Oklahoma Department of Transportation

Other Special Inspection of

SH 99 over Cimarron River

Creek County, OK

July 25, 2019

Structure No. 1935-0635-X

NBI No. 15863

PREPARED BY:

CONSOR

LICENSED PROFESSIONAL ENGINEER
MICHAEL DUKES
26634
OKLAHOMA

9-4-2019

Certificate of Authorization: 2518
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To: Leslie Lewis, P.E.

From: CONSOR Engineers, LLC

Date: September 4, 2019

Subject: Other Special Inspection
NBI 15863, Structure 1935-0635-X, SH 99 over Cimarron River

On July 25, 2019 as part of EC-1812 Underwater Bridge Inspections, CONSOR Engineers, LLC performed an other special inspection of the above-referenced structure in Creek County.

The inspection was performed by the following personnel:

Michael Dukes, P.E.	Team Leader/SONAR Operator/Diving Inspector
Conor Hueber	Assistant Diving Inspector
Matt Ratliff	Assistant Diving Inspector

The following corrective actions are recommended:

- Remove the timber debris from Piers 2, 3, and 4.

Sincerely,
CONSOR Engineers, LLC

Michael Dukes, P.E.
Project Manager

OTHER SPECIAL INSPECTION REPORT
OF
Structure No. 1935-0635-X
NBI No. 15863

SH 99
Over the Cimarron River
Creek County

July 25, 2019

AUTHORIZATION AND SCOPE

This Other Special inspection of Structure No. 1935-0635-X, (NBI 15863) was authorized by Engineering Contract No. 1812, Job Piece No. 33026(04). The scope includes a post-flood scour assessment. Each inspection includes documentation of existing scour conditions adjacent to each substructure. This report presents the findings of the inspection.

INSPECTION METHOD AND FINDINGS

The inspection team was comprised of a Professional Engineer-Diver and two assistant inspectors. The scour assessment was completed by collecting sounding data at each column with a weighted measuring tape.

Piers 1-4 were in the waterway at the time of the scour assessment. Each pier consists of two concrete columns joined by a concrete strut. Each column is founded on a reinforced concrete spread footing. The columns are numbered from upstream to downstream.

There is timber debris lodged on the upstream portions of Piers 2-4 (Photo 2). Both embankments appeared stable and are well vegetated (Photos 3 and 4).

At the time that soundings were taken, the waterline was 34.6-ft below the top of the pier cap at Pier 4. This corresponds to a waterline elevation of 738.98 according to the 1963 design plans. The table on Page 4 presents the channel bottom elevation at each column, as well as the bottom of footing elevation at each column.

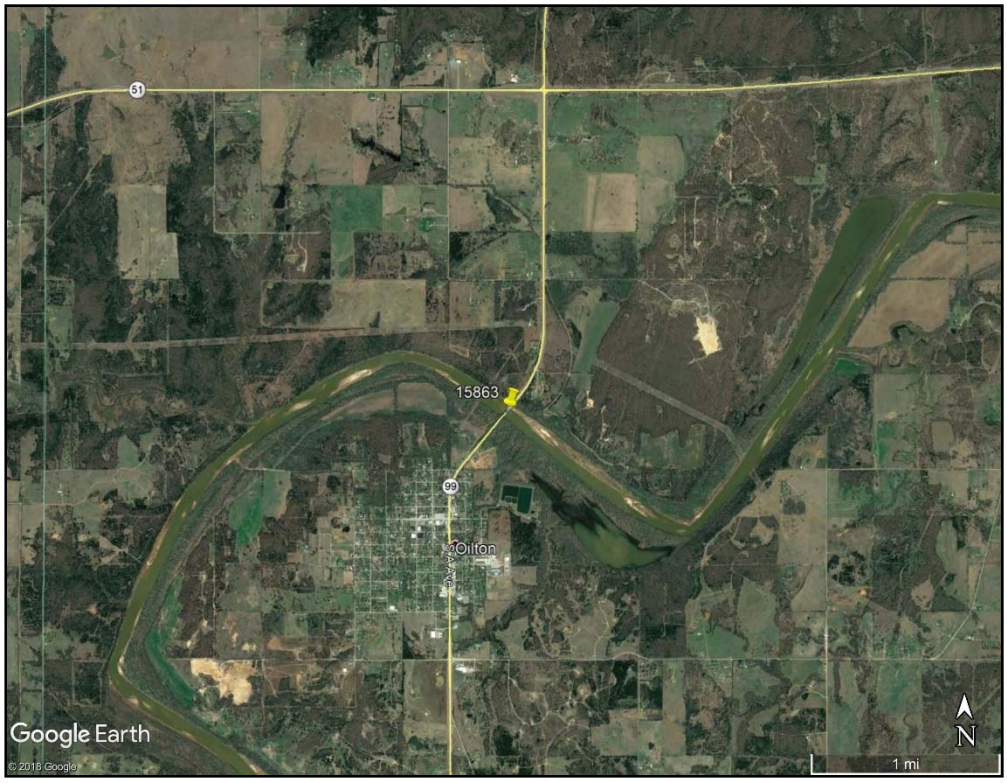
At the time of the scour assessment, all footings were below grade.

Channel Bottom Elevation Data at Piers

Pier	Column	WL to CB (ft)	Channel Btm Elevation	Btm of Footing Elevation
1	1 (UST)	7.5	731.5	693.00
	2 (DST)	6.9	732.1	693.00
2	1	11.0	728.0	692.00
	2	13.6	725.4	692.00
3	1	19.3	719.7	693.00
	2	18.6	720.4	693.00
4	1	4.0	735.0	697.00
	2	9.8	729.2	697.00

CRITICAL DEFICIENCIES

No critical deficiencies were observed during the scour assessment.



Location Map 1

Location Map 2

Photo 1 – North approach looking south

Photo 2 Pier 3, north face

Photo 3 – South embankment

Photo 4 – North embankment