

Routine Inspection Report

Date: 6/25/2017

Br No 253

HERRING COVE

Cloudy

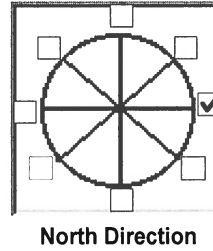
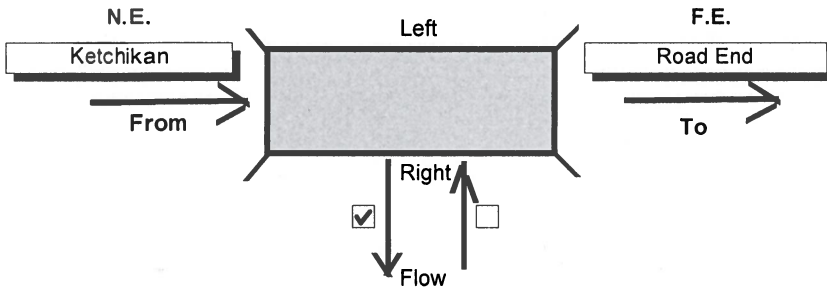
55 F

INSPECTOR: Sara Manning

ASSISTANT: Jesse Escamilla

Initials **SEM**

Initials **JES**



Apprch Rdwy Width (ft)	23.00
Est Camber (inch)	0.00
Bridge Length (ft)	116
Bridge Width O-O (ft)	30.0
CDS Route	291400
CDS Mile Point	10.7

Left						
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post
2 Tube Top Mount w / Curb		34.00	10.50	Thrie - Beam	30.00	W - Beam
Right						
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post
2 Tube Top Mount w / Curb		34.00	10.50	Thrie - Beam	31.00	W - Beam

Near End		SIGNS		Far End			
Lt	Rt	Load Limit Wording or Other Signs		Lt	Rt		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>			Object Markers		No Stopping on Bridge	
<input type="checkbox"/>	<input type="checkbox"/>			Restricted Width			
<input type="checkbox"/>	<input type="checkbox"/>			Vertical Clear			
<input type="checkbox"/>	<input type="checkbox"/>			Load Limit			
<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
				Name Place			

Deck Material	Thk(Inches)
Concrete	7.00
Location Measured	
Edge of Deck	

Wear Surface	Thk (Inches)
Same	
Wear Location	

Drive Condition
Satisfactory
Locality
Ketchikan

Route
SOUTH TONGASS HWY

Utilities

Kind	Size	Location	Owner
Telephone	2-4.5" PVC	Left Exterior Soffit	Unknown

Bridge No. 0253, HERRING COVE

Work Candidates

Inspected on: 06/25/2017

<i>Priority</i>	<i>Description</i>	<i>Quantity</i>	<i>Work Needed</i>
High	Deck-Rehab (SF)	1392	Rehab deck.
High	Joints-Replace (LF)	60	Replaced damaged or ineffective joints. Clean debris impacted joints.
High	Misc-Repair / Replace Utilities or Signs (EA)	1	Reattach utility lines at pier.
Medium	Misc-Install Sign (EA)	2	Install NE LT object marker. Install correct FE LT object marker.
Medium	Approach Railing (EA)	2	Replace FELT and FERT BCT.
Medium	Misc-Remove Vegetation	1	Remove brush from bridge corners.

Bridge No. 0253, HERRING COVE

Element Inspection

Inspected on: 06/25/2017

Element	Description	Observations
12	Reinforced Concrete Deck	<p>Scale and abrasion throughout. Numerous spalls, popouts, and several exposed rebar.</p> <p>Delaminations and Spalls: Span 1 LT - Approximately 50% of total area Span 1 RT - Approximately 40% of total area Span 2 LT - Approximately 20% of total area Span 2 RT - Approximately 50% of total area</p> <p>Exposed Rebar: Span 1 LT - 16SF; 3ft x 8ft section (14SF of total) with 6 transverse and 1 longitudinal bar(s) exposed, partially patched with asphalt, rebar still exposed Span 1 RT - 3SF; 1 section mostly covered with asphalt patch material Span 2 LT - 1SF FE, patched Span 2 RT - 10SF; 2SF at midspan, remaining in 1SF increments; 1SF found, 9 SF patched with asphalt</p> <p>Soffit: Minor cracking with efflorescence typical near rail post anchor plates and drains. Span 1 G2 DS haunch spalled 15ft near NE abutment Span 1 G3 US haunch spalled 20ft near NE abutment; both haunches spalled 5ft US and 10ft DS near Pier 2 Span 1 G4 haunch spalled 12ft US near Pier 2 Span 2 G2 US haunch spalled 4ft near Pier 2 Span 2 G2 DS haunch spalled 1ft near Pier 2 Span 2 G2 DS haunch spalled 1ft near Abutment 3 Span 2 G3 DS haunch spalled 2 ft with delamination near Abutment 3 Span 2 G3 DS haunch delaminated 1ft near Pier 3 Span 2 G4 US haunch spalled 0.5 ft near Abutment 3</p>
	> 1080	Delamination/Spall/Patched Area
	> 1120	Efflorescence/Rust Staining
	> 1130	Cracking (RC and Other)
107	Steel Open Girder/Beam	
	> 515	Steel Protective Coating
210	Reinforced Concrete Pier Wall	<p>Marine growth in tidal zone. NE face, top of footing slightly exposed. FELT of footing exposed for about 2ft; streambed approximately 3 inches below top of footing. RT face minor crack with efflorescence. One LT face 1 SF spall. NELT spall has exposed rebar.</p>

Bridge No. 0253, HERRING COVE

215	Reinforced Concrete Abutment	FE G3 concrete pedestal has minor spalls with exposed rebar. NE abutment erosion and undermining from 1 ft US to 3 ft DS. FE abutment undermined up to 14 inches.
301	Pourable Joint Seal	Joints filled with dirt and easily removed with geopick.
311	Movable Bearing	Surface rust.
> 515	<i>Steel Protective Coating</i>	
313	Fixed Bearing	Surface rust with laminar rust on bottom of sole plates.
> 515	<i>Steel Protective Coating</i>	
330	Metal Bridge Railing	NERT 23.5ft rail segment coating loss with surface rust. Remaining rail with 5% coating loss and discoloration. Minor scrapes along rail throughout. Heavy moss growth on curb. Bolt damage at 4th post from FE DS.
> 515	<i>Steel Protective Coating</i>	
600	Signs Smart Flag	Missing NELT object marker. Incorrect FELT object marker installed (stripes should angle toward roadway).
601	Brush Smart Flag	Brush encroaching bridge corners.
602	Approach Rail Smart Flag	NELT, NERT, and FELT transition damage. FELT minor BCT damage. FERT 5 rail posts and 13.5ft w-beam section damaged.
606	Approach Fill Erosion Smart Flag	NERT erosion gully, 1ft of additional post exposed. NERT erosion under cap extends 3 inches past begin bridge. FERT foot traffic erosion.
609	Utility Smart Flag	LT utilities separated at Pier 2. Birds are flying in and out of conduit.

Br No 253	HERRING COVE	Date: 6/25/2017	ID	12 Odd 2017 253
INSPECTOR: Sara Manning	ASSISTANT: Jesse Escamilla	Weather Cloudy	Temperature 55 F	

HYDRAULICS REPORT

Inspection To Mudline At All Piers and Abuts? <input type="text" value="Yes"/>	Apparent HW <input type="text" value="Yes"/>	Stream Bottom Material
	AHW Comments <input type="text" value="Drift and debris at bottom of cap"/>	<input type="text" value="Gravel"/>
	Bank Erosion <input type="text" value="No"/>	<input type="text" value="Cobble"/>
	Erosion Comments <input type="text"/>	<input type="text" value="Boulder"/>
Activities <input type="text" value="Fishing on RT"/>	Drift Comments <input and="" diameter="" in="" seaweed"="" type="text" value="Sticks and driftwood up to 24"/>	
Drift <input type="text" value="Medium"/>		
Riprap Condition <input type="text" value="Adequate"/>	Comments <input type="text" value="Inspected at low tide. Foot traffic erosion FE RT. Erosion NE RT."/>	

SOUNDINGS Measured At Surface Location

Soundings Report		<u>All measurements in feet</u>	12 Odd 2017 253		
Horiz Dist from NE	Substr Unit No.	Vert Dist to Water Surface	Vert Dist to Stream Bottom	Remarks	
0.00	1	0.0	6.5	Begin Bridge	
10.00	1	0.0	13.2		
15.00	1	0.0	13.5	Edge of Water	
20.00	1	0.0	18.8		
30.00	1	0.0	23.7		
40.00	1	0.0	25.7		
50.00	1	0.0	24.5		
57.00	1	0.0	24.3	Pier 2	
60.00	1	0.0	24.2		
70.00	1	0.0	23.5		
80.00	1	0.0	21.2		
90.00	1	0.0	17.4		
94.00	1	0.0	16.9	Edge of Water	
100.00	1	0.0	13.0		
110.00	1	0.0	8.4		
114.00	1	0.0	3.5	End Bridge	

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 0253 Agency ID: 0253 SR: 56.1 SD/FO: SD

IDENTIFICATION			
State 1:	02 Alaska	Struc Number 8:	0253
Facility Carried 7:	SOUTH TONGASS HWY	Location 9:	MILE POINT 10.7
Rte.(On/Under)5A:	Route On Structure	Rte Signing Prefix 5B:	3 State Hwy
Level of Service 5C:	1 Mainline	Rte. Number 5D:	00902
Directional Suffix 5E:	0 N/A (NBI)	% Responsibility:	
SHD District 2:	03 Southcoast	County Code 3:	Ketchikan Gateway Boro
Place Code 4:	Herring Cove	Mile Post 11:	10.705 mi
Feature Intersected 6:	HERRING COVE		
Latitude 16:	55d 19' 35.4 "	Longitude 17:	131d 31' 30.4 "
Border Bridge Code 98:	Unknown (P)		
Border Bridge No. 99:	NA		

INSPECTION			
Frequency 91:	24 months	Inspection Date 90:	06/25/2017
Next Inspection:		06/25/2019	
FC Freq. 92A:	NA	FC Insp. Date 93A:	NA
Next FC Inspection:		NA	
UW Freq. 92B:	NA	UW Insp. Date 93B:	NA
Next UW Inspection:		NA	
SI Freq. 92C:	NA	SI Date 93C:	NA
Next SI:		NA	

CLASSIFICATION			
Defense Highway 100:	0 Not a STRAHNET hwy	Parallel Structure 101:	No bridge exists
Traffic Direction 102:	2 2-way traffic	Temporary Structure 103:	Unknown (NBI)
Highway System 104:	0 Not on NHS	NBIS Length 112:	Long Enough
Toll Facility 20:	3 On free road	Functional Class 26:	17
Natl. Network 110:	0 Not on truck network	Historical Sig. 37:	5 Not eligible for NRHP
Owner 22:	01 State Highway Agency		
Custodian 21:	01 State Highway Agency		

STRUCTURE TYPE AND MATERIALS			
Number of Approach Spans 46:	0	Number of Spans Main Unit 45:	2
Main Span 43A/B:			
	3 Steel		2 Stringer/Girder
Appr Span 44A/B:			
	0 Other		00 Other
Deck Type 107:			1 Concrete Cast-in-Place
Wearing Surface 108A:			1 Monolithic Concrete
Membrane 108B:			0 None
Deck Protection 108C:			0 None

CONDITION			
Deck 58:	4 Poor	Super 59:	6 Satisfactory
Sub 60:		7 Good	
Channel/Ch. Protection 61:		8 Protected	
Culvert 62:		N N/A (NBI)	

LOAD RATING AND POSTING			
Inventory Method 65:	1 LF Load Factor	Operating Method 63:	1 LF Load Factor
Inventory Rating 66:	HS 13	Operating Rating 64:	HS 28
Design Load 31:	3	Posting 70:	5 At/Above legal loads
Posting Status 41:	A Open, no restriction		

AGE AND SERVICE			
Year Built 27:	1952	Year Reconstructed 106:	
Type of Service on 42A:	1 Highway		
Type of Service under 42B:	5 Waterway		
Lanes on 28A:	2	Lanes under 28B:	0
Detour Length 19:	124 mi		
ADT 29:	781	Truck ADT 109:	1%
Year of ADT 30:	2015		

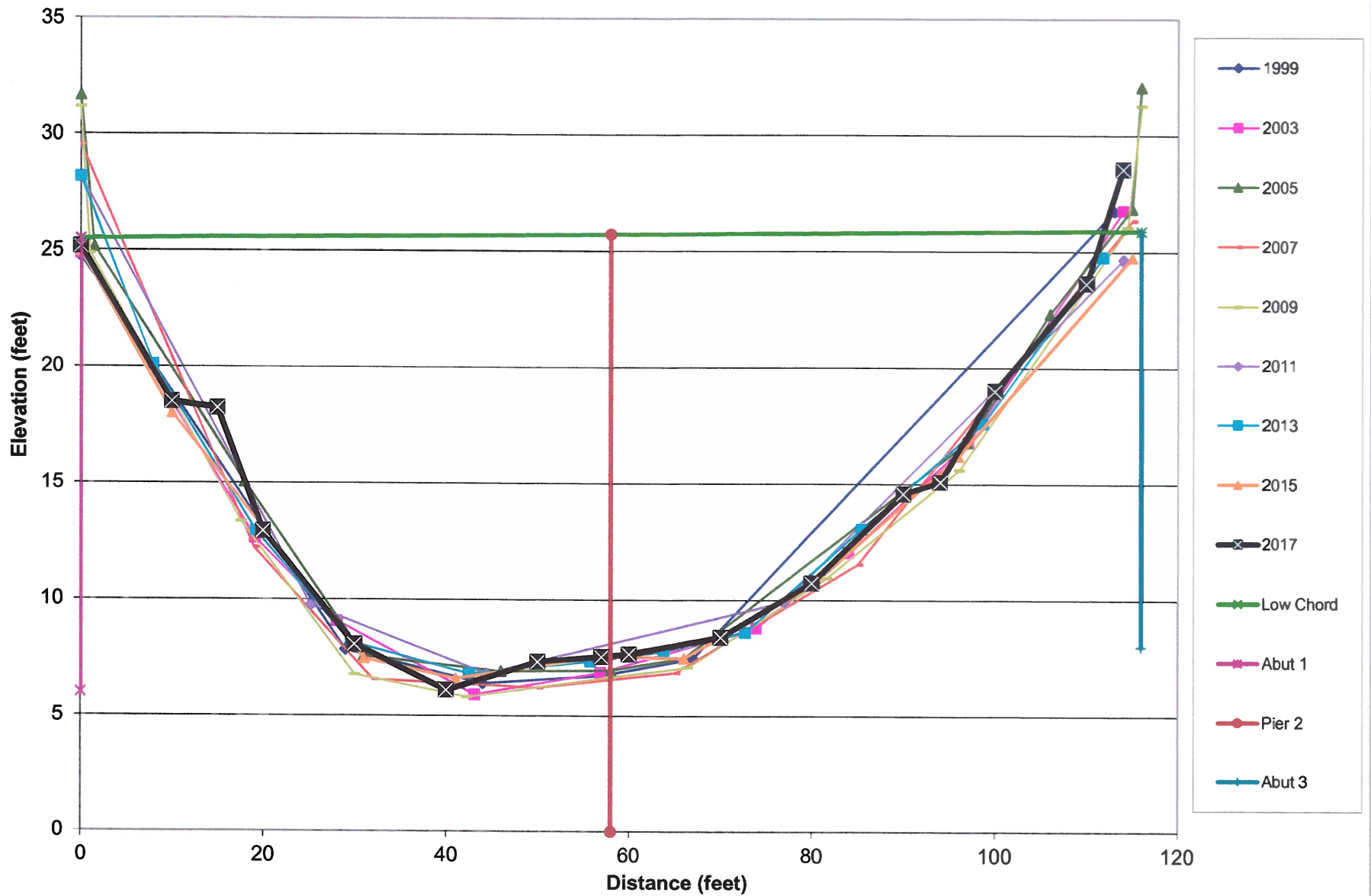
APPRAISAL			
Bridge Rail 36A:	1 Meets Standards	Approach Rail 36C:	1 Meets Standards
Transition 36B:	1 Meets Standards	Approach Rail Ends 36D:	1 Meets Standards
Str Evaluation 67:	5 Somewhat Better than Min	Deck Geometry 68:	5 Somewhat Better than Min
Underclearance, Vertical and Horizontal 69:	N Not applicable (NBI)		
Waterway Adequacy 71:	7 Better than Min	Approach Alignment 72:	5
Scour Critical 113:	8 Stable Above Footing		

GEOMETRIC DATA			
Length Max Span 48:	55 ft	Structure Length 49:	116 ft
Curb/Sdwk Width L 50A:	0.0 ft	Curb/Sidewalk Width R 50B:	0.0 ft
Width Curb to Curb 51:	26.9 ft	Width Out to Out 52:	29.9 ft
Approach Roadway Width 32: (w/ shoulders)	25 ft	Median 33:	0 No median
Deck Area:	3,466.0 sq ft		
Skew 34:	0	Structure Flared 35:	0 No flare
Vertical Clearance 10:	18.47 ft	Horizontal Clearance 47:	24.28 ft
Minimum Vertical Clearance Over Bridge 53:	100.0 ft		
Minimum Vertical Underclearance 54A:	N Feature not hwy or RR		
Minimum Vertical Underclearance 54B:	0.0 ft		
Minimum Lateral Underclearance 55A:	N Feature not hwy or RR		
Minimum Lateral Underclearance R 55A:	99.9 ft		
Minimum Lateral Underclearance L 56:	0.0 ft		

PROPOSED IMPROVEMENTS			
Bridge Cost 94:	\$0	Type of Work 75:	Unknown (P)
Roadway Cost 95:	\$0	Length of Improvement 76:	0.0 ft
Total Cost 96:	\$0	Future ADT 114:	1,000
Year of Cost Estimate 97:	Unknown	Year of Future ADT 115:	2035

NAVIGATION DATA			
Navigation Control 38:	0 Permit Not Required		
Vertical Clearance 39:	0.0 ft	Horizontal Clearance 40:	0.0 ft
Pier Protection 111:	1 Not required	Lift Bridge Vertical Clearance 116:	0.0 ft

BN 253 Herring Cove Soundings





Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	1
Ahead at bridge					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	2
NE looking away from bridge					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	3
Back at bridge					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	4
FE looking away from bridge					



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **5**
Looking RT FE



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **6**
Looking RT



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **7**
Looking RT NE



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **8**
Looking LT NE



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	9
		Looking LT			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	10
		Looking LT FE			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	11
		US elevation			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	12
		Deck typical			



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **13**
Deck embedded hardware



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **14**
Exposed deck bar



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **15**
NE joint



Bridge No. **0253** Br. Name **Herring Cove** Date **06/25/17**
 Inspector **Manning / Escamilla** Frame **16**
Pier 2 joint



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	17
		FE joint			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	18
		NE abutment up to 3' undermined			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	19
		FE abutment			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	20
		NE bearing typical			



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	21
Underside of deck typical					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	22
NE Pier 2					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	23
Pier 2 NE LT spall has exposed rebar					



Bridge No.	0253	Br. Name	Herring Cove	Date	06/25/17
Inspector		Manning / Escamilla		Frame	24
Span 2 Bay 3 diaphragm near Pier 2 bowed					