Montana Department of Transportation

HWY 567 / Pipe Creek Road
Libby North
Corridor Study

Appendix G

Forest Service Bridge Report

USDA, FOREST SERVICE
ROUTINE ROAD BRIDGE INSPECTION REPORT

IDENTIFICATION and LOCATION:

Structure Name: **Timberlane**

Route: 68 Milepost: 07.4

Forest: Kootenai National Forest District: Libby

Feature Crossed: Pipe Creek

BRIDGE RATING SUMMARY:

Date: 8/12/05 Time Started: 12:30 PM Time Completed: 1:45 PM

Inspection Team: K. Yakawich / M. Yakawich

Weather: Rain 65°

Rerating required based on current inspection?

YES (NO) (Circle One)

Organization: Great West Engineering

Insp Team Leader: _____ Signature

Ind. In Charge _____ Signature

RECOMMENDED WORK

REASON* /PRIORITY**	REFERENCE CODE	DESCRIPTION	COST
H/N		Technical Bridge Inspection	$500
H/N	36.C	Repair bridge rail post anchorage	$2,000
H/N	59.C1	Repair bearing devices at abutment #1	$5,000
H,R/N	59.C2	Paint Steel girders	$20,000
H/N	60.15	Place riprap along downstream north bank	$500
H,R,N	61.1	Remove leaning tree	$500
H/N	Wearing Surface	Asphalt seal and patch on areas above backwalls to stop water from penetrating onto caps	$400

*H = Health & Safety R = Resource Protection M = Mission
**E = Emergency C = Critical N = Non critical

Structure Name: Timberlane Inspection Date: 8/12/05
Route & MP: 68-07.4

CONDITION CODES AND REMARKS

			CONDITION RATING	REMARKS
WEARING SURFACE			**G**	Some section loss at abutment #1
58. DECK:			**7**	
	*1.	DECK SLAB/PANELS/JOISTS	G	Spalls at guard angles. Transverse cracks in soffit. Crack at railpost connection at abutment #2, upstream.
	C1.	DECK JOINTS	NA	
	C2.	CURBS	G	Transverse cracks.
	C3.	SIDEWALKS	NA	
	C4.	BRIDGE RAILINGS	G	
	C5.	DRAINS AND DRAINAGE	G	
	C6.	RIDEABILITY	G	
	C7.	CLEANLINESS	G	
	C8.	UTILITIES	NA	
59. SUPERSTRUCTURE:			**7**	
	*1.	GIRDERS 5 EA.	F	Weld still cracked at bearing stiffener at abutment #2, exterior girder.
		A. DIAPHRAGMS	G	
		B. BRACING	NA	
	*2.	FLOOR BEAMS	NA	
	*3.	STRINGERS	NA	
	*4.	TRUSSES	NA	
		A. CHORDS	NA	
		B. PORTALS	NA	
		C. VERTICALS/DIAGONAL	NA	
		D. BRACING	NA	
	C1.	BEARING DEVICES	P	Two anchor bolts sheared off at abutment #1, upstream girder.
	C2.	PAINT	F	No noticable progression in flaking paint on 2nd girder from downstream.
	C3.	DEFLECTION UNDER LOAD	NOB	
	C4.	VIBRATION UNDERLOAD	NOB	
60. SUBSTRUCTURE:			**7**	
A	*1.	ALIGNMENT (TIPPING, TILTING,...)	G	
B	*2.	EROSION OR SCOUR	F	Loss of material under abutments and end wing walls.
U	*3.	SETTLEMENT	G	
T		**TIMBER ABUTMENTS (INCL. WW)**		
M	*4.	CAPS	NA	
E	*5.	POSTS/PILES	NA	
N	*6.	BACKING PLANKS	NA	
T	*7.	SILLS/FOOTINGS	NA	
S	*8.	CRIB WALLS	NA	
		OTHER ABUTMENTS		
	*9.	CAPS	G	Random cracking.
	*10.	FOOTINGS	NOB	
	*11.	BACKWALLS	G	Leaking joint between backwall and deck causing wet conditions at bearings.
	*12.	PILES	NA	Several tight vertical cracks.
	*13.	WINGWALLS	F	Corner spalls typical.
P	*14.	ALIGNMENT (TIPING, TILTING,…)	NA	
I	*15.	EROSION OR SCOUR	NA	
E	*16.	SETTLEMENT	NA	
R	*17.	CAPS	NA	
S	*18.	COLUMNS OR WALLS	NA	
	*19.	FOOTINGS	NA	
	*20.	PILES	NA	
	*21.	BRACING	NA	

* Only these items are used in the determination of the overall condition rating for that category ie. Deck, superstructure, substructure. Other items should be rated and remarked on but NOT included in determining the overall category rating. Items enumerated using a C (ex C1) should be commented on but not rated. See the FHWA Coding Guide for further information as to what is included in condition rating.

CONDITION CODES AND REMARKS (Continued)

		CONDITION RATING	REMARKS
61. CHANNEL AND CHANNEL PROTECTION		**7**	
*1.	CHANNEL SCOUR/EROSION	F	As previously noted downstream bank erosion has resulted in undermining of a large tree with exposed roots. Tree is currently leaning towards bridge.
*2.	CHANNEL PROTECTION	G	
*3.	VEGETATION	G	
*4.	WATERWAY OBSTR./DRAFT	G	Log upstream 50'.
*5.	ADEQUACY OF OPENINGS	G	
C1.	CLEAR HEIGHT	G	
APPROACH CONDITION:		**G**	
*1.	SURFACING	G	Loss of surfacing above backwalls.
*2.	SHOULDER EMBANKMENT	G	
*3.	ROADWAY EMBANKMENT	G	
*4.	APPROACH SETTLEMENT	G	Transverse crack at approaches with ½" of settlement at abutment #1 (south).

APPRAISAL CODES and REMARKS

36. TRAFFIC SAFETY FEATURES:		**1 1 1 1**	
*A.	BRIDGE RAILING	G	Collision impact damage at abutment #2, upstream post at deck connnection.
*B.	RAIL TRANSITIONS	G	New 2001.
*C.	APPROACH GUARDRAILS	G	New 2001.
*D.	APPROACH RAIL ENDS	G	New 2001.
1.	SIGNING	NA	
2.	OBJECT MARKERS	G	Located on end buffers.
72. APPROACH ROADWAY ALIGNMENT:		**8**	
1.	HORIZONTAL	G	
2.	VERTICAL	G	

Bridge Appraisal Rating items may change as a result of this inspection. Use FHWA Coding Guide and Regional Office direction for appraisal rating code determination.

67. STRUCTURAL EVALUATION:	**7**	**68. DECK GEOMETRY:**	**7**		
71. WATERWAY ADEQUACY:	**9**	**113. SCOUR CRITICAL BRIDGES:**		**6**	
STRUCTURE LIFE REMAINING	**25**	**SCOUR VULNERABILITY:**		**Not determined**	

CONDITION RATING OF EACH MEMBER OR ELEMENT

NA -NOT APPLICABLE

NOB -APPLICABLE, BUT NO OBSERVED. (Give reason unless obvious)

G = GOOD -ELEMENT IN NEW OR GOOD CONDITION WITH NO REPAIRS NECESSARY.

F = FAIR -ELEMENT IS STILL PERFORMING THE FUNCTION FOR WHICH IT WAS INTENDED BUT MAY NEED MAINTENANCE.

P = POOR -ELEMENT STILL PERFORMING THE FUNCTION FOR WHICH IT WAS INTENDED BUT IS IN NEED OF REPAIRS.

C = CRITICAL -ELEMENT IS NOT PERFORMING THE FUNCTION FOR WHICH IT WAS INTENDED

INSPECTION PHOTOS

Photo #1 – View of the approach looking back.

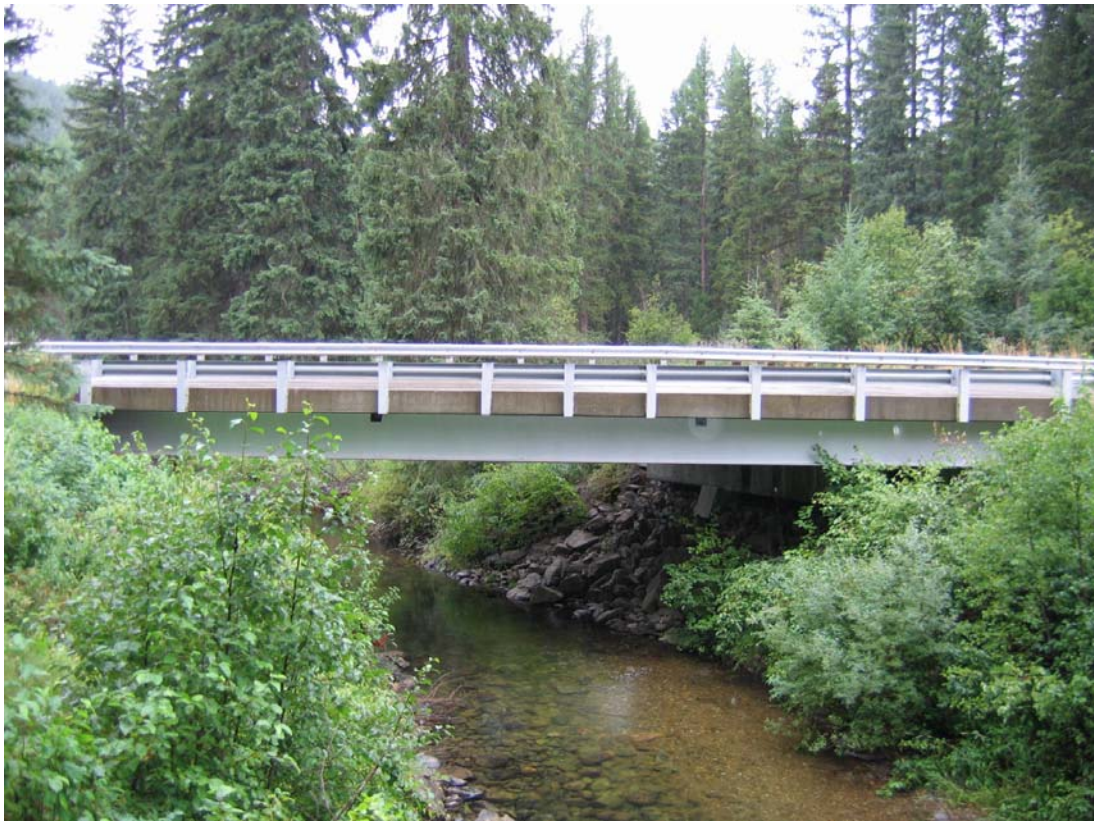

Photo #2 – Profile view looking downstream.

Photo #3 – View of the broken anchor bolt at abutment #1.

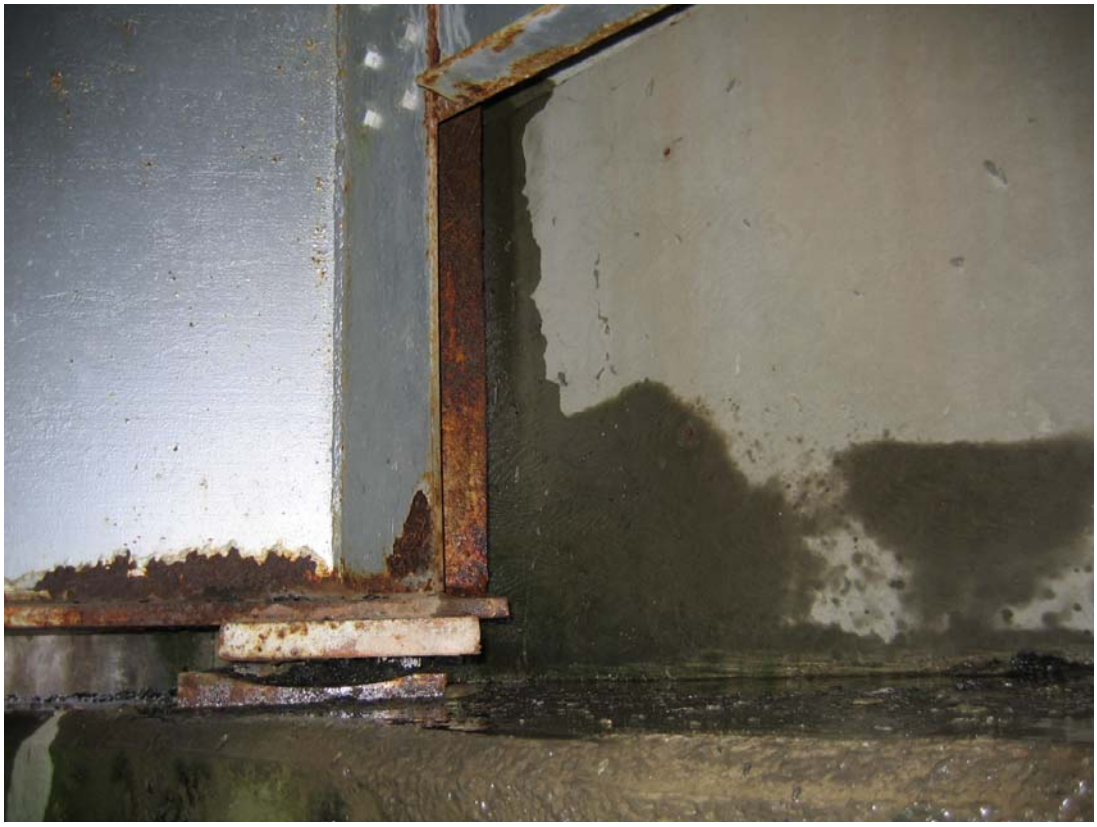

Photo #4 – View of the expanded bearing at abutment #1. Also note the leaking backwall/deck connection.

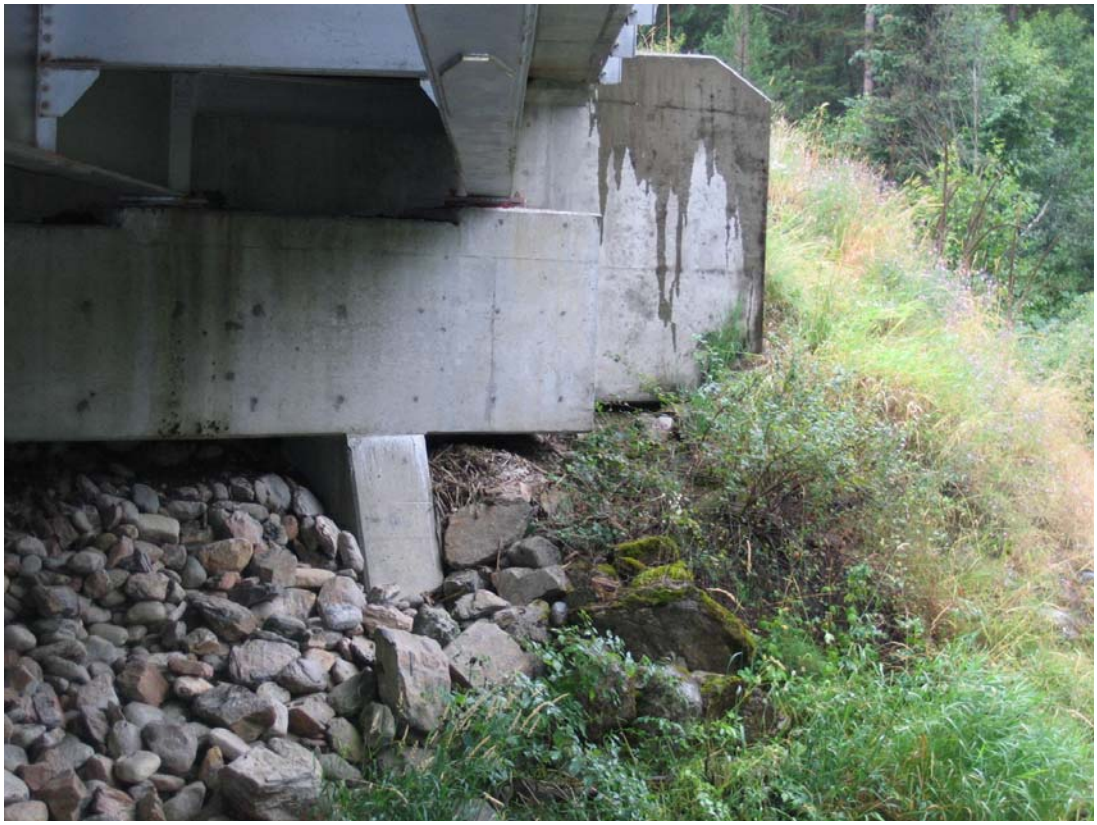

Photo #5 – View of material loss typical under both abutments and wing walls.

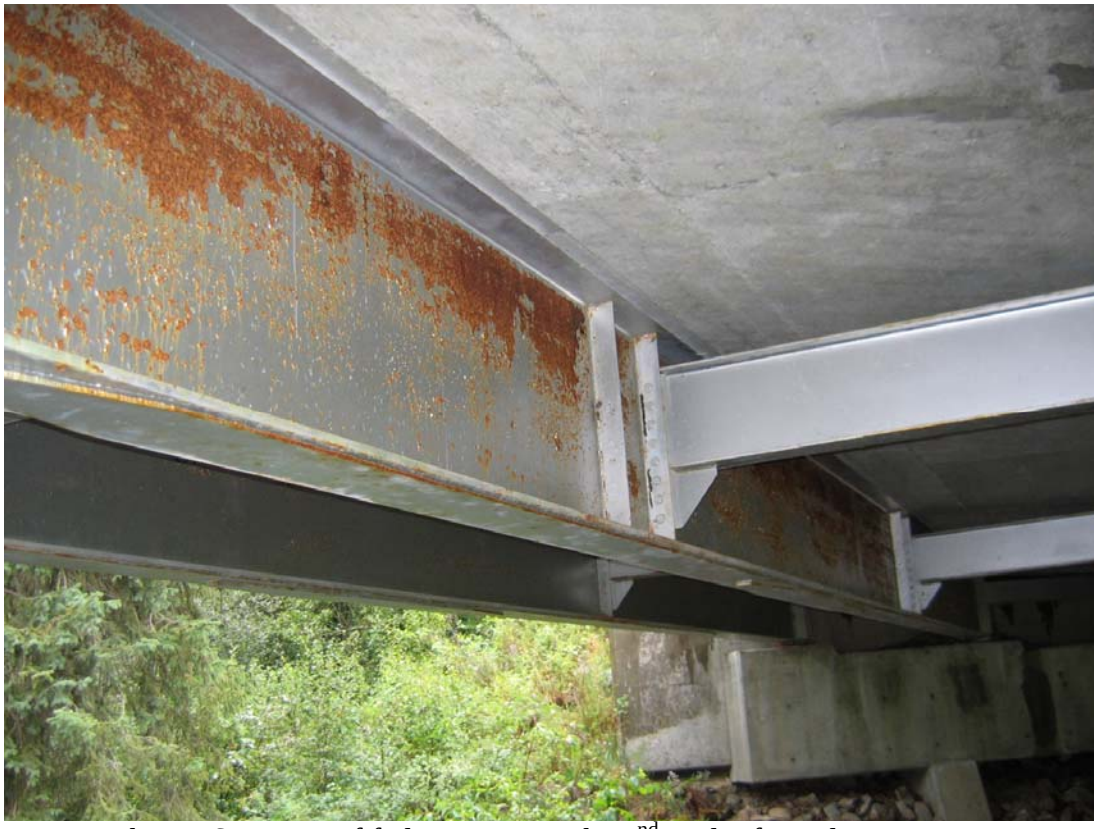

Photo #6 – View of failing paint on the 2nd girder from downstream.

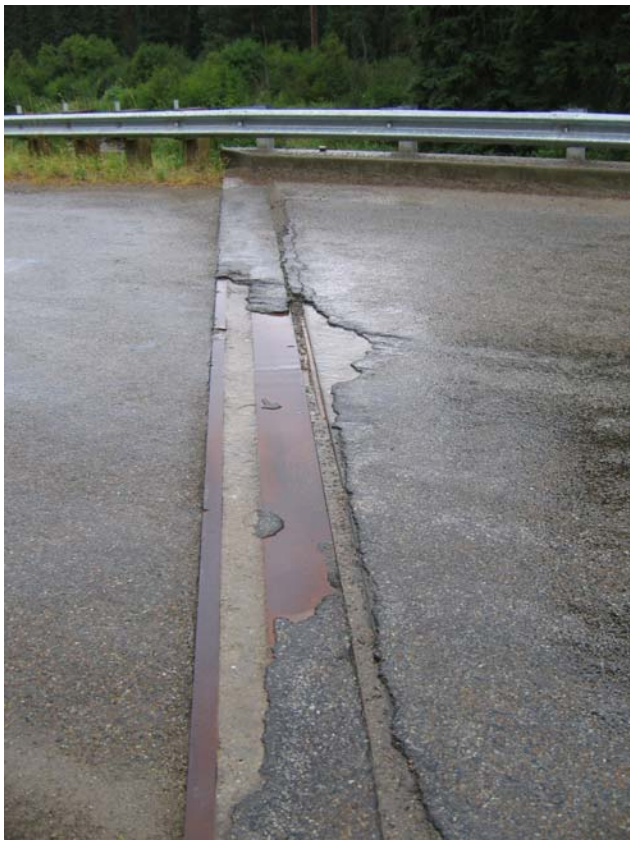

Photo #7 – View of failing approach asphalt at abutment #1 which creates an abrupt transition on to the deck.

Photo #8 – View of the downstream streambank and undermining of a large tree which is leaning towards the bridge.