

New York State Thruway Authority

General Large Culvert Inspection Report

Inspection Date: October 25, 2023

Structure Information

MP: 417.63 **CIN:** 41763011XX **Region:** 05 - Buffalo
Feature Carried: 90IX **County:** 3 - Erie
Feature Crossed: DRAINAGE DITCH **Political Unit:** Town of Cheektowaga
Orientation: 3 - East **Approximate Year Built:** 1952

Primary Owner: 2L - NYS Thruway Authority
Primary Maintenance Responsibility: 2L - NYS Thruway Authority
General Type Main Span: 1 - Concrete, 19 - Culvert
Number of Spans: 1

Postings

Posted Load Matches Inventory: Yes **Posted Vertical Clearances Match Inventory:** N/A
Posted Load in Field: Not Posted **Inventory On:** Not Posted
Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0
Red: 0
Yellow: 0
Safety PIA: 0

Inspection Overview

General Recommendation: 4

Action Items

Non-Structural Condition Observations noted: NO
Vulnerability Reviews Recommended: NO
Diving Inspection Requested: NO
Further Investigation Requested: NO

Inspector and Reviewer Signature Information

Inspection Signature:	Neil Ferguson	Date: 10/31/2023
Review Signature:	Sohel Ahmed	Date: 03/18/2024
Processed by:	Mike Sullivan	Date: 03/25/2024

<i>Additional Information</i>

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

1. CIN Plate is missing. There is a MP plate on the end right wingwall.
2. Parked off I-90 WB right shoulder near end left.

Improvements Observed

2023 - None

Pedestrian Fence Height

None

CIN Plate Condition

Missing

General Notes:

Culvert Design: Cast-in-place reinforced concrete box culvert with precast concrete extensions.

Span Length: 12'-0"

Span Rise: 5'-0"

Inlet/Outlet: Precast concrete end sections with aprons into rock

Field Notes

Staff Present During Inspection

Name	Title	Organization
Neil Ferguson	TL	NYSTA
Andrew Machaby	ATL	NYSTA

General Equipment Required for Inspection

Access Type
Walking

Detailed Time & Weather Conditions

Field Date	Arrival	Departure	Temperature (F)	Weather Conditions
10/25/2023	10:45 AM	12:00 PM	70	Partly Cloudy

Inspection Time (Hours)

Time required for travel, inspection and report preparation	4
Lane closure usage	0
Railroad flagging time	None

Element Quantities

Element Assessment Summary Table								
Span	Element	Unit	Total Quantity	CS-1	CS-2	CS-3	CS-4	CS-5
1	CO800 - Scour	LF	28	28				
1	241 - Reinforced Concrete Culvert	LF	244	93	124	27		
1	801 - Stream Hydraulics	EA	1		1			

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Element Condition Notes

Span 1: 241 - Reinforced Concrete Culvert Referenced Photo(s): 1, 2, 3, 4, 5, 6, 7 Referenced Sketch(es): None	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
	244	93	124	27		
<p>PRECAST EXTENSIONS At the left and right side of the original culvert, there are (4) precast concrete box culvert units and (1) precast concrete end section (assessed under Element 241) installed under TAB 98-23. The precast units are in good condition, except for minor dampness at joints, 4 LF x 2 sides = 8 LF CS-2.</p> <p>CLOSURE POURS There are closure pours at the transition from the original cast in place concrete culvert to the precast concrete extensions. The closure pours are generally in good condition, CS-1.</p> <p>ORIGINAL CAST-IN-PLACE CUVLERT The original culvert is generally in good to fair condition with areas of minor cracking, delamination, dampness, and isolated efflorescence, 75% (116 LF) CS-2. There is more severe deterioration at the following locations:</p> <p>LT FASCIA (Photo 1) - There is minor leakage and rust-staining at the cold joint with the closure pour. There are 1' to 2' wide delaminations along the cold joint and a 1 SF and 3 SF spall with exposed/corroded rebar, 2 LF CS-3.</p> <p>CJ 1 (Photo 2) - Damp with minor leakage and rust staining. Left side of joint exhibits a 3' wide x 8' long delaminated area with a 2 SF x 1"D spall. Right side of joint is spalled 1' to 2.5' wide x 6' long x 1"D with (3) exposed/corroded rebar and delaminated concrete adjacent, 5 LF CS-3.</p> <p>CJ 2 (Photos 3 & 4) - 6' wide x full span length x up to 2.5"D spall with (8) exposed/corroded longitudinal bars (up to 50% section loss). (4) of the (8) bars are debonded 3' to 4' long. Concrete adjacent to the spall is damp and delaminated. 6 LF CS-3.</p> <p>CJ 3 (Photo 5) - Left side of joint exhibits a 4' wide x 9' long x up to 2.5"D spall with (3) exposed longitudinal bars (up to 10% section loss). Concrete adjacent to the spall is damp and delaminated. Right side of the joint is damp and delaminated up to 2' wide. 6 LF CS-3</p> <p>2' RT of CJ 3: 2' wide x 4' long x 2" deep area of honeycombing with partially exposed rebar, 2 LF CS-3.</p> <p>CJ 4 (Photo 6) - Left side of joint exhibits a 2' wide x 6' long x 2" deep spall with (2) exposed/corroded rebar. Right side of joint exhibits a 3' wide x full length area of heavy dampness, mapcracking and moderate efflorescence. At the bottom of the begin stem there is a 1 SF x 4"D spall. 5 LF CS-3.</p> <p>RT FASCIA (Photo 7) - Leakage and rust staining at the cold joint with the closure pour, 1 LF CS-3.</p>						
Span 1: 801 - Stream Hydraulics Referenced Photo(s): 8 Referenced Sketch(es): 2	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
	1		1			
<p>Refer to Stream Hydraulics Defect History Sketch.</p>						

Inspection Photographs



Photo Number	01	Photo Filename:	MP 417.63_CIN 41763011XX_2023_01
Attachment Description: Culvert top slab at left side cold joint between original culvert and closure pour looking toward end left		 <p>10/25/2023</p>	

Photo Number	02	Photo Filename:	MP 417.63_CIN 41763011XX_2023_02
Attachment Description: Culvert top slab at CJ 1 looking toward end		 <p>10/25/2023</p>	

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Photo Number	03	Photo Filename:	MP 417.63_CIN 41763011XX_2023_03
Attachment Description: Culvert top slab at CJ 2 looking toward end			

Photo Number	04	Photo Filename:	MP 417.63_CIN 41763011XX_2023_04
Attachment Description: Culvert top slab at CJ 2 looking toward end (Close-up of debonded rebar)			

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Photo Number	05	Photo Filename:	MP 417.63_CIN 41763011XX_2023_05
Attachment Description: Culvert top slab and begin stem at CJ 3 looking toward begin left		 <p>10/25/2023</p>	

Photo Number	06	Photo Filename:	MP 417.63_CIN 41763011XX_2023_06
Attachment Description: Culvert top slab and begin stem at CJ 4 looking toward begin left		 <p>10/25/2023</p>	

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Photo Number	07	Photo Filename:	MP 417.63_CIN 41763011XX_2023_07
Attachment Description: Culvert top slab at right side cold joint between original culvert and closure pour looking toward end			

Photo Number	08	Photo Filename:	MP 417.63_CIN 41763011XX_2023_08
Attachment Description: Culvert outlet (right side) looking left			

Inspection Sketches

Sketch Number: 01

MP: 417.63
CIN: 41763011XX
DATE: 10/25/2023



Thruway
Authority

PHOTO LOCATION PLAN

CARRIED: 90IX
CROSSED: DRAINAGE DITCH

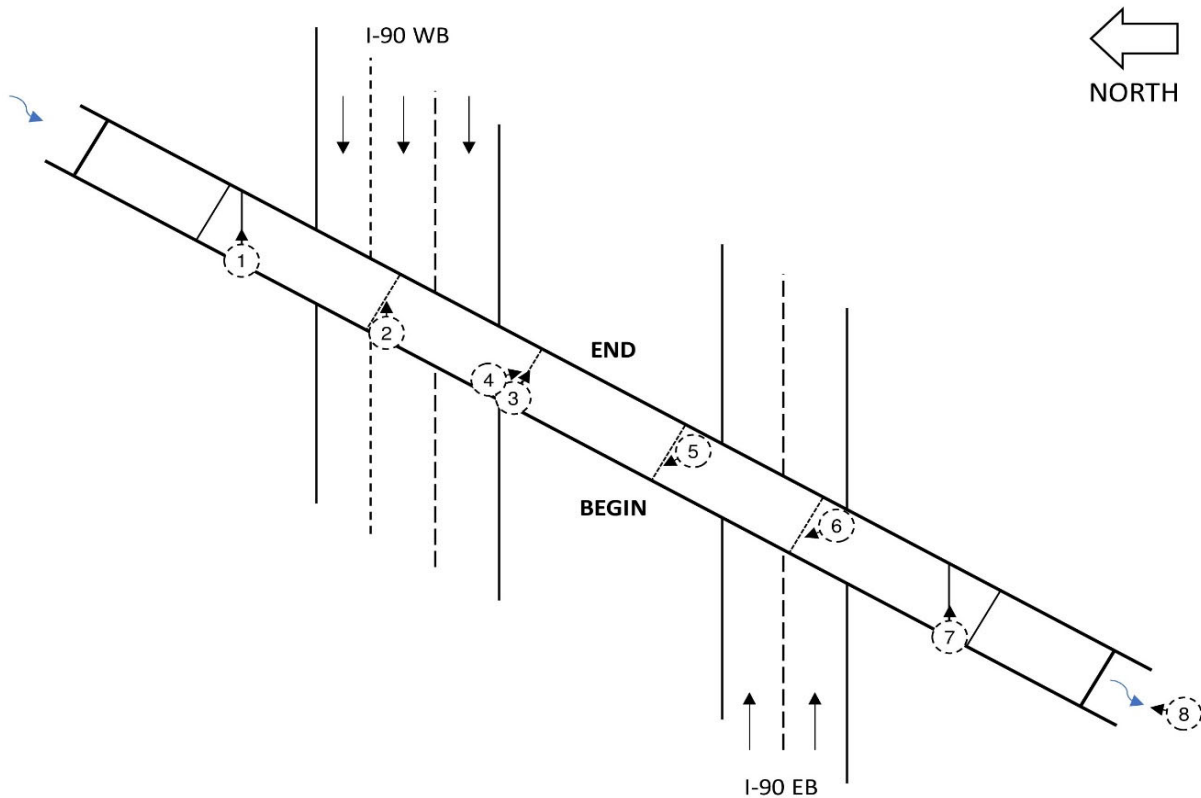


PHOTO TAKEN ABOVE CULVERT



PHOTO TAKEN BELOW/INSIDE CULVERT

Sketch Description: Photo Location Plan

Sketch Number: 02

Agency Defined Element 801 - Stream Hydraulics Defect History

CIN: 41763011XX

MP: 417.63

ADE 801 DEFECTS		CONDITION STATES (CS)				
		Baseline	Previous Inspection Assessments			Current Inspection
		NA	mm/dd/yy	mm/dd/yy	mm/dd/yy	10/25/2023
6120	Channel Alignment	1				1
6130	Channel Scour	1				1
6140	Waterway Opening	2				2
6150	Scour Protection	NA				NA
6160	Bank Protection	NA				NA
6165	Bank Erosion	1				1
6180	Debris Near Bridge	2				2
6190	Countermeasures	NA				NA
ADE 801 - Controlling Condition State =						2

Inspector's Comment (comment required for each defect assessed CS-3 or CS-4):

There is minor accumulation of vegetation at the culvert outlet (right side) in the begin half of the channel that slightly reduces the waterway opening.

(updated 6/1/2017)

Sketch Description: Stream Hydraulics Defect History

Standard Photographs

MP 417.63_CIN 41763011XX_ApproachBeginEB



MP 417.63_CIN 41763011XX_ApproachEndEB



MP 417.63_CIN 41763011XX_ApproachBeginWB



MP 417.63_CIN 41763011XX_ApproachEndWB



MP 417.63_CIN 41763011XX_ElevationLeft



MP 417.63_CIN 41763011XX_ElevationRight



MP 417.63_CIN 41763011XX_FeatureCrossedLeft



MP 417.63_CIN 41763011XX_FeatureCrossedRight



MP 417.63_CIN 41763011XX_CulvertInterior_Original



MP 417.63_CIN 41763011XX_CulvertInterior_PrecastExtension

