Wilton Bridge Capital Plan

Thursday, May 20, 2021

					Approved Grants		*Pending Grant Submissions*		*Potential Federal/Local Grant Submissions*		*Town*								
BRIDGE NUMBER	FEATURED CARRIED	FEATURED CROSSED	Sufficiency Rating	Estimated Cost Opinion FY 2021 dollars	Town Match	Grant Amount	Town Match	Grant Amount	Town Match	Grant Amount	Other Non-Qualifying Grant Bridge Improvements	FY 2020 Capital Plan TOTAL APPROVED	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2025	TOTAL SPENT BY TOWN OF WILTON
5501	Arrowhead Road	Norwalk River	54.50	$ 3,617,000	$ 673,400	$ 2,943,600						673,400							
4975	Lovers Lane	Comstock Brook	42.10	$ 3,087,500	$ 567,500	$ 2,520,000						567,500							
	Pedestrian Bridge	Norwalk River		$ 1,405,200		$ 1,405,200													
4976	Honey Hill Rd	Norwalk River	42.10	$ 3,500,000					$ 700,000	$ 2,800,000					700,000				
161-006	Musket Ridge Lane	Belden Hill Brook	58.44	$ 775,000			$ 387,500	$ 387,500	$ -	$ -				$ 100,000	$ 287,500.00				
161-004	Olmstead Hill Road	Barretts Brook	52.70	$ 35,000							$ 35,000				35,000				
5734	Borglum road	Silvermine Brook	66.10	$ 189,282							$ 189,282				37,856	151,426			
4985	Old Mill Road	Norwalk River	68.20	$ 267,760			$ 38,825	$ 228,935						38,825					
4896	SugarHollow Road	Norwalk River	67.80	$ 2,362,500										50,000				$ 472,500.00	
4978	Old Ridgefield Road	Norwalk River	69.50	$ 579,161			$ 83,978	$ 495,183						83,978					
4980	Middlebrook Farm Rd	Comstock Brook	72.90	$ 90,243			$ 13,085	$ 77,158						13,085					
4355	River Gate Drive	W Branch Saugatuck River	73.60	$ 761,225			$ 110,378	$ 650,847						110,378					
4981	Cannon Road	Norwalk River	76.80	$ 4,650,000					$ 930,000	$ 3,720,000					930,000				
4979	Kent Road	Norwalk River	76.60	$ 366,660												73,332	366,660		
161-002	Nod Hill Road	Comstock Brook	79.40	$ 27,000							$ 27,000					27,000			
4982	Seeley Rd	Norwalk River	79.80	$ 613,498			$ 88,957	$ 524,541						88,957					
5991	Ruscoe Rd	E Branch Silvermine River	79.90	$ -							$ -								
WT-S6	Huckleberry Hill Rd	Parting Brook	80.70	$ 23,000							$ 23,000						23,000		
161-003	Old Boston Rd	Belden Hill Brook	81.00	$ 86,000							$ 86,000						86,000		
6188	Snowberry Lane	E Branch Silvermine River	83.20	$ -							$ -								
WT-S4	St. Johns Rd	Stream	86.50	$ 32,000							$ 32,000						32,000		
161-001	Branch Brook Rd	Barretts Brook	87.40	$ 54,000							$ 54,000						54,000		
WT-S1	Kellogg Drive	Silver Spring Brook	87.50	$ 100,000							$ 100,000						100,000		
WT-S5	Seir Hill Rd	Stream	88.30	$ 23,000							$ 23,000							23,000	
WT-S2	McFadden Drive	Stream	90.00	$ 44,000							$ 44,000							44,000	
4983	Bald Hill Rd	E Branch Silvermine River	90.50								$ -								
6189	Long Meadows Rd	Silvermine Brook	92.70	$ 66,000							*$ 66,000*							66,000	
WT-S3	Springbrook Lane	Stream	99.00	$ 106,000							$ 106,000							106,000	
161-007	Wild Duck Rd	Thayers Brook	100.00	$ 50,000							$ 50,000							50,000	
MISCELLANOUS DESIGN SERVICES				$ 36,000							$ 36,000	-		36,000	36,000	36,000	36,000	36,000	
		Engineering Total		$ 22,947,030	$ 1,240,900	$ 6,868,800	$ 722,724	$ 2,364,163	$ 1,630,000	$ 6,520,000	$ 871,282	$ 1,240,900		$ 521,224	2,026,356	287,758	697,660	797,500	5,571,399
											ADJUSTMENTS FOR INFLATION 3% STARTING FY 2022	$ 1,240,900	$ -	536,860	2,149,762	314,441	785,223	897,593	5,924,779

Notes

Musket Ridge Lane Bridge - Submitted State/Local Bridge Grant - Awaiting State Review 50% Town Match

Honey Hill Rd Bridge & Cannon Rd Bridge -Potential Federal/Local Bridge Grant - 20% Town Match - 80% Federal Reimbursement

Various Bridges - Potential LOTCIP Grant submission - Town pays 100% of Design - State pays 100% of Construction - Submit all Bridges highlighted in purple as 1 application

CONNECTICUT DEPARTMENT OF TRANSPORTATION

LOCAL BRIDGE PROGRAM

PRELIMINARY APPLICATION

Preliminary application is hereby made by the Town/City/Borough of Wilton
for possible inclusion in the Local Bridge Program for Fiscal Year **2021** for the following structure:

Bridge Location: Cannon Road over Norwalk River

Bridge Number: 04981 Structure Length: 75.0 feet Curb-to-Curb Width: 22.1 feet

Sufficiency Rating: 76.80 % Priority Rating: 76.20 %

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: C, G, L, EE *(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: Chris Burney

Title: DPW and Facilities Director Telephone: (203) 563-0152 Ext: ____ Fax: (203) 563-0269

Mailing Address: Town Annex, 238 Danbury Road, Wilton, CT 06897

E-mail: Chris.Burney@wiltonct.org

Anticipated Schedule:

	(MM/DD/YYYY)
Public Meeting Conducted:	06/30/2022
Design Completion:	09/30/2023
Property Acquisition Completion:	09/30/2023
Utilities Coordination Completion:	09/30/2023
Construction Advertising:	11/01/2023
Supplemental Application Submission: (Not applicable for Federal Local Bridge Program Projects)	
Start of Construction:	04/01/2024
Completion of Construction:	11/30/2024

Local Bridge Program – FY 2021 Preliminary Application

Bridge Number 04981, Town/City/Borough of Wilton

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees)	$ 600,000.00
Rights-of-Way Cost (If applicable)	$ 50,000.00
Municipally Owned Utility Relocation Cost	$ 0.00
Estimated Construction Costs (Include Detailed Estimate)	$ 3,000,000.00
Construction Engineering (Inspection, Materials Testing)	$ 700,000.00
Contingencies *(10% of Construction Costs Only)*	$ 300,000.00
Total Estimated Project Cost	$ 4,650,000.00

Financial Aid Data:

NOTE: funding limited to Eligible Bridges as published at 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 $ 3,720,000.00

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

Total Estimated Project Cost multiplied by 50%:

Project Grant Request: $ _____

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 **2021**.

Signature: _____ Date: _____

Name: _____ Title: _____

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

Submit application by email to Francisco.Fadul@ct.gov

Description of Existing Conditions

Bridge No. 04981 carries Cannon Road over Norwalk River in the Town of Wilton, Connecticut. The bridge is located approximately ¼ mile east of US Route 7 and approximately 100 feet west of the intersection of Cannon Road and Pimpewaug Road. There is an at-grade MNRR crossing located approximately 100 feet east of the bridge. The 2-span (34' long each) 75' long bridge superstructure comprises of prestressed concrete deck units supported by concrete abutments and a concrete center pier with spread footings bearing on unknown stratum. The bridge was built approximately 65 years ago in 1956 and construction plans for the bridge are not available. The bridge carries bi-directional traffic in an east-west direction over a 22'-1" roadway curb-to-curb width. There is a 5'-0" wide sidewalk on the north side of the bridge and a 1'-6" wide safety walk on the south side of the bridge. The Average Daily Traffic (ADT) on the bridge is estimated to be 1,740 vehicles (Year 2019) and the roadway over the bridge is classified as a Rural Minor Collector. The Norwalk River flows under the bridge from the north to the south, primarily under the westerly Span 1 with no flows observed under the easterly Span 2.

The following summarizes the condition of the existing bridge components based on a Routine Inspection performed on 10/03/19 by the Connecticut Department of Transportation (Report attached) in accordance with National Bridge Inspection Standards (NBIS):

1. **Deck** (NBIS Item 58): Rating 5 (Fair Condition) – The deck condition rating, due to absence of a deck, is based on the condition of the bituminous concrete overlay which is rated to be in fair condition with areas of substantial cracking, raveling, and potholes. The condition of the steel bridge rail system is satisfactory due to presence of surface rust and the rail system does not meet current safety standards.
2. **Superstructure** (NBIS Item 59): Rating 6 (Satisfactory Condition) – The precast prestressed concrete deck units are in satisfactory condition with areas of spalling and evidence of active leakage through the deck unit joints. The bearing devices are rated to be in satisfactory condition with presence of bulges and tears in the elastomeric pads.
3. **Substructure** (NBIS Item 60): Rating 7 (Good Condition) – The reinforced concrete abutments and pier are rated to be in good condition and wingwalls are rated to be in satisfactory condition with presence of hairline cracking, shallow spalls and light scaling.
4. **Channel & Channel Protection** (NBIS item 61): Rating 6 (Satisfactory Condition) – There is an isolated 20' diameter scour hole that is 1'-6" deep in the channel under the westerly Span 1 near the west abutment. Minor erosion is present along the channel embankments.
5. **Load Rating Capacity** – No Load Rating has been performed on this bridge due to the lack of existing information on the structure. **The bridge has been assigned a judgement Inventory Rating factor of 1.00** since it does not exhibit evidence of any distress during its service life.
6. **Structural Evaluation** (NBIS Item 67): Rating 6 – The structural evaluation is rated to be 6 based on the condition of the superstructure.
7. **Deck Geometry** (NBIS Item 68): **Rating 3** – The Bridge is classified to be **functionally obsolete** due to the curb to curb width of 22'-1". The ADT across the bridge is

approximately 1,740 vehicles, which requires a minimum roadway curb to curb width of 24'-0" to meet Federal and State Standards.

8. **Waterway Adequacy** (NBIS Item 71): Rating 9 – The 1998 Comparative Scour Analysis Report states that a Flood Insurance Study dated June 1990 indicates overtopping of the bridge and west approach under a 100-year flood event.
9. **Scour Critical Rating** (NBIS Item 113): **Rating 3 (Scour Critical)** – The 1998 Comparative Scour Analysis Report recommended a rating of 3 indicating the bridge to be scour critical based on visual inspections and comparison to similar structures due to potential undermining of the pier from a 100-year storm event and presence of channel scour even though the bridge has withstood a 50-year and a 50-75 year storm event in the 1970's.
10. **Sufficiency Rating** of the bridge is calculated to be 76.8

Description of Proposed Conditions

Based on the condition of the existing bridge, a superstructure replacement is proposed in order to eliminate the functional obsolescence of the existing narrow roadway width on the bridge and assuming that the existing abutments/pier will either be determined to be adequate for scour for design storm events or a riprap or permanent sheet piling countermeasure will suffice to provide the necessary protection. A full replacement is not anticipated. The proposed work for a superstructure replacement will involve:

1. Removal of the existing bridge superstructure.
2. Installation of riprap or permanent sheet piling scour countermeasure at the abutments and pier if necessary.
3. Construction of a new two span superstructure to carry a 24'-0" wide roadway and a 5'-0" north sidewalk meeting FHWA and CTDOT design standards.
4. The proposed bridge rail system will comprise of an aesthetically pleasing open bridge rail system meeting current safety standards. The deck out-to-out width is estimated to be approximately 33'-0".
5. The proposed span lengths of 34'-0" will match existing.
6. The proposed superstructure will likely comprise of multiple precast prestressed concrete deck units with Ultra High Performance Concrete (UHPC) closure pours to eliminate the need for a topping slab in order to maintain the existing low chord and hydraulic opening while at the same time avoiding the need to raise the roadway profile due to the presence of an intersection at the east approach and an at-grade railroad crossing at the west approach to the bridge. The proposed superstructure will provide a redundant structure.
7. The proposed bridge superstructure will be supported on the existing concrete abutments and pier. Depending on the existing substructure configuration, corbels could be required to accommodate the widened superstructure.
8. Roadway will be reconstructed approximately 100' at both approaches to the bridge.
9. New guiderails will be installed at all approach corners to the bridge to meet current design standards.
10. Traffic is anticipated to be detoured during construction. A short detour route to the bridge (1 mile) is available.

The construction cost of the project assuming a superstructure replacement is estimated to be approximately $3,000,000 (see attached). The total cost of project is estimated to be approximately $4,650,000 including incidentals and contingencies ($1,000,000), ROW ($50,000) and Engineering ($600,000).

	COMPUTATION BY: TL	DATE: 5/2/21	SHEET: 1 OF: 1
	CHECKED BY:	DATE:	CME PROJECT NO.:
	CLIENT: ConnDOT Federal Local Bridge Liaison Project		CLIENT PROJECT NO.: 161-TBD Wilton
ITEM: Bridge #04981 Prelim Application Estimate			

Superstructure Replacement Estimate

1. Replace existing bridge superstructure. New bridge superstructure to provide for an out-to-out width of 33'-0" to accommodate a 24'-0" curb-to-curb roadway width and a 5' wide sidewalk.
2. New structure likely to be prestressed concrete deck units with UHPC Closure pours supported by existing concrete abutments and pier. Assume corbels for substructures to support widened bridge width. Scour countermeasure to comprise of riprap or permanent sheeting.
3. Replace the bridge and approach rail at all four approaches to meet current standards
4. Reconstruct Approx. 100' of approach roadway on each side

STRUCTURE ITEMS

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
N/A	Superstructure Removal (deck area per inspection report)	SF	2340	$70.00	$163,800.00
N/A	Substructure Repairs & Scour Countermeasures	LS	1	$40,000.00	$40,000.00
N/A	New Bridge Superstructure (assume 75 ft long based on x 31 ft wide; $360/SF per CTDOT guidelines; Add 15% unknowns/aesthetics)	SF	2475	$420.00	$1,039,500.00
				STRUCTURE TOTAL:	$1,243,300.00

ROADWAY ITEMS

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
N/A	Estimate Roadway Items based on Per Square Foot Costs	SF	4800	$40.00	$192,000.00
				ROADWAY TOTAL:	$192,000.00
				SUBTOTAL 1 (STRUCTURE PLUS ROADWAY)	$1,435,300.00

MINOR ITEMS		UNIT	QUANTITY	UNIT PRICE	TOTAL
Minor Items (30% of Subtotal 1)	30%	LS	1	$430,590.00	$430,590.00
				SUBTOTAL 2	$430,590.00

LUMP SUM ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL
Clearing & Grubbing (3% of Subtotal 1 and 2)	LS	1	$55,976.70	$55,980.00
M & P of Traffic (4% of Subtotal 1 and 2)	LS	1	$74,635.60	$74,640.00
Mobilization (7% of Subtotal 1 and 2)	LS	1	$130,612.30	$130,620.00
Construction Staking (1% of Subtotal 1 and 2)	LS	1	$18,658.90	$18,660.00
			SUBTOTAL 3	$279,900.00

ENGINEERING PERCENTAGES			TOTAL
Incidentals (0% of Subtotal 1, 2, and 3)	0%	INCIDENTALS	$0.00
Contingency (30% of Subtotal 1, 2, and 3)	30%	CONTINGENCY	$643,740.00
		SUBTOTAL 4	$643,740.00

NON-CONTRACT ITEMS	UNIT PRICE	TOTAL
(None)		
	SUBTOTAL 5	$0.00

ESCALATION TO YEAR OF CONSTRUCTION		TOTAL
Say 3.5% per Year to 2024	SUBTOTAL 6	$198,690.00
	TOTAL	$2,988,220.00
	GRAND TOTAL	$3,000,000.00

CONNECTICUT DEPARTMENT OF TRANSPORTATION

LOCAL BRIDGE PROGRAM

PRELIMINARY APPLICATION

Preliminary application is hereby made by the Town/City/Borough of Wilton
for possible inclusion in the Local Bridge Program for Fiscal Year **2021** for the following structure:

Bridge Location: Honey Hill Road over Norwalk River

Bridge Number: 04976 Structure Length: 51.0 feet Curb-to-Curb Width: 22.0 feet

Sufficiency Rating: 42.10 % Priority Rating: 38.62 %

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: C, G, EE *(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: Chris Burney

Title: DPW and Facilities Director Telephone: (203) 563-0152 Ext: ___ Fax: (203) 563-0269

Mailing Address: Town Annex, 238 Danbury Road, Wilton, CT 06897

E-mail: Chris.Burney@wiltonct.org

Anticipated Schedule: (MM/DD/YYYY)

Public Meeting Conducted:	06/30/2022
Design Completion:	09/30/2023
Property Acquisition Completion:	09/30/2023
Utilities Coordination Completion:	09/30/2023
Construction Advertising:	11/01/2023
Supplemental Application Submission: (Not applicable for Federal Local Bridge Program Projects)	
Start of Construction:	04/01/2024
Completion of Construction:	11/30/2024

Local Bridge Program – FY 2021 Preliminary Application

Bridge Number 04976, Town/City/Borough of Wilton

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees)	$ 450,000.00
Rights-of-Way Cost (If applicable)	$ 50,000.00
Municipally Owned Utility Relocation Cost	$ 0.00
Estimated Construction Costs (Include Detailed Estimate)	$ 2,000,000.00
Construction Engineering (Inspection, Materials Testing)	$ 800,000.00
Contingencies *(10% of Construction Costs Only)*	$ 200,000.00
Total Estimated Project Cost	$ 3,500,000.00

Financial Aid Data:

NOTE: funding limited to Eligible Bridges as published at 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 $ 2,800,000.00

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

Total Estimated Project Cost multiplied by 50%:

Project Grant Request: $ _____

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 **2021**.

Signature: _____ Date: _____

Name: _____ Title: _____

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

Submit application by email to Francisco.Fadul@ct.gov

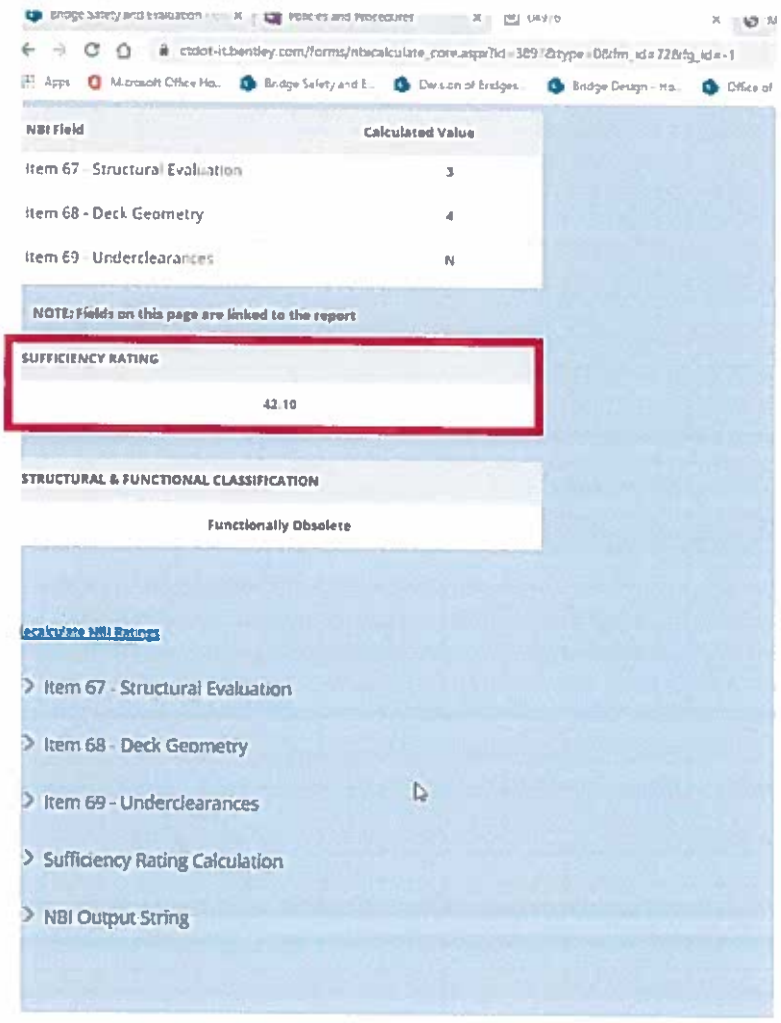
Description of Existing Conditions

Bridge No. 04976 carries Honey Hill Road over Norwalk River in the Town of Wilton, Connecticut. The bridge is located approximately 125 feet east of US Route 7 and there is an at-grade MNRR crossing located approximately 100 feet east of the bridge. The bridge superstructure comprises of prestressed concrete I-Beams with a concrete deck supported by concrete abutments with spread footings on soil. The bridge was built approximately 64 years ago in 1957. The bridge carries bi-directional traffic in an east-west direction over a 22'-0" roadway curb-to-curb width and has a span length of approximately 46'. The Average Daily Traffic (ADT) on the bridge is estimated to be 360 vehicles (Year 2019) and the roadway over the bridge is classified as an Urban Local Road. Norwalk River flows under the bridge from the north to the south. There is a water main located immediately south of the bridge that is not attached to the structure.

The following summarizes the condition of the existing bridge components based on a Routine Inspection performed on 10/02/19 by the Connecticut Department of Transportation (Report attached) in accordance with National Bridge Inspection Standards (NBIS):

1. **Deck** (NBIS Item 58): Rating 6 (Satisfactory Condition) – The cast-in-place concrete deck is rated to be in satisfactory condition. Spalls with exposed rusted shallow rebar are present on the underside of deck. The bridge rail system consists of two wire cable rails and a top rail channel cap with steel posts. The existing rail system does not meet current safety standards and is rated to be in poor condition. Random steel post anchor bolts and nuts have up to 100% section loss, base plates are rusted, and the north cable rail is loose.
2. **Superstructure** (NBIS Item 59): Rating 6 (Satisfactory Condition) – The prestressed concrete I-girders atop steel fixed and sliding bearings are rated to be in satisfactory condition. The concrete girders and diaphragms have numerous spalls, some with exposed rebar. The bearing devices are also rated to be in satisfactory condition with presence of rust and section loss on plates and tipped anchor bolts. The expansion bearings do not appear to be functioning properly and may be frozen as they are observed to be in contraction mode during warmer temperatures.
3. **Substructure** (NBIS Item 60): Rating 7 (Good Condition) – The concrete abutment stems and wingwalls are rated to be in good condition with the presence of some cracks, spalls, hollow sounding areas and light scaling in the concrete. The abutment backwalls are in satisfactory condition with presence of large spalls and exposed rebar.
4. **Channel & Channel Protection** (NBIS item 61): Rating 7 (Good) – No scour in the channel or in the vicinity of the abutments have been observed. There is minor embankment erosion with exposed tree roots and undercutting.
5. **Load Rating Capacity** – A load rating analysis for the bridge completed in April 2020 indicates the inventory rating factor for the AASHTO HL-93 Design Vehicle to be 0.26 (1.00 minimum standard). In addition, the rating factors for all AASHTO and Connecticut Legal Load Vehicles have been determined to be less than 1.00 (minimum standard) thereby **requiring weight restrictions on the bridge**. The inventory load rating capacity of the bridge for an AASHTO HS20 vehicle is 17.3 Tons (36 Tons standard). **The bridge is being posted for 16 Ton single unit truck and 26T semi-truck.**

6. **Structural Evaluation** (NBIS Item 67): **Rating 3** – As a result of the load rating capacity not meeting current standards and due to the need for weight restrictions on the bridge, the rating for structural evaluation is reduced to a 3 indicating "an intolerable condition with a high priority for corrective action" and a "**functionally obsolete**" classification".
7. **Deck Geometry** (NBIS Item 68): Rating 4 - The existing roadway width of 22'-0" meets FHWA Standards (20'-0" Minimum based on ADT between 100-400 vehicles) and CTDOT Standards (22'-0" minimum for Local Urban Street – Built Up Condition).
8. **Waterway Adequacy** (NBIS Item 71): Rating 9 – The 2001 Comparative Scour Analysis Report states that there is no pressure flow during the design 100-year storm event based on FEMA FIS dated 1990 and the crossing provides a 2.5 feet of freeboard and therefore recommended a rating of 9 indicating the existing hydraulic opening to be adequate with slight chance of overtopping of the bridge deck and approach roadways.
9. **Scour Critical Rating** (NBIS Item 113): Rating 5 – The 2001 Comparative Scour Analysis Report has recommended a rating of 5 since the bridge is considered scour susceptible due to potential undermining from a 50-year storm event even though no channel scour was observed and the bridge has withstood two 50-year storm events in the 1970's.
10. **Sufficiency Rating** of the bridge is calculated to be 42.10



Description of Proposed Conditions

Based on the condition of the existing bridge, a superstructure replacement is proposed assuming that the existing abutments will either be determined to be adequate for scour for design storm events or a riprap countermeasure will suffice to provide the necessary protection. If this is not determined to be feasible, a full replacement will be necessary. The proposed work for a superstructure replacement will involve:

1. Removal of the existing bridge superstructure.
2. Installation of riprap scour countermeasure at the abutments if necessary.
3. Construction of a new superstructure to carry a 22'-0" wide roadway matching existing and meeting FHWA and CTDOT design standards.
4. The proposed bridge rail system will comprise of an aesthetically pleasing open bridge rail system meeting current safety standards. The deck out-to-out width is estimated to be approximately 26'-0".
5. The proposed span length of 46'-0" will match existing.
6. The proposed superstructure will likely be multiple rolled steel beams, prestressed concrete I beams or precast concrete deck units, with a concrete deck resulting in a redundant structure.
7. Roadway will be reconstructed approximately 125' at both approaches to the bridge.
8. New guiderails will be installed at all approach corners to the bridge to meet current design standards.
9. Traffic is anticipated to be detoured during construction. A short detour route to the bridge (3 miles) is available.

The construction cost of the project assuming a superstructure replacement is estimated to be approximately $2,000,000 (see attached). The total cost of project is estimated to be approximately $3,500,000 including incidentals and contingencies ($1,000,000), ROW ($50,000) and Engineering ($450,000).

	COMPUTATION BY: TL	DATE: 5/2/21	SHEET: 1 OF: 1
	CHECKED BY:	DATE:	CME PROJECT NO.:
	CLIENT: ConnDOT Federal Local Bridge Liaison Project		CLIENT PROJECT NO.: 161-TBD Wilton
ITEM: Bridge #04976 Prelim Application Estimate			

Superstructure Replacement Estimate

1. Replace existing bridge superstructure. New bridge superstructure to provide for an out-to-out width of 26'-0" to accommodate a 22'-0" curb-to-curb roadway width.
2. New structure likely to be a steel I beams or prestressed concrete I beams or prestressed concrete deck units with a concrete deck supported by existing concrete abutments
3. Replace the bridge and approach rail at all four approaches to meet current standards
4. Reconstruct Approx. 125' of approach roadway on each side

STRUCTURE ITEMS

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
N/A	Superstructure Removal (deck area per inspection report)	SF	1300	$70.00	$91,000.00
N/A	Substructure Repairs & Scour Countermeasures	LS	1	$20,000.00	$20,000.00
N/A	New Bridge Superstructure (assume 51 ft long based on x 26 ft wide; $360/SF per CTDOT guidelines. Add 25% unknowns/aesthetics)	SF	1326	$450.00	$596,700.00
				STRUCTURE TOTAL:	$707,700.00

ROADWAY ITEMS

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
N/A	Estimate Roadway Items based on Per Square Foot Costs	SF	5500	$40.00	$220,000.00
				ROADWAY TOTAL:	$220,000.00
				SUBTOTAL 1 (STRUCTURE PLUS ROADWAY)	$927,700.00

MINOR ITEMS		UNIT	QUANTITY	UNIT PRICE	TOTAL
Minor Items (30% of Subtotal 1)	30%	LS	1	$278,310.00	$278,310.00
				SUBTOTAL 2	$278,310.00

LUMP SUM ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL
Clearing & Grubbing (3% of Subtotal 1 and 2)	LS	1	$36,180.30	$36,190.00
M & P of Traffic (4% of Subtotal 1 and 2)	LS	1	$48,240.40	$48,250.00
Mobilization (7% of Subtotal 1 and 2)	LS	1	$84,420.70	$84,430.00
Construction Staking (1% of Subtotal 1 and 2)	LS	1	$12,060.10	$12,070.00
			SUBTOTAL 3	$180,940.00

ENGINEERING PERCENTAGES			TOTAL
Incidentals (0% of Subtotal 1, 2, and 3)	0%	INCIDENTALS	$0.00
Contingency (30% of Subtotal 1, 2, and 3)	30%	CONTINGENCY	$416,090.00
		SUBTOTAL 4	$416,090.00

NON-CONTRACT ITEMS	UNIT PRICE	TOTAL
(None)		
	SUBTOTAL 5	$0.00

ESCALATION TO YEAR OF CONSTRUCTION		TOTAL
Say 3.5% per Year to 2024	SUBTOTAL 6	$128,430.00
	TOTAL	$1,931,470.00
	GRAND TOTAL:	$2,000,000.00