

Routine Inspection Report

Date: 8/9/2017

Br No 603

SNOW RIVER WEST CHANNEL

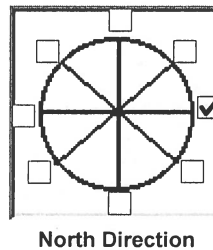
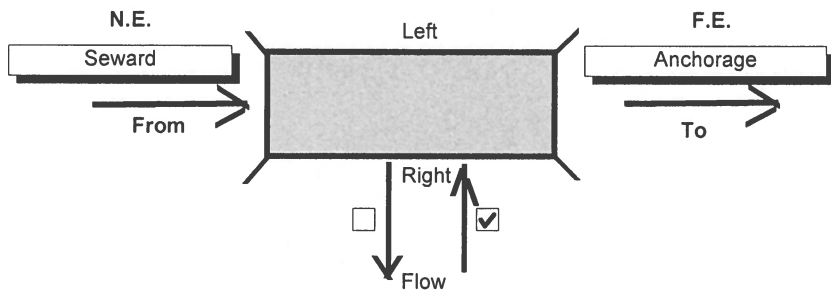
Overcast 62 F

INSPECTOR: Nick Murray

ASSISTANT: Diane Murph

Initials NWM

Initials _____



Apprch Rdwy Width (ft)	35.00
Est Camber (inch)	0.50
Bridge Length (ft)	188
Bridge Width O-O (ft)	34.1
CDS Route	130000
CDS Mile Point	17.0

Left							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
Parapet w/ top mount rail & curb		37.00	6.00	Thrie - Beam	32.50	W - Beam/Wood	SRT
Right							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
Parapet w/ top mount rail & curb		37.50	6.50	Thrie - Beam	32.50	W - Beam/Wood	Contin.

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 type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Deck Material	Thk(Inches)
Concrete	8.00
Location Measured	
Estimated	

Wear Surface	Thk (Inches)
Same	
Wear Location	

Drive Condition
Satisfactory

Locality
Primrose - Kenai Lake

Route
SEWARD HIGHWAY

Utilities

Kind	Size	Location	Owner
none			

Bridge No. 0603, SNOW RIVER WEST CHANNEL

Work Candidates

Inspected on: 08/09/2017

<i>Priority</i>	<i>Description</i>	<i>Quantity</i>	<i>Work Needed</i>
High	Deck-Rehab (SF)	588	Rehabilitate deck.
High	Paint-Structural (SF)	20	Clean and paint bearings
High	Misc-Install Sign (EA)	4	Install place name signs. Install correct NE bridge number plate. Install FE bridge number plate. Install FE US object marker.
High	Bridge Rail-Repair (LF)	1	Replace 2 damaged bridge rail tubes.
High	Approach Railing-Repair (EA)	1	Replace damaged w-beam sections. Replace FEUS SRT end section.
High	Substructure-Clean Abutment / Pier Seats (LF)	1	Remove mud and dirt from bearing seats.
Medium	Misc-Remove Vegetation (EA)	1	Cut brush from approaches and bridge corners.
Medium	Channel-Remove Debris (EA)	1	Remove debris and tree growth in channel.

Bridge No. 0603, SNOW RIVER WEST CHANNEL

Element Inspection

Inspected on: 08/09/2017

<i>Element</i>	<i>Description</i>	<i>Observations</i>
12	Reinforced Concrete Deck	<p>From 2015 In-Depth Insp: Span 1 US - 106SF delams, 91SF sound patch material, 7SF exposed rebar Span 1 DS - 57SF delams, 106SF sound patch material, 1SF exposed rebar Span 2 US - 81SF delams, 167SF sound patch material, 3SF exposed rebar Span 2 DS - 91SF delams, 146SF sound patch material, 4SF exposed rebar</p> <p>Several patched areas are delaminated or have adjacent delaminations. Delaminations adjacent to many spalled areas. A few spalls are filled with asphalt.</p>
109	Prestressed Concrete Open Girder/Beam	<p>Span 1 FE Bay 3 from DS, rock pocket and exposed rebar with surface rust. Span 2 NE Girder 2 from DS, exposed bottom bar with surface rust.</p>
205	Reinforced Concrete Column	None.
215	Reinforced Concrete Abutment	<p>NE full-height backwall crack adjacent to Girder 3 from DS. Seats covered with damp dirt and mud.</p>
234	Reinforced Concrete Pier Cap	Pier 2 US cap bottom, segregated concrete.
303	Assembly Joint With Seal	<p>Joints leaking. FEUS joint has freeflowing water. (could not verify in 2017). NEUS curb joint damaged, section is pushed away from traffic.</p>
311	Movable Bearing	<p>NE Girder 3 bearing partially covered with debris. Up to 1/4 inch laminar rust at abutment bearings. 100% paint failure.</p>
> 515	<i>Steel Protective Coating</i>	
313	Fixed Bearing	<p>Surface rust at pier bearings Span 2 NEUS grout pad spalled. 100% paint failure.</p>
> 515	<i>Steel Protective Coating</i>	
333	Other Bridge Railing	<p>Span 1 DS tube bent 3 inches DS about 20ft from Pier 2. Span 1 FEDS tube torn on outside face. Sheared tube bolts at NEUS, Span 2 NE, and FEDS. 7 inch sidewalks extend 12 inches past thrie beam transition.</p>

Bridge No. 0603, SNOW RIVER WEST CHANNEL

600	Signs Smart Flag	No name place signs. No FE bridge number plate; NE plate is for the wrong bridge. FE US object marker missing.
601	Brush Smart Flag	Brush encroaching approach rail and bridge corners.
602	Approach Rail Smart Flag	NEDS curved w-beam damaged. NEUS w-beam section torn. FEUS approach rail flattened and SRT damaged.
603	Stay-in-Place Form Smart Flag	Sporadic light rust spots at weld locations.
605	Debris Smart Flag	Span 1 channel logs and root wads.

Br No 603	SNOW RIVER WEST CHANNEL	Date: 8/9/2017	ID	07 Odd 2017 603
INSPECTOR: Nick Murray	ASSISTANT: Diane Murph	Weather Overcast	Temperature 62 F	

HYDRAULICS REPORT

Inspection To Mudline At All Piers and Abuts? <input type="text" value="Yes"/>	Apparent HW <input type="text" value="No"/>	Stream Bottom Material
Activities <input type="text"/>	AHW Comments <input type="text"/>	<input type="text" value="Silt"/>
Drift <input type="text" value="Medium"/>	Bank Erosion <input type="text" value="No"/>	<input type="text" value="Sand"/>
Riprap Condition <input type="text" value="Adequate"/>	Erosion Comments <input type="text"/>	<input type="text" value="Cobble"/>
	Drift Comments <input type="text" value="Root wads and branches."/>	
	Other Hydraulic Comments <input type="text" value="Very low flow at time of inspection."/>	

SOUNDINGS Measured At Surface Location

Soundings Report		All measurements in feet	<input type="text" value="07 Odd 2017 603"/>	
Horiz Dist from NE	Substr Unit No.	Vert Dist to Water Surface	Vert Dist to Stream Bottom	Remarks
0.00	1	0.0	6.3	Begin Bridge
12.00	1	0.0	9.8	
25.50	1	0.0	16.3	
35.30	1	0.0	20.5	EOW
35.50	1	0.0	20.5	
41.80	1	0.0	20.4	EOW
50.90	1	0.0	19.8	
66.80	1	0.0	20.0	
82.00	1	0.0	19.6	
92.70	1	0.0	20.0	Pier 2
14.00	1	0.0	19.0	
131.90	1	0.0	19.0	
153.90	1	0.0	18.3	
168.90	1	0.0	12.5	
181.00	1	0.0	7.5	
184.70	1	0.0	4.5	

Abbreviations: FE=Far End, NE=Near End, DS= Downstream, US=Upstream, LT=Left, RT=Right, P=Pier, FB=Floorbeam, G=Girder, S=Span

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 0603 Agency ID: 0603 SR: 72.3 SD/FO: SD

IDENTIFICATION			
State 1:	02 Alaska	Struc Number 8:	0603
Facility Carried 7:	SEWARD HIGHWAY	Location 9:	MILE POINT 17.0
Rte. (On/Under)5A:	Route On Structure	Rte Signing Prefix 5B:	3 State Hwy
Level of Service 5C:	1 Mainline	Rte. Number 5D:	00031
Directional Suffix 5E:	0 N/A (NBI)	% Responsibility:	
SHD District 2:	01 Central	County Code 3:	Kenai Peninsula Borough
Place Code 4:	Seward	Mile Post 11:	16.990 mi
Feature Intersected 6:	SNOW RIVER WEST CHANNEL		
Latitude 16:	60d 19' 34.0 "	Longitude 17:	149d 21' 35.0 "
Border Bridge Code 98:	Unknown (P)		
Border Bridge No. 99:	NA		

INSPECTION			
Frequency 91:	24 months	Inspection Date 90:	08/09/2017
Next Inspection:	08/09/2019		
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:	1 STRAHNET hwy	Parallel Structure 101:	No bridge exists
Traffic Direction 102:	2 2-way traffic	Temporary Structure 103:	Unknown (NBI)
Highway System 104:	1 On the NHS	NBIS Length 112:	Long Enough
Toll Facility 20:	3 On free road	Functional Class 26:	02 Rural Arterial-Other
Natl. Network 110:	0 Not on truck network	Historical Sig. 37:	5 Not eligible for NRRP
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:	5 Prestressed concrete			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:	6 Satisfactory			
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 21	Operating Rating 64:	HS 45
Design Load 31:	4	Posting 70:	5 At/Above legal loads
Posting Status 41:	A Open, no restriction		

AGE AND SERVICE			
Year Built 27:	1965	Year Reconstructed 106:	Unknown
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:	1,942	Truck ADT 109:	9%
Year of ADT 30:	2015		

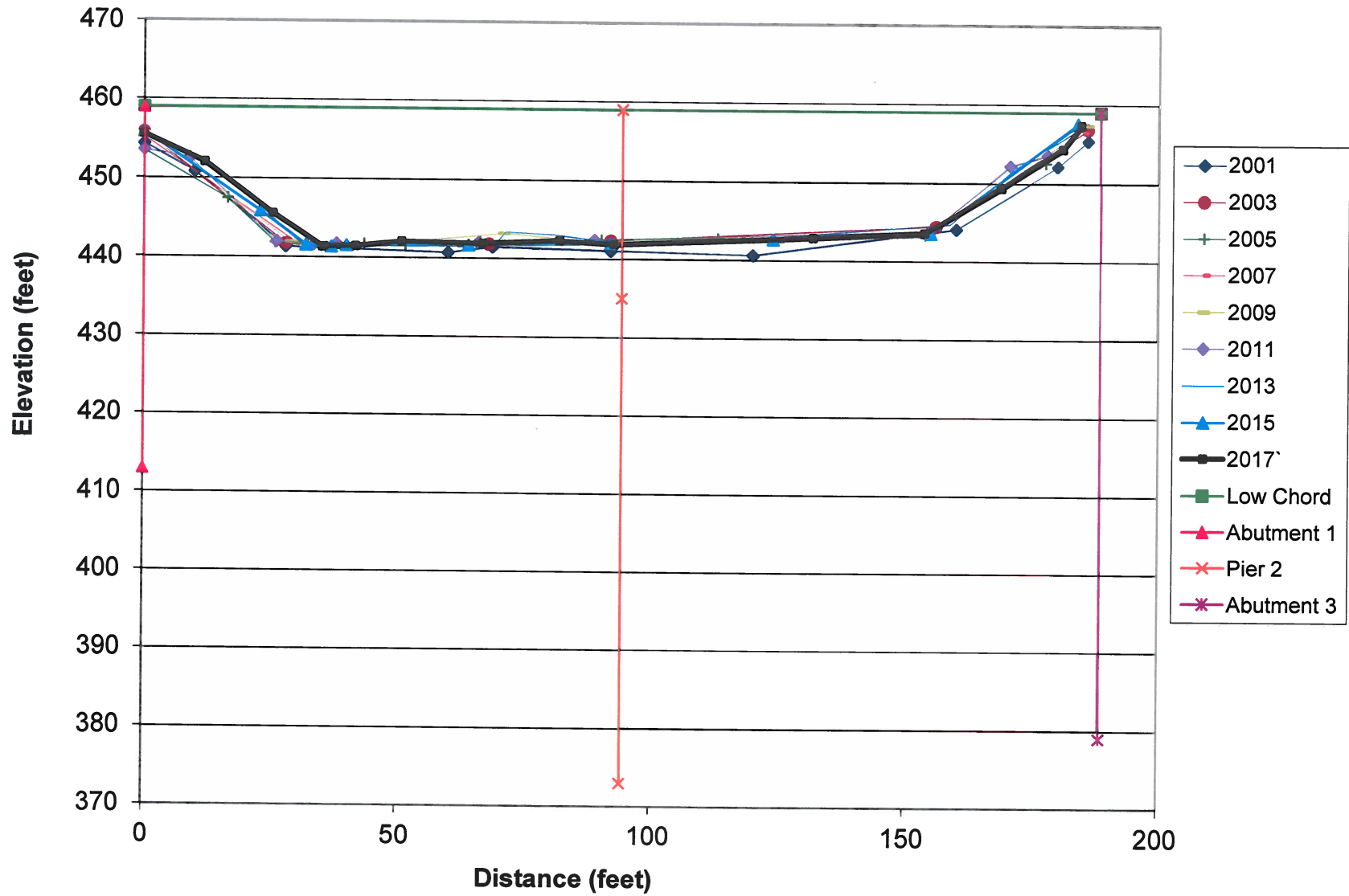
APPRAISAL			
Bridge Rail 36A:	0 Substandard	Approach Rail 36C:	1 Meets Standards
Transition 36B:	1 Meets Standards	Approach Rail Ends 36D:	1 Meets Standards
Str Evaluation 67:	6 Equal Min Criteria	Deck Geometry 68:	5 Somewhat Better than Min
Underclearance, Vertical and Horizontal 69:	N Not applicable (NBI)		
Waterway Adequacy 71:	8 Equal Desirable	Approach Alignment 72:	8 Equal Desirable Crit
Scour Critical 113:	8 Stable Above Footing		

GEOMETRIC DATA			
Length Max Span 48:	90 ft	Structure Length 49:	188 ft
Curb/Sdwk Width L 50A:	1.6 ft	Curb/Sidewalk Width R 50B:	1.6 ft
Width Curb to Curb 51:	30.2 ft	Width Out to Out 52:	34.1 ft
Approach Roadway Width 32: (w/ shoulders)	30 ft	Median 33:	0 No median
Deck Area:	6,415.3 sq ft		
Skew 34:	40	Structure Flared 35:	0 No flare
Vertical Clearance 10:	99.99 ft	Horizontal Clearance 47:	23.95 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:	2,300
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

BN603 Snow River West Channel Soundings





Bridge No. **0603** Br. Name **Snow River West Channel** Date **08/09/17**
 Inspector **Murray / Murph** Frame **1**
Ahead at bridge



Bridge No. **0603** Br. Name **Snow River West Channel** Date **08/09/17**
 Inspector **Murray / Murph** Frame **2**
Back at bridge



Bridge No. **0603** Br. Name **Snow River West Channel** Date **08/09/17**
 Inspector **Murray / Murph** Frame **3**
Looking US



Bridge No. **0603** Br. Name **Snow River West Channel** Date **08/09/17**
 Inspector **Murray / Murph** Frame **4**
Looking DS



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	5
Looking US from below					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	6
Looking DS from below					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	7
Wearing surface, typ.					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	8
Transition rail, typ.					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	9
			FE US broken object marker		



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	10
			DS rail dented		



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	11
			DS NE expansion joint		



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	12
			DS pier 2 expansion joint		



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector	Murray / Murph		Frame	13	
DS FE expansion joint					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector	Murray / Murph		Frame	14	
Abutment 1					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector	Murray / Murph		Frame	15	
NE bearing, typ.					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector	Murray / Murph		Frame	16	
Pier 2 FE face					



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	17
	FE underside, typ.				



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	18
	Abutment 3				



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	19
	FE bearing, typ.				



Bridge No.	0603	Br. Name	Snow River West Channel	Date	08/09/17
Inspector			Murray / Murph	Frame	20