7	6	N	7	4	3	76.98	76.24	N	Y
05388	Sharon	King Hill Road	Indian Pond Creek	8	8	6	5	N	6	3	7	69.97	69.38	N	Y
05854	Sherman	Sawmill Road	Sawmill River	N	N	N	4	4	4	3	7	37.64	36.53	Y	Y
04465	Southbury	River Road	Pomperaug River	4	6	6	7	N	4	6	9	91.80	91.10	Y	N
05029	Southbury	Poverty Road	Pomperaug River	8	5	7	7	N	5	2	8	65.88	64.44	N	Y
04564	Southington	West Queen Street	Quinnipiac River	N	N	N	7	4	4	4	7	48.26	47.37	Y	N

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Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible	Federal Eligible
05535	Southington	West Center Street Ext.	Eight Mile River	4	7	7	7	N	6	7	6	93.90	95.57	Y	N
04444	Sprague	Parkwood Road	Little River-Hanover Res.	7	7	8	8	N	7	3	7	68.27	67.90	N	Y
04774	Stafford	Colburn Road	Furnace Brook	7	5	6	6	N	5	3	8	67.94	69.46	N	Y
04778	Stafford	Leonard Road	Furnace Brook	4	5	6	7	N	5	2	8	62.63	66.19	Y	Y
04779	Stafford	Spring Street	Middle River	6	6	6	5	N	6	3	8	72.33	71.66	N	Y
04781	Stafford	West Street	Middle River	6	7	6	7	N	6	3	8	78.81	79.77	N	Y
06025	Stafford	Krol Road	Ellis Brook	7	8	6	6	N	6	3	8	72.90	75.51	N	Y
03682	Stamford	South State Street #1	Rippowam River	6	6	4	6	N	4	2	6	45.90	45.09	Y	N
04064	Stamford	Richmond Hill Avenue	Rippowam River	4	6	6	6	N	5	4	9	75.35	76.46	Y	N
04070	Stamford	Wire Mill Road	Haviland Brook	4	5	7	7	N	5	4	7	68.21	65.84	Y	N
04071	Stamford	River Bank Road	East Branch Mianus River	5	4	5	6	N	4	5	7	58.63	56.67	Y	N
05009	Stamford	June Road	Mianus River	3	3	5	5	N	3	4	7	12.64	11.23	Y	N
04567	Suffield	Boston Neck Road	Stony Brook	5	6	6	7	N	6	3	8	75.65	73.80	N	Y
05043	Thomaston	Walnut Hill Road #2	Northfield Brook	4	6	7	6	N	4	7	6	86.61	86.20	Y	N
04793	Thompson	Red Bridge Road	Quinebaug River	7	7	7	7	N	7	3	3	73.64	73.75	N	Y
04794	Thompson	Blain Road	French River	6	7	6	7	N	6	2	7	77.82	79.12	N	Y
04797	Thompson	Wilsonville Road	French River	5	6	7	6	N	5	3	4	73.74	72.15	N	Y
05412	Thompson	Brandy Hill Road	Quaddick Lake	8	8	7	7	N	7	3	7	71.19	70.89	N	Y
05638	Thompson	Baker Road	Quaddick Lake	7	7	8	8	N	7	3	7	72.32	71.95	N	Y
03977	Torrington	Franklin Street	E. Branch Naugatuck River	4	6	7	7	N	4	4	8	82.30	83.89	Y	N
05084	Torrington	Wall Street	E. Branch Naugatuck River	4	5	6	6	N	4	5	8	80.82	80.93	Y	N
05088	Torrington	Farley Place	E. Branch Naugatuck River	6	4	7	6	N	4	5	8	60.15	59.19	Y	N
05090	Torrington	Lovers Lane	Lovers Lane Brook	N	N	N	7	6	5	3	6	76.81	74.70	N	Y
04936	Trumbull	Brock Street	Pequonnock River	8	7	7	7	N	7	2	9	67.95	67.36	N	Y
04573	Vernon	West Main Street	Hockanum River	3	5	4	6	N	4	4	8	53.85	52.52	Y	Y
04575	Vernon	Main Street	Tankerhoosen River	7	7	4	6	N	5	6	8	50.57	50.35	N	Y
05159	Washington	Romford Road	Bantam River	8	8	8	7	N	8	2	8	69.16	68.94	N	Y
05162	Washington	Tunnel Road	Kirby Brook	N	N	N	6	7	6	3	6	69.43	68.76	N	Y
06103	Washington	Walker Brook Rd #3	Walker Brook	N	N	N	6	4	4	N	7	64.43	63.10	Y	Y
03681	Waterbury	East Liberty Street	Mad River	4	4	5	5	N	4	3	6	41.78	40.52	Y	N
05039	Waterbury	Eagle Street	Naugatuck River	5	5	5	6	N	5	3	6	72.32	73.21	N	Y
05042	Waterbury	Sharon Road	Mad River	4	8	7	5	N	7	5	4	91.35	94.09	Y	N
05518	Waterford	Old Mill Road	Hunts Brook	6	5	6	6	N	5	2	7	62.59	64.29	N	Y
04408	Watertown	Skilton Road	Nonewaug River	6	6	5	5	N	5	2	8	58.32	57.36	N	Y
04933	Weston	Old Redding Road	Aspetuck River	5	5	6	6	N	4	2	7	55.50	54.46	N	Y
04960	Weston	River Road	Saugatuck River	7	6	7	7	N	6	3	9	75.38	74.42	N	Y
04971	Westport	Old Road #2	Sasco Brook	7	5	7	5	N	5	2	9	66.63	65.32	N	Y
05345	Willington	Daleville School Road	Fenton River	7	6	6	6	N	6	3	7	71.37	70.56	N	Y
05531	Willington	Kechkes Road	Fenton River	7	4	4	5	N	4	3	6	45.19	45.40	Y	Y
04975	Wilton	Lovers Lane	Comstock Brook	6	6	4	5	N	4	2	9	34.29	33.25	Y	Y
04979	Wilton	Kent Road	Norwalk River	5	5	7	7	N	5	2	9	58.74	58.00	N	Y
04980	Wilton	Middlebrook Farm Road	Comstock Brook	3	5	7	7	N	4	2	9	52.07	50.96	Y	Y
04981	Wilton	Cannon Road	Norwalk River	6	6	7	6	N	6	3	9	69.99	69.18	N	Y
04986	Wilton	Sugar Hollow Road	Norwalk River	5	4	6	7	N	4	4	7	54.71	53.71	Y	Y
05734	Wilton	Borglum Road	Silvermine Brook	7	7	7	8	N	7	2	9	71.26	70.82	N	Y

APPENDIX 1 - ELIGIBLE LOCAL BRIDGES OVER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible	Federal Eligible
05991	Wilton	Ruscoe Road	E. Branch Silvermine River	8	8	7	6	N	7	3	9	77.81	79.96	N	Y
04060	Winchester	Holabird Avenue	Still River	3	6	7	7	N	6	2	8	73.74	74.48	Y	N
05135	Winchester	Newfield Road	E. Branch Naugatuck River	7	7	7	7	N	7	3	6	69.36	68.69	N	Y
05691	Winchester	Wahee Road	E. Branch Naugatuck River	7	7	7	7	N	7	3	7	79.52	79.19	N	Y
05065	Woodbury	Minortown Road	Nonewaug River	8	8	7	7	N	7	2	7	77.97	77.78	N	Y

APPENDIX 1A - ELIGIBLE BRIDGES UNDER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible
001003	Andover	Merritt Valley Road	Brook	N	N	7	4	4	4	7	7	60.84	59.51	Y
001006	Andover	Lake Road	Brook	5	4	6	6	N	4	8	7	56.00	54.89	Y
001007	Andover	Lake Road	Cheney Brook	N	N	N	5	2	2			46.76	44.98	Y
003002	Ashford	Axe Factory Road	Bigelow Brook	6	4	6	6	N	4	7	7	32.88	29.84	Y
005002	Barkhamsted	Park Road	Beaver Brook	N	N	N	4	4	4	N	7	64.83	63.50	Y
007019	Berlin	Middletown Road	Stream	5	4	5	7	N	4	4	6	49.78	48.59	Y
007020	Berlin	Spruce Brook Road	Spruce Brook	6	3	5	7	N	3	4	9	38.67	37.48	Y
008005	Bethany	Old Mill Road	Sargent River	5	5	4	7	N	4	2	9	29.53	26.68	Y
014001	Branford	Chestnut Street	Branford Supply Pond	N	N	N	6	4	4			62.85	61.52	Y
014002	Branford	Harbor Street	Tidal Channel	4	3	4	6	N	4			45.69	44.28	Y
014003	Branford	Hosley Avenue	Brook	N	N	N	6	3	3			42.37	40.81	Y
014005	Branford	Saw Mill Road	Pond	7	6	4	7	N	4			41.36	38.95	Y
015004	Bridgeport	Chopsy Hill Road	Island Brook	6	N	N	7	3	3			49.31	47.75	Y
015005	Bridgeport	Chopsy Hill Road	Island Brook	4	4	4	6	N	4			60.66	59.33	Y
015009	Bridgeport	Crescent Street	Yellow Mill Pond	N	N	N	5	3	3	6	8	54.06	52.50	Y
015012	Bridgeport	Griffin Avenue	Island Brook	4	4	6	6	N	4			61.65	60.46	Y
015021	Bridgeport	Platt Street	Island Brook	N	N	N	5	4	4			64.76	63.43	Y
015022	Bridgeport	Pond Street	Island Brook	N	N	N	7	4	4			63.85	62.52	Y
015026	Bridgeport	Valley Avenue	Island Brook	6	6	4	5	N	4			64.85	63.81	Y
015028	Bridgeport	Woodrow Avenue	Island Brook	5	5	3	4	N	3			44.84	43.58	Y
016001	Bridgewater	Hut Hill Road	Wewaka Brook	4	4	4	6	N	4			61.82	60.49	Y
016004	Bridgewater	Wewaka Brook Road	Wewaka Brook	N	N	N	7	4	4			62.78	61.45	Y
016005	Bridgewater	Stuart Road East	Brook	N	N	N	4	4	4			64.84	63.51	Y
017005	Bristol	Lake Avenue	Cussgutter Brook	4	4	5	7	N	4			49.36	48.10	Y
017006	Bristol	Lake Avenue	Mix Brook	5	4	5	7	N	4			63.61	62.42	Y
017015	Bristol	Brook Street	Stream	7	7	4	8	N	4			64.61	63.72	Y
017036	Bristol	Memorial Boulevard	Stream	3	3	7	6	N	3			43.74	42.48	Y
017042	Bristol	Church Street	Stream	4	4	6	7	N	4			61.75	60.56	Y
018001	Brookfield	Obtuse Rocks Road	Beers Brook	N	N	N	6	4	4			67.86	66.53	Y
019006	Brooklyn	Elliot Road	Sandy Brook	3	3	6	8	N	3	5	4	32.61	31.28	Y
022005	Canterbury	Cemetery Road	Deane Brook	6	6	4	6	N	5	7	7	62.69	61.65	Y
022007	Canterbury	Cemetery Road	Peck Brook	5	5	3	6	N	4	6	7	47.64	46.38	Y
025018	Cheshire	Blacks Road	Honeypot Brook	5	5	4	4	N	4			63.84	62.65	Y
030002	Columbia	Macht Road	Macht Brook	6	6	3	6	N	3	4	7	38.10	36.99	Y
031001	Cornwall	River Road	Reed Brook	7	4	6	6	N	4	6	7	35.61	32.09	Y
031016	Cornwall	Lake Road	Holenbeck River	N	N	N	6	4	4			62.84	61.51	Y
032006	Coventry	Monument Hill Road	Mill Brook	6	6	4	7	N	4			64.82	63.78	Y
032008	Coventry	Bradbury Lane	Mill Brook	5	2	6		N	0			22.94	21.68	Y
032010	Coventry	Snake Hill Road	Mill Brook	6	6	4	6	N	4			47.78	46.74	Y
034003	Danbury	Shelter Rock Road	Sympaug Brook	4	6	6	6	N	4			74.39	75.02	Y
034013	Danbury	West Starrs Plain Road	Saugatuck River	5	4	4	6	N	4			47.86	46.60	Y
034017	Danbury	Washington Avenue	Parks Pond Brook	4	4	5	6	N	4	7	7	61.75	60.49	Y

APPENDIX 1A - ELIGIBLE BRIDGES UNDER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible
034023	Danbury	Miry Brook Road	Miry Brook	4	4	5	5	N	4			43.36	42.10	Y
034024	Danbury	Backus Avenue	Brook	4	4	4	4	N	4	2	7	46.04	44.71	Y
034027	Danbury	Padanaram Road	Margerie Brook	4	4	4	6	N	4			53.03	51.70	Y
034031	Danbury	Padanaram Road	East Lake Brook	5	5	4	8	N	4			47.62	46.43	Y
034035	Danbury	West Street	Blind Brook	4	4	5	7	N	4	9	8	65.86	64.60	Y
034037	Danbury	William Street	Blind Brook	4	4	5	7	N	4	6	6	66.19	64.93	Y
034039	Danbury	Jefferson Street	Blind Brook	5	4	6	7	N	4	6	5	67.17	66.06	Y
034040	Danbury	Reservoir Road	Brook	5	5	4	6	N	4	4	6	50.21	49.02	Y
122001	Deep River	Tower Hill Road	Brook	N	N	N	6	4	4			65.84	64.51	Y
037003	Durham	Coe Road	Parmalee Brook	N	N	N	5	4	4			67.84	66.51	Y
041002	East Hampton	Walnut Ave	Brook	6	6	4	7	N	4			59.84	58.80	Y
041004	East Hampton	Niles Street	Brook	6	6	4	7	N	4			41.99	38.40	Y
041005	East Hampton	Flat Brook Road	Flat Brook	4	4	4	7	N	4			59.80	58.47	Y
041006	East Hampton	Flat Brook Road	Flat Brook	6	6	3	3	N	3			26.83	25.72	Y
041007	East Hampton	Blacksmith Road	Brook	N	N	N	7	4	4			62.86	61.53	Y
041008	East Hampton	Terp Road	Pine Brook	6	6	4	4	N	4			46.51	45.47	Y
044004	East Lyme	Society Road	Pataquanset River	4	7	3	8	N	3	4	7	45.77	49.81	Y
046003	East Windsor	East Road	Ketch Brook	4	4	4	8	N	4	2	2	50.71	49.38	Y
046007	East Windsor	Highland Avenue	Chestnut Brook	4	4	4	7	7	4	3	7	47.17	46.50	Y
049002	Essex	Ivory Street	Falls River (South Branch)	4	4	6	7	N	4	4	7	64.21	63.02	Y
049004	Essex	Old Deep River Road	Brook	5	4	6	7	N	4	5	8	50.82	49.71	Y
050003	Fairfield	Burr Street	Brook	5	4	6	7	N	5	3	7	49.21	48.10	Y
050008	Fairfield	Creconoof Road	Cricker Brook	6	6	4	6	N	5	8	6	71.20	70.16	Y
050011	Fairfield	Governors Lane	Browns Brook	5	5	4	5	N	4			60.85	59.66	Y
050019	Fairfield	Nonopage Road	Cricker Brook	4	4	6	6	N	4			59.85	58.66	Y
055005	Granby	Simsbury Road	Kendall Brook	6	6	4	4	N	4	3	6	48.74	47.70	Y
055010	Granby	Enders Road	brook	6	4	5	4	N	4	2	7	31.50	27.17	Y
056010	Greenwich	Pemberwick Road	Crossing Path	5	5	4	0	N	4			47.54	46.35	Y
056051	Greenwich	Winding Lane	Horseneck Brook	N	N	N	2	6	2	6	7	77.16	76.27	Y
058003	Groton	Packer Road	Haleys Brook	4	4	7	6	N	4	5	7	57.71	56.60	Y
058008	Groton	Beach Road	Venetian Harbor	N	N	N	7	4	4	4	7	55.89	54.56	Y
059004	Guilford	North Madison Road	Little Meadow Brook	N	N	N	5	4	4	N	7	72.16	70.83	Y
061025	Hamden	Sanford Street	Shepard Brook	4	4	5	6	N	4	5	6	52.46	51.20	Y
0610??	Hamden	Woodin Street	Wilmont Brook	4	4	5	5	N	4	5	6	55.76	53.95	Y
064002	Hartland	Fuller Road	Belden Brook	7	7	4	4	N	4			36.65	33.76	Y
064003	Hartland	Fuller Road	Brook	4	6	4	4	N	4			28.49	24.86	Y
066006	Hebron	Marjorie Circle	Brook	6	4	6	7	N	4			58.85	56.81	Y
067003	Kent	Macedonia Brook Road	Macedonia Brook	7	4	7	8	N	5	2	9	53.71	52.82	Y
067016	Kent	Kent Hollow Road	Aspetuck River	4	4	6	7	N	4	4	7	49.15	47.96	Y
070007	Lebanon	Goshen Hill Road	Exeter Brook	6	6	4	7	N	4	4	7	56.16	55.12	Y
071003	Ledyard	Stonybrook Road	Billings Avery Brook	4	4	7	6	N	4	7	7	66.16	65.05	Y
072002	Lisbon	Blissville Road	Brook	4	4	6	6	N	4			47.27	46.08	Y
073002	Litchfield	Shear Shop Road	Marshepaug River	6	4	6	7	N	4			53.58	52.54	Y
073011	Litchfield	West Morris Road	Hill Brook	7	7	4	7	N	4	5	7	58.10	57.21	Y

APPENDIX 1A - ELIGIBLE BRIDGES UNDER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible
073025	Litchfield	Knife Shop Road	Humaston Brook	6	6	4	7	N	4			48.74	47.70	Y
074007	Lyme	Birch Mill Road	Falls Brook	6	4	7	6	N	4			58.75	58.68	Y
075001	Madison	Tibbals Bridge Road	Hammonasset River	7	6	2		N	2			22.00	20.89	Y
075005	Madison	Bradley Corners Road	Neck Brook	5	5	4	4	N	4			58.79	57.60	Y
075010	Madison	Garnet Park Road	Bailey Creek	N	N	N	7	4	4			59.61	58.28	Y
077006	Mansfield	Hillyndale Road	Eagleville Brook	N	N	N	7	2	2	6	7	27.45	25.67	Y
077007	Mansfield	Shady Lane	Eagleville Brook	4	5	4	6	N	4			48.27	49.01	Y
083013	Milford	Wheeler Farms Road	Brook	5	6	4	7	N	4			59.84	58.73	Y
085008	Montville	Derry Hill Road	Brook	4	4	6	7	N	4			45.51	44.32	Y
089005	New Canaan	Huckleberry Hill Road	Silvermine River	5	5	4	4	N	4			51.35	50.16	Y
089008	New Canaan	Ponus Ridge	Brook	N	N	N	7	4	4			67.86	66.53	Y
089010	New Canaan	Greenley Road	Noroton River	4	4	6	5	N	4			45.73	44.54	Y
089012	New Canaan	West Road	Brook	N	N	N	6	4	4			62.78	61.45	Y
089013	New Canaan	Wahackme Road	Noroton River	4	4	4	7	N	4			47.74	46.41	Y
089014	New Canaan	Richmond Hill Road	Brook	3	2	3	6	6	2	4	7	14.22	13.33	Y
091001	New Hartford	Farmington River Road	Ratlum Brook	N	N	N	4	4	4	N	7	64.84	63.51	Y
095002	New Milford	Mud Pond Road	Bull Mountain Brook	3	2	3		N	2			17.00	15.37	Y
095008	New Milford	Riverview Road	Womenshenuk Brook	6	4	4	4	N	4			49.49	48.19	Y
095010	New Milford	North Road	Denman Brook	N	N	N	7	3	3			47.84	46.28	Y
095011	New Milford	Indian Trail	Merryall Brook	6	3	5	5	N	3	2	7	21.89	18.04	Y
095020	New Milford	Gaylord Road	Morrissey Brook	5	4	4	4	N	4			36.51	33.81	Y
096006	Newtown	Stony Brook Road	Brook	N	N	N	7	4	4	5	8	56.20	54.87	Y
096038	Newtown	High Rock Road #2	Halfway Brook	7	7	4	6	N	4			27.55	26.66	Y
096040	Newtown	Old Hawleyville Road	Pond Brook	5	5	4	6	N	4	3	6	43.91	42.72	Y
097004	Norfolk	Mountain Road	Norfolk Brook	5	4	3	6	N	3	5	7	50.20	48.87	Y
097006	Norfolk	Doolittle Drive	Loon Brook	N	N	N	8	4	4			63.82	62.49	Y
101002	North Stonington	Puttker Road	Green Fall River	N	N	N	7	4	4			64.82	63.49	Y
103016	Norwich	East Town Street	Brook	6	6	4	7	N	4			64.75	63.71	Y
103018	Norwich	Hunters Road	Hunter Brook	4	4	6	4	N	4			49.58	48.39	Y
104004	Old Lyme	McCurdy Road	Duck River	N	N	N	7	4	4			66.61	65.28	Y
107001	Oxford	Park Road	Little River	N	N	N	8	4	4			60.84	59.51	Y
109001	Plainville	Town Line Road	Stream	4	6	4	7	4	4	5	8	60.15	58.82	Y
111004	Pomfret	Dennis Road	Lyon Brook	4	6	6	7	N	5			48.31	44.38	Y
117007	Ridgefield	Mopus Bridge Road	Brook	3	3	3	7	N	3	4	6	33.06	31.50	Y
117016	Ridgefield	Stonehedge Road	Brook	4	4	6	7	N	4			53.31	52.12	Y
117026	Ridgefield	Florida Hill Road	Norwalk River	4	4	7	7	N	4	4	8	49.87	48.76	Y
117029	Ridgefield	Depot Road	Norwalk River	N	N	N	7	4	4			60.78	59.45	Y
117033	Ridgefield	Wilton Road East	Silvermine River	6	6	4	7	N	5	2	7	51.15	50.11	Y
117036	Ridgefield	Gay Road	Silvermine River	7	7	4	7	N	4			63.85	62.96	Y
121003	Salisbury	Mount Riga Road	Wachocastinook Creek	5	7	4	4	N	4			47.86	46.82	Y
121010	Salisbury	Salmon Kill Road	Factory Brook	7	7	4	4	N	4			65.81	64.92	Y
123003	Scotland	Kemp Road	Kimball Pond Brook	6	6	4	4	N	6			63.82	62.78	Y
123004	Scotland	Kasacek Road	Merrick Brook	6	6	3	3	N	6			49.82	48.71	Y

APPENDIX 1A - ELIGIBLE BRIDGES UNDER 20 FEET

Bridge No	Town	Feature Carried	Feature Crossed	Deck	Superstructure	Substructure	Channel	Culvert	Structural Eval	Deck Geometry	Waterway	Sufficiency Rating	Priority Rating	State Eligible
125006	Sharon	Old Sharon Road #3	Mill Brook	4	0	8	8	N	0	3	7	26.86	21.75	Y
125010	Sharon	Keeler Road	Macedonia Brook	7	3	6	7	N	3			25.57	20.98	Y
125011	Sharon	Kirk Road	Brook	4	4	6	7	N	4			48.20	47.01	Y
125012	Sharon	West Cornwall Road	Swamp Brook	4	4	7	8	N	4			44.81	43.70	Y
125015	Sharon	West Woods Road #2	Brook	N	N	N	5	4	4			64.84	63.51	Y
130010	Southbury	New Road	Spruce Brook	4	5	6	8	N	4			52.17	51.06	Y
130023	Southbury	River Road #1	Pootatuck Brook	6	6	4	6	N	4	5	8	60.24	59.20	Y
131018	Southington	Old Mountain Road	Stream	3	3	7	7	N	3			28.72	27.46	Y
133003	Sprague	LaCroix Road	Beaver Brook	6	3	3	6	N	3			34.36	33.03	Y
134003	Stafford	Pine Road	Crystal Lake Brook	4	4	5	6	N	4	3	8	29.74	26.70	Y
134005	Stafford	Upper Road	Furnace Brook	7	7	3	3	N	3	5	8	39.19	38.23	Y
135011	Stamford	Riverbank Road	East Branch Mianus River	4	4	5	5	N	4			61.78	60.52	Y
141001	Thompson	Owen Adam Road	Long Branch Brook	N	N	N		2	2			38.97	37.19	Y
143014	Torrington	Brightwood Avenue #1	Brook	7	7	4	7	N	4			64.81	63.92	Y
143024	Torrington	Klug Hill Road	Brook	4	4	5	8	N	4			47.17	45.91	Y
148010	Wallingford	Field Drive	Brook	7	N	N	5	4	5	7	5	65.20	63.87	Y
150015	Washington	West Mountain Road	Sprain Brook	7	4	3	7	N	3	4	8	23.30	19.45	Y
151012	Waterbury	Cooke Street	Brook	5	5	3	8	N	3			34.53	33.27	Y
151026	Waterbury	Brown Street	Great Brook	4	3	7	7	N	3			32.78	31.59	Y
151027	Waterbury	Water Street	Great Brook	6	3	7	0	N	3			35.79	34.75	Y
151029	Waterbury	Cherry Avenue	Great Brook	3	3	8	0	N	3			30.65	29.46	Y
151030	Waterbury	Cherry Street	Great Brook	5	3	8	0	N	3			34.69	33.65	Y
153008	Watertown	Cherry Avenue	Brook	0	0	6	7	N	0	6	7	35.88	30.32	Y
154003	Westbrook	Lynn Road	Falls River	4	4	7	7	N	4	7	8	61.80	60.69	Y
158008	Westport	Greens Farms Road	Muddy Brook	4	4	5	6	N	4			59.78	58.52	Y
158009	Westport	High Point Road	Muddy Brook	N	N	N	6	4	4			56.42	55.09	Y
158018	Westport	Sasco Creek Road	Brook	3	3	4	6	N	3			41.82	40.34	Y
158021	Westport	Kings Highway North	Willow Brook	4	4	5	7	N	4			45.55	44.29	Y
159007	Wethersfield	Middletown Ave	Beaver Brook	N	N	N	7	4	4			63.82	62.49	Y
168013	Woodbury	Middle Quarter Road	South Brook	5	4	5	6	N	5	2	8	53.47	52.28	Y
169003	Woodstock	Hopkins Road	Stafford Brook	6	6	4	7	N	4			47.64	46.60	Y
169016	Woodstock	North Gate Road	Sawmill Brook	6	7	4	6	N	4			62.44	59.59	Y
169017	Woodstock	Peake Brook Road	Brook	6	6	4	7	N	4			47.95	46.91	Y

APPENDIX 2 - GRANT PERCENTAGES FOR MUNICIPALITIES

TOWN	AENGLC	GRANT %
Andover	27,448.94	31.95
Ansonia	15,214.08	32.61
Ashford	21,620.53	32.27
Avon	107,380.15	27.61
Barkhamsted	36,982.98	31.43
Beacon Falls	23,908.90	32.14
Berlin	40,082.73	31.26
Bethany	48,000.91	30.83
Bethel	48,076.19	30.83
Bethlehem	40,894.89	31.22
Bloomfield	36,614.18	31.45
Bolton	33,106.07	31.64
Bozrah	33,510.27	31.62
Branford	48,050.61	30.83
Bridgeport	8,090.80	33.00
Bridgewater	134,064.93	26.16
Bristol	20,344.16	32.33
Brookfield	68,827.88	29.70
Brooklyn	17,369.08	32.50
Burlington	47,172.12	30.88
Canaan	67,364.36	29.78
Canterbury	20,062.80	32.35
Canton	45,476.78	30.97
Chaplin	17,987.54	32.46
Cheshire	48,228.09	30.82
Chester	52,750.76	30.57
Clinton	38,982.50	31.32
Colchester	23,912.28	32.14
Colebrook	45,325.24	30.98
Columbia	31,564.37	31.73
Cornwall	108,733.58	27.53
Coventry	26,144.86	32.02
Cromwell	38,919.31	31.33
Danbury	32,619.67	31.67
Darien	393,536.38	12.07
Deep River	42,666.07	31.12
Derby	20,112.36	32.35
Durham	39,435.34	31.30
Eastford	26,477.73	32.00
East Granby	49,545.97	30.75
East Haddam	36,957.73	31.43
East Hampton	19,994.83	32.35
East Hartford	18,108.92	32.46
East Haven	20,051.96	32.35
East Lyme	35,678.63	31.50
Easton	154,651.91	25.04
East Windsor	30,328.39	31.79

APPENDIX 2 - GRANT PERCENTAGES

TOWN	AENGLC	GRANT %
Ellington	27,462.56	31.95
Enfield	17,017.14	32.52
Essex	96,067.38	28.22
Fairfield	94,524.96	28.31
Farmington	78,660.41	29.17
Franklin	36,095.33	31.48
Glastonbury	64,368.68	29.94
Goshen	67,337.81	29.78
Granby	41,671.51	31.18
Greenwich	431,643.54	10.00
Griswold	14,877.36	32.63
Groton	28,259.00	31.90
Guilford	68,976.02	29.69
Haddam	39,488.88	31.30
Hamden	24,668.46	32.10
Hampton	22,369.85	32.22
Hartford	8,181.37	33.00
Hartland	29,322.29	31.85
Harwinton	40,105.16	31.26
Hebron	32,795.09	31.66
Kent	100,340.43	27.99
Killingly	17,399.30	32.49
Killingworth	47,660.66	30.85
Lebanon	25,822.16	32.04
Ledyard	22,747.21	32.20
Lisbon	21,897.95	32.25
Litchfield	51,442.36	30.65
Lyme	133,277.58	26.20
Madison	83,936.12	28.88
Manchester	25,796.26	32.04
Mansfield	17,565.15	32.49
Marlborough	40,634.38	31.23
Meriden	14,619.76	32.65
Middlebury	56,373.99	30.38
Middlefield	31,472.73	31.73
Middletown	27,181.80	31.96
Milford	47,356.25	30.87
Monroe	59,135.28	30.23
Montville	19,316.88	32.39
Morris	55,450.21	30.43
Naugatuck	17,774.79	32.47
New Britain	8,892.14	32.96
New Canaan	398,351.71	11.81
New Fairfield	59,442.16	30.21
New Hartford	38,910.43	31.33
New Haven	9,062.72	32.95
Newington	31,723.41	31.72
New London	13,953.28	32.68
New Milford	39,002.68	31.32
Newtown	69,785.00	29.65

APPENDIX 2 - GRANT PERCENTAGES

TOWN	AENGLC	GRANT %
Norfolk	68,113.14	29.74
North Branford	30,224.40	31.80
North Canaan	24,912.59	32.09
North Haven	52,204.05	30.60
North Stonington	37,214.32	31.42
Norwalk	53,951.84	30.51
Norwich	15,135.23	32.62
Old Lyme	109,432.23	27.50
Old Saybrook	76,194.65	29.30
Orange	79,251.39	29.14
Oxford	40,018.48	31.27
Plainfield	13,776.12	32.69
Plainville	24,661.21	32.10
Plymouth	17,849.66	32.47
Pomfret	27,782.64	31.93
Portland	27,533.94	31.94
Preston	24,749.89	32.10
Prospect	31,645.05	31.72
Putnam	17,064.45	32.51
Redding	142,042.40	25.73
Ridgefield	154,066.65	25.07
Rocky Hill	43,318.66	31.09
Roxbury	194,144.15	22.90
Salem	28,893.89	31.87
Salisbury	114,655.31	27.21
Scotland	20,645.98	32.32
Seymour	23,929.45	32.14
Sharon	109,831.85	27.48
Shelton	42,910.55	31.11
Sherman	86,074.93	28.77
Simsbury	61,539.77	30.10
Somers	24,020.17	32.13
Southbury	62,497.93	30.05
Southington	29,032.41	31.86
South Windsor	41,371.22	31.19
Sprague	19,404.33	32.39
Stafford	19,327.63	32.39
Stamford	85,158.26	28.82
Sterling	17,251.25	32.50
Stonington	53,108.56	30.56
Stratford	33,069.37	31.64
Suffield	34,152.46	31.58
Thomaston	26,763.20	31.99
Thompson	19,242.68	32.39
Tolland	33,442.59	31.62
Torrington	18,073.34	32.46
Trumbull	68,156.73	29.74
Union	40,359.22	31.25
Vernon	20,813.14	32.31
Voluntown	19,660.09	32.37
Wallingford	31,685.25	31.72

APPENDIX 2 - GRANT PERCENTAGES

TOWN	AENGLC	GRANT %
Warren	99,972.98	28.01
Washington	133,481.75	26.19
Waterbury	9,613.26	32.92
Waterford	57,052.09	30.34
Watertown	30,785.63	31.77
Westbrook	57,854.25	30.30
West Hartford	44,883.49	31.00
West Haven	15,668.06	32.59
Weston	274,049.68	18.56
Westport	355,798.97	14.12
Wethersfield	34,732.87	31.55
Willington	26,735.64	31.99
Wilton	235,189.09	20.67
Winchester	19,334.90	32.39
Windham	8,312.31	32.99
Windsor	36,705.41	31.45
Windsor Locks	36,290.51	31.47
Wolcott	23,371.66	32.17
Woodbridge	92,240.50	28.43
Woodbury	68,284.18	29.73
Woodstock	27,640.00	31.94

APPENDIX 3 - LOCAL BRIDGE LEGISLATION

Following are excerpts from the Connecticut General Statutes and Public Acts which relate to Local Bridges. They are included as a convenience to the reader of this manual, and are not intended to be a complete list of all relevant Statutes. The reader is cautioned that these are not certified copies, and to check that there have been no revisions to the Statute before relying upon it.

CGS SECTIONS 13A-175P - 13A-175W: LOCAL BRIDGE PROGRAM

Sec. 13a-175p. Definitions. The following terms, as used in sections 13a-175p to 13a-175w, inclusive, shall have the following meanings unless the context clearly indicates a different meaning or intent:

- (1) "Commissioner" means the Commissioner of Transportation.
- (2) "Eligible bridge" means a bridge located within one or more municipalities in the State, the physical condition of which requires that it be removed, replaced, reconstructed, rehabilitated or improved as determined by the commissioner.
- (3) "Eligible bridge project" means the removal, replacement, reconstruction, rehabilitation or improvement of an eligible bridge by one or more municipalities.
- (4) "Grant percentage" means a percentage established by the commissioner for each municipality by (A) ranking all municipalities in descending order according to each such municipality's adjusted equalized net grand list per capita as defined in section 10-261; and (B) determining a percentage for each such municipality on a scale from not less than 10% to not more than 33% based upon such ranking. In any case where a municipality does not have an adjusted equalized net grand list per capita such municipality shall be deemed to have the adjusted equalized net grand list per capita of the town in which it is located.
- (5) "Local bridge program" means the local bridge program established pursuant to sections 13a-175p to 13a-175u, inclusive.
- (6) "Local Bridge Revolving Fund" means the Local Bridge Revolving Fund created under section 13a-175r.
- (7) "Municipality" means any town, city, borough, consolidated town and city, consolidated town and borough, district or other political subdivision of the state, owning or having responsibility for the maintenance of all or a portion of an eligible bridge.
- (8) "Physical condition" means the physical condition of a bridge based on its structural deficiencies, sufficiency rating and load capacity all as determined by the commissioner.
- (9) "Priority list of eligible bridge projects" means the priority list of eligible bridge projects established by the commissioner in accordance with the provisions of section 13a-175s.
- (10) "Project costs" means the total costs of a project determined by the commissioner to be necessary and reasonable.
- (11) "Project loan" means a loan made to a municipality from the Local Bridge Revolving Fund and evidenced by the municipality's project loan obligation.
- (12) "Project loan agreement" means a loan agreement with respect to a project loan as provided for in subsection (c) of section 13a-175s.

APPENDIX 3 - LEGISLATION

(13) "Project loan obligation" means an obligation of a municipality issued to evidence indebtedness under a project loan agreement and payable to the state for the benefit of the Local Bridge Revolving Fund.

(14) "Project grant" means a grant-in-aid made to a municipality pursuant to section 13a-175s.

(15) "Supplemental project obligation" means bonds or serial notes issued by a municipality for the purpose of financing the portion of the costs of an eligible bridge project not met from the proceeds of a project grant or project loan.

(P.A. 84-254, S. 8, 62.)

Sec. 13a-175q. Local bridge program. The establishment of a program for the removal, replacement, reconstruction, rehabilitation or improvement of local bridges is a matter of state-wide concern affecting the health, safety and welfare of the inhabitants of the state and of persons traveling within the state. It is the policy of the state to establish a timely and efficient method for municipalities to participate in this program and in furtherance thereof, sections 13a-175p to 13a-175w, inclusive, are intended to provide authority for municipalities to approve local bridge projects, and, in connection therewith, to authorize project loan agreements, and the issuance of project loan obligations and supplemental project obligations. For the purpose of ensuring and encouraging participation by municipalities in the benefits of the local bridge program, the powers of municipalities are expressly enlarged and expanded to include the power to do all things necessary and incident to their participation in the local bridge program under sections 13a-175p to 13a-175w, inclusive.

(P.A. 84-254, S. 9, 62.)

Sec. 13a-175r. Local Bridge Revolving Fund. There is established and created a fund to be known as the "Local Bridge Revolving Fund". The state shall deposit in said fund (1) all proceeds of bonds issued by the state for the purpose of making project loans and project grants to municipalities, including proceeds of any special tax obligation bonds which are issued for the purpose of funding the local bridge program through project loans and grants, (2) any and all payments made by municipalities in respect of project loans including loan interest, (3) all appropriations for the purpose of making project loans and project grants, and (4) any additional moneys from any other source available for deposit into said fund. Moneys deposited in said fund shall be held by the treasurer separate and apart from all other moneys, funds and accounts. Investment earnings credited to the assets of said fund shall become part of the assets of said fund. Any balance remaining in said fund at the end of a fiscal year shall be carried forward in said fund for the fiscal year next succeeding. Amounts in the Local Bridge Revolving Fund shall be expended only for the purpose of funding project loans and project grants or for the purchase or redemption of special tax obligation bonds issued pursuant to sections 13b-74 to 13b-77, inclusive.

(P.A. 84-254, S. 10, 62; P.A. 89-240, S. 1, 3.)

History: P.A. 89-240 added provisions re proceeds of grants to be deposited in fund, added new Subdiv. (3) re appropriations deposited in fund and relettered Subdiv. (3) as Subdiv. (4).

Sec. 13a-175s. Procedure for making project grants and loans under local bridge program.
(a) The commissioner shall maintain a list of eligible bridges and shall establish a priority list of eligible bridge projects for each fiscal year. In establishing such priority list, the commissioner shall consider the physical condition of each eligible bridge.

(b) In each fiscal year the commissioner may make project loans to municipalities in the order of the priority list of eligible bridge projects to the extent of moneys available therefor in the Local Bridge Revolving Fund. Each municipality undertaking an eligible bridge project may apply for and receive a project loan or loans. The aggregate amount of project loans made to a municipality with respect to any project shall be equal to the amount requested by the municipality up to an amount not to exceed 50% of the project costs allocable therefore to such municipality.

APPENDIX 3 - LEGISLATION

(c) Each project loan shall be made pursuant to a project loan agreement between the state, acting by and through the commissioner, and the borrowing municipality and shall be evidenced by a project loan obligation of the borrowing municipality issued in accordance with section 13a-175t. Each project loan agreement shall be in the form prescribed by the commissioner, provided that each project loan agreement shall provide for a project loan obligation bearing interest at the rate of 6% per annum payable quarterly and maturing no later than 10 years from the date of such obligation.

(d) In each fiscal year the commissioner may make project grants to municipalities in the order of the priority list of eligible bridge projects to the extent moneys are available therefore. Each municipality undertaking an eligible bridge project may apply for and receive a project grant equal to its grant percentage multiplied by the project costs allocable to such municipality.

(e) All applications for project loans and project grants for the fiscal year ending June 30, 1985, shall be filed with the commissioner no later than October 1, 1984, and for each succeeding fiscal year all such applications shall be filed with the commissioner no later than March first of the fiscal year next preceding. The commissioner may for good cause extend the period of time in which any such application may be filed.

(f) A project grant or project loan shall not be made to a municipality with respect to an eligible bridge project unless: (1) each municipality undertaking such project has available to it, or has made arrangements satisfactory to the commissioner to obtain, funds to pay that portion of the project costs for which it is legally obligated and which are not met by project loans or project grants; (2) each municipality undertaking such project provides assurances satisfactory to the commissioner that it will undertake and complete such project with due diligence and that it will operate and maintain the eligible bridge properly after completion of such project; (3) each municipality undertaking such project and seeking a project loan or a project grant has filed with the commissioner all applications and other documents prescribed by the commissioner; (4) each municipality undertaking such project and seeking a project loan or a project grant has established separate accounts for the receipt and disbursement of the proceeds of project loans and project grants; and (5) in any case in which an eligible bridge is owned or maintained by more than one municipality, evidence satisfactory to the commissioner that all such municipalities are legally bound to complete their respective portions of such project. Notwithstanding any provisions of this subsection, the commissioner may make an advance grant to a municipality for the purpose of funding the engineering cost of an eligible bridge project. Such grant shall equal the municipality's grant percentage multiplied by the engineering cost, which cost shall not exceed fifteen per cent of the construction cost of the project, provided the amount of such advance shall be deducted from the total grant for the project.

(g) Notwithstanding the provisions of subsections (b) and (d) of this section, the commissioner may make project grants and project loans with respect to an eligible bridge project without regard to the priority list of eligible bridge projects if a public emergency exists requiring the immediate removal, replacement, reconstruction, rehabilitation or improvement of the eligible bridge of such project to protect the public health and safety.

(P.A. 84-254, S. 11, 62; P.A. 88-60, S. 2; P.A. 89-240, S. 2, 3.)

History: P.A. 88-60 amended Subsec. (g) to allow the commissioner to make an advance grant to a municipality to fund engineering costs of an eligible bridge project; P.A. 89-240 deleted Subsec. (b) re allocation of funds between projects and fund, deleted Subdiv. (1) of Subsec. (f) re approval by commissioner of preliminary plans and specifications and relettered Subsecs. (c), (d), (e), (f), (g) and (h) as Subsecs. (b), (c), (d), (e), (f), (g)

Sec. 13a-175t. Project loans. Municipal procedures. (a) A municipality may authorize (1) the execution and delivery of project loan agreements; (2) the issuance and sale of project loan obligations to finance its obligations under a project loan agreement; and (3) the issuance and sale of its supplemental project obligations, in accordance with such statutory and other legal requirements as govern the issuance of obligations and the making of contracts by the municipality. Obligations authorized under this section shall be subject to the debt limitation provisions of section 7-374.

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(b) The legislative body of a municipality shall hold at least one public hearing on an eligible bridge project, including the authorization of project loan obligations and supplemental project obligations with respect thereto, prior to its vote on the approval or disapproval of the eligible bridge project and the authorization of financing therefore. Notice of the time, place and purpose of the hearing shall be published in a newspaper having general circulation in the municipality not less than five days prior to the day on which such hearing is to be held. For purposes of this subsection, such five-day period shall include the day upon which such notice is first published, and shall include any Saturday, Sunday or legal holiday, which may intervene between such publication and the day on which such hearing is held, but shall not include the day upon which such hearing is held.

(c) Each project loan obligation issued pursuant to this section shall bear interest at the rate of 6% per annum payable quarterly, shall mature in such amounts and at such time or times not later than 10 years from the date thereof and shall contain such other terms and provisions as the project loan agreement under which it is issued provides.

(d) Project loan obligations and supplemental project obligations shall be general obligations of the issuing municipality and each such obligation shall recite that the full faith and credit of the issuing municipality are pledged for the payment of the principal thereof and interest thereon.

(e) Whenever a municipality has authorized the issuance of project loan obligations or supplemental project obligations, it may authorize the issuance of temporary notes in anticipation of the receipt of the proceeds from the issuance of its project loan obligations or supplemental project obligations. Such temporary notes may be renewed from time to time by the issuance of other notes, provided that any such renewals shall conform to all legal requirements and limitations applicable thereto, including the requirements and limitations set forth in sections 7-378 and 7-378a.

(f) Except as otherwise provided in this section, project loan obligations, supplemental project obligations and temporary notes issued in anticipation of the receipt of the proceeds thereof shall be issued by a municipality in accordance with such statutory and other legal requirements as govern the issuance of such obligations generally by such municipality, including, where applicable, the provisions of chapter 109.

(P.A. 84-254, S. 12, 62.; P.A. 87-224, S. 1, 4.)

History: P.A. 87-224 amended Subsec. (b) by changing the time notice of a hearing is published from at least ten days to not less than five days prior to the day on which the hearing is held, and by defining the five day period.

Sec. 13a-175u. Regulations. The commissioner shall adopt such regulations in accordance with the provisions of chapter 54 as may be necessary to give effect to and carry out the purposes of sections 13a-175p to 13a-175t, inclusive.

(P.A. 84-254, S. 13, 62.)

Sec. 13a-175v. Interlocal Agreements. If an eligible bridge is located or maintained by more than one municipality, the municipalities owning such eligible bridge may enter into an interlocal agreement concerning such eligible bridge. Such interlocal agreement may provide, among other things, that one municipality shall be responsible for undertaking and completing an eligible bridge project, maintaining such eligible bridge project, applying for a project loan or a project grant, or both, for such eligible bridge project and repaying a project loan for such eligible bridge project. A municipality is authorized to enter into such an interlocal agreement by vote of its legislative body and the provisions of sections 7-339a to 7-339i, inclusive, shall not be applicable to such interlocal agreement. Any such agreement entered into prior to May 27, 1987, is validated.

(P.A. 87-224, S. 2, 4.)

Sec. 13a-175w. Eligibility of municipality which enter into interlocal agreement for project loan or grant. In any case in which an eligible bridge is owned or maintained by more than one municipality and such municipalities enter into or have entered into an interlocal agreement authorized by section 13a-175v, the commissioner may deem the municipality which has agreed pursuant to such

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interlocal agreement to undertake, complete and maintain an eligible bridge project to be the only municipality eligible for a project grant or a project loan, or both, concerning such eligible bridge project and the commissioner may make a project loan or project grant, or both, to such municipality without regard to the ownership or other interests of any other municipality in such eligible bridge.

(P.A. 87-224, S. 3, 4.)

Secs. 13a-175x to 13a-175z. Reserved for future use.

CGS SECTION 13A-86A (FORMERLY PA 97-214)

Sec. 13a-86a. Geometric design standards for bridges, exceptions. Factors re bridge rehabilitation or new construction. Development or construction of projects by municipal governments. Immunity from liability. (a) In the event site conditions, environmental factors, engineering factors or considerations of community standards and custom would reasonably allow for a departure from the standards for geometric design with respect to bridges established by the American Association of State Highway and Transportation Officials or by the Department of Transportation, the Department may approve exceptions to such standards without waivers.

(b) In choosing between the rehabilitation of an existing bridge and the construction of a new bridge, whether on the existing location or on a new location, the department and any affected municipality shall weigh the following factors:

- (1) The functional classification of the highway;
- (2) the load capacity and geometric constraints of the bridge within its existing footprint and the availability of alternative routes;
- (3) the comparative long-term costs, risks and benefits of rehabilitation and new construction;
- (4) the requirements of state standards for geometric design;
- (5) disruption to homes and businesses;
- (6) environmental impacts;
- (7) the potential effects on the local and state economies;
- (8) cost-effectiveness;
- (9) mobility;
- (10) safety, as determined by factors such as accident history for motorists, pedestrians and bicyclists; and
- (11) the impact on the historic, scenic and aesthetic values of the municipality in which the bridge is or may be located.

(c) The department shall implement policies and programs to allow municipal governments to develop projects or construct projects, or both, in consultation with the department, in accordance with federal laws and regulations if federal funds are used.

(d) The state or a municipality, any state or municipal agency or any employee thereof or any engineer retained in connection with a bridge project shall not be liable for any injury or damage to any person or property caused by the selection of design standards that enable an existing bridge, which was initially constructed not less than twenty-five years prior to the effective date of this act, to be repaired or rehabilitated in substantially the same configuration that existed before such repair or rehabilitation, provided nothing in this subsection shall be construed to relieve the state, any municipality or any

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person from liability under section 13a-144 or 13a-149 of the general statutes arising out of structural or design defects in any such bridge or negligence in the maintenance, repair or rehabilitation of any such bridge.

(P.A. 97-214, S. 1.)

PUBLIC ACT 87-584 (TOWN BRIDGE STUDY)

AN ACT CONCERNING MUNICIPAL ASSISTANCE AND ESTABLISHING A LOCAL PROPERTY TAX RELIEF TRUST FUND

Sec. 15. The Department of Transportation shall conduct a state-wide study of town roads and bridges in which the Department shall evaluate and catalog the following:

(1) The age of such roads and bridges; (2) the physical condition of such roads and bridges; (3) the present and future use of such roads and bridges; and (4) the cost of repairing, reconstructing and maintaining such roads and bridges. The Department of Transportation shall provide each municipality in the state with the information collected by the department while cataloging and evaluating such roads and bridges. The Department of Transportation shall, on the basis of such information, recommend a priority list of town road and reconstruction projects. The Department shall submit a report of its findings and recommendations to the governor and the joint standing committees of the general assembly on finance, revenue and bonding and on transportation on or before January 15, 1988.

MISCELLANEOUS BRIDGE & HIGHWAY PROVISIONS

Sec. 13a-89. Appeal to commissioner from posted weight restriction. Any person may appeal to the commissioner from the restriction of the use of any bridge imposed by the posting of a maximum weight notice as provided in section 13a-121. Upon such appeal the commissioner shall inspect such bridge and may, after due notice thereof to all parties in interest and hearing thereon, order the authority having control of such bridge to increase its capacity to such extent as he finds public convenience and necessity require. If such authority fails to make such repairs or reconstruction as are necessary so to increase the capacity of such bridge within sixty days after receiving notice from the commissioner to do so, the commissioner may so repair or reconstruct such bridge and the authority having control of such bridge shall be liable for the cost of such repair or reconstruction.

(1949 Rev., S. 2187; 1958 Rev., S. 13-74; 1963, P.A. 226, S. 89.)

History: 1963 act replaced previous provisions: See title history.

Sec. 13a-99. Towns to build and repair highways and bridges. Towns shall, within their respective limits, build and repair all necessary highways and bridges, and all highways to ferries as far as the low water mark of the waters over which the ferries pass, except when such duty belongs to some particular person. Any town, at its annual meeting, may provide for the repair of its highways for periods not exceeding five years and, if any town fails to so provide at such meeting, the selectmen may provide for such repairs for a period not exceeding one year.

(1949 Rev., S. 2117; 1958 Rev., S. 13-2; 1963, P.A. 226, S. 99.)

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History: 1963 act replaced previous provisions: See title history.

When towns are liable to maintain bridges on turnpike roads. 4 D. 198; 1 C. 1. Town to maintain road in borough, formerly turnpike. 25 C. 86. Town and turnpike company not both liable to maintain same road. 27 C. 48. Herbage in a highway belongs to the landowner. 28 C. 165. Dedication of highway provable by public use. 29 C. 157; 31 C. 308. Towns have no duty or power to build bridges between this and adjoining states. 29 C. 356. City of Hartford liable for defective sidewalks. 30 C. 118. No municipal corporation obliged to lay out or maintain highways except by statute. 31 C. 213. Legislature may create highway district out of several towns. 170 U. S. 309. Admissibility of evidence that others safely crossed ice. 33 C. 57. Highway surveyor may widen roadway within highway limits. 36 C. 165. Municipalities may remove earth from one highway to another. 38 C. 50. Municipalities not liable for negligence in public duty to repair highways. 38 C. 90; 71 C. 686. Dedication of a system of highways; loss of public rights by laches. 40 C. 410. Town cannot divert spring in highway for watering trough. 44 C. 521. Town liable for nuisance caused in doing lawful act. 45 C. 550; 47 C. 314. Town may change form of dedicated highway. 50 C. 259. Town voluntarily operating drawbridge liable for negligence. 63 C. 587. History of law; duty to repair applies to highways by dedication. 74 C. 360. Care of streets is a governmental duty; no liability except by statute. 74 C. 573; 79 C. 94; 81 C. 392. History of exception where duty belongs to some particular person. 75 C. 695. Of sidewalk, as part of highway. 76 C. 105. See 71 C. 655; 77 C. 307; 80 C. 296. This section measures the liability imposed by section 13a-149. 81 C. 68; 89 C. 30. Building new roadway several feet above old one not repairing. 75 C. 271. Municipality cannot enter private property to abate conditions there which tend to create defect. 80 C. 291. Discretion of municipality as to methods to be used. 79 C. 94. This section does not apply to state aid or trunk line highways. 94 C. 594. Town is under duty to maintain roadway of bridge over railroad, although railroad is obliged to maintain superstructure of bridge. 100 C. 437. Does not apply to defect caused by opening in street made by trolley company in repairing its roadbed. 103 C. 121; id., 605. See note to Sec. 13a-149. Town's obligation for sidewalks not modified by section 13a-144. 109 C. 336. Where town builds road under section 13a-173 as a contractor with the state, jury may reasonably find it entered contract for special benefit and pecuniary profit, thereby depriving itself of governmental immunity from liability. 120 C. 148. Cited. 121 C. 616; 124 C. 344; 160 C. 295. Cited. 193 C. 589. Cited. 226 C. 684, 695. Cited. 12 CA 153, 157. Cited. 29 CA 18, 24, 25.

City becomes responsible for condition of highways when town and city consolidate. 3 CS 418. Cited. 4 CS 401; 5 CS 193. Duty of New Haven not impaired by special act 576 of 1937. 8 CS 204. Cited. 25 CS 305; 27 CS 469, 472.

Sec. 13a-100. Expense of bridges between towns. Necessary bridges between towns, except when otherwise specially provided by law, shall be built and kept in repair by such towns, and the expense thereof shall be apportioned between them according to the total revenue received yearly from direct taxation in each of such towns, as averaged for the three fiscal years next preceding.

(1949 Rev., S. 2119; 1958 Rev., S. 13-4; 1963, P.A. 226, S. 100.)

History: 1963 act replaced previous provisions: See title history.

What constitutes a bridge. 26 C. 583; 44 C. 25; 64 C. 568.

Sec. 13a-101. Bridges over artificial watercourses. Any bridge or passageway over any artificial watercourse on a highway which it is not the duty of the commissioner to maintain shall be constructed and maintained by the person owning or controlling such watercourse and shall be of such width and carrying capacity as are approved by the board of selectmen of the town, provided, if at any time the board of selectmen finds that any such existing bridge or passageway has become insufficient to permit the traveling public to use it with safety, the board of selectmen shall cause such bridge or passageway to be reconstructed so as to make it sufficient or shall cause a new sufficient bridge or passageway to be constructed. The town and the person owning or controlling the watercourse shall each pay an equitable portion of the cost of reconstructing such existing bridge or passageway or of constructing a new sufficient bridge or passageway, which equitable apportionment shall be based upon the respective needs of the town and the person for such change in such bridge or passageway, and the board of selectmen is authorized to enter into an agreement with such person determining the portion to be paid by each, provided, if the board of selectmen and such person cannot agree upon an equitable apportionment of such cost, either may apply to the superior court in the judicial district within which such bridge or passageway is situated, or, if said court is not in session, to any judge thereof, for a determination of the portion of the cost to be borne by each, and said court or such judge, after causing notice of the pendency of such application to be given to the other party, shall appoint a state referee to make such determination. Such referee, having given at least ten days' notice to the parties interested of the time and place of the hearing, shall hear both parties, shall view the bridge or passageway and take

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such testimony as such referee deems material, and shall thereupon determine the portion of the cost to be borne by each and forthwith report to the court. If the report is accepted by the court, such determination shall, subject to right of appeal as in civil actions, be conclusive upon both parties.

(1949 Rev., S. 2200; 1951, S. 1192d; 1957, P.A. 211, S. 1; 1958 Rev., S. 13-9; 1963, P.A. 226, S. 101; P.A. 78-280, S. 2, 127.)

History: 1963 act replaced previous provisions: See title history; P.A. 78-280 substituted "judicial district" for "county".

See Sec. 13a-90 re bridges over artificial watercourses which Transportation Commissioner is responsible for maintaining.

Sec. 13a-102. Court may direct construction or repair of bridge. When any town neglects to construct or repair a bridge across a river in a highway in such town, or when it is necessary to construct or repair any such bridge between towns or judicial districts and the towns liable therefor neglect, or do not agree, to construct or repair it, the superior court of the judicial district in which either town is situated, on complaint of any person, and legal notice given to the town liable for such construction or repairs, shall inquire by itself or committee into the public necessity and convenience thereof; and, if no sufficient reason is shown to the contrary, and such town or towns do not undertake to construct or repair such bridge within such time as the court directs, it may appoint some suitable person to do the same; and the expense thereof, being allowed by said court, shall be paid by such town or towns. Said court or such committee may estimate the damages, if any, sustained by any person or corporation by the construction of such bridge, due notice having been given to such person or corporation to appear and be heard, and, upon return of the report of any such committee into court, the same proceedings may be had in regard to such report and damages as are provided in sections 13a-52 to 13a-72, inclusive, for persons interested in laying out or altering a highway, in regard to remonstrance and reassessment of damages.

(1949 Rev., S. 2123; 1958 Rev., S. 13-7; 1963, P.A. 226, S. 102; P.A. 78-280, S. 2, 4, 127.)

History: 1963 act replaced previous provisions: See title history; P.A. 78-280 substituted "judicial district(s)" for "county(ies)".

State's attorney cannot complain. 9 C. 32.

Sec. 13a-105. Contracts for highway construction. When any town has determined to construct or reconstruct any highway, section of highway or bridge, which construction or reconstruction is to be paid for from funds allotted to such town under the provisions of sections 13a-175a to 13a-175f, inclusive, and the commissioner has entered into an agreement with the selectmen of such town, as provided by sections 13a-175e and 13a-175f, said commissioner shall call for bids and award a contract for such construction or reconstruction in the manner provided by section 13a-95, except that, if, in the opinion of said commissioner, it is to the best interest of the state and such town, the commissioner may award to such town a contract for such construction or reconstruction upon such terms and conditions as the commissioner determines, provided the estimated unit prices under any contract so awarded shall not be in excess of ten per cent more than the average unit prices prevailing during the preceding twelve months for similar work in the state and provided such town shall have authorized the selectmen to enter into such contract in the name and on behalf of such town. Nothing in this section shall be construed to eliminate the use of force account work for the repair of town aid highways. The commissioner may, subject to the approval of the selectmen or legislative body of such town, enter into an agreement with a third party for additional construction or reconstruction works when requested to do so by such third party, provided such third party shall, immediately upon certification by the commissioner, pay to the State Treasurer the full cost to the state of such additional construction or reconstruction works. If under such agreement such additional construction or reconstruction works are carried out by such third party, they shall conform with all requirements and regulations of such town and such as may be prescribed by the commissioner.

(1949 Rev., S. 2178; 1958 Rev., S. 13-65; 1963, P.A. 226, S. 105; 1967, P.A. 701, S. 11; 1971, P.A. 582, S. 1; P.A. 02-89, S. 16.)

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History: 1963 act replaced previous provisions: See title history; 1967 act corrected obsolete statutory references; 1971 act added provisions re agreements between commissioner and third party for additional construction or reconstruction work; P.A. 02-89 replaced reference to Sec. 13a-175h with reference to Sec. 13a-175f, reflecting the repeal of Sec. 13a-175h by the same public act, and made technical changes for purposes of gender neutrality.

Sec. 13a-106. Competitive bids not required when material available at price acceptable to commissioner. When any town highway is maintained, improved, constructed or reconstructed on a force account basis by expenditure of funds allocated under sections 13a-175a to 13a-175f, inclusive, the furnishing of gravel, sand or wood posts by competitive bids under section 4a-57 shall not be required when suitable material, meeting Department of Transportation specifications, is available to the town at a unit price acceptable to the commissioner.

(1953, S. 1184d; 1958 Rev., S. 13-66; 1963, P.A. 226, S. 106; 1967, P.A. 701, S. 12; 1969, P.A. 768, S. 89.)

History: 1963 act replaced previous provisions: See title history; 1967 act changed obsolete statutory references; 1969 act substituted commissioner and department of transportation for highway commissioner and department; P.A. 02-89 replaced reference to Sec. 13a-175h with reference to Sec. 13a-175f, reflecting the repeal of Sec. 13a-175h by the same public act.

Sec. 13a-109. Apportionment of cost for work on bridge. The commissioner or any municipality or other person who has performed any work on any bridge for a portion of the cost of which any other municipality or person is liable shall, within thirty days after the completion of such work, mail to each person liable for a portion of the cost of such work a statement of the total cost of such work, showing the proportionate share assessed against each interested party, and such amount assessed against each interested party shall thereupon become due and, if not paid within thirty days, shall bear interest at the rate of six per cent per annum and shall be collectible in an action at law brought to the superior court for the judicial district wherein such bridge is located.

(1949 Rev., S. 2273; 1958 Rev., S. 13-129; 1963, P.A. 226, S. 109; P.A. 78-280, S. 24, 127.)

History: 1963 act replaced previous provisions: See title history; P.A. 78-280 substituted superior court for "any court of competent jurisdiction" and "judicial district" for "county".

That county or town has no money in its treasury, no defense against action to recover amount due. 70 C. 437.

Sec. 13a-111. Railings on bridges and highways. The party bound to maintain any bridge or highway shall erect and maintain a sufficient railing or fence on the sides of such bridge and on the sides of such parts of such road as are so made or raised above the ground as to be unsafe for travel. The specifications for railings or fences on state highways or bridges required to be erected and maintained pursuant to this section shall be constructed equal to, or better than, the current specifications and policies approved by the Commissioner of Transportation for the installation and maintenance of roadside appurtenances. A railing or fence that is reasonably maintained under said specifications shall be deemed sufficient under the provisions of this section.

(1961, P.A. 43; 1963, P.A. 226, S. 111; P.A. 98-182, S. 14, 22.)

History: 1963 act replaced previous provisions: See title history; P.A. 98-182 deleted the requirement for the commissioner to promulgate regulations, required the specifications for railings or fences to be constructed equal to or better than current specifications and policies, effective July 1, 1998.

See Sec. 13a-152 re damages for failure to maintain railing or fence.

Annotations to former statute: Proof of compliance with former provision deemed to raise conclusive presumption defendant discharged duty. 122 C. 99. Standard not generally applicable; applies only to highways specified. 129 C. 700.

Sec. 13a-120. Traffic authority to maintain warning signs. The traffic authority of any city, town or borough shall erect and maintain suitable warning signs on highways under the jurisdiction of such

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traffic authority, legible from a distance of one hundred feet and located at a reasonable distance in each direction from schoolhouses or at a reasonable distance from the ends of hard surfaced highways, which signs shall designate the proximity of such schoolhouses or the ends of such hard surfaced highways; and such traffic authority shall erect and maintain similar warning signs in respect to bridges, dangerous curves and intersecting highways. All new and replacement signs, signals or markings erected in accordance with the requirements of this section shall conform to the specifications of the manual on uniform traffic control devices as approved and revised by the State Traffic Commission.

(1949 Rev., S. 2137; 1958 Rev., S. 13-21; 1963, P.A. 226, S. 120; 337.)

History: 1963 acts added mandatory requirement of maintenance of signs in re bridges, curves and intersections required that new and replacement signs, signals, etc. conform to specifications in manual on uniform traffic control devices and restated previous provisions: See title history.

Cited. 225 C. 217, 222.

Sec. 13a-121. Notice of load capacity; appeal. When the load-carrying capacity of any bridge on any highway is such that it will not carry safely any vehicle or combination of vehicle and trailer or semitrailer or any other object within the limits of the weights specified in section 14-267a, the authority having control of such bridge shall maintain notice at each end of such bridge legible at a distance of fifty feet, stating the maximum weight of vehicle which such bridge will carry safely. Any person may appeal from the restriction of the use of such bridge under the provisions of section 13a-89.

(1949 Rev., S. 2186; 1955, S. 1189d; 1958 Rev., S. 13-73; 1963, P.A. 226, S. 121; P.A. 79-188, S. 3, 10.)

History: 1963 act replaced previous provisions: See title history; P.A. 79-188 substituted Sec. 14-267a for reference to repealed Sec. 14-268.

See Sec. 13a-88 re load capacity of bridges.

See Sec. 13a-151 re violation of load capacity of bridge.

See Sec. 14-269 re exemptions from weight restrictions for certain vehicles engaged in construction work.

When read with section 14-222 amounts to a penal statute. Where there was no evidence that the sign on the bridge was legible for fifty feet, the defendants were not proved guilty of reckless driving beyond a reasonable doubt. 24 CS 155.

Sec. 13a-130. Bridges over railroad tracks. The bottom timbers of all bridges constructed over any railroad track shall be not less than eighteen feet above the rails, unless the Commissioner of Transportation requires a lesser height and prescribes the same in writing.

(1949 Rev., S. 2124; 1958 Rev., S. 13-8; 1963, P.A. 226, S. 130; P.A. 75-486, S. 33, 69; P.A. 77-614, S. 571, 587, 610; P.A. 78-303, S. 85, 136.)

History: 1963 act replaced previous provisions: See title history; P.A. 75-486 substituted public utilities control authority for public utilities commission; P.A. 77-614 and P.A. 78-303 substituted commissioner of transportation for public utilities control authority, effective January 1, 1979.

Sec. 13a-149. Damages for injuries by means of defective roads and bridges. Any person injured in person or property by means of a defective road or bridge may recover damages from the party bound to keep it in repair. No action for any such injury sustained on or after October 1, 1982, shall be brought except within two years from the date of such injury. No action for any such injury shall be maintained against any town, city, corporation or borough, unless written notice of such injury and a general description of the same, and of the cause thereof and of the time and place of its occurrence, shall, within ninety days thereafter be given to a selectman or the clerk of such town, or to the clerk of such city or borough, or to the secretary or treasurer of such corporation. If the injury has been caused by a structure legally placed on such road by a railroad company, it, and not the party bound to keep the road in repair, shall be liable therefor. No notice given under the provisions of this section shall be held invalid or insufficient by reason of an inaccuracy in describing the injury or in stating the time, place or cause of its occurrence, if it appears that there was no intention to mislead or that such town, city, corporation or borough was not in fact misled thereby.

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(1949 Rev., S. 2126; 1951, S. 1180d; 1958 Rev., S. 13-11; 1959, P.A. 372; 1963, P.A. 226, S. 149; P.A. 76-222, S. 2; P.A. 82-5; P.A. 86-338, S. 14.)

History: 1959 act extended time for giving notice of injury due to snow and ice from ten to thirty days; 1963 act replaced previous provisions: See title history; P.A. 76-222 changed deadline for notice to town officer from sixty to ninety days after injury and deleted special provision re injury from defect caused by ice and/or snow; P.A. 82-5 required that actions for injuries sustained on or after October 1, 1982, be brought within two years of the injury; P.A. 86-338 deleted provision which exempted an injured person from the requirement of giving written notice if an action is commenced by complaint setting forth the same information as required in the notice within the time limited for the giving of such notice.

See Sec. 7-163a re municipal liability for ice and snow on public sidewalks.

See Sec. 7-308 re municipalities' assumption of liability for damages caused by firemen.

Historical review of law. 75 C. 694; 81 C. 68. Nature of liability. 66 C. 360; 71 C. 686; 75 C. 291; 84 C. 657; 103 C. 605; 104 C. 88; 108 C. 555. Elements necessary to support recovery. 81 C. 66; 104 C. 87; 108 C. 555. Purpose of law is protection of travelers. 81 C. 393; 88 C. 151. One departing from traveled way for his own convenience cannot recover. 80 C. 154; 91 C. 542. Statute does not apply to wrongful exclusion from highway. 76 C. 311. One whose negligence contributes to injury cannot recover. 66 C. 36; 79 C. 42; 82 C. 527; 86 C. 506; 89 C. 24; 98 C. 86; 103 C. 605. One may use highway little traveled. 66 C. 36. Stumbling as excuse. 70 C. 554. Plaintiff's use of defective materials in himself repairing bridge. 22 C. 290. Carrying too heavy a load. 47 C. 73; 91 C. 542. Accident or negligence of fellow traveler contributing to injury. 40 C. 238; 71 C. 697; 75 C. 291; 81 C. 241; 86 C. 506; 104 C. 88. Illegal act of person injured as debarring remedy. 82 C. 663. No liability for consequential damage. 17 C. 475; 66 C. 360. Evidence as to damage. 74 C. 475. Allegation of injury to person and property joinable in one count. 22 C. 290. Plaintiff may prove his peril and danger to enhance his damages. 22 C. 290; 27 C. 300. Special damage must be alleged. 43 C. 565. Basis of damages; when punitive allowed. 24 C. 491; 47 C. 74. Injury from branch of tree falling in road not recoverable; 34 C. 9; 85 C. 128; so from weight falling from flagpole. 34 C. 136. Open basement descent held not a defect in sidewalk. 50 C. 536. Nuisance distinguished; 48 C. 220; so defect in plan of street. 69 C. 353; 81 C. 67. Excavation outside limits of highway. 89 C. 24. Reasonable obstructions not defects. 73 C. 199; 75 C. 349; 76 C. 311; 78 C. 145; 82 C. 527; 89 C. 343. Objects calculated to frighten horses. 30 C. 129; 39 C. 381; id., 435. Whether defect exists is question of fact. 37 C. 414; 118 C. 288; 128 C. 272; but see 124 C. 285. Duty extends to highway actually in use; 78 C. 62; highways by dedication; 31 C. 308; 72 C. 231; 73 C. 359; id., 576; 74 C. 360; abandonment of road by turnpike company. 46 C. 216. Defects in bridges; 1 R. 270; id., 448; 2 R. 436; where turnpike company has been dissolved; 18 C. 32; dangerous draw; 69 C. 651; burden of proof. 24 C. 491. Ice and snow on highway. 48 C. 467; 49 C. 134. Sidewalks. 30 C. 118; 40 C. 377; id., 406; id., 456; 78 C. 396; 79 C. 44; ice thereon. 37 C. 615; 44 C. 117; 51 C. 412; 104 C. 85. Knowledge of defect; 94 C. 542; when presumed; 39 C. 228; 40 C. 375; 72 C. 672; 79 C. 385; 89 C. 24; 118 C. 288; 128 C. 272; where defendant itself causes defect; 40 C. 460; 67 C. 434; 98 C. 85; knowledge of policeman; 70 C. 115; 94 C. 692; 118 C. 288; knowledge question of fact; 30 C. 118; 94 C. 693; 104 C. 94; no liability for secret defects. 27 C. 300. Extent of protection required; degree of care. 27 C. 300; 78 C. 396; 79 C. 385; 80 C. 291; 82 C. 530; crosswalks. 79 C. 659. Duty to provide against results of fright of ordinarily gentle horse. 75 C. 288. Duty to erect fence; section 13a-111 distinguished. 75 C. 288; 81 C. 65; 89 C. 24; 105 C. 361. Duty to give warning of dangerous conditions. 36 C. 320; 37 C. 298; 67 C. 428; 69 C. 103; 70 C. 122. Failure in duty question of fact. 39 C. 439; 46 C. 218; 67 C. 433; 69 C. 354; 72 C. 680; 75 C. 289; 85 C. 693. Statutory notice; necessity; 66 C. 387; 81 C. 274; id., 287; in case of railway bound to repair; 54 C. 9; 64 C. 381; 75 C. 693; see 74 C. 475; waiver of notice; 46 C. 61; action may lie at common law, and then notice not necessary; 84 C. 349; id., 654; 94 C. 231; giving of notice must be alleged in complaint; 81 C. 274; 85 C. 221; 106 C. 62; sufficiency of notice. 46 C. 264; 50 C. 497; 51 C. 421; 53 C. 212; 58 C. 45; 59 C. 219, 225; 63 C. 268; 64 C. 376; 67 C. 437; 72 C. 673; 73 C. 312; 74 C. 437; 81 C. 300; 86 C. 45; 91 C. 181; 92 C. 552; 98 C. 312. Liability of turnpike company; 7 C. 86; of town for defect in borough; 40 C. 205; of borough; 65 C. 311; 77 C. 308; of city. 74 C. 360; 80 C. 296; 85 C. 693. Town not liable where some other party is. 75 C. 693. Platform extending into highway; nuisance. 98 C. 524. Action by town against person causing defect. 74 C. 152; 91 C. 255. Abutting owner not liable for defect in sidewalk. 48 C. 532; 102 C. 401; 108 C. 200. Action against both town and railway. 79 C. 379; 103 C. 121. Railroad "structures." 46 C. 217; 50 C. 216; 54 C. 589; 74 C. 475. Several defects may be alleged in one complaint; 72 C. 667; amending complaint after hearing in damages. 69 C. 554. Burden of proof. 86 C. 506. Admissibility of evidence that others safely crossed sidewalk. 33 C. 57; 89 C. 24. Admissibility of evidence of condition of sidewalk before accident. 104 C. 95. See note to section 13a-99. Liability of municipality where alleged defect is caused by negligence of licensee excavating under a permit. 92 C. 367. Municipality's right of recovery over does not accrue until its liability has been finally adjudicated. Id., 667. Negligence of municipality in allowing minor defect to exist is a question of fact. Id., 365. Snow and ice on sidewalk. 93 C. 548; id., 625; knowledge of city must consist of knowledge of precise defect. Id., 628. Obligation of street railway company operating on trunk line highway. 94 C. 237. Right of town to remove shade tree in highway but outside traveled part. Id., 439. How great a part of width must be kept open for travel; covered tile drain near side of road giving way under weight of motor truck. Id., 538. Limitations of doctrine of no liability for error in plan. Id., 539. Liability of state for defect in trunk line highway is same as that of town in an ordinary road; id., 542; 105 C. 359; and likewise in case of state aid highway. Id., 596. Silent policeman not itself a defect, but may become so if allowed to remain out of position. Id., 694. Excavation in traveled part of highway; contributory negligence where accident happens in sunlight. 98 C. 84. Evidence of other accidents to show municipality's knowledge. 94 C. 693. Ten-day notice required where automobile runs into pile of ice and snow. 96 C. 7; Contributory negligence in having defective lights on automobile. Id. Whether defect counted on in complaint is same as that described in statutory notice is a question for the court. 98 C. 314. Embankment six feet from traveled part of highway may be a defect. 105 C. 361. Tree protruding over traveled part of road. 106 C. 63. Definition of defect in highway. 106 C. 63; id., 380. Fire hose left across sidewalk to guard against rekindling of fire not a defect. Id., 381. Complaint containing allegations showing notice was not given within statutory period is demurrable. Id., 394. Whether period for giving notice runs before existence of injury could be known, quaere. Id., 394. Whether shoulders of road are within "traveled portion of highway," quaere. 108 C. 196.

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Abutting owner's liability for nuisance on sidewalk or in proximity thereto. *Id.*, 200. Action against both abutting owner and municipality. *Id.* Indemnification of city of New Haven by abutting owner under special charter provision. *Id.*, 70. When act of third party in sanding sidewalk inures to benefit of municipality. *Id.*, 559. State not liable for defect in sidewalk on side of trunk line highway within town. 109 C. 336. Town has no duty to keep in repair shoulders of state highway used by public as footpath. 130 C. 84. Remedy for injuries caused by snow and ice on sidewalk is against city, not abutting owner. 123 C. 453. City not liable for nuisance where sidewalk on grade became dangerous only when icy and city could do nothing practicable by way of construction to make it more safe. 120 C. 499. Duty of city is not to exercise reasonable care to make streets entirely safe, but only to make them reasonably safe. 116 C. 568; 124 C. 284. Failure to warn or safeguard against danger from flagstone upheaved by hurricane constituted violation of statutory duty, when city had ample means and opportunity. 128 C. 483. What constitutes a defect; small cavity at edge of walk not. 124 C. 283. Hidden defect; constructive notice and duty of city to inspect. 128 C. 464. Placing of catch basin and cover is a governmental function but if they create condition rendering street not reasonably safe for public travel, they may be defect within statute. 109 C. 324, 327; 118 C. 427. Unsafe wall abutting sidewalk is not defect within statute. 109 C. 668. Liability is not based on negligence, but on breach of statutory duty; section 52-114 does not apply. 119 C. 479; 133 C. 246. Statute affords exclusive remedy for defects due to neglect rather than positive act of municipality, whether or not defect is a nuisance; apart from statute, municipality is liable for condition it created by positive act on highway amounting to nuisance. 126 C. 402; 131 C. 691; 133 C. 245. Jury to say if municipality should make fence sufficient to guard against skidding; effect on duty of city of failure of railway company to make rails safe. 129 C. 699. Defect must be sole and essential cause of injury; if negligence of plaintiff's intestate or of third party is also a proximate cause, no recovery. 118 C. 480; 124 C. 463. Where injury is result of defect combined with accident or natural cause, municipality is liable unless accident or natural cause was so direct and separate as to be sole proximate cause. 119 C. 168. Fundamental test is whether defect was sole cause in producing damage. Where plaintiff slipped on ice which had filled up long-existing defect, city not liable on ground defect was cause of plaintiff's fall. 130 C. 410; 131 C. 239. Municipality not liable for negligence in performing function of construction and maintenance, but for defective condition which is proximate cause of injury. 131 C. 239. City not liable where maintenance of nuisance by or negligence of another is a proximate cause of injury which concurred with sidewalk defect to bring it about. 134 C. 89. Notice of defect may be imputed to city after passage of time. 118 C. 288; 128 C. 272. Length of time defect in sidewalk must have existed in order to charge municipality with notice is question of fact. 131 C. 239. Statute cited. 110 C. 77; 115 C. 385; *id.*, 716; 121 C. 613; 124 C. 677; 128 C. 710; 129 C. 259; 132 C. 395. Action for death due to highway defect survives; not a penal statute within meaning of section 52-599. 22 C. 80. Whether notices of injury were served and whether they were intended to be or were misleading to city are questions of fact. 113 C. 145. Purpose and elements of notice; entire absence of general description of injury is fatal. 120 C. 577. "Do not know full extent of my injuries" is insufficient description. 123 C. 685. "Got hurt" insufficient. 127 C. 711. Notice alleging "bruises on other parts of legs and body" inaccurate, but not a total failure of description preventing recovery for fracture of spine. 131 C. 430. Notice that decedent fell "upon a sidewalk of a highway known as North Elm Street" is insufficient. 117 C. 70. Notice failing entirely to state cause of injury is invalid; knowledge of facts by officers of city will not obviate necessity of compliance with statute. 117 C. 401. Notice giving cause as "defective sidewalk," without describing defect, is sufficient. 123 C. 152. Special law validating defective notice held constitutional. 124 C. 183. Sixty-day notice held not a condition precedent where action was based on negligence of railroad company at common law in permitting dangerous condition on bridge. 126 C. 558. Section applies to highway by dedication; common convenience and necessity with respect to establishment of highway reviewed. 130 C. 298. Duty of plaintiff to recite statutory notice given in complaint or to annex it thereto. 134 C. 569. Defect not too slight as matter of law to justify an award of damages. Where hole was made and maintained by state, failure of city to repair was not sole proximate cause. 134 C. 686. Bottle of syrup on walk for forty- five minutes does not warrant finding of constructive notice. 134 C. 694. Whether a condition of highway constitutes defect must be determined in each case upon the basis of its particular circumstances. 135 C. 469. From photographs of raised flagstone in sidewalk and other evidence, jury might reasonably have found that defendant had notice of defect. 135 C. 473. Elapsed time insufficient as a matter of law to sustain a finding of constructive notice and an opportunity of remedying the condition. 135 C. 484. Sidewalk within boundaries of state highway. Where there was no finding that sidewalk was constructed by state it was held that, as between town and state, the town was liable for plaintiff's injuries. 135 C. 619. When city assumes control of sidewalks it must exercise reasonable care to keep them in a reasonably safe condition. 136 C. 553. Cited. 137 C. 288. Statute is designed to protect travelers only; provides no right of recovery to an abutting landowner for damage from a defective highway. 138 C. 116. Cited. 138 C. 367; 139 C. 256; 140 C. 279. Constructive notice. 141 C. 126. Cited. 144 C. 282. Breach of duty on part of municipality must be shown. 144 C. 739. Special act of state legislature validating notice given municipality does not constitute breach of cooperation clause in insurance policy by municipality. 145 C. 368. Unlike most negligence actions, plaintiff has burden of proving due care for action brought under this statute. 147 C. 149. If certain portions of street are devoted to purpose other than travel, travelers leaving way provided for them and attempting to cross such reserved portions may not assume such portions are free from danger or unusual conditions. 148 C. 349. Ordinarily the length of time a defect in a sidewalk must exist in order to charge a municipality with notice of its existence is a question of fact. 148 C. 548. Defect must have existed for such a length of time that the city was charged with notice of it and had a reasonable opportunity to remedy the defect. *Id.* What constitutes defect discussed. 150 C. 514. Where statutory notice relied solely on accumulated water, as distinguished from snow and ice, as the claimed defective condition and cause of the accident, and plaintiff testified that he actually lost control of his car on a film of ice, he cannot recover from the city. 151 C. 343. Cited. 153 C. 439; 159 C. 150. Cited. 162 C. 295. Cited. 167 C. 509. Overhanging tree limb which did not obstruct or hinder travel was not a "defect" in the highway. 177 C. 268- 270. Cited. 183 C. 473, 475. Sec. 52-572h does not apply to actions for personal injuries based on this statute; liability of defendant under statute is for breach of statutory duty and does not arise from negligence. 184 C. 205, 206, 212. Cited. 186 C. 229, 234; *Id.*, 300, 305; *Id.*, 692- 695. Special act limiting liability of New Britain could not stand where clear policy statement in this section that municipal liability for damages should not be limited. 193 C. 589, 594, 601. Cited. 196 C. 509, 512. Cited. 211 C. 370, 381. Cited. 213 C. 307, 316, 325. Cited. *Id.*, 446, 477. P.A. 86-338 cited. 214 C. 1, 6, 7. Cited. *Id.* Cited. 218 C. 1, 5. Cited. 219 C. 179, 184- 186, 190- 192, 196- 198, 201, 203; *Id.*, 641- 644. Cited. 224 C. 23, 27. Cited. 225 C. 177- 185. P.A. 86- 338, tort reform act of 1986, cited. *Id.* Cited. *Id.*, 217, 219- 223. P.A. 86-338, tort reform act of 1986, cited. *Id.* Cited. 226 C. 282, 293, 294; *Id.*, 757, 767. Section does not bar an employer from seeking reimbursement under Sec. 31-293(a). 231 C. 370, 371, 373- 378. Cited. 235 C. 408, 409, 412. Cited. 240 C. 105. P.A. 86-338 cited. *Id.* In order for liability

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to obtain under this section, defendant must have notice of an actual defect and not merely notice of potential defects or conditions likely to create a defect. 246 C. 638.

In action pursuant to this section costs may be taxed against a defendant municipality. 4 CA 30, 32. Savings clause of section must be pleaded and evidence introduced to prove its elements. *Id.*, 315, 317. Cited. 5 CA 104, 105. Cited. 8 CA 169, 173. Cited. 11 CA 1-4, 7, 9. Cited. 15 CA 185, 187. Cited. *Id.*, 668, 669, 675. Cited. 16 CA 213, 215, 216, 221. Cited. 21 CA 633, 635, 640, 642. Cited. 25 CA 67-70, 75, 76, 78, 80, 81. Cited. 26 CA 407-411, 413; *Id.*, 534-538. Cited. 27 CA 487, 488, 490, 492. Cited. 28 CA 449-452, 454, 455, 457. Cited. 29 CA 565, 572; judgment reversed, see 228 C. 358 et seq. Cited. *Id.*, 791, 792, 796, 797. Cited. 30 CA 594, 606. Cited. 31 CA 906. Cited. 33 CA 56, 57, 59. Cited. *Id.*, 754, 755, 758, 759. Cited. 36 CA 158, 159. Cited. 38 CA 14, 15, 17, 19. Cited. 39 CA 289, 303-305. Cited. 40 CA 179, 180, 181. Cited. 45 CA 413. Notice provisions discussed. 47 CA 365. Walkway deemed to be road or bridge since it was on public property leading from city street to public school and there was reasonable anticipation that the public would make use of it. *Id.*, 734. Plaintiff could not prevail on claim that because section contains its own limitation period court improperly relied on Sec. 52-584, which is applicable to negligence cases in general; trial court properly determined statute of limitations was not tolled during plaintiff's illness because this section contains no such tolling provision. 48 CA 60.

Cited. 3 CS 12. Section grants right of action. 4 CS 401. Contributory act of another. 4 CS 481. Civil liability of property owner in absence of an ordinance creating it. *Id.* Complaint based on nuisance. 5 CS 81; *id.*, 268; 16 CS 222. No action at common law in absence of negligence. 5 CS 88. Cited. 5 CS 193. Sidewalk built for travel under normal conditions is devoid of defect. 5 CS 312. Cited. 7 CS 143; *id.*, 297; 9 CS 79; 10 CS 521. Suit against both city and town. 11 CS 114. Cited. 12 CS 267; 283; 309. Action against Waterbury must be read with city charter. 14 CS 403. Terms of statute may not be waived. 15 CS 442. Cited. 17 CS 114; 18 CS 501. Governmental immunity not a defense to action under this section. 18 CS 124. Cited. 20 CS 142. See note to section 13a-144. Action against city under this section and against another defendant for nuisance can be joined but claim must be in alternative. 22 CS 74, 76. Complaint demurrable where plaintiff did not allege exercise of due care. 22 CS 75; or freedom from contributory negligence. *Id.*, 77. Whether path in public park was part of public highway system and was being used by plaintiff as traveler within meaning of this section are questions of fact to be determined on trial of case. 22 CS 456. Cited. 23 CS 132; 152. Where plaintiff brought action under section 7-465 against local board of education to recover for injuries resulting from school bus accident, held action should have been brought under this section. 25 CS 305. Cited. 26 CS 74. Municipality liable for invisible stop sign. 29 CS 352. Cited. 44 CS 45, 47-52.

Notice: What is sufficient. 2 CS 41; 14 CS 365; 18 CS 330; 19 CS 43. Concerning ice and snow. 8 CS 471. Improperly addressed. 5 CS 493; 16 CS 136. Condition precedent to recovery. 7 CS 245. Contents of. 7 CS 379. General description of "defective road." 10 CS 22. How "time" of injury is stated. 12 CS 246. Burden of plaintiff to prove that defective notice was not intended to mislead municipality. 14 CS 106. Requirement not obviated because officer has knowledge of the fact. 15 CS 442. Not required if action based on negligence. 16 CS 222. Commencement of action as alternative to. 17 CS 420. See note to section 13a-152. Dicta that giving of prescribed notice is condition precedent to exercise of right of action. 21 CS 65. Saving clause serves to obviate inaccuracies in description of injuries. Comparison with section 13a-144. 23 CS 113. Redrafted count of complaint, substituted after demurrer, should have alleged requisite notice had been given. 23 CS 147. Purpose of notice requirement. 25 CS 358. Cited. 31 CS 442. Cited. 44 CS 389.

Statute applied to the City of New Haven. 2 CS 41; 4 CS 401, 481; 5 CS 88, 193, 312; 6 CS 44, 491; 7 CS 245, 297; 9 CS 79; 29 CS 75. A malfunctioning traffic light is a defect in the highway. 29 CS 108.

Although a notice will not be held invalid because of inaccuracy in describing the cause of the injury, where there is in effect no cause of injury stated the notice is invalid. 3 Conn. Cir. Ct. 644, 647.

Sec. 13a-175f. Purchase of materials by Transportation Department and towns. Commissioner to test materials. The Commissioner of Transportation upon reasonable request of the selectmen or other authority having charge of highways of any town shall allow such town to join with the department in the purchase of materials used for the laying out, construction, repair, reconstruction or maintenance of any highway or bridge. The commissioner shall conduct such tests as are necessary to insure the quality of such materials.

(1967, P.A. 701, S. 9; 1969, P.A. 768, S. 118; P.A. 81-463, S. 4, 10.)

History: 1969 act replaced highway commissioner with commissioner of transportation; P.A. 81-463 repealed requirement that the commissioner, upon request of a town, furnish supervision, inspectors and engineers for purposes connected with the laying out, construction and maintenance of highways and bridges and added provisions requiring the commissioner to perform quality testing of materials used for such purposes and allowing towns to join with the department in the purchase of such materials.

See Sec. 13b-31 re Transportation Commissioner's authority to furnish supervision, inspectors and engineers to assist towns in highway and bridge projects.

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Sec. 13a-175j. Emergency aid for roads, bridges, and dams to repair damage resulting from natural disaster. Any balance of appropriations in excess of that required to be distributed to the towns, under the formulas set forth in sections 13a-175a to 13a-175d, inclusive, as of June 30, 1977, and annually thereafter, may be made available by the Governor, upon application of the selectman or other authority having charge of highways in any town, to be used to defray, in whole or part, the cost of repairs, improvements, alteration or replacement of roads, bridges and dams in such town which, in the opinion of the Governor, with the advice of the Commissioner of Transportation, in the case of roads or bridges, and the Commissioner of Environmental Protection, in the case of dams, constitute a threat to public safety as a result of damage resulting from a natural disaster. Any such balance shall not lapse but shall continue to be available and shall not be transferred to the General Fund.

(P.A. 78-182, S. 1, 2.)

Sec. 13b-31. Town highways. The Commissioner of Transportation may, upon application of the selectmen or other authority having charge of highways of any town, furnish supervision, inspectors and engineers for any purpose connected with the laying out, repair, reconstruction or maintenance of any highway or bridge. Any expense incurred in furnishing any such assistance shall be paid by the town to the State Treasurer on certification by the commissioner.

(1969, P.A. 768, S. 72.)

See Sec. 13a-175f re joint purchase of materials for use in highway or bridge projects by Transportation Department and town.

CHAPTER 446I – WATER RESOURCES: STREAM CHANNEL ENCROACHMENT

Sec. 22a-342. (Formerly Sec. 25-4a). Establishment of stream channel encroachment lines. Permits for encroachments, required findings. Fees. The commissioner shall establish, along any tidal or inland waterway or flood-prone area considered for stream clearance, channel improvement or any form of flood control or flood alleviation measure, lines beyond which, in the direction of the waterway or flood-prone area, no obstruction, encroachment or hindrance shall be placed by any person, and no such obstruction, encroachment or hindrance shall be maintained by any person unless authorized by said commissioner. The commissioner shall issue or deny permits upon applications for establishing such encroachments based upon his findings of the effect of such proposed encroachments upon the flood-carrying and water storage capacity of the waterways and flood plains, flood heights, hazards to life and property, and the protection and preservation of the natural resources and ecosystems of the state, including but not limited to ground and surface water, animal, plant and aquatic life, nutrient exchange, and energy flow, with due consideration given to the results of similar encroachments constructed along the reach of waterway. Each application for a permit shall be accompanied by a fee as follows: (1) No change in grades and no construction of above-ground structures, two hundred fifty dollars; (2) a change in grade and no construction of above-ground structures, five hundred dollars; and (3) a change in grade and above-ground structures or buildings, two thousand five hundred dollars. The commissioner may adopt regulations, in accordance with the provisions of chapter 54, to prescribe the amount of the fees required pursuant to this section. Upon the adoption of such regulations, the fees required by this section shall be as prescribed in such regulations.

(1963, P.A. 435, S. 1; 1971, P.A. 872, S. 45; P.A. 73-590, S. 2, 3; P.A. 90-231, S. 11, 28; P.A. 91-369, S. 26, 36; P.A. 98-209, S. 5.)

History: 1971 act replaced references to water resources commission with references to environmental protection commissioner; P.A. 73-590 clarified applicable waterways as "tidal or inland" and required that findings contain effect of encroachment upon water

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storage capacity, floodplains and upon protection and preservation of natural resources and ecosystems; Sec. 25-4a transferred to Sec. 22a-342 in 1983; P.A. 90-231 required the payment of application fees and provided that on and after July 1, 1995, the fees shall be prescribed by regulations; P.A. 91-369 restated commissioner's authority to adopt regulations setting the fees required by this section; P.A. 98-209 prohibited hindrances beyond stream channel encroachment lines and prohibited maintenance of obstructions, encroachments or hindrances beyond such lines.

See Sec. 7-147 re municipal ordinances. See Sec. 22a-27i re exemption of municipality for one year. See Sec. 22a-360 re boundaries for structures.

Annotation to former section 25-4a: Cited. 179 C. 250, 252.

Annotations to present section: Cited. 215 C. 616, 618, 619, 621, 622, 625—630, 632. Cited. 235 C. 448, 457. Cited. 239 C. 124. Cited. 24 CA 163, 166.

Sec. 22a-342a. Civil penalty. Any person who places any obstruction, encroachment or hindrance within any stream channel encroachment line established by the Commissioner of Environmental Protection pursuant to section 22a-342 without a permit issued under said section, or is maintaining any such obstruction, encroachment or hindrance placed without such a permit, or in violation of the terms and conditions of such permit shall be liable for a civil penalty of not more than one thousand dollars for each offense. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each day's continuance thereof shall be deemed to be a separate and distinct offense. The Commissioner of Environmental Protection may request the Attorney General to bring a civil action in the superior court for the judicial district of Hartford to seek imposition and recovery of such civil penalty.

(P.A. 87-438, S. 2; P.A. 88-230, S. 1, 12; 88-364, S. 42, 123; P.A. 90-98, S. 1, 2; P.A. 93-142, S. 4, 7, 8; P.A. 95-220, S. 4—6; P.A. 98-209, S. 6.)

History: P.A. 88-230 replaced "judicial district of Hartford-New Britain at Hartford" with "judicial district of Hartford", effective September 1, 1991; P.A. 88-364 made technical change; P.A. 90-98 changed the effective date of P.A. 88-230 from September 1, 1991, to September 1, 1993; P.A. 93-142 changed the effective date of P.A. 88-230 from September 1, 1993, to September 1, 1996, effective June 14, 1993; P.A. 95-220 changed the effective date of P.A. 88-230 from September 1, 1996, to September 1, 1998, effective July 1, 1995; P.A. 98-209 prohibited maintenance of obstructions, encroachments or hindrances beyond stream channel encroachment lines without a permit.

Cited. 215 C. 616, 625.

Sec. 22a-343. (Formerly Sec. 25-4b). Determination of lines. The commissioner, in establishing such encroachment lines, shall base their location on the boundaries of the area which would be inundated by a flood similar in size to one or more recorded floods which have caused extensive damages in such area or on a size of flood computed by accepted methods applicable generally throughout the state or a region thereof. The determination of the size of the flood and the boundaries of the inundated area shall take into consideration the effects of probable future developments. The position of the lines may vary from the boundaries of the inundated area so as to minimize the area of land to be regulated when a portion of the inundated area does not contribute to the flood-carrying capacity of the waterway. The position of the lines shall, insofar as practical, equitably affect riparian properties and interests depending upon existing topography and shall be interdependent throughout the reaches of the waterway, and shall conform with the requirements of the federal government imposed as conditions for the construction of flood control projects. When the existing waterway, because of natural or man-made constrictions, is such that such lines cannot be established by standard engineering methods, a channel may be adopted, whereby the removal of such constrictions may be anticipated so that reasonable lines can be established by methods applicable to the state generally. When the flood boundary falls along the channel banks, the lines shall be placed at the top of the bank.

(1963, P.A. 435, S. 2; 1971, P.A. 872, S. 46.)

History: 1971 act replaced reference to water resources commission with reference to environmental protection commissioner; Sec. 25-4b transferred to Sec. 22a-343 in 1983.

Annotation to former section 25-4b: Cited. 179 C. 250, 252.

Annotations to present section: Cited. 215 C. 616, 625, 626.

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Sec. 22a-344. (Formerly Sec. 25-4c). Public hearing. Order establishing lines. The commissioner or a hearing examiner, designated by him, shall hold a public hearing to review the proposed encroachment lines along any waterway or flood-prone area prepared in accordance with section 22a-343 with due consideration of the equities involved. Notice of such hearing shall be given by mail to all property owners known to be affected by the proposed lines and shall be published three times in a newspaper having a general circulation in the area involved. The commissioner shall take appropriate steps to inform the public and the interested property owners of the proposals by making suitable maps available in the office of the town clerk of the town wherein the property is located for inspection, study and discussion. After consideration of all testimony and pertinent facts at his disposal and with due regard for the public interest and the rights of respective property owners, the commissioner may approve the location of the lines as proposed or as modified and thereupon shall establish such lines by order. Such order shall be recorded with appropriate maps with the town clerks of the respective towns involved. Notice of such order establishing or altering such line or lines shall be mailed to all persons known to be affected thereby and shall be published three times in a newspaper having a general circulation in the area involved. Any person aggrieved by any order of the commissioner as to the location of such line may appeal therefrom, in accordance with the provisions of section 4-183, except venue for such appeal shall be in the judicial district of New Britain.

(1963, P.A. 435, S. 3; 1971, P.A. 872, S. 47; P.A. 76-436, S. 465, 681; P.A. 77-603, S. 105, 125; P.A. 80-483, S. 162, 186; P.A. 88-230, S. 1, 12; P.A. 90-98, S. 1, 2; P.A. 93-142, S. 4, 7, 8; P.A. 95-220, S. 4—6; P.A. 99-215, S. 24, 29.)

History: 1971 act replaced references to water resources commission with references to environmental protection commissioner and authorized designated hearing examiners to conduct hearings; P.A. 76-436 replaced court of common pleas with superior court, effective July 1, 1978; P.A. 77-603 replaced previous appeal provisions with requirement that appeals be made in accordance with Sec. 4-183, but retained venue in Hartford county; P.A. 80-483 replaced Hartford county with judicial district of Hartford-New Britain; Sec. 25-4c transferred to Sec. 22a-344 in 1983; P.A. 88-230 replaced "judicial district of Hartford-New Britain" with "judicial district of Hartford", effective September 1, 1991; P.A. 90-98 changed the effective date of P.A. 88-230 from September 1, 1991, to September 1, 1993; P.A. 93-142 changed the effective date of P.A. 88-230 from September 1, 1993, to September 1, 1996, effective June 14, 1993; P.A. 95-220 changed the effective date of P.A. 88-230 from September 1, 1996, to September 1, 1998, effective July 1, 1995; P.A. 99-215 replaced "judicial district of Hartford" with "judicial district of New Britain", effective June 29, 1999.

See Sec. 52-192 re precedence of appeal.

Annotation to former section 25-4c: Cited. 179 C. 250, 252.

Annotations to present section: Cited. 215 C. 616, 625.

Sec. 22a-345. (Formerly Sec. 25-4d). Nonconforming uses. Taking of existing structures by commissioner. When the establishment of such lines in accordance with sections 22a-342 to 22a-348, inclusive, requires that they be placed through portions of or so as to include entire existing structures within the regulated area, such structures or portions thereof shall be considered as a nonconforming use of the area, except that, if the structure is destroyed or damaged to the extent of more than fifty per cent of the fair market value, such structure shall be replaced or repaired only through a permit from the commissioner, provided the commissioner may define types of structures which may be reconstructed within such lines without a permit. Whenever the commissioner finds that existing structures or encroachments within the lines established constitute a hazard to life and property in the event of flood, he is empowered to take such land and structure as provided by chapter 835 and cause removal of such encroachment.

(1963, P.A. 435, S. 4; 1971, P.A. 872, S. 48.)

History: 1971 act replaced references to water resources commission with references to environmental protection commissioner; Sec. 25-4d transferred to Sec. 22a-345 in 1983.

Cited. 215 C. 616, 625.

Sec. 22a-346. (Formerly Sec. 25-4e.) Encroachment as nuisance. After the commissioner has established such lines on any waterway or flood plain, any obstruction, encroachment or hindrance of

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any nature placed within such lines in the direction of the waterway, without specific authorization of the commissioner, shall be considered a public nuisance. The Attorney General shall, at the request of the commissioner, institute proceedings to enjoin and abate any such nuisance.

(1963, P.A. 435, S. 5; 1971, P.A. 872, S. 49.)

History: 1971 act replaced references to water resources commission with references to environmental protection commissioner; Sec. 25-4e transferred to Sec. 22a-346 in 1983.

See Sec. 22a-362 re structures or fill.

Cited. 215 C. 616, 625.

Sec. 22a-347. (Formerly Sec. 25-4f). Regulations and procedures. The commissioner may, subject to the provisions of subsection (a) of section 22a-6, adopt, revise and amend such rules, regulations and procedures as are necessary to carry out the purposes of sections 22a-342 to 22a-348, inclusive, in the public interest.

(1963, P.A. 435, S. 6; 1971, P.A. 872, S. 50.)

History: 1971 act replaced reference to water resources commission with reference to environmental protection commissioner and added phrase limiting commissioner's power to make and revise regulations and procedures; Sec. 25-4f transferred to Sec. 22a-347 in 1983.

See chapter 54 (Sec. 4-166 et seq.) re administrative procedure.

Cited. 215 C. 616, 625.

Sec. 22a-348. (Formerly Sec. 25-4g). Municipal powers. (a) The provisions of sections 22a-342 to 22a-348, inclusive, shall not affect the provision of section 7-147 authorizing any town, city or borough to establish such lines within its jurisdiction prior to the establishment of lines by the commissioner, provided the commissioner may alter any lines, however established, upon finding such alterations are necessary to effectuate the purpose of said sections 22a-342 to 22a-348, inclusive, and section 25-69. If the commissioner has established lines within a municipality, the commissioner shall have exclusive jurisdiction over any encroachments within such lines.

(b) Notwithstanding the provisions of subsection (a), any town, city or borough may establish such lines at any time to comply with the eligibility provisions of the National Flood Insurance Program (44 CFR Part 59 et seq.).

(1963, P.A. 435, S. 7; 1971, P.A. 872, S. 51; P.A. 84-16; P.A. 88-327, S. 2, 3.)

History: 1971 act replaced references to water resources commission with references to environmental protection commissioner; Sec. 25-4g transferred to Sec. 22a-348 in 1983; P.A. 84-16 added Subsec. (b) authorizing towns to establish lines to comply with the National Flood Insurance Program; P.A. 88-327 added provisions to Subsec. (a) re exclusive jurisdiction of commissioner of environmental protection.

Cited. 215 C. 616, 625.

Sec. 22a-349. (Formerly Sec. 25-4h). Permitted agricultural use. The provisions of sections 22a-342 to 22a-348, inclusive, shall not be deemed to restrict agricultural or farming uses of lands located within the stream channel encroachment lines including the building of fences, provided this section shall not apply to farm buildings and farm structures.

(P.A. 75-114, S. 1, 2.)

History: Sec. 25-4h transferred to Sec. 22a-349 in 1983.

Cited. 215 C. 616, 618, 621, 622, 625—627, 629—632. Cited. 239 C. 124. Cited. 24 CA 163, 167.

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Sec. 22a-349a. General permits for minor activities. Regulations. (a) The Commissioner of Environmental Protection may issue a permit for any minor activity regulated under sections 22a-342 to 22a-349, inclusive, except for any activity covered by an individual permit, if the commissioner determines that such activity would cause minimal environmental effects when conducted separately and would cause only minimal cumulative environmental effects, and will not cause any increase in flood heights or in the potential for flood damage or flood hazards. Such activities may include routine minor maintenance and routine minor repair of existing structures; replacement of existing culverts; installation of water monitoring equipment, including but not limited to staff gauges, water recording and water quality testing devices; removal of unauthorized solid waste; extension of existing culverts and stormwater outfall pipes; placement of greenhouses or hoopouses lacking concrete foundations; construction of irrigation and utility lines; and safety improvements with minimal environmental impacts within existing rights-of-way of existing roadways. Any person, firm or corporation conducting an activity for which a general permit has been issued shall not be required to obtain an individual permit under any other provision of said sections 22a-342 to 22a-349, inclusive, except as provided in subsection (c) of this section. A general permit shall clearly define the activity covered thereby and may include such conditions and requirements as the commissioner deems appropriate, including but not limited to, management practices and verification and reporting requirements. The general permit may require any person, firm or corporation, conducting any activity under the general permit to report, on a form prescribed by the commissioner, such activity to the commissioner before it shall be covered by the general permit. The commissioner shall prepare, and shall annually amend, a list of holders of general permits under this section, which list shall be made available to the public.

(b) Notwithstanding any other procedures specified in said sections 22a-342 to 22a-349, inclusive, any regulations adopted thereunder, and chapter 54, the commissioner may issue, revoke, suspend or modify a general permit in accordance with the following procedures: (1) The commissioner shall publish in a newspaper having a substantial circulation in the affected area or areas notice of intent to issue a general permit; (2) the commissioner shall allow a comment period of thirty days following publication of such notice during which interested persons may submit written comments concerning the permit to the commissioner and the commissioner shall hold a public hearing if, within said comment period, he receives a petition signed by at least twenty-five persons; (3) the commissioner may not issue the general permit until after the comment period; and (4) the commissioner shall publish notice of any permit issued in a newspaper having substantial circulation in the affected area or areas. Any person may request that the commissioner issue, modify or revoke a general permit in accordance with this subsection.

(c) Subsequent to the issuance of a general permit, the commissioner may require any person, firm or corporation, to apply for an individual permit under the provisions of said sections 22a-342 to 22a-349, inclusive, for all or any portion of the activities covered by the general permit, if in the commissioner's judgment the purposes and policies of such sections would be best served by requiring an application for an individual permit. The commissioner may require an individual permit under this subsection only if the affected person, firm or corporation has been notified in writing that an individual permit is required. The notice shall include a brief statement of the reasons for the decision and a statement that upon the date of issuance of such notice the general permit as it applies to the individual activity will terminate.

(d) Any general permit issued under this section shall require that any person, firm or corporation intending to conduct an activity covered by such general permit shall, at least sixty days before initiating such activity, give written notice of such intention to the inland wetlands agency, zoning commission, planning commission or combined planning and zoning commission and conservation commission of any municipality which will or may be affected by such activity, and to the department which shall make such notices available to the public. The general permit shall specify the information which must be contained in the notice. An inland wetlands agency, planning and zoning commission, conservation commission or any person may submit written comments to the commissioner concerning such activity not later than twenty-five days prior to the date that the activity is proposed to begin.

(e) The commissioner may adopt regulations in accordance with the provisions of chapter 54 to carry out the purposes of this section.

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(P.A. 91-263, S. 4, 8; P.A. 92-162, S. 16, 25.)

History: P.A. 92-162 amended Subsec. (d) to provide that any person may submit comments to the commissioner concerning regulated activities permitted under this section prior to commencement of such activities and changed the deadline for such comments from thirty days prior to such commencement to twenty-five days.

CGS CHAPTER 467a: FLOOD MANAGEMENT

Sec. 25-68b. Definitions. As used in sections 25-68b to 25-68h, inclusive:

(1) "Activity" means any proposed state action in a floodplain or that impacts natural or man-made storm drainage facilities, including, but not limited to, the following: (a) Any structure, obstruction or encroachment proposed for emplacement within the floodplain area; (b) any proposal for site development which increases peak runoff rates; (c) any grant or loan which affects land use, land use planning or the disposal of state properties in floodplains, or (d) any program regulating flood flows within the floodplain;

(2) "Base flood" means that flood which has a one per cent chance of being equaled or exceeded in any year, as defined in regulations of the National Flood Insurance Program (44 CFR 59 et seq.) or that flood designated by the commissioner pursuant to section 25-68c. Any flood so designated by the commissioner shall have at least a one per cent chance of being equaled or exceeded in any year. Such flood may be designated as the A or V zones on maps published by the National Flood Insurance Program. The "base flood for a critical activity" means the flood that has at least a .2 per cent chance of being equaled or exceeded in any year. Such flood may be designated as the B zone on maps published for the National Flood Insurance Program;

(3) "Commissioner" means the Commissioner of Environmental Protection;

(4) "Critical activity" means any activity, including, but not limited to, the treatment, storage and disposal of hazardous waste and the siting of hospitals, housing for the elderly, schools or residences, in the .2 per cent floodplain in which the commissioner determines that a slight chance of flooding is too great;

(5) "Floodplain" means that area located within the real or theoretical limits of the base flood or base flood for a critical activity;

(6) "Flood-proofing" means any combination of structural or nonstructural additions, changes or adjustments which reduce or eliminate flood damage to real estate or improved real property, to water and sanitary facilities, and to structures and their contents;

(7) "Freeboard" means a safety factor, expressed in feet above a calculated flood level, that compensates for unknown factors contributing to flood heights greater than the calculated height, including, but not limited to, ice jams, debris accumulations, wave actions, obstructions of bridge openings and floodways, the effects of urbanization on the hydrology of a watershed, loss of flood storage due to development and sedimentation of a watercourse bed.

(P.A. 84-536, S. 1.)

Sec. 25-68c. Powers and duties of commissioner. The commissioner shall have the following powers and duties under sections 25-68b to 25-68h, inclusive:

(1) To coordinate, monitor and analyze the floodplain management activities of state and local agencies;

(2) To coordinate flood control projects within the state and be the sole initiator of a flood control project with a federal agency;

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- (3) To act as the primary contact for federal funds for floodplain management activities sponsored by the state;
 - (4) To regulate actions by state agencies affecting floodplains except conversion by The University of Connecticut of commercial or office structures to an educational structure;
 - (5) To designate a repository for all flood data within the state;
 - (6) To assist municipalities and state agencies in the development of comprehensive floodplain management programs;
 - (7) To determine the number and location of state-owned structures and uses by the state in the floodplain and to identify measures to make such structures and uses less susceptible to flooding including flood-proofing or relocation;
 - (8) To mark or post the floodplains within lands owned, leased or regulated by state agencies in order to delineate past and probable flood heights and to enhance public awareness of flood hazards;
 - (9) To designate the base flood or base flood for a critical activity where no such base flood is designated by the National Flood Insurance Program. The commissioner may add a freeboard factor to any such designation;
 - (10) To require that any flood control project be designed to provide protection equal to or greater than the base flood.

(P.A. 84-536, S. 2; P.A. 95-230, S. 44, 45.)

History: P.A. 95-230 amended Subdiv. (4) to add exception for The University of Connecticut, effective June 7, 1995.

Sec. 25-68d. Certification of activity or critical activity within or affecting the floodplain.

Exemption. (a) No state agency shall undertake an activity or a critical activity within or affecting the floodplain without first obtaining approval from the commissioner of a certification submitted in accordance with subsection (b) or exemption by the commissioner from such approval in accordance with subsection (d).

(b) Any state agency proposing an activity or critical activity within or affecting the floodplain shall submit to the commissioner information certifying that:

(1) The proposal will not obstruct flood flows or result in an adverse increase in flood elevations, significantly affect the storage or flood control value of the floodplains, cause an adverse increase in flood velocities, or an adverse flooding impact upon upstream, downstream or abutting properties, or pose a hazard to human life, health or property in the event of a base flood or base flood for a critical activity;

(2) The proposal complies with the provisions of the National Flood Insurance Program (44 CFR 59 et seq.), and any floodplain zoning requirements adopted by a municipality in the area of the proposal and the requirements for stream channel encroachment lines adopted pursuant to the provisions of section 22a-342;

(3) The agency has acquired, through public or private purchase or conveyance, easements and property in floodplains when the base flood or base flood for a critical activity is elevated above the increment authorized by the National Flood Insurance Program or the flood storage loss would cause adverse increases in such base flood flows;

(4) The proposal promotes long-term non-intensive floodplain uses and has utilities located to discourage floodplain development;

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(5) The agency has considered and will use to the extent feasible flood-proofing techniques to protect new and existing structures and utility lines, will construct dikes, dams, channel alterations, seawalls, breakwaters or other structures only where there are no practical alternatives and will implement stormwater management practices in accordance with regulations adopted pursuant to section 25-68h; and

(6) The agency has flood forecasting and warning capabilities consistent with the system maintained by the National Weather Service and has a flood preparedness plan.

(c) The commissioner shall make a decision either approving or rejecting a certification within ninety days of receipt of such certification, except that in the case of an exemption any decision shall be made within ninety days of the close of the hearing. If a certification is rejected, the agency shall be entitled to a hearing in accordance with the provisions of sections 4-176e, 4-177, 4-177c and 4-180.

(d) Any state agency proposing an activity or critical activity within or affecting the floodplain may apply to the commissioner for exemption from the provisions of subsection (b). Such application shall include a statement of the reasons why such agency is unable to comply with said subsection and any other information the commissioner deems necessary. The commissioner, after public notice of the application and an opportunity for a public hearing in accordance with the provisions of chapter 54, may approve such exemption if he determines that (1) the agency has shown that the activity or critical activity is in the public interest, will not injure persons or damage property in the area of such activity or critical activity, complies with the provisions of the National Flood Insurance Program, and, in the case of a loan or grant, the recipient of the loan or grant has been informed that increased flood insurance premiums may result from the activity or critical activity or (2) in the case of a flood control project, such project meets the criteria of subdivision (1) and is more cost-effective to the state and municipalities than a project constructed to or above the base flood or base flood for a critical activity. Following approval for exemption for a flood control project, the commissioner shall provide notice of the hazards of a flood greater than the capacity of the project design to each member of the legislature whose district will be affected by the project and to the following agencies and officials in the area to be protected by the project: The planning and zoning commission, the inland wetlands agency, the director of civil defense, the conservation commission, the fire department, the police department, the chief elected official and each member of the legislative body, and the regional planning agency. Notice shall be given to the general public by publication in a newspaper of general circulation in each municipality in the area in which the project is to be located.

(e) The failure of any agency to comply with the provisions of this section or any regulations adopted pursuant to section 25-68c shall be grounds for revocation of the approval of the certification.

(f) The provisions of this section shall not apply to any proposal by the department of transportation for a project within a drainage basin of less than one square mile.

(P.A. 84-536, S. 3; P.A. 88-317, S. 87, 107.)

History: P.A. 88-317 added references in Subsec. (c) to Secs. 4-176e, 4-177c and 4-180, effective July 1, 1989, and applicable to all agency proceedings commencing on or after that date.

Sec. 25-68e. Suspension. The provisions of sections 25-68b to 25-68h, inclusive, and any regulations adopted thereunder may be suspended by the commissioner during any disaster emergency proclaimed by the Governor pursuant to section 28-9a or during an emergency declaration or major disaster declaration declared by the President of the United States under Public Law 93-288.

(P.A. 84-536, S. 4.)

Sec. 25-68f. Floodplain designation. Where more than one flood zone has been designated for an area, the most stringent designation shall be used in fulfilling the provisions of sections 25-68b to 25-68h, inclusive.

(P.A. 84-536, S. 5.)

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Sec. 25-68g. Immunity. The state, any municipality or any officer or employee thereof shall not be liable for any damage resulting from reliance on any decision made pursuant to section 25-68d.

(P.A. 84-536, S. 6.)

Sec. 25-68h. Regulations. The commissioner shall adopt regulations in accordance with the provisions of chapter 54 to implement the provisions of sections 25-68b to 25-68h, inclusive. Such regulations shall include, but not be limited to, (1) standards for stormwater management and flood flows and (2) procedures for certification or exemption of a proposal in accordance with section 25-68d.

(P.A. 84-536, S. 7.)

AUDITS FOR RECIPIENTS OF STATE FINANCIAL ASSISTANCE

Sec. 4-230. Definitions. As used in sections 4-230 to 4-236, inclusive:

- (1) "Cognizant agency" means a state agency which is assigned by the secretary the responsibility for implementing the requirements of sections 4-230 to 4-236, inclusive;
 - (2) "Secretary" means the Secretary of the Office of Policy and Management;
 - (3) "State financial assistance" means assistance that a non-state entity receives or administers which is provided by a state agency or pass-through entity in the form of grants, contracts, loans, loan guarantees, property, cooperative agreements, interest subsidies, insurance or direct appropriations, but does not include direct state cash assistance to individuals or payments to a vendor;
 - (4) "State agency" means any department, board, commission, institution or other agency of the state;
 - (5) "Generally accepted accounting principles" has the meaning specified in the generally accepted auditing standards issued by the American Institute of Certified Public Accountants (AICPA);
 - (6) "Generally accepted government auditing standards" (GAGAS) means the generally accepted government auditing standards issued by the Comptroller General of the United States that are applicable to financial audits;
 - (7) "Independent auditor" means a public accountant who is licensed to practice in the state and meets the independence standards included in generally accepted government auditing standards;
 - (8) "Internal controls" means a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in: (A) Reliability of financial reporting, (B) effectiveness and efficiency of operations and (C) compliance with applicable laws and regulations;
 - (9) "Municipality" means a town, consolidated town and city, consolidated town and borough, city or borough, including a local board of education as described in subsection (c) of section 7-392;
 - (10) "Audited agency" means a fire district, fire and sewer district, sewer district or other municipal utility, the Metropolitan District of Hartford County, a regional board of education, a regional planning agency, any other political subdivision of similar character which is created or any other agency created or designated by a municipality to act for such municipality whose average annual receipts from all sources exceed two hundred thousand dollars or any tourism district established under section 32-302;
 - (11) "Nonprofit agency" means any organization that is not a for-profit business and provides services contracted for by (A) the state or (B) a non-state entity. It also means private institutions of higher learning which receive state financial assistance;
 - (12) "Major state program" means any program, excluding an exempt program, for which total expenditures of state financial assistance by a nonstate entity during the applicable year exceed the larger of (A) one hundred thousand dollars or (B) one per cent of the total amount of state financial assistance expended, excluding expenditures of an exempt program by the nonstate entity during the audited year;
 - (13) "Public accountant" means an individual who meets the standards included in generally accepted government auditing standards for personnel performing government audits and the licensing requirements of the State Board of Accountancy;
 - (14) "Subrecipient" means a nonstate entity that receives state financial assistance from a pass-through entity, but does not include an individual who receives such assistance;
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- (15) "Tourism district" means a district established under section 32-302;
- (16) "Nonstate entity" means a municipality, tourism district, audited agency or nonprofit agency;
- (17) "Pass-through entity" means a nonstate entity that provides state financial assistance to a subrecipient;
- (18) "Program-specific audit" means an audit of a single state program conducted in accordance with the regulations adopted under section 4-236;
- (19) "Expended" and "expenditures" have the meanings attributed to those terms in generally accepted accounting principles, except that (A) state financial assistance received which does not specify a required use shall be assumed to be fully expended in the fiscal year of receipt, and (B) exempt programs shall be assumed to be expended in the fiscal year that the state financial assistance is received;
- (20) "Exempt program" means any of the following programs: Education cost sharing, pursuant to sections 10-262f to 10-262j, inclusive; public and nonpublic school pupil transportation, pursuant to sections 10-54, 10-97, 10-266m, 10-273a, 10-277 and 10-281; special education, excess costs equity and excess costs student-based, pursuant to subsection (e) of section 10-76d, subsections (a), (b) and (c) of section 10-76g and section 10-253; school building grants-principal and interest subsidy, pursuant to chapter 173 and section 10-264h; and school construction grants pursuant to public act 97- 265 and public act 97-11 of the June 18 Special Session*; and
- (21) "Vendor" means a dealer, distributor, merchant or other seller providing goods or services that are required for the conduct of a state program. Such goods or services may be for an organization's own use or for the use of beneficiaries of the state program.

(P.A. 91-401, S. 1, 20; P.A. 97-238, S. 5; P.A. 98-143, S. 17, 24; P.A. 00-66, S. 9.)

*Public act 97-265 is entitled "An Act Concerning Authorization of State Grant Commitments for School Building Projects and Clarification and Separation of the Grant and Bond Program for School Building Projects and the Grant and Bond Program for Interest Payment Subsidies" and public act 97-11 of the June 18 special session is entitled "An Act Concerning Computerized Information Sharing, the Mashantucket Pequot and Mohegan Fund, Early Retirement, School Construction, State Buildings, Nursing Homes, Executive and Legislative Councils, Commissions and Task Forces, Appropriations for the Fiscal Years Ending June 30, 1997, 1998 and 1999, Spring and Well Water Collection, Project Concern, Notice Requirements for Psychiatric Admissions, the Tax on Net Direct Subscriber Charges of Health Care Centers, Elimination of Certain Wage Inequities, Sheriffs' Fees and Expenses of the Connecticut Siting Council". (See Reference Tables captioned "Public Acts of 1997" and "Public Acts of June 18, 1997", respectively, in Volume 16 which list the sections amended, created or repealed by the acts.)

History: P.A. 97-238 redefined "audited agency" to include tourism districts; P.A. 98-143 revised definitions in Subdivs. (3), (5) to (8), inclusive, and (11) to (14), inclusive, and added new Subdivs. (15) to (21), inclusive, defining "tourism district", "nonstate entity", "pass-through entity", "program-specific audit", "expended" and "expenditures", "exempt program" and "vendor", effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998; P.A. 00-66 made a technical change in Subdiv. (19).

Sec. 4-231. When single audits required or program-specific audits. (a)(1) Each nonstate entity which expends a total amount of state financial assistance equal to or in excess of one hundred thousand dollars in any fiscal year of such nonstate entity beginning on or after July 1, 1998, shall have either a single audit or a program-specific audit made for such fiscal year, in accordance with the provisions of subdivision (2) or (3) of this subsection and the requirements of regulations adopted pursuant to section 4- 236. If a provision of the general statutes or an administrative rule, regulation, guideline, standard or policy, which is effective on July 1, 1992, requires a nonstate entity to conduct a biennial audit, the audit required under this section shall be conducted on the same biennial basis and shall cover both years of the biennial period.

(2) If the total amount of state financial assistance expended in any such fiscal year is for a single program, such nonstate entity may elect to have a program-specific audit made in lieu of a single audit.

(3) If the total amount of state financial assistance expended in any such fiscal year is for more than one program, such entity shall have a single audit made for such fiscal year.

(b) Notwithstanding any provision of the general statutes or any regulation adopted under any provision of the general statutes, each nonstate entity that expends total state financial assistance of less than one hundred thousand dollars in any fiscal year of such nonstate entity beginning on or after July 1, 1998,

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shall be exempt with respect to such year from complying with any statutory or regulatory requirements concerning financial or financial and compliance audits that would otherwise be applicable.

(c) No provision of this section shall be deemed to exempt a nonstate entity from complying with any statutory or regulatory provision requiring the entity to (1) maintain records concerning state financial assistance or (2) provide access to such records to a state agency.

(P.A. 91-401, S. 2, 20; P.A. 92-121, S. 1, 3; May 25 Sp. Sess. P.A. 94-1, S. 43, 130; P.A. 98-143, S. 18, 24.)

History: P.A. 92-121 amended Subsec. (a) by requiring each municipality and audited agency subject to the federal Single Audit Act to have a comprehensive audit each fiscal year and delaying the compliance of the single comprehensive audit for certain nonprofit agencies for one year; May 25 Sp. Sess. P.A. 94-1 amended Subdiv. (1) of Subsec. (a) by making technical changes, effective July 1, 1994; P.A. 98-143 deleted all former provisions and substituted new provisions re auditing requirements, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998.

Sec. 4-232. Designation of independent auditor to conduct audit. Audit report filing. (a) Each nonstate entity which is required to be audited pursuant to sections 4- 230 to 4-236, inclusive, shall designate an independent auditor to conduct such audit. Not later than thirty days before the end of the fiscal period for which the audit is required, the nonstate entity shall file the name of such auditor with the cognizant agency. If a nonstate entity fails to make such filing, the cognizant agency may designate an independent auditor to conduct the audit.

(b) (1) Upon the completion of the audit, pursuant to sections 4-230 to 4-236, inclusive, the nonstate entity shall file copies of the audit report with state grantor agencies, the cognizant agency and if applicable, pass-through entities. Once filed, such report shall be made available by the nonstate entity for public inspection. Copies of the report shall be filed not later than thirty days after completion of such report, if possible, but not later than six months after the end of the audit period. The cognizant agency may grant an extension of not more than thirty days, if the auditor making the audit and the chief executive officer of the nonstate entity jointly submit a request in writing to the cognizant agency stating the reasons for such extension at least thirty days prior to the end of such six-month period. If the reason for the extension relates to deficiencies in the accounting system of the nonstate entity, the request shall be accompanied by a corrective action plan. The cognizant agency may, after a hearing with the auditor and officials of the nonstate entity, grant an additional extension if conditions warrant.

(2) Any nonstate entity, or auditor of such nonstate entity, which fails to have the audit report filed on its behalf within six months after the end of the fiscal year or within the time granted by the cognizant agency may be assessed, by the Secretary of the Office of Policy and Management, a civil penalty of not less than one thousand dollars but not more than ten thousand dollars. In addition to, or in lieu of such penalty, the cognizant agency may assign an auditor to perform the audit of such nonstate entity. In such case, the nonstate entity shall be responsible for the costs related to the audit. The secretary may, upon receipt of a written request from an official of the nonstate entity or its auditor, waive all such penalties if the secretary determines that there appears to be reasonable cause for the entity not having completed or provided the required audit report.

(P.A. 91-401, S. 3, 20; P.A. 98-143, S. 19, 24.)

History: P.A. 98-143 designated existing provisions as Subsec. (a), amended Subsec. (a) by substituting "nonstate entity" for "municipality, audited agency and nonprofit agency" and deleting requirement that auditor be subject to approval of cognizant agency and added new Subsec. (b) re filing of audit report, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998.

Sec. 4-233. Conduct and scope of audits. When corrective action required. (a) Each audit required by sections 4-230 to 4-236, inclusive, shall:

(1) Be conducted in accordance with generally accepted government auditing standards, except that, for the purposes of said sections such standards shall not be construed to require economy and efficiency audits, program results audits, or program evaluations; and

(2) Except in the case of program-specific audits, cover the entire operations, including financial operations, of the nonstate entity, except that such audit may exclude public hospitals.

(b) Each such audit shall determine and report whether: (1) The financial statements of the nonstate entity are presented fairly in all material respects in conformity with generally accepted accounting

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principles; (2) the schedule of expenditures of state financial assistance of the nonstate entity is presented fairly in all material respects in relation to the financial statements taken as a whole; (3) in addition to the requirements of generally accepted government auditing standards, the auditor has performed procedures to obtain an understanding of internal control over state programs sufficient to (A) plan the audit to support a low assessed level of control risk for major state programs, (B) plan the testing of internal control over major state programs to support a low assessed level of control risk for the assertions relevant to the compliance requirement for each major state program, and (C) perform testing of internal controls; and (4) the nonstate entity has complied with laws, regulations and grant or contract provisions that may have a material effect upon individual compliance requirements for each major state program. In complying with the requirements of subdivision (4) of this subsection, the independent auditor shall select and test a representative number of transactions from each major state program. Each audit report shall identify which programs were tested for compliance.

(c) (1) When the total expenditures of a nonstate entity's major state programs are less than fifty per cent of such nonstate entity's total expenditures of state financial assistance, excluding exempt program expenditures, the independent auditor shall select and test additional programs as major state programs as may be necessary to achieve audit coverage of at least fifty per cent of the nonstate entity's total expenditures of state financial assistance, excluding exempt program expenditures. The provisions of this subsection shall be carried out in accordance with the regulations adopted pursuant to section 4-236 and shall be subject to the provisions of subdivision (2) of this subsection.

(2) In achieving the audit coverage in accordance with subdivision (1) of this subsection, no more than two programs which each have total state financial assistance expenditures of twenty-five thousand dollars or more but not more than one hundred thousand dollars shall be tested, if such programs are required to be tested to achieve the audit coverage of subdivision (1) of this subsection.

(d) If an audit conducted pursuant to this section finds any material noncompliance by a nonstate entity with applicable laws, regulations and grant or contract provisions, or finds any reportable condition or material weakness with respect to the internal controls of the nonstate entity concerning the matters described in subsection (b) of this section, the nonstate entity shall submit to appropriate state officials a plan for corrective action to eliminate such material noncompliance, reportable condition or material weakness.

(P.A. 91-401, S. 4, 20; P.A. 98-143, S. 20, 24.)

History: P.A. 98-143 substituted "nonstate entity" for "municipality, audited agency or nonprofit agency" throughout the section, amended Subsec. (a)(2) by inserting exception for program-specific audits, substantially amended the audit determination and report requirements of Subsec. (b) and deleted former Subsecs. (c) to (g), inclusive, substituting new Subsec. (c) re audit coverage of expenditures of state financial assistance and new Subsec. (d) re corrective action to eliminate material noncompliance, reportable condition or material weakness, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998.

Sec. 4-234. Audits in lieu of financial or financial and compliance audits. Additional audits. (a)

An audit conducted in accordance with sections 4-230 to 4-236, inclusive, shall be in lieu of any financial or financial and compliance audit of state financial assistance programs which a nonstate entity is required to conduct under any other state law or regulation. To the extent that such audit provides a state agency with the information it requires to carry out its responsibilities under state law or regulations, a state agency shall rely upon and use such information and plan and conduct its own audits accordingly in order to avoid a duplication of effort.

(b) Notwithstanding the provisions of subsection (a) of this section, a state agency shall conduct any additional audits which it deems necessary to carry out its responsibilities, upon a written determination by the executive authority of the agency, based on evidence of fiscal irregularities or noncompliance with applicable laws and regulations, and after consulting with the cognizant agency. The provisions of sections 4-230 to 4-236, inclusive, do not authorize a cognizant agency or any nonstate entity, or any subrecipient thereof, to constrain, in any manner, such state agency from carrying out such additional audits. As used in this subsection and subsection (d) of this section, "executive authority" shall be construed as defined in section 4-37e.

(c) The provisions of sections 4-230 to 4-236, inclusive, do not (1) limit the authority of state agencies to conduct, or enter into contracts for the conduct of, audits and evaluations of state financial assistance

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programs or (2) limit the authority of any state agency auditor or other state audit official.

(d) A state agency that performs or contracts for audits in addition to the audits conducted for recipients of state financial assistance pursuant to sections 4-230 to 4-236, inclusive, shall, consistent with other applicable law, pay for the cost of such additional audits. Such additional audits may include, but shall not be limited to, economy and efficiency audits, program results audits and program evaluations. The state agency shall use the results of the single audit as a basis for any additional requirements, and shall not duplicate the single audit unless the executive authority of such agency determines in writing that such duplication is necessary.

(P.A. 91-401, S. 5, 20; P.A. 98-143, S. 21, 24.)

History: P.A. 98-143 substituted "nonstate entity" for "municipality, audited agency or nonprofit agency" in Subsecs. (a) and (b), amended Subsec. (a) by substituting "state financial assistance programs" for "an individual state assistance program" and deleted former Subsec. (e) re requirement that audits be conducted in conjunction with federal Single Audit Act, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998.

Sec. 4-235. Designation of cognizant agencies. Pass-through entities and subrecipients. (a) The secretary shall designate cognizant agencies for audits conducted pursuant to sections 4-230 to 4-236, inclusive.

(b) A cognizant agency shall: (1) Ensure through coordination with state agencies, that audits are made in a timely manner and in accordance with the requirements of sections 4-230 to 4-236, inclusive; (2) ensure that corrective action plans made pursuant to section 4-233 are transmitted to the appropriate state officials; and (3) (A) coordinate, to the extent practicable, audits done by or under contract with state agencies that are in addition to the audits conducted pursuant to sections 4-230 to 4-236, inclusive; and (B) ensure that such additional audits build upon the audits conducted pursuant to said sections.

(c) (1) Each pass-through entity which is subject to the audit requirements of sections 4-230 to 4-236, inclusive, shall:

(A) Advise subrecipients of requirements imposed on them by state laws, regulations, and the provisions of contracts or grant agreements, and any supplemental requirements imposed by the pass-through entity;

(B) If the subrecipient is subject to an audit in accordance with the requirements of said sections 4-230 to 4-236, inclusive, review such audit and ensure that prompt and appropriate corrective action is taken with respect to material findings of noncompliance with individual compliance requirements or reportable conditions or material weaknesses in internal controls pertaining to state financial assistance provided to the subrecipient by the pass-through entity; or

(C) If the subrecipient is not subject to an audit in accordance with the requirements of said sections 4-230 to 4-236, inclusive, monitor the activities of subrecipients as necessary to ensure that state financial assistance is used for authorized purposes in compliance with laws, regulations, and the provisions of contracts or grant agreements.

(2) Each pass-through entity, as a condition of receiving state financial assistance, shall require each of its subrecipients to permit the independent auditor of the pass-through entity to have such access to the subrecipient's records and financial statements as may be necessary for the pass-through entity to comply with sections 4-230 to 4-236, inclusive.

(P.A. 91-401, S. 6, 20; P.A. 98-143, S. 22, 24.)

History: (Revisor's note: In 1997 the Revisors changed Subsec. (b)(3)(B) from "ensure that such additional audits build upon the audits conducted pursuant said sections" to "ensure that such additional audits build upon the audits conducted pursuant to said sections", thereby correcting a clerical error made during the codification of P.A. 91-401); P.A. 98-143 amended Subsec. (b) by deleting provision requiring cognizant agency to act in conjunction with federal cognizant agency designated pursuant to federal Single Audit Act, inserting "through coordination with state agencies," in Subdiv. (1) and deleting "the audit reports and" following "ensure that" in Subdiv. (2), and added new Subsec. (c) re requirements for pass-through entities, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998.

Sec. 4-236. Regulations. (a) The secretary shall, in consultation with the Auditors of Public Accounts, appropriate state officials and representatives of nonstate entities, adopt regulations pursuant to the provisions of chapter 54 to implement the provisions of sections 4-230 to 4-235, inclusive.

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(b) The secretary shall also adopt regulations, in accordance with the provisions of chapter 54, (1) concerning the recovery of grant funds based on audit findings, as the secretary deems appropriate for any grantee which is found as a result of an audit to not be in compliance with the standards established pursuant to section 4-233, and (2) establishing uniform standards which prescribe the cost accounting principles to be used in the administration of state financial assistance by the recipients of such assistance.

(P.A. 91-401, S. 7, 20; P.A. 98-143, S. 23, 24; P.A. 00-125, S. 1, 2.)

History: P.A. 98-143 amended Subsec. (a) by substituting "state officials and representatives of nonstate entities" for "state, municipal and audited agency officials and representatives of nonprofit agencies" and deleting criteria required to be included in regulations, effective June 4, 1998, and applicable to audits conducted for fiscal years commencing on and after July 1, 1998; P.A. 00-125 amended Subsec. (a) to make a technical change, and amended Subsec. (b) to make existing language re regulations Subdiv. (1) and to add Subdiv. (2) re cost accounting principles, effective May 26, 2000.

Sec. 7-396a. Audits of agencies receiving state grants. (a) Any agreement for a state grant entered into between a state agency and a public or private agency shall provide for an audit acceptable to such state agency of any grant expenditures made by such public or private agency and, unless otherwise provided by the state agency, the cost of such audit may be considered an allowable expense under such grant agreement. The Auditors of Public Accounts shall have access to all records and accounts of such public or private agency for the fiscal year in which such grant is made. A copy of any audit performed under the provisions of this section shall be filed with the Auditors of Public Accounts.

(b) Notwithstanding the provisions of subsection (a) of this section, in the case of an agreement for a state grant entered into between a state agency and a public or private agency where the state agency has received funding for such grant from the federal government, the cost of any required audit shall be considered an allowable expense under such grant agreement, provided the cost of such audit is an allowable expense under the federal grant regulations.

(P.A. 76-68, S. 6, 7; P.A. 84-316, S. 1, 2; P.A. 85-613, S. 20, 154; P.A. 87-573, S. 9, 11; P.A. 88-61, S. 1, 2; P.A. 89-81, S. 2.)

History: P.A. 84-316 added Subsec. (c) re payment of cost of audits; P.A. 85-613 made technical changes; P.A. 87-573 inserted a reference to reporting requirements in Subsec. (a), effective July 1, 1987, and applicable to audits for fiscal years beginning on or after that date; P.A. 88-61 authorized in Subsec. (b) the cost of the annual audits of state agency grants to be considered an allowable expense under grant agreements; P.A. 89-81 deleted former Subsec. (a), transferring provisions to Subsec. (c) of Sec. 2-90, and relettered remaining Subsecs.

WAGES & LABOR

Sec. 31-52. Preference to state citizens in construction of public buildings. Enforcement of violations. (a) In the employment of mechanics, laborers and workmen in the construction, remodeling or repairing of any public building, by the state or any of its agents or by persons contracting therewith, preference shall be given to citizens of the state, and, if they cannot be obtained in sufficient numbers, then to citizens of the United States. Any contractor who knowingly and willfully employs any person in violation of any provision of this subsection shall be fined two hundred dollars for each week or fraction of a week each such person is so employed.

(b) Each contract for the construction or repair of any building under the supervision of the state or any of its agents shall contain the following provisions: "In the employment of labor to perform the work specified herein, preference shall be given to citizens of the United States, who are, and continuously for at least three months prior to the date hereof have been, residents of the labor market area, as established by the Labor Commissioner, in which such work is to be done, and if no such qualified person is available, then to citizens who have continuously resided in the county in which the work is to be performed for at least three months prior to the date hereof, and then to citizens of the state who have continuously resided in the state at least three months prior to the date hereof." In no event

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shall said provisions be deemed to abrogate or supersede, in any manner, any provision regarding residence requirements contained in a collective bargaining agreement to which the contractor is a party.

(c) No person who receives an award or contract for public works projects from the state, or who receives an order or contract for which a portion of funds is derived from the state, shall knowingly employ nonresidents of the state while residents who may qualify for such work are reasonably available for employment. In the employment of nonresidents, the construction supervisor or construction inspector assigned to the public works project shall verify that the contracting employer, by reasonable efforts, sought to obtain construction job applicants from existing employment sources in Connecticut.

(d) The agent contracting on behalf of the state or any political subdivision thereof shall investigate promptly any alleged violation of this section or section 31-52a. If said agent finds evidence of such a violation, he shall immediately notify the alleged violator of such evidence and allegations. If the alleged violator fails to take corrective action within one week, or to produce evidence which satisfies said agent that no violation has occurred, said agent shall (1) institute a civil action to recover as liquidated damages for the violation of the contract an amount equal to the wages paid to any employees employed in violation of this section or section 31-52a and cost of suit, including reasonable attorney's fees and (2) notify the office of the state's attorney in the judicial district for the area in which such work was performed so that appropriate criminal action may be instituted against the alleged violator.

(e) In contracts so financed preference in employment shall be given to citizens of the United States or any possession thereof.

(f) Nothing in this section shall abrogate or supersede any provision regarding residence requirements in a collective bargaining agreement to which the contractor is a party.

(1949 Rev., S. 7371; 1967, P.A. 757, S. 1; P.A. 78-280, S. 68, 127; P.A. 83-530, S. 2, 3; 83-552, S. 2; P.A. 97-263, S. 13.)

History: 1967 act clarified provisions and specified that one hundred dollar fine applies for each week or fraction of a week during which a person is employed in violation of Subsec. (a) where previously hundred dollar fine was the maximum fine for each offense, substituted labor market areas for towns under Subsec. (b) and added Subsecs. (c) to (e) re employment of state residents in preference to nonresidents, hiring preference to U.S. citizens and procedure to be followed in investigation of and action on violations; P.A. 78-280 required notification of state's attorney in the appropriate judicial district rather than notification of prosecuting attorney in the appropriate circuit, circuit courts having been abolished pursuant to P.A. 76-436, under Subsec. (d)(2); P.A. 83-530 added a new Subsec. (f) which prohibits this section from abrogating or superseding any residence requirement in a collective bargaining agreement to which the contractor is a party; P.A. 83-552 amended Subsec. (b) to provide that collective bargaining agreement is not superseded by preference provisions of contract; P.A. 97-263 amended Subsec. (a) to increase amount of fine from one hundred to two hundred dollars.

See Sec. 7-112 re applicability of this section to construction, remodeling, etc. of public buildings by political subdivisions of state.

Commissioner's duty under statute is carried out when he has caused proper preference clause to be inserted in contract. 26 CS 384, 386.

Sec. 31-52a. Residents' preference in work on other public facilities. (a) In the employment of mechanics, laborers or workmen in connection with any public works project, including, but not limited to, construction, remodeling or repairing of any public facility, structure, except public buildings covered by section 31-52, site preparation or site improvement, appurtenances or highways or in preparation or improvement of any land or waterway on or in which a structure is situated or to be constructed by the state or any of its agents or by persons contracting therewith, preference shall be given to persons who are residents of the state, and, if they cannot be obtained in sufficient numbers, then to residents of other states. Nothing herein shall abrogate or supersede any provision regarding residence requirements in a collective bargaining agreement to which the contractor is a party. Any contractor who knowingly and willfully employs any person in violation of any provision of this section shall be fined two hundred dollars for each week or a fraction of a week each such person is employed.

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(b) Each contract for any such project covered by this section under the supervision of the state or any of its agents shall contain the following provision: "In the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to residents of the state who are, and continuously for at least six months prior to the date hereof have been, residents of this state, and if no such person is available then to residents of other states."

(1967, P.A. 757, S. 2.)

Sec. 31-52b. Exceptions. The provisions of sections 31-52 and 31-52a shall not apply where the state or any subdivision thereof may suffer the loss of revenue granted or to be granted from any agency or department of the federal government as a result of said sections or regulative procedures pursuant thereto.

(1967, P.A. 757, S. 3.)

Sec. 31-53. Construction, alteration or repair of public works projects by state or political subdivision; wage rates; certified payroll. Penalties for violations. (a) Each contract for the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project by the state or any of its agents, or by any political subdivision of the state or any of its agents, shall contain the following provision: "The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of this section, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day."

(b) Any person who knowingly or willfully employs any mechanic, laborer or workman in the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project for or on behalf of the state or any of its agents, or any political subdivision of the state or any of its agents, at a rate of wage on an hourly basis which is less than the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed, remodeled, refinished, refurbished, rehabilitated, altered or repaired, or who fails to pay the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, or in lieu thereof to the employee, as provided by subsection (a), shall be fined not less than two thousand five hundred dollars but not more than five thousand dollars for each offense and (1) for the first violation, shall be disqualified from bidding on contracts with the state or any political subdivision until the contractor or subcontractor has made full restitution of the back wages owed to such persons and for an additional six months thereafter and (2) for subsequent violations, shall be disqualified from bidding on contracts with the state or any political subdivision until the contractor or subcontractor has made full restitution of the back wages owed to such persons and for not less than an additional two years thereafter. In addition, if it is found by the contracting officer representing the state or political subdivision thereof that any mechanic, laborer or workman employed by the contractor or any subcontractor directly on the site for the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as required by this section, the state or contracting political subdivision thereof may (A) by written notice to the contractor, terminate such contractor's right to proceed with the work or such part of the work as to which there has been a failure to pay said required wages and to prosecute the work to completion by contract or otherwise, and the contractor and his sureties shall be liable to the state or the contracting political subdivision for any excess costs occasioned the state or the contracting political subdivision thereby or (B) withhold payment of money to the contractor or subcontractor. The contracting department of the state or the political subdivision thereof shall within two days after taking such action notify the Labor Commissioner in writing of the name of the contractor or subcontractor, the project involved, the location of the work, the violations involved, the date the contract was terminated, and steps taken to collect the required wages.

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(c) The Labor Commissioner may make complaint to the proper prosecuting authorities for the violation of any provision of subsection (b).

(d) For the purpose of predetermining the prevailing rate of wage on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in subsection (h), in each town where such contract is to be performed, the Labor Commissioner shall (1) hold a hearing at any required time to determine the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each person to any employee welfare fund, as defined in subsection (h), upon any public work within any specified area, and shall establish classifications of skilled, semiskilled and ordinary labor, or (2) adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the Secretary of Labor of the United States under the provisions of the Davis-Bacon Act, as amended.

(e) The Labor Commissioner shall determine the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of such employee to any employee welfare fund, as defined in subsection (h), in each locality where any such public work is to be constructed, and the agent empowered to let such contract shall contact the Labor Commissioner, at least ten but not more than twenty days prior to the date such contracts will be advertised for bid, to ascertain the proper rate of wages and amount of employee welfare fund payments or contributions and shall include such rate of wage on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in subsection (h), or in lieu thereof the amount to be paid directly to each employee for such payment or contributions as provided in subsection (a) for all classifications of labor in the proposal for the contract. The rate of wage on an hourly basis and the amount of payment or contributions to any employee welfare fund, as defined in subsection (h), or cash in lieu thereof, as provided in subsection (a), shall, at all times, be considered as the minimum rate for the classification for which it was established. Prior to the award of any contract subject to the provisions of this section, such agent shall certify in writing to the Labor Commissioner the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts. Upon the award of any contract subject to the provisions of this section, the contractor to whom such contract is awarded shall certify, under oath, to the Labor Commissioner the pay scale to be used by such contractor and any of his subcontractors for work to be performed under such contract.

(f) Each employer subject to the provisions of this section or section 31-54 shall (1) keep, maintain and preserve such records relating to the wages and hours worked by each employee and a schedule of the occupation or work classification at which each mechanic, laborer or workman on the project is employed during each work day and week in such manner and form as the Labor Commissioner establishes to assure the proper payments due to such employees or employee welfare funds under this section or section 31-54, and (2) submit monthly to the contracting agency a certified payroll which shall consist of a complete copy of such records accompanied by a statement signed by the employer which indicates that (A) such records are correct; (B) the rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of this section, are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection (d) of this section, and not less than those required by the contract to be paid; (C) the employer has complied with the provisions of this section and section 31-54; (D) each such employee is covered by a workers' compensation insurance policy for the duration of his employment, which shall be demonstrated by submitting to the contracting agency the name of the workers' compensation insurance carrier covering each such employee, the effective and expiration dates of each policy and each policy number; (E) the employer does not receive kickbacks, as defined in 41 USC 52, from any employee or employee welfare fund; and (F) pursuant to the provisions of section 53a-157a, the employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years, or both. This subsection shall not be construed to prohibit a general contractor from relying on the certification of a lower tier subcontractor, provided the general contractor shall not be exempted from the provisions of section 53a- 157a if he

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knowingly relies upon a subcontractor's false certification. Notwithstanding the provisions of section 1-210, the certified payroll shall be considered a public record and every person shall have the right to inspect and copy such records in accordance with the provisions of section 1-212. The provisions of sections 31-59(a), 31-59(b), 31-66 and 31-69 which are not inconsistent with the provisions of this section or section 31-54 shall apply to this section. Failing to file a certified payroll pursuant to subdivision (2) of this subsection is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years, or both.

(g) The provisions of this section shall not apply where the total cost of all work to be performed by all contractors and subcontractors in connection with new construction of any public works project is less than four hundred thousand dollars or where the total cost of all work to be performed by all contractors and subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than one hundred thousand dollars.

(h) As used in this section, section 31-54 and section 31-89a, "employee welfare fund" means any trust fund established by one or more employers and one or more labor organizations or one or more other third parties not affiliated with the employers to provide from moneys in the fund, whether through the purchase of insurance or annuity contracts or otherwise, benefits under an employee welfare plan; provided such term shall not include any such fund where the trustee, or all of the trustees, are subject to supervision by the Commissioner of Banking of this state or any other state or the Comptroller of the Currency of the United States or the Board of Governors of the Federal Reserve System, and "benefits under an employee welfare plan" means one or more benefits or services under any plan established or maintained for employees or their families or dependents, or for both, including, but not limited to, medical, surgical or hospital care benefits; benefits in the event of sickness, accident, disability or death; benefits in the event of unemployment, or retirement benefits.

(1949 Rev., S. 7372; March, 1950, S. 3018d, 3019d; 1961, P.A. 486, S. 1; 1963, P.A. 240, S. 1; 1967, P.A. 494, S. 1; P.A. 73-566, S. 1; P.A. 75-90, S. 1, 2; P.A. 77-442; 77-614, S. 161, 610; P.A. 79-325; P.A. 80-482, S. 200, 348; P.A. 83-537, S. 2; P.A. 85-355, S. 1-3; P.A. 87-9, S. 2, 3; P.A. 91-74, S. 1; 91-407, S. 40, 42; P.A. 93-392, S. 1; 93-435, S. 65, 95; P.A. 97-263, S. 14.)

History: 1961 act added provisions re political subdivision and employee welfare funds and added Subsecs. (f) and (g) re records and schedules which must be kept and re inapplicability of provisions where total cost of work is less than five thousand dollars; 1963 act substituted "alteration" for "remodeling" and "public works project" for references to public buildings; 1967 act added Subsec. (h) defining "employee welfare fund" and "benefits under an employee welfare plan" and substituted references to Subsec. (h) for references to Sec. 31-78; P.A. 73-566 amended Subsec. (b) to add provisions re termination of contract when discovery is made that employees are being paid less than the amount required under contract; P.A. 75-90 added references to remodeling, refurbishing, refinishing and rehabilitation of projects in Subsecs. (a), (b) and (g); P.A. 77-442 added Subdiv. (2) in Subsec. (d) requiring commissioner to adopt and use appropriate and applicable prevailing wage rate determinations made by U.S. Secretary of Labor; P.A. 77-614 replaced bank commissioner with banking commissioner within the department of business regulation and made banking department the division of banking within that department, effective January 1, 1979; P.A. 79-325 replaced former provisions of Subsec. (g) which had rendered section inapplicable where total cost of project is less than fifty thousand dollars with provision rendering provisions inapplicable to new construction projects where total cost is less than fifty thousand dollars and to remodeling, refinishing etc. projects where total cost is less than ten thousand dollars; P.A. 80-482 restored banking division as independent department with commissioner as its head following abolition of business regulation department; P.A. 83-537 amended Subsec. (e) to require the local agent to contact the labor commissioner, to ascertain proper wage rates and payment levels, at least ten but not more than twenty days prior to putting the contract out to bid; P.A. 85-355 amended Subsec. (e) to require the agent to certify the total cost of work to be done on the public works project, and to require the contractor to certify the pay scale to be used on the project after having been awarded the contract and amended Subsec. (g) to make the prevailing wage requirements inapplicable to projects costing less than two hundred thousand dollars if new construction, or to projects costing less than fifty thousand dollars if remodeling; pursuant to P.A. 87-9 "banking commissioner" was changed editorially by the Revisors to "commissioner of banking"; P.A. 91-74 made a technical change in Subsec. (a), amended Subsec. (b) to increase fines from one hundred dollars to not less than two thousand five hundred dollars but not more than five thousand dollars and amended Subsec. (g) by changing the cost thresholds from two hundred thousand dollars to four hundred thousand dollars and from fifty thousand dollars to one hundred thousand dollars; P.A. 91-407 changed effective date of P.A. 91-74 from October 1, 1991, to July 1, 1991; P.A. 93-392 deleted reference to Sec. 51-53 in Subsec. (a) and added Subdiv. (2) in Subsec. (f) requiring employers subject to the state prevailing wage laws to file weekly certified payrolls with the contracting public agency and designating such certified payrolls as public records; P.A. 93-435 made technical change in Subsec. (a) to reinstate language in existence prior to amendment made by P.A. 93-392, effective June 28, 1993; P.A. 97-263 amended Subsec. (b) to add Subdivs. (1) and (2) disqualifying bidders from bidding on contracts with the state until certain requirements are met and to add provision permitting the withholding of payment of money to the contractor or subcontractor, amended Subsec. (d) to change "employee" to "person", amended Subsec. (f) to require monthly submission of certified payroll and to

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make failure to file a certified payroll a class D felony, and amended Subsec. (h) by redefining "employee welfare fund" to include one or more other third parties not affiliated with the employers.

See Sec. 7-112 re applicability of section to construction, remodeling or repair of public buildings by state agencies and political subdivisions of the state.

See Sec. 31-53a re (1) payments to mechanics, laborers and workmen from accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of this section, and their right of action and intervention, (2) the Labor Commissioner's duty to prepare and distribute lists of persons or firms found to be in violation of this section or barred from federal contracts pursuant to the Davis-Bacon Act, and (3) limitation on awarding of contracts to such persons or firms.

Where an employee is working under a contract which violates the statute or fails to provide for pay at least equal to the prevailing wages as fixed by the board, the state is in no position to claim that, if he is injured, compensation should not be based on the prevailing wage as so determined. 135 C. 498. Cited. 223 C. 573, 574, 578, 580, 582- 587, 591- 594.

Cited. 36 CA 29, 32, 38- 40.

Subsec. (a): Cited. 223 C. 573, 581, 583, 585. Cited. 36 CA 29, 38, 40.

Subsec. (b): Cited. 223 C. 573, 583, 585. Cited. 36 CA 29, 30.

Subsec. (d): Cited. 223 C. 573, 584, 587, 590.

Subsec. (e): Cited. 223 C. 573, 584, 585.

Subsec. (f): Cited. 223 C. 573, 581, 584, 585, 592- 594.

Subsec. (h): Cited. 44 CA 397.

Sec. 31-53a. List of violators. Limitation on awarding of contracts. Distribution of accrued payments. Right of action. (a) The State Comptroller or the contracting authority acting pursuant to section 31-53 is hereby authorized and directed to pay to mechanics, laborers and workmen from any accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of said section 31-53 any wages found to be due such mechanics, laborers and workmen pursuant to said section 31-53. The Labor Commissioner is further authorized and directed to distribute a list to all departments of the state and political subdivisions thereof giving the names of persons or firms whom he has found to have disregarded their obligations under said section 31-53 and section 31-76c to employees and subcontractors on public works projects or to have been barred from federal government contracts in accordance with the provisions of the Davis-Bacon Act, 49 Stat. 1011 (1931), 40 USC 276a-2. No contract shall be awarded by the state or any of its political subdivisions to the persons or firms appearing on this list or to any firm, corporation, partnership, or association in which such persons or firms have an interest until a period of up to three years, as determined by the Labor Commissioner, has elapsed from the date of publication of the list containing the names of such persons or firms.

(b) If the accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of section 31-53 are insufficient to reimburse all the mechanics, laborers and workmen with respect to whom there has been a failure to pay the wages required pursuant to said section 31-53, such mechanics, laborers and workmen shall have the right of action and of intervention against the contractor and his sureties conferred by law upon persons furnishing labor or materials, and in such proceedings it shall be no defense that such mechanics, laborers and workmen accepted or agreed to accept less than the required wages or that such persons voluntarily made refunds.

(P.A. 73-566, S. 2; P.A. 78-362, S. 1, 3; P.A. 91-74, S. 2; 91-407, S. 40, 42; P.A. 93-392, S. 2; P.A. 97-263, S. 15.)

History: P.A. 78-362 required that list distributed by commissioner to departments of the state and to its political subdivisions contain names of those who have been barred from federal government contracts in accordance with provisions of Davis-Bacon Act in Subsec. (a); P.A. 91-74 amended Subsec. (a) by increasing the period of ineligibility from three years to five years; P.A. 91-407 changed effective date of P.A. 91-74 from October 1, 1991, to July 1, 1991; P.A. 93-392 amended Subsec. (a) to add reference to Sec. 31-76c, to require that list distributed by labor commissioner to departments of the state and to its political subdivisions contain names of those who have violated overtime laws of the state on public works projects and to decrease the period of ineligibility from five to a maximum of three years, as determined by the commissioner; P.A. 97-263 incorporated changes to Sec. 31-53 by reference.

Cited. 223 C. 573, 574, 577, 580- 583, 587, 592, 593.

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Sec. 31-54. Rate of wages for work on state highways. The Labor Commissioner shall hold a hearing at any required time to determine the prevailing rate of wages upon any highway contract within any specified area on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in section 31-53, upon any classifications of skilled, semiskilled and ordinary labor. Said commissioner shall determine the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in section 31-53, in each locality where any highway or bridge is to be constructed, and the Commissioner of Transportation shall include such rate of wage on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in section 31-53, or in lieu thereof, in cash as part of wages each pay day, for each classification of labor in the proposal for the contract and in the contract. The rate and the amount so established shall, at all times, be considered as the minimum rate of wage on an hourly basis and the amount of payment or contributions to an employee welfare fund, or cash in lieu thereof, for the classification for which it was established. Any contractor who pays any person at a lower rate of wage on an hourly basis or the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in section 31-53, or where he is not obligated by any agreement to make payment or contributions to the employee welfare funds, as defined in section 31-53, and fails to pay the amount of such payment or contributions directly to the employee as a part of his wages each pay day, than that so established for the classifications of work specified in any such contract shall be fined not more than two hundred dollars for each offense. The provisions of this section shall apply only to state highways and bridges on state highways.

(1949 Rev., S. 2206; March, 1950, S. 1194d; 1961, P.A. 486, S. 2; 1967, P.A. 494, S. 2; 1969, P.A. 768, S. 260; P.A. 97-263, S. 17.)

History: 1961 act added establishment of rate on hourly basis and provisions re employee welfare funds; 1967 act replaced references to Sec. 31-78 with references to Sec. 31-53; 1969 act replaced highway commissioner with commissioner of transportation; P.A. 97-263 increased amount of fine from one hundred to two hundred dollars.

See Sec. 7-112 re applicability of this section to construction, remodeling, etc. of public buildings by political subdivisions of state.

Sec. 31-55. Posting of wage rates by contractors doing state work. Every contractor or subcontractor performing work for the state subject to the provisions of section 31-53 or 31-54 shall post the prevailing wages as determined by the Labor Commissioner in prominent and easily accessible places at the site of work or at such place or places as are used to pay its employees their wages.

(1955, S. 3020d; P.A. 97-263, S. 16.)

History: P.A. 97-263 incorporated changes to Secs. 31-53 and 31-54 by reference.

Sec. 31-56. Hours of labor on state bridges. Each contract entered into by the Commissioner of Transportation for the construction, alteration or repair of a state bridge shall contain a provision to the effect that no person shall be employed to work or be permitted to work more than forty-eight hours in any week on any work provided for in such contract. The operation of such limitation of hours of work may be suspended during an emergency, upon the approval of the Commissioner of Transportation.

(1949 Rev., S. 2208; 1963, P.A. 240, S. 2; 1969, P.A. 768, S. 261.)

History: 1963 act added reference to alteration of bridges; 1969 act replaced highway commissioner with commissioner of transportation.

Sec. 31-57b. Awarding of contracts to occupational safety and health law violators prohibited. No contract shall be awarded by the state or any of its political subdivisions to any person or firm or any firm, corporation, partnership or association in which such persons or firms have an interest (1) which has been cited for three or more willful or serious violations of any occupational safety and health act or of any standard, order or regulation promulgated pursuant to such act, during the three-year period

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preceding the bid, provided such violations were cited in accordance with the provisions of any state occupational safety and health act or the Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency or court having jurisdiction or (2) which has received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the bid. Any person who knowingly provides false information concerning the information required pursuant to this section shall be assessed a civil penalty of not less than five hundred dollars nor more than five thousand dollars and shall be disqualified from bidding on or participating in a contract with the state or any of its political subdivisions for five years from the date of the final determination that the information is false. Any political subdivision or any state agency receiving false information pursuant to this section shall notify the Commissioner of Administrative Services and, upon receipt of such notice, the commissioner shall conduct a hearing in accordance with the provisions of chapter 54. Upon a determination that false information was provided, the commissioner shall impose a civil penalty in accordance with the provisions of this section. Such civil penalty shall be paid to the Treasurer or to an official of the political subdivision, as the case may be. Any civil penalty imposed pursuant to this section may be collected in a civil proceeding by any official of a political subdivision authorized to institute civil actions or, in the case of the state, by the attorney general, upon complaint of the Commissioner of Administrative Services.

(P.A. 89-367, S. 6.)

Sec. 31-57d. Disqualification of certain contractors from bidding on, applying for or participating in public works contracts with the state: Disqualification by Commissioner of Transportation; procedure; causes. Exception permitting disqualified contractor to participate in contract or subcontract. (a) As used in this section, the term "contractor" shall mean any person, firm or corporation which has contracted or seeks to contract with the state, or to participate in such a contract, in connection with any public works of the state or a political subdivision of the state.

(b) Disqualification of a contractor is a serious action that shall be used only in the public interest and for the state government's protection and not for purposes of punishment or in lieu of other applicable enforcement or compliance procedures. The causes for and consequences of disqualification under this section shall be separate from and in addition to causes for and consequences of disqualification under sections 4b- 95, 31-53a, 31-57a and 31-57b.

(c) The Commissioner of Transportation may disqualify any contractor, for up to two years, from bidding on, applying for, or participating as a subcontractor under, contracts with the state, acting through the Department of Transportation, for one or more causes set forth under subsection (d) of this section. The commissioner may initiate a disqualification proceeding only after consulting with the Attorney General and shall provide notice and an opportunity for a hearing to the contractor who is the subject of the proceeding. The hearing shall be conducted in accordance with the contested case procedures set forth in chapter 54. The commissioner shall issue a written decision within ninety days of the last date of such hearing and state in the decision the reasons for the action taken and, if the contractor is being disqualified, the period of such disqualification. The existence of a cause for disqualification does not require that the contractor be disqualified. In determining whether to disqualify a contractor, the commissioner shall consider the seriousness of the contractor's acts or omissions and any mitigating factors. The commissioner shall send the decision to the contractor by certified mail, return receipt requested. The written decision shall be a final decision for the purposes of sections 4-180 and 4-183.

(d) Causes for disqualification from bidding on, or participating in, contracts shall include the following:

- (1) Conviction or entry of a plea of guilty or nolo contendere for or admission to commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract;

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- (2) Conviction or entry of a plea of guilty or nolo contendere or admission to the violation of any state or federal law for embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or any other offense indicating a lack of business integrity or business honesty which affects responsibility as a state contractor;
 - (3) Conviction or entry of a plea of guilty or nolo contendere or admission to a violation of any state or federal antitrust, collusion or conspiracy law arising out of the submission of bids or proposals on a public or private contract or subcontract;
 - (4) A willful failure to perform in accordance with the terms of one or more public contracts, agreements or transactions;
 - (5) A history of failure to perform or of unsatisfactory performance of one or more public contracts, agreements or transactions; or
 - (6) A willful violation of a statutory or regulatory provision or requirement applicable to a public contract, agreement or transaction.
- (e) For purposes of a disqualification proceeding under this section, conduct may be imputed as follows:
- (1) The fraudulent, criminal or other seriously improper conduct of any officer, director, shareholder, partner, employee or other individual associated with a contractor may be imputed to the contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the contractor and the contractor knew of or had reason to know of such conduct. The term "other seriously improper conduct" shall not include advice from an attorney, accountant or other paid consultant if it was reasonable for the contractor to rely on such advice.
 - (2) The fraudulent, criminal or other seriously improper conduct of a contractor may be imputed to any officer, director, shareholder, partner, employee or other individual associated with the contractor who participated in, knew of or had reason to know of the contractor's conduct.
 - (3) The fraudulent, criminal or other seriously improper conduct of one contractor participating in a joint venture or similar arrangement may be imputed to other participating contractors if the conduct occurred for or on behalf of the joint venture or similar arrangement and these contractors knew of or had reason to know of such conduct.
- (f) The commissioner may reduce the period or extent of disqualification, upon the contractor's request, supported by documentation, for the following reasons:
- (1) Newly discovered material evidence;
 - (2) Reversal of the conviction upon which the disqualification was based;
 - (3) Bona fide change in ownership or management;
 - (4) Elimination of other causes for which the disqualification was imposed; or
 - (5) Other reasons the commissioner deems appropriate.
- (g) The commissioner may grant an exception permitting a disqualified contractor to participate in a particular contract or subcontract upon a written determination that there is good cause, in the interest of the public, for such action.

(P.A. 93-220, S. 2, 3.)

History: P.A. 93-220 effective July 2, 1993.

APPENDIX 4 - REGULATIONS

STATE OF CONNECTICUT REGULATIONS OF DEPARTMENT OF TRANSPORTATION CONCERNING LOCAL BRIDGE PROGRAM

Sec. 13a-175u-1. Definitions

The following terms shall have the following respective meanings:

(a) "AASHTO" means the American Association of State Highway and Transportation Officials, 444 North Capitol Street, N.W., Suite 249, Washington, D.C. 20001.

(b) "AENGLC" means as of the date grant percentages are determined in accordance with Section 3 of these regulations, the adjusted equalized net grand list per capita of a town prepared as of the immediately preceding January 1 by the State pursuant to Section 10-261 of the General Statutes.

(c) "Bridge design requirements" means the design requirements for a span established by the "Standard Specifications for Highway Bridges" of AASHTO and, in addition, the following:

- (1) minimum life expectancy of 20 years after construction completion;
- (2) an HS-20 limit for a newly constructed or rehabilitated span, except that a municipality may approve a lesser load limit for a rehabilitated span so long as such load limit is not less than a 12-ton single unit load limit;
- (3) compliance with DOT guidelines for fatigue of existing structural elements;
- (4) guide railings of a safe design at the leading ends of a span;
- (5) upgrading of existing parapet and traffic railings to AASHTO standards.

(d) "Bridge" means a structure with defined abutments with a distance between the faces of abutments of 6 feet or more, measured along the centerline of the bridge, and whose superstructure is integral with the roadway.

(e) "Coding Guide" means the "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges", dated December 1995, as may be updated from time to time, prepared by the Federal Highway Administration.

(f) "Commissioner" means the Commissioner of the Department of Transportation.

(g) "Commitment to fund" means a commitment issued to a municipality by the Commissioner to fund the project costs of an eligible bridge project through a project grant, a project loan, or both, in accordance with Section 5 of these regulations.

APPENDIX 4 - REGULATIONS

(h) "Condition rating of substructure" means the numerical rating of from 0 to 9 applicable to the substructure of a bridge determined in accordance with the criteria set forth in the Coding Guide.

(i) "Condition rating of superstructure" means the numerical rating of from 0 to 9 applicable to the condition of the superstructure of a bridge determined in accordance with the criteria set forth in the Coding Guide.

(j) "Construction contract" means an agreement between a municipality and a contractor whereby the contractor undertakes to complete the removal, replacement, reconstruction, rehabilitation or improvement of an eligible bridge.

(k) "Culvert" means (a) a box culvert with a distance between the faces of side walls of 6 feet or more whose superstructure is not integral with the roadway, or (b) a concrete or metal arched structure or a metal plate pipe structure with an interior span length of 6 feet or more. A prefabricated metal, concrete or other pipe culvert does not constitute a "culvert".

(l) "Culvert condition rating" means the numerical rating of from 0 to 9 applicable to the condition of a culvert determined in accordance with the criteria set forth in the Coding Guide.

(m) "Deck condition rating" means the numerical rating of from 0 to 9 applicable to the condition of the deck of a bridge determined in accordance with the criteria set forth in the Coding Guide.

(n) "Eligible bridge" means:

- (1) a bridge which has a condition rating of 4 or less given to any of the following components: superstructure, substructure, or deck condition, or an appraisal rating of 2 or less given to the structure evaluation or waterway adequacy, or
- (2) a culvert with a culvert condition rating of 4 or less.

(o) "Eligible bridge project" means the removal, replacement, reconstruction, rehabilitation or improvement of an eligible bridge by one or more municipalities.

(p) "Factor" means the number equal to the following:

$$\frac{(\text{High AENGLC} - \text{Low AENGLC})}{23}$$

(q) "Filing date" means with respect to any fiscal year the filing date set forth in Section 5 of these regulations.

(r) "Fiscal year" means the fiscal year of the State.

(s) "Grant percentage" means the number equal to the following:

$$33 - \frac{(\text{Municipal AENGLC} - \text{Low AENGLC})}{\text{Factor}}$$

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- (t) "High AENGLC" means the AENGLC of a town which is higher than the AENGLC of any other town.
- (u) "Inventory rating in tons" means the numerical rating denoting the safe sustained load capacity of a structure, determined in accordance with the Load Factor Method described in the Manual For Condition Evaluation Of Bridges. The live load used in the analysis shall be the MS18 (HS 20) truck or lane loading, whichever controls.
- (v) "Local bridge revolving fund" means the local bridge revolving fund created under Section 13a-175r of the Connecticut General Statutes.
- (w) "Low AENGLC" means the AENGLC of a town which is lower than the AENGLC of any other town.
- (x) "Managing municipality" means the municipality designated by those municipalities filing joint preliminary and supplemental applications pursuant to Section 5 of these regulations to act as the municipalities' liaison with the Department of Transportation and to coordinate the efforts of such municipalities in undertaking and completing an eligible bridge project.
- (y) "Manual For Condition Evaluation Of Bridges" means the most recent edition of the "Manual For Condition Evaluation Of Bridges, 1994", dated September 1996, with interim revisions as may be updated from time to time, prepared by the AASHTO Subcommittee On Bridges And Structures, and published by AASHTO.
- (z) "Municipality" means any town, city, borough, consolidated town and city, consolidated town and borough, district or other political subdivision of the State, owning or having responsibility for the maintenance of all or a portion of an eligible bridge.
- (aa) "Municipal AENGLC" means the AENGLC of a municipality, but if no AENGLC is determined for the municipality, then it is the AENGLC of the town in which the municipality is located.
- (bb) "Municipal official" means the chief elected official, town manager, city manager, or other official of a municipality duly authorized to act on behalf of such municipality in connection with the local bridge program.
- (cc) "Physical condition" means the physical condition of a span based on its structural deficiencies, sufficiency rating and load capacity all as determined by the Commissioner.
- (dd) "Preliminary application" means an application prepared in accordance with subsections (a), (b), and (c) of Section 5 of these regulations.
- (ee) "Priority list of eligible bridge projects" means the priority list determined in accordance with Section 2 of these regulations.
- (ff) "Professional engineer" means a professional engineer licensed by the State of Connecticut.
- (gg) "Priority rating" as determined by the Commissioner means:
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APPENDIX 4 - REGULATIONS

- (1) with respect to a bridge, the number equal to the following:

$$SR - 2\left[1 - \frac{(DC + SUB + SUP)}{27}\right] - 4\left[1 - \frac{(IR)}{36}\right]$$

"SR" means sufficiency rating
 "DC" means deck condition rating
 "SUB" means condition rating of substructure
 "SUP" means condition rating of superstructure
 "IR" means inventory rating in tons

- (2) with respect to a culvert, the number equal to the following:

$$SR - 2\left[1 - \frac{(CUL)}{9}\right] - 4\left[1 - \frac{(IR)}{36}\right]$$

"SR" means sufficiency rating
 "CUL" means culvert condition rating
 "IR" means inventory rating in tons

(hh) "Project costs" means the costs of an eligible bridge project determined by the Commissioner to be necessary and reasonable.

(ii) "Project grant" means a grant-in-aid made to a municipality pursuant to Section 13a-175s of the Connecticut General Statutes.

(jj) "Project grant agreement" means a grant agreement between the State and a municipality with respect to a project grant.

(kk) "Project loan" means a loan made to a municipality from the local bridge revolving fund and evidenced by the municipality's project loan obligation.

(ll) "Project loan agreement" means a loan agreement with respect to a project loan as provided for in subsection (c) of Section 13a-175s of the Connecticut General Statutes.

(mm) "Project loan obligation" means an obligation of a municipality issued to evidence indebtedness under a project loan agreement and payable to the State for the benefit of the local bridge revolving fund.

(nn) "Public emergency" means a situation in which the physical condition of a bridge requires it to be closed or its load limit to be reduced substantially resulting in the isolation of, or a significant delay in the availability of emergency vehicle service to, people to such an extent that the safety of such people is jeopardized.

(oo) "Rehabilitation" means the improvement of an existing span in such manner as to preserve the existence of all or any portion of such span.

(pp) "Span" means a bridge or culvert.

(qq) "Structure evaluation" means the overall rating of the structure which takes into account all major structural deficiencies, and evaluates a bridge in relation to the level of service it provides, as compared with a new bridge built to current standards.

APPENDIX 4 - REGULATIONS

(rr) "Sufficiency rating" means the sufficiency rating of a span determined in accordance with the criteria set forth in the Coding Guide.

(ss) "Supplemental application" means the application described in subsection (e) of Section 5 of these regulations.

(tt) "Waterway adequacy" means the appraisal of the adequacy of waterway opening with respect to the passage of flow through the bridge.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-2. Priority List of Eligible Bridge Projects

(a) As of July 1 of each fiscal year, the Commissioner shall establish a priority rating for each bridge or culvert which is located within one or more municipalities, and is owned in whole or in part by a municipality. Each such priority rating shall be based upon the then most recently available data obtained by or submitted to and accepted by the Commissioner.

(b) As of July 1 of each fiscal year, the Commissioner shall rank all spans for which a completed Preliminary Application has been received in the order of their priority ratings, with the span having the lowest priority rating being ranked first and the span having the highest priority rating being ranked last. The list so determined shall constitute the priority list of eligible bridge projects for the then current fiscal year.

(c) Notwithstanding the provisions of subsection (b) of this section, upon receipt by the Commissioner of an application of a municipality, which application shall include all necessary supporting data, the Commissioner may disregard the priority list of eligible bridge projects and issue a commitment to fund an eligible bridge project if a public emergency exists with respect to such project.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-3. Grant Percentage

(a) As of March 1 of each fiscal year, the Commissioner shall determine a grant percentage for each town. The grant percentage of a town shall be applicable to any municipality located in such town.

(b) The grant percentage of a municipality determined as of March 1 of each fiscal year shall be used to determine the amount of the project grant for which a municipality would be eligible under a commitment to fund issued during the next succeeding fiscal year.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-4. Project Costs

(a) The Commissioner shall fund through project grants and project loans only those costs of an eligible bridge project which he finds necessary and reasonable. A cost is necessary and reasonable

APPENDIX 4 - REGULATIONS

if, in its nature or amount, it does not exceed that which would be incurred by a prudent person in the conduct of a competitive business. In determining the necessity and reasonableness of a given cost, the Commissioner shall consider the following:

- (1) whether the cost is of a type generally recognized as reasonable and necessary for the performance of the project taking into account established contracting or construction practices;
- (2) restraints or requirements imposed by such factors as generally accepted sound business practices, Federal and state laws and regulations, and contract terms and specifications;
- (3) generally accepted accounting practices and principles appropriate under the circumstances;
- (4) whether the cost would be incurred by a prudent businessman under the circumstances, considering his responsibilities to the owners of his business, his employees, his customers, the government, and the public at large; and
- (5) any limitations or exclusions set forth in these regulations or the applicable project grant agreement or project loan agreement.

(b) In any given project the reasonableness or necessity of certain items of cost may be difficult to determine. In order to avoid a possible subsequent disallowance or dispute based on a cost being found unnecessary or unreasonable, a municipality may seek advance approval from the Commissioner as to the treatment to be accorded such cost.

(c) Those items of cost which ordinarily will be considered eligible project costs include:

- (1) preliminary engineering activities, including engineering studies undertaken to determine whether a bridge is eligible for inclusion on the priority list of eligible bridge projects, provided that the aggregate cost thereof does not exceed 15% of the construction costs of the project;
 - (2) property acquisition;
 - (3) construction engineering services including inspection and materials testing, provided that the cost thereof does not exceed 15% of the construction costs of the project;
 - (4) construction costs;
 - (5) municipally owned utility adjustment and relocation costs; and
 - (6) in the case where a municipality undertakes a project using its own labor, equipment and material, the following:
 - (A) payroll costs of municipal employees working on the project;
 - (B) burden and fringe costs, such as FICA, vacation pay, sick leave pay, and pension contributions, of such employees so long as such costs can be audited;
 - (C) documented costs of materials;
 - (D) costs per hour of an item of equipment so long as such costs can be audited; if such costs cannot be audited then the then current equipment charges published by the Federal Emergency Management Agency.
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(d) Any project costs incurred prior to the start of construction of an eligible bridge project will be eligible for reimbursement so long as actual construction of the project for which such costs were incurred commences no earlier than the date upon which the Commissioner issues a commitment to fund the project.

(e) Those items of cost which ordinarily will not be eligible for local bridge program funding include:

- (1) administration, including the wages or salaries of municipal employees not working directly on the project;
- (2) overhead costs of a municipality performing construction on its own account; and
- (3) interim or final audits.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-5. Application for Project Grants and Project Loans; Issuance of Commitments to Fund

(a) A municipality must file a completed preliminary application with the Commissioner on or before March 1 in each fiscal year, unless otherwise extended by the Commissioner, in order to be eligible to receive a commitment to fund during the fiscal year next following such date.

(b) Any municipality which submits a completed preliminary application and which does not receive a commitment to fund as provided in subsection (a) of this section shall be required to resubmit such preliminary application for it to be reconsidered for funding during the next succeeding fiscal year, or shall notify the Commissioner in writing that the municipality wants such preliminary application as previously submitted to be so reconsidered.

(c) A preliminary application shall provide all information requested by the Commissioner on the Preliminary Application form.

(d) Following each filing date the Commissioner shall rank in the order of the priority list of eligible bridge projects then in effect each preliminary application which is complete. On or before June 30 of the then current fiscal year, the Commissioner shall issue commitments to fund, in the order of such priority list, each eligible bridge project the construction of which is scheduled to commence within the next succeeding fiscal year, to the extent moneys therefore are available, provided, however, that a municipality may request a waiver of the construction commencement date from the Commissioner if justification can be provided for not commencing construction of an eligible bridge project within the next succeeding fiscal year. However, for eligible projects for which the preliminary application was filed on or before October 1, 1984, or such later date as may be established by the Commissioner, commitments to fund shall be issued by the Commissioner within 90 days of such date.

(e) A commitment to fund shall lapse (1) as to a project loan or a project grant if the municipality's supplemental application as filed with the Commissioner contains estimated project costs in excess of those set forth in the municipality's preliminary application and insufficient moneys remain to fund the amount of the project loan or project grant or both, as the case may be, being requested, or (2) a municipality fails to file with the Commissioner within 270 days of the date its commitment to

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fund is issued, unless any such date is extended by the Commissioner for good cause shown, a completed supplemental application which shall contain all information requested by the Commissioner on the Supplemental Application form.

(f) In the case of an eligible bridge project involving more than one municipality, only one preliminary application and one supplemental application shall be filed. Each such application shall contain all the information required by these regulations with respect to each participating municipality and the preliminary application shall designate the managing municipality.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-6. Funding

(a) After a supplemental application is deemed complete by the Commissioner he shall enter into a project loan agreement or a project grant agreement or both, as the case may be, with the filing municipality, pursuant to which the State shall, on the date all of the conditions precedent to funding are met, pay to the municipality the project grant or make the project loan, or both.

(b) Subject to the terms and conditions set forth in each project grant agreement and project loan agreement, the Commissioner shall be obligated to fund the amount of project costs equal to the sum of (1) the municipality's grant percentage multiplied by the project costs allocable to such municipality and (2) the project loan amount requested by the municipality up to 50% of the project costs allocable to it.

(c) In addition to any other conditions precedent to funding the project established by the Commissioner, each project grant agreement and project loan agreement shall include the following conditions precedent to funding, if applicable:

- (1) certified copies of all bids of contractors;
 - (2) written justification for awarding the construction contract to any person other than the lowest bidder;
 - (3) evidence that the municipality and contractor have entered into a legally binding construction contract;
 - (4) the municipality has available to it, or has made arrangements satisfactory to the Commissioner to obtain, funds to pay that portion of the project costs for which it is legally obligated and which are not met by project loans or project grants;
 - (5) the municipality has established a tax exempt proceeds fund account for the receipt and disbursement of the proceeds of project loans and project grants;
 - (6) in any case in which an eligible bridge is owned or maintained by more than one municipality, evidence satisfactory to the Commissioner that all such municipalities are legally bound to complete their respective portions of such project; and
 - (7) evidence that the legislative body of the municipality has held at least one public hearing on the eligible bridge project in accordance with subsection (b) of section 13a-175t of the Connecticut General Statutes.
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(d) In addition to any other agreement of a municipality required by the Commissioner, each project grant agreement and project loan agreement shall contain the following agreements:

- (1) the municipality will commence construction of the project within 30 days after the date such agreement or agreements are entered into, unless otherwise extended by the Commissioner;
- (2) the municipality will complete such project no later than the date of completion set forth in its supplemental application, unless otherwise extended by the Commissioner;
- (3) the municipality will operate and maintain the eligible bridge properly after completion of such project.

(Effective October 24, 1984; amended October 7, 1999)

Sec. 13a-175u-7. Project Completion

(a) Upon completion of construction a municipality will (1) certify to the Commissioner that the project is completed and (2) forward to the Commissioner an audit of the project prepared by a certified public accountant.

(b) The Commissioner will review the audit and notify the municipality of any overpayment or underpayment of project costs by the State. In case of underpayment, the Commissioner shall as soon as practicable, but in no event later than 90 days after determining such underpayment, reimburse the municipality for such underpayment. In case of overpayment the municipality shall as soon as practicable but in no event later than 90 days after such notification, reimburse the State for such overpayment.

(c) Any interest earned by a municipality from the proceeds of a project grant or a project loan shall be expended by the municipality solely for transportation purposes within the municipalities.

(Effective October 24, 1984)

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE **DOCUMENT**

Supplemental Guidelines for Preparing Riverine Hydraulic Analyses in Permit Applications Submitted to the Inland Water Resources Division Including:

- **Inland Wetlands and Watercourses Permits**
- **Stream Channel Encroachment Line Permits**
- **401 Water Quality Certifications**
- **Water Diversion Permits**
- **Dam Construction Permits**
- **Flood Management Certification Approvals**

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APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT

SECTION 1. INTRODUCTION*Purpose of Guidelines*

These guidelines have been prepared by the Inland Water Resources Division (IWRD) to assist engineers in the preparation of engineering reports where hydraulic modeling is required. Such engineering reports are required to be submitted with IWRD permit applications for projects that fall within the IWRD's jurisdiction. Specifically, these guidelines detail the documentation necessary to demonstrate that a project is in compliance with the requirements of the State of Connecticut Flood Management Statutes and Regulations (Sections 25-68b through 25-68h of the Connecticut General Statutes [CGS] and Sections 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies [RCSA]) applicable statutes and regulations. It also details the preferred format in which the documentation should be submitted to the Department of Environmental Protection (DEP). It does not include the modeling requirements for open channel modifications, storm drainage systems, or stormwater detention facilities. Further information on these specific types of projects may be found in RCSA Section 25-68h-3.

Note to Users

These guidelines are intended for persons with a background in hydraulic modeling, therefore it is assumed that technical terms are generally understood and do not need to be explained. Applicants should remember that these guidelines have been prepared to outline a suggested format for documenting and presenting your modeling work and are not intended to provide training in the design of bridges, roadways, commercial site development, or wetlands mitigation. Compliance with these guidelines does not create a presumption that your project will be approved. Applicants should review all applicable statutes and regulations prior to preparing an application, including, where applicable, the provisions of the coastal management statutes, Chapter 444 of the general statutes.

When is a Hydraulic Analysis Required?

In any case where changes are proposed in a floodplain or in a watercourse which may affect the conveyance of flood flows, hydraulic information as outlined in this report is required. This includes but is not limited to; bridge/culvert replacements or relocations of any kind, bridge superstructure replacement if the hydraulic opening of the bridge is changed in any way, channel modifications including the placement of bank stabilization material, fill placed in a floodplain, excavation in a floodplain, or any combination of fill and excavation. The complexity of the analysis depends on whether special circumstances exist, such as the presence of a Federal Emergency Management Agency (FEMA) floodway or stream channel encroachment lines (SCCEL) at the site.

SECTION 2. GOVERNING POLICIES

The following statutes and regulations establish the Flood Management policies and practices of the DEP:

- State of Connecticut Flood Management Statutes and Regulations (CGS Sections 25-68b through 25-68h and RCSA Sections 25-68h-1 through 25-68h-3). All applications for permits in the programs administered by the IWRD are reviewed to insure that the proposed activities are in conformance with applicable flood management standards and criteria.

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT

- National Flood Insurance Program (NFIP) (44 CFR, Chapter 1, Subchapter B, Part 60.3). The NFIP standards and criteria are the basis for the minimum requirements of the State's Flood Management Program.
- Inland Wetlands and Watercourses (CGS Section 22a-39 through 22a-45a), Dam Construction (CGS Section 22a-401 through 22a-411), Water Diversion (CGS Section 22a-365 through 22a-379a), Water Quality Certifications under Section 401 of the Federal Clean Water Act (33 USC 1341), and Stream Channel Encroachment (CGS Sections 22a-342 through 22a-349). These programs regulate Connecticut's inland water resources. Applications for permits in these programs are evaluated for environmental and flooding impacts.
- CGS Section 13a-94 requires that all structures built over or adjacent to streams in connection with state highway projects conform to the Stream Channel Encroachment Program requirements.

Most communities in Connecticut have adopted Flood Insurance Rate Maps and Floodway maps in conjunction with the NFIP administered by the FEMA for use in regulating development within floodplains. Many streams and rivers in these communities have been studied for the purpose of defining a flood plain area and a floodway area. The floodway is the central part of the floodplain that is reserved to ensure that a sufficient part of the flood plain will remain open to carry flood waters efficiently.

The following are some of the standards and criteria which must be met in order for a project to be consistent with the State's Flood Management Policies:

- **Floodplains.** RCSA Section 25-68h-2(c)(1) prohibits any activity in a floodplain which would adversely affect the hydraulic characteristics of the floodplain. This includes floodplains in both inland areas and coastal areas. All permit applications for projects proposed within a floodplain must demonstrate that the project will not cause adverse impacts to upstream, downstream, or adjacent properties.
- **Floodways.** RCSA Section 25-68h-2(c)(5) and Section 60.3(d)(3) of NFIP regulations prohibit any activity within a regulatory floodway which would result in any increase in the base flood water surface elevation. In order for any proposed project which does not meet these standards to be approved, a map revision is required from FEMA.
- **10-Year Profiles.** RCSA Section 25-68h-2(c)(5) prohibits any activity within a regulatory floodway which would result in an increase in the elevation of the 10-year water surface profile.
- **Stream Channel Encroachment Lines.** The State of Connecticut has established Stream Channel Encroachment Lines (SCELs) on approximately 270 miles of flood prone rivers in the state. This program differs from the Flood Management Certification program in the scope of review and the extent of jurisdiction, as well as the base flood elevations and discharges for individual watercourses. Maps showing the regulated areas are on file with the IWRD and are also on file in the Town Clerk's offices in each town where lines have been established.

CGS Section 22a-342 requires that the DEP evaluate proposed encroachments based on the flood-carrying and water storage capacity of the waterways and floodplains, flood heights, hazards to life and property, and the protection and preservation of the natural resources and

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT

ecosystems of the state, including but not limited to ground and surface water, animal, plant, and aquatic life, nutrient exchange, and energy flow, with due consideration given to the results of similar encroachments constructed along the reach of waterway.

- **Natural Profile.** Bridges and culverts should be designed so that the proposed water surface profile does not exceed the natural profile by more than one foot for the 100-year or SCEL floodplain analysis. This applies to the replacement of existing bridges and culverts as well as the construction of new structures. If the proposed profile does not meet this standard, documentation must be submitted justifying the basis for the design. This standard does not apply to DOT Flood Management Certifications for projects which have a drainage area of less than one square mile. These projects have been exempted by regulation from Flood Management standards. Notwithstanding the above, any increase over the existing water surface elevations will only be permitted provided no adverse impacts are created.
- **Water Resources.** The project should not adversely affect the environment or long range water resource planning or impair proper management and use of the water resources of the State.
- **Fish Habitat.** The project must provide for adequate fish passage and maintenance of fish habitat in watercourses which may support fish. DEP Fisheries should be contacted in advance for technical advice for any project which may impact fisheries

SECTION 3. FUNDAMENTALS IN MODELING RIVER HYDRAULICS

Selection of Computer Modeling Programs. Most hydraulic models used in support of permit applications are one-dimensional models for calculating water surface profiles which assume steady gradually varied flow. Programs such as HEC-2, HEC-RAS, WSP2 and WSPRO are all acceptable models, since these are models which are in the public domain and can be recreated for review. In general, no other models should be submitted to the IWRD.

Other models may be acceptable, with prior approval from DEP, provided they use the standard step method of solving the Energy Equation:

$$\boxed{WS_2 + a_2 V_2^2 / 2g = WS_1 + a_1 V_1^2 / 2g + h_e}$$

Unique situations may require specialized modeling, such as two- or three- dimensional models. If you are not using one of the above listed models, you must consult with the IWRD before submitting your application. The models used by FEMA to map floodplains assume subcritical flow and applicants recreating a FEMA study should apply the same assumption. In almost all cases, the FEMA analysis is available only on hard copy which necessitates recreating the files for use on the computer. This should not be a problem unless the FIS utilized the U.S. Geological Survey's E431 or J635 computer programs. Neither of these programs can be run on a personal computer so it is necessary to convert the input data to another hydraulic model. In all other situations, the applicant should utilize the latest version of the same computer model as was used by FEMA, except that HEC-2 data may be run in the program HEC-RAS.

Design Discharge. If the subject site is located in a FEMA floodway or a *numbered "A"* zone, the discharge for analyzing the acceptability of a project at that site must be the same discharge used by

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT

FEMA in establishing the floodway or *numbered* “A” zone designation for the site. If the subject site is located in an *unnumbered* “A” zone or is not located in a FEMA flood zone, such that no detailed study is available), the applicant must establish an appropriate design discharge for evaluating the acceptability of the project at that site. If an applicant uses a design discharge other than the discharge used by FEMA, the applicant must still evaluate the project using the FEMA design discharge and provide a detailed justification as to why another discharge was selected. Both the applicant’s selected design discharge and the FEMA discharge analyses must be submitted in the application package. If the subject site is riverward of SCEL, an analysis using the SCEL discharge must also be submitted. If the site is located in a floodway, the 10-year discharge must also be evaluated.

Existing Conditions Model

FEMA Cross Section Data. As a starting point for any hydraulic modeling of a river mapped by FEMA, the most recent cross sections published in the specific community’s Flood Insurance Study should be used. Applicants should contact FEMA Region I – Mitigation Division at 617-223-9561 for information on how to obtain a copy of the FIS back-up data. Applicants should note that the average request takes approximately 2 to 4 weeks to fill and costs between \$100 and \$200.

FEMA Calibration Run. The back-up data obtained from FEMA must be run “as-is” to check for any differences which may appear simply because a different version of the same model is used, or in cases where a different model is used (as when the original is unavailable to the public). This run must be included in the application package along with a summary of any differences from the published information which may occur.

Use of Cross Sections to Define a Site. An *existing conditions model* and an *existing conditions encroached model* (if a floodway is present) should be developed by utilizing the FIS data and inserting additional cross sections where appropriate to define the project site.

This is often necessary because the FIS section locations are frequently far apart and may not be located within the project limits. In the case where FEMA has accurately modeled an existing condition, the FEMA calibration run may be used for the existing conditions run unless additional cross sections are needed to define a proposed condition. For example, additional cross sections may be needed to define the site of a bridge relocation or widening. (Note: Each cross section from the *proposed conditions model* must have a matching section in the *existing conditions model*.) Existing cross sections should be taken at the locations of the downstream and upstream right-of-way limits in order to define water surface elevations in the areas beyond the roadway right-of-way. Cross section locations should be consistent with the recommendations of the manual for the model utilized.

As a starting point, the inserted cross sections should utilize roughness, contraction and expansion coefficients identical to those used by FEMA. Subsequently, based on the professional judgement of the engineer, these coefficients may need to be adjusted to reflect actual field conditions or if there are difficulties in matching the FEMA model. Such adjustments should be noted and summarized. Cross sections must span the entire floodplain. These cross sections may be a combination of survey data and existing available topographic information where appropriate. If sources other than survey data are used, an explanation should be provided. The floodway limits at the inserted sections should be scaled from the FEMA floodway maps. Floodway limits may not be modified unless a map revision has been issued from FEMA.

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Accuracy of Available FEMA Cross Sections. The FEMA cross sections within the study reach of the proposal should be compared to current survey information at the location of the FEMA cross sections in order to determine their accuracy. In situations where any discrepancies found between the FEMA data and the current survey information are relatively minor (generally matching to within 0.5' is acceptable), the FEMA data should be used to create the *existing conditions model*. The *existing conditions model* will be used for a comparison to the *proposed conditions model*. In cases where the discrepancies between the FEMA cross sections and the current survey information are unacceptable, or obvious input errors are noted, data from the actual site conditions should be utilized.

Map Revisions. Any request to amend or modify an existing floodway must first receive a letter or a conditional letter of map revision (LOMR or CLOMR) from FEMA before DEP will issue an approval. The purpose of a CLOMR is to ensure that the modifications will be acceptable to FEMA. A LOMR is not generally issued until a project is complete. The map revision process may be lengthy, so be sure to allow sufficient time for this process in your project schedule. The applicant should contact FEMA to obtain the most current document which outlines the procedures for obtaining a CLOMR.

When There is no Detailed FEMA Study. If FEMA has not established a flood zone with elevations on the watercourse or has not established a floodway, the applicant must develop an *existing conditions model* using field survey data and reasonable coefficients with a calculated design discharge based on a hydrologic model which is appropriate for the site such as TR-55.

In some cases where a culvert is proposed to be replaced in an area which has an unnumbered "A" zone, use of a model such as HY-8 may be acceptable for use in calculating differences in the water surface elevation upstream of the proposed culvert.

When FEMA Data is Unavailable. In some situations the FEMA input information is not available. In this case, applicants must provide the DEP a letter from FEMA indicating that the requested material cannot be supplied. Applicants may then exclusively use field survey data to produce a model that matches as closely as possible to the published FIS model. A closer match may be made by adjusting roughness, contraction, and expansion coefficients. At minimum, cross sections should be taken as close to FEMA sections as possible. On rivers with established SCEL, cross section information from the SCEL study may be available from the DEP.

Natural Conditions Model

For new or replacement bridges and culverts, a *natural conditions model* must be developed. The natural conditions model is intended to show the floodplain in the vicinity of the project as it would be without any artificial encroachments or modifications. For replacement bridges the natural profile may be developed by modifying the *existing conditions model* to remove the bridge or culvert structure and any approach embankments. In the case where a downstream bridge or dam affects the tailwater of the bridge at the site, two models are required. The first model should show the natural conditions with all obstructions removed. The second model should show the proposed conditions with the downstream obstruction removed but the subject bridge left in place. This will more clearly demonstrate the effect of the subject bridge in comparison with natural conditions. The backwater value of the proposed bridge will be considered to be the difference between the two models.

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT***Proposed Conditions Model***

The *proposed conditions model* and *proposed conditions encroached model* (if floodway is present) is developed by modifying the *existing conditions model(s)* to reflect proposed changes. The *proposed conditions model* is compared to the *existing conditions model* to evaluate the hydraulic impacts of the project. The proposed project must not increase the water surface elevations for the 10 or 100 year floodway (encroached condition) profiles. If the proposed activity causes any increases, then the project design must be modified to eliminate these increases. If increases are shown for the unencroached 100 year profile or the SCCEL profile, the impacts must be thoroughly discussed. Adverse impacts are not permissible. Additionally, for bridge and culvert projects, the proposed profile must be compared to the natural profile to determine if the design satisfies the goal of no more than one foot of backwater over the natural profile for the 100 year and/or the SCCEL floodplain analysis. The applicant must satisfy this goal unless they can demonstrate unusual circumstances such as adverse property or environmental impacts.

When a floodway run is required, you must use FEMA's discharge. Do not propose increases in the floodway model over the model representing existing field conditions. Remember, proposed encroachments into the regulatory floodway will not be permitted if the project results in any increase (greater than **0.00** feet) in either the 10 or 100-year floodway (encroached condition) profiles. The IWRD will not approve an increase in the floodway elevations unless FEMA has granted a conditional letter of map revision. Some increase in the floodway elevations within the roadway right-of-way of a state project may be acceptable without FEMA's prior approval.

If the proposed unencroached 100-year water surface profile will be lower than the published information by more than 0.5 feet or if there are significant differences in the published data and the proposed water surface elevation due to modeling differences or errors in the FEMA data, you must notify FEMA by letter with a copy to the town and DEP once the project is complete and provide to FEMA the hydraulic model information with the 500 year, 100 year, 50 year and 10 year flood profiles and an equal conveyance floodway. The letter sent to FEMA should make it clear that the information is being submitted for FEMA's future mapping use and not for a current map revision, as per agreement between DEP and FEMA. The address for the FEMA Region I office (serving Connecticut) is:

J.W. McCormack Post Office and Court House
Room 442
Boston, MA 02109
617-223-9561

SECTION 4. SUMMARY AND PRESENTATION OF INFORMATION

The results of the hydraulic modeling should be clearly summarized in the engineering report to show water surface elevations, velocities and cross section information. This is best done through tables, profiles, cross section plots, and a clear narrative. A well-organized presentation can greatly facilitate timely permit reviews.

Hydraulic analyses should be submitted with the input data and full output tables. In the engineering report, conclusionary statements should be explained and fully supported by back-up data. Copies of computer output sheets should be checked for legibility. Often these pages are too light to read after being copied.

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A 3.5" computer diskette or CD (preferred) of all input files contained within the report with an index of these files should be included with the engineering report. Label the disk with the project name. By including this diskette, some additional information requests may be avoided. In addition, if a disk is included, the output of the models need not be submitted; only a hard copy of the input and the summary tables must be included in the submittal.

Narrative. A narrative sufficient to explain the project should accompany the hydraulic analyses. The narrative should contain sections for project description, natural conditions, existing conditions, proposed conditions, and the hydraulic summary. Unusual error messages identified by the hydraulic analysis should be explained and/or commented upon. A complete narrative will assist DEP staff to understand unusual circumstances or complex situations pertaining to the project. Any other information that the applicant feels will be helpful in assessing the project should also be included. Make sure the copies of the engineering report, especially computer printouts and hand computation sheets are legible. If the report is bound, make sure that no portions of the computer printouts are obscured. Reports should be tabbed and labeled so that sections can be easily located.

Profiles. In a report containing more than one discharge, profiles should show existing, proposed, and natural conditions on one page for each discharge. This enables an easy comparison of the profiles. A separate page should be used for each discharge. The existing and proposed profiles should converge both upstream and downstream of the project site or at least pass through critical depth. If decreases in water surface elevation are shown, convergence within 0.5' are acceptable. If not, the analysis should be extended upstream until convergence or critical depth is reached.

Cross Section Plots. The report should include plots of the cross sections, looking downstream. Cross section plots should be clear and have proposed conditions superimposed onto the existing conditions. Computer generated plots are often of a scale which does not clearly differentiate between existing and proposed conditions. In these situations, the applicant should provide drafted plots of the project area large enough so that existing versus proposed conditions are clearly depicted. The scale of the plots should be clearly denoted. A plan sheet showing cross section locations is required.

Tables. Table fields should be clearly labeled. A separate table should be shown for each discharge. Each cross section that is used in the model should be listed together with the published FEMA water surface elevation, existing and proposed conditions. FEMA lettered sections should be labeled. Include the differences between the FEMA and the existing model, and the difference between the existing and the proposed model.

Summary

Include in the hydraulic package:

- Natural, existing, and proposed models based on the appropriate discharge.
- Computer diskette or CD (preferred) with input.
- Adequate narrative.
- Hydraulic Data Sheets.
- Profiles – one page per discharge.
- Cross sections.

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- Tables – one table per discharge.
- Plans including erosion and sediment controls and water handling

SECTION 5. OTHER IMPORTANT CONSIDERATIONS

Fish Passage. Projects must be designed to accommodate fish passage and maintain fish habitat where needed. If a culvert is proposed instead of a bridge, some methodologies used to provide fish passage are: sinking a box culvert bottom roughly one foot to allow accumulation of natural sediment in the box, providing a low flow channel, or using an inverted “U” type culvert in order to leave a natural bottom. Whenever a box culvert is proposed as a new river crossing or as a replacement for an existing bridge, it is advisable to contact the DEP Fisheries Division prior to completing plans for submittal to DEP. The main office telephone number for the DEP Fisheries Division is 860-424-3474.

Spanning the Floodway. When an existing bridge spans the floodway, with its abutments at or outside the floodway limits, a proposal to replace the bridge in kind or with a greater span will not require a floodway evaluation provided the low chord of the existing and proposed bridge is higher than the floodway elevation. This information must be clearly shown on plans and elevations. In the design of a new crossing, it is highly recommended that no part of the structure be within the floodway. This will eliminate the need for a floodway assessment but does not negate the need for obtaining an environmental permit(s) or approval of a flood management certification.

Overtopping of Local Bridges. Under certain limited conditions defined by regulation, local bridges may be allowed to overtop by floodwaters if site constraints so warrant. In this case, the application must state how the bridge will be closed to traffic in the case of a flood, what detour routes are available, and that the bridge will be posted as being prone to flooding.

Flood Storage. When a hydraulically inadequate bridge or culvert is proposed to be replaced and a significant drop in backwater at the structure is expected, the applicant must investigate whether the subsequent loss of upstream flood storage will have an adverse downstream impact. Information provided to DEP to show the downstream impact should include the volume of storage upstream of the bridge lost in acre-feet. If the volume of storage lost is significant, more detailed flood storage routing may be required. Measures such as replacing the bridge or culvert in kind may have to be taken to avoid an adverse downstream impact.

Metric vs. English Units. Projects are sometimes designed using metric units, in compliance with past federal mandates. An hydraulic analysis which is completed in metric units may be submitted with an application; however, the summary must contain tables in both English and metric.

Tailwater Control. Occasionally a bridge or culvert will be inundated by backwater from a downstream river or from Long Island Sound. In these cases the hydraulic analysis should generally be conducted using the design inland storm together with a ten-year tailwater elevation, unless it can be demonstrated that use of a different tailwater elevation would be appropriate. DEP should be contacted for concurrence prior to submission of the report.

Channel Restoration. Channel restoration plans must be provided for all open channel work. The plan will help restore and/or create an aquatic habitat suitable for fisheries, if applicable, as well as maintain or improve water quality, recreation, aesthetics and flow capacity. The channel restoration plan

APPENDIX 5 - HYDRAULIC ANALYSIS GUIDANCE DOCUMENT

should include, as appropriate: avoidance of barriers to fish movement; formation of pools and riffles; provisions for areas of sheltered flow with use of deflectors, boulders, or low check dams; preservation of stream bank vegetation and establishment of new vegetation; use of clean natural bed materials of a suitable size; scheduling of work to minimize conflicts with spawning, stocking, and fishing season; and removal of excess debris. The plan must be designed to avoid adverse hydraulic impacts from obstructions placed in the stream. Consultation with the DEP Fisheries Division is recommended.

Temporary Hydraulic Facilities. Temporary hydraulic facilities include, among other things, temporary bridges, by-pass channels, haul roads or channel constrictions such as cofferdams. The Connecticut Department of Transportation Drainage Manual 2000 (<http://www.CT.gov>), Chapter 6, Section 15, and Appendix 6.F describes the methodology for determining the temporary design discharge for such facilities. Such facilities must be capable of conveying the temporary design discharge for the temporary facility without endangering life or property (including the structure under construction). The temporary hydraulic facilities should not cause roadways to be overtopped or aggravate existing flooding conditions during the temporary design discharge. In the case where such facilities are utilized, the hydraulic design based on the DOT drainage manual must be provided.

Hydraulic Data Sheets. Hydraulic data sheets should accompany every hydraulic report involving a bridge. Data sheets may be found in the DOT Drainage Manual, Chapter 9, Appendix A.

Plans. Plans should be provided that are in conformance with the requirements listed in the application instructions DEP-IWRD-INST-100. Plans must include erosion and sediment controls as well as water handling and sequence of construction information.

Pre-application Meetings. In cases where a project is hydraulically complex or problems with hydraulic modeling are foreseen, a pre-application meeting with IWRD engineering staff is highly recommended.

Copies. Only one copy of a hydraulic analysis should be submitted with an application, regardless of how many total copies of the application are required. This does not include plans which must be submitted in the appropriate number.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER MANAGEMENT
INLAND WATER RESOURCES DIVISION
79 ELM STREET, 3RD FLOOR
HARTFORD, CT 06106-5127
TEL. 860-424-3019
FAX 860-424-4075

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CONNECTICUT DEPARTMENT OF TRANSPORTATION

Stephen E. Korta, II, Commissioner



PRELIMINARY APPLICATION FOR THE LOCAL BRIDGE PROGRAM

Preliminary application is hereby made by the Town/City/Borough of _____ for possible inclusion in the Local Bridge Program for **Fiscal Year 2006** for the following structure:

Bridge Location: _____

Bridge Number: _____ Length of Span: _____ feet

Sufficiency Rating: _____ Priority Rating: _____

Evaluation & Rating Performed by: _____ State Forces _____ Others

If Others, Name of Professional Engineer: _____

Connecticut Professional Engineers License Number: _____

Engineering Firm: _____

Engineer's Address: _____

Engineer's E-mail Address: _____

Description of Existing Condition of Structure: *(attach description)*

Description of Project Scope: _____ *(note repair code; attach narrative/preliminary plans & specifications).*

Municipal Official to Contact *(name & title)*: _____

Mailing Address: _____

Telephone: _____ FAX: _____

E-mail: _____

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees) \$ _____
(Not to Exceed 15% of Construction Costs)

Rights-of-Way Cost (If applicable) \$ _____

Municipally Owned Utility Relocation Cost \$ _____

Estimated Construction Costs (Include Detailed Estimate) \$ _____

Construction Engineering (Inspection, Materials Testing) \$ _____
(Not to Exceed 15% of Construction Cost)

Contingencies *(10% of Construction Costs Only)* \$ _____

Total Estimated Project Cost \$ _____

Financial Aid Data:

Federal Reimbursement: *(Limited to qualifying bridges – See Appendix1)*

Total Estimated Project Cost multiplied by 80%:

Project Reimbursement Request \$ _____

State Local Bridge Project Grant: *(Cannot be combined with Federal reimbursement)*

Allowable Grant Percentage _____% of Total Cost.

Project Grant Request \$ _____

State Local Bridge Project Loan: *(Maximum 50% of total project cost)*

Project Loan Request \$ _____

Schedule: (Anticipated Dates)

Public Hearing Conducted: _____

Design Completion: _____

Property Acquisition Completion: _____

Utilities Coordination Completion: _____

Construction Advertising: _____

Supplemental Application Submission: _____

Start of Construction: _____

Completion of Construction: _____

I hereby certify that the above is accurate and true, to the best of my knowledge and belief.

Signature: _____
(Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Date: _____

Return completed applications to: Mr. Stanley C. Juber
Administrator of the Local Bridge Program
Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, Connecticut 06131-7546

COMMENT FORM

Local Bridge Program Manual – FY 2006

In order to improve this manual for future users, your comments and suggestions would be greatly appreciated. What parts of the manual did you find:

Most helpful, and why? _____

Least helpful, and why? _____

Confusing? _____

I would like more information on: _____

General Comments: _____

Fold along dotted line

Place
Stamp
Here

Stanley C. Juber
Local Bridge Program, Room 3300
Connecticut Department of Transportation
PO Box 317546
Newington, CT 06131-7546

Fold along dotted line