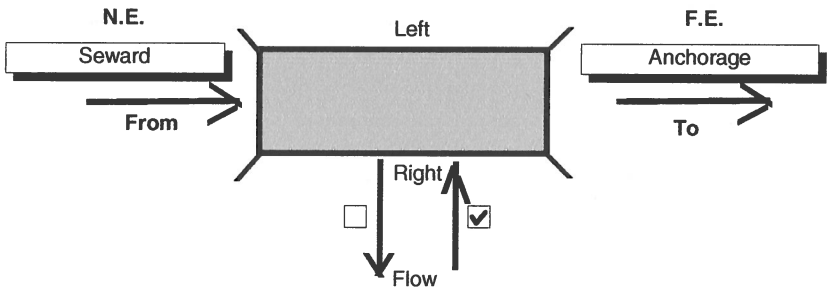
Routine Inspection Report

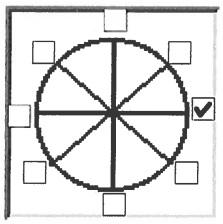
Date: 8/9/2017

Br No 607 | VICTOR CREEK | Cloudy | 52 F

INSPECTOR: Nick Murray | ASSISTANT: Diane Murph

Initials NWM | Initials





North Direction

Apprh Rdwy Width (ft)	28.00
Est Camber (inch)	-0.50
Bridge Length (ft)	198.00
Bridge Width O-O (ft)	26.60
CDS Route	130000
CDS Mile	19.4

Left

Type BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
W or Thrie Beam w/ side mount & curb	30.50	9.00	W - Beam	30.50	W - Beam/Wood	BCT

Right

Type BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
W or Thrie Beam w/ side mount & curb	30.50	9.00	W - Beam	29.50	W - Beam/Wood	BCT

SIGNS

Near End	Lt.	Rt.
Object Markers	☑	☑
Restricted Width	☐	☐
Vertical Clear	☐	☐
Load Limit	☐	☐
Name Place	☐	☐

Load Limit Wording or Other Sign:

Far End	Lt.	Rt.
Object Markers	☑	☑
Restricted Width	☐	☐
Vertical Clear	☐	☐
Load Limit	☐	☐
Name Place	☑	☑

Load Limit Wording or Other Signs:

Deck Material	Thk(Inches)
Concrete	5.50

Location Measured: Core hole

Wear Surface	Thk (Inches)
Same	

Wear Location:

Drive Condition: Satisfactory

Locality: Mi. 20 Seward Hwy

Route: SEWARD HIGHWAY

Utilities

Kind	Size	Location	Owner
none			

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

Bridge No. 0607, VICTOR CREEK

Work Candidates

Inspected on: 08/09/2017

Priority	*Description*	*Quantity*	*Work Needed*
High	Bridge-Replacement		Bridge programmed for replacement.
High	Joints-Repair (LF)	30	Replace joints. Install new Pier 3 nose armor. Patch soffit spalls adjacent to joints.
High	Paint-Structural (SF)	1	Sandblast and repaint bearings and girders near joints.
Medium	Deck-Patch spalls->Deck-Repair (Potholes) (SF)	1	Patch open core holes, spalls, and spalls patched with asphalt. Do not use asphalt for patch material.
Low	Misc-Install Sign (EA)	1	Install NE name place sign.

Bridge No. 0607, VICTOR CREEK

Element Inspection

Inspected on: *08/09/2017*

Element	*Description*	*Observations*
12	Reinforced Concrete Deck	Heavy abrasion. Deck Visual Inspection: Span 1 - 8SF patches, 1 SF spall, 2SF spall filled with asphalt. Two exposed transverse reinforcing bars at P2 Span 2 - 7SF patches Span 3 - 31SF patches, 2SF spalls Span 4 - none. Three 6 inch dia. open or partially patched core holes FE Pier 3. Soffit: Span 1, minor spalls along exterior girders (about 20SF). Span 2 US, two cracks with efflorescence (about 10SF). Pier 2 US and DS, 1SF spall at rail post with exposed angle. Span 3, three deck racks with efflorescence, one with rust staining (6SF each). Span 4 DS, spall at joint about 2 inches deep x 30 inches long x 4 inches wide. Exposed steel is perforated.
107	Steel Open Girder/Beam	Span 1 - Surface rust on bottom flanges and top flange edges. Heavy laminar rust on bottom flanges at Pier 2. Span 2 - Surface rust on top flanges and spotted surface rust on bottom flanges. Full paint loss, surface rust, and minor laminar rust near bearings. Span 3 - Surface rust on top and bottom flanges. Span 4 - Bottom flange surface rust throughout. Heavy surface rust, laminar rust, and pack rust at hinges.
> 515	*Steel Protective Coating*	
210	Reinforced Concrete Pier Wall	Pier 2 NE face multiple hairline cracks half height. One full height cracked measured at 0.040in. Pier 3 NE, two hairline cracks full-width about mid-height and 1 full-height hairline crack. Pier 3 NEDS, 2SF spall with exposed rebar at footing. Pier 3 FE, two cracks full width about mid-height. US side is 3/16 inch wide for about 6ft. Pier 3 FE, one full-height hairline crack. Pier 3 US footing exposed about 3ft deep and 4ft wide. Remaining length 1.5 feet deep. As-builts indicate footing is pile supported. Pier 4 NE, 1SF spall near mudline. Pier 4 FE, full-width hairline crack at construction joint. US side is about 0.3 inches wide for about 5ft.
> 6000	*Scour*	
215	Reinforced Concrete Abutment	NEDS, minor wingwall spall. 40 inch long x 5 inch high x 40 inch deep void under NE cap near centerline. NEDS and FEUS 8ft vertical banks for about 200ft starting at bridge.
> 6000	*Scour*	
301	Pourable Joint Seal	Various segments failed at each joint. Remaining sections are cracked. Pier 3 DS, angle armor missing for about 9ft. Attachments exposed but appear below deck surface.

Bridge No. 0607, VICTOR CREEK

311		Movable Bearing	Span 2 bearings rocked toward NE; DS girder web is in contact with Pier 2 stemwall. Minor laminar rust on bearings. Moderate laminar rust on anchor rods.
	> 515	*Steel Protective Coating*	
313		Fixed Bearing	Surface rust throughout.
	> 515	*Steel Protective Coating*	
330		Metal Bridge Railing	100% w-beam surface rust on road face, 25% on back face. Minor coating loss on posts. NEDS, 6 inch dia. curb spall. Pier 2 DS, curb spalled with exposed rebar for about 4ft. Span 2 DS midspan rail damage. Post is bent outward but anchorages are intact. FEUS, minor exterior curb spall.
	> 515	*Steel Protective Coating*	
600		Signs Smart Flag	NE name place sign is missing.
601		Brush Smart Flag	Brush encroaching approach rail and NEUS bridge rail.
607		Seismic Retrofit Smart Flag	Longitudinal restrainers in good conition. FE bearing plate gap about 1 inch.

Br No 607	VICTOR CREEK	Date: 8/9/2017	ID	07 Odd 2017 607
INSPECTOR: Nick Murray	ASSISTANT: Diane Murph	Weather: Cloudy	Temperature: 52 F	

HYDRAULICS REPORT

Inspection To Mudline At All Piers and Abuts? *Yes*

Apparent HW *No*

AHW Comments

Bank Erosion *Yes*

Erosion Comments 8 ft vertical banks NE DS for 200+ feet as well as FE US for 200+ ft.

Activities

Drift Comments 12" tree at US P3 has collected smaller branches and debris.

Drift Medium

Riprap Condition Minimal

Other Hydraulic Comments No soundings taken due to high traffic, limited sight distance and impending bridge replacement.

Stream Bottom Material

- Silt
- Sand
- Gravel

SOUNDINGS

Measured At Surface

Location Upstream

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: 0607 | Agency ID: 0607 | SR: 40.0 | SD/FO: ND

IDENTIFICATION

State 1:	02 Alaska	Struc Number 8:	0607
Facility Carried 7:	SEWARD HIGHWAY	Location 9:	MILE POINT 19.4
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:	19.435 mi
Feature Intersected 6:	VICTOR CREEK		
Latitude 16:	60d 21' 27.0 "	Longitude 17:	149d 21' 6.0 "
Border Bridge Code 98:	Unknown (P)		
Border Bridge No. 99:	NA		

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 | Number of Spans Main Unit 45: 4

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

AGE AND SERVICE

Year Built 27:	1952	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

GEOMETRIC DATA

Length Max Span 48:	70 ft	Structure Length 49:	198 ft
Curb/Sdwlk Width L 50A:	1.0 ft	Curb/Sidewalk Width R 50B:	1.0 ft
Width Curb to Curb 51:	24.3 ft	Width Out to Out 52:	26.6 ft
Approach Roadway Width 32: (w/ shoulders)	28 ft	Median 33:	0 No median
Deck Area:	5,263.6 sq ft		
Skew 34:	45	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		

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 NRHP
Owner 22:	01 State Highway Agency		
Custodian 21:	01 State Highway Agency		

CONDITION

Deck 58: 5 Fair	Super 59: 5 Fair	Sub 60:	5 Fair
Channel/Ch. Protection 61:	6 Bank Slumping	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 12	Operating Rating 64:	HS 25
Design Load 31:	3	Posting 70:	5 At/Above legal loads
Posting Status 41:	A Open, no restriction		

APPRAISAL

Bridge Rail 36A:	0 Substandard	Approach Rail 36C:	1 Meets Standards
Transition 36B:	0 Substandard	Approach Rail Ends 36D:	0 Substandard
Str Evaluation 67:	5 Somewhat Better than Min	Deck Geometry 68:	4 Min Tolerable
Underclearance, Vertical and Horizontal 69:		N Not applicable (NBI)	
Waterway Adequacy 71:	8 Equal Desirable	Approach Alignment 72:	6 Equal Min Criteria
Scour Critical 113:	3		

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:	2 200
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. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **1**
Ahead at bridge

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **2**
Back at bridge

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **3**
Looking US

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **4**
Looking DS

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **5**
Looking NE US

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **6**
Looking NE DS

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **7**
Looking FE DS

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **8**
Looking FE US

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **9**
US NE elevation

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **10**
US FE elevation

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **11**
DS elevation

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **12**
DS NE undercutting along bank

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **13**
FE US undercutting along bank

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **14**
DS NE rail spall

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **15**
DS NE expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **16**
DS Pier 2 expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **17**
Expansion joint 2 exposed rebar at centerline

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **18**
DS Pier 3 expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **19**
DS Pier 4 expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **20**
DS FE expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **21**
DS Abutment 1

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **22**
Bearing, typ.

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **23**
DS pier 2 concrete and girder contact

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **24**
NE underside, typ.

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **25**
Connection joint, typ.

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **26**
US NE spalling along expansion joint

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **27**
NE face Pier 2

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **28**
NE face Pier 2 cracks

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **29**
NE face Pier 2 crack 10' from DS

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **30**
DS FE face Pier 2

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **31**
NE face Pier 3

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **32**
DS NE face pier 3 spall with exposed rebar

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **33**
FE face pier 3

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **34**
NE face pier 4

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **35**
FE face pier 4

Bridge No. **0607** Br. Name **Victor Creek** Date **08/09/17**
Inspector **Murray / Murph** Frame **36**
Abutment 5

Bridge No.	**0607**	Br. Name	**Victor Creek**	Date	**08/09/17**
Inspector		**Murray / Murph**		Frame	**37**
Span 4 DS joint failure					

Bridge No.	**0607**	Br. Name	**Victor Creek**	Date	**08/09/17**
Inspector		**Murray / Murph**		Frame	**38**
FE underside, typ.					

Bridge No.	**0607**	Br. Name	**Victor Creek**	Date	**08/09/17**
Inspector		**Murray / Murph**		Frame	**39**

Bridge No.	**0607**	Br. Name	**Victor Creek**	Date	**08/09/17**
Inspector		**Murray / Murph**		Frame	**40**