

# Routine Inspection Report

Date: 7/21/2020

Br No 1557 **LITTLE NENANA RIVER**

Cloudy 58 F

INSPECTOR: Nicholas Murray

ASSISTANT: Jasmine Langmann

Initials NWM

Initials \_\_\_\_\_

N.E. Left

Parks Hwy

From

Right

Flow

F.E. To

End Totchaket Rd

North Direction

Apprh Rdwy Width (ft) **14.00**

Est Camber (inch) **0.00**

Bridge Length (ft) **80.00**

Bridge Width O-O (ft) **14.30**

CDS Route **158000**

CDS Mile **0.4**

Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
		0.00	0.00				
<b>Left</b>							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
	3.5 inch steel tube & bullrail	22.00	8.50	None		None	
<b>Right</b>							
Type	BRIDGE RAIL	Ht (in)	Curb Height (in)	Transition Type	Ht (in)	Approach Type/Post	Leading End Treat
	3.5 inch steel tube & bullrail	22.00	8.50	None		None	

**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)**

Timber 3.00

**Location Measured**

Edge of Deck

**Wear Surface Thk (Inches)**

Timber Run PI 3.00

**Wear Location**

Edge of Deck

**Drive Condition**

Unsatisfactory

**Locality**

Nenana

**Route**

Totchaket Road

## Utilities

Kind	Size	Location	Owner
None			

# Bridge No. 1557, LITTLE NENANA RIVER

## *Work Candidates*

*Inspected on: 07/21/2020*

<i>Priority</i>	<i>Description</i>	<i>Quantity</i>	<i>Work Needed</i>
High	Rehab Substructure (EA)		Raise FE abutment to correct settlement.
High	Substructure-Riprap (EA)	1	Stabilize the gabion basket at NE DS corner. Place additional fill and bank protection under the undermined abutment areas.
High	Deck-Resurface	1	Replace timber running planks to prevent deterioration of deck.
Medium	Misc-Remove Vegetation (EA)	1	Cut brush around and under bridge.

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## Element Inspection

Inspected on: 07/21/2020

Element	Description	Observations
31	Timber Deck	Deck planks are rough sawn Number 2 or better, treated with CCA.
> 510	Wearing Surfaces	Running planks are heavily deteriorated and missing in locations. Gravel and dirt are present in large amounts on deck.
107	Steel Open Girder/Beam	Manufacturer's (Rapid Span) plate on the girder ends. See 2020 FC for more details.
> 515	Steel Protective Coating	Uniform, protective rust coating. No pack rust observed.
156	Timber Floor Beam	Floorbeams are Number 2 or better, treated with CCA preservative. Approximately 10% have splits in ends.
216	Timber Abutment	NE US mudsill is undermined by 12in. FE mudsill has settled approximately 24in.
311	Movable Bearing	No anchor bolts on any of the bearings.
330	Metal Bridge Railing	Timber bull rail is split and rotten.
> 515	Steel Protective Coating	
601	Brush Smart Flag	Brush encroaching on bridge.
602	Approach Rail Smart Flag	No approach rails present.
604	Bank Protection Smart Flag	Gabion basket at NE, DS is rotating toward the river.

Br No 1557	LITTLE NENANA RIVER	Date: 7/21/2020	ID	04 Even 2020 1557
INSPECTOR: Nicholas Murray	ASSISTANT: Jasmine Langmann	Weather Cloudy	Temperature 58 F	

HYDRAULICS REPORT

Inspection To Mudline At All Piers and Abuts?	Yes	Apparent HW	No	Stream Bottom Material
		AHW Comments		
		Bank Erosion	Yes	Silt
		Erosion Comments	FE gabions have settled ~2'	Sand
Activities		Drift Comments	Sticks	
Drift	Light			
Riprap Condition	None, only gabions directly under bridge	Other Hydraulic Comments		

SOUNDINGS      Measured At Surface      Top Rail      Location      Upstream

Soundings Report		All measurements in feet		04 Even 2020 1557	
Horiz Dist from	Substr Unit No.	Vert Dist to Water Surface	Vert Dist to Stream Bottom	Remarks	
0.00	1	0.0	7.8	Begin Bridge	
3.90	1	0.0	7.8		
4.20	1	0.0	9.5		
8.10	1	0.0	10.0		
10.00	1	0.0	14.6	EOW	
19.90	1	0.0	20.8		
29.80	1	0.0	21.5		
39.90	1	0.0	21.0		
49.90	1	0.0	20.0	EOW	
59.80	1	0.0	17.9		
66.90	1	0.0	14.4		
68.80	1	0.0	9.9		
75.80	1	0.0	7.8		
80.00	1	0.0	7.8		

## Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 1557

Agency ID: 1557

On/Off System: Off System

SR: 75.9

SD/FO/ND: ND

## IDENTIFICATION

State 1: 02 Alaska Struc Number 8: 1557  
 Facility Carried 7: TOTCHAKET ROAD Location 9: MILE POINT 0.4  
 Rte.(On/Under)5A: Route On Structure Rte Signing Prefix 5B: 5 City Street  
 Level of Service 5C: 0 Rte. Number 5D: 00000  
 Directional Suffix 5E: 0 N/A % Responsibility:  
 SHD District 2: 02 North., Interior County Code 3: Yukon-Koyukuk Census  
 Place Code 4: Nenana Mile Post 11: 0.400 mi  
 Feature Intersected 6: LITTLE NENANA RIVER  
 Latitude 16: 64d 33' 30.5 " Longitude 17: 149d 07' 35.9 "  
 Border Bridge Code 98: Unknown (P)  
 Border Bridge No. 99: NA

## INSPECTION

Frequency 91: 24 months Inspection Date 90: 07/21/2020 Next Inspection: 07/21/2022  
 FC Freq. 92A: 24 months FC Insp. Date 93A: 06/22/2020 Next FC Inspection: 06/22/2022  
 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: 3 1-lane Br for 2-way Temporary Structure 103: No  
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough  
 Toll Facility 20: 3 On free road Functional Class 26: 09 Rural Local  
 Natl. Network 110: 0 Not on truck network Historical Sig. 37: 5 Not eligible for NRHP  
 Owner 22: City or Municipal Highway Agency  
 Custodian 21: City or Municipal Highway Agency

## STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 1  
 Main Span Mat'l and Type 43A/B:  
 3 Steel 2 Stringer/Girder  
 Appr Span Mat'l and Type 44A/B:  
 N/A N/A  
 Deck Type 107: 8 Wood or Timber  
 Wearing Surface 108A: 7 Wood or Timber  
 Membrane 108B: 0 None  
 Deck Protection 108C: 9

## CONDITION

Deck 58: 7 Good Super 59: 7 Good Sub 60: 6 Satisfactory  
 Channel/Ch. Protection 61: 5 Eroding Culvert 62: N/A

## LOAD RATING AND POSTING

Operating Rating 64: HS 33 Operating Method 63: 1 LFR  
 Inventory Rating 66: HS 20 Inventory Method 65: 1 LFR  
 Design Load 31: C Other Posting 70: 5 At/Above legal loads  
 Posting Status 41: A Open, no restriction

## AGE AND SERVICE

Year Built 27: 2013 Year Reconstructed 106:  
 Type of Service on 42A: 1 Highway  
 Type of Service under 42B: 5 Waterway  
 Lanes on 28A: 1 Lanes under 28B: 0 Detour Length 19: 124 mi  
 ADT 29: 10 Truck ADT 109: 1% Year of ADT 30: 2018

## APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 0 Substandard  
 Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard  
 Str Evaluation 67: 6 Equal Min Criteria Deck Geometry 68: 5 Somewhat Better than Min  
 Underclearance, Vertical and Horizontal 69: N/A  
 Waterway Adequacy 71: 7 Better than Min Approach Alignment 72: 8 Equal Desirable Crit  
 Scour Critical 113: 3 Scour Critical - Within Limits

## GEOMETRIC DATA

Length Max Span 48: 77.00 ft Structure Length 49: 80.00 ft  
 Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 0.0 ft  
 Width Curb to Curb 51: 13.3 ft Deck Width Out to Out 52: 14.3 ft  
 Approach Roadway Width 32: 14.00 ft Median 33: 0 No median  
 (w/ shoulders)  
 Deck Area: 1,144.0 sq ft  
 Skew 34: 0 Structure Flared 35: 0 No flare  
 Route Minimum Vertical Clearance 10: 99.99 ft Route Horizontal Clearance 47: 14.00 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

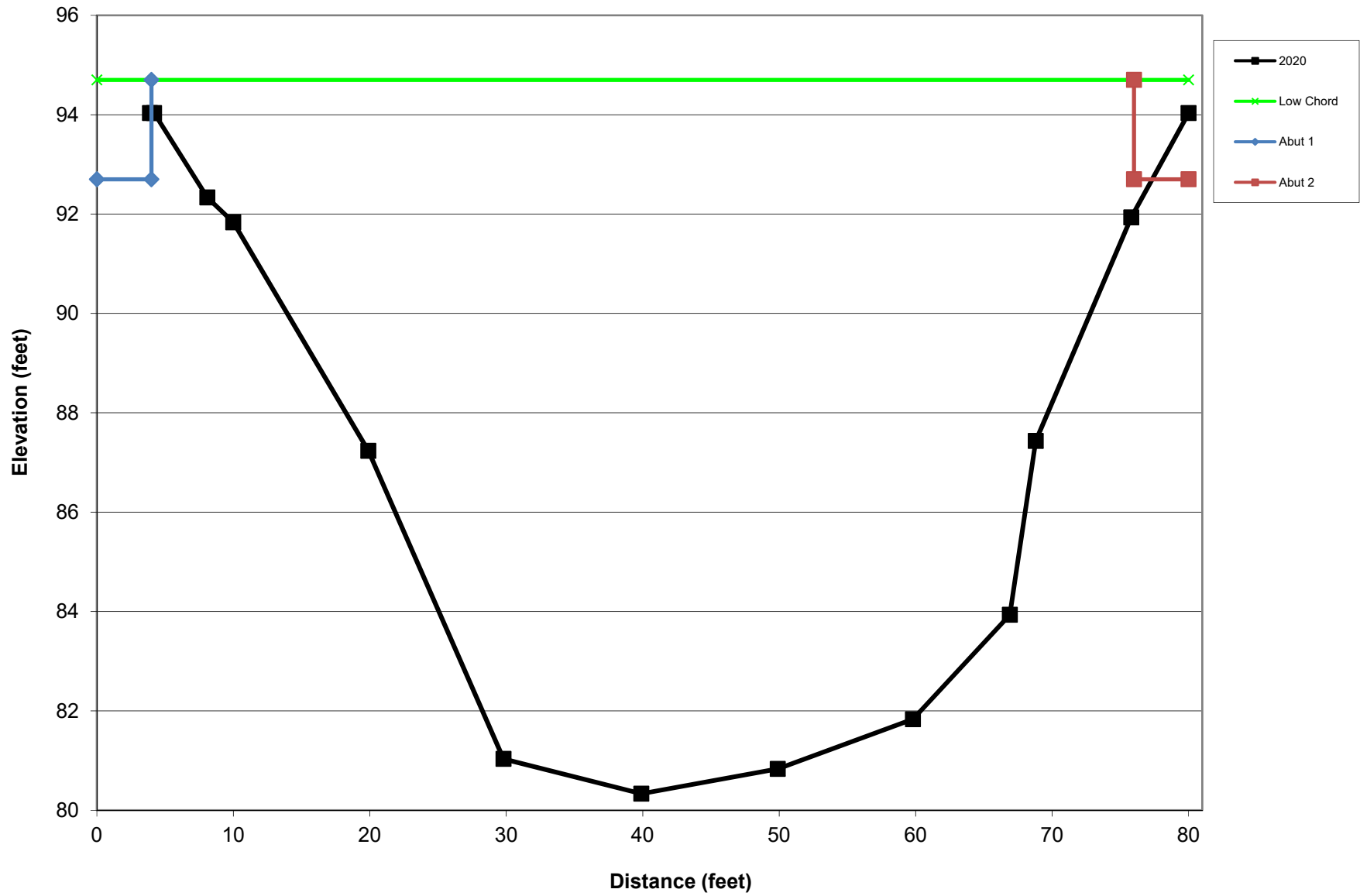
## PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ Type of Work 75: Unknown  
 Roadway Cost 95: \$ Length of Improvement 76: 0.0 ft  
 Total Cost 96: \$ Future ADT 114: 15  
 Year of Cost Estimate 97: 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 1557 - Little Nenana River Soundings.







Bridge No. 1557 Br. Name Little Nenana River Date 07/21/20  
 Inspector Nicholas Murray / Jasmine Langmann Frame 1  
 NE Looking at Bridge File P7210776.jpg



Bridge No. 1557 Br. Name Little Nenana River Date 07/21/20  
 Inspector Nicholas Murray / Jasmine Langmann Frame 2  
 FE Looking at Bridge File P7210777.jpg



Bridge No. 1557 Br. Name Little Nenana River Date 07/21/20  
 Inspector Nicholas Murray / Jasmine Langmann Frame 3  
 Looking US File P7210759.jpg



Bridge No. 1557 Br. Name Little Nenana River Date 07/21/20  
 Inspector Nicholas Murray / Jasmine Langmann Frame 4  
 Looking DS File P7210762.jpg





Bridge No. **1557** Br. Name **Little Nenana River** Date **07/21/20**  
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **5**  
**DS NE Bank** File **P7210763.jpg**



Bridge No. **1557** Br. Name **Little Nenana River** Date **07/21/20**  
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **6**  
**US NE Bank** File **P7210758.jpg**



Bridge No. **1557** Br. Name **Little Nenana River** Date **07/21/20**  
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **7**  
**US FE Bank** File **P7210760.jpg**



Bridge No. **1557** Br. Name **Little Nenana River** Date **07/21/20**  
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **8**  
**DS FE Bank** File **P7210761.jpg**





Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	9
Abutment 1				File	P7210768.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	10
Abutment 2				File	P7210769.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	11
Elevation Looking DS				File	P7210765.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	12
Rail Typ				File	P7210756.jpg





Bridge No.	<b>1557</b>	Br. Name	<b>Little Nenana River</b>	Date	<b>07/21/20</b>
Inspector	<b>Nicholas Murray / Jasmine Langmann</b>			Frame	<b>13</b>
Deck Typ				File	<b>P7210757.jpg</b>



Bridge No.	<b>1557</b>	Br. Name	<b>Little Nenana River</b>	Date	<b>07/21/20</b>
Inspector	<b>Nicholas Murray / Jasmine Langmann</b>			Frame	<b>14</b>
Deck Layers Typ				File	<b>P7210772.jpg</b>



Bridge No.	<b>1557</b>	Br. Name	<b>Little Nenana River</b>	Date	<b>07/21/20</b>
Inspector	<b>Nicholas Murray / Jasmine Langmann</b>			Frame	<b>15</b>
Deck Debris Typ				File	<b>P7210775.jpg</b>



Bridge No.	<b>1557</b>	Br. Name	<b>Little Nenana River</b>	Date	<b>07/21/20</b>
Inspector	<b>Nicholas Murray / Jasmine Langmann</b>			Frame	<b>16</b>
Underside Typ				File	<b>P7210767.jpg</b>





Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	17
Deck Exterior Underside Typ				File	P7210773.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	18
Fabrication Plaque				File	P7210771.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	19
Abutment 1 US Undermined				File	P7210774.jpg



Bridge No.	1557	Br. Name	Little Nenana River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	20
Abutment 2 DS Settlement				File	P7210770.jpg