

WSBIS Field Inventory Report



Approved		
Revised		
RFC		
AAN		
Not Reviewed		

1001	2009	2132	1019	1021	2023	1156	1188	1196
Structure ID	Bridge Number	Bridge Name	Owner	County	City	Location	Latitude	Longitude
00200440	DOC-5	MCNEIL IS. BARGE DOCK	21	27	0000	MCNEIL ISLAND	47° 11' 28.17"	122° 40' 54.92"

1232	1256	1274	1286	1288	1289
Feature Intersected	Facilities Carried	Region	Custodian	Parallel	Temporary
BALCH PASSAGE (P. SOUND)		OL			

Shaded fields are to be reviewed each inspection.
Fields in *italics* are for information only & are not editable.

1332	1336	1340	2346	1348	1352	1356	1360	1364	1367	1370	1374	1378	1379	1382	1383	1386	1397	1310	1312	1291
Year Built	Year Rebuilt	Bridge Length	NBIS Length	Maximum Span Length	Lanes On	Curb to Curb Deck Width	Out to Out Deck Width	Sidewalk Left	Sidewalk Right	Min Vert Over Deck	Min Vert Under	Vert Code	Min Lat Under Right	Lat Code	Min Lat Under Left	Navigation Control Code	Approach Roadway	Skew Angle	Flared	Median
	0																			

2000	1432	1433	1434	1435	2440	1445	1451	2402	1487	1490	1354	1491	1495	1499	2500	2501	2502	1413	
Main Code	Under	On	Hwy Class	Service Level	Route Number	Milepost	ADT	Truck %	Crossing Description	Funct. Class	Lane Use Direction	Total Lanes Under	Horizontal Clearance Route Dir	Horizontal Clearance Reverse Dir	Max Vert Clearance Route	Min Vert Clearance Route	Max Vert Clearance Reverse	Min Vert Clearance Reverse	Detour Length
M	1	5	1	10210	5.96						1								

Route On

2000	1432	1433	1434	1435	2440	1445	1451	2402	1487	1490	1354	1491	1495	1499	2500	2501	2502	1413	
Main Code	Under	On	Hwy Class	Service Level	Route Number	Milepost	ADT	Truck %	Crossing Description	Funct. Class	Lane Use Direction	Crossing Lanes Under	Horizontal Clearance Route Dir	Horizontal Clearance Reverse Dir	Max Vert Clearance Route	Min Vert Clearance Route	Max Vert Clearance Reverse	Min Vert Clearance Reverse	Detour Length

Route Under

1532	1533	1535	1536	1538	1541	1544	1545	1546	1547	1548	1549	1551	1552	1553	1554	1555	1556
Main Span Material	Main Span Design	Appr Span Material	Appr Span Design	Number Main Spans	Number Appr Spans	Service On	Service Under	Deck Type	Wearing Surface	Membrane	Deck Protect	Oper Rating Method	Oper Rating Tons	Oper Rating Factor	Inv Rating Method	Inv Rating Tons	Inv Rating Factor
	15			1	0							5	17		5	10	

NBIS Risk Category

Printed Date
6/6/2019

2920	1990	2646	2649	2654
Inspection	Date	Inspector	Cert No	Co-Inspector
Routine	4/8/2019	JHL	D2016	CRT
Fracture Critical				
Special Feature				
Underwater				
UW Interim				

Inspection	Date	Inspector	Cert No	Co-Inspector
Interim				
In Depth				
Damage				
PRM Safety				
SEC Safety				

Inspection	Date	Inspector	Cert No	Co-Inspector
Condition				
Short Span				
Geometric				
Info				
Inventory				

Control Data Guid: dca1ade4-abdf-4c7f-8107-6022d0cefd88 Control Data Date: 4/10/2019

BRIDGE INSPECTION REPORT

Status: Work

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

Inspector's Signature *JHL* JHL

Cert # D2016

Cert Exp Date 1/12/2022

Co-Inspector's Signature *CRT* CRT

Inspections Performed

Report Type	Inspection Type	Date	Freq	Hours	Inspector	Cert No	Co-Insp.
Routine		4/8/2019	24	3.0	JHL	D2016	CRT
Fracture Critical		4/25/2017	24	1.0	JSW	G0303	KGH
Underwater		4/25/2017	48	4.0	DON	G0314	RMP

<input type="checkbox"/> Alignment (1661)	17 <input type="checkbox"/> Operating Tons (1552)	<input type="checkbox"/> Bridge Rails (1684)	<input type="checkbox"/> No Utilities (2675)
5 <input type="checkbox"/> Deck Overall (1663)	<input type="checkbox"/> Op RF (1553)	<input type="checkbox"/> Transition (1685)	<input type="checkbox"/> Asphalt Depth (2610)
7 <input type="checkbox"/> Superstructure (1671)	10 <input type="checkbox"/> Inventory Tons (1555)	<input type="checkbox"/> Guardrails (1686)	<input type="checkbox"/> Year Built (1332)
5 <input type="checkbox"/> Substructure (1676)	<input type="checkbox"/> Inv RF (1556)	<input type="checkbox"/> Terminals (1687)	0 <input type="checkbox"/> Year Rebuilt (1336)
<input type="checkbox"/> Culvert (1678)	<input type="checkbox"/> Operating Level (1660)	<input type="checkbox"/> Bridge Rail Ht (2612)	
8 <input type="checkbox"/> Chan/Protection (1677)	<input type="checkbox"/> Open/Closed (1293)	<input type="checkbox"/> Design Curb Ht (2611)	
<input type="checkbox"/> Pier/Abut/Prot (1679)	5 <input type="checkbox"/> Structural Eval (1657)		
<input type="checkbox"/> Waterway (1662)	* <input type="checkbox"/> Deck Geometry (1658)		
T <input type="checkbox"/> Scour (1680)	* <input type="checkbox"/> Underclearance (1659)		

NBIS Risk Category

No Risk Category

Inspection Flags

<input type="checkbox"/> Soundings (2693)	<input type="checkbox"/> Measure Clearance (2694)	<input type="checkbox"/> Revise Rating (2688)	<input type="checkbox"/> Photos (2691)	<input type="checkbox"/> QA Flag (2695)
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BMS Elements

Element	Element Description	Total	Units	CS 1	CS 2	CS 3	CS 4
8102	Concrete Abutment	18	LF	18	0	0	0
8114	Timber Laminated Girder	500	LF	500	0	0	0
8124	Timber Submerged Pile/Column	60	EA	59	0	1	0
8131	Timber Pier Cap	60	LF	60	0	0	0
8201	Steel Open Girder, (FC)	184	LF	180	0	4	0
8206	Steel Floor Beam	160	LF	160	0	0	0
8209	Steel Stringer	460	LF	460	0	0	0
8221	Timber Deck	2,745	SF	2,145	0	600	0
8225	Non-skid Metal Surfacing	277	SF	277	0	0	0
8301	Apron Steel Orthotropic Deck	277	SF	277	0	0	0
8305	Apron Hinge Multi-Pin & Plate	5	EA	5	0	0	0
8307	Apron Lips & Pins	6	EA	6	0	0	0
8341	Lift Beam (FC)	24	LF	21	0	3	0
8342	Live Load Hanger Bars (FC)	2	EA	2	0	0	0
8343	Apron Two Hinge Pin System/LL Hanger Pins (FC)	4	EA	4	0	0	0

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Page 3 of 6

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Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5	SID 00200440	Br. Name MCNEIL IS. BARGE DOCK	Route On 10210	Mile Post 5.96
Carrying			Route Under	Mile Post
Intersecting BALCH PASSAGE (P. SOUND)				

Notes (Continued)

1680 SCOUR:

Structure is in tidal waters and is subject to tidal currents. Scour code set to "T-tidal" and is considered a low risk for scour. See note 8361.

8114 TIMBER LAMINATED GIRDER:

Timber Laminated Girders located in the three approach spans.
Girder hold down plates at Pier 3 are rusty (photo #4).
Girder 4D at Pier 4 hold down plate has holed through (photo #5). REPAIR #10005.

8124 TIMBER SUMBERGED PILE/COLUMN:

Quantity includes approach piles and tower piles (photos #6 and #7). Wingwall piles are quantified under 8450 and are not included in these quantities.

Underwater Inspection Findings (2017):

Due to low tide, the bridge seat and approach piles were dry and were inspected from shore by routine inspectors. The tower piles were inspected from low water to mudline by diving. In general the tower piles are in good condition with only minor defects noted. Piles 2C and 4A in the right tower were noted to have marine borer entries (MBE) (photos #UW-1 thru #UW-3). These defects do not significantly affect the structural capacity of the pile but will be monitored for further deterioration during future inspections. See attached Layout drawing and Pile Data Sheets for further defect descriptions and locations.

8201 STEEL OPEN GIRDER, (FC):

The transfer span girders have a few rust blooms, some with minor section loss. See photos in paint element 8901. See attached Fracture Critical Report for more details.

8206 STEEL FLOORBEAM:

Floorbeams are numbered 0 to 9 from shore to sea.

8221 TIMBER DECK:

Timber decking is nail laminated and has a depth of 3". The deck is rutting up to 5/8" deep, leaving 2-3/8" of depth. Decking spans between timber girders. Consideration should be made to widen the metal running boards to reduce any more rutting (photos #10 and #11). REPAIR #10010.

Many of the timber deck hold down bolts are loose (photo #12). REPAIR #10004.

The timber decking near the abutment deflects 3/4"± with heavy wheel loads when observed from above (photo #33). Inspection below without live load found nothing abnormal.

The perforated metal running boards on the approach slip on the timber decking have fastening bolts which are loose, missing, and/or not sufficient to fully tighten the metal to the timber (photos #38 & #42). REPAIR #10008.

ACP roadway above drains on to timber decking.

8225 NON-SKID METAL SURFACING:

The apron deck consists of painted diamond plating.

8305 APRON HINGE MULTI-PIN & PLATE:

This element defines the pins used in a multi hinge connection between transfer span and apron.

8341 LIFT BEAM (FC):

Lift beam supports the transition span at Floorbeam 8 (photos #13 and #14).

The Lift Beam has laminar rust on the shore side girder interior web to bottom flange (element 8901 photo #34). Laminar rust is beginning to form on the bottom cover plate near the live load hangers. REPAIR #10000.

8342 LIVE LOAD HANGER BARS (FC):

Live load hanger bars are supported at the top with fixed pins and the bottom with adjustable pins (photos #14 - #16).

Underwater Inspection Findings (2017):

The live load hanger stops are intact both left and right (photos #UW-4 and #UW-5). Both hanger bars and stops have minor surface corrosion with some shallow pitting. Right hanger contacts the gravel at the groundline.

8343 APRON TWO HINGE PIN SYSTEM/LL HANGER PINS:

This element defines the FC pins at the top and bottom of the live load hangers.
The apron has five pins, not fracture critical.

BRIDGE INSPECTION REPORT

Page 4 of 6

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Intersecting BALCH PASSAGE (P. SOUND)			Route Under	Mile Post

Notes (Continued)

8348 SPAN HOIST/CABLES/SPOOL/PLATFORM/SUPPORTS/RIGGING:

The cables are lacking lubrication throughout, some surface rust showing (photos #18 & #37). REPAIR #10001. The apron counterweight cable has no thimble at the connection to the apron (photo #40). REPAIR #10009.

Left Girder lifting shackle connection is gapped (photo #19).

Tie rings for securing docked boats have section loss from previous corrosion (photos #43 & #44). REPAIR #10007.

2015 cover removed from apron winch, motor and gear housing looked in fair shape, oil was at proper levels (photo #36).

Lift span cable sockets show some sign of slippage and degradation of zinc filler (photos #48 & #49).

8361 SCOUR (Field):

There are four approach piers and one lift span tower line pier.

Underwater Inspection Findings (2017):

Water flow in the vicinity is tidally induced. No significant scour patterns or scour countermeasures were observed.

8390 FIXED BEARING:

Pier 4 bearings supporting the transfer span are in poor shape. The hold down through pins are missing nuts and washers. The anchor nuts and washers have laminar rust and section loss. Lack of grease has caused fretting corrosion (wear). This has shortened the height of the bearing so that the hold down plates now ride on the base plate (photos #20 - #23). REPAIR #10002.

8391 MOVEABLE BEARING:

The timber girders in the approach spans have elastomeric bearings at all piers.

8408 STEEL SLIDING PLATE JOINT:

Joint is located at transition from fixed pier to the lift span (photo #24).

8419 CONCRETE COUNTERWEIGHTS:

Two lift span and two apron counterweights.

8450 TIMBER WINGWALLS:

Right timber wingwall is missing several UHMW sheets. The lower facing timbers are also in poor condition (photo #46). REPAIR #10006.

Left timber wingwall is missing all lower UHMW sheets. The lower facing timbers are also in poor condition (photo #47). REPAIR #10006.

Throughout the timber wingwall are cut wrapping cables (photo #27).

Many of the wingwall piles have top end rot (photos #28 and #29).

Underwater Inspection Findings (2017):

In general, the timber wingwalls are in good condition underwater. The offshore end 5-pile groups on each wingwall have broken lower wraps (photos #UW-6 and -7). The right wingwall has one pile with MBE's noted near mudline (photos #UW-8 and -9). See attached Layout drawing and Pile Data Sheets for more information.

8462 STEEL PILE FRAME DOLPHINS:

Underwater Inspection Findings (2017):

The steel pipe piles that support the dolphins are in good condition underwater with no significant defects noted.

8810 METAL BRIDGE RAILING:

Metal bridge railing on apron only.

8812 TIMBER BRIDGE RAILING:

Left Timber rail is split and splintered (photo #30). REPAIR #10003.

8901 PROTECTIVE COATING - BRIDGE:

The paint in the bottom laterals, stringers, bearings, lift beam, steel headframe, open girders, and floorbeams of transfer span have some rust blooms (photos #8, #9, #34, #39, and #51- #56). REPAIR #10000.

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Intersecting BALCH PASSAGE (P. SOUND)		Route Under	Mile Post	

Notes (Continued)

8902 PROTECTIVE COATING - PILING:

The 2' diameter steel piles making up the Left and Right Dolphins have rust blooms starting in the intertidal zone (photo #45).

Underwater Inspection Findings (2017):

Coatings are largely intact with only minor blistering noted in small areas (photos #UW-10, -11, & -12). No corrosion observed. See Layout and Pile Data Sheets for thickness measurements.

8907 GALVANIZING:

Galvanizing is found on the right and left dolphin horizontal beams, cables, timber girder hold downs, and other connections on the lift span.

Losses are found on the timber girder hold downs, cables, and lift span/apron connections.

8910 SAFETY ACCESS LADDERS:

Safety access ladder are on the right wingwall and the right tower.

Underwater Inspection Findings (2017):

No defects noted on ladders or attachments.

Repairs

Repair No	Pr	R	Repair Descriptions	BMS	Noted	Maint	Verified
10000	1	B	The paint in the bottom laterals, stringers, bearings, lift beam, steel headframe, open girders and floorbeams of transfer span have some rust blooms. Recommend spot painting these areas.	8201, 8341, 8901	4/18/2013		
10001	1	B	Transfer span and apron lift cables are lacking grease and starting to corrode. Lubricate wire ropes annually. Replacement of cables should be considered in the near future.	8348	5/20/2013		
10002	1	B	Transfer span fixed bearings are in poor condition. Bolts, washers, and nuts are rusting with some section loss. The hold down through pin has no containment nut on the right bearing and the head is broken off the left bearing. Fretting corrosion (wear) has shortened the height of the bearing so that the hold down plates now ride on the base plate. Replace with new bearing, if using the same system install greasing access to prevent fretting.	8390	5/20/2013		
10003	2	B	Left Timber rail is split and splintered. Replace treated timber 2-1/2" x 7" x 32'-0" long.	8812	5/20/2013		
10004	2	B	Many of the timber deck hold down bolts are loose. Tighten bolts.	8221	5/20/2013		
10005	2	B	Girder hold down brackets are rusty. Girder 4D at Pier 4 hold down plate has holed through. Clean, paint, or replace as needed.	8114	5/20/2013		
10006	1	B	The left timber wingwall UHMW protection is missing or in poor shape in the lower half. The right timber wingwall is missing several UHMW sheets missing. Repair wingwalls, replace any rotten timbers and missing or unattached UHMW protection.	8450	5/20/2013		
10007	1	B	Boat tie up connections are heavily pitted. Replace loops.	8348	4/21/2015		
10008	2	B	The perforated metal plates near the top of the approach are loose, and slip under heavy traffic. Add, replace, and/or tighten hold down bolts.	8221	4/25/2017		
10009	3	B	Install a thimble on the apron counterweight cable, where it connects to the apron.	8348	4/25/2017		

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Carrying		Route On 10210 Mile Post 5.96
Intersecting BALCH PASSAGE (P. SOUND)		Route Under Mile Post

Repairs (Continued)

Repair No	Pr	R	Repair Descriptions	BMS	Noted	Maint	Verified
10010	3	B	The deck is rutting up to 5/8" deep, leaving 2-3/8" of depth. Decking spans between timber girders. Consideration should be made to widen the metal running boards to reduce any more rutting.		4/8/2019		

Inspections Performed and Resources Required

Report Type	Date	Freq	Hrs	Insp	CertNo	CoInsp	Note	
Routine	4/8/2019	24	3.0	JHL	D2016	CRT		
Resources	Hours	Min	Pref	Max	Freq Date	Need Date	Override	Notes
Boat	3.00		D					Boat needed for inspection. Kvichak used in 2019.
Third Party Notification								Schedule inspection with Greg Buikema (DOC) 253-328-3229 or 253-588-5281 (cell). A security clearance must be done for all inspectors prior to landing on the island. This can be done via Greg, provide full name, SS#, and date of birth (DOB).
Fracture Critical	4/25/2017	24	1.0	JSW	G0303	KGH	Fracture Critical Inspection done of the Transfer Span girders, lift beam, and associated cables and pins.	
Underwater	4/25/2017	48	4.0	DON	G0314	RMP	Underwater inspection by WSDOT Dive Team. Frequency set at 48 months to correspond with every-other routine inspection. (Set values for codes 1232, 1533, 1538 & 1541 in an effort to populate blank fields in the UW Report – NAF)	
Resources	Hours	Min	Pref	Max	Freq Date	Need Date	Override	Notes
Boat		D	D	D				Duckworth boat

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Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-1

0 Orientation

Photo Type: D - Deck

Orientation: Sea

Date: 4/18/2013

Repairs:

Barge Dock Deck view.



SI-2

0 Orientation

Photo Type: E - Elevation

Orientation: Right

Date: 4/18/2013

Repairs:

Barge Dock Elevation view.



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Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-3

0 Orientation

Photo Type: E - Elevation

Orientation: Right

Date: 4/18/2013

Repairs:

Barge Dock Elevation view.



UW-0

9 Underwater Report Executive Summary

Photo Type: W - UW Cover

Orientation:

Date: 4/25/2017

Repairs:

UW report cover photo.



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Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-4

8114 Timber Laminated Girder

Photo Type: G - General

Orientation: Shore

Date: 5/20/2013

Repairs: 10005

Laminated girders on Pier 3 timber cap, note rusty hold down brackets.



SI-5

8114 Timber Laminated Girder

Photo Type: G - General

Orientation: Sea

Date: 5/20/2013

Repairs: 10005

Pier 4 girder hold down bracket at Pier 4 Girder D has holed through.



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Route Under

Mile Post

SI-6

8124 Timber Submerged Pile

Photo Type: G - General

Orientation: Shore

Date: 5/20/2013

Repairs:

Left tower.



SI-7

8124 Timber Submerged Pile

Photo Type: G - General

Orientation: Shore

Date: 5/20/2013

Repairs:

Right Tower.



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UW-1

8124 Timber Submerged Pile
Photo Type: I - In Depth
Orientation:
Date: 4/25/2017
Repairs:
Right Tower Pile 2C: Lower defect, MBE at mudline.



UW-2

8124 Timber Submerged Pile
Photo Type: I - In Depth
Orientation:
Date: 4/25/2017
Repairs:
Right Tower Pile 2C: Upper defect, 2 MBE's



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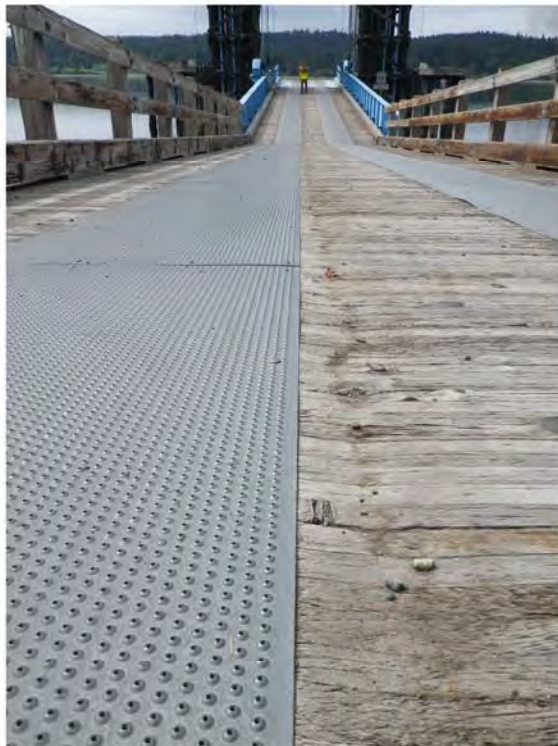
UW-3

8124 Timber Submerged Pile
Photo Type: I - In Depth
Orientation:
Date: 4/25/2017
Repairs:
Right Tower Pile 4A: MBE at MDL+2



SI-10

8221 Timber Deck
Photo Type: G - General
Orientation: Sea
Date: 5/20/2013
Repairs: 10010
Timber deck is rutting.



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Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-11

8221 Timber Deck

Photo Type: G - General

Orientation: Sea

Date: 5/20/2013

Repairs: 10010

Timber deck is rutting up to 5/8" deep.



SI-12

8221 Timber Deck

Photo Type: R - Repair

Orientation: UP

Date: 5/20/2013

Repairs: 10004

Many of the timber deck hold down bolts are loose.



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Mile Post

SI-33

8221 Timber Deck

Photo Type: G - General

Orientation: Left

Date: 4/20/2015

Repairs:

The timber decking near the abutment defects 3/4"± under heavy wheel loads.



SI-38

8221 Timber Deck

Photo Type: R - Repair

Orientation: Right

Date: 4/25/2017

Repairs: 10008

The perforated metal plates at the top of the approach are loose.



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CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-42

8221 Timber Deck

Photo Type: R - Repair

Orientation: Left

Date: 4/25/2017

Repairs: 10008

Left wheelline plate, near 2/3 span, is loose; bolts are not holding down plate.



SI-13

8341 Lift Beam (FC)

Photo Type: G - General

Orientation: Shore

Date: 5/20/2013

Repairs:

Lift beam supports the the transition span at Floorbeam 8.



Status: Lock

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Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-14

8341 Lift Beam (FC)

Photo Type: G - General

Orientation: DN

Date: 5/20/2013

Repairs:

Lift Beam end connection including lower hanger bar pin.



SI-15

8342 Live Load Hanger Bars (FC)

Photo Type: G - General

Orientation: DN

Date: 5/20/2013

Repairs:

From head frame, view of pin for left top hanger bar connection.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

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Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-16

8342 Live Load Hanger Bars (FC)

Photo Type: G - General

Orientation: DN

Date: 5/20/2013

Repairs:

From head frame, view of pin for right top hanger bar connection.



UW-4

8342 Live Load Hanger Bars (FC)

Photo Type: I - In Depth

Orientation:

Date: 4/25/2017

Repairs:

Left LL hanger stops intact. Minor corrosion and pitting.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

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Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

UW-5

8342 Live Load Hanger Bars (FC)

Photo Type: I - In Depth

Orientation:

Date: 4/25/2017

Repairs:

Right LL hanger stops intact. Minor corrosion and pitting. Bar end contacts groundline.



SI-18

8348 Span Hoist

Photo Type: R - Repair

Orientation: DN

Date: 5/20/2013

Repairs: 10001

Counterweight cable has very little to no grease remaining.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

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Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-37

8348 Span Hoist

Photo Type: R - Repair

Orientation: DN

Date: 4/20/2015

Repairs: 10001

The cables are lacking lubrication throughout, some surface rust showing.



SI-40

8348 Span Hoist

Photo Type: R - Repair

Orientation: DN

Date: 4/25/2017

Repairs: 10001, 10009

Transfer span counterweight cable has no thimble, is lacking lubrication/protection.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-19

8348 Span Hoist

Photo Type: G - General

Orientation: Left

Date: 5/20/2013

Repairs:

Left girder lifting shackle connection is gapped.



SI-43

8348 Span Hoist

Photo Type: G - General

Orientation: DN

Date: 4/25/2017

Repairs: 10007

Left tie ring, with section loss



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-44

8348 Span Hoist

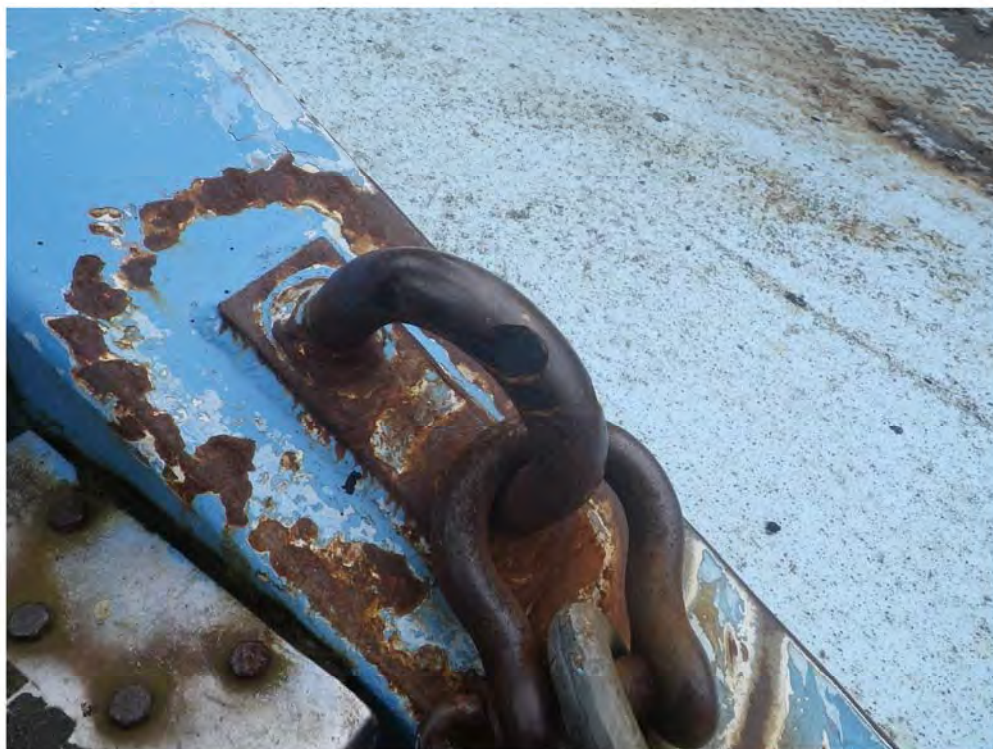
Photo Type: G - General

Orientation: DN

Date: 4/25/2017

Repairs: 10007

Right tie ring, with section loss.



SI-36

8348 Span Hoist

Photo Type: G - General

Orientation: Sea

Date: 4/20/2015

Repairs:

Cover removed from apron winch exposing motor and gear housing.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-48

8348 Span Hoist

Photo Type: R - Repair

Orientation: Shore

Date: 4/8/2019

Repairs:

Lift span cable sockets show some sign of slippage and degradation of zinc filler.



SI-49

8348 Span Hoist

Photo Type: R - Repair

Orientation: Sea

Date: 4/8/2019

Repairs:

Lift span cable sockets show some sign of slippage and degradation of zinc filler, close up view shows slippage at right side socket.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-20

8390 Fixed Bearing

Photo Type: R - Repair

Orientation: Right

Date: 5/20/2013

Repairs: 10002

Pier 4 transfer span right bearing, hold down through pin and anchor nuts need replacing.



SI-21

8390 Fixed Bearing

Photo Type: R - Repair

Orientation: Left

Date: 5/20/2013

Repairs: 10002

Pier 4 transfer span right bearing, hold down through pin and anchor nuts need replacing.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-22

8390 Fixed Bearing

Photo Type: R - Repair

Orientation: Shore

Date: 5/20/2013

Repairs: 10002

Pier 4 transfer span left bearing, hold down through pin and anchor nuts need replacing.



SI-23

8390 Fixed Bearing

Photo Type: R - Repair

Orientation: Right

Date: 5/20/2013

Repairs: 10002

Pier 4 transfer span left bearing, hold down through pin and anchor nuts need replacing.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-24

8408 Steel Sliding Plate Joint

Photo Type: G - General

Orientation: Left

Date: 5/20/2013

Repairs:

Joint is located at transition from fixed pier to the lift span.



SI-46

8450 Timber Wingwalls

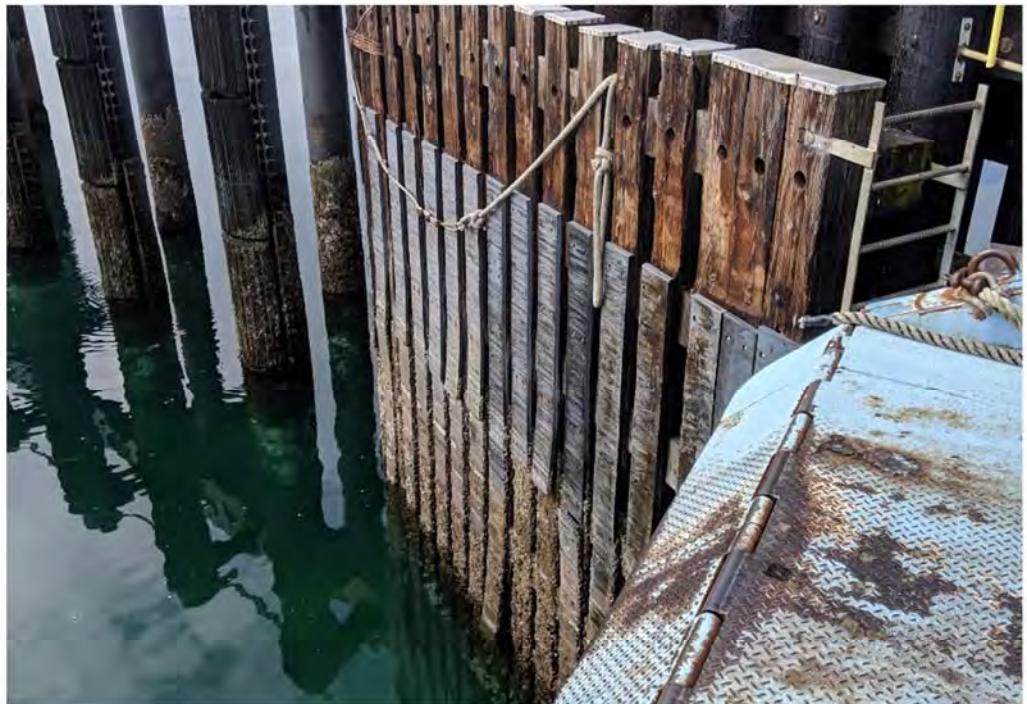
Photo Type: R - Repair

Orientation: Right

Date: 4/8/2019

Repairs: 10006

Right timber wingwall is missing several UHMW sheets. The lower facing timbers are in poor condition also.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0ceffd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-47

8450 Timber Wingwalls

Photo Type: R - Repair

Orientation: Left

Date: 4/8/2019

Repairs: 10006

Left timber wingwall is missing all lower UHMW sheets. The lower facing timbers are in poor condition also.



SI-27

8450 Timber Wingwalls

Photo Type: G - General

Orientation: Right

Date: 5/20/2013

Repairs:

Left timber wingwall has broken cables; possibly redundant.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0ceffd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-28

8450 Timber Wingwalls

Photo Type: G - General

Orientation: DN

Date: 5/20/2013

Repairs:

Many of the wingwall piles have top end rot.



SI-29

8450 Timber Wingwalls

Photo Type: G - General

Orientation: Sea

Date: 5/20/2013

Repairs:

Many of the wingwall piles have top end rot.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

UW-6

8450 Timber Wingwalls

Photo Type: (none)

Orientation:

Date: 4/25/2017

Repairs:

LWW end dolphin lower wraps broken



UW-7

8450 Timber Wingwalls

Photo Type: (none)

Orientation:

Date: 4/25/2017

Repairs:

RWW end dolphin lower wraps broken



BRIDGE INSPECTION REPORT

Status: Lock
CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Printed On: 6/6/2019
Release Date:

Agency: Other State Agencies
Program Mgr: Evan M Grimm

Br. No. DOC-5 **SID** 00200440 **Br. Name** MCNEIL IS. BARGE DOCK
Carrying **Route On** 10210 **Mile Post** 5.96
Intersecting BALCH PASSAGE (P. SOUND) **Route Under** **Mile Post**

UW-8

8450 Timber Wingwalls
Photo Type: (none)
Orientation:
Date: 4/25/2017
Repairs:
RWW Pile 3I lower MBE defects



UW-9

8450 Timber Wingwalls
Photo Type: (none)
Orientation:
Date: 4/25/2017
Repairs:
RWW Pile 3I upper MBE defects



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-30

8812 Timber Bridge Railing

Photo Type: R - Repair

Orientation: Left

Date: 5/20/2013

Repairs: 10003

Left Timber rail is split and splintered.
Treated timber 2-1/2" x 7" x 32'-0" long.



SI-8

8901 Protective Coating - Bridge

Photo Type: G - General

Orientation: DN

Date: 5/20/2013

Repairs: 10000

The right side girder at Floorbeam 3 has
a rust bloom in the exterior face of the
web with some light rust pitting.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-9

8901 Protective Coating - Bridge

Photo Type: G - General

Orientation: Right

Date: 4/18/2013

Repairs: 10000

The right side girder at Floorbeam 6 has a 3" diameter rust bloom in the web with section loss 1/16" deep.



SI-34

8901 Protective Coating - Bridge

Photo Type: I - In Depth

Orientation: Left

Date: 4/20/2015

Repairs: 10000

The Lift Beam has laminar rust on the shore side interior web.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-39

8901 Protective Coating - Bridge

Photo Type: G - General

Orientation: DN

Date: 4/25/2017

Repairs: 10000

The right side girder at Floorbeam 0 has laminar rust above the bearing, at the stiffener weld.



SI-51

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: Shore

Date: 4/8/2019

Repairs: 10000

Pier 4 transfer span right bearing paint has failed and steel is corroding.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-52

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: Shore

Date: 4/8/2019

Repairs: 10000

Transfer span Bay 1 and 2 paint is failing throughout.



SI-53

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: Shore

Date: 4/8/2019

Repairs: 10000

Transfer span Bay 2 paint is failing on bottom laterals, floorbeams, and stringers.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-54

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: DN

Date: 4/8/2019

Repairs: 10000

FB 0 right side connection to the right steel girder has a rust bloom with minor section loss.



SI-55

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: Sea

Date: 4/8/2019

Repairs: 10000

The left open girder bottom flange has rust blooms with minor section loss near Floorbeam 0.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

SI-56

8901 Protective Coating - Bridge

Photo Type: R - Repair

Orientation: DN

Date: 4/8/2019

Repairs: 10000

Paint failure on top of head frame above left tower.



SI-45

8902 Protective Coating - Piling

Photo Type: G - General

Orientation: Shore

Date: 4/8/2019

Repairs:

The 2' diameter steel piles making up the Left and Right Dolphins have rust blooms starting in the intertidal zone.



Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

UW-10

8902 Protective Coating - Piling

Photo Type: I - In Depth

Orientation:

Date: 5/20/2013

Repairs:

Left Dolphin Pile 2C. Typical condition of steel dolphin piles.



UW-11

8902 Protective Coating - Piling

Photo Type: I - In Depth

Orientation:

Date: 5/20/2013

Repairs:

Right dolphin Pile 4C. Coating intact.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefdd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

UW-12

8902 Protective Coating - Piling

Photo Type: I - In Depth

Orientation:

Date: 5/20/2013

Repairs:

Right dolphin Pile FR9. Typical condition; coatings intact with moderate marine growth coverage.



BRIDGE INSPECTION REPORT

Status: Lock

Printed On: 6/6/2019

Agency: Other State Agencies

CD Guid: dca1ade4-abdf-4c7f-8107-6022d0cefd8

Release Date:

Program Mgr: Evan M Grimm

Br. No. DOC-5

SID 00200440

Br. Name MCNEIL IS. BARGE DOCK

Carrying

Route On 10210

Mile Post 5.96

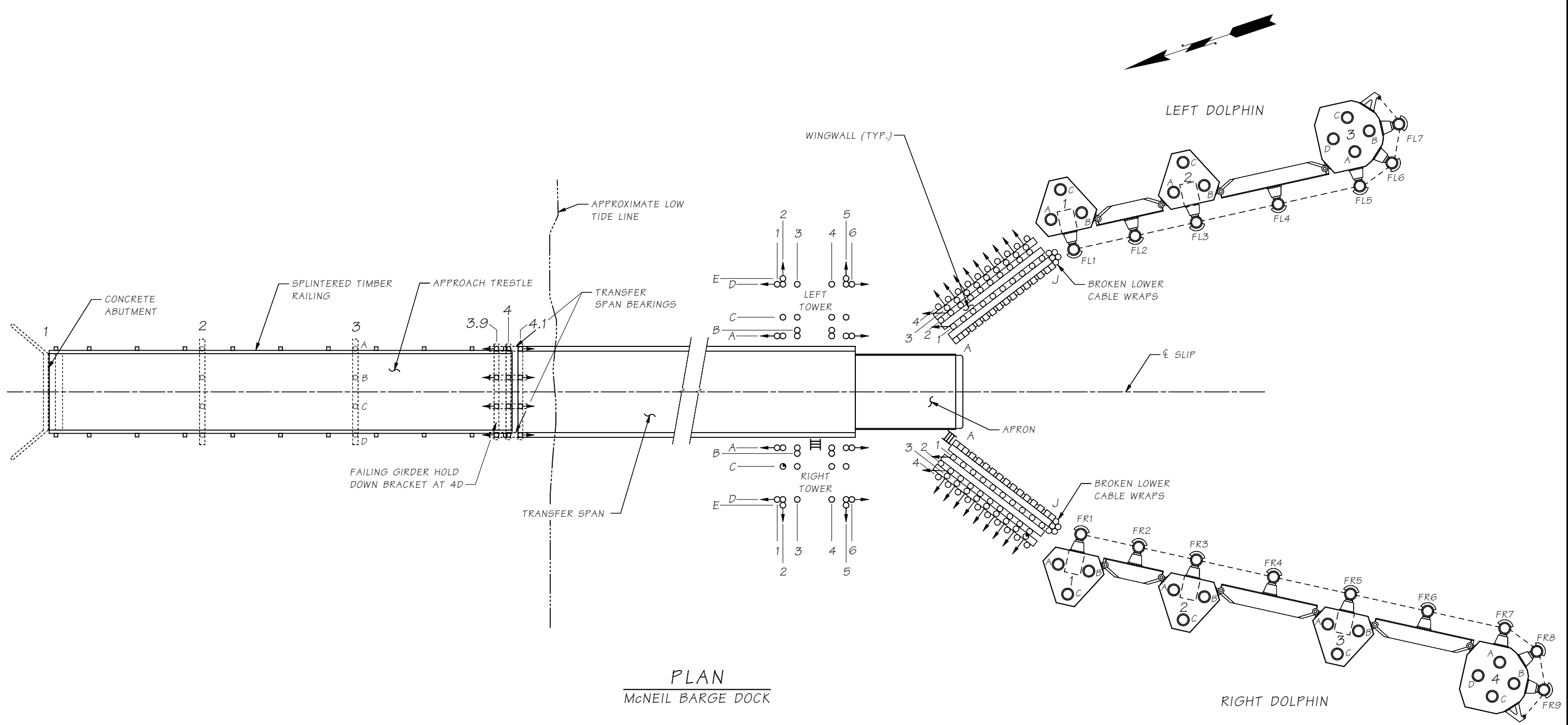
Intersecting BALCH PASSAGE (P. SOUND)

Route Under

Mile Post

Entry Name	Folder Name	Type	Repairs	Page
UW-7	8450 Timber Wingwalls			22
UW-8	8450 Timber Wingwalls			23
UW-9	8450 Timber Wingwalls			23
SI-30	8812 Timber Bridge Railing	R	10003	24
SI-8	8901 Protective Coating - Bridge	G	10000	24
SI-9	8901 Protective Coating - Bridge	G	10000	25
SI-34	8901 Protective Coating - Bridge	I	10000	25
SI-39	8901 Protective Coating - Bridge	G	10000	26
SI-51	8901 Protective Coating - Bridge	R	10000	26
SI-52	8901 Protective Coating - Bridge	R	10000	27
SI-53	8901 Protective Coating - Bridge	R	10000	27
SI-54	8901 Protective Coating - Bridge	R	10000	28
SI-55	8901 Protective Coating - Bridge	R	10000	28
SI-56	8901 Protective Coating - Bridge	R	10000	29
SI-45	8902 Protective Coating - Piling	G		29
UW-10	8902 Protective Coating - Piling	I		30
UW-11	8902 Protective Coating - Piling	I		30
UW-12	8902 Protective Coating - Piling	I		31

W:\Data\Bridges\Special Structures\Ferry Terminals\McNeil Island\DOC - 5 McNeil Barge Dock\2019\DOC - 5 McNeil Barge Dock\2019\DOC - 5 McNeil Barge Dock_Slip.MAN



PLAN
McNEIL BARGE DOCK

LEGEND:

- | | |
|---|-------------------------------------|
| ○ 100% SECTION REMAINING | ○ VERTICAL TREATED TIMBER PILE |
| ◐ 75% TO 100% SECTION REMAINING | ● VERTICAL ROUND STEEL PILE |
| ◑ 50% TO 75% SECTION REMAINING - Y _T | ⊙ BATTERED (br) TREATED TIMBER PILE |
| ◒ 25% TO 50% SECTION REMAINING - MONITOR - Y _T | |
| ◓ 0% TO 25% SECTION REMAINING - REPAIR OR REPLACE - RT | |

- ⊗ REDUNDANT
- III SAFETY ACCESS LADDER
- FR FACING PILE RIGHT
- FL FACING PILE LEFT

ROUTINE INSPECTION	UNDERWATER INSPECTION
Date: 4/8/2019	Date: 4/25/2017
Scale: NA	Scale: NA
Inspected by: JHL/CRT	Inspected by: DON/RMP



Washington State
Department of Transportation
Bridge and Structures Office

DOC - 5
MCNEIL ISLAND BARGE DOCK

LAYOUT

SHEET NO.
1
SHEET
1
OF
1
SHEETS

Underwater		4/25/2017	Lead: DON			Co: RMP		
Routine		4/8/2019	Lead: JHL			Co: CRT		
Pile Location			Condition/Damage				Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
PILE INSPECTION DATA - Trestle								
2	A	100					Routine	4/8/2019
	B	100					Routine	4/8/2019
	C	100					Routine	4/8/2019
	D	100					Routine	4/8/2019
3	A	100					Routine	4/8/2019
	B	100					Routine	4/8/2019
	C	100					Routine	4/8/2019
	D	100					Routine	4/8/2019
3.9	A	100					Routine	4/8/2019
	B	100					Routine	4/8/2019
	C	100					Routine	4/8/2019
	D	100					Routine	4/8/2019
4	A	100					Routine	4/8/2019
	B	100					Routine	4/8/2019
	C	100					Routine	4/8/2019
	D	100					Routine	4/8/2019
4.1	A	100					Routine	4/8/2019
	B	100					Routine	4/8/2019
	C	100					Routine	4/8/2019
	D	100					Routine	4/8/2019
PILE INSPECTION DATA - Left Tower (12:00 = offshore / ahead on station)								
1	A	100				Battered pile.	UW	4/25/2017
	D	100				Battered pile.	UW	4/25/2017
2	A	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100				Battered pile.	UW	4/25/2017
3	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017

Underwater		4/25/2017	Lead: DON	Co: RMP				
Routine		4/8/2019	Lead: JHL	Co: CRT				
Pile Location		Condition/Damage				Inspection Type		
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
4	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
5	A	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100				Battered pile.	UW	4/25/2017
6	A	100				Battered pile.	UW	4/25/2017
	D	100				Battered pile.	UW	4/25/2017
LL-L	Hanger	95				LL hanger stop intact. 5% surface corrosion / section loss with minor pitting. Photo #UW-4	UW	4/25/2017
PILE INSPECTION DATA - Right Tower (12:00 = offshore / ahead on station)								
1	A	100				Battered pile.	UW	4/25/2017
	D	100				Battered pile.	UW	4/25/2017
2	A	100					UW	4/25/2017
	C	75			MDL	MBE @ 6:00; 2" H x 3/4" W w/ 3" pen. Photo #UW-1	UW	4/25/2017
					MDL+1	2 MBEs @6:30; 1/2" diam. w/ up to 3" pen. Photo #UW-2		
	D	100					UW	4/25/2017
3	E	100				Battered pile.	UW	4/25/2017
	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
4	D	100					UW	4/25/2017
	A	100			MDL+2	MBE @ 7:00; 1/4" diam. w/ 1" pen. Photo #UW-3	UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
5	D	100					UW	4/25/2017
	A	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017

Underwater		4/25/2017	Lead: DON			Co: RMP		
Routine		4/8/2019	Lead: JHL			Co: CRT		
Pile Location			Condition/Damage				Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
6	E	100				Battered pile.	UW	4/25/2017
	A	100				Battered pile.	UW	4/25/2017
	D	100				Battered pile.	UW	4/25/2017
LL-R	Hanger	95				LL hanger stop intact. 10% surface corrosion / section loss. Bottom of hanger contacts groundline. UW Photo #UW-5	UW	4/25/2017
PILE INSPECTION DATA - Left Wingwall (12:00 = Front face of Wingwall)								
1	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	100					UW	4/25/2017
	J	100					UW	4/25/2017
End	Dolphin	100			MLLW	Offshore end pile group. Lower pile wraps are broken (Photo #UW-6)	UW	4/25/2017
2	Endo	100				Battered on-shore	UW	4/25/2017
	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	100					UW	4/25/2017
3	Up Endo	100				Upper endo pile.	UW	4/25/2017
	Lw Endo	100				Lower endo pile.	UW	4/25/2017
	A	100					UW	4/25/2017

Underwater		4/25/2017	Lead: DON	Co: RMP				
Routine		4/8/2019	Lead: JHL	Co: CRT				
Pile Location		Condition/Damage				Inspection Type		
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	100					UW	4/25/2017
	J	100					UW	4/25/2017
4	Abr	100					UW	4/25/2017
	Bbr	100					UW	4/25/2017
	Cbr	100					UW	4/25/2017
	Dbr	100					UW	4/25/2017
	Ebr	100					UW	4/25/2017
	Fbr	100					UW	4/25/2017
	Gbr	100					UW	4/25/2017
	Hbr	100					UW	4/25/2017
	Ibr	100					UW	4/25/2017
PILE INSPECTION DATA - Right Wingwall (12:00 = Front face of Wingwall)								
1	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	100					UW	4/25/2017
	J	100					UW	4/25/2017
End	Dolphin	100			MLLW	Offshore end pile group. Lower pile wraps are broken (Photo #UW-7)	UW	4/25/2017
2	Endo	100					UW	4/25/2017


Underwater		4/25/2017	Lead: DON	Co: RMP				
Routine		4/8/2019	Lead: JHL	Co: CRT				
Pile Location		Condition/Damage					Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	100					UW	4/25/2017
	J	100					UW	4/25/2017
3	Up Endo	100				Upper endo pile.	UW	4/25/2017
	Lw Endo	100				Lower endo pile.	UW	4/25/2017
	A	100					UW	4/25/2017
	B	100					UW	4/25/2017
	C	100					UW	4/25/2017
	D	100					UW	4/25/2017
	E	100					UW	4/25/2017
	F	100					UW	4/25/2017
	G	100					UW	4/25/2017
	H	100					UW	4/25/2017
	I	75			MDL+0.5 MDL+1.5	2 MBEs @ 8:00; 3/4" diam w/ up to 2" pen. Photo #UW-8 2 MBEs @ 9:00 inside shake 1"W x 4"H x 1" D. MBEs have 2.5" pen. Sounds punky. Photo #UW-9.	UW	4/25/2017
	J	100					UW	4/25/2017
4	Abr	100					UW	4/25/2017
	Bbr	100					UW	4/25/2017
	Cbr	100					UW	4/25/2017
	Dbr	100					UW	4/25/2017
	Ebr	100					UW	4/25/2017
	Fbr	100					UW	4/25/2017
	Gbr	100					UW	4/25/2017
	Hbr	100					UW	4/25/2017

Underwater		4/25/2017	Lead: DON			Co: RMP		
Routine		4/8/2019	Lead: JHL			Co: CRT		
Pile Location			Condition/Damage				Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
	lbr	100					UW	4/25/2017
PILE INSPECTION DATA - Left Dolphin Groups								
Facing	FL1	100		Steel	MDL+2	Thickness reading 0.965" (2013)	UW	4/25/2017
	FL2	100		Steel	MDL+1	Thickness reading 0.975"	UW	4/25/2017
	FL3	100		Steel			UW	4/25/2017
	FL4	100		Steel			UW	4/25/2017
	FL5	100		Steel	MDL+2	Thickness reading 0.995" (2013)	UW	4/25/2017
	FL6	100		Steel			UW	4/25/2017
	FL7	100		Steel	MDL+1	Thickness reading 0.985"	UW	4/25/2017
1	A	100		Steel			UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel	MDL+1	Thickness reading 0.975"	UW	4/25/2017
2	A	100		Steel			UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel	MDL+2	Thickness reading 0.995" (2013) Photo #UW-10 (typical conditions).	UW	4/25/2017
3	A	100		Steel			UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel	MDL+1	Thickness reading 0.985"	UW	4/25/2017
	D	100		Steel			UW	4/25/2017
PILE INSPECTION DATA - Right Dolphin Groups								
Facing	FR1	100		Steel			UW	4/25/2017
	FR2	100		Steel			UW	4/25/2017
	FR3	100		Steel	MDL+1	Thickness reading 0.985"	UW	4/25/2017
	FR4	100		Steel			UW	4/25/2017
	FR5	100		Steel			UW	4/25/2017
	FR6	100		Steel			UW	4/25/2017
	FR7	100		Steel			UW	4/25/2017
	FR8	100		Steel	MDL+1	Thickness reading 0.975"	UW	4/25/2017
	FR9	100		Steel	MDL+2	Thickness reading 0.985" (2013) Photo #UW-12 (typical conditions).	UW	4/25/2017

Underwater		4/25/2017	Lead: DON	Co: RMP				
Routine		4/8/2019	Lead: JHL	Co: CRT				
Pile Location			Condition/Damage				Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
1	A	100		Steel	MDL+1	Thickness reading 0.980"	UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel			UW	4/25/2017
2	A	100		Steel			UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel			UW	4/25/2017
3	A	100		Steel	MDL+1	Thickness reading 0.980"	UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel			UW	4/25/2017
4	A	100		Steel			UW	4/25/2017
	B	100		Steel			UW	4/25/2017
	C	100		Steel	MDL+2	Thickness reading 0.975" (2013) Photo #UW-11 (typical conditions).	UW	4/25/2017
	D	100		Steel	MDL+1	Thickness reading 0.985"	UW	4/25/2017
Counts	Timber	Structural	20	trestle				
		Underwater	40	towers				
	Steel		39					
		Wingwall	42	ea				



VISUAL FRACTURE CRITICAL INSPECTION REPORT

Bridge Name: McNEIL IS. BARGE DOCK Date: 4/8/2019
 Bridge No: DOC-5 Hours: 1
 Structure ID: X0200440 Inspector ID #: D2016
 Structure Type: Steel Girder Lead Inspector Initials: JHL
 Agency: Wa. Dept of Corrections Co-Inspector Initials: CFT
 Milepost: Lead Inspector Signature: 

Inspected Items: Welds and Pins Co-Inspector Signature: 

Procedures:

Welded Two Girder

1. Check longitudinal welds the full length of the FCM.
2. Check transverse connections into the FCM.
3. Check transverse welds on tension flanges and web areas.
4. Check terminus of all cover plates.
5. Check welds at connections.
6. Check backup bars, if present. Record presence of backup bars regardless of condition.
7. Check for cracks at any intersecting fillet welds.
8. Check longitudinal stiffener butt welds and adjacent webs.
9. For continuous spans with welded stud shear connectors, check top flange soffit for cracking in tension areas and document location in weld category C.
10. Check haunched areas of girders.
11. Check for welding arc strikes.
12. Check for any plug, tack, or repair welds. Record location of these welds and document weld type and category.
13. Check FC members and associated connection or gusset plates for areas of heavy or pitted corrosion, nicks, gouges, sharp bends, and collision damage. Record location and estimated section loss, if applicable.
14. Check all heat straightened or repaired areas. Record location of these areas, regardless of condition.

Pins and Anchor Bolts

1. As required, use mirrors or other equipment to check inside surfaces of FCM's.
2. Check for pitting, laminar rust, surface deformation, and pack rust. It is important to check the pin, pin nuts, and all members surrounding the pin for this kind of steel deterioration.
3. Check for mobility and noise of pin and surrounding members. If the pin is physically "frozen" it is important to note this because the added stress can affect other members in the structure.
4. Observe and record abnormalities like: alignment, pin wear, loose pin nuts, and amount of nut engagement. It's important to note that full nut engagement is when the nut is flush with the pin or the pin is extending past the nut.
5. Check for paint system failure on pin nuts, pin, and surrounding members.

Fracture Critical Member (FCM) Location	FCM Type (WELDS)	FCM Per Girder Line	BEIST Server Plans		
			Sheet No.	Contract	Sheet Name
Left Girder	Top & bottom flanges in tension and welds	1	S-10 & S-11	85-025	Transfer Span Framing Plan & Transfer Span Details
Right Girder	Top & bottom flanges in tension and welds	1	S-10 & S-11	85-025	Transfer Span Framing Plan & Transfer Span Details
Lift Beam	Tension flanges and welds	1	S-12	85-025	Transfer Span Lift Beam
Live Load Hangers	Tension member	1	S-12	85-025	Transfer Span Lift Beam
Headframe	Upper Live Load Hanger Pins	1	S-9	85-025	Transfer Span Lift Beam
Lift Beam	Lower Live Load Hanger Pins	1	S-12	85-025	Transfer Span Lift Beam



Washington State Department of Transportation

VISUAL FRACTURE CRITICAL INSPECTION REPORT

Bridge Name: McNEIL IS. BARGE DOCK **Date:** 4/8/2019
Bridge No.: DOC-5 **Hours:** 1
Structure ID: X0200440 **Inspector ID #:** D2016
Structure Type: Steel Girder **Lead Inspector:** JHL
Agency: WSDOT **Co-Inspector:** CRT
Milepost:

Truss / Girder	Span	Location	Feature Inspected	Detail Description	Remarks
Left	1	Girder	Flanges	Top & Bot. flange to web weld	The left open girder bottom flange has rust blooms with minor section loss near Floorbeam 0 (photo #55). No Defects Noted.
Left	1	Lift Beam	LL Hanger	Tension LL Hanger	
Left	1	Headframe	Upper LL Hanger Pin	Shear Pin	
Left	1	Lift Beam	Lower LL Hanger Pin	Shear Pin	
		Lift Beam	Welds	Bottom flange in tension.	The Lift Beam has laminar rust on the shore side girder at the interior web to bottom flange.
Right	1	Girder	Flanges	Top & Bot. flange to web weld	The exterior web face at Floorbeam 3 stiffener has a rust bloom in the exterior face of the web with some light rust pitting (photo #8). The interior web face at Floorbeam 6 has a 3" diameter rust bloom in the web with section loss 1/16" deep (photo #9). Additional rust blooms scattered throughout the right lift beam. No Defects Noted.
Right	1	Lift Beam	LL Hanger	Tension LL Hanger	
Right	1	Headframe	Upper LL Hanger Pin	Shear Pin	
Right	1	Lift Beam	Lower LL Hanger Pin	Shear Pin	No Defects Noted.