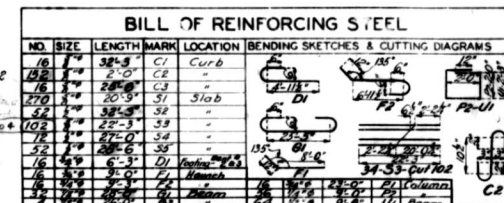


FED. ROAD DIST. NO.	STATE	FED. AID PRC J. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	50-51	19		



GENERAL NOTES:
Concrete in slabs and curbs to be 1:2-3/4 mix Class "A". All other concrete to be 1:2-4 mix Class "B".
Exposed edges shall be beveled, 3" where no other bevel is noted.
All timber to be Douglas Fir, dense structural or Southern Yellow Pine, dense heart.

All timber and piling to be creosoted.

All timber rough sawed. Slight variations in sawing to be in accordance with grading rules. All timber cut to lengths, shaped and bored as shown before creosoting. Backing plank are all drilled and bored to be as shown.

All piling to be driven. Lengths of piles to be as given on plan.

All holes in timber $\frac{1}{2}$ " except field holes for drift pins which shall be field bored $\frac{1}{2}$ " and except holes otherwise noted.

Welds to be made in accordance with indicated on plans cut washers shall be used under heads. G.G. washers shall be used under heads of all other bolts and under nuts of all timber bolts.

Loading: One 10 Ton Truck, 80 % of weight on rear axle, 30 % impact.

Point: Shop: none; Field: three coats of paint as furnished by the Missouri State Highway Department.

1. Beams with fastenings, spacers, handrail, handrail posts with washers and nuts. All steel work on end bent with fastenings, will be paint for as structural steel. Cost of metallic edge moulding will be included in unit price bid for concrete.

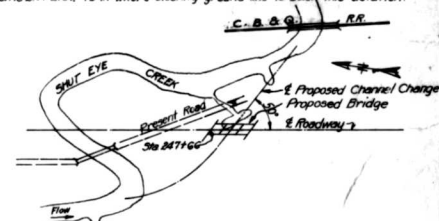
Cost of substructure hardware to be included in price bid for timber piling.

$\frac{1}{2}$ " holes $\frac{1}{2}$ " except in handrail where rivets shall be $\frac{3}{8}$ " holes $\frac{1}{2}$ " Turned bolts $\frac{1}{2}$ " holes subpunched and reamed to driving fit. Field connections, except handrail, shall be turned bolts.

Field connections for handrail shall be $\frac{3}{8}$ " button head bolts $\frac{1}{2}$ " holes.

Detail shop drawings shall be submitted to the State Highway Department in duplicate and shall be approved before steel is fabricated. Shop drawings in accordance with Section L of Standard Specifications for Highway Construction, 1939, except as noted.

From extreme L.W. Ck. 7541 where existing ground line is below the elevation.



LOCATION SKETCH

B.M. Elev 764.43 Spike in 12" Cottonwood 152' Lt. Sta 242+75

STATE ROAD FROM NOVINGER NORTH
ABOUT .25 MI. WEST OF CONNELSVILLE
PROJECT NO. S.C.-SI STA. 247+66

FINISHED **ADAIR** COUNTY

SUBMITTED BY *M.R. Say* DATE *10/3/50*
APPROVED BY *THC* DATE *10/3/50*

CHIEF ENGINEER
CONSTRUCTION CHANGES NOTED HERE

S-53

~~FINAL PLAY~~



SUBSTRUCTURE TIMBER BILL					SHAPING AND BORING SKETCHES	
PIECE	NOPCS	SIZE	LENGTH	REMARKS		
Backing Plank	2	3"x12"	29'-6"	Cut to length		
"	2	3"x12"	21'-0"	"		
"	2	3"x12"	21'-0"	Cut to length & shape		
"	2	3"x12"	31'-6"	"		
"	2	3"x12"	27'-6"	"		
"	2	3"x12"	21'-0"	"		
"	2	3"x12"	17'-0"	"		
"	2	3"x12"	27'-6"	"		
"	2	3"x12"	23'-6"	"		
"	2	3"x12"	17'-0"	"		
Shoulder Plank	2	3"x6"	4'-0"	"		
"	2	3"x6"	4'-6"	"		
Edge Support	4	6"x6"	14'-0"	"		
Backing Support	4	6"x6"	6'-0"	"		
"	4	6"x6"	4'-0"	"		
Backing Support Cap	2	6"x6"	27'-10"	Cut to length		
Pile Cap	2	12"x12"	26'-0"	"		

* S2S to exact depth of $1\frac{1}{2}"$

Note: This drawing is not to scale
Follow dimensions.

Sheet No. 1 of 2

ESTIMATED QUANTITIES

ESTIMATED QUANTITIES			
ITEM	SUPERSTR.	SUBSTR.	TC TAL.
Excavation Class 1	Cu Yds	43	43
Excavation Class 1	Cu Yds	97	97
Concrete 12" 31 min "X"	Cu Yds	34.8	34.8
Reinforced Timber Piling	Lm Ft	24.8	24.8
Crossed Timber Piling Cut-offs	Lm Ft	12	12
Crossed Timber	#B.M	2594	2594
Reinforcing Steel	Lbs	368.0	15390
Reinforced Structural Steel	Lbs	41700	41700
Concrete 12" 31 min "X"	Cu Yds	35.2	35.2

Bridge excavation above Elev 7570 will be paid for as Class 1 Bridge Excavation
Bridge excavation below Elev. 7570 will be paid for as Class 2 Bridge Excavation.

Assembled July 1930 by I.B.
Checked August 1930 by L.C.L.
Drawn April 1930 By RAB
Traced April 1930 By RAB
Checked April 1930 By F.C.L.



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/30/2017 SUBMITTAL YEAR : 2016

GENERAL STRUCTURE INFORMATION			ROUTE DESIGNATION INFORMATION		
1	State	MISSOURI	5A	Record Type	ROUTE CARRIED 'ON' STRUCT
2	District	NE	5B	Route Signing Prefix	MO
3	County	ADAIR	5C	Designated Level of Service	MAINLINE
8	Federal ID No.	8572	5D	Route Number	00149
27	Year Built	1930	5E	Directional Suffix	NOT APPLICABLE
106	Year Reconstructed	0	7	Facility Carried	MO 149 S
42A	Type of Service On	HIGHWAY	12	Base Hwy. Network	NO
21	Structure Maintenance	STATE HIGHWAY AGENCY	13A	LRS Inventory Route No.	
22	Structure Owner	STATE HIGHWAY AGENCY	13B	Subroute No.	
33	Br. Median Code	NO MEDIAN	20	Toll Status	ON FREE ROAD
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP	26	Functional Classification	07-RURAL MAJOR COLLECTOR
101	Parallel Struc Desg	NONE EXISTS	28A	Lanes on Structure	01
103	Temporary Structure	NOT TEMPORARY	100	STRAHNET Designation	RTE NOT A DEFENSE HWY
112	NBIS Bridge Length	YES	104	National Highway System	NOT ON NHS
			105	Federal Lands Highway	NOT APPLICABLE
			110	Designated Nat. Network	NO
STRUCTURE LOCATION INFORMATION			STRUCTURE TRAFFIC INFORMATION		
4	Place	NINEVEH	29	AADT	378
	Code	52526	30	AADT Year	2016
9	Location	S 9 T 63 N R 16 W	102	Direction of Traffic	ONE LANE BRIDGE FOR 2-WAY
11	Milepoint	27.18 miles	109	AADT Truck Percent	11%
16	Latitude	40 D 16 M 54 S	114	Future AADT	472
17	Longitude	92 D 42 M 1 S	115	Future AADT Year	2037
UNDERRECORD INFORMATION			STRUCTURE GEOMETRIC INFORMATION		
6	Features Intersected	SHUTEYE CR	10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
42B	Type of Service Under	WATERWAY	19	By pass Detour Length	19.84 miles
28B	Lanes Under Structure	00	32	Approach Roadway Width	20 Ft. 0 In.
54A	Vert. Clearance Ref.	N/A	34	Skew	40.00 Degrees
54B	Vert. Clearance	0 Ft. 0 In.	35	Struct. Flared	NO
55A	Rt. Lat Clear Ref.	N/A	47	Total Horiz. Clear	20 Ft. 0 In.
55B	Rt. Lat Clearance	0 Ft. 0 In.	48	Maximum Span Length	49 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.	49	Structure Length	113 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ	50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
39	Nav Vertical Clear	0 Ft. 0 In.	50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.	51	Curb to Curb Br. Width	20 Ft. 0 In.
111	Nav. Pier Protection		52	Deck Width (Out-Out)	20 Ft. 11 In.
116	Nav. Cl. Vert. Clear		53	Vert. Clearance Over Deck	99 Ft. 99 In.

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/30/2017 SUBMITTAL YEAR : 2016

LOAD RATING AND POSTING INFORMATION			MATERIAL/CONSTRUCTION INFORMATION		
31	Design Load	H 10	43A	Main Struc. Mat type	STEEL
41	Structure Status	P - POSTED FOR LOAD	43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
63	Oper. Rating Meth.	LOAD FACTOR	45	# of Main Spans	3
64	Operating Rating	28 Tons.	44A	Appr Struc. Mat type	
65	Inventory Rating Meth	LOAD FACTOR	44B	Appr Struc. Cnstr. type	
66	Inventory Rating	16 Tons.	46	# of Approach Span	0
70	Bridge Posting Code	20.0-29.9% BELOW	107	Deck Mat/Constr.	1 CONCRETE CIP
PROPOSED IMPROVEMENT INFORMATION			108A	Wear Surf Mat/Constr.	6 BITUMINOUS
	Sufficiency Rating	40.4 Percent	108B	Membrane Mat/Constr.	0 NONE
	Deficiency Rating	STRUCTURAL	108C	Deck Protect Mat/Constr.	0 NONE
	Funding Eligibility	FULL	CONDITION RATING INFORMATION		
75A	Proposed Work	REPLACEMENT SUBSTND LOAD	58	Deck Cond. Rating	4
75B	Work Done By	Contract	59	Superstructure Cond. Rating	5
76	New Struc Length	144 Ft. 3 In.	60	Substructure Cond. Rating	4
94	Struc Improve Cost	\$ 449,000	61	Channel /Channel Protection Cond. Rating	6
95	Roadway Improve Cost	\$ 44,000	62	Culvert Cond. Rating	N
96	Total Project Cost	\$ 673,000	INSPECTION INFORMATION		
97	Year of Cost Estimates	2017	90	Gen. Insp Date	12 / 15
APPRAISAL RATING INFORMATION			91	Gen. Insp. Frequency	24 Months
36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND	92A	Frac. Critical Inspection	N Months
36B	Transition Rail App. Rating	DOES NOT MEET ACCEPT STND	93A	Frac. Critical Insp. Date	
36C	Approach Rail App. Rating	DOES NOT MEET ACCEPT STND	92B	Underwater Inspection	N Months
36D	Rail End Treat. App. Rating	DOES NOT MEET ACCEPT STND	93B	Underwater Insp. Date	
67	Struc Eval App. Rating	4	92C	Special Inspection	N Months
68	Deck Geometry App. Rating	4	93C	Special Inspection Date	
69	Underclearance App. Rating	N	BORDER BRIDGE INFORMATION		
71	Waterway Adeq. App. Rating	5	98	Neighboring State Code	
72	Approach Road App. Rating	6	98B	Neighboring State % Respon	
113	Scour Assess App. Rating	8	99	Neighboring State Struc. No.	
APPROVED POSTING INFORMATION			FIELD POSTING INFORMATION		
Approved Posting Category S-5			Field Posting Category S-5		
Ton1 Ton2 Ton3			Ton1 Ton2 Ton3		
Tonnage Values for Posting Sign 17			Tonnage Values for Posting Sign 17		
General Text for Posting Sign			General Text for Posting Sign		
CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.			CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.		

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/9/2018 SUBMITTAL YEAR : 2017

GENERAL STRUCTURE INFORMATION			ROUTE DESIGNATION INFORMATION		
1	State	MISSOURI	5A	Record Type	ROUTE CARRIED 'ON' STRUCT
2	District	NE	5B	Route Signing Prefix	MO
3	County	ADAIR	5C	Designated Level of Service	MAINLINE
8	Federal ID No.	8572	5D	Route Number	00149
27	Year Built	1930	5E	Directional Suffix	NOT APPLICABLE
106	Year Reconstructed	0	7	Facility Carried	MO 149 S
42A	Type of Service On	HIGHWAY	12	Base Hwy. Network	NO
21	Structure Maintenance	STATE HIGHWAY AGENCY	13A	LRS Inventory Route No.	
22	Structure Owner	STATE HIGHWAY AGENCY	13B	Subroute No.	
33	Br. Median Code	NO MEDIAN	20	Toll Status	ON FREE ROAD
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP	26	Functional Classification	07-RURAL MAJOR COLLECTOR
101	Parallel Struc Desg	NONE EXISTS	28A	Lanes on Structure	01
103	Temporary Structure	NOT TEMPORARY	100	STRAHNET Designation	RTE NOT A DEFENSE HWY
112	NBIS Bridge Length	YES	104	National Highway System	NOT ON NHS
			105	Federal Lands Highway	NOT APPLICABLE
			110	Designated Nat. Network	NO
STRUCTURE LOCATION INFORMATION			STRUCTURE TRAFFIC INFORMATION		
4	Place	NINEVEH	29	AADT	378
	Code	52526	30	AADT Year	2016
9	Location	S 9 T 63 N R 16 W	102	Direction of Traffic	ONE LANE BRIDGE FOR 2-WAY
11	Milepoint	27.18 miles	109	AADT Truck Percent	5%
16	Latitude	40 D 16 M 54 S	114	Future AADT	472
17	Longitude	92 D 42 M 1 S	115	Future AADT Year	2036
UNDERRECORD INFORMATION			STRUCTURE GEOMETRIC INFORMATION		
6	Features Intersected	SHUTEYE CR	10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
42B	Type of Service Under	WATERWAY	19	By pass Detour Length	19.84 miles
28B	Lanes Under Structure	00	32	Approach Roadway Width	20 Ft. 0 In.
54A	Vert. Clearance Ref.	N/A	34	Skew	40.00 Degrees
54B	Vert. Clearance	0 Ft. 0 In.	35	Struct. Flared	NO
55A	Rt. Lat Clear Ref.	N/A	47	Total Horiz. Clear	20 Ft. 0 In.
55B	Rt. Lat Clearance	0 Ft. 0 In.	48	Maximum Span Length	49 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.	49	Structure Length	113 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ	50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
39	Nav Vertical Clear	0 Ft. 0 In.	50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.	51	Curb to Curb Br. Width	20 Ft. 0 In.
111	Nav. Pier Protection		52	Deck Width (Out-Out)	20 Ft. 11 In.
116	Nav. Cl. Vert. Clear		53	Vert. Clearance Over Deck	99 Ft. 99 In.

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/9/2018 SUBMITTAL YEAR : 2017

LOAD RATING AND POSTING INFORMATION			MATERIAL/CONSTRUCTION INFORMATION		
31	Design Load	H 10	43A	Main Struc. Mat type	STEEL
41	Structure Status	P - POSTED FOR LOAD	43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
63	Oper. Rating Meth.	LOAD FACTOR	45	# of Main Spans	3
64	Operating Rating	28 Tons.	44A	Appr Struc. Mat type	
65	Inventory Rating Meth	LOAD FACTOR	44B	Appr Struc. Cnstr. type	
66	Inventory Rating	16 Tons.	46	# of Approach Span	0
70	Bridge Posting Code	20.0-29.9% BELOW	107	Deck Mat/Constr.	1 CONCRETE CIP
PROPOSED IMPROVEMENT INFORMATION			108A	Wear Surf Mat/Constr.	6 BITUMINOUS
	Sufficiency Rating	40.4 Percent	108B	Membrane Mat/Constr.	0 NONE
	Deficiency Rating	STRUCTURAL	108C	Deck Protect Mat/Constr.	0 NONE
	Funding Eligibility	FULL	CONDITION RATING INFORMATION		
75A	Proposed Work	REPLACEMENT SUBSTND LOAD	58	Deck Cond. Rating	4
75B	Work Done By	Contract	59	Superstructure Cond. Rating	5
76	New Struc Length	144 Ft. 3 In.	60	Substructure Cond. Rating	4
94	Struc Improve Cost	\$ 449,000	61	Channel /Channel Protection Cond. Rating	6
95	Roadway Improve Cost	\$ 44,000	62	Culvert Cond. Rating	N
96	Total Project Cost	\$ 673,000	INSPECTION INFORMATION		
97	Year of Cost Estimates	2018	90	Gen. Insp Date	12 / 17
APPRAISAL RATING INFORMATION			91	Gen. Insp. Frequency	24 Months
36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND	92A	Frac. Critical Inspection	N Months
36B	Transition Rail App. Rating	DOES NOT MEET ACCEPT STND	93A	Frac. Critical Insp. Date	
36C	Approach Rail App. Rating	DOES NOT MEET ACCEPT STND	92B	Underwater Inspection	N Months
36D	Rail End Treat. App. Rating	DOES NOT MEET ACCEPT STND	93B	Underwater Insp. Date	
67	Struc Eval App. Rating	4	92C	Special Inspection	N Months
68	Deck Geometry App. Rating	4	93C	Special Inspection Date	
69	Underclearance App. Rating	N	BORDER BRIDGE INFORMATION		
71	Waterway Adeq. App. Rating	5	98	Neighboring State Code	
72	Approach Road App. Rating	6	98B	Neighboring State % Respon	
113	Scour Assess App. Rating	8	99	Neighboring State Struc. No.	
APPROVED POSTING INFORMATION			FIELD POSTING INFORMATION		
Approved Posting Category S-5			Field Posting Category S-5		
Ton1 Ton2 Ton3			Ton1 Ton2 Ton3		
Tonnage Values for Posting Sign 17			Tonnage Values for Posting Sign 17		
General Text for Posting Sign			General Text for Posting Sign		
CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.			CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.		

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/8/2019 SUBMITTAL YEAR : 2018

GENERAL STRUCTURE INFORMATION			ROUTE DESIGNATION INFORMATION		
1	State	MISSOURI	5A	Record Type	ROUTE CARRIED 'ON' STRUCT
2	District	NE	5B	Route Signing Prefix	MO
3	County	ADAIR	5C	Designated Level of Service	MAINLINE
8	Federal ID No.	8572	5D	Route Number	00149
27	Year Built	1930	5E	Directional Suffix	NOT APPLICABLE
106	Year Reconstructed	0	7	Facility Carried	MO 149 S
42A	Type of Service On	HIGHWAY	12	Base Hwy. Network	NO
21	Structure Maintenance	STATE HIGHWAY AGENCY	13A	LRS Inventory Route No.	
22	Structure Owner	STATE HIGHWAY AGENCY	13B	Subroute No.	
33	Br. Median Code	NO MEDIAN	20	Toll Status	ON FREE ROAD
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP	26	Functional Classification	07-RURAL MAJOR COLLECTOR
101	Parallel Struc Desg	NONE EXISTS	28A	Lanes on Structure	01
103	Temporary Structure	NOT TEMPORARY	100	STRAHNET Designation	RTE NOT A DEFENSE HWY
112	NBIS Bridge Length	YES	104	National Highway System	NOT ON NHS
			105	Federal Lands Highway	NOT APPLICABLE
			110	Designated Nat. Network	NO
STRUCTURE LOCATION INFORMATION			STRUCTURE TRAFFIC INFORMATION		
4	Place	NINEVEH	29	AADT	381
	Code	52526	30	AADT Year	2017
9	Location	S 9 T 63 N R 16 W	102	Direction of Traffic	ONE LANE BRIDGE FOR 2-WAY
11	Milepoint	27.18 miles	109	AADT Truck Percent	5%
16	Latitude	40 D 16 M 54 S	114	Future AADT	476
17	Longitude	92 D 42 M 1 S	115	Future AADT Year	2037
UNDERRECORD INFORMATION			STRUCTURE GEOMETRIC INFORMATION		
6	Features Intersected	SHUTEYE CR	10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
42B	Type of Service Under	WATERWAY	19	By pass Detour Length	19.84 miles
28B	Lanes Under Structure	00	32	Approach Roadway Width	20 Ft. 0 In.
54A	Vert. Clearance Ref.	N/A	34	Skew	40.00 Degrees
54B	Vert. Clearance	0 Ft. 0 In.	35	Struct. Flared	NO
55A	Rt. Lat Clear Ref.	N/A	47	Total Horiz. Clear	20 Ft. 0 In.
55B	Rt. Lat Clearance	0 Ft. 0 In.	48	Maximum Span Length	49 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.	49	Structure Length	113 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ	50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
39	Nav Vertical Clear	0 Ft. 0 In.	50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.	51	Curb to Curb Br. Width	20 Ft. 0 In.
111	Nav. Pier Protection		52	Deck Width (Out-Out)	20 Ft. 11 In.
116	Nav. Cl. Vert. Clear		53	Vert. Clearance Over Deck	99 Ft. 99 In.

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : APPROVED NBI STATUS : P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 1/8/2019 SUBMITTAL YEAR : 2018

LOAD RATING AND POSTING INFORMATION			MATERIAL/CONSTRUCTION INFORMATION		
31	Design Load	H 10	43A	Main Struc. Mat type	STEEL
41	Structure Status	P - POSTED FOR LOAD	43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
63	Oper. Rating Meth.	LOAD FACTOR	45	# of Main Spans	3
64	Operating Rating	28 Tons.	44A	Appr Struc. Mat type	
65	Inventory Rating Meth	LOAD FACTOR	44B	Appr Struc. Cnstr. type	
66	Inventory Rating	16 Tons.	46	# of Approach Span	0
70	Bridge Posting Code	20.0-29.9% BELOW	107	Deck Mat/Constr.	1 CONCRETE CIP
PROPOSED IMPROVEMENT INFORMATION			108A	Wear Surf Mat/Constr.	6 BITUMINOUS
	Sufficiency Rating	40.4 Percent	108B	Membrane Mat/Constr.	0 NONE
	Deficiency Rating	STRUCTURAL	108C	Deck Protect Mat/Constr.	0 NONE
	Funding Eligibility	FULL	CONDITION RATING INFORMATION		
75A	Proposed Work	REPLACEMENT SUBSTND LOAD	58	Deck Cond. Rating	4
75B	Work Done By	Contract	59	Superstructure Cond. Rating	5
76	New Struc Length	144 Ft. 3 In.	60	Substructure Cond. Rating	4
94	Struc Improve Cost	\$ 449,000	61	Channel /Channel Protection Cond. Rating	6
95	Roadway Improve Cost	\$ 44,000	62	Culvert Cond. Rating	N
96	Total Project Cost	\$ 673,000	INSPECTION INFORMATION		
97	Year of Cost Estimates	2019	90	Gen. Insp Date	12 / 17
APPRAISAL RATING INFORMATION			91	Gen. Insp. Frequency	24 Months
36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND	92A	Frac. Critical Inspection	N Months
36B	Transition Rail App. Rating	DOES NOT MEET ACCEPT STND	93A	Frac. Critical Insp. Date	
36C	Approach Rail App. Rating	DOES NOT MEET ACCEPT STND	92B	Underwater Inspection	N Months
36D	Rail End Treat. App. Rating	DOES NOT MEET ACCEPT STND	93B	Underwater Insp. Date	
67	Struc Eval App. Rating	4	92C	Special Inspection	N Months
68	Deck Geometry App. Rating	4	93C	Special Inspection Date	
69	Underclearance App. Rating	N	BORDER BRIDGE INFORMATION		
71	Waterway Adeq. App. Rating	5	98	Neighboring State Code	
72	Approach Road App. Rating	6	98B	Neighboring State % Respon	
113	Scour Assess App. Rating	8	99	Neighboring State Struc. No.	
APPROVED POSTING INFORMATION			FIELD POSTING INFORMATION		
Approved Posting Category S-5			Field Posting Category S-5		
Ton1 Ton2 Ton3			Ton1 Ton2 Ton3		
Tonnage Values for Posting Sign 17			Tonnage Values for Posting Sign 17		
General Text for Posting Sign			General Text for Posting Sign		
CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.			CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.		

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : CONVERTED NBI STATUS : T
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 3/12/2019 SUBMITTAL YEAR : 2019

GENERAL STRUCTURE INFORMATION			ROUTE DESIGNATION INFORMATION		
1	State	MISSOURI	5A	Record Type	ROUTE CARRIED 'ON' STRUCT
2	District	NE	5B	Route Signing Prefix	MO
3	County	ADAIR	5C	Designated Level of Service	MAINLINE
8	Federal ID No.	8572	5D	Route Number	00149
27	Year Built	1930	5E	Directional Suffix	NOT APPLICABLE
106	Year Reconstructed	0	7	Facility Carried	MO 149 S
42A	Type of Service On	HIGHWAY	12	Base Hwy. Network	NO
21	Structure Maintenance	STATE HIGHWAY AGENCY	13A	LRS Inventory Route No.	
22	Structure Owner	STATE HIGHWAY AGENCY	13B	Subroute No.	
33	Br. Median Code	NO MEDIAN	20	Toll Status	ON FREE ROAD
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP	26	Functional Classification	07-RURAL MAJOR COLLECTOR
101	Parallel Struc Desg	NONE EXISTS	28A	Lanes on Structure	01
103	Temporary Structure	NOT TEMPORARY	100	STRAHNET Designation	RTE NOT A DEFENSE HWY
112	NBIS Bridge Length	YES	104	National Highway System	NOT ON NHS
			105	Federal Lands Highway	NOT APPLICABLE
			110	Designated Nat. Network	NO
STRUCTURE LOCATION INFORMATION			STRUCTURE TRAFFIC INFORMATION		
4	Place	NINEVEH	29	AADT	381
	Code	52526	30	AADT Year	2017
9	Location	S 9 T 63 N R 16 W	102	Direction of Traffic	ONE LANE BRIDGE FOR 2-WAY
11	Milepoint	27.40 miles	109	AADT Truck Percent	5%
16	Latitude	40 D 16 M 54 S	114	Future AADT	476
17	Longitude	92 D 42 M 1 S	115	Future AADT Year	2037
UNDERRECORD INFORMATION			STRUCTURE GEOMETRIC INFORMATION		
6	Features Intersected	SHUTEYE CR	10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
42B	Type of Service Under	WATERWAY	19	By pass Detour Length	20.00 miles
28B	Lanes Under Structure	00	32	Approach Roadway Width	20 Ft. 0 In.
54A	Vert. Clearance Ref.	N/A	34	Skew	40.00 Degrees
54B	Vert. Clearance	0 Ft. 0 In.	35	Struct. Flared	NO
55A	Rt. Lat Clear Ref.	N/A	47	Total Horiz. Clear	20 Ft. 0 In.
55B	Rt. Lat Clearance	0 Ft. 0 In.	48	Maximum Span Length	49 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.	49	Structure Length	113 Ft. 10 In.
38	Navigation Control	PERMIT NOT REQ	50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
39	Nav Vertical Clear	0 Ft. 0 In.	50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.	51	Curb to Curb Br. Width	20 Ft. 0 In.
111	Nav. Pier Protection		52	Deck Width (Out-Out)	20 Ft. 12 In.
116	Nav. Cl. Vert. Clear		53	Vert. Clearance Over Deck	99 Ft. 99 In.

Design_No = S0053



Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

November 13, 2019
11:30:42am

COUNTY : ADAIR BRIDGE : S0053 REVIEW STATUS : CONVERTED NBI STATUS : T
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT RUN DATE : 3/12/2019 SUBMITTAL YEAR : 2019

LOAD RATING AND POSTING INFORMATION			MATERIAL/CONSTRUCTION INFORMATION		
31	Design Load	H 10	43A	Main Struc. Mat type	STEEL
41	Structure Status	POSTED FOR LOAD	43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
63	Oper. Rating Meth.	LOAD FACTOR	45	# of Main Spans	3
64	Operating Rating	28 Tons.	44A	Appr Struc. Mat type	000
65	Inventory Rating Meth	LOAD FACTOR	44B	Appr Struc. Cnstr. type	000
66	Inventory Rating	16 Tons.	46	# of Approach Span	0
70	Bridge Posting Code	20.0-29.9% BELOW	107	Deck Mat/Constr.	1 CONCRETE CIP
PROPOSED IMPROVEMENT INFORMATION			108A	Wear Surf Mat/Constr.	6 BITUMINOUS
Sufficiency Rating 40.4 Percent			108B	Membrane Mat/Constr.	0 NONE
Deficiency Rating STRUCTURAL			108C	Deck Protect Mat/Constr.	0 NONE
Funding Eligibility FULL			CONDITION RATING INFORMATION		
75A	Proposed Work	REPLACEMENT SUBSTND LOAD	58	Deck Cond. Rating	4
75B	Work Done By	Contract	59	Superstructure Cond. Rating	5
76	New Struc Length	144 Ft. 4 In.	60	Substructure Cond. Rating	4
94	Struc Improve Cost	\$ 449,000	61	Channel /Channel Protection Cond. Rating	6
95	Roadway Improve Cost	\$ 44,000	62	Culvert Cond. Rating	N
96	Total Project Cost	\$ 673,000	INSPECTION INFORMATION		
97	Year of Cost Estimates	2019	90	Gen. Insp Date	12 / 17
APPRAISAL RATING INFORMATION			91	Gen. Insp. Frequency	24 Months
36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND	92A	Frac. Critical Inspection	N Months
36B	Transition Rail App. Rating	DOES NOT MEET ACCEPT STND	93A	Frac. Critical Insp. Date	
36C	Approach Rail App. Rating	DOES NOT MEET ACCEPT STND	92B	Underwater Inspection	N Months
36D	Rail End Treat. App. Rating	DOES NOT MEET ACCEPT STND	93B	Underwater Insp. Date	
67	Struc Eval App. Rating	4	92C	Special Inspection	N Months
68	Deck Geometry App. Rating	4	93C	Special Inspection Date	
69	Underclearance App. Rating	N	BORDER BRIDGE INFORMATION		
71	Waterway Adeq. App. Rating	5	98	Neighboring State Code	
72	Approach Road App. Rating	6	98B	Neighboring State % Respon	
113	Scour Assess App. Rating	8	99	Neighboring State Struc. No.	
APPROVED POSTING INFORMATION			FIELD POSTING INFORMATION		
Approved Posting Category S-5			Field Posting Category S-5		
Ton1 Ton2 Ton3			Ton1 Ton2 Ton3		
Tonnage Values for Posting Sign 17			Tonnage Values for Posting Sign 17		
General Text for Posting Sign			General Text for Posting Sign		
CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.			CENTERLINE OF BRIDGE AND TRUCKS OVER 17 TONS 15 MPH ON BRIDGE.		

Design_No = S0053

SHOP DRAWINGS FOR STEEL STRUCTURE

Adair COUNTY BRIDGE NO. S-53



PROJECT NO. SC-51

INDEX

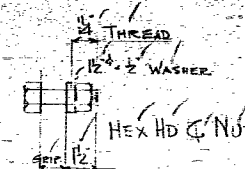
ERECTION SHEET NOS. _____ THRU _____
GENERAL MATERIALS SHEET NOS. 1 ^{of} 2 THRU 2
BOLT LIST SHEET NOS. _____ THRU _____
BEARING DETAILS SHEET NOS. _____ THRU _____
BRIDGE RAILING DETAILS SHEET NOS. _____ THRU _____
PAINT DETAILS SHEET NOS. _____ THRU _____
BLOCKING DIAGRAM SHEET NOS. _____ THRU _____

EXPANSION DEVICE DETAILS SHEET NOS. _____ THRU _____
SHOP WELDED SPLICE DETAILS SHEET NOS. _____ THRU _____
WEB AND FLANGE CUTTING DETAILS SHEETS NOS. _____ THRU _____
DRAIN DETAILS SHEET NOS. _____ THRU _____
DRAINAGE SYSTEM DETAILS SHEET NOS. _____ THRU _____
STEEL GRID FLOORING DETAILS SHEET NOS. _____ THRU _____
PEDESTRIAN FENCE DETAILS SHEET NOS. _____ THRU _____

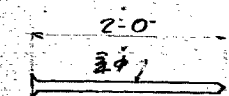
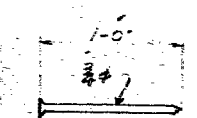
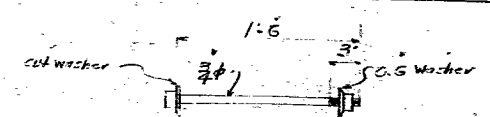
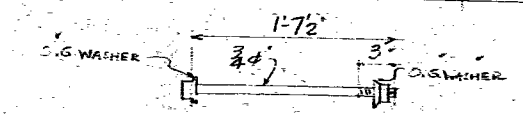
FOR <u>ST. JOHNS STREET STEEL CO.</u>		<u>ST. JOHNS MO.</u>	
DCE. OF WORK <u>2-20-01 1/2" x 2-1/2" RAIL I.R. SPAN</u>		OVER <u>10' 0" F.R. GLEBE</u>	
Ways To <u>HARRY T. BUELLVILLE MO.</u>		PACED <u>50' 0" 1/2" 1/2" 1/2"</u>	
LOCATION <u>CLINTON IOWA</u>		<u>SPR. 247756</u>	
DESIGN DATE	DESIGN OFFICE NO.	DESIGN ENGINEER NO.	DATE
DESIGNER	DESIGNER	DESIGNER	DESIGNER

	CLINTON BRIDGE WORKS	
	CLINTON, IOWA (EST. 1888)	
STRUCTURAL STEEL		
RAILWAY AND HIGHWAY BRIDGES		

DATE OF ORDER	DATE OF DELIVERY	DATE OF PAYMENT	CONTRACT
1901	1901	1901	
AMOUNT OF ORDER	AMOUNT PAID	AMOUNT DUE	1901
1901	1901	1901	



SCHEDULE OF FIELD BOLTS					
NUMBER	SIZE	GROUP	LENGTH	DESCRIPTION	LOCATION
16	3/4"	24	24"	TIEED BOLTS	N1 TO F1&P1
16	"	14	24"	"	N1 TO H1&K1
16	"	8	24"	"	N1 TO A1&B1
16	"	13	24"	"	N1 TO C1&D1
32	"	8	24"	"	T1 TO E1&F1
32	"	12	37"	"	T1 TO H1&K1
16	"	1	24"	"	P1 TO A1&B1
16	"	12	37"	"	P1 TO C1&D1
64	5/8"	24	12 1/4"	HEX NUTS	ATTN TO RAIL POST
40	"	"	12	"	ATTN TO "
40	"	"	12	"	ATTN TO "
40	"	"	12	"	ATTN TO "
40	5/8"	"	4"	LAG SCREWS	EXPANSION PLATE TO WOOD
160	WASHERS 1/2" x 3/4" - 1/2" HOLE				



37

NOTES

FOR ST. JOSEPH STEEL CO. ST. JOSEPH, MO.

NO. OF BOLTS 2-3/4" x 24" SCHEDULE 40 STEEL I-BEAM SPAN 10'-0" AT

SPAN TO HARRY TID AT CHANNEL SINGLE RIG

CLINTON BRIDGE WORKS

STRUCTURAL STEEL

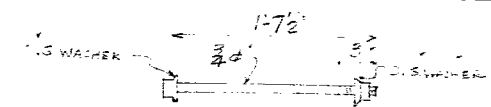
INSPECTION BY

ST. JOSEPH STEEL CO.

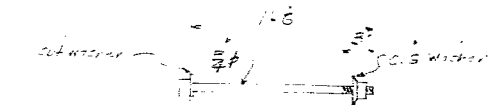
1/2" THREAD
1/2" x 2" WASHER
HEX HD (N)T

ACTUAL NO. REQUIRED

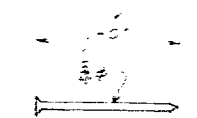
SCHEDULE OF FIELD BOLTS					
NO. PER	SIZE	GRIP	LENGTH	DESCRIPTION	LOCATION
16	3/4"	3/4"	2 1/2"	TREATED BOLTS	NI TO E1EPI
16	"	1 1/2"	2 1/2"	"	NI TO H1EPI
16	"	1 1/2"	2 1/2"	"	NI TO A1EPI
32	"	1 1/2"	2 1/2"	"	NI TO C1EPI
32	"	1 1/2"	2 1/2"	"	TI TO E1EPI
16	"	1 1/2"	2 1/2"	"	PI TO H1EPI
16	"	1 1/2"	2 1/2"	"	PI TO A1EPI
16	"	1 1/2"	2 1/2"	"	PI TO C1EPI
64	5/8"	3/4"	1 1/2"	EX. ON HO BOLE	AVI TO RAIL POST
40	"	"	1 1/2"	"	AVI TO "
40	"	"	1 1/2"	"	AVI TO "
40	"	"	1 1/2"	"	AVI TO "
40	5/8"	3/4"	1 1/2"	EX. ON HO BOLE	EXPANSION PLATE TO WASH
160	WASHERS	1 1/2"	3/4"	1 1/2" HOLE	



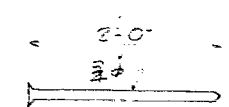
12 BOLTS THUS (ONE TIME TO PILE)



44 BOLTS THUS (ONE TIME TO PILE)



3-DRIPT PINS THUS (EACH EACH NI SUN. RT)



3-DRIPT PINS THUS (PILE CAP TO PILE)

37

NOTES
RIVETS
OPEN HOLES
REAMING
FIELD BOLTS OR RIVETS
PAINT SHOP NOTE FIELD BOLTS
SHOP ASSEMBLY
INSPECTION BY
ATERIAL STOCK OR MILL

FOR ST. JOSEPH STREET STEEL CO. ST. JOSEPH, MO.
DES. OF WORK 2-310 & 1-470 - FENCE E.M. VAN FENCE ST. JOSEPH
SHIP TO HARRY TIDD AT CONNELSVILLE, MO.
LOCATION
ORDER DATE
RIVETING ORDER NO.
CLINTON BRIDGE WORKS
CLINTON, IOWA
STRUCTURAL STEEL
RAILWAY AND HIGHWAY BRIDGES
CONTRACT
No. 1644