STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for B-03-019

USH 53 NB over A

Jun 23,2017

Type	Prior	Frequency (mos)	Performed
Routine	06-16-15	24	X
SIA Review	06-13-13	48	X

Latitude	45°17'25.89"N	Owner	STATE HIGHWAY DEPT
Longitude	91°38'36.37"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)	09-08-17

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

Identification & Location

Feature On:	Section Town Range:	Structure Number:
USH 53 NB	S05 T32N R10W	B-03-019
Feature Under:	County:	
A	BARRON	
Location	Municipality:	Structure Name:
7.2M N JCT CTH M TO E	DOVRE	

Geometry

measurements in feet, except where noted

Approach Roadway Width:	Bridge Roadway Width:	Total Length:
40	40.0	271.7
Approach Pavement Width:	Deck Width:	Deck Area (sq ft):
24	43.8	11900

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	5550	2014	ONE WAY TRAFFIC
Under	2	450	2011	TWO WAY TRAFFIC

Capacity

Inventory rating:	Overburden depth (in):	Last rating date:	Controlling:
HS17	2.0		INTERIOR DECK GIRDER Moment
Operating rating:	Deck surface material:	Re-rate for capacity (Y/N):	Control location:
HS29	LOW SLUMP CONCRETE		3.7 SPAN 1, 28.7
Posting:	Re-rate notes:		

Load Rating

Hydraulic

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

Classification

Sufficiency #: 95.2

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT STEEL	DECK GIRDER		77.0	
2	CONT STEEL	DECK GIRDER		118.5	Y
3	CONT STEEL	DECK GIRDER		65.0	

Expansion joint(s)

Temperature: File: | New:

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	14.5		
Highway Min Vertical Under Non-Cardinal			
Horizontal Under Cardinal	46.2		
Horizontal Under Non-Cardinal			
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
DECK - IOWA MIX	1989	OVERLAY - CONCRETE	

Construction History

Year	Work Performed	FOS id
1989	OVERLAY - CONCRETE	0003-84-01
1972	NEW STRUCTURE	1196-04-74

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed
Deck - Patching	Harrington, Daniel J (8004)	COMPLETE	01/17/13	
approx 14 sq ft of deck patching				

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Misc - Tighten Bolts and Nuts	HIGH	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Tighten all bolts and replace missing bolts (2) on decorative rail.				
Misc - Cut Brush	LOW	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Remove brush from four (4) quadrants.				
Substructure - Other Work	LOW	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Seal concrete columns.				

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck**	SF	11,900	11,186	714	0	0
		1130	Cracking (RC)	SF		0	714	0	0
			CRK CS2 714SF.						
	8514		Concrete Overlay	SF	11,900	0	11,879	21	0
			Trans. and long. cracks over pier. random mapping cracks throughout. Spalls shoulder westside. Patched 2006. Six spalls in left lane and shoulder 20 SQ Ft total 2011						
		3210	Debonding/Spall/Patched Area/Pothole	SF		0	833	21	0
			DELAM CS2 833SF. SPL CS3 21SF.						
		3220	Crack (Wearing Surface)	SF		0	11,046	0	0
			CRKNG CS2 11,046SF.						
X	**107**		**Steel Open Girder**	LF	1,351	1,341	10	0	0
			Steel area for painting estimate 17,561 sq ft - 1,631 sq m Painted 06/05						
		1000	Corrosion	LF		0	10	0	0
			Freckle rust CS2 10sf.						
	8516		Painted Steel	SF	15,898	0	15,888	0	10
			Steel area for painting estimate 17,561 sq ft - 1,631 sq m Painted 06/05						
		3440	Effectiveness (Steel Protective Coatings)	SF		0	15,888	0	10
			Few rusted scrapes btwn G5 & 4 Span 2. Signs of lt chalking						
X	**205**		**Reinforced Concrete Column**	EA	10	10	0	0	0
X	**215**		**Reinforced Concrete Abutment**	LF	209	155	53	1	0
			rust stains, s**ome sloughing** at S abut. Spall SW corner						
		1080	Delamination - Spall - Patched Area	LF		0	1	1	0
			S ABUT G1 SPL CS3 1LF | G5 SPL CS2 1LF.						
		1130	Cracking (RC)	LF		0	52	0	0
			S ABUT CRK CS2 30LF. N ABUT CRK CS2 22F.						

X	**300**		**Strip Seal Expansion Joint**	LF	200	200	0	0	0
X	**311**		**Moveable Bearing** painted 06/05	EA	15	0	15	0	0
		1000	Corrosion **Lt edge rust.** S ABUT CS2 5EA. N ABUT CS2 5EA. P2 CS2 5EA.	EA		0	15	0	0
X	**313**		**Fixed Bearing** P1.	EA	10	10	0	0	0
X	**331**		**Reinforced Concrete Bridge Rail** Tubular rail missing bolts. Spalls and Cracks in concrete 20 lf of spalling at toe of paparpet southwest span 1.	LF	580	267	313	0	0
		1080	Delamination - Spall - Patched Area E RAIL CS2 3LF. W RAIL CS2 10LF.	LF		0	13	0	0
		1130	Cracking (RC) E RAIL CS2 150LF. W RAIL CS2 150LF.	LF		0	300	0	0
X	**8400**		**Integral Wingwall**	EA	4	0	4	0	0
		8902	Wall Movement SE 1/4" IN, 0" DOWN. SW 1/2" IN, 1/2" UP. NE 0" OUT, 1/2" UP.	EA		0	3	0	0
		8903	Wall Deterioration **Fine cracking on few**	EA		0	1	0	0

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9001**		**Drainage - Approach** Good condition.	EA	4	4	0	0	0
X	**9030**		**Signs - Object Markers**	EA	4	4	0	0	0
X	**9033**		**Signs - Vertical Clearance**	EA	2	2	0	0	0
X	**9043**		**Slope Protection- Crushed Aggregate with Bit.**	EA	2	2	0	0	0
X	**9167**		**Steel Diaphragm** Painted 06/05 **Lt edge rust.**	EA	52	41	11	0	0
X	**9322**		**Approach Roadway - Concrete (non-structural)** SW cracked, both N slabs have been overlaid w/bit. and have settlement and rutting**.** S APPR SPL CS3. N APPR overlaid w/bit.	EA	2	1	1	0	0
X	**9335**		**Decorative Rail** E DRAIL Bolt Missing (2) | Loose nuts (3)**.** W DRAIL Loose nuts	EA	2	0	2	0	0

NBI Ratings

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

Structure Specific Notes

OLD: Overall, condition of structure is vg. Minor/moderate rusting of north abutment bearings should be cleaned/painted ASAP. Also tighten north abutment bearing plate holdown bolts. All other elements in **vg condition. Steel area 17,561 sq ft, 1631.47 sq m. Delam 7.2%- 1996. [98] Monitor delams @ const. joints 1,2,3,4 - 10 sq ft. total. Patch with SET 45.**
(99) spalls at expansion joints in overlay east lane NB. 6 spalls 2'x1' some filled with Bit. Overall structure in good shap. Need to work on spalls in spring.
(01) Structure is in good condition. The deck is showing signs of distress with cracks and spalls both top and bottom. Railing system is in fair condition with damage to tubular top rail and spalls on concrete parapet. New traffic impact to G5 fascia girder bottom flange WB on CTH A under. 13-1/2'x7/8' gouge in flange. Should be ground. Measured 14.60' at spot of hit for clearance.

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

walk-thru

Special Requirements

	Chk	Hours	Cost	Comments

Routine

Document Comment/Description

Bay 4 south abutment - surface concrete deterioration

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-03-019
USH 53 NB over A

LOCATION

(3) Municipality:	DOVRE
(16) Latitiude(° ' "):	45°17'25.89"N
(17) Longitude(° ' "):	91°38'36.37"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):	271.7	
(50) Sidewalk Width(ft):	**Left:** 0.0	**Right:** 0.0
(50) Curb Width(ft):	3.8	
(52) Culvert Barrel Length(ft):		
(34) Skew:	**Angle(°):** 66	**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):	46.2	
(55) Minimum Right Lateral(ft):	12.1	
(56) Minimum Left Lateral(ft):	12.1	

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	X-SUB-STANDARD -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

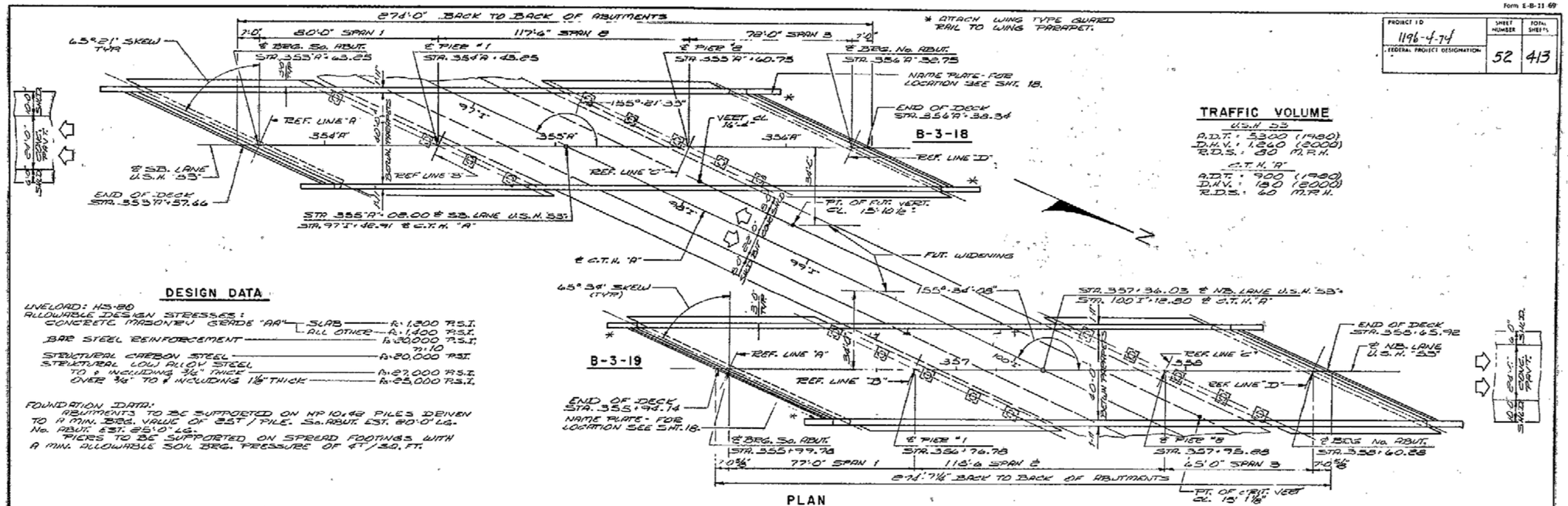
(72) Approach Alignment Appraisal:

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

Form E-B-11 69

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
1196-4-74	52	413
FEDERAL PROJECT DESIGNATION		

WISDOT DTID



PLAN
(3 SPAN WELDED ℄ GIRDER)

* ATTACH WING TYPE GUARD RAIL TO WING PARAPET.

TRAFFIC VOLUME

U.S.H. 53
A.D.T. : 5300 (1980)
D.H.V. : 1,240 (2000)
R.D.S. : 80 M.P.H.

C.T.H. "A"
A.D.T. : 900 (1980)
D.H.V. : 180 (2000)
R.D.S. : 60 M.P.H.

DESIGN DATA

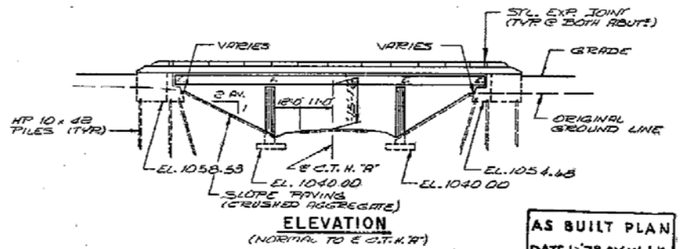
LIVE LOAD: HS-20
ALLOWABLE DESIGN STRESSES:
CONCRETE, MASONRY GRADE "AA" — SLAB — f_c = 1,200 P.S.I.
ALL OTHER — f_c = 1,400 P.S.I.
BAR STEEL REINFORCEMENT — f_s = 20,000 P.S.I.
n = 10
STRUCTURAL CARBON STEEL — F_b = 20,000 PSI.
STRUCTURAL LOW ALLOY STEEL
TO ¾ INCLUDING ¾" THICK — F_b = 27,000 P.S.I.
OVER ¾" TO 4 INCLUDING 1½" THICK — F_b = 25,000 P.S.I.

FOUNDATION DATA:
ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 PILES DRIVEN TO A MIN. BEAR. VALUE OF 25T / PILE. So. ABUT. EST. 80'-0" Lg. No. ABUT. EST. 25'-0" Lg.
PIERS TO BE SUPPORTED ON SPREAD FOOTINGS WITH A MIN. ALLOWABLE SOIL BEG. PRESSURE OF 4T / SQ. FT.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
ALL FIELD CONNECTIONS SHALL BE MADE WITH ⅞" DIA. FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.
THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE, TO THE EXTENT SHOWN ON THIS SHT. & 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 EXISTING GROUND LINE AND THE QUANTITIES WERE COMPUTED FROM THIS LINE.

LIST OF DRAWINGS



ELEVATION
(NORMAL TO ℄ C.T.H. "A")

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

LAYOUT

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-19
U.S.H. 53 OVER C.T.H. "A"

County BARRON	City, Village, Town TN. DOVRE		
Design Spec A.A.S.H.O. 1969	Load HS-20	Const. Spec. 1969	
Designed By C.H.A.	Design Checked C.D.W.	Drawn By BUDD	Plans Checked G.J.S.

Approved W. A. Veitz, Chief Bridge Engineer — Date 2-23-72

GENERAL PLAN

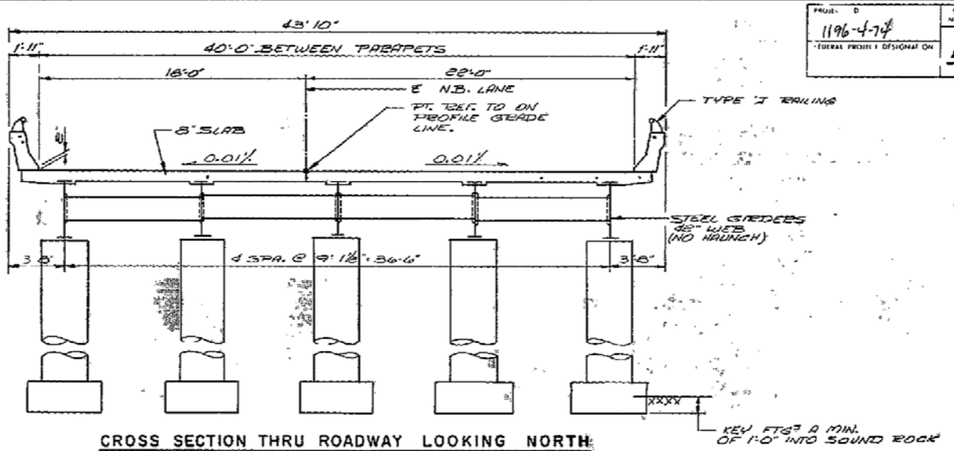
SHEET 1 OF 19
X47077

Form E B 12 68

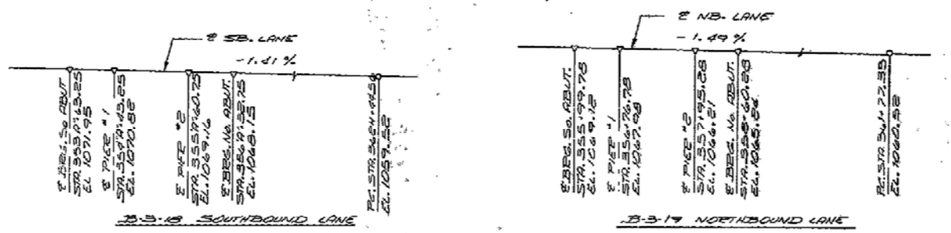
PROJECT ID	SHEET NUMBER	TOTAL SHEETS
1196-4-74	53	413
FEDERAL PROJECT # (IF APPLICABLE)		

TOTAL ESTIMATED QUANTITIES

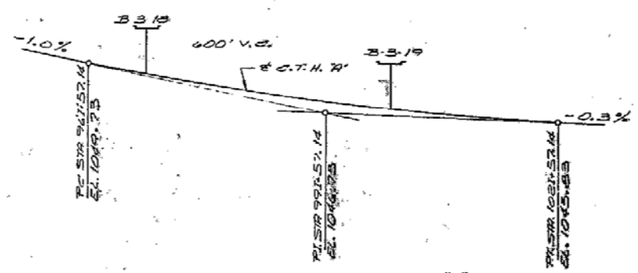
BID ITEMS	UNIT	SUPERS.	So. ABUT.	PIER #1	PIER #2	No. ABUT.	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.	---	415	325	820	145	1,145
CONCRETE MASONRY	C.Y.	347.0	149.1	89.8	44.1	166.0	836.0
BAR STEEL REINFORCEMENT	LBS.	91,930	6,340	25,440	11,900	4160.	141,770
STRUCTURAL CARBON STEEL	LBS.	190,000	---	---	---	---	190,000
STRUCTURAL LOW ALLOY STEEL	LBS.	99,620	---	---	---	---	99,620
LUBRICATED BRONZE PLATES	LBS.	256	---	---	---	---	256
BEARING PADS	S.F.	32	---	---	---	---	32
STEEL PILING, DELIVERED & DRIVEN HP 10x42	L.F.	---	700	---	---	885	1585
TUBULAR RAILING, TYPE 'T'	L.F.	595	---	---	---	---	595
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	---	510	---	---	445	955
NON BID ITEMS							
ALUMINUM OR ZINC PLATE	S.F.	72	---	---	---	---	72
POLYVINYL CHLORIDE WATERSTOP	L.F.	---	126	---	---	118	244



CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADES U.S.H. 53



PROFILE GRADE C.T.H. "A"

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-19

Coord Sys. 1969	Drawn By BUDD	Plans Checked GJS

GENERAL PLAN

SHEET 2 OF 19

X47078

WISDOT DTID