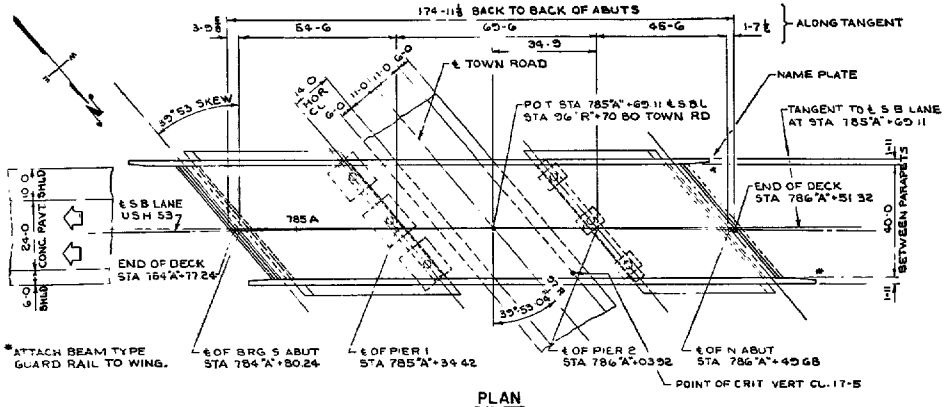
SELECT AS-BUILT DRAWINGS

Form B-B.1-69

PROJECT I.D. 1196-5-73 | SHEET NUMBER 52 | TOTAL SHEETS 188

FED. PROJ. NO. EMP-FOB-4(40)

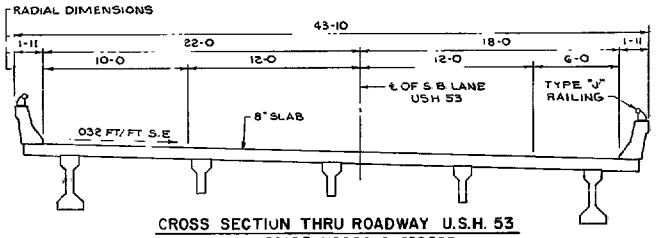


PLAN

CURVE DATA

℄ OF S B LANE USH 53
P. I. STA 804"A"+87 30

R = 8594 367 FT.
L = 6756 20 FT.
T = 3586 99 FT.
D = 0° 40' 00"
Δ = 45°-18 29
S℄ = 0.032 FT/FT



CROSS SECTION THRU ROADWAY U.S.H. 53
PRESTRESSED GIRDER SUPERSTR
(LOOKING NORTH)

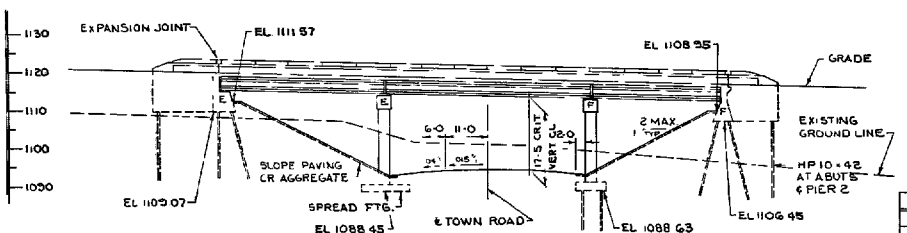
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
THE SLOPE OF THE F.L. IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS
THE FINISHED GRADED SECTION WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR COMPUTATION OF EXCAVATION QUANTITIES AT THE PIERS
THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES FOR THE ABUTMENTS SHALL BE THE BOTTOM OF SLOPE PROTECTION AND THE QUANTITIES WERE COMPUTED FROM THIS LINE

DESIGN DATA

LIVE LOAD : HS 20
ALLOWABLE DESIGN STRESSES
CONCRETE, MASONRY, GRADE "AA" -
SLAB = f_c 1,200 psi
OTHER = f_c 1,400 psi
BAR STEEL REINFORCEMENT - f_s 20,000 psi
PRESTRESSED GIRDER -
CONCRETE = f'_c 6,000 psi
STRANDS - ½" ϕ WITH ULTIMATE TENSILE STRENGTH 270,000 psi

FOUNDATIONS
ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 AT 24 TONS/PILE. MIN. BRG. EST. LENGTH AT S. ABUT 15'-0", N. ABUT 45'-0"
PIER 1 TO BE SUPPORTED ON SPREAD FOOTINGS. MAXIMUM DESIGN SOIL PRESSURE 1½ 2 TONS / SQ. FT.
PIER 2 TO BE SUPPORTED ON HP 10 x 42 AT 37 TONS / PILE MIN. BRG. EST. LENGTH 20'-0"



ELEVATION
NORMAL TO ℄ TOWN ROAD

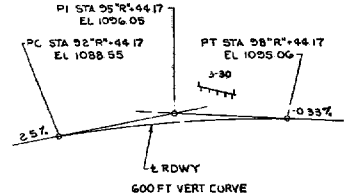
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	S ABUT	PIER 1	PIER 2	N ABUT	SUPER	TOTAL
EXCAVATION FOR STRUCTURES	C Y	45	181	51	46	—	307
CONCRETE MASONRY	C Y	87	84	52	65	278	576
PRESTRESSED GIRDER "I" TYPE 45"	L F	—	—	—	—	850	850
BAR STEEL REINFORCEMENT	LB	5,510	16,450	9,180	3,240	72 930	107,310
STRUCTURAL CARBON STEEL	LB	—	—	—	—	3,950	3,950
STRUCTURAL LOW ALLOY STEEL	LB	—	—	—	—	2,660	2,660
LUBRICATED BRONZE PLATES	LB	—	—	—	—	235	235
BEARING PADS	S F	—	—	—	—	21	21
BEARING PADS ELASTOMERIC	S F	—	—	—	—	24	24
STEEL PILING, DEL & DRIVEN HP 10 x 42	L F	210	—	360	810	—	1,440
TUBULAR RAILING, TYPE "J"	L F	—	—	—	—	381	381
SLOPE PAVING, CRUSHED AGGREGATE	S Y	329	—	—	275	—	604
NON BID ITEMS							
⅛" ALUMINUM OR ZINC PLATE	S F	—	—	—	—	51	51
FILLER	SIZE	—	—	—	—	½ℓ 8	½ℓ 8
POLYVINYL CHLORIDE WATERSTOP	L F	9	—	—	57	—	66

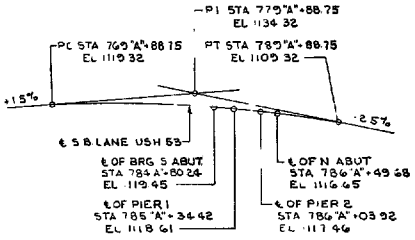
LIST OF DRAWINGS

1 GENERAL PLAN — X45720
2 SUBSURFACE EXPLORATION — X45721
3 SOUTH ABUTMENT — X45722
4 BILL OF BARS — X45723
5 NORTH ABUTMENT — X45724
6 PIER 1 — X45725
7 PIER 2 — X45726
8 PRESTRESSED GIRDER DETAILS — X45727
9 SUPERSTRUCTURE — X45728
10 SUPERSTRUCTURE — X45729
11 EXPANSION JOINT & BEARING DETAILS — X45730
12 RAIL PARAPET DETAILS — X45731
13 TUBULAR RAILING TYPE "J" — X45732

AS BUILT PLAN
DATED 1-'78 BY W.J.K.



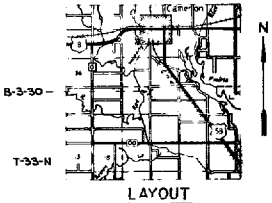
PROFILE GRADE - TOWN ROAD



PROFILE GRADE - S.B. LANE U.S.H. 53

TRAFFIC DATA

	S B LANE USH 53	TN ROAD
DHV =	780 (1980)	53
RDS =	80 MPH	60



LAYOUT
R-11-W

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-30

S B LANE U.S.H. 53 OVER TOWN ROAD

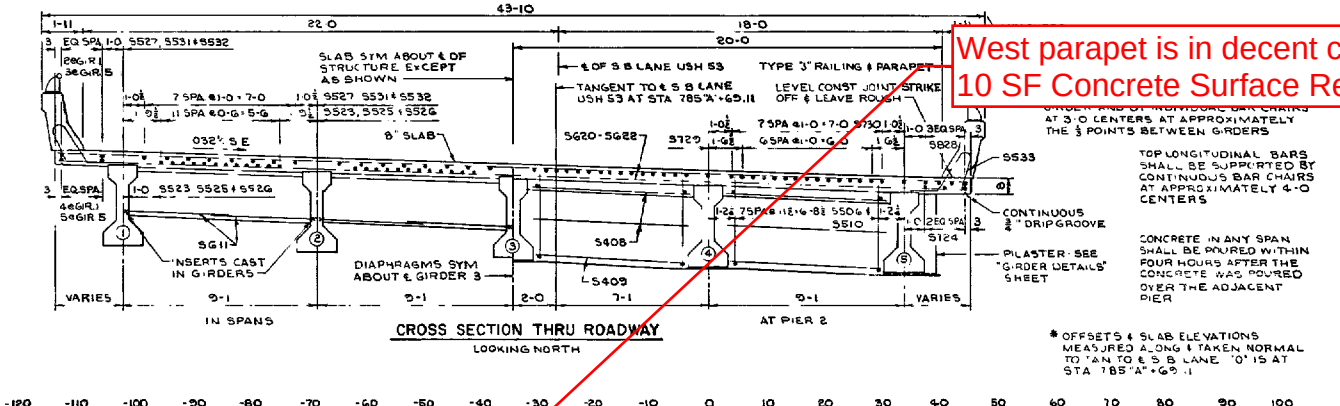
County BARRON		C.H. Village	
Design Spec. AASHO 1969		Load HS 20	Spec. 1969
Designed By CRD	Design Checked RTB	Drawn By FWG	Plans Checked JAG

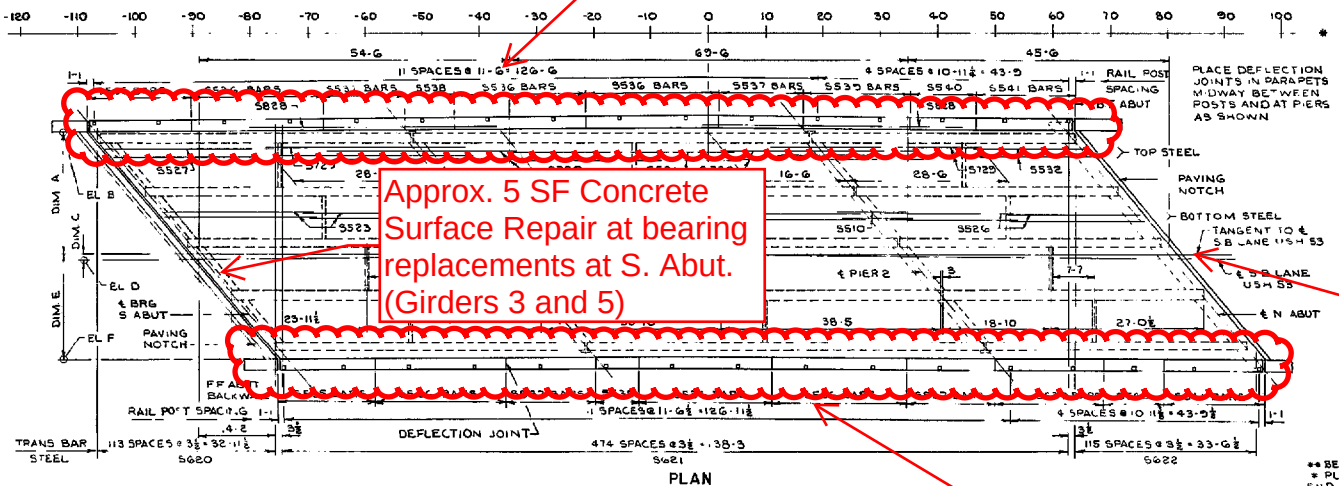
Approved W A Klemz — Chief Bridge Engineer — Date 12 21 77

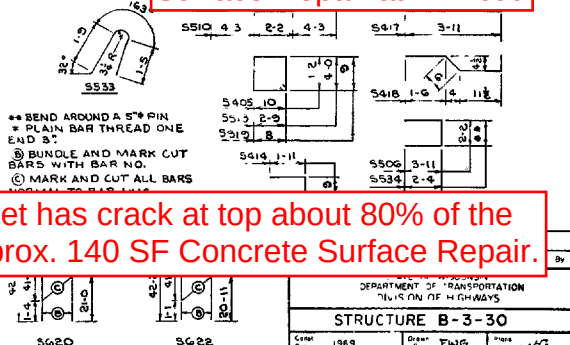
GENERAL PLAN

SHEET 1 OF 13

X45720







West parapet is in decent condition, approx. 10 SF Concrete Surface Repair.

Approx. 5 SF Concrete Surface Repair at bearing replacements at S. Abut. (Girders 3 and 5)

Approx. 5 SF Concrete Surface Repair at N. Abut.

East parapet has crack at top about 80% of the length, approx. 140 SF Concrete Surface Repair.

BILL OF BARS 72 900*

					LOCATION
S904	6	20 3			" " " - TOP
S405	93	4-6	x		" " " - STIRRUPS
S506	64	9-10	x		PIER DIAPHRAGM - STIRRUPS
S507	12	9-0			PIER 1 DIAPHRAGM BOTTOM
S508	68	9-8			N ABUT & PIERS - DIAPHRAGM
S509	12	9-0			N ABUT & PIER 2 - DIAPHRAGM
S510	64	10-10	x		PIERS & SLAB - HAUNCH
* S611	98	5-5			DIAPHRAGM IN SPANS
S412	10	28-7			N ABUT - DIAPHRAGM & SEAT
S513	39	14-3	x		" " - DIAPHRAGM - STIRRUPS
S414	52	4-6	x		" " - SEAT - STIRRUPS
S415	2	2-4			N ABUT DIAPHRAGM & GIRDER 1
S416	2	3-9			" " " & GIRDER 5
S417	8	4-3	x		PILASTER
S418	8	3-4	x		"
S319	12	3-4	x		"
S520	57	42 4		x	SLAB - TRANSVERSE
S62-	475	42 4			" "
S622	58	42 2		x	" "
S523	118	21-7			SLAB - LONGIT - SPAN 1 BOTTOM
S524	12	15-0			SLAB - SYM OVER PIERS AT EDGE
S525	118	33 6			SLAB LONGIT - SPAN 2 BOTTOM
S526	118	23 2			" " - SPAN 3 BOTTOM
S527	39	28-6			" " - SPAN 1 TOP
S828	16	45-0			" " OVER PIERS - EDGE
S729	66	37-0			" " " " - TOP
S730	64	33 6			" " " "
S531	39	39 0			" " - SPAN 2 TOP
S532	39	19-9			" " - SPAN 3 TOP
S533	346	4-9	x		SLAB & PARAPET
S534	346	5-1	x		PARAPET
S535	10	17-9			"
S536	50	22-8			"
S537	20	14-0			"
S538	10	8-3			"
S535	0				
S540	10				
S541	10				

** BEND AROUND A 5" ℄ PIN
* PLAIN BAR THREAD ONE END 3".
(B) BUNDLE AND MARK CUT BARS WITH BAR NO.
(C) MARK AND CUT ALL BARS

OFFSETS & SLAB ELEVATIONS

	-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80
DIM A	21 2	21 3⅜	21-9	21-6⅝	21-7⅝	21-8⅝	21-9⅛	21-10¼	21-10⅝	21-11⅛	21-11⅝	21-11⅞	22-0	21-11⅞	21-11⅝	21-11⅛	21-10⅝	21-10¼	21-9⅛	21-8⅝	21-7⅝
EL B	120 60	120 46	120 31	120 16	120 02	119 87	119 71	119 56	119 40	119 24	119 08	118 91	118 75	118 59	118 42	118 25	118 08	117 90	117 72	117 55	117 37
DIM C	0-10	0-8⅜	0-7	0-5⅝	0-4⅛	0 3⅞	0-2⅝	0-1⅜	0-1⅛	0 0⅝	0-0¼	0 0⅛	0-0	0-0⅛	0-0¼	0 0⅝	0-1⅛	0 1⅝	0-2⅛	0 3⅛	0-4¼
EL D	119 50	119 36	119 21	119 06	118 92	118 77	118 62	118 46	118 30	118 14	117 98	117 82	117 66	117 50	117 34	117 18	117 02	116 86	116 70	116 54	116 38
DIM E	18-10	18-8⅜	18-7	18 5⅝	18 4⅛	18 3⅛	18 2⅝	18 1⅞	18 1⅜	18 0⅝	18 0¼	18 0⅛	18 0	18 0⅛	18 0¼	18 0⅝	18-1⅛	18 1⅝	18 2⅛	18 3⅛	18 4⅛
EL F	119 33	119 18	119 04	118 89	118 74	118 59	118 44	118 28	118 12	117 96	117 80	117 64	117 47	117 31	117 14	116 97	116 81	116 62	116 46	116 29	116 13

"AS BUILT" - SLAB ELEVATIONS WERE LOWERED 0.04 FT.

1196-5-73

EMR F08-4(66)

SHEET NUMBER 60 TOTAL SHEETS 188

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-30

Const. Spec. 1969 Drawn By FWG Plans Revised JG

SUPERSTRUCTURE

SHEET 9 OF 13

X45728

ASBESTOS REPORT

GEI Consultants
3159 Voyager Drive
Green Bay, WI 54311
920.455.8200 Phone

Bridge Asbestos Inspection Report

WisDOT Project ID: 1196-04-02
Structure Number: B-03-030
Structure Name: USH 53 SB over 20th Street
City/County: Town of Prairie Lake, Barron County, Wisconsin
GEI project Number: 1901822
Date Inspected: April 4, 2019
Inspected by: Kyle C. Sandmire
Asbestos Inspector License Number: All- 217616
Consultant Company: GEI Consultants, Inc.

Summary:

An asbestos inspection of Structure B-03-030 was conducted on April 4, 2019 by Kyle Sandmire, Asbestos Inspector License No. AII-217616. Asbestos-containing material (ACM) **IS** present on this structure.

The inspection to identify and collect samples of potential asbestos-containing material (ACM) was completed following WisDOT standard sampling procedures for bridge inspections found in FDM 21-35-45. The ACM was detected in the gray caulk between the bridge deck wall joints and the joints between the bridge deck and abutments.

Asbestos-containing material has been found in Structure B-03-030. Standard Special Provision 203-005 shall be included in the plans and abatement will be required. The contractor will be responsible for completion of the Notification of Demolition and/or Renovation (DNR form 4500-113) if required. A copy of the inspection report is available from the region office.

Sample #	Sample Description	Sample Location	Method and Analytical Results	Category I or II non-friable or No ACM	Total Amount of Material on Structure
B-03-030-1A	Brown gasket material	Between the bridge deck and the north abutment	PLM, non-detect	No ACM	N/A
B-03-030-1B	Brown gasket material	Between the bridge deck and the north abutment	PLM, non-detect	No ACM	N/A
B-03-030-1C	Brown gasket material	Between the bridge deck and the north abutment	PLM, non-detect	No ACM	N/A
B-03-030-2A	Brittle gray caulk	Bridge deck wall joints and abutment joints	PLM, 5% Chrysotile Asbestos	Category II Non-friable	30 LF

B-03-030-2B	Brittle gray caulk	Bridge deck wall joints and abutment joints	Not Tested – Positive Stop	See 2A	See 2A
B-03-030-2C	Brittle gray caulk	Bridge deck wall joints and abutment joints	Not Tested – Positive Stop	See 2A	See 2A
B-03-030-3A	Gray caulk	Between several bridge deck wall joints	PLM, 5% Chrysotile Asbestos	Category II Non-friable	20 LF
B-03-030-3B	Gray caulk	Between several bridge deck wall joints	Not Tested – Positive Stop	See 3A	See 3A
B-03-030-3C	Gray caulk	Between several bridge deck wall joints	Not Tested – Positive Stop	See 3A	See 3A
B-03-030-4A	Black/gray expansion material	Between bridge deck joints	PLM, non-detect	No ACM	N/A
B-03-030-4B	Black/gray expansion material	Between bridge deck joints	PLM, non-detect	No ACM	N/A
B-03-030-4C	Black/gray expansion material	Between bridge deck joints	PLM, non-detect	No ACM	N/A
B-03-030-5A	Silver paint	Steel plates between bridge spans and abutment	PLM, non-detect	No ACM	N/A
B-03-030-5B	Silver paint	Steel plates between bridge spans and abutment	PLM, non-detect	No ACM	N/A
B-03-030-5C	Silver paint	Steel plates between bridge spans and abutment	PLM, non-detect	No ACM	N/A

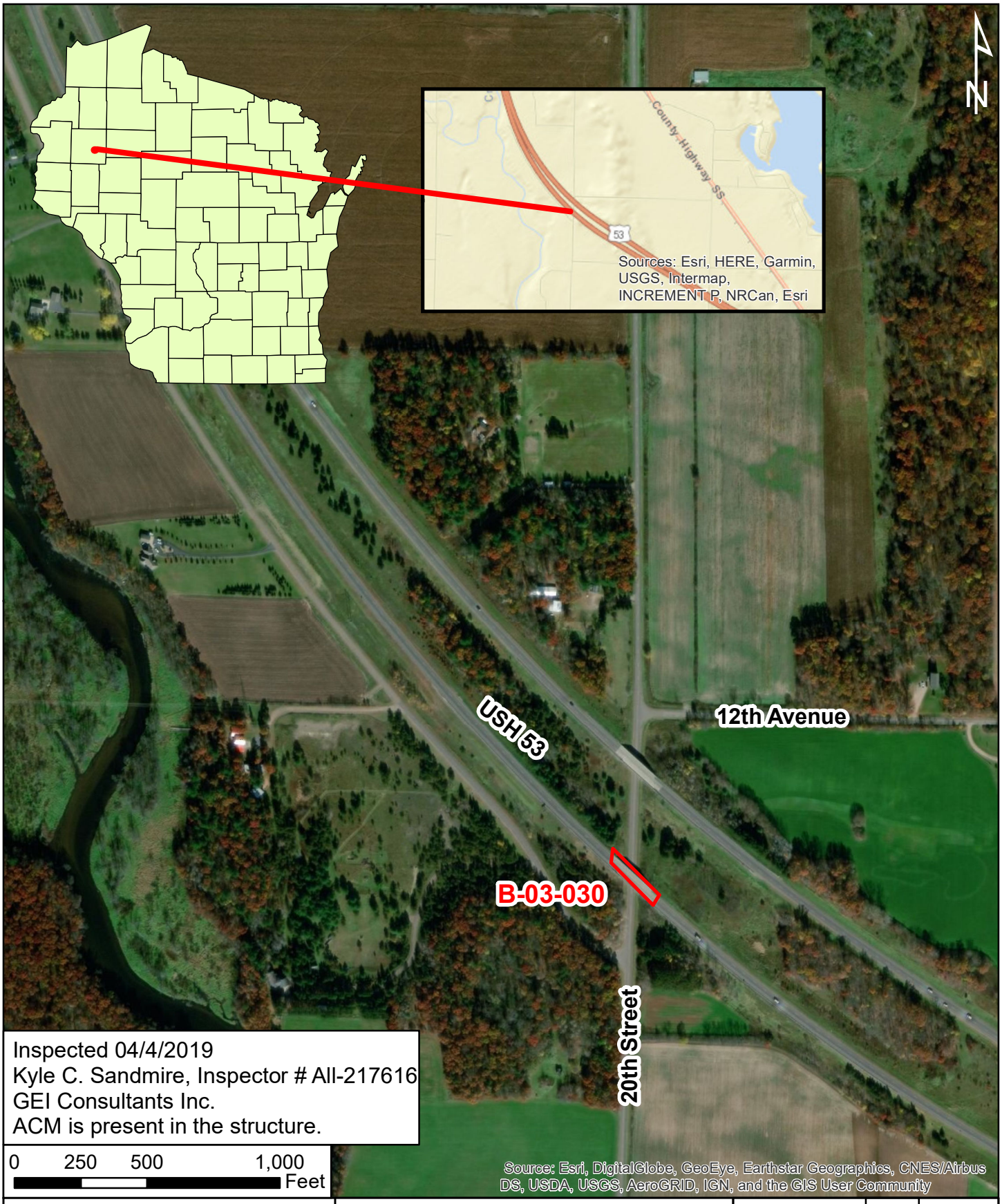
If you have any questions, please contact us at (920) 455-8200.

GEI CONSULTANTS, INC.

Kyle C. Sandmire
Environmental Scientist

Paul M. Garvey
Senior Scientist

Attachments:
B-03-030 Report Table
B-03-030 Map
B-03-030 Photo Log
B-03-030 Bulk Asbestos Sample Analysis Summary
B-03-030 Bulk Asbestos Sample Chain of Custody



Inspected 04/4/2019
Kyle C. Sandmire, Inspector # All-217616
GEI Consultants Inc.
ACM is present in the structure.

0 250 500 1,000 Feet

GEI Consultants
3159 Voyager Drive
Green Bay, WI 54311
920.455.8200

WisDOT Project 1196-04-02
Structure B-03-030
USH 53 (SB)
over 20th Street
Barron County

DESIGNED BY	KCS	4/10/2019
DRAWN BY	KCS	4/10/2019
APPROVED BY	PMG	4/10/2019
SCALE	1 inch = 500 feet	
FIGURE NO.	B-03-030	

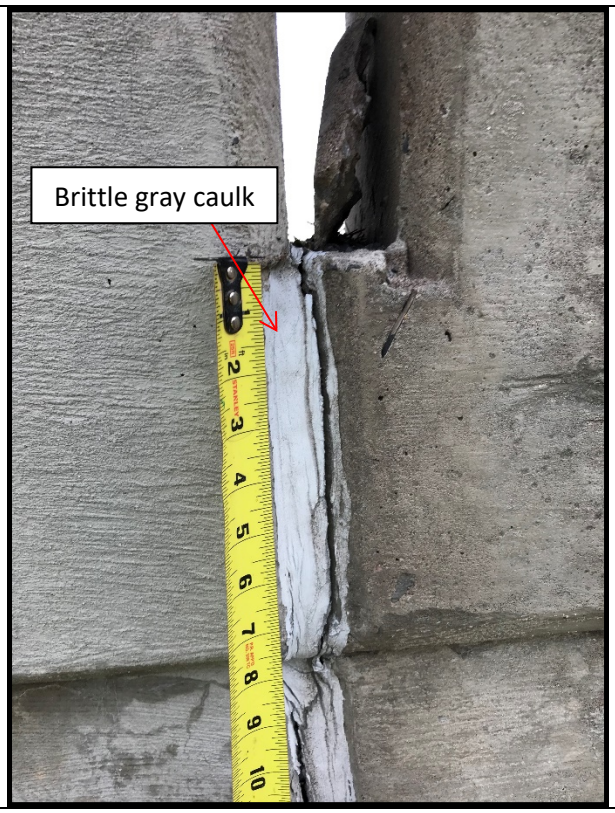
PHOTOGRAPHIC LOG

PHOTOGRAPH NO: 1	
DIRECTION: NW	
DESCRIPTION: Looking northwest at B-03-030.	

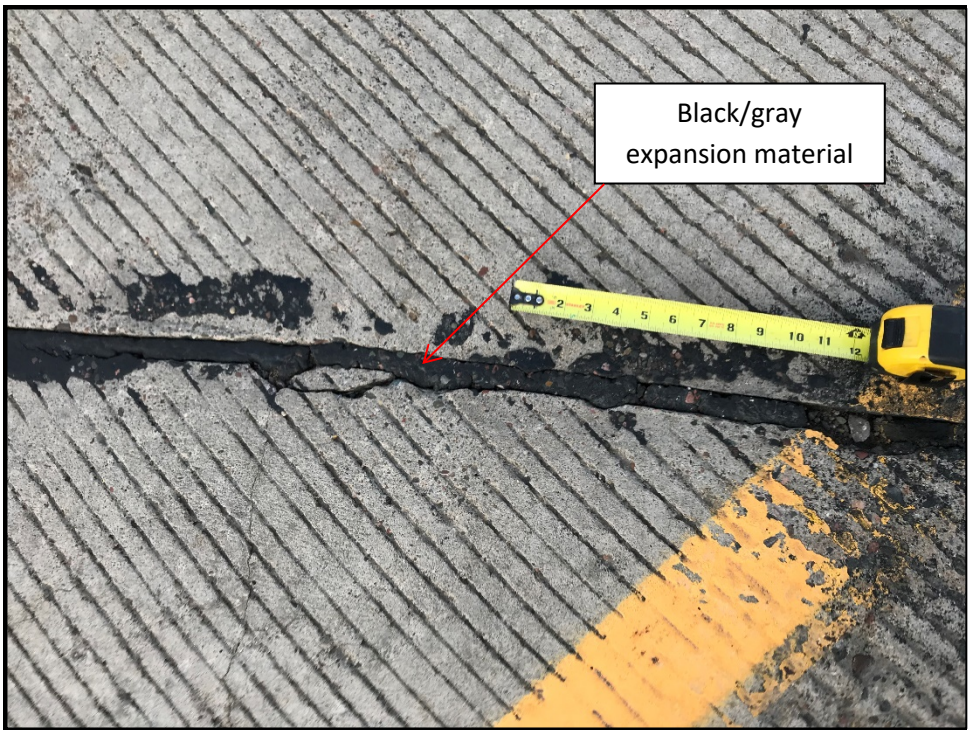
PHOTOGRAPH NO: 2	
DIRECTION: W	
DESCRIPTION: Looking west at B-03-030.	

PHOTOGRAPH NO: 3	
DIRECTION: SW	
DESCRIPTION: View of the bridge identification plate.	

PHOTOGRAPH NO: 4	
DIRECTION: NW	
DESCRIPTION: View of the brown gasket material between the bridge deck and the north abutment. The gasket material is not ACM.	

PHOTOGRAPH NO: 5 **DIRECTION**: E **DESCRIPTION:** View of the brittle gray caulk on the bridge wall joints and abutment joints. **The gray caulk is non-friable ACM containing 5% Chrysotile asbestos.**	

PHOTOGRAPH NO: 6 **DIRECTION**: Down **DESCRIPTION:** View of the gray caulk on the bridge deck wall joints. **The gray caulk is non-friable ACM containing 5% Chrysotile asbestos**.	

PHOTOGRAPH NO: 7 **DIRECTION**: Down **DESCRIPTION:** View of the black/gray expansion material on the bridge deck joints. The black/gray expansion material is not ACM.	

PHOTOGRAPH NO: 8 **DIRECTION**: E **DESCRIPTION:** View of the silver paint on the steel plates between the south bridge deck and abutment. The silver paint is not ACM.	

Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Asbestos Bulk Analysis Report

Report Number: 19-04-02067

Client: GEI Consultants Inc
3159 Voyager Dr.
Green Bay, WI 54311

Received Date: 04/12/2019
Analyzed Date: 04/16/2019
Reported Date: 04/17/2019

Project/Test Address: B-03-030; OSH 53 SB over 20th Street; Town of Prairie Lake, WI

Client Number: 200598

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-04-02067-001	B-3-30-1A		Brown Cork; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-002	B-3-30-1B		Brown Cork; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-003	B-3-30-1C		Brown Cork; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-004	B-3-30-2A		Gray Soft Pliable; Homogeneous	5% Chrysotile	95% Non-Fibrous
			Total Asbestos:	5%	
19-04-02067-005	B-3-30-2B			Did Not Analyze (Positive Stop)	
19-04-02067-006	B-3-30-2C			Did Not Analyze (Positive Stop)	

Environmental Hazards Services, L.L.C

Client Number: 200598 Report Number: 19-04-02067

Project/Test Address: B-03-030; OSH 53 SB over 20th Street;
Town of Prairie Lake, WI

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-04-02067-007A	B-3-30-3A	Caulk I	Gray Soft Pliable; Homogeneous	5% Chrysotile	95% Non-Fibrous
			Total Asbestos:	5%	
19-04-02067-007B	B-3-30-3A	Caulk II	Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-008A	B-3-30-3B	Caulk I		Did Not Analyze (Positive Stop)	
19-04-02067-008B	B-3-30-3B	Caulk II	Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-009A	B-3-30-3C	Caulk I		Did Not Analyze (Positive Stop)	
19-04-02067-009B	B-3-30-3C	Caulk II	Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-010	B-3-30-4A		Black Pliable; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-011	B-3-30-4B		Black Pliable; Homogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 200598 Report Number: 19-04-02067

Project/Test Address: B-03-030; OSH 53 SB over 20th Street;
Town of Prairie Lake, WI

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-04-02067-012	B-3-30-4C		Black Pliable; Homogeneous	NAD	100% Non-Fibrous
19-04-02067-013	B-3-30-5A		Red/Silver/Black Brittle; Inhomogeneous	NAD	100% Non-Fibrous
19-04-02067-014	B-3-30-5B		Gray/Silver/Black Brittle; Inhomogeneous	NAD	100% Non-Fibrous
19-04-02067-015	B-3-30-5C		Gray/Silver/Black Brittle; Inhomogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 200598 Report Number: 19-04-02067

Project/Test Address: B-03-030; OSH 53 SB over 20th Street;
Town of Prairie Lake, WI

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials

QC Sample: 27-M12009-3

QC Blank: SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method: EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst: Michelle Swift

Reviewed By Authorized Signatory: Tasha Eaddy

Tasha Eaddy
QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND: NAD = no asbestos detected

EHS Laboratories™
Environmental Hazards Services, LLC

Asbestos Chain-of-Custody Form

SHIP TO: 7469 Whitepine Rd. Richmond, VA 23237
Phone: (800) 347-4010 FAX: (804) 275-4907
ONLINE CLIENT PORTAL AVAILABLE FOR ANALYSIS RESULTS AT:
www.leadlab.com

19-04-02067
Due Date:
04/17/2019
(Wednesday)
AE
WS
5PLM

Company Name: GEI Consultants, Inc. Account Number: 1901822
Address: 3159 Voyager Drive City/State/Zip: Green Bay, WI, 54311
Phone #: 920-241-2725 Email: Rsandmire@geiconsultants.com Fax: 920-455-8225
Project Name / Testing Address: B-03-030, USH 53 SB over 20th Street City/State (Required): Town of Prairie Lake, WI
Collected by: Kyle C. Sandmire, AII-217616 P.O. # 1901822

TURN AROUND TIMES: IF NO TAT IS SPECIFIED, SAMPLE(S) WILL BE PROCESSED AND CHARGED AS 3 - DAY TAT.

1 Day		2 Day	X	3 Day		* Same Day – Must Call Ahead		* Weekend – Must Call Ahead

No.	Client Sample ID	HA Area #	Collection Date	Collection Time	PLM	PLM Point Count 400	PLM Point Count 1000	PLM NY Protocol	TEM - Bulk	* Positive stop on all "A" thru "C" series. Comments
1	B-3-30-1A thru 1C		4/4/2019	8:15 AM / PM	X					Cork gasket
2	B-3-30-2A thru 2C			8:15 AM / PM	X					brittle gray caulk
3	B-3-30-3A thru 3C			8:15 AM / PM	X					Gray caulk
4	B-3-30-4A thru 4C			8:15 AM / PM	X					Black gasket material
5	B-3-30-5A thru 5C			8:15 AM / PM	X					silver paint
6				AM / PM						
7				AM / PM						
8				AM / PM						
9				AM / PM						
10				AM / PM						

Released by: Kyle C. Sandmire Signature: Date/Time: 4/4/2019 8:00
Received by: [illegible] Signature: [illegible] Date/Time: 4/2/19 2:45 pm

BRIDGE INSPECTION REPORT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-03-030 (20TH STREET)

USH 53 SB over 20TH ST

May 09,2017

Type	Prior	Frequency (mos)	Performed
Routine	05-20-15	24	X
SIA Review	06-19-13	48	X

Latitude	45°22'40.18"N	Owner	STATE HIGHWAY DEPT
Longitude	91°44'44.58"W	Maintainer	STATE HIGHWAY DEPT

Time Log

Hours	Minutes
1	0

Team members

Wjk

	Name	Number	Signature	Date
Inspector	Kovaleski, William J	8007	William J Kovaleski E-signed by Bill(dotwjk)	07-06-17

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

Identification & Location

Feature On: USH 53 SB	Section Town Range: S04 T33N R11W	Structure Number: **B-03-030**
Feature Under: 20TH ST	County: BARRON	
Location: 1.7M S JCT USH 8 TO E	Municipality: PRAIRIE LAKE	Structure Name: 20TH STREET

Geometry

measurements in feet, except where noted

Approach Roadway Width: 40	Bridge Roadway Width: 40.0	Total Length: 174.1
Approach Pavement Width: 24	Deck Width: 43.8	Deck Area (sq ft): 7625

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	5550	2014	ONE WAY TRAFFIC
Under	2	300	2015	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS22	Overburden depth (in): 2.0	Last rating date: 08-21-13	Controlling: INTERIOR DECK GIRDER Positive Moment
Operating rating: HS33	Deck surface material: LOW SLUMP CONCRETE	Re-rate for capacity (Y/N):	Control location: SPAN 2
Posting:	Re-rate notes:		

Hydraulic

Classification

Scour Critical Code(113): (N) NO WATERWAY	Q100 (ft3/sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficiency #: 98.7

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT PREST CONC	DECK GIRDER	45	54.5	
2	CONT PREST CONC	DECK GIRDER	45	69.5	Y
3	CONT PREST CONC	DECK GIRDER	45	45.5	

Expansion joint(s)

Temperature: File: | New:

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	17.23	20-May-2015	
Highway Min Vertical Under Non-Cardinal			
Horizontal Under Cardinal	50.0		
Horizontal Under Non-Cardinal			
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
DECK - IOWA MIX	1991	OVERLAY - CONCRETE	

Construction History

Year	Work Performed	FOS id
1991	OVERLAY - CONCRETE	1198-05-71
1972	NEW STRUCTURE	1196-05-73

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed
Drainage - Repair Washouts / Erosion	Bjorklund, Allan M (8003)	COMPLETE	01/17/13	
Repair NE surface drain.				
Bearings - Clean Assemblies / Paint	Harrington, Daniel J (8004)	COMPLETE	01/17/13	
clean and paint bearings				
Expansion Joints - Seal	Harrington, Daniel J (8004)	COMPLETE	01/17/13	
repour expansion joints over piers.				

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Deck - Repair Railing	HIGH	Bjorklund, Allan M (8003)	IDENTIFIED	06/29/15
Remove any exposed rebar on east rail that might create a snagging hazard.				
Deck - Seal Surface Cracks	MEDIUM	Kovaleski, William J (8007)	IDENTIFIED	06/21/17
Fill midspan cut joints.				
Substructure - Other Work	LOW	Bjorklund, Allan M (8003)	IDENTIFIED	06/29/15
Seal columns with a concrete sealer from the approved list. 6 columns along 20th.				

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck**	SF	7,626	7,510	115	1	0
		1080	Delamination - Spall - Patched Area	SF		0	2	1	0
			Full depth repair area and one unrepaired spall, see sketch.						
		1130	Cracking (RC)	SF		0	113	0	0
			Multiple areas with cracking with efflorescence and rust stains, see sketch.						
	8514		Concrete Overlay	SF	7,626	0	7,626	0	0
			13.8 % delam - 1996 extensive map cracking throughout						
		3210	Debonding/Spall/Patched Area/Pothole	SF		0	760	0	0
			10% area has debonded using a chain drag.						
		3220	Crack (Wearing Surface)	SF		0	6,866	0	0
			Random map cracking throughout.						
X	**109**		**Prestressed Concrete Open Girder**	LF	869	869	0	0	0
			Hairline cracks at bearing bottome of flange						
		1080	Delamination - Spall - Patched Area	LF		0	0	0	0
X	**205**		**Reinforced Concrete Column**	EA	6	6	0	0	0
		1080	Delamination - Spall - Patched Area	EA		0	0	0	0
		1130	Cracking (RC)	EA		0	0	0	0

X	**215**		**Reinforced Concrete Abutment**	LF	108	90	18	0	0
			South abut. cracks under girder seats and wet stains under G3 Same dry stains 05. N abut. crack backwall @ c/l w/eff. dry. South abut wet in 2009, water flowing behind G3. Wet 2011. Dry 2013.						
		1080	Delamination - Spall - Patched Area	LF		0	4	0	0
			Delamination along inside face of G1-4 on north abutment.						
		1130	Cracking (RC)	LF		0	14	0	0
			North abutment has 2 vert cracks, 1 in diaphragm in Bay 2, 1 under G5. South abutment has 12 vert cracks.						
X	**234**		**Reinforced Concrete Cap**	LF	98	98	0	0	0
		1130	Cracking (RC)	LF		0	0	0	0
X	**300**		**Strip Seal Expansion Joint**	LF	52	52	0	0	0
			rip less than one foot over G3 sout abut. Dirty 2011.						
		2310	Leakage, Seal Adhesion, Damage,Cracking	LF		0	0	0	0
X	**311**		**Moveable Bearing**	EA	15	0	10	5	0
			need to be cleaned and painted.						
		1000	Corrosion	EA		0	10	5	0
			Heavy rust on abutment bearings. Freckled rust on Pier 1.						
		2210	Movement	EA		0	0	0	0
		2220	Alignment	EA		0	0	0	0
X	**331**		**Reinforced Concrete Bridge Rail**	LF	386	221	140	25	0
			spalls exposed rebar w/rust east parapet. end section removed SW corner metal tube. East rail continues to degrade 2011 with more rust and larger horizontal crack in top six inches. Worse in 2013 on section top conc broken off between posts over 20th. east rail.						
		1080	Delamination - Spall - Patched Area	LF		0	0	25	0
			East rail has spalled with exposed rebar for 25lf, mainly over 20th.						
		1130	Cracking (RC)	LF		0	140	0	0
			Horizontal cracking near top on majority of east rail.						
X	**8400**		**Integral Wingwall**	EA	4	2	0	2	0
			North west wing is missing the top rail transition on the downstream end.						
		8903	Wall Deterioration	EA		0	0	2	0
			East wings both have spalled with exposed rebar.						

BRIDGE INSPECTION REPORT
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DT2007 2003 s.84.17 Wis. Stats.

Structure No.: **B-03-030**

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9001**		**Drainage - Approach** Drain off NE quadrant.	EA	1	1	0	0	0
X	**9030**		**Signs - Object Markers** NW sign is twisted slightly.	EA	2	1	1	0	0
X	**9043**		**Slope Protection- Crushed Aggregate with Bit.**	EA	2	2	0	0	0
X	**9168**		**Concrete Diaphragm** bay 2&3 pier 1, spall @ north side, also bay 2 Pier 2 on north face.	EA	20	17	3	0	0
X	**9322**		**Approach Roadway - Concrete (non-structural)** SE slab cracked	EA	2	1	1	0	0
X	**9335**		**Decorative Rail** West rail missing 12.5LF on north end, transition piece. East rail impact damage to 66LF at north half.	EA	2	0	1	1	0

NBI Ratings

	File	New
Deck	5	5
Superstructure	7	7
Substructure	6	6
Culvert	N	N
Channel	N	N
Waterway	N	N

Structure Specific Notes

OLD: Overall condition of structure is vg. Random map/long. 358 cracks throughout entire deck, 1,000 LF total, not epoxied. Important to note no 359 cracks. All other elements in vg condition. 13.8 % dela**m 1996.**
(99) in program for deck replacement.
(01) Structure is in overall good condition. The low point being the delam on the deck w/ random map cracking. Still in program for deck replacement. Respray slope protection with bit.

Inspection Specific Notes

2013 Monitor combination rail for loose spalls over 20th.

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Walk-thru

Special Requirements

Chk	Hours	Cost	Comments

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-03-030
USH 53 SB over 20TH ST

LOCATION

(3) Municipality:	PRAIRIE LAKE
(16) Latitiude(° ' "):	45°22'40.18"N
(17) Longitude(° ' "):	91°44'44.58"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	2
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	1

GEOMETRY

(49) Structure Length(ft):	174.1	
(50) Sidewalk Width(ft):	**Left:** 0.0	**Right:** 0.0
(50) Curb Width(ft):	3.8	
(52) Culvert Barrel Length(ft):		
(34) Skew:	**Angle(°):** 40	**Direction:** X-RIGHT FORWARD -LEFT FORWARD
	Cardinal	**Non-Cardinal**
(51) Bridge Roadway Width(ft):	40.0	40.0
(52) Deck Width(ft):	43.8	43.8
Right Wingwall Length(ft):		
Left Wingwall Length(ft):		
(32) Approach Roadway Width(ft):	40	0
	Cardinal Under Clearance	**Non-Cardinal Under Clearance**
(47) Minimum Horizontal(ft):	50.0	
(55) Minimum Right Lateral(ft):	14.0	
(56) Minimum Left Lateral(ft):	14.0	

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail:

Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) **Left:** TYPE J (ALUMINUM) ON SLOPED PPT(45) **Right:** TYPE J (ALUMINUM) ON SLOPED PPT(45)

Transition Type:

	CONT GUARD RAIL
	NO APP GRDRL
	NO ATTACHMENT
5	22 MM(7/8") BOLT (Please enter quantity)
	25 MM(1") BOLT (Please enter quantity)
	OTHER (Please specify)

Approach Attachment Rail Note:

Guardrail Termination Type:

X	(01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)

Guardrail Termination Note:

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	3 Intolerable- Substantial speed reduction
	6 Fair- Minor speed reduction
X	8 Good- No speed reduction

BRIDGE DECK
REPAIR QUANTITIES

12/6/2018

Ken,
Here's a summary of our new direction for the Barron County project. Wing replacements are still in the project and Al Bjorklund wants the joints replaced on the overlays.
I've also included Al's estimated quantities for deck repairs. I would like to have another conference call with Al to discuss this change in scope, let me know if you agree and we'll try to set up a time.
I'm guessing we'll need to amend your design contract.
Let me know if you have questions.
Thanks,
Brendan

1196-04-77
USH 53 (Chippewa Co Line - CTH I NB)
RSRF20

- Change SFY from 2021 to 2023
- Add ADV SFY of 2021
- Change estimate from $14.460 M to $12.0 M to reflect BOS-recommended bridge scope changes (see below)
- Update bridge information in FIIPS to reflect BOS-recommended bridge scope changes

1196-04-77:
Current FIIPS Estimate w/o delivery: 14,460,000
New FIIPS Estimate w/o delivery including BOS changes: 12,000,000
Structure Work including: Conc overlays on B-3-14,20,24,30; Conc Overlays and Joints on B-3-26, 37; Re-decks on B-3-16,18 plus any other incidental structure work.

Here are Al's guesses on deck repair quantities, Type 1(SY)-Type 2(SY)-Full Depth(SY)

1) 1196-04-77 (USH 53, Chippewa County Line – USH 8 SB) 2021 RSRF20 $14.460 M

- B-03-14 (03) CONC OVLY 70-35-2
- B-03-16 (06) REPLACE DECK
- B-03-18 (06) REPLACE DECK
- B-03-20 (03) CONC OVLY 100-50-15
- B-03-24 (03) CONC OVLY 30-15-5
- B-03-26 (58) CONC OVLY/NEW JOINTS 20-10-1
- B-03-30 (03) CONC OVLY 125-60-10
- B-03-37 (58) CONC OVLY/NEW JOINTS 95-45-5