NEW HAVEN BRIDGE CONDITION REPORT

June 2019

City Of New Haven
Engineering Department

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ENGINEERING DEPARTMENT

City of New Haven
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Executive Summary

The 2019 New Haven Bridge Condition Report outlines the state of New Haven's bridges. Bridges are an essential part of the City's infrastructure, and are some of the most expensive elements of our transportation system. The City of New Haven has made significant investments over time into its bridges, and the overall good state of repair of New Haven's bridges are a testament to that investment.

This report contains information not only on the bridges maintained by the City of New Haven but also those maintained by the State of Connecticut and Amtrak. The purpose of including all bridges in the City that are not part of the limited access highway system is to track the status of all structures that have a significant impact on the local transportation infrastructure. While for example State owned and maintained bridges do not present a budgetary impact on the City, the state of these bridges has a significant impact on the City's transportation network.

The bridges in this report are rated in two ways. Bridges over 20' in length have a biennial inspection conducted by the Connecticut Department of Transportation and the information in this document is based on these inspection reports. Bridges under 20' in length are inspected by the City of New Haven.

In all, there are 60 bridges that the City is fully responsible for the maintenance. Of those 60 bridges, only two of the bridges are rated in poor condition:

- **Grand Avenue Bridge over the Quinnipiac River –** This historic moveable bridge from 1898 requires structural repair/replacement, painting, and complete mechanical/electrical replacement. The bridge is slated for an approximately $25M overhaul starting in the first half of 2020. The City has secured a combination of funding from the federal, state, and local governments to pay for this project.

- **Humphrey St. Bridge over the Mill River –** This bridge is currently rated as having a 'poor' condition for the substructure. The substructure is showing some masonry defects and scour susceptibility. A bridge rehabilitation project is currently under design by BL Companies, and is slated for construction in early 2021. The proposed work includes repairing the masonry piers, armoring the river channel at the bridge, installing a new waterproofing membrane on the deck, and providing pedestrian lighting improvements.

In addition, there are several bridges that are not rated 'poor' yet, but are strong candidates for bridge preservation projects in the coming years. The purpose of bridge preservation projects are to take steps to reduce bridge degradation earlier in the lifespan of the bridge to avoid the necessity of larger future investments. While traditionally state and federal funding sources have not funded projects unless a bridge was rated 'poor', there has been recent interest in making funding available for bridge preservation projects:

- **Edgewood Ave over West River –** The bridge is starting to show concrete deterioration and may be a candidate for a major overhaul in 10-15 years. The bridge will be evaluated for a preservation project to determine cost effectiveness vs a larger overhaul in the mid-term.

- **Ferry St. over Quinnipiac River –** While a major overhaul of the bridge was completed in 2008, there are some early signs of corrosion that should be addressed as part of a preservation project. In addition, there are certain portions of corrosion that were cleaned and painted as part of the 2008 project, but not reinforced. CT DOT is performing a routine load rating of the bridge this summer and will provide more information on the structure.

- **Wintergreen Avenue over Town Farm Brook –** This picturesque stone arch bridge has deterioration in the road surface and bridge deck that should be addressed to prevent deterioration from moving further into the structure.

- **Orange St. #1 over Mill River –** There are areas of concrete deterioration and loss of mortar on the substructure and superstructure that are suited to a preservation project. In addition, replacing the pavement, waterproofing membrane, and bridge joints will greatly enhance the longevity of the structure.

- **Wilmot Road over Town Farm Brook –** This bridge will most likely require full replacement in 5-10 years due to the type of structure and deterioration. The City has already replaced two similar structures in the last 5 years nearby.

- **State St North over Union Ave Pump Station –** The bridge exhibits significant concrete and masonry deterioration and lacks a waterproofing membrane. While the future service of the bridge is subject to larger traffic analysis of the area, the extreme complexity of replacing a bridge next the the very active northeast rail corridor warrants a preservation project in the near term.

In addition, there are two state-owned bridges that are rated 'poor' and are slated for replacement/rehabilitation in the near future:

- **Ferry St. over Railroad –** This truss bridge is subject to a major state rehabilitation project starting in Spring of 2021. This will have very major traffic impacts and the City has asked CT DOT to look into more ways to accelerate construction.

- **South End Road over Morris Creek –** CT DOT has informed the City that it intends replace this bridge starting in Spring 2022.

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New Haven's Bridges by the Numbers:

There are a total of 167 public bridges within the City of New Haven.
60 bridges are owned and maintained by the City of New Haven.
16 bridges that span railroad crossings are 'orphaned', the roadway is maintained by the City via CGS 13b-283, the structure by the State or RR.
4 bridges span State highways, there the roadway is maintained by the City via CGS 13a-99a, the structure by the State.
20 bridges are State owned and maintained on local roads within the City.
6 bridges are owned by Amtrak and pass over or under City streets.
1 bridge is owned and maintained by West Haven on the City border.
2 bridges are owned and maintained by the State on the City border.
1 bridge carries only utilities and is privately owned.
57 bridges are part of the State Highway System and are owned and maintained by the State of Connecticut. These are not included in this report.

The City's inventory includes:

- 16 pedestrian bridges
- 2 park's dept. road vehicle bridge (generally inaccessible to public traffic)
- 11 bridges under 20 feet long
- 31 bridges over 20 feet long

There are currently 2 City owned bridges that rate in poor condition

- Humphrey St. over the Mill River
- Grand Ave. over the Quinnipiac River

There are currently 2 State owned bridges that rate in poor condition

- Ferry St. over Amtrak RR
- South End Rd. over Morris Creek

There is currently 1 Amtrak owned bridge that rates in poor condition

- E. Grand & Russell St. over Amtrak RR

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Bridge Rating Definitions:

Bridge identification numbers - numbers assigned by the Federal Highway Administration (FHWA) to all bridges over 20 feet in clear span length measured according to FHWA guidelines.

Facility Carried - Roadway name for vehicle traffic, path connection for pedestrians
Feature Intersected - road, waterway, or structure being crossed
Length - measured from abutment to abutment
Number of spans - number of superstructure spans between abutments and over intermediate piers
C-C width - width of bridge measured from inside face of curb to inside face of curb
Condition rating - summary of existing in place structural features as compared to original as-built condition. A condition rating value chart is included as appendix A.
Inventory rating – A load, determined through an approved load rating method, that a structure can safely carry for an indefinite period of time.

Deck - structural condition of the deck, in regards to cracking, spalling, scaling, efflorescence for concrete, cracked welds, broken grids, section loss, corrosion for steel, and splitting, crushing, fastener failure, or rot for timber.

Superstructure - the main load carrying members supporting the deck and transient load. This value will reflect signs of member distress including cracking, deterioration, section loss, misalignment.
Substructure - bents, piers, abutments, piles, fenders, footings and any other structure transmitting loads from the superstructure to the ground. This value reflects signs of distress, cracking, section loss, settlement, rotation, misalignment, scour, corrosion or collision damage.

Channel - physical conditions associated with the flow of water, stream stability and condition of stream control devices in place. A condition rating value chart is included as appendix B.

Culverts - an evaluation of the alignment, settlement, joints, scour and structural condition of the culvert. A condition rating value chart is included as appendix C.

Structurally deficient - a condition rating of 4 or less for either the deck, superstructure, substructure or culvert. This classification is a comparison between the load carrying capacity of the original structure and the as-inspected structure.
Deck geometry - a ratio of the driving lane width of a deck to the average daily traffic across the bridge and a ratio of the vertical under clearance of the bridge to the roads functional class
Under clearances - vertical and horizontal clearance of structure. Rated 'N' if no routes are below bridge.
Waterway adequacy - criteria evaluating the risks the waterway poses to the structure. A condition rating value chart is included as appendix D.
Approach alignment - comparison to existing roadway alignment and evaluation of the functionality of roadway approach to highway alignment. Significant speed reductions, or turning movements at the bridge approaches would reduce the rating.
Scour Critical - The bridge's current status of, and vulnerability to scour. A condition rating value chart is included as appendix E.
Functionally obsolete - A rating of 3 or less for the deck geometry, under clearances, approach alignment, structural condition, waterway adequacy. This classification has been discontinued by FHWA. This classification is a comparison between the current bridge criteria listed above, and the current required standards for new bridges.

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Division of Bridge Maintenance Responsibilities:

City Owned/Maintained: Bridges under this classification are owned and maintained by the City of New Haven, and typically carry local roads over watercourses or other local roads. This category also includes bridges in parks and pedestrian bridges. All bridges in this category over 20' in length are inspected every two years by the CT DOT and the City is provided with an inspection report highlighting any issues.

State or Railroad Owned/Partial City Maintenance: Under Sections 13b-283 and 13a-99a of the Connecticut General Statutes, municipalities are responsible for the maintenance of road surfaces (pavement) and sidewalks on certain state-owned structures. The most common category of these structures are "orphan" bridges, structures over railroads that the State has inherited ownership. The City often coordinates paving and other repairs on these structures with the CT DOT so that they can make any needed repairs that are their responsibility as well. All bridges in this category over 20' in length are inspected every two years by the CT DOT and the City is provided with an inspection report highlighting any issues.

State Owned/Maintained: The bulk of the bridges in this category in New Haven are related to the Interstate Highway System. However, there are State owned/maintained structures on state roads throughout New Haven, and the CT DOT is entirely responsible for their maintenance. All bridges in this category over 20' in length are inspected every two years by the CT DOT.

Amtrak Owned/Maintained: Some rail structures in New Haven are owned/maintained by Amtrak. The City has repeatedly reached out to Amtrak for bridge status information with limited success and will continue to work on building a relationship.

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Bridge Identification No.: **3748**	**Facility Carried:** STATE STREET	**Feature Intersected:** MILL RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	12/11/17
Year Built:	2016
Year Rehabilitated:	
Superstructure Type:	PS girder
ADT:	9349
Length:	97
No. of Spans:	2
C-C Width:	43.95

Condition Ratings

Deck:	8
Superstructure:	8
Substructure:	8
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	2*
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure was replaced in 2016 and is in very good condition. Leakage from the sidewalk joint at the NW end of the bridge was noted in the inspection report. Per an email circulated internally within CDOT, the scour rating of '2' for this structure should be revised to an '8'.

Suggested Work: Inspect retaining walls along embankment and investigate repair responsibility – these are beyond the scope of bridge repair work.

Approximate Cost:
N/A

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Bridge Identification No.: 3754	**Facility Carried:** TEMPLE STREET	**Feature Intersected:** FARMINGTON CANAL GREENWAY
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	06/22/15
Year Built:	1900
Year Rehabilitated:	2009
Superstructure Type:	PS box beam
ADT:	5500
Length:	25.9
No. of Spans:	1
C-C Width:	34

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge was replaced in 2009 and is in overall good condition. The overlay has transverse cracks ¾" wide at both deck joints. Significant loss of bearing between three beams and their bearing pads on the southern abutment was reported in 2015. Several beams were also noted to be in contact with the abutment seats, causing shear cracks in the beams.

Suggested Work: Request updated inspection and ADT from State. Determine changes in condition of beams with loss of bearing and/or shear cracks. Additional deterioration may require rehabilitation to extend the bridge's useful life. Cracks in overlay should be sealed.

Approximate Cost:
$600

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Bridge Identification No.: **3808**	**Facility Carried:** EDGEWOOD AVENUE	**Feature Intersected:** WEST RIVER & PARK ROAD
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/05/17
Year Built:	1910
Year Rehabilitated:	1974
Superstructure Type:	Concrete arch
ADT:	5225
Length:	130.9
No. of Spans:	3
C-C Width:	42

Elevation

Approach

Condition Ratings

Deck:	6
Superstructure:	5
Substructure:	5
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	Y

Status Summary: This bridge is in generally fair condition. The overlay is in good condition, typical map cracking is present. The major rehabilitation project in 1974 replaced the deck and other minor structural repairs. There is now map cracking throughout the deck and significant efflorescence at joints between deck and ribs. The girders have efflorescence, hollow areas, and spalls up to 3" deep – section loss of exposed rebar has been observed. The abutments have areas of heavy scale, active leakage at interface with deck and ribs, map cracking, and spalls up to 5" deep. The wingwalls and piers are in similar condition to the abutments. The outlet pipes in both piers has been broken within the structure causing additional scale at the pier. A load rating using the Concrete Judgement Rating system was performed in 2000 and determined an inventory rating of 34 TN.

Suggested Work: This bridge will be a candidate for a major rehabilitation project within the next 10-15 years. It should be closely monitored for further structural deterioration, and the load rating updated if anything is found.

Approximate Cost:
N/A

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Bridge Identification No.: **3809**	**Facility Carried:** FERRY STREET	**Feature Intersected:** QUINNIPIAC RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	09/11/17
Year Built:	1940
Year Rehabilitated:	2008
Superstructure Type:	Steel girder bascule
ADT:	7210
Length:	431
No. of Spans:	1
C-C Width:	43

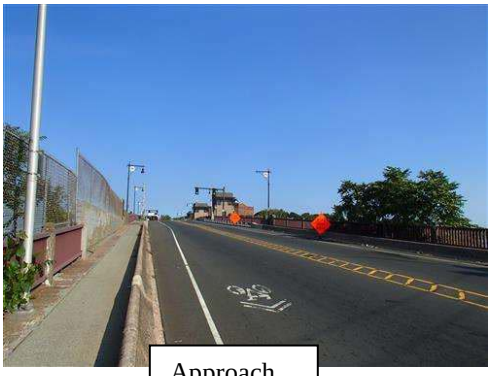
Elevation

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	6
Scour Critical:	8
Functionally Obsolete:	N



Approach

Status Summary: This bridge is generally in satisfactory condition. The open expansion joints are misaligned and missing bolts. The superstructure is in fair condition. It has several areas of significant section loss (5% - 24%) focused at the stringers in the approach spans, floor beams have corrosion and section loss varying from 19% - 53%, corrosion and pitting is typical on the main girders. It should be noted that much of this corrosion happened prior to the 2008 rehabilitation project and was painted over during that project. Due to the section loss in the superstructure a load rating request was made in Feb. of 2018. The machinery is rated to be in fair condition. There is debris accumulation from animals and material passing through the deck and joints. The substructure has typical 2" deep spalling, with hairline cracking and efflorescence all within acceptable tolerances.

Suggested Work: Due to the significant financial burden a major rehabilitation to this structure would enact, break out projects to perform isolated structural steel repairs should be considered, based on the load rating results, and additional inspection, within the next five years.

Approximate Cost:
$150,000

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Bridge Identification No.: **3810**	**Facility Carried:** GRAND AVENUE	**Feature Intersected:** QUINNIPIAC RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	42979
Year Built:	1900
Year Rehabilitated:	1984
Superstructure Type:	Steel girder & truss swing
ADT:	7567
Length:	425.85
No. of Spans:	2
C-C Width:	34

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	5
Channel:	5
Culverts:	N
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Due to the condition rating of '4' for the electrical components, and '2' for mechanical components, this bridge is considered to be in poor condition. A project is current in design to replace the approach spans, rehabilitate the truss, and replace the mechanical and electrical components of the bridge.

Suggested Work: Replacement of the approach superstructure and decking for the full bridge length. Rehabilitation of the truss with painting of all existing structural steel. Replacement of the electrical and mechanical systems. Minor substructure repointing and fender work.

Approximate Cost:
$25,036,625 (30% City, 50% State, 20% Federal)

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Bridge Identification No.: **3813**	**Facility Carried:** HUMPHREY STREET	**Feature Intersected:** MILL RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	07/17/17
Year Built:	1908
Year Rehabilitated:	1973
Superstructure Type:	PS box beam
ADT:	5000
Length:	89.89
No. of Spans:	3
C-C Width:	38

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	4
Channel:	5
Culverts:	N
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	3
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Due to the condition rating of '4' for the substructure this bridge is considered to be in poor condition. The City has applied and received a commitment to fund letter from the State & Local Bridge Program to perform a rehabilitation. That project is currently in the design phase and is expected to be ready for bid in the Winter of 2019.

Suggested Work: Rehabilitation of the intermediate piers and fender system. Increase stream bed protection from scour. Concrete repairs to the substructure. New waterproofing membrane, overlay and joint replacement. Sidewalk improvements and parapet modification to bring the guardrails up to current FHWA standards.

Approximate Cost:
$974,297 (50% State, 50% City)

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Bridge Identification No.:	Facility Carried:	Feature Intersected:
3996	WHITNEY AVENUE	FARMINGTON CANAL GREENWAY
Owner:	**Maintenance Responsibility:**	**Functional Classification:**
City	City	Urban - Other Principal Arterial

Structure Features

Inspection Date:	9/25/17
Year Built:	1885
Year Rehabilitated:	
Superstructure Type:	Masonry arch
ADT:	9400
Length:	22
No. of Spans:	1
C-C Width:	42

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	8
Under Clearances:	N
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: A project in 1983 repainted the masonry and included overlay and sidewalk repairs. The structure is currently in overall good condition. Moderate efflorescence along the superstructure is evident, no significant loss of mortar or voids are apparent within the exposed arch.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **3997**	**Facility Carried:** PROSPECT STREET	**Feature Intersected:** FARMINGTON CANAL GREENWA
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	08/10/17
Year Built:	1929
Year Rehabilitated:	2009
Superstructure Type:	PS & CIP girders
ADT:	11700
Length:	45.9
No. of Spans:	1
C-C Width:	35

Condition Ratings

Deck:	7
Superstructure:	8
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is in overall good condition. A judgement-based load rating was performed in 2002 and found the inventory rating to be 34 TN. The overlay is in very good condition. The sidewalk at the SE approach has settled ½". The superstructure is in very good condition. Asphaltic plug joints are beginning to show signs of wear, the substructure has typical leakage staining and hair line cracks all within acceptable tolerances.

Suggested Work: Grind sidewalk at SE approach.
*A vehicle collision damaged a 30' section of bridge rail at the SE parapet – it will be replaced ASAP.

Approximate Cost:
$53,000

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Bridge Identification No.: **4026**	**Facility Carried:** HILLHOUSE AVENUE	**Feature Intersected:** FARMINGTON CANAL GREENWA
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	09/26/17
Year Built:	1910
Year Rehabilitated:	2009
Superstructure Type:	PS box beam
ADT:	2060
Length:	32
No. of Spans:	1
C-C Width:	32

Condition Ratings

Deck:	8
Superstructure:	8
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure is in very good condition. This bridge was replaced in 2009. The substructure has some minor edge spalls, cracks, and efflorescense is noted at the backwall. No significant deficiencies were found during the most recent inspection.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **4138**	**Facility Carried:** WINTERGREEN AVENUE	**Feature Intersected:** TOWN FARM BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	06/15/17
Year Built:	1890
Year Rehabilitated:	
Superstructure Type:	Masonry arch
ADT:	2335
Length:	23.95
No. of Spans:	1
C-C Width:	20

Elevation

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	7
Channel:	5
Culverts:	N
Structurally Deficient:	N

Approach

Appraisals:

Deck Geometry:	2
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	6
Scour Critical:	5
Functionally Obsolete:	Y

Status Summary: This bridge is in satisfactory condition overall. The overlay is in poor condition; it does not extend the full bridge width, leaving exposed ballast and allowing vegetation to grow adjacent to the parapet. The SE approach guardrail has collision damage, and no transition – neither the parapet or guardrails meet FHWA standards. The superstructure arch has sections of missing mortar up to 4" deep, several small voids and some cracks in stones. Erosion between 2'-2.5' is noted at each wingwall, and vegetative growth is typical on all the exposed masonry. Fallen trees and debris were inhibiting the streams natural flow as of the most recent inspection.

Suggested Work: In consideration of the age and complexity of this structure a preservation project should be considered to improve and extend the current condition of the superstructure. At a minimum the overlay should be replaced within two years, and masonry repointed. Vegetation should be cleared annually and damaged guardrail replaced.

Approximate Cost:
$35,000

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Bridge Identification No.: **4380**	**Facility Carried:** GRAND AVENUE	**Feature Intersected:** MILL RIVER EAST
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	06/01/17
Year Built:	1982
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	11238
Length:	65.9
No. of Spans:	1
C-C Width:	43.95

Condition Ratings

Deck:	8
Superstructure:	6
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is in satisfactory condition. There is a section of broken sidewalk that has settled 2” at the abutment, and a section on the bridge with severe scale. The superstructure has hairline cracking and minor spalls all within acceptable tolerances. The substructure has edge spalls up to 2” deep and hairline cracking. A keeper block on abutment 1 has fractured full width.

Suggested Work: N/A

Approximate Cost:
N/A

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Toni N. Harp
Mayor

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City Engineer

Bridge Identification No.: **4381**	**Facility Carried:** GRAND AVENUE	**Feature Intersected:** MILL RIVER WEST
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

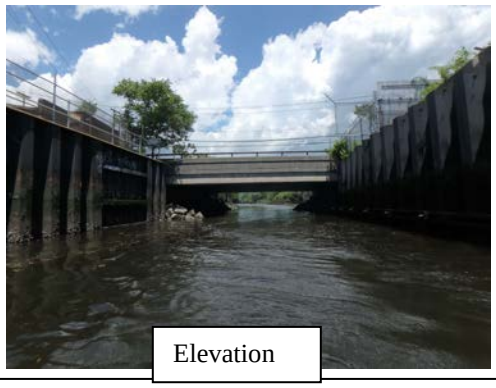
Inspection Date:	06/01/17
Year Built:	1982
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	11238
Length:	56.1
No. of Spans:	1
C-C Width:	43.95

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N



Elevation

Approach

Status Summary: This bridge is in satisfactory condition. The overlay and joints are in overall good condition. Some efflorescence is noted between girders, and typical spalling up to ¾" deep. Vertical misalignment of up to 1" is noted and has been consistent since 2013 with no change. The abutments have minor spalls within acceptable limits. The footing of abutment 1 has been exposed due to scour for a 30'x30" section. No other channel conditions were noted to have changed over the last two inspection cycles.

Suggested Work: Monitor future scour at abutment footing and vertical misalignment of the superstructure.

Approximate Cost:
N/A

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Bridge Identification No.: **4418**	**Facility Carried:** EAST ROCK ROAD	**Feature Intersected:** MILL RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	11/16/17
Year Built:	1900
Year Rehabilitated:	2013
Superstructure Type:	Steel arch
ADT:	1285
Length:	89.9
No. of Spans:	1
C-C Width:	20

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	6
Scour Critical:	5
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure was rehabilitated in 2013 and is in good condition. Minor raveling and wear noted on the overlay with some efflorescence below the deck. The abutment stems have non-structural masonry facing with 5%-10% mortar loss. There is a 1.5” opening between wingwall 1A and abutment 1 indicating settlement.

Suggested Work: Monitor construction joint between wingwall and abutment for further distress or movement. Inspect masonry facing for mortar loss and eventual repointing. No major work is anticipated to keep this bridge operational.

Approximate Cost:
N/A

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Bridge Identification No.: **4885**	**Facility Carried:** ORANGE STREET #1	**Feature Intersected:** MILL RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	07/27/17
Year Built:	1950
Year Rehabilitated:	1991
Superstructure Type:	Concrete arch
ADT:	4417
Length:	118
No. of Spans:	3
C-C Width:	34

Condition Ratings

Deck:	7
Superstructure:	5
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	0
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is generally in good condition. The overlay has typical minor map cracking and wear. The parapets, approach guardrail and transitions are in overall good condition. Sidewalk uplift is present at the SW corner. There is efflorescence between the spandrels of the arch, scaling and 1/16" wide cracks in the arch ribs, with several spalls approximately 6'x3" deep exposing delaminated rebar. The substructure is in good condition, showing minor efflorescence and isolated cracking. Piers exhibit random spalls up to 7" deep, hairline cracking of the concrete and loss of mortar in the masonry. Scour holes up to 1' in depth occur adjacent to the piers, no significant erosion or debris within the channel.

Suggested Work: Due to their bridge's size and complexity a preservation project should be considered. Concrete repairs should be made to the superstructure and piers, a new wearing surface, waterproofing membrane, and joints should be installed as well.

Approximate Cost:
$700,000

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Bridge Identification No.: **4886**	**Facility Carried:** EAST RAMSDELL ST	**Feature Intersected:** WEST RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/07/17
Year Built:	1951
Year Rehabilitated:	1988
Superstructure Type:	Concrete culvert
ADT:	4284
Length:	70.87
No. of Spans:	4
C-C Width:	41.98

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	5
Culverts:	5
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure is in fair condition. The overlay was recently replaced. Debris and sediment buildup within the barrels is leading to scour and negative channel conditions. The roof has efflorescence, spalls up to 1.5” deep, and hairline cracking. Walls have isolated hollow areas, 1/8” wide vertical cracks and efflorescence.

Suggested Work: In-house routine maintenance, cleaning scuppers, clearing and grubbing, removing debris should be performed following every spring. Regrading and stream control will greatly reduce future scour issues. Inspections should be reviewed biennially.

Approximate Cost:
N/A

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Bridge Identification No.:	Facility Carried:	Feature Intersected:
4889	BLAKE STREET	TOWN FARM BROOK
Owner:	**Maintenance Responsibility:**	**Functional Classification:**
City	City	Rural - Major Collector

Structure Features

Inspection Date:	07/20/17
Year Built:	1939
Year Rehabilitated:	2006
Superstructure Type:	PS box beam
ADT:	6429
Length:	47.9
No. of Spans:	1
C-C Width:	36

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	5
Scour Critical:	3
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure is in good condition. There are isolated potholes, and paving seams from 2”-5” wide. Minor efflorescence staining along joints of girders, and typical ½” misalignment. Loss of bearing at girders reported however girders show no signs of distress. The substructure has two areas of delamination or punky concrete and minor spalling, all non-critical. Scour holes have developed adjacent to the footing which is exposed per plan. The stream is controlled by retaining walls leading to and away from the bridge. Approx. 40’ from the bridge a portion of privately owned retaining wall has collapsed and since been stabilized by vegetative growth.

Suggested Work: Cracks and potholes should be sealed next season. Bi-annual inspection of the channel for further scour should be performed.

Approximate Cost:
$1,200

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Bridge Identification No.:	Facility Carried:	Feature Intersected:
4890	BLAKE STREET	WEST RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	07/03/17
Year Built:	1995
Year Rehabilitated:	2000
Superstructure Type:	PS box beam
ADT:	5780
Length:	97
No. of Spans:	1
C-C Width:	30.18

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	3
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in good condition. The overlay has minimal longitudinal cracking. Superstructure has superficial cracking, and 1.25" vertical misalignment. There are no approach guardrail or transitions at the SE and SW ends of the bridge. There is evidence of leakage on the abutment at bridge joints, but the substructure is in good condition. There are localized significant areas of scour and aggradation adjacent to the abutments, with heavy buildup at abutment 1.

Suggested Work: Trim vegetative growth every spring. Monitor for continuing scour and aggradation at abutments.

Approximate Cost:
N/A

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Bridge Identification No.: **4891**	**Facility Carried:** WILMOT ROAD	**Feature Intersected:** TOWN FARM BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/20/17
Year Built:	1951
Year Rehabilitated:	
Superstructure Type:	Concrete culvert
ADT:	1232
Length:	22.97
No. of Spans:	3
C-C Width:	40

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	5
Culverts:	5
Structurally Deficient:	N

Appraisals:

Deck Geometry:	7
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is in fair condition structurally. The sidewalk on the bridge has been overgrown, and has curbing settled. There are no catch basins at or adjacent to the bridge and during storm events water will stagnate on a significant portion of the bridge up to 4" in depth. The CIP concrete culvert has map cracking with efflorescence concentrated at cold joints. There are several locations of spalls and honeycombing up to 3" deep. Significant debris accumulation has effectively blocked cells 1 and 2 reducing the available channel flow and causing additional scour with aggradation.

Suggested Work: Clear debris, trim vegetation, install channel control devices, install new curbing and catch basins. Consider temporary barrier rails. Full replacement should be considered within 5-10 years.

Approximate Cost:
$30,000 - $900,000

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Bridge Identification No.: **4892**	**Facility Carried:** WILMOT ROAD	**Feature Intersected:** WINTERGREEN BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/13/17
Year Built:	1952
Year Rehabilitated:	2017
Superstructure Type:	PC culvert
ADT:	656
Length:	24
No. of Spans:	1
C-C Width:	40

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	8
Culverts:	8
Structurally Deficient:	N

Appraisals:

Deck Geometry:	8
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure was replaced in 2016-2017 and is in very good condition.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **5259**	**Facility Carried:** VALLEY STREET #1	**Feature Intersected:** WEST RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/03/17
Year Built:	1983
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	9775
Length:	65.9
No. of Spans:	1
C-C Width:	36

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	7
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is in good condition. The overlay has typical wear, cracking up to ¼" wide, the deck joints have been paved over. Approach sidewalks have settled 2" below the bridge sidewalk. Superstructure has minor spalls and ¾" vertical misalignment, all within acceptable limits. Isolated hollow areas were identified on the abutments as well as hairline cracking. Minor erosion exists along the channel and scour 2' deep at abutment 2.

Suggested Work: The sidewalk should be ground or replaced. The bridge joints should be sawed and resealed. Vegetation growing onto the bridge should be trimmed every spring.

Approximate Cost:
$3,000

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Bridge Identification No.: **5399**	**Facility Carried:** STATE STREET NORTH	**Feature Intersected:** UNION STATION PUMP HOUSE
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/20/17
Year Built:	1968
Year Rehabilitated:	
Superstructure Type:	PS & CIP girder
ADT:	1340
Length:	422.9
No. of Spans:	6
C-C Width:	36

Elevation

Approach

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	N
Waterway Adequacy:	N
Approach Alignment:	5
Scour Critical:	N
Functionally Obsolete:	N

Status Summary: This structure is rated as fair condition but has serious serviceability issues. The overlay has failed in several sections with significant cracks, raveling and potholes exposing the deck without a waterproofing membrane. The SE parapet has collision damage. All the expansion joints are in a state of failure due to missing sealant, spalls or hollow areas of concrete headers. Several scuppers on the deck are clogged and ineffective. There is efflorescence present on the bent caps, underside the exposed deck, and abutments. Spalls of 2" depth are typical through superstructure, broken strands are observable in the pre-stressed girders. Abutment 1 stem is stone masonry and has full depth holes from mortar loss and broken stones. Efflorescence and 1/8" wide cracks are typical throughout the concrete portions of the substructure and are within acceptable limits.

Suggested Work: This structure will be a significant financial burden and inconvenience to the public if replacement becomes necessary, a preservation project should be considered. The overlay, joints and membrane should be replaced. The abutment should be repointed, grout injected, or underpinned. The parapet should be repaired.

Approximate Cost:
$700,000

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Bridge Identification No.: **5742**	**Facility Carried:** MIDDLETOWN AVENUE	**Feature Intersected:** QUINNIPIAC RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	07/19/17
Year Built:	1989
Year Rehabilitated:	
Superstructure Type:	PS girder
ADT:	13806
Length:	171.9
No. of Spans:	2
C-C Width:	47.9

Elevation

Condition Ratings

Deck:	7
Superstructure:	5
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	9
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Approach

Status Summary: This bridge is in overall satisfactory condition. Moderate cracking and typical wear are apparent on the overlay, and there is a ½" of sidewalk settlement at the SW end of the bridge. SW approach rail is missing 4 anchor bolts. The expansion joint compression seal is debonded for 75% of its length. The superstructure is in fair condition; there is typical hairline cracking as well as more significant spalls up to 2.5" deep exposing strands/rebar. The substructure exhibits typical spalling and hairline cracking within acceptable limits. Protective coating of the steel encased piles at the piers has failed and corrosion of the steel is in the early stages. Aggradation of material up to 4.5' at the piers and scour to 1.5' at the abutments was recorded in 2017.

Suggested Work: Grind the sidewalk at the SW corner. Replace the failed compression seal at both expansion joints over piers. Monitor rate of corrosion and further scour/erosion. No major work is anticipated to keep this bridge operational.

Approximate Cost:
$2,000

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Bridge Identification No.: **6023**	**Facility Carried:** CHAPEL STREET #1	**Feature Intersected:** WEST RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	07/05/17
Year Built:	1991
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	3822
Length:	106.95
No. of Spans:	1
C-C Width:	40

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This bridge is in generally good condition. There is minor cracking and typical wear on the overlay. The superstructure is in good condition, 90% of the protective coating is still effective nominal rusting is evident. Minor typical cracking of the abutments, with isolated spalls up to 2" deep. Stone masonry wingwalls exhibit 23" deep voids with missing mortar. There are localized scour holes within the channel adjacent to abutment 1 at a 36" outlet pipe.

Suggested Work: Masonry retaining wall should be repointed within the next 5 years. Riprap should be placed at the SW outlet to reduce future scour.

Approximate Cost:
$12,000

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Bridge Identification No.: **6024**	**Facility Carried:** POND LILY AVENUE	**Feature Intersected:** WEST RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	07/13/17
Year Built:	1991
Year Rehabilitated:	
Superstructure Type:	PS slab
ADT:	7000
Length:	70.87
No. of Spans:	2
C-C Width:	27.9

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	6
Scour Critical:	8
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structural is in overall good condition. Nominal map cracking is present on the overlay, with one ½" transverse crack full width where the expansion joint was paved over. The superstructure is in good condition with signs of typical wear. Significant efflorescence was observed between superstructure units 10 and 11 at the gutter line. Typical spalling on both abutments is evident and is within tolerable limits. There is a 1/8" shear crack in the center pier and typical hairline cracks.

Suggested Work: The saw and seal bridge joints should be replaced at the bridge ends. Grout should be placed along the curb line to redirect water permeation through the overlay. No major work is anticipated to keep this bridge operational.

Approximate Cost:
$3,000

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Bridge Identification No.: **6169**	**Facility Carried:** CHAPEL STREET	**Feature Intersected:** MILL RIVER
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	9/28/17
Year Built:	1992
Year Rehabilitated:	2017
Superstructure Type:	Steel continuous, swing
ADT:	7272
Length:	230
No. of Spans:	2
C-C Width:	33

Condition Ratings

Deck:	7
Superstructure:	5
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	N

Elevation

Approach

Status Summary: A major rehabilitation project was completed in 2018 to replace structural steel elements of the superstructure, replace to wearing surface, replace the bridge joints, and make significant repairs or replacements of the mechanical components that operate the bridge.

Suggested Work: Due to standard operation routine mechanical and electrical inspections should occur, and typically minor repairs are necessary throughout the year. On-call structural engineering, structural, mechanical, and electrical contracts are bid to respond to bridge outages, and emergency work. No major rehabilitation work is anticipated to keep this bridge operational.

Approximate Cost:
$50,000/year

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Bridge Identification No.: 6532	**Facility Carried:** ORANGE STREET	**Feature Intersected:** GOV'T CENTER ACCESS ROAD
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	7/31/17
Year Built:	1975
Year Rehabilitated:	
Superstructure Type:	CIP slab
ADT:	4488
Length:	39
No. of Spans:	1
C-C Width:	25.6

Condition Ratings

Deck:	8
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is generally in good condition. The bridge portion of it extends from the curb line West of Pitkin Plaza and across Orange St. A load rating was performed in 2001 using the Concrete Judgement Rating method and an inventory rating of 34 TNs was determined. The superstructure has isolated areas of map cracking with efflorescence and spalls up to 3" deep.

Suggested Work: Monitor for active leakage through superstructure.

Approximate Cost:
N/A

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Bridge Identification No.: 6533	**Facility Carried:** CHURCH STREET	**Feature Intersected:** CHURCH STREET TUNNEL
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	7/28/17
Year Built:	1963
Year Rehabilitated:	
Superstructure Type:	PC t-beam
ADT:	14116
Length:	38
No. of Spans:	1
C-C Width:	60.25

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in satisfactory shape. The superstructure consists of inverted pre-cast reinforced concrete t-beams, 7'x2' hollow areas over tunnel traffic were noted. Both abutments have typical map cracks and spalls ½" deep, abutment 2 has a full height crack at the southern end.

Suggested Work: Monitor for active leakage and further efflorescence. Inspect abutment 2 for shear crack, cause and repair procedure if necessary.

Approximate Cost:
N/A

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Bridge Identification No.: **6534**	**Facility Carried:** GEORGE STREET	**Feature Intersected:** CHURCH STREET TUNNEL
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	2/26/18
Year Built:	1963
Year Rehabilitated:	2016
Superstructure Type:	Concrete girder
ADT:	10402
Length:	344
No. of Spans:	13
C-C Width:	43.6

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in overall satisfactory condition. A major rehabilitation project took place from 2015 through 2016 to perform structural repairs, replace the ventilation system throughout the tunnel and to install fire detection equipment. A load rating was performed in 2001 using the Concrete Judgement Rating method and determined an inventory rating of 34 TN. Superstructure has isolated spalled ½" deep, and typical hairline cracking. Pier cap 3 was sounded and recorded as up to 80% hollow or deboned. Pier 1, column 1 was also found to have approximately 80% hollow areas.

Suggested Work: The noted pier cap and piers found to have 80% hollow areas should be further investigated as soon as possible. If report is confirmed an isolated repair project should repair those components.

Approximate Cost:
$45,000

ENGINEERING DEPARTMENT

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Toni N. Harp
Mayor

Giovanni Zinn, P.E.
City Engineer

Bridge Identification No.: **6535**	**Facility Carried:** CROWN STREET	**Feature Intersected:** CHURCH STREET TUNNEL
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	7/18/17
Year Built:	1963
Year Rehabilitated:	2017
Superstructure Type:	Steel composite
ADT:	4800
Length:	61
No. of Spans:	1
C-C Width:	36

Condition Ratings

Deck:	7
Superstructure:	8
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in over all good condition. The superstructure and deck were replaced, and substructure rehabilitated in a 2017 project. Inspectors noted a 'gouge' in the web of girder 6 and attributed it to construction damage – it may simply be damage to the paint overlay. Efflorescence and transverse cracks were noted on the underside of the deck at closure pours.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **6581**	**Facility Carried:** CHURCH ST SOUTH #2	**Feature Intersected:** NEW HAVEN INTERLOCK AMTRAK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	11/30/17
Year Built:	2003
Year Rehabilitated:	
Superstructure Type:	Steel truss, steel girder
ADT:	6828
Length:	1286
No. of Spans:	7
C-C Width:	43.95

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in overall good condition. In 2018 in partnership with the State the bridge expansion joints were replaced in three locations and conduit expansion joints on both sides of the parapet were replaced. The street-light pole at the SE approach has impact damage and a cracked weld at its base. The truss bracing has waves in the flanges in span 2, and a later brace has bowed 1". The substructure has typical map cracking within acceptable tolerances. Several bearing pads are noted as map cracking, horizontal cracks, punky concrete, and one anchor bolt has been broken.

Suggested Work: No major work is anticipated to keep this bridge operational.

Approximate Cost:
N/A

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Bridge Identification No.: **6724**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** ROUTE 10
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	9/19/18
Year Built:	2006
Year Rehabilitated:	
Superstructure Type:	Steel truss
ADT:	
Length:	129
No. of Spans:	3
C-C Width:	10

Condition Ratings

Deck:	7
Superstructure:	8
Substructure:	8
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	N
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	0
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in very good condition; no significant defects or signs of distress were observed. It services pedestrians over route 34 between the adjacent middle school and West River Park. This structure is on the State's biennial inspection list and an updated report will be provided to the City every two years.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **6874**	**Facility Carried:** COLLEGE STREET	**Feature Intersected:** NORTH SERVICE DRIVE
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban – Principal Arterial

Structure Features

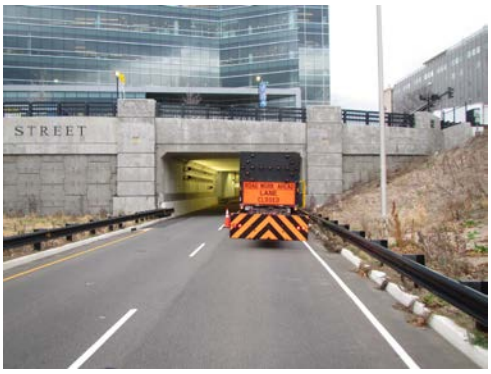
Inspection Date:	1/26/17
Year Built:	2015
Year Rehabilitated:	
Superstructure Type:	PC culvert
ADT:	12800
Length:	35
No. of Spans:	1
C-C Width:	56

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	8
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y



Elevation

Approach

Status Summary: This structure was replaced in 2015 and is in overall good condition. Hairline cracking within acceptable tolerances, mortar loss between units and some efflorescence leakage along joints were observed. The adjacent building owners sent complaints about leakage within the structure creating a hazard and damaging the building's interior finishing. The City investigated the leak and determined it was outside the structure's footprint and the responsibility of the adjacent property owner. A report on the findings was distributed in February of 2018.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **6875**	**Facility Carried:** COLLEGE STREET	**Feature Intersected:** SOUTH SERVICE DRIVE
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban – Principal Arterial

Structure Features

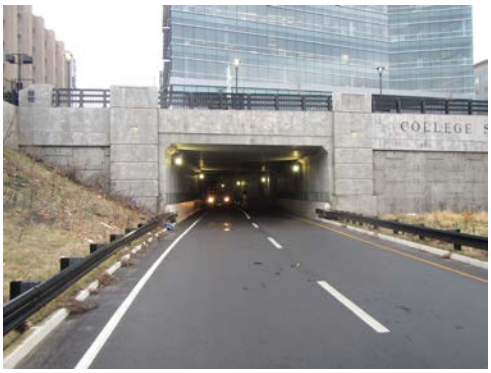
Inspection Date:	1/26/17
Year Built:	2015
Year Rehabilitated:	
Superstructure Type:	PC culvert
ADT:	12800
Length:	35
No. of Spans:	1
C-C Width:	56

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	8
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y



Elevation

Approach

Status Summary: This structure was replaced in 2015 and is in overall good condition. Hairline cracking is noted throughout the pre-cast structure within acceptable tolerances. Efflorescence was observed on the bottom of the slab, and walls around locations of mortar loss. Notices have been received of ice/water between units 17 & 18 over the roadway.

Suggested Work: A trough cannot be installed due to height clearance restrictions. Under dry conditions the mortar between units 17 and 18 should be fully chipped out and oakum rope installed to divert water.

Approximate Cost:
$1,000

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Bridge Identification No.: **6877**	**Facility Carried:** BROOKSIDE AVENUE	**Feature Intersected:** WINTERGREEN BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	6/20/17
Year Built:	2015
Year Rehabilitated:	
Superstructure Type:	PC culvert
ADT:	500
Length:	32
No. of Spans:	2
C-C Width:	40

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	6
Culverts:	8
Structurally Deficient:	N

Appraisals:

Deck Geometry:	8
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure was replaced in 2016 and is in very good condition. Vegetation encroachment in the Northern span was noted to be damming flow and causing further aggradation within the channel.

Suggested Work: An effort should be made to cut back vegetation and restore the channel to its original flow conditions by removing aggradation within the culvert. The current conditions equate to a 50% reduction in available flow rate.

Approximate Cost: N/A

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Bridge Identification No.: **92001**	**Facility Carried:** BLAKE STREET	**Feature Intersected:** BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	01/29/91
Year Built:	1980 (est)
Year Rehabilitated:	
Superstructure Type:	PC culvert
ADT:	
Length:	10
No. of Spans:	1
C-C Width:	31

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	7
Culverts:	7
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	9
Approach Alignment:	6
Scour Critical:	9
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure has not been inspected since 1991 and there are no reliable record drawings of it.

Suggested Work: This structure should be fully inspected and if found to be in poor condition, load rated as well.

Approximate Cost:
$15,000

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Bridge Identification No.: **92003**	**Facility Carried:** EASTERN STREET	**Feature Intersected:** HEMINGWAY CREEK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	2/28/17
Year Built:	1975
Year Rehabilitated:	
Superstructure Type:	PC box culvert
ADT:	12000
Length:	17
No. of Spans:	2
C-C Width:	40

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	5
Culverts:	6
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure is in satisfactory condition. The overlay has minor wear and cracking within allowable tolerances. Light scaling is observable on the interior culvert walls. One of the two cells through the culvert has filled with debris and can no longer convey water. The western sidewalk and parapet are overgrown by vegetation.

Suggested Work: Cut back vegetation every Spring. Remove debris and sediment blocking culvert cell. Perform full structure inspection by 2022.

Approximate Cost:
$10,000

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Bridge Identification No.: **92004**	**Facility Carried:** HEMINGWAY STREET	**Feature Intersected:** HEMINGWAY CREEK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	2/28/17
Year Built:	1975
Year Rehabilitated:	
Superstructure Type:	PC box culvert
ADT:	600
Length:	13
No. of Spans:	2
C-C Width:	30

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	4
Culverts:	6
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: The structure is in satisfactory condition. Overlay has significant map cracking up to 1" wide. There is some minor sediment build up occurring within the cells of the culvert. Light scaling is noticeable on all the internal walls of the culvert. Vegetation growns over the parapet on both the North and South sides of the bridge.

Suggested Work: Cut back vegetation every Spring. Replace overlay and waterproofing membrane within 5 years. Perform full structure inspection by 2022.

Approximate Cost:
$4,000

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Bridge Identification No.: **92005**	**Facility Carried:** WAYFARER STREET	**Feature Intersected:** WINTERGREEN BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	1/10/91
Year Built:	1970
Year Rehabilitated:	
Superstructure Type:	CIP culvert
ADT:	
Length:	22
No. of Spans:	2
C-C Width:	34

Elevation

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	7
Culverts:	7
Structurally Deficient:	N

Approach

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Status Summary: This structure is in satisfactory condition. It is made up of two RCP and CIP headwalls with wingwalls at either edge of the roadway. The most recent inspection was 1991 and there are not reliable record drawings of the structure. The pipes were in good condition at the time of the inspection. The headwalls have some rotational translation and hairline cracking.

Suggested Work: This bridge was recently registered on the NBI, it will be measured and recorded during its next inspection and the State will determine future inspection responsibilities.

Approximate Cost:
N/A

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Bridge Identification No.: 92006	Facility Carried: GANDO DRIVE	Feature Intersected: BROOK
Owner: City	Maintenance Responsibility: City	Functional Classification: Urban – Local

Structure Features

Inspection Date:	6/2/16
Year Built:	
Year Rehabilitated:	
Superstructure Type:	PC box culvert
ADT:	
Length:	14
No. of Spans:	1
C-C Width:	29

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	4
Culverts:	5
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	5
Scour Critical:	4
Functionally Obsolete:	

Elevation

Approach

Status Summary: Structure is in satisfactory condition. Scour holes were noted adjacent to the wing walls of the structure. Minor misalignment between units was noted, lack of distress on roadway indicates misalignment was due to construction error rather than settlement.

Suggested Work: Monitor vegetation growth within channel limits and for further scour conditions. Perform inspection biennially to ensure structure remains in satisfactory condition.

Approximate Cost:
N/A

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Bridge Identification No.: **92007**	**Facility Carried:** GROVE ST & ORANGE ST	**Feature Intersected:** FARMINGTON CANAL GREENWAY
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	
Year Built:	1996
Year Rehabilitated:	
Superstructure Type:	CMP culvert
ADT:	
Length:	166
No. of Spans:	1
C-C Width:	13.666

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: No inspection reports or record data can be found for this structure. Parts of it were demolished during construction of the FUSCO/Federal building located at Orange & State.

Suggested Work: This structure should be fully inspected and if found to be in poor condition, load rated as well. A survey may be necessary.

Approximate Cost:
N/A

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Bridge Identification No.: **X92010**	**Facility Carried:** CRESCENT STREET	**Feature Intersected:** BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	
Year Built:	
Year Rehabilitated:	
Superstructure Type:	RCP culvert
ADT:	
Length:	8
No. of Spans:	1
C-C Width:	47.3

Elevation

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Approach

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Status Summary: No inspection records or reliable record data exists for this structure.

Suggested Work: Inspect/scope to assess integrity of structure. Complete structure report and reproduce design plans. Load rate if necessary.

Approximate Cost:
$6,000

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Bridge Identification No.: **X92011**	**Facility Carried:** QUINNIPIAC AVE	**Feature Intersected:** HEMINGWAY CREEK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Culvert
ADT:	
Length:	
No. of Spans:	
C-C Width:	

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	4
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	7
Under Clearances:	N
Waterway Adequacy:	4
Approach Alignment:	7
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: At time of inspection only one 12” diameter outlet was above the water line. Headwalls on either side of the structure are in good condition. Water was still and additional piping, depth, and condition could not be determined. There is no barrier on the West side, the East side has 3 sections of 20’ jersey barrier aprox. 10’ off the curb line. A significant amount of debris, trash, and vegetation were covering the Eastern (inlet) side of the culvert, pipes were not exposed and flow was restricted.

Suggested Work: Debris and vegetation should be cleared from pipe inlet for full inspection and once yearly to maximize flow.

Approximate Cost:
N/A

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Bridge Identification No.: X92012	**Facility Carried:** WINTERGREEN AVENUE	**Feature Intersected:** BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	2/28/19
Year Built:	2012
Year Rehabilitated:	
Superstructure Type:	PC culvert
ADT:	
Length:	4
No. of Spans:	1
C-C Width:	42.5

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	8
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: This culvert is on Wintergreen Ave. approximately 1,100' south of Brookside. It is approximately 36" wide and in overall good condition. Erosion control devices have begun to fail and debris are interfering with flow at the inlet. There were no indications of distress at the headwalls, or within the body of the pipe.

Suggested Work: Periodically check for debris clogging inlet and cut back vegetation.

Approximate Cost: N/A

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Bridge Identification No.: **X92013**	**Facility Carried:** FOUNTAIN ST	**Feature Intersected:** OVERFLOW BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	2/28/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	
ADT:	
Length:	5
No. of Spans:	1
C-C Width:	54

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	6
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: Ellipitical culvert under Fountain St. approximately 4’-11” wide and 5’-3” tall. Masonry retaining wall in good condition with minor vegetation overgrowth. Metal grating on inlet clasps have rusted off and is hanging loosely. Interior of structure appears in good condition from outside.

Suggested Work: Further inspection should be performed, record drawings located and flow should be observed during a rain event.

Approximate Cost: N/A

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Bridge Identification No.: **X92022**	**Facility Carried:** MORRIS CAUSEWAY	**Feature Intersected:** TUTTLE BROOK
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:** Emergency Access Rd.

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	RCP culvert
ADT:	0
Length:	28
No. of Spans:	4
C-C Width:	14

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	5
Culverts:	7
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	4
Scour Critical:	6
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure was installed to serve as an airport emergency access road from Morris Causeway to the Tweed runway. It conveys tidal water under the access road and consists of four buried 5' diameter RCPs approximately 28' long each. Flow was obstructed in two of the pipes and riprap at the SW slope has shifted at the time of inspection.

Suggested Work: Additonal reflective signage and tags should be placed at the entrance to this bridge to alert motorists and prevent them from accidentally approaching the airport. The vegetation and debris should be removed from the inlet/outlet of the pipes every spring to prevent damming.

Approximate Cost:
N/A

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Bridge Identification No.: X921	**Facility Carried:** Park Dept Bridge	**Feature Intersected:** Woodland Depression
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Masonry arch
ADT:	
Length:	
No. of Spans:	1
C-C Width:	

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Photo 2 - approach

Approach

Status Summary: This is a defunct structure that use to serve as an access road within Edgerton Park. The deck and approaches have fencing and plywood coverings to keep pedestrians off the bridge. The substructure appears to be in satisfactory condition. There is typical mortar loss within acceptable tolerances, and cracking on the underside of the deck.

Suggested Work: Temporarily uncover bridge for further inspections. Consider necking down bridge approach to only allow pedestrians access if conditions warrant reopening.

Approximate Cost:
N/A

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City Engineer

Bridge Identification No.: **X931**	**Facility Carried:** PARK DEPT BRIDGE	**Feature Intersected:** EAST ROCK PARK ACCESS TRAIL
Owner: CITY	**Maintenance Responsibility:** CITY	**Functional Classification:**

Structure Features

Inspection Date:	
Year Built:	
Year Rehabilitated:	
Superstructure Type:	
ADT:	
Length:	
No. of Spans:	1
C-C Width:	

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: Park's dept. access road bridge over East Rock Park trails.

Suggested Work: N/A

Approximate Cost:
N/A

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Mayor

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City Engineer

Bridge Identification No.: **1P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** Beldon Brook (1)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	2018
Year Rehabilitated:	
Superstructure Type:	Steel box truss
ADT:	
Length:	41
No. of Spans:	1
C-C Width:	6.167

Condition Ratings

Deck:	9
Superstructure:	9
Substructure:	9
Channel:	6
Culverts:	
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	8
Approach Alignment:	
Scour Critical:	8
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure was installed as part of the Winslow Augustine Pedestrian Path project in 2018. It spans between Winslow Augustine Park and the Trail Path over Beldon Brook. It should have a minimum of 20 years maintenance free design life.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **2P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** Beldon Brook (2)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	2017
Year Rehabilitated:	
Superstructure Type:	Steel box truss
ADT:	
Length:	60.2
No. of Spans:	1
C-C Width:	6

Condition Ratings

Deck:	9
Superstructure:	9
Substructure:	9
Channel:	5
Culverts:	
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	
Scour Critical:	8
Functionally Obsolete:	

Elevation

Approach

Status Summary: This bridge was installed in 2017 and should have a typical maintenance free design life of 20 years minimum. It spans over Wintergreen brook between Winslow Augustine Park and the elementary school adjacent to Wilmot Rd.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **3P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** Detention Basin
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	2018
Year Rehabilitated:	
Superstructure Type:	Steel bow truss
ADT:	
Length:	61.17
No. of Spans:	1
C-C Width:	6.167

Condition Ratings

Deck:	9
Superstructure:	9
Substructure:	9
Channel:	
Culverts:	
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure was installed in 2018 as part of the Winslow Augustine Pedestrian Path project. It spans between Augustine St. and the trail to Winslow Augustine Park over a detention basin and wetlands. It should have a minimum of 20 years maintenance free design life.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **4P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** West River (1)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	2014
Year Rehabilitated:	
Superstructure Type:	
ADT:	
Length:	60
No. of Spans:	1
C-C Width:	6

Condition Ratings

Deck:	9
Superstructure:	9
Substructure:	9
Channel:	8
Culverts:	
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	8
Approach Alignment:	
Scour Critical:	8
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure was installed in 2014. It spans over the West River between the playground adjacent to Blake St. and the parking lot off Valley St. It should have a minimum of 20 years maintenance free design life.

Suggested Work: N/A

Approximate Cost: N/A

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Bridge Identification No.: **5P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** West River (2)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	
Length:	75
No. of Spans:	5
C-C Width:	5.5

Elevation

Condition Ratings

Deck:	5
Superstructure:	6
Substructure:	6
Channel:	5
Culverts:	
Structurally Deficient:	N

Approach

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	
Scour Critical:	6
Functionally Obsolete:	

Status Summary: This structure spans over the West River from the parking lot adjacent to Valley St. to the West Rock Park baseball fields. There are no reliable record documents of when it was installed or the design of substructure units. There is a moderate shear crack in the Southern abutment, however the superstructure shows no indication of movement or distress. The decking is beginning to rot at connection points. Debris accumulation was typical against all the in-water piers.

Suggested Work: Clean decking of rot and treat with preservative. Periodically remove debris from piers to avoid negative impacts to channel flow.

Approximate Cost:
$1,000

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Bridge Identification No.: **6P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** West River (3)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel arch truss
ADT:	
Length:	57
No. of Spans:	1
C-C Width:	6

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	7
Channel:	8
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	7
Approach Alignment:	
Scour Critical:	8
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure spans over the West River between the tennis courts and Coogan Pavilion within Edgewood Park. It is in overall good condition.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **7P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** West River (4)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	2/28/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	
Length:	
No. of Spans:	2
C-C Width:	

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	5
Channel:	6
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	5
Approach Alignment:	
Scour Critical:	5
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure spans over the West River between a hiking path and the main access road within Edgewood Park. The decking on this structure is severely deteriorated and should be replaced. Several of the connections have failed due to corrosion and boards are loose. There is a significant amount of debris accumulating on the center pier causing channel flow problems. The masonry wingwalls have significant loss of mortar. The abutments have typical cracking and spalls but do not appear to be in distress.

Suggested Work: Replace bridge decking, clean and paint structural steel superstructure, repoint masonry and patch concrete abutments. An analysis should be performed to compare costs of rehabilitation to full replacement.

Approximate Cost:
$65,000

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Bridge Identification No.: **8P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** West River 3
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	5/1/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	CIP slab
ADT:	
Length:	14
No. of Spans:	1
C-C Width:	5

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	5
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	7
Under Clearances:	7
Waterway Adequacy:	7
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure spans over the West River between a path from Edgewood ave to soccer fields within lower Edgewood Park. CIP concrete slab bridge is in overall good condition. The abutment was cast monolithic with the slab but there is a cold joint between the abutment and backwall/wingwalls that has begun to move laterally.

Suggested Work: No significant work is anticipated to keep this bridge operational, routine inspections should be performed for the structure and the river should be checked after major storm events to clear debris from the bridge.

Approximate Cost:
N/A

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Bridge Identification No.: **9P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** Mill River
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	4/10/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel truss
ADT:	
Length:	80
No. of Spans:	1
C-C Width:	6.5

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	5
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	6
Waterway Adequacy:	6
Approach Alignment:	6
Scour Critical:	5
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure spans the Mill River in East Rock Park. It connects two hiking trails adjacent to English Drive and East Rock Park Drive. A void in the west wing wall due to scour and buldging of the wingwalls has begun. There is a 4" wide 12" deep void in the face of the eastern abutment.

Suggested Work: The masonry wingwalls and abutments should be repointed and voids filled.

Approximate Cost:
$5,000

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Bridge Identification No.: **10P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** FARMINGTON CANAL GREENWAY (1)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	
Year Built:	2009
Year Rehabilitated:	
Superstructure Type:	Steel box beam
ADT:	
Length:	62.5
No. of Spans:	1
C-C Width:	7.25

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure was installed in conjunction with the Hill House Ave Bridge Replacement project in 2009. It is one of twin pedestrian bridges installed on East and West sidewalks. The structure should have a minimum 20-year maintenance free design life.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **11P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** FARMINGTON CANAL GREENWAY (2)
Owner: City	**Maintenance Responsibility:** City	**Functional Classification:**

Structure Features

Inspection Date:	
Year Built:	2009
Year Rehabilitated:	
Superstructure Type:	Steel box beam
ADT:	
Length:	62.25
No. of Spans:	1
C-C Width:	7.75

Elevation

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Approach

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Status Summary: Western twin pedestrian bridge over Farmington Canal. This bridge was installed in 2009 and should have a typical maintenance free design life of 20 years minimum.

Suggested Work: Perform full bridge inspection and assessment in 2019.

Approximate Cost:
N/A

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Bridge Identification No.: **12P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** FORT HALE PARK INLET
Owner: CITY	**Maintenance Responsibility:** CITY	**Functional Classification:**

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Timber girder
ADT:	
Length:	68
No. of Spans:	10
C-C Width:	12

Condition Ratings

Deck:	
Superstructure:	6
Substructure:	6
Channel:	8
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	8
Functionally Obsolete:	

Elevation

Approach

Status Summary: Historic pull bridge within Fort Nathan Hale Park over tidal inlet. Pile supported bents without signs of deterioration. Signs of rot in toe-guard on deck of superstructure. Inlet is tidal, flow rate is insignificant, and no scour or erosion is anticipated.

Suggested Work: Further inspection of piles during low water and deck for rot should be conducted.

Approximate Cost:
N/A

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Bridge Identification No.: **13P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** WEST RIVER (6)
Owner: CITY	**Maintenance Responsibility:** CITY	**Functional Classification:**

Structure Features

Inspection Date:	
Year Built:	
Year Rehabilitated:	
Superstructure Type:	
ADT:	
Length:	
No. of Spans:	1
C-C Width:	

Condition Ratings

Deck:	
Superstructure:	
Substructure:	
Channel:	
Culverts:	
Structurally Deficient:	

Appraisals:

Deck Geometry:	
Under Clearances:	
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: Defunct pedestrian bridge over West River within the West River Open Spaces Park.

Suggested Work: Remove debris, coordinate with Park's Dept. to investigate project to replace structure.

Approximate Cost:
N/A

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Bridge Identification No.: **14P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** WEST RIVER (7)
Owner: CITY	**Maintenance Responsibility:** CITY	**Functional Classification:**

Structure Features

Inspection Date:	5/1/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	CIP slab
ADT:	
Length:	14
No. of Spans:	1
C-C Width:	5

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	5
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	7
Under Clearances:	7
Waterway Adequacy:	7
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Pedestrian bridge adjacent to Chapel St. on walking path through park over West River. One of two twin bridges at river. CIP concrete slab bridge is in overall good condition. The abutment was cast monolithic with the slab but there is a cold joint between the abutment and backwall/wingwalls that has begun to move laterally.

Suggested Work: No significant work is anticipated to keep this bridge operational, routine inspections should be performed for the structure and the river should be checked after major storm events to clear debris from the bridge.

Approximate Cost:
N/A

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Bridge Identification No.: **15P**	**Facility Carried:** PEDESTRIAN CROSSING	**Feature Intersected:** Brook – East Rock Park
Owner: CITY	**Maintenance Responsibility:** CITY	**Functional Classification:**

Structure Features

Inspection Date:	6/7/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Timber beam
ADT:	
Length:	18
No. of Spans:	1
C-C Width:	6

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	5
Channel:	4
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	7
Under Clearances:	4
Waterway Adequacy:	4
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Pedestrian bridge adjacent to Mill River on pedestrian trail in East Rock Park off Orange St. Timber superstructure on timber backwall. Brook invert to superstructure low member is approx. 2'.

Suggested Work: No significant work is anticipated to keep this bridge operational, bridge should be inspected after significant storm events for debris and aggradation, and substructure checked for rot every other year.

Approximate Cost:
N/A

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Bridge Identification No.: **3746**	**Facility Carried:** EAST STREET	**Feature Intersected:** AMTRAK RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	04/18/18
Year Built:	1906
Year Rehabilitated:	1995
Superstructure Type:	PS box beam
ADT:	5849
Length:	76.1
No. of Spans:	1
C-C Width:	44.9

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	9
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in fair condition, there is leakage and typical superficial deterioration of the superstructure. The overlay has map cracking, efflorescence between deck units indicates failure of the waterproofing membrane. The City is responsible for the wearing surface and maintenance.

Suggested Work: Seal the map cracking in the overlay during the next season.

Approximate Cost:
$1,000

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Bridge Identification No.: **3752**	**Facility Carried:** OLIVE STREET	**Feature Intersected:** AMTRAK RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	04/16/18
Year Built:	1998
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	6800
Length:	87.9
No. of Spans:	1
C-C Width:	43.95

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is generally in good condition. There is some map cracking and light to moderate raveling of the overlay. The City is responsible for the wearing surface and maintenance.

Suggested Work: Seal cracks and monitor for mill and pavement replacement in 5-10 years.

Approximate Cost:
$1,000

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Bridge Identification No.: 3867	**Facility Carried:** HOWARD AVENUE	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	05/09/17
Year Built:	1920
Year Rehabilitated:	1997
Superstructure Type:	Steel girder
ADT:	10420
Length:	75.13
No. of Spans:	1
C-C Width:	51.5

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in satisfactory condition. Leaking at the abutments suggests penetrations in the overlay and waterproof membrane. The overlay has moderate wear and raveling at the curb line. The City is responsible for the wearing surface and maintenance.

Suggested Work: The overlay should be monitored for milling and pavement replacement within 5-10 years.

Approximate Cost:
N/A

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Bridge Identification No.: **3868**	**Facility Carried:** CEDAR STREET NO. 1	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	02/04/17
Year Built:	1906
Year Rehabilitated:	1994
Superstructure Type:	Steel girder
ADT:	2914
Length:	136
No. of Spans:	2
C-C Width:	29.85

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in satisfactory condition. The overlay exhibits extensive map cracking that has been sealed previously. The City is responsible for the wearing surface and maintenance.

Suggested Work: The overlay should be monitored for milling and pavement replacement within 5-10 years.

Approximate Cost:
N/A

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Bridge Identification No.: **3870**	**Facility Carried:** FAIR STREET	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	04/11/17
Year Built:	1998
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	4920
Length:	142
No. of Spans:	3
C-C Width:	38

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in generally good condition. There is light raveling throughout the overlay but no significant defects. The City is responsible for the wearing surface and maintenance.

Suggested Work: N/A

Approximate Cost:
N/A

ENGINEERING DEPARTMENT

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Toni N. Harp
Mayor

Giovanni Zinn, P.E.
City Engineer

Bridge Identification No.: **3872**	**Facility Carried:** CHAPEL STREET	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	04/11/17
Year Built:	1994
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	10255
Length:	136
No. of Spans:	3
C-C Width:	47.88

Condition Ratings

Deck:	5
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in satisfactory condition. The overlay, waterproofing membrane, and joint headers were replaced in 2018. The City is responsible for the wearing surface and maintenance.

Suggested Work: N/A

Approximate Cost:
N/A

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City Engineer

Bridge Identification No.: **3873**	**Facility Carried:** COURT STREET	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Collector

Structure Features

Inspection Date:	04/11/17
Year Built:	1907
Year Rehabilitated:	1994
Superstructure Type:	PS box beam
ADT:	180
Length:	139
No. of Spans:	4
C-C Width:	25.9

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is generally in satisfactory condition. The City is responsible for the wearing surface and maintenance. There is map cracking which has been previously sealed, and light wear on the overlay.

Suggested Work: Seal cracks, mill and replace pavement within 5 years.

Approximate Cost:
N/A

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Bridge Identification No.: **3874**	**Facility Carried:** GRAND AVENUE	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	06/15/17
Year Built:	1933
Year Rehabilitated:	2009
Superstructure Type:	PS box beam
ADT:	11700
Length:	205
No. of Spans:	2
C-C Width:	43.95

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is generally in good condition. The City is responsible for the wearing surface and maintenance. There are random ½" wide cracks in the overlay and light wear.

Suggested Work: Seal cracks and continue to monitor for mill and pavement replacement within 5-10 years.

Approximate Cost:
N/A

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Bridge Identification No.: **3879**	**Facility Carried:** CLIFTON ST	**Feature Intersected:** AMTRAK RAILROAD
Owner: Amtrak	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	04/04/18
Year Built:	1912
Year Rehabilitated:	
Superstructure Type:	Masonry arch
ADT:	1800
Length:	29.85
No. of Spans:	1
C-C Width:	25.9

Condition Ratings

Deck:	N
Superstructure:	5
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is currently in satisfactory condition. This bridge is now owned by Amtrak and will no longer be included in the State biennial inspection. The City is responsible for the wearing surface and maintenance. There are ½" cracks in the overlay.

Suggested Work: Mill and pave within 5-10 years. Coordinate with Amtrak verification of inspection and bridge serviceability on a biennial basis.

Approximate Cost:
N/A

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Bridge Identification No.: **3998**	**Facility Carried:** FERRY STREET	**Feature Intersected:** AMTRAK RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	01/28/18
Year Built:	1912
Year Rehabilitated:	1992
Superstructure Type:	Steel truss
ADT:	12880
Length:	118
No. of Spans:	1
C-C Width:	36.7

Condition Ratings

Deck:	6
Superstructure:	4
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	2
Under Clearances:	2
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge's superstructure is in poor condition. Stringers have section loss of 25% to 47% as well as pitting and rust build up. The City is responsible for the wearing surface and maintenance. A load rating request was submitted by the inspector to the State.

Suggested Work: The State is planning a rehabilitation project to replace the deck, wearing surface, approaches and perform limited concrete and steel repairs. The project is currently scheduled for the Fall through Spring of 2021 and will require a full road closure. The City is coordinating with the State to reduce the closure period and offer relief to anticipated congestion as much as possible.

Approximate Cost:
$7,300,000 (100% State)

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City Engineer

Bridge Identification No.: **4024**	**Facility Carried:** E GRAND&RUSSELL ST	**Feature Intersected:** AMTRAK RAILROAD
Owner: Amtrak	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	06/15/16
Year Built:	1935
Year Rehabilitated:	
Superstructure Type:	Masonry arch
ADT:	2090
Length:	29.86
No. of Spans:	1
C-C Width:	32.14

Condition Ratings

Deck:	N
Superstructure:	4
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This structure is in poor condition. The superstructure is multi-course brick arch and at the 2016 inspection showed significant areas of efflorescence, mortar loss, and missing bricks. Load rating completed in 1991 by CTDOT using Concrete Judgement Rating found the bridge's inventory rating to be 36 Tons. The City is responsible for the wearing surface and maintenance. The overlay is in satisfactory condition.

Suggested Work: The City has previously contacted Amtrak regarding their inspection protocols and structure status updates. Continued monitoring and biennial check-ins should occur to verify the structure's capacity.

Approximate Cost:
N/A

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Bridge Identification No.: **4025**	**Facility Carried:** DEWITT STREET	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

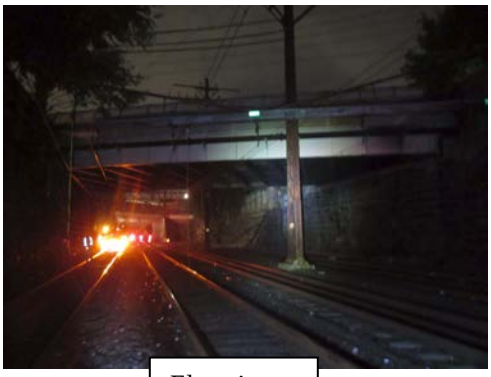
Inspection Date:	09/08/15
Year Built:	1914
Year Rehabilitated:	1992
Superstructure Type:	Steel girder
ADT:	500
Length:	81
No. of Spans:	1
C-C Width:	29.8

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y



Elevation

Approach

Status Summary: Bridge is generally in satisfactory condition. Random short cracks approx. 1/8" wide on overlay. The City is responsible for the wearing surface and maintenance.

Suggested Work: Seal cracks, monitor for mill and pavement replacement within 5-10 years.

Approximate Cost:
$1,000

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Bridge Identification No.: 4027	**Facility Carried:** LAMBERTON STREET	**Feature Intersected:** METRO NORTH RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	05/10/17
Year Built:	1907
Year Rehabilitated:	1994
Superstructure Type:	Steel girder
ADT:	3606
Length:	150
No. of Spans:	2
C-C Width:	40

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Bridge is in satisfactory condition. There are some ¼" cracks previously sealed that have reopened. The City is responsible for the wearing surface and maintenance.

Suggested Work: Seal cracks, monitor for mill and pavement replacement within 5-10 years.

Approximate Cost:
$1,000

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City Engineer

Bridge Identification No.: **4058**	**Facility Carried:** CHAPEL STREET	**Feature Intersected:** PROV & WORC RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	10/31/17
Year Built:	1912
Year Rehabilitated:	2005
Superstructure Type:	PS box beam
ADT:	8041
Length:	53
No. of Spans:	1
C-C Width:	32

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	4
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary:

The bridge is in generally good condition. Overlay shows signs of light wear. The City is responsible for the wearing surface and maintenance.

Suggested Work:

None at this time.

Approximate Cost:

N/A

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Bridge Identification No.: **5886**	**Facility Carried:** BLATCHLEY AVENUE	**Feature Intersected:** AMTRAK RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	01/30/18
Year Built:	1989
Year Rehabilitated:	
Superstructure Type:	Steel continuous girder
ADT:	3588
Length:	236.87
No. of Spans:	3
C-C Width:	29.89

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	5
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is in good condition. There is map cracking and raveling on the overlay. The deck show nominal efflorescence. The City is responsible for the wearing surface and maintenance. It should be noted in March 2017 adjacent construction of the UHAUL building caused undermining of the bridge abutment and a forced two-day closure of the bridge. Repair documents were created by Langan. The repair construction and coordination is the responsibility of the State.

Suggested Work: Cracks on the deck should be sealed next season.

Approximate Cost:
$1,000

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City Engineer

Bridge Identification No.: **5890**	**Facility Carried:** WALLACE STREET	**Feature Intersected:** AMTRAK RAILROAD
Owner: Orphan	**Maintenance Responsibility:** CGS 13b-283 City/State	**Functional Classification:** Urban - Local

Structure Features

Inspection Date:	04/18/18
Year Built:	1906
Year Rehabilitated:	1989
Superstructure Type:	PS box beam
ADT:	2133
Length:	73.16
No. of Spans:	1
C-C Width:	36.08

Condition Ratings

Deck:	5
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: This bridge is generally in satisfactory condition. The cracks in the overlay have recently been sealed, and pot holes filled. The City is responsible for the wearing surface and maintenance.

Suggested Work: N/A

Approximate Cost:
N/A

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Toni N. Harp
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City Engineer

Bridge Identification No.: 165	**Facility Carried:** HOWARD AVENUE	**Feature Intersected:** INTERSTATE-95
Owner: State	**Maintenance Responsibility:** CGS 13a-99a City/State	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	06/17/17
Year Built:	2010
Year Rehabilitated:	
Superstructure Type:	Steel continuous
ADT:	3770
Length:	164
No. of Spans:	2
C-C Width:	55

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	9
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Bridge is in generally good condition. The City is responsible for the wearing surface and maintenance.

Suggested Work:
Overlay has some cracking and should be repaved within 5 years – at which time coordinate with the State for waterproofing membrane and joint replacement.

Approximate Cost:
N/A

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City Engineer

Bridge Identification No.: **951**	**Facility Carried:** CHURCH ST SOUTH #1	**Feature Intersected:** ROUTE 34
Owner: State	**Maintenance Responsibility:** CGS 13a-99a City/State	**Functional Classification:** Urban - Other Principal Arterial

Structure Features

Inspection Date:	06/21/17
Year Built:	1960
Year Rehabilitated:	1996
Superstructure Type:	PS box beams
ADT:	13080
Length:	163
No. of Spans:	2
C-C Width:	60

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	7
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary:

This bridge is in generally good condition. The City is responsible for the wearing surface and maintenance. Random ¼" cracks in the wearing surface, and moderate overall wear.

Suggested Work:

Seal cracks next season. Mill and pave within 5-10 years.

Approximate Cost:

$1,000

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City Engineer

Bridge Identification No.: 3019	**Facility Carried:** WILLOW STREET	**Feature Intersected:** I91 RMPS 139&141,MILL RV
Owner: State	**Maintenance Responsibility:** CGS 13a-99a City/State	**Functional Classification:** Urban - Minor Arterial

Structure Features

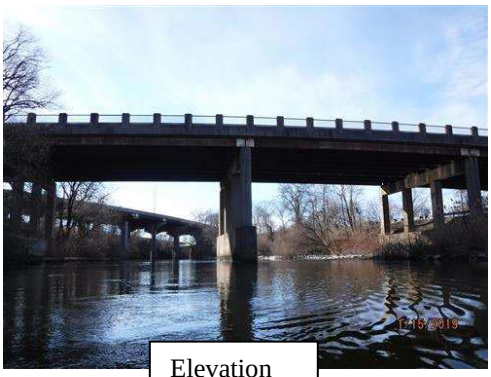
Inspection Date:	01/15/19
Year Built:	1965
Year Rehabilitated:	
Superstructure Type:	Steel multi-beam
ADT:	11584
Length:	352
No. of Spans:	6
C-C Width:	40

Condition Ratings

Deck:	6
Superstructure:	6
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	3
Waterway Adequacy:	9
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	Y



Elevation

Approach

Status Summary:

Bridge is in satisfactory condition. The City is responsible for the wearing surface and maintenance.

Suggested Work:

This bridge was milled and paved by the City in 2018. The State replaced the waterproofing membrane and joints.

Approximate Cost:

N/A

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Bridge Identification No.: **5996**	**Facility Carried:** WOODWARD AVENUE	**Feature Intersected:** INTERSTATE-95
Owner: State	**Maintenance Responsibility:** CGS 13a-99a City/State	**Functional Classification:** Urban - Minor Arterial

Structure Features

Inspection Date:	07/25/16
Year Built:	2006
Year Rehabilitated:	
Superstructure Type:	Steel continuous
ADT:	7250
Length:	181
No. of Spans:	2
C-C Width:	51

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	5
Waterway Adequacy:	N
Approach Alignment:	7
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary:

Bridge is in generally good condition. The City is responsible for the wearing surface and maintenance.

Suggested Work:

The overlay has very light cracking and should be inspected for milling/replacement within 10 years.

Approximate Cost:

N/A

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Bridge Identification No.: **179**	**Facility Carried:** ROUTE 337 (TOWNSEND AVE)	**Feature Intersected:** I-95
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	7/16/18
Year Built:	2006
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	8600
Length:	179
No. of Spans:	2
C-C Width:	51.167

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	6
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Townsend Ave over I-95. This bridge is in overall good condition and has no notable deficiencies.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **180**	**Facility Carried:** ROUTE 1 NB	**Feature Intersected:** I-95
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	7/16/18
Year Built:	2006
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	11450
Length:	261
No. of Spans:	2
C-C Width:	43.333

Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	5
Waterway Adequacy:	N
Approach Alignment:	4
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 1 over I-95 (Forbes Ave to Frontage Rd.). This bridge is in overall good condition and has no notable difficiencies.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **331**	**Facility Carried:** ROUTE 1	**Feature Intersected:** WEST RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	2/05/18
Year Built:	2006
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	20400
Length:	103
No. of Spans:	2
C-C Width:	50

Condition Ratings

Deck:	7
Superstructure:	5
Substructure:	6
Channel:	5
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	3
Waterway Adequacy:	6
Approach Alignment:	8
Scour Critical:	3
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Route 1 (Columbus Ave.) over West River on New Haven/West Haven town line. Structure is in generally satisfactory condition. Bearing devices and girders have moderate rust and random areas of pitting. Substructure shows typical signs of wear but no distress. There are localized areas of scour at the substructure units.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **334**	**Facility Carried:** ROUTE 1	**Feature Intersected:** METRO NORTH RR
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	3/23/18
Year Built:	1990
Year Rehabilitated:	1992
Superstructure Type:	Steel truss
ADT:	7039
Length:	171
No. of Spans:	1
C-C Width:	40

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Water street bridge over Metro North Railroad. The superstructure is in satisfactory condition, some locations of debris accumulation and rusting has begun. Portions of the bracing and lateral frame sag up to 2", but no further distress is evident. The structure was load rated in 1999 and received an inventory rating of 56.5 TN. Significant collision damage to the parapet at the SW approach (shared parapet with State St. North bridge).

Suggested Work: N/A

Approximate Cost:
N/A

ENGINEERING DEPARTMENT

City of New Haven
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Toni N. Harp
Mayor

Giovanni Zinn, P.E.
City Engineer

Bridge Identification No.: **337**	**Facility Carried:** ROUTE 1 & PW RR	**Feature Intersected:** QUINNIPIAC RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	1/24/17
Year Built:	2002
Year Rehabilitated:	
Superstructure Type:	Steel girder, movable lift
ADT:	13500
Length:	936
No. of Spans:	7
C-C Width:	52

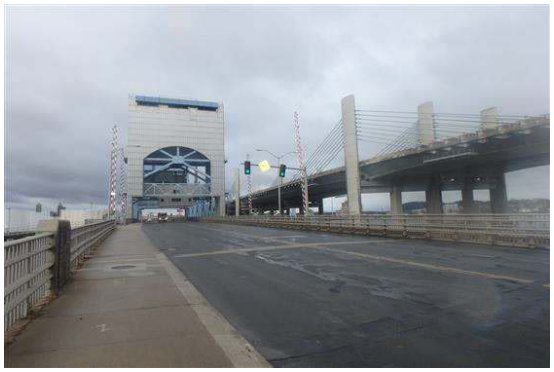
Condition Ratings

Deck:	7
Superstructure:	7
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	N

Elevation



Approach

Status Summary: Tomlinson Lift Bridge (Forbes Ave.) over the Quinnipiac River. This structure was replaced in 2002 and is in overall good condition. There is typical wear on the overlay and hairline map cracking of the deck. The superstructure has minor rusting in some locations. The substructure has isolated vertical hairline cracks. Localized scour at pier 1w exposed the sheet pile around the footing, but no undermining was observed.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **1031**	**Facility Carried:** ROUTE 63	**Feature Intersected:** WEST RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	3/20/17
Year Built:	1921
Year Rehabilitated:	
Superstructure Type:	Steel girder concrete encased
ADT:	26200
Length:	88
No. of Spans:	2
C-C Width:	68

Condition Ratings

Deck:	6
Superstructure:	5
Substructure:	5
Channel:	5
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	8
Scour Critical:	3
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 63 (Whalley Ave.) over the West River. This structure is in fair condition. It was load rated in 2009 and received an inventory rating of 45.7 TN. The sidewalks have spalls up to 4" deep and pose trip risks to pedestrians, active leakage was observed through sections of sidewalk joints and spalls onto the superstructure below. The parapets have significant spalls with exposed rebar. The superstructure is made up of concrete encased steel girders. Cracks up to 1" wide, severe spalls at girder bearings, and section loss up to 25.2% was observed on the bottom flange of girders. The substructure has typical spalling and cracks up to 7/16" wide, several full height vertical cracks were noted on the abutments and pier. The footings have become exposed up to 21" in depth and areas of scour up to 30" deep along the abutments.

Suggested Work: This bridge may be targeted by the State for a major rehabilitation project within the next ten years.

Approximate Cost:
N/A

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Bridge Identification No.: **2105**	**Facility Carried:** FITCH STREET	**Feature Intersected:** BROOK
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	2/27/18
Year Built:	1920
Year Rehabilitated:	
Superstructure Type:	Masonry culvert
ADT:	14500
Length:	9
No. of Spans:	1
C-C Width:	38.58

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	6
Culverts:	6
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This structure is in overall satisfactory condition. It is the State's responsibility to maintain the road and structure. It was load rated in 2002 using a Judgement Rating method and found to have an inventory rating of 34 TN. Masonry within the culvert has some voids, cracked stones, and mortar loss. Concrete pipe extensions and headwall have minor spalling and typical cracking.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **2166**	**Facility Carried:** ROUTE 337	**Feature Intersected:** MORRIS CREEK
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	4/19/17
Year Built:	1936
Year Rehabilitated:	1971
Superstructure Type:	PS slab
ADT:	2600
Length:	36
No. of Spans:	1
C-C Width:	30

Condition Ratings

Deck:	8
Superstructure:	7
Substructure:	4
Channel:	6
Culverts:	N
Structurally Deficient:	Y

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	6
Approach Alignment:	6
Scour Critical:	4
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 337 (South End Rd.) over Morris Creek. This structure is owned and operated by the State at the boarder between New Haven and East Haven. It's substructure currently has a condition rating of '4' giving the structure an overall rating of poor. The superstructure is in overall good condition showing typical signs of wear. The abutments, made up of masonry brownstones, have lost enough mortar that stones have come loose and shifted. There are several voids, shear cracks, and heavy deterioration sections. The bridge was load rated in 2001 and given an inventory rating of 45.6 TN.

Suggested Work: Continued monitoring. This is a State bridge and as such they should be planning a rehabilitation project for it. At the moment the substructure conditions will not present a danger to the traveling public.

Approximate Cost:
N/A

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Bridge Identification No.: **3097**	**Facility Carried:** ROUTE 17	**Feature Intersected:** LITTLE RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	8/14/17
Year Built:	1965
Year Rehabilitated:	
Superstructure Type:	CIP culvert
ADT:	32100
Length:	43
No. of Spans:	2
C-C Width:	78.75

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	7
Culverts:	5
Structurally Deficient:	N

Appraisals:

Deck Geometry:	9
Under Clearances:	N
Waterway Adequacy:	9
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 17 (Foxon Blvd.) over little river at Middletown Ave. Structure is in overall satisfactory condition and was load rated in 2005 using the Concrete Judgement Rating method. Some sections of severe scale were found within the culvert at the water line and full depth in structure joints. The center pier (wall) has a section of void space approximately 1'x6". Efflorescence and hairline map cracking was typical throughout the interior of the structure.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **3515**	**Facility Carried:** PEDESTRIAN	**Feature Intersected:** ROUTE 10 (FITCH ST.)
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:**

Structure Features

Inspection Date:	5/14/15
Year Built:	1968
Year Rehabilitated:	
Superstructure Type:	PC PS beam
ADT:	
Length:	113
No. of Spans:	1
C-C Width:	30

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	N
Under Clearances:	6
Waterway Adequacy:	N
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Pedestrian bridge over Route 10 (Fitch St.). Structure is in good condition. Minor spalling and vehicle impact damage is evident in the girders and CIP deck.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: 03612	**Facility Carried:** SR 745 KIMBERLY AVE	**Feature Intersected:** WEST RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	11/28/17
Year Built:	1969
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	23800
Length:	462
No. of Spans:	4
C-C Width:	52

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	6
Channel:	7
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	4
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	6
Scour Critical:	5
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 745 (Kimberly Ave.) over the West River. This structure is State owned and maintained, on the boarder of New Haven/West Haven. The structure is in overall satisfactory condition.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **4008**	**Facility Carried:** ROUTE 10	**Feature Intersected:** METRO NORTH RR
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	6/15/17
Year Built:	1977
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	20500
Length:	894
No. of Spans:	11
C-C Width:	48

Condition Ratings

Deck:	7
Superstructure:	5
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	7
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Route 10 (Ella Grasso Blvd) over Metro North RR This structure is in overall satisfactory condition. It was load rated in 2000 and given an inventory rating of 37.8 TN. The deck and wearing surface have slight map cracking within acceptable tolerances and deterioration was estimated at 1% of the total area. The bearings have accumulated pack rust and were found to be in 'fair' condition at the time of inspection. The superstructure was also given a rating of 'far' due to section less in the web of several girders. Significant spalling has occurred at the bearing areas of intermediate columns.

Suggested Work: N/A – The State may target this bridge for a minor rehabilitation project within the next ten years.

Approximate Cost:
N/A

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Bridge Identification No.: **4309**	**Facility Carried:** YORK ST	**Feature Intersected:** FUTURE ROUTE 34
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Minor Arterial

Structure Features

Inspection Date:	10/13/17
Year Built:	1980
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	8304
Length:	151
No. of Spans:	2
C-C Width:	44

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	6
Under Clearances:	3
Waterway Adequacy:	N
Approach Alignment:	8
Scour Critical:	N
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: York St. over 'future route 34'. The structure is in overall satisfactory condition and was load rated in 2002. The overlay has typical wear, raveling and several potholes. Underside of the deck has spalls up to 1" deep, but no noticeable efflorescence. Minor concrete spalls, delamination and hollow areas were found on the abutments and piers.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **5593**	**Facility Carried:** ROUTE 34	**Feature Intersected:** WEST RIVER
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	12/17/18
Year Built:	1925
Year Rehabilitated:	1988
Superstructure Type:	PS box beam
ADT:	2300
Length:	78
No. of Spans:	1
C-C Width:	48

Condition Ratings

Deck:	6
Superstructure:	7
Substructure:	5
Channel:	4
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	2
Under Clearances:	N
Waterway Adequacy:	9
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	Y

Elevation

Approach

Status Summary: Route 34 (Derby Ave.) over West River. The structure is in overall satisfactory condition. It was load rated in 1999.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **6664**	**Facility Carried:** ROUTE 17	**Feature Intersected:** BROOK
Owner: State	**Maintenance Responsibility:** State	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	6/11/18
Year Built:	1970
Year Rehabilitated:	
Superstructure Type:	Steel corrugated arch pipe culvert
ADT:	6800
Length:	22
No. of Spans:	3
C-C Width:	39.25

Condition Ratings

Deck:	N
Superstructure:	N
Substructure:	N
Channel:	6
Culverts:	6
Structurally Deficient:	N

Appraisals:

Deck Geometry:	5
Under Clearances:	N
Waterway Adequacy:	8
Approach Alignment:	8
Scour Critical:	8
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Route 17 (Middletown Ave.) over Brook at Gando Drive. The structure was load rated in 2010 and is in generally good condition. Wearing surface has some transverse cracking. Silt and marsh growth has effectively blocked two of the culvert pipes, the site should be monitored for over topping or pooling water during heavy rain events.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: 1A	**Facility Carried:** AMTRAK	**Feature Intersected:** HUMPHREY STREET
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/25/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel encased concrete girders
ADT:	
Length:	45
No. of Spans:	3
C-C Width:	184

Condition Ratings

Deck:	5
Superstructure:	5
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure is owned and operated by Amtrak. Spalling on the deck and girders is significant and wide spread. There is low clearance on both approaches and signage of 12'-3". Several lights are out over the sidewalk and street below the bridge. Utility cables (electric and communication) are suspended and drape 8.5' above the north sidewalk.

Suggested Work: This structure should be visited every few months to check for loose concrete or falling hazards from the road way below. The wires should be pinned to the wall or deck out of reach of pedestrians. Lights are the responsibility of the City and a project is currently in development to improve lighting beneath the structure.

Approximate Cost:
$2,000

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Bridge Identification No.: 2A	**Facility Carried:** AMTRAK	**Feature Intersected:** JAMES STREET
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/25/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Plate girder
ADT:	
Length:	30
No. of Spans:	3
C-C Width:	60

Condition Ratings

Deck:	N
Superstructure:	6
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	N
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	

Elevation

Approach

Status Summary: This structure is owned and maintained by Amtrak, it passes over James St. and carrys train traffic. The deck is open with longitudinal girders, transverse stringers and transverse ties. Measurements of vertical clearance were taken as 12.66' at the sidewalk, 13.25' at the North curb line, and 12.75' at the center of road – both approaches are signed for low clearance of 12'-1". Utility wires are hung 7' off the Eastern sidewalk.

Suggested Work: The wires should be pinned to the superstructure or wall and placed high enough they are not accessible from the sidewalk. Due to the open deck debris, snow and various materials may fall through the deck onto the roadway – the site should be visited frequently by the City to check for fallen objects.

Approximate Cost:
N/A

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Bridge Identification No.: 3A	**Facility Carried:** Amtrak	**Feature Intersected:** QUINNIPIAC STREET
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	
Length:	53
No. of Spans:	1
C-C Width:	37

Elevation

Condition Ratings

Deck:	
Superstructure:	5
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	

Approach

Status Summary: Amtrak railroad bridge over Quinnipiac Ave. The superstructure has significant corrosion accumulation, and lateral bracing showed deformation at gausset plate connections. No deflection of the superstructure was apparent. The substructure, masonry brownstone blocks, had full height 1.5" wide shear cracks in several locations with signs of a previous repair. Clearance was measured as 12'-11", SB is signed as '12'-11" Low Clearance'.

Suggested Work: Shear cracking in abutments should be measured again next year for comparison. If additional deformation, or deflection is noticed in the superstructure it should be brought to Amtrak's attention. Low clearance signage should be added to the NB approach.

Approximate Cost:
N/A

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Bridge Identification No.: 4A	**Facility Carried:** Amtrak	**Feature Intersected:** HEMINGWAY STREET
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	PC girder
ADT:	
Length:	39
No. of Spans:	1
C-C Width:	27

Condition Ratings

Deck:	
Superstructure:	
Substructure:	7
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	7
Scour Critical:	N
Functionally Obsolete:	

Elevation

Approach

Status Summary: Amtrak railroad bridge over Hemingway Street. There was significant activage leakage from the longitudinal joint between girders 2 & 3. Joint was not large enough for debris to pose a risk, but ice may interfere with motorists. Clearance was measured as 12'-11". Two catch basins are in the road under the structure, both appeared to be fully clogged.

Suggested Work: Catch basins should be cleaned to ensure no localized flooding at the low point under the structure. Signage should be installed at either approach to the bridge to signal low clearance.

Approximate Cost:
$1,200

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Bridge Identification No.: **5A**	**Facility Carried:** AMTRAK	**Feature Intersected:** MIDDLETOWN AVE (1)
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	PC girder
ADT:	
Length:	38
No. of Spans:	1
C-C Width:	40

Condition Ratings

Deck:	
Superstructure:	
Substructure:	5
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	6
Scour Critical:	N
Functionally Obsolete:	

Elevation

Approach

Status Summary: Railroad bridge over City ROW approximately 1,500' south of I-91 exit 8. Longitudinal joints in the superstructure are opened to approximately 2" and allow water, debris, and ice to fall onto the roadway below. Clearance to the superstructure was measured at 13'-3", the bridge is signed '13'-4" Low Clearance' in the SB lane. The substructure wingwalls are dry stacked masonry with shotcrete facing, masonry is exposed at edges. The abutments have moderate mortar loss between stacked brownstones, as well as shifted blocks. It appears the Eastern abutment was repointed at some point but has since lost a significant amount of mortar.

Suggested Work: The NB lane should be signed '13'-3" Low Clearance'. Biennial inspections should verify condition of the abutments and wingwalls to ensure they do not pose additional risk to vehicles on the adjacent road. If motorists complain about icicles, or they are observed as posing a danger the RR should be alerted.

Approximate Cost:
N/A

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Bridge Identification No.: **6A**	**Facility Carried:** AMTRAK	**Feature Intersected:** MIDDLETOWN AVE (2)
Owner: Amtrak	**Maintenance Responsibility:** Amtrak	**Functional Classification:** RR over City Street

Structure Features

Inspection Date:	3/6/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Steel girder
ADT:	
Length:	89
No. of Spans:	3
C-C Width:	20

Condition Ratings

Deck:	
Superstructure:	
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	
Under Clearances:	6
Waterway Adequacy:	
Approach Alignment:	
Scour Critical:	
Functionally Obsolete:	

Elevation

Approach

Status Summary: Railroad bridge over City ROW approximately 650’ south of I-91 exit 8. Clearance measured as 14’-6”. Superstructure is open deck with transverse RR ties. Substructure is in satisfactory condition. This structure poses no apparent nuisance or risk to traveling public.

Suggested Work: N/A

Approximate Cost:
N/A

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Bridge Identification No.: **03815**	**Facility Carried:** WASHINGTON AVE	**Feature Intersected:** WEST RIVER
Owner: West Haven	**Maintenance Responsibility:** West Haven	**Functional Classification:** Urban – Principal Arterial

Structure Features

Inspection Date:	12/6/17
Year Built:	1999
Year Rehabilitated:	
Superstructure Type:	PS box beam
ADT:	6965
Length:	157
No. of Spans:	2
C-C Width:	30

Condition Ratings

Deck:	7
Superstructure:	6
Substructure:	6
Channel:	6
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	3
Under Clearances:	N
Waterway Adequacy:	7
Approach Alignment:	8
Scour Critical:	5
Functionally Obsolete:	N

Elevation

Approach

Status Summary: Washington Ave. over West River. This structure is at the town line between New Haven and West Haven. The structure is in overall satisfactory condition.

Suggested Work: N/A

Approximate Cost:
N/A

ENGINEERING DEPARTMENT

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www.newhavenct.gov

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Mayor

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City Engineer

Bridge Identification No.: U1	**Facility Carried:** UTILITY BRIDGE	**Feature Intersected:** LENOX AVE
Owner: Buckeye Pipe Line Company	**Maintenance Responsibility:** Private	**Functional Classification:**

Structure Features

Inspection Date:	3/18/19
Year Built:	
Year Rehabilitated:	
Superstructure Type:	Plate girder
ADT:	
Length:	35
No. of Spans:	1
C-C Width:	8

Condition Ratings

Deck:	N
Superstructure:	5
Substructure:	6
Channel:	N
Culverts:	N
Structurally Deficient:	N

Appraisals:

Deck Geometry:	N
Under Clearances:	4
Waterway Adequacy:	N
Approach Alignment:	N
Scour Critical:	N
Functionally Obsolete:	N

Elevation

Approach

Status Summary: This is a private utility bridge over Lenox St. carrying Buckeye Pipe Line Company's utility line. There is low clearance and signage of 12' clear on both approaches. There is no deck on the bridge and the approach was blocked by chain link fence which has been partially removed.

Suggested Work: This is a private structure and currently poses no hazard to traveling public. It should be inspected every two years for damage and potential risk to the street traffic below.

Approximate Cost:
N/A

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Appendix A

Condition Rating Values

Code	Description
N	Not applicable
9	Excellent condition
8	Very good condition, no problems noted
7	Good condition, some minor problems
6	Satisfactory condition, structural elements show some minor deterioration
5	Fair condition, all primary structural elements are sound but may have minor section loss cracking, spalling or scour
4	Poor condition, advanced section loss, deterioration, spalling, or scour
3	Serious condition, 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.
2	Critical Condition, 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. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
1	Imminent failure condition, 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 return it to light service.
0	Failed condition, out of service and beyond corrective action.

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Appendix B

Channel and Channel Protection

Code	Description
N	Not applicable
9	No noticeable or noteworthy deficiencies.
8	Banks are protected and well vegetated. No river control devices are required.
7	Bank protection requires minor repairs. River control devices and embankment protection have minor damage and/or minor amounts of drift.
6	Bank is beginning to slump. River control devices and embankment have widespread minor damage. Debris restricting the channel slightly and stream bed movement evident.
5	Bank protection is being eroded. River control devices and/or embankment have major damage. Debris is restricting the channel.
4	Bank and embankment protection is severely undermined. River control devices have serious damage. Large deposits of debris are in the channel.
3	Bank protection has failed, river control devices have been destroyed, streambed aggradation, degradation or lateral movement has changed the channel to now threaten the bridge and/or approach roadway.
2	The channel has changed to a state that the bridge is now near collapse.
1	Bridge closed due to channel failure. Corrective action may return it to light service.
0	Bridge closed due to channel failure. Replacement necessary.

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Appendix C

Culverts

Code	Description
N	Not applicable.
9	No deficiencies
8	No noticeable or noteworthy deficiencies.
7	Shrinkage cracks, light scaling, insignificant spalling, insignificant damage caused by drift. Minor scour with no misalignment. Superficial corrosion without pitting.
6	Deterioration or initial disintegration, chloride contamination, cracking with leaching, spalls. Local minor scouring. Significant corrosion or moderate pitting.
5	Moderate to major deterioration or disintegration. Extensive cracking, leaching or spalling. Minor settlement or misalignment. Noticeable scour or erosion. Distortion, deflection significant corrosion or deep pitting.
4	Large spalls, heavy scaling, wide cracks, considerable efflorescence, or loss of backfill through open joint. Considerable settlement or misalignment, scouring or erosion. Significant distortion, deflection, corrosion or pitting.
3	Severe movement or differential settlement, scour or erosion. Extreme distortion, deflection, corrosion or pitting with scattered perforations.
2	Integral wingwalls collapsed, severe settlement of roadway, failed section of culvert, undermining. Corrective action required to maintain traffic.
1	Bridge closed, corrective action may return it to light service.
0	Bridge closed, replacement necessary.

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Appendix D

Waterway Adequacy

Code			Description
Functional Classification			
Principal Arterial	Minor Arterial and major collectors	Minor collectors and local roads	
N	N	N	Bridge not over waterway
9	9	9	Bridge deck and roadway above flood water elevations.
8	8	8	Bridge deck above roadway approaches. Slight chance of overtopping roadway.
6	6	7	Slight chance of overtopping bridge deck and roadway.
4	5	6	Bridge deck over roadway, occasional overtopping of roadway.
3	4	5	Bridge deck above roadway, occasional overtopping of roadway with significant traffic delays.
2	3	4	Occasional overtopping of bridge deck and roadway with significant traffic delays.
2	2	3	Frequent overtopping of bridge deck and roadway with significant traffic delays.
2	2	2	Occasional or frequent overtopping with severe traffic delays.
0	0	0	Bridge closed.

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Appendix E

Scour Critical

Code	Description
N	Bridge not over waterway
U	Bridge with unknown foundation that hasn't been evaluated for scour.
T	Bridge over tidal waters that hasn't been evaluated for scour but considered low risk.
9	Bridge foundations on dry land above flood water elevations.
8	Bridge foundations determined to be stable. Calculated scour is above footing.
7	Countermeasures have been installed to correct previous scour problems.
6	Scour calculation/evaluation has not yet been made.
5	Bridge foundations determined to be stable for calculated scour.
4	Bridge foundations determined to be stable for calculated scour, however field review indicated additional measures are required to protect exposed foundations.
3	Bridge is scour critical, foundation determined to be unstable
2	Bridge is scour critical, field review indicates extensive scour has occurred. Provide scour countermeasures immediately.
1	Bridge is scour critical, field review indicates that failure of piers/abutment is imminent. Bridge should be closed to traffic.
0	Bridge is scour critical. It has failed and is closed to traffic.