CONNECTICUT DEPARTMENT OF TRANSPORTATION

The Honorable Emil H. Frankel, Acting Commissioner

PRELIMINARY APPLICATION FOR THE LOCAL BRIDGE PROGRAM

Preliminary application is hereby made by the Town/City/Borough of Southington for possible inclusion in the Local Bridge Program for Fiscal Year **2009** for the following structure:

Bridge Location: West Queen Street over Quinnipiac River

Bridge Number: 04564 Length of Span: 39 feet

Sufficiency Rating: 48.26 Priority Rating: 47.37

Evaluation & Rating Performed by: X 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: K *(note repair code; attach narrative/preliminary plans & specifications).*

Municipal Official to Contact *(name & title)*: Anthony J. Tranquillo, P.E., Town Engineer

Mailing Address: Town Hall, 75 Main Street, Southington, CT 06489

Telephone: 860-276-6231 FAX: 860-628-8669

E-mail: _____

Schedule: (Anticipated Dates)

Public Hearing Conducted:	Sept. 2010
Design Completion:	Jan. 2011
Property Acquisition Completion:	Feb. 2011
Utilities Coordination Completion:	April 2011
Construction Advertising:	Feb. 2011
Supplemental Application Submission:	June 2011
Start of Construction:	April 2011
Completion of Construction:	Dec. 2011

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees) *(Not to Exceed 15% of Construction Costs)*	$ 107,000
Rights-of-Way Cost (If applicable)	$ 30,000
Municipally Owned Utility Relocation Cost	$ -
Estimated Construction Costs (Include Detailed Estimate)	$ 714,000
Construction Engineering (Inspection, Materials Testing) *(Not to Exceed 15% of Construction Cost)*	$ 107,000
Contingencies *(10% of Construction Costs Only)*	$ 71,000
Total Estimated Project Cost	$ 1,029,000

Financial Aid Data:

Federal Reimbursement: *(Limited to qualifying bridges – See Appendix 1)*
Total Estimated Project Cost multiplied by 80%:

Federal Aid Request $ -

State Local Bridge Project Grant: *(Cannot be combined with Federal reimbursement)*

Allowable Grant Percentage 31.98% of Total Cost (*see Appendix 2*).

Project Grant Request $ 329,074

State Local Bridge Project Loan: *(Maximum 50% of total project cost)*

Project Loan Request $ -

I hereby certify that the above is accurate and true, to the best of my knowledge and belief. I also certify that this form has not been modified in any way from that distributed by the Department of Transportation for FY 2009.

Signature: _____
(Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Date: 5-28-08

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

Do not use this form after May16, 2008

BRIDGE NO. 04564
WEST QUEEN STREET over QUINNIPIAC RIVER
SOUTHINGTON, CT

Description of Existing Conditions:

Bridge No. 04564, is a three (3) span reinforced concrete box culvert that carries West Queen Street over the Quinnipiac River in Southington, CT. The existing bridge has an overall length of 39'-0" and provides a 40'-0" roadway, curb-to-curb. Inventory information available from ConnDOT indicates that the bridge has a 34 ton load capacity at the Inventory level for an AASHTO Type 3-S2 loading.

The exposed concrete bridge deck exhibits hollow areas, spalling and deteriorated asphalt patches over approximately 22% of the deck surface and was rated "4"-poor by the last ConnDOT inspection in 2005.

The bridge waterway adequacy is rated good and the culvert has been determined to be stable under the calculated stream scour conditions at the site.

The two-cable guide rail on timber posts and concrete parapets with safety walks do not meet current traffic design standards in geometry, transition stiffness or end anchorage.

Bridge deck surface with over 22% hollow, spalls & patches.

Description of Project Scope:

The proposed scope of this project is to replace the existing culvert top slab with a new reinforced concrete deck with membrane waterproofing and bituminous concrete overlay. The overall length of the project is estimated to be approximately 200 feet with approach paving and guide rail work.

Appropriate traffic barriers will be incorporated on the structure and approach guide rails meeting NCHRP-350 design standards will be installed at each approach corner.

The rehabilitation will be designed in accordance with AASHTO & ConnDOT standards to accommodate HS-25 load capacity. Construction will be in accordance with the ConnDOT Standard Specifications, Form 816. Aesthetics, initial costs and future maintenance requirements will be considered in the design.

It is anticipated that the rehabilitation will be performed in stages and one-way alternating direction traffic will be maintained during the construction using a temporary traffic signal.

G:\WT08\0001\ProjectMgmt\Admin\West Queen Street\Prelim App\ West Queen Summary.doc

Bridge Number 04564

Inspected By: _____ & _____

Sufficiency Rating 59.78
Previous Inspection Date 4/6/2005

BS&E Received ☐ Data Entry By: _____
Copies Made ☐ Data Entry Date: _____

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BRIDGE SAFETY & EVALUATION

STRUCTURE EVALUATION

SHEET 1 OF 2 FORM BRI-19 REV 10/00

SHEET_____ OF_____ (INSP. REPORT)

90) Inspection Date	Inspection Team	91) Frequency	Class
	24	24	01

Indepth Insp	Deck Survey	Access	Flagman
4/5/2005		0	0

CRITICAL FEATURE INSPECTIONS

	Type	Frequency	Team	Date
Fracture:				
Uwater:				
Special:				

RED FLAG ☐

IDENTIFICATION

Bridge Name
Town Name SOUTHINGTON Town Code 70550
5) Inventory Route:
A) Record Type 1
B) Signing Prefix 5 City Street
C) Level of Service 0 None of the bel
D) Route Number 00000
E) Directional Suffix 0 NA
6) Feature Intersected QUINNIPIAC RIVER
7) Facility Carried WEST QUEEN STREET
9) Location 3 MI W. ROUTE 10
11) Milepoint 0.75 Miles
16) Latitude 41 deg 38 min 6.00 sec
17) Longitude 72 deg 52 min 48.00 sec
98) Border Bridge:
A) State Code
B) Percent Responsibility %
C) Border Town Name
99) Border Bridge Structure No

STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:
A) Material 2 Concrete continuou
B) Design Type 19 Culvert (includes fra
44) Structure Type, Approach:
A) Material 0 Other
B) Design Type 0 Other
45) Number of Spans, Main Unit 3
46) Number of Approach Spans 0
107) Deck Structure Type 9 Other
108) Wearing Surface/Protective System:
A) Type of Wearing Surface 1 Monolithic Concrete
B) Type of Membrane 0 None
C) Type of Deck Protection 0 None

AGE AND SERVICE

27) Year Built 1969
106) Year Reconstructed 0000
42) Type of Service:
A) On 5 Highway-pedestria
B) Under 5 WATERWAY
28) Number of Lanes:
A) On 3
B) Under 0
29) Average Daily Traffic 5000
Half ADT?: No
109) Percent Truck 2 %
30) Year of ADT 1993
19) Bypass, Detour Length 1 miles

GEOMETRIC DATA

48) Length of Max Span 12 ft
49) Structure Length 39 ft
50) Curb or Sidewalk Widths:
A) Left 3.7 ft
B) Right 3.7 ft
51) Brg Rdwy width,curb-curb 39.9 ft
52) Deck Width, Out-Out 49.9 ft
32) Approach Roadway Width 40 ft
33) Bridge Median 0 No Median
Deck Area 2046 sqft
34) Skew Angle 42 deg
35) Structure Flared 0
10)Inv. Rte. Min. Vert Clearance 99 ft 99 in
47) Log Inv. Rte. Total Horiz Clr.: 39.9 ft
47) RLog Inv. Rte. Total Horiz. Clr.: ft
53) Min Vert Clearance Over Bridge 99 ft 99 in
54) Min Vert Under Clearance N Ref 0 ft 0 in
55) Min Lat Under Clearance on Right N Ref 99.9 ft
56) Min Lat Under Clearance on Left 0.0 ft

BRIDGE COMMENTS

Three Span Continuous Cast-In-Place R.C. Box Culvert - 9 feet 00 inches by 12 feet 9 inches - No Ballast..

STRUCTURE EVALUATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET_____ OF_____ (INSP. REPORT

Bridge Number	04564
Town Name	SOUTHINGTON
Facility Carried	WEST QUEEN STREET
Feature Crossed	QUINNIPIAC RIVER

NBIS Length: Yes 39

Inspected By: _____ & _____

CLASSIFICATION

112) NBIS Bridge Length	Yes	
104) Highway System	0	Off System
26) Functional Class	19	Urban Local
100) Defense Highway	0	Not Defense Highway
101) Parallel Structure	N	No parallel structure exists
102) Direction of Traffic	2	2-way traffic
103) Temporary Structure		
110) Designated National Network	0	Not on national network
20) Toll	3	On Free Road
21) Maintain	3	Town or Township Highway Agency
22) Owner	3	Town or Township Highway Agency
Report Class	L	LOCAL
37) Historical Significance	5	Bridge is not eligible for National Register

WATERWAY

DrainageBasinCode	5200	
38) Navigation Control	0	No navigation control on waterway
39) Navigation Vert Clr.	0	
40) Navigation Horiz Clr.	0	
116) Vert-Lift Brg Nav Min		
111) Pier Abutment Protection		

PROPOSED IMPROVEMENTS

75A) Type of Work Proposed		
75B) Work Done By		
76) Length of Struct. Improvement		ft
94) Bridge Improvement Cost	$	
95) Roadway Improvement Cost	$	
96) Total Project Cost	$	
97) Year of Improvement Cost Est.		
114) Future ADT		115) Year Future ADT

List No. _____ Project No. _____ Advertised _____

POSTED SIGNS & UTILITIES

Other Posted Signs 1					
Other Posted Signs 2					
Actual P.L. Single Unit Truck	tons		Actual P.L. 4Axle Truck	tons	
Rec. P.L. Single Unit Truck	tons		Rec. P.L. 4Axle Truck	tons	
Actual P.L. Semi-TrailerTruck	tons		Actual P.L. 3S2 Truck	tons	
Rec. P.L. Semi-TrailerTruck	tons		Rec. P.L. 3S2 Truck	tons	
Rec. P.L. All Vehicles	tons		Actual P.L. All Vehicles	tons	
Posted Vert Clearance On Bridge	ft	in		ft	In
Posted Vert UnderClearance	ft	in		ft	In
Posted Speed Limit	35	mph			mph
Utility					
Utility	1	Gas			
Utility	2	Water			
Utility	7	Sewer			

LOAD RATING AND POSTING

31) Design Load	5	Evaluation Code	C
63) Operating Rating Type	5	Year of Evaluation	2005
64) Operating Rating	58.0	70) Bridge Posting	5
65) Inventory Rating Type	5	41) Structure Status	A
66) Inventory Rating	34.0	Open, no restriction	

CONDITION

	Rating	By
58) Deck	N	
59) Superstructure	N	
60) Substructure	N	
61) Channel & Chan. Protection	7	
62) Culverts	4	

APPRAISALS

	Rating	By
67) Structure Evaluation	4	
68) Deck Geometry	4	
69) Under Clear Vert & Horiz	N	
71) Waterway Adequacy	7	
72) Approach Rdwy Alignment	8	
113) Scour Critical	8	

Items 58 Thru 72 Checked By: _____

36) Traffic Safety Features:

A) Bridge Railings	1
B) Transitions	0
C) Approach Guardrail	0
D) Approach Guardrail End	0

OTHER FEATURES

Fence Required	No	Barrel Ladder	No
Fence Present	No	Stand Pipes	No
Fence Height	0.0 ft	Cat Walks	No
Fence Type		Movable Inspection System	No
Fence Material		Loose Concrete Checked?	No
Fence Top Type			

INSPECTION COMMENTS

Proposed Next Indepth Insp Year 2015

Senior Supervisor debishopk kozlowskijc

REVIEWED BY _____ Date _____

Connecticut Department of Transportation
Bridge Inspection Report BRI-18

BRIDGE #: 04564 **INSPECTION DATE:** 4/6/2005

INSPECTION TYPE: Indepth **PREVIOUS INSPECTION DATE:** 1/7/2003 **SNOOPER REQUIRED:** No
INSPECTION PERFORMED BY: Team 5 **SNOOPER USED:** No

TOWN: SOUTHINGTON **FEATURE CARRIED:** WEST QUEEN STREET **YEAR BUILT:** 1969
LOCATION: .3 MI W. ROUTE 10 **FEATURE INTERSECTED** QUINNIPIAC RIVER **YEAR REBUILT:** 0
MAIN MATERIAL: Concrete continuous **MAIN DESIGN:** Culvert (includes frame cul

INSPECTION VISITS:

Inspection Date: 4/5/2005 **Start Time:** 9:00 AM
Temperature: 55 ° F **End Time:** 1:50 PM

INSPECTORS:

Inspector:	A. Ferrara	**Task:**	Inspection
Inspector:	D. Talmont	**Task:**	In-Depth Inspection
Inspector:	D. Trotochaud	**Task:**	Inspection
Inspector:	K. Weir	**Task:**	In-Depth Inspection

58. DECK — OVERALL RATING P

	RATING	
OVERLAY	N	
DECK STR. CONDITION	4	Bare concrete shows approximately 450 square feet +/- of numerous large and small spalls roughly patched with bitumious concrete, some bituminous patches are breaking up and (2) isolated spalls shows rusted rebars. Also large areas of hollow concrete, areas of light scale, and areas of hairline cracking. Bands of sand along shoulder areas from 2 to 4 feet with concrete chips. Total surface deterioration equals approx. 22% +/- of the deck area. General note; used chain drag to locate areas of hollow concrete. See photos & attached sketch.
CURBS	6	Curbs show isolated vertical cracks,areas of light to medium scale and some snow plow damage at ends.
MEDIAN	N	
SIDEWALKS	6	Rating based on previous reports. Up to 2 inches +/- of sand cover.
PARAPET	6	Parapets show random hairline vertical cracks with efflorescence.
RAILING	7	Single pipe rail and "H" posts shows spotty light rust.
PAINT	N	
FENCE	N	
DRAINS	N	
LIGHTING STANDARD	N	
UTILITIES TYPE/SIZE	7	Insulated water pipe. Shows minor dents and holes in protective covering. 15 inch gas pipe show cracks in protective covering. Sewer underground.
CONSTRUCTION JOINTS	6	Longitudinal joint at deck surface sealed with bituminous concrete & shows large bituminous concrete patches along joint. Deck underside shows leakage and efflorescence stains.
EXPANSION JOINTS	N	

59. SUPERSTRUCTURE — OVERALL RATING N

60. SUBSTRUCTURE — OVERALL RATING N

61. CHANNEL PROTECTION — OVERALL RATING 7

Connecticut Department of Transportation
Bridge Inspection Report BRI-18

BRIDGE #: 04564 **INSPECTION DATE:** 4/6/2005

61. CHANNEL PROTECTION **OVERALL RATING** 7

	RATING	
CHANNEL SCOUR	7	Minor at inlet of cell #2, vertical face of floor exposed up to 9 inches high, see attached sketch.
EMBANKMENT EROSION	7	Light to moderate erosion,covered with brush.
DEBRIS	8	
VEGETATION	6	Channel banks are well vegetated, small brush leaning out into channel.
CHANNEL CHANGE	7	Alignment - Adequate. Minor accumulation of stones at inlet.
FENDER SYSTEM	N	
SPUR DIKES & JETTIES	N	
RIP RAP	N	

62. CULVERTS & RETAINING WALL 3 CONTINUOUS SPAN BOX CULVERT AT GRADE **OVERALL RATING** 4

	RATING	
BARREL	N	
CONCRETE	4	See DECK-STR.CONDITION. Rating based on integral format and approx.22% +/- of the top surface of the box roof is deteriorated. Soffit shows some hairline longitudinal cracks with efflorescence in cells #1 and #3. Soffit in cell #2 shows (1) isolated one square foot hollow area along north side of construction joint. Stems generally show minor hairline vertical cracks. Center stems also show full height vertical cracks with some light efflorescence, up to .025 inches wide at water utility opening and crack ending at the longitudinal joint in the soffit. One isolated crack is approx. 1/8 inch open below water pipe opening. Stem #2 at outlet end shows a minor 5 inch x 4 inch construction void. Center stem in cell #3 shows (1) 17 inch by 3 inch hollow area on inside face of larger cutout. Floors show areas of light scale in cells #2 &#3.
STEEL	N	
TIMBER	N	
HEADWALL	7	Headwall shows random vertical hairline cracks with light efflorescence.
CUTOFF WALL	7	Partially exposed at inlet of cell #2 up to approx 9 inches high at center stems.
DEBRIS	6	Cell #1 shows a 55 gallon drum at outlet end,floor covered with silt. Cell #2 minor brush at inlet. Some rocks thru-out.
RETAINING WALL STEM	7	Wingwalls show joint material slipping out.
FOOTING	N	Not visible.

APPROACH CONDITION **OVERALL RATING** 6

	RATING	
APPROACH SLAB	N	
RELIEF JOINTS	N	
APPROACH GUIDE RAIL	7	Cables with wood posts. Some weathered and split posts and loose cables.
APPROACH PAVEMENT	6	Bituminous concrete shows all types of cracking open up to 1/2 inch +/-. West approach shows isolated bituminous patches. East approach shows large bituminous patches with some spalls up to 2 inches deep along deck end.

Connecticut Department of Transportation
Bridge Inspection Report BRI-18

BRIDGE #: 04564 **INSPECTION DATE:** 4/6/2005

APPROACH CONDITION **OVERALL RATING** 6

APPROACH EMBANKMENT 7 Erosion along the north sidewalk.

TRAFFIC SAFETY FEATURES:

BRIDGE RAILINGS	1	
TRANSITIONS	0	
APPROACH GUARDRAILS	0	
APPR. GUARDRAIL ENDS	0	

LOAD POSTING

SINGLE UNIT (TONS)		
HS (TONS)		
4 AXLE (TONS)		
3S2 (TONS)		
ADVANCE WARNING Y/N		
LEGIBILITY		
VISIBILITY/LOCATION		

MISC.

MIN VERT. UNDERCLR.	0' 0"	
POSTED CLR. UNDER BRIDGE	' "	
POSTED CLR. ON BRIDGE	' "	
ADVANCE WARNING (Y/N)	No	
SPEED LIMIT (IF ANY)	35 MPH	
CHARACTER OF TRAFFIC	Moderate volume.	

ADDITIONAL NOTES

ADDITIONAL COMMENTS:

Spans determined by facing west to east. Inlet north.

Inspectors' Signatures: 1) _____ **Date:** __/__/__

2) _____ **Date:** __/__/__

3) _____ **Date:** __/__/__

4) _____ **Date:** __/__/__

P.E. Signature: _____ **Date:** __/__/__

P.E.#: _____

Reviewed by: _____ CDOT **Date:** __/__/__

BRIDGE #: 04564 **INSPECTION DATE:** 4/6/2005