

Routine Inspection Report

Date: 7/21/2020

Br No 1559

EAST MIDDLE RIVER

Overcast

56 F

INSPECTOR: Nicholas Murray

ASSISTANT: Jasmine Langmann

Initials NWM

Initials _____

N.E. Left F.E.

Parks Hwy End Totchaket Rd

From To

Right

Flow

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 2.1

Left

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

Right

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

Lt. Rt. **Near End**

☐ Object Markers

☐ Restricted Width

☐ Vertical Clear

☐ Load Limit

☒ Name Place

SIGNS

Load Limit Wording or Other Sign

Lt. Rt. **Far End**

☐ 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 Pl 3.00

Wear Location

Edge of Deck

Drive Condition

Unsatisfactory

Locality

Nenana

Route

Totchaket Road

Utilities

Kind	Size	Location	Owner
None			

Bridge No. 1559, EAST MIDDLE RIVER

Work Candidates

Inspected on: 07/21/2020

<i>Priority</i>	<i>Description</i>	<i>Quantity</i>	<i>Work Needed</i>
High	Substructure-Riprap (EA)	1	Stabilize the gabion baskets at the FE DS corner.
High	Bridge Rail-Replace (LF)	1	Replace deteriorated bull rail.
High	Deck-Resurface	1	Replace timber running planks to prevent damage to deck.
Low	Misc-Remove Vegetation (EA)	1	Cut brush around and under bridge.

Bridge No. 1559, EAST MIDDLE RIVER

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 preservative.
> 510	Wearing Surfaces	Untreated, rough sawn running planks. Plants are rotten and deteriorated throughout.
107	Steel Open Girder/Beam	Manufacturer's (Rapid Span) plate on the girder ends. Mud and rocks present on top of DS girder bottom flange. See 2020 FC report 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% of floor beams have full length splits.
216	Timber Abutment	None.
311	Movable Bearing	No anchor bolts on any of the bearings.
330	Metal Bridge Railing	Timber bull rail is rotten and broken in most locations.
> 515	Steel Protective Coating	
601	Brush Smart Flag	Brush encroaching on bridge.
604	Bank Protection Smart Flag	Gabions at both abutments are rotating towards the river.

Br No 1559	EAST MIDDLE RIVER	Date: 7/21/2020	ID	04 Even 2020 1559
INSPECTOR: Nicholas Murray		ASSISTANT: Jasmine Langmann	Weather Overcast	Temperature 56 F

HYDRAULICS REPORT

Inspection To Mudline At All Piers and Abuts?	Yes	Apparent HW	Yes	Stream Bottom Material
		AHW Comments	Debris on top of DS girder bottom flange.	
		Bank Erosion	Yes	Silt
		Erosion Comments	Gabions at both abutments rotating towards river.	Sand
Activities		Drift Comments	Sticks	
Drift	Light			
Riprap Condition	None	Other Hydraulic Comments	Water is stagnant, flow direction difficult to establish.	

SOUNDINGS

Measured At Surface

Top Rail

Location

Upstream

Soundings Report		All measurements in feet		04 Even 2020 1559	
Horiz Dist from	Substr Unit No.	Vert Dist to Water Surface	Vert Dist to Stream Bottom	Remarks	
0.00	1	0.0	7.9	Begin Bridge	
3.00	1	0.0	7.9		
4.10	1	0.0	8.9		
7.60	1	0.0	9.8		
11.10	1	0.0	11.3		
13.30	1	0.0	10.4		
15.10	1	0.0	13.4	EOW	
24.40	1	0.0	17.4		
30.10	1	0.0	18.4		
40.00	1	0.0	18.2		
50.20	1	0.0	18.0		
60.20	1	0.0	15.8		
69.50	1	0.0	13.6	EOW	
70.80	1	0.0	9.8		
76.20	1	0.0	8.8		
76.40	1	0.0	7.8		
79.40	1	0.0	7.8	End Bridge	

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 1559

Agency ID: 1559

On/Off System: Off System

SR: 75.9

SD/FO/ND: ND

IDENTIFICATION

State 1: 02 Alaska Struc Number 8: 1559
 Facility Carried 7: TOTCHAKET ROAD Location 9: MILE POINT 2.1
 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: 2.100 mi
 Feature Intersected 6: EAST MIDDLE RIVER
 Latitude 16: 64d 33' 37.2 " Longitude 17: 149d 11' 7.5 "
 Border Bridge Code 98: Unknown (P)
 Border Bridge No. 99: NA

INSPECTION

Frequency 91: 24 months Inspection Date 90: 07/21/2020 Next Inspection: 07/22/2022
 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: 0 None

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

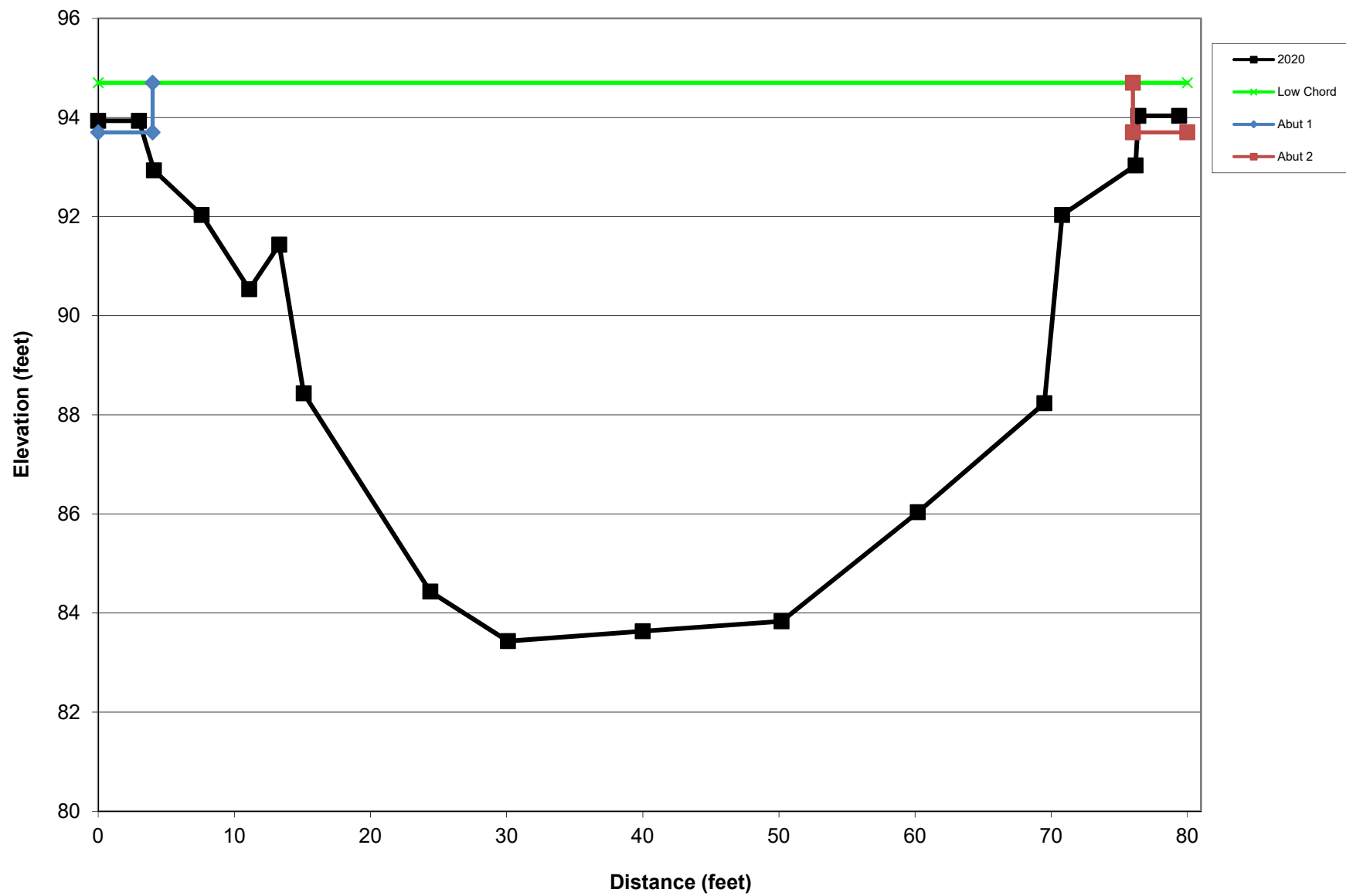
PROPOSED IMPROVEMENTS

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 1559 - East Middle River Soundings.





Bridge No. **1559** Br. Name **East Middle River** Date **07/21/20**
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **1**
 NE Looking at Bridge File **P7210851.jpg**



Bridge No. **1559** Br. Name **East Middle River** Date **07/21/20**
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **2**
 FE Looking Back at Bridge File **P7210868.jpg**



Bridge No. **1559** Br. Name **East Middle River** Date **07/21/20**
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **3**
 Looking US File **P7210862.jpg**



Bridge No. **1559** Br. Name **East Middle River** Date **07/21/20**
 Inspector **Nicholas Murray / Jasmine Langmann** Frame **4**
 Looking DS File **P7210865.jpg**



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	5
DS NE Bank				File	P7210866.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	6
US NE Bank				File	P7210861.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	7
US FE Bank				File	P7210863.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	8
DS FE Bank				File	P7210864.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	9
Abutment 1				File	P7210858.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	10
Abutment 2				File	P7210854.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	11
Elevation Looking US				File	P7210859.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	12
Rail Typ				File	P7210852.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	13
Deck Typ				File	P7210853.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	14
Underside Typ				File	P7210855.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	15
Deck Exterior Underside Typ				File	P7210860.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	16
Rocks on Interior Girder				File	P7210856.jpg



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	17
Abutment 1 US Gabion Basket				File	P7210857.jpg

Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	19
				File	



Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	18
Fabrication Plaque				File	P7210867.jpg

Bridge No.	1559	Br. Name	East Middle River	Date	07/21/20
Inspector	Nicholas Murray / Jasmine Langmann			Frame	20
				File	