

Routine Inspection Report

Date: 7/14/2017

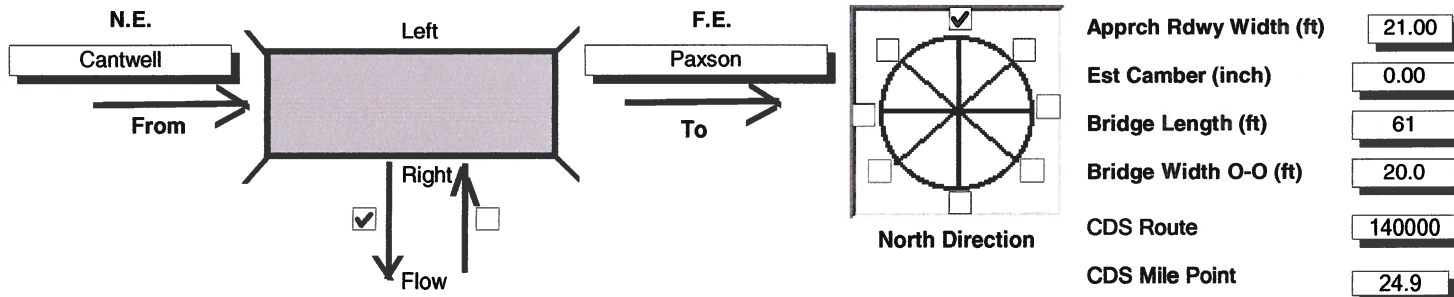
Br No 684 ROCK CREEK

Fair 70 F

INSPECTOR: Nick Murray ASSISTANT: Michael Knapp

Initials NWM

Initials MK



Left							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
	2 1/2" X 9" Wood Plank w/Bullrail	32.50	0.00	None		Timber Plank	None

Right							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
	2 1/2" X 9" Wood Plank w/Bullrail	32.50	0.00	None		Timber Plank	None

Near End		SIGNS		Far End	
Lt.	Rt.	Load Limit Wording or Other Signs	Load Limit Wording or Other Signs	Lt.	Rt.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<div style="border: 1px solid black; padding: 5px;">Narrow Bridge Yield to Oncoming Traffic</div>	<div style="border: 1px solid black; padding: 5px;">Narrow Bridge Yield to Oncoming traffic</div>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Deck Material	Thk(Inches)
Timber	5.50
Location Measured	
Edge of Deck	

Wear Surface	Thk (Inches)
Timber Run Pl	2.75
Wear Location	
Edge of Deck	

Drive Condition

Satisfactory

Locality

Paxson

Route

DENALI HIGHWAY

Utilities

Kind	Size	Location	Owner
None			

Bridge No. 0684, ROCK CREEK

Work Candidates

Inspected on: 07/14/2017

<i>Priority</i>	<i>Description</i>	<i>Quantity</i>	<i>Work Needed</i>
Medium	Misc-Install Sign (EA)	2	Install object marker, NE US corner. Install FE name place sign.
Medium	Approach Railing-Repair (EA)	1	Install approach railing at all four corners.

Bridge No. 0684, ROCK CREEK

Element Inspection

Inspected on: 07/14/2017

<i>Element</i>	<i>Description</i>	<i>Observations</i>
31	Timber Deck	Timber deck has minor splits and cracks along deck edge.
> 510	<i>Wearing Surfaces</i>	Running planks have 0.25 inches of wear in a few locations, but minimal wear in rest of deck.
107	Steel Open Girder/Beam	Swallows are nesting at almost all of the diaphragms. Paint system is corroding with heaviest corrosion on top flanges. NE US exterior girder looks a little twisted -- Could be associated with NE abutment problems. Total of three intermediate diaphragms per bay - two at third points and one at midspan.
> 515	<i>Steel Protective Coating</i>	
218	Other Abutments	NE backwall is pushed back into the approach fill at the DS end. DS girder overhangs the pile cap 2.25 ft. Backwall and wingwall are out of plumb 6.5 inches in 7.5 feet. Fill at NE is about 12 inches below cap and the DS side appears to be higher than the US side. Surface rust on pile extensions from groundline up 3 feet. Pile rust lines appear level. NE US 3-rail pile has cracks in two of the three rail piles. Pile has had splice plates installed across crack. NE DS pile has a crack in a vertical weld. FE US wingwall pile has a crack in a vertical weld. Distance between black marks on G4 bottom flange and G4 bearing: 2013: 1.25" 2015: 1.625" 2107: 2.5" NE DS corner of the bridge appears to be about one foot higher than the other three corners.
> 6000	<i>Scour</i>	Timber lagging does not extend to stream bed at FE DS with ~1 foot of undermining.
311	Movable Bearing	NE bearings moving toward backwall. Rust on NE bearings.
> 515	<i>Steel Protective Coating</i>	
313	Fixed Bearing	Rust on FE bearings.
> 515	<i>Steel Protective Coating</i>	
332	Timber Bridge Railing	NE US, FE DS and DS midspan bullrail has impact damage.
600	Signs Smart Flag	No object marker at NE US corner. FE Name place sign missing.
602	Approach Rail Smart Flag	No approach rails at either end.

Bridge No. 0684, ROCK CREEK

608

Wingwall Smart Flag

FE US wingwall and end of lagging wall are getting 'punky'.
FE US wingwall pile has a crack in a vertical weld.

Br No 684

ROCK CREEK

Date: 7/14/2017

ID

01 Odd 2017 684

INSPECTOR: Nick Murray

ASSISTANT: Michael Knapp

Weather
FairTemperature
70 F**HYDRAULICS REPORT**

Inspection To Mudline At All Piers and Abuts?

Yes

Apparent HW

No

Stream

AHW Comments

Bottom
Material

Bank Erosion

No

Cobble

Erosion Comments

Boulder

Drift Comments

Gravel

Activities

Camping observed near bridge

Drift

None

Riprap Condition

Round boulders placed as riprap at NE DS corner. Appears stable but non angular material tends to be prone to "rolling".

Other Hydraulic
Comments

Probing at FE abutment found ~1 ft gap at bottom of lagging to streambed; smaller gap visible at NE abutment;

SOUNDINGS

Measured At Surface

Top Rail

Location

Upstream

**Soundings
Report**

All measurements in feet

01 Odd 2017 684

Horiz Dist from NE	Substr Unit No.	Vert Dist to Water Surface	Vert Dist to Stream Bottom	Remarks
0.00	1	0.0	13.6	NE face of wall. river-right
2.10	1	0.0	14.2	EOW
9.10	1	0.0	14.3	
16.80	1	0.0	14.2	
24.90	1	0.0	14.4	
32.70	1	0.0	14.5	
42.30	1	0.0	14.2	
50.50	1	0.0	13.5	
57.30	1	0.0	12.7	EOW
61.10	1	0.0	12.4	FE face of wall

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 0684	Agency ID: 0684	SR: 57.2	SD/FO: SD
------------------	-----------------	----------	-----------

IDENTIFICATION			
State 1:	02 Alaska	Struc Number 8:	0684
Facility Carried 7:	DENALI HIGHWAY	Location 9:	MILE POINT 24.8
Rte.(On/Under)5A:	Route On Structure	Rte Signing Prefix 5B:	3 State Hwy
Level of Service 5C:	1 Mainline	Rte. Number 5D:	00750
Directional Suffix 5E:	0 N/A (NBI)	% Responsibility:	
SHD District 2:	05 North., S. Central	County Code 3:	Valdez-Cordova
Place Code 4:	Gulkana	Mile Post 11:	24.764 mi
Feature Intersected 6:	ROCK CREEK		
Latitude 16:	63d 04' 12.0 "	Longitude 17:	146d 06' 24.0 "
Border Bridge Code 98:	Unknown (P)		
Border Bridge No. 99:	NA		

INSPECTION			
Frequency 91:	24 months	Inspection Date 90:	07/14/2017
Next Inspection:		07/14/2019	
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:	07
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:	1
Main Span 43A/B:			
	3 Steel	2 Stringer/Girder	
Appr Span 44A/B:			
	0 Other	00 Other	
Deck Type 107:		8 Wood or Timber	
Wearing Surface 108A:		7 Wood or Timber	
Membrane 108B:		0 None	
Deck Protection 108C:		0 None	

CONDITION			
Deck 58:	6 Satisfactory	Super 59:	5 Fair
Sub 60:		4 Poor	
Channel/Ch. Protection 61:		7 Minor repairs needed	
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 16	Operating Rating 64:	HS 22
Design Load 31:	2	Posting 70:	5 At/Above legal loads
Posting Status 41:	R		

AGE AND SERVICE			
Year Built 27:	1955	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:	40	Truck ADT 109:	8%
Year of ADT 30:	2015		

APPRAISAL			
Bridge Rail 36A:	0 Substandard	Approach Rail 36C:	0 Substandard
Transition 36B:	0 Substandard	Approach Rail Ends 36D:	0 Substandard
Str Evaluation 67:	4 Min Tolerable	Deck Geometry 68:	5 Somewhat Better than Min
Underclearance, Vertical and Horizontal 69:	N Not applicable (NBI)		
Waterway Adequacy 71:	5	Approach Alignment 72:	7 Better than Min
Scour Critical 113:	8 Stable Above Footing		

GEOMETRIC DATA			
Length Max Span 48:	58 ft	Structure Length 49:	60 ft
Curb/Sdwk Width L 50A:	0.0 ft	Curb/Sidewalk Width R 50B:	0.0 ft
Width Curb to Curb 51:	20.0 ft	Width Out to Out 52:	20.0 ft
Approach Roadway Width 32:	20 ft	Median 33:	0 No median
(w/ shoulders)			
Deck Area:	1,209.6 sq ft		
Skew 34:	0	Structure Flared 35:	0 No flare
Vertical Clearance 10:	99.99 ft	Horizontal Clearance 47:	20.00 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:	200
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



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **1**
Ahead at bridge



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **2**
Back at bridge



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **3**
Looking US



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **4**
Looking DS



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **5**
US NE Bank



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **6**
DS NE Bank



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **7**
DS FE Bank



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **8**
US FE Bank



Bridge No.	0684	Br. Name	Rock Creek	Date	07/14/17
Inspector	Murray / Knapp		Frame	9	
Underside from FE, abutment 1					



Bridge No.	0684	Br. Name	Rock Creek	Date	07/14/17
Inspector	Murray / Knapp		Frame	10	
Underside view from NE, FE abutment					



Bridge No.	0684	Br. Name	Rock Creek	Date	07/14/17
Inspector	Murray / Knapp		Frame	11	
Running planks					



Bridge No.	0684	Br. Name	Rock Creek	Date	07/14/17
Inspector	Murray / Knapp		Frame	12	
FE DS elevation					



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **13**
FE US elevation, delete



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **14**
Abutment 1, repaired pile



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **15**
NE DS bearing movement



Bridge No. **0684** Br. Name **Rock Creek** Date **07/14/17**
 Inspector **Murray / Knapp** Frame **16**
NE DS bearing movement