

**CONNECTICUT FEDERAL LOCAL BRIDGE PROGRAM**

**Fiscal Year 2018**

**PRELIMINARY APPLICATION**

**Griffin Road Bridge**

**Hungary Brook**

**Granby, CT**

**ConnDOT Bridge No. 055002**

Prepared for the  
Connecticut Department of Transportation  
Federal Local Bridge Program  
Newington, Connecticut

August 2018

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# CONNECTICUT DEPARTMENT OF TRANSPORTATION



## LOCAL BRIDGE PROGRAM

### PRELIMINARY APPLICATION

Preliminary application is hereby made by the Town/City/Borough of Granby for possible inclusion in the Local Bridge Program for Fiscal Year **2019** for the following structure:

Bridge Location: 0.2 MILES WEST OF HUNGARY ROAD

Bridge Number: 055002 Structure Length: 22.8 feet Curb-to-Curb Width: 19.6 feet

Sufficiency Rating: 31.96 % Priority Rating: 26.18 %

Evaluation & Rating Performed by:  State Forces  Others

If Others, Name of Professional Engineer: Jay A. Costello

Connecticut Professional Engineers License Number: 13202

Engineering Firm: WMC Consulting Engineers

Engineer's Address: 87 Holmes Road, Newington, CT 06111

Engineer's E-mail Address: jcostello@wmcengineers.com

Description of Existing Condition of Structure: *(attach description)*

Description of Project Scope: A *(note Bridge Repair Code as per Figure 5-1 of the current Local Bridge Program Manual; attach narrative/preliminary plans & specifications).*

Name of Municipal Official to Contact: John Ward

Title: Town Manager Telephone: (860) 844-5300 Ext:      Fax:     

Mailing Address: 15 North Granby Road, Granby, CT 06035

E-mail: jward@granby-ct.gov

#### Anticipated Schedule:

(MM/DD/YYYY)

Public Meeting Conducted: 06/01/2019

Design Completion: 10/01/2019

Property Acquisition Completion: 11/01/2019

Utilities Coordination Completion: 10/01/2019

Construction Advertising: 12/01/2019

Supplemental Application Submission: 02/01/2019

(Not applicable for Federal Local Bridge Program Projects)

Start of Construction: 04/01/2020

Completion of Construction: 11/30/2020

**Local Bridge Program – FY 2019 Preliminary Application**

Bridge Number 055002, Town/City/Borough of Granby

**Preliminary Cost Figures:**

Preliminary Engineering Fees (Include Breakdown of Fees)	\$ <u>180,000.00</u>
Rights-of-Way Cost (If applicable)	\$ _____
Municipally Owned Utility Relocation Cost	\$ _____
Estimated Construction Costs (Include Detailed Estimate)	\$ <u>1,980,000.00</u>
Construction Engineering (Inspection, Materials Testing)	\$ <u>297,000.00</u>
Contingencies (10% of Construction Costs Only)	\$ <u>198,000.00</u>
Total Estimated Project Cost	\$ <u>2,655,000.00</u>

**Financial Aid Data:**

NOTE: funding limited to Eligible Bridges as published at [www.ct.gov/dot/localbridge](http://www.ct.gov/dot/localbridge) or those found to be eligible in accordance with Section 2.3 – Priority Lists of the current Local Bridge Program Manual.

**Federal Reimbursement:**

Total Estimated Project Cost multiplied by 80%:

Federal Aid Request \$ \_\_\_\_\_

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

Total Estimated Project Cost multiplied by 50%:

Project Grant Request: \$ 1,327,500.00

Other Source of State or Federal funding received/applied for: \$ \_\_\_\_\_, State/Federal \_\_\_\_\_

Funding program: \_\_\_\_\_

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 2019.

Signature: \_\_\_\_\_



Date: \_\_\_\_\_



Name: John Ward

Title: Town Manager

(Must be signed by Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Return **original signed applications** to:

Mr. Francisco T. Fadul, P.E.  
Project Engineer for the Local Bridge Program  
Connecticut Department of Transportation  
2800 Berlin Turnpike, P.O. Box 317546  
Newington, Connecticut 06131-7546

## 2. Existing Conditions

**Inspection Report Summary Table**

<b>Item No.</b>	<b>Item</b>	<b>Rating</b>	
58	Deck	0	Failed Condition
59	Superstructure	0	Failed Condition
60	Substructure	3	Serious Condition – Loss of section, deterioration, spalling. Local failure is possible. Fatigue cracks in steel are present.
61	Channel & Ch. Protection	6	Bank protection is being eroded. River control devices and/or embankment have major damage. Trees and brush restrict the channel.
62	Culverts	N	Satisfactory Condition
67	Structure Evaluation	0	Bridge Closed
68	Deck Geometry	0	Bridge Closed
	<b>Sufficiency Rating</b>	<b>31.96%</b>	
	<b>Priority Rating</b>	<b>26.18%</b>	

\*See attached I.R. for reference.

## 3. Proposed Condition

According to the bridge rating on the ConnDOT Eligible Bridge List, the **Structure Evaluation** rating is **0** with a Sufficiency Rating of **31.96%** indicate that the bridge would likely warrant full replacement. Replacement would involve the following:

- Removal of existing bridge.
- M&P –Detour traffic.
- Install Precast Next Beams, Parapets, Approach walls.
- Install new Bridge Rail, New Bearing Pads, MBR Guide Rail and end anchorages
- Reconstruct approximately 100 feet of roadway (50 feet each side of bridge)

Estimated construction cost for the work is \$ 1,980,000 a detailed estimate is provided on the following page.

Town of Granby  
 Griffin Road over Hungary Brook  
 Bridge No. 055002  
 WMC Reference No.: 18007.10

Date: 08/10/2018  
 Prepared By: S.A.G  
 Checked By: K.O.E

**Preliminary Cost Opinion**

ITEM NO.	ROADWAY ITEMS	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0202000	Earth Excavation	C.Y.	185	\$ 26.00	\$ 4,810.00
0202529	Cut Bituminous Concrete Pavement	L.F.	100	\$ 6.25	\$ 625.00
0209001	Formation of Subgrade	S.Y.	405	\$ 5.00	\$ 2,025.00
0210820	Water Pollution Control (Estimated Cost)	Est	1	\$ 5,000.00	\$ 5,000.00
0212000	Subbase	C.Y.	115	\$ 60.00	\$ 6,900.00
0219001	Sedimentation Control System	L.F.	415	\$ 7.80	\$ 3,237.00
0406170	HMA S1	Ton	175	\$ 140.00	\$ 24,500.00
0406171	HMA S0.5	Ton	90	\$ 140.00	\$ 12,600.00
0406236	Material for Tack Coat	Gal.	25	\$ 10.00	\$ 250.00
0703011	Rounded Stone Riprap	C.Y.	250	\$ 110.00	\$ 27,500.00
0703030	A Placement of Channel Boulder	Ea.	6	\$ 176.15	\$ 1,056.90
0755013	Geotextile Erosion Control Class A	S.Y.	700	\$ 3.50	\$ 2,450.00
0822001	Temporary Precast Concrete Barrier Curb	L.F.	80	\$ 52.00	\$ 4,160.00
0910170	Metal Beam Rail (Type R-B 350)	L.F.	120	\$ 36.00	\$ 4,320.00
0911923	R-B End Anchorage - Type I	Ea.	4	\$ 1,250.00	\$ 5,000.00
0910173	R-B 350 Bridge Attachment - Vertical Shape Parapet	Ea.	4	\$ 2,692.00	\$ 10,768.00
0925201	Pavement For Railing	S.Y.	120	\$ 65.52	\$ 7,862.40
0944000	Furnishing and Placing Topsoil	S.Y.	100	\$ 10.75	\$ 1,075.00
0950005	Turf Establishment	S.Y.	100	\$ 3.60	\$ 360.00
0969060	A Construction Field Office (Small)	Mo.	9	\$ 1,864.45	\$ 16,780.05
0970006	Trafficperson (Municipal Police Officer)	Est.	1	\$ 2,500.00	\$ 2,500.00
0970007	A Trafficperson (Uniformed Flagger)	Hr	20	\$ 50.00	\$ 1,000.00
0976002	Barricade Warning Light-High Intensity	Day	1440	\$ 1.00	\$ 1,440.00
0979003	Construction Barricade Type III	Ea.	4	\$ 140.00	\$ 560.00
1206013	Removal of Existing Signing	L.S.	1	\$ 1,000.00	\$ 1,000.00
1206023	Removal and relocation of Existing Signing	L.S.	1	\$ 1,000.00	\$ 1,000.00
1208928	Sign Face - Sheet Aluminum (Type III Reflective Sheeting)	S.F.	15	\$ 70.00	\$ 1,050.00
1210101	4" White Epoxy Resin Pavement Marking	L.F.	300	\$ 0.80	\$ 240.00
1210102	4" Yellow Epoxy Resin Pavement Marking	L.F.	300	\$ 0.80	\$ 240.00
1210105	Epoxy Resin Pavement Markings, Symbols And Legends	S.F.	130	\$ 4.25	\$ 552.50
1220027	Construction Signs	S.F.	200	\$ 20.00	\$ 4,000.00
1803071	A Type B Impact Attenuation System (Tangential)	Ea.	3	\$ 1,600.00	\$ 4,800.00
<b>SUBTOTAL</b>					<b>\$ 154,309.35</b>

Town of Granby

Griffin Road over Hungary Brook

Bridge No. 055002

WMC Reference No.: 18007.10

Date: 08/10/2018

Prepared By: S.A.G

Checked By: K.O.E

**Preliminary Cost Opinion**

ITEM NO.	STRUCTURE ITEMS	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0202216	A Excavation and Reuse of Existing Channel Bottom Material	C.Y.	175	\$ 48.00	\$ 8,400.00
0203202	Structure Excavation - Earth (Excluding Cofferdam and	C.Y.	340	\$ 33.00	\$ 11,220.00
0204001	Cofferdam and Dewatering	L.F.	235	\$ 350.00	\$ 82,250.00
0213100	Granular Fill	C.Y.	80	\$ 58.00	\$ 4,640.00
0216000	Pervious Structure Backfill	C.Y.	230	\$ 53.00	\$ 12,190.00
0406171	HMA S0.5	Ton	35	\$ 140.00	\$ 4,900.00
0406173	HMA S0.25	Ton	20	\$ 154.60	\$ 3,092.00
503866	A Removal of Existing Superstructure	L.S.	1	\$ 40,000.00	\$ 40,000.00
0514022	A Prestressed NEXT 28D Beam	L.F.	160	\$ 750.00	\$ 120,000.00
0520036	A Asphaltic Plug Expansion Joint System	C.F.	15	\$ 245.00	\$ 3,675.00
0521021	Steel-Laminated Elastomeric Bearings	C.I.	792	\$ 7.00	\$ 5,544.00
0601000	Class "A" Concrete	C.F.	200	\$ 650.00	\$ 130,000.00
0601073	Class "S" Concrete	C.F.	10	\$ 796.00	\$ 7,960.00
0601201	Class "F" Concrete	C.Y.	160	\$ 1,450.00	\$ 232,000.00
0601502	1/2" Preformed Expansion Joint Filler for Bridges	S.F.	70	\$ 6.25	\$ 437.50
0601510	1" Preformed Expansion Joint Filler for Bridges	S.F.	50	\$ 13.00	\$ 650.00
0602000	Deformed Steel Bars	Lbs.	400	\$ 1.75	\$ 700.00
0602006	Deformed Steel Bars-Epoxy Coated	Lbs.	24500	\$ 2.10	\$ 51,450.00
0702101	Furnishing Steel Piles	Lbs.	44000	\$ 0.90	\$ 39,600.00
0702109	Pre-Augering of Piles	L.F.	370	\$ 196.33	\$ 72,643.21
0702103	A Placing Steel Piles	L.F.	590	\$ 53.00	\$ 31,270.00
0702642	A Test Pile (Steel HP 12 x 53 - 25' Long)	Ea.	1	\$ 9,500.00	\$ 9,500.00
0702643	A Test Pile (Steel HP 12 x 53 - 30' Long)	Ea.	1	\$ 10,000.00	\$ 10,000.00
0702801	Pile Loading Test	Ea.	2	\$ 25,000.00	\$ 50,000.00
0702929	A Drill Rock Socket for Pile Foundations	L.F.	75	\$ 832.00	\$ 62,400.00
0707009	A Membrane Waterproofing (Cold Liquid Elastomeric)	S.Y.	100	\$ 83.00	\$ 8,300.00
0708001	Dampproofing	S.Y.	195	\$ 17.00	\$ 3,315.00
0822005	A Temporary Precast Concrete Barrier Curb (Structure)	L.F.	240	\$ 61.30	\$ 14,712.00
0904051	A 3 Tube Curb Mounted Bridge Rail	L.F.	65	\$ 509.77	\$ 33,135.05
0974001	Removal of Existing Masonry	C.Y.	175	\$ 111.00	\$ 19,425.00
<b>SUBTOTAL</b>					<b>\$ 1,073,408.76</b>

Town of Granby  
 Griffin Road over Hungary Brook  
 Bridge No. 055002  
 WMC Reference No.: 18007.10

Date: 08/10/2018  
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**Preliminary Cost Opinion**

ROADWAY ITEMS	\$	154,309.35
STRUCTURE ITEM	\$	1,073,408.76
<b>SUBTOTAL</b>	<b>\$</b>	<b>1,227,718.11</b>

ITEM NO.	LUMP SUM ITEMS	PERCENTAGE	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0201001	Clearing and Grubbing	2.00%	L.S.	1	\$ 25,000.00	\$ 25,000.00
0971001	A Maintenance and Protection of Traffic	4.00%	L.S.	1	\$ 49,500.00	\$ 49,500.00
0975004	Mobilization and Project Closeout	7.50%	L.S.	1	\$ 92,500.00	\$ 92,500.00
0980001	Construction Staking	1.00%	L.S.	1	\$ 12,500.00	\$ 12,500.00
<b>SUBTOTAL</b>						<b>\$ 179,500.00</b>

<b>SUBTOTAL</b>	<b>\$</b>	<b>1,407,218.11</b>
INCIDENTAL @ 25%	\$	351,804.53
2018 TOTAL	\$	1,759,022.64
<b>SAY 2018 TOTAL</b>	<b>\$</b>	<b>1,760,000.00</b>
Projected to 2020 @ 4% per year	\$	1,979,760.64
<b>SAY 2020 TOTAL</b>	<b>\$</b>	<b>1,980,000.00</b>