

BRIDGE INSPECTION

BRIDGE NO./NAME K445: Pasayten River FSR (48.90 km)

Inspection Date: October 2nd, 2012

Inspected By: M. Hanson

Year Built: 1982

Number of Spans: 1



Span Lengths: 32,000 mm

Superstructure Type: Four glulam slab girders, 1750 mm x 275 mm spaced at 180 mm clear distance (pairs), 2270 mm clear distance.

Deck: Untreated timber running planks, 254 mm x 89 mm.

Deck Structural: Diagonally placed creosote treated timber plank sub deck with treated timber ties.

Curb: Creosote treated timber curb and risers. Steel W-beam on inside face.

Substructure:
Abutments:
Creosote treated piles, ballast walls, wing walls, and cap beams.

BRIDGE INSPECTION

GENERAL BRIDGE CONDITION:

Superstructure Condition:	Fair
Substructure Condition:	Fair
Deck Condition:	Fair
Load Posting:	No sign noted.
Date for the Next Close Proximity Inspection:	2015
Projected Replacement Date:	2032

BRIDGE INSPECTION SUMMARY/ RECOMMENDATIONS:

The bridge is generally in good condition, no significant checks noted on the glulam girders. One pile at the camp end abutment has heartwood rot, no sign of crushing and likely does not affect the capacity of the abutment. We recommend monitoring the condition of the pile during future inspections.

INSPECTION NOTES:

Approaches:

- The approaches are generally in good condition.
- Delineators present on all 4 corners however all are damaged.
- 2 delineators not installed properly, pointing in wrong direction.
- Bridge ahead signs missing on camp end approach.
- No approach barriers or guide logs.
- Brushing is required, delineators are partially obstructed.

Deck:

- The deck is generally in fair condition.
- Localized impact damage to W-beam and woods end downstream corner of curb rail.
- Minimal wearing of running planks and deck planks.
- Minor debris accumulation towards ends of bridge.

Abutments:

- The woods end abutment is generally in fair condition.
- Vertical check along length of cap beam, no rot noted.
- Pile 2 cored, no rot
- All piles sounded, no rot.
- The camp end abutment is generally in fair condition.
- All piles sounded, Pile 7 has heartwood rot starting 1,500 mm above ground level, 50 mm solid shell.
- Flashing on downstream wing wall pile 2 is damaged with end rot on the top of the pile.

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Girders:

Typical Condition:

Span 1 – All girder faces:

- Creosote leaching out and covering girder faces.
- Minor weathering, few checks noted <20 mm deep.

Checks on Girders:

- No checks recorded.

LIST OF MAINTENANCE ITEMS TO BE COMPLETED:

Items	Description	Priority
1.	Replace delineators (4 required)	High
2.	Replace damaged section of curb rail.	High
3.	Install bridge ahead sign (1 required)	Medium
4.	Replace flashing on top of camp end, downstream wing wall pile 2.	Medium
5.	Brush along approaches and around abutments.	Low

MONITOR DURING FUTURE INSPECTIONS:

1. Monitor rot in camp end abutment piles.

Prepared by:



Mike Hanson, EIT.
Project Engineer

Reviewed by:



David Chen, P.Eng.
Project Manager

Attached:

1. CBR Report
2. Annotated Photo Sheets

BRIDGE INSPECTION

NOTES:

Directional & Numbering Conventions Used:

Girders and piles are numbered from upstream to downstream. Left end or right end is determined facing downstream (except for delineators). Spans and piers are numbered from the left end when facing downstream.

Projected Replacement Date:

The projected date for the bridge replacement is based on the remaining service life of the bridge. We estimate the remaining service life as the greater of:

For Glulam Girder Bridges:

1. Original design life, typically 50 years.
2. If a bridge is nearing the end of its estimated service life but is still in fair condition, we recommend that the Ministry assume a remaining service life of five years.

For Steel and Concrete Bridges:

1. Original design life, typically 60 years.
2. If a bridge is nearing the end of its estimated service life but is still in fair condition, we recommend that the Ministry assume a remaining service life of ten years.

Condition Ratings:

Excellent:	New or almost new condition and properly installed
Good:	Structurally sound, in good repair with minimal wear
Fair:	Structurally functional, shows moderate wear or preliminary indications of deterioration
Poor:	Structurally unsound, items typically in need of repair or replacement

Maintenance Priority (Typical Usage):

High:	Critical items that need to be addressed to protect safety of users (curbs, structural decks, delineators, major structural repairs, etc.); schedule work immediately.
Medium:	Items that maintain the service life of the bridge (wearing planks, deck joints, etc.)
Low:	Items that will extend the service life of the structure or general maintenance.

Cost Estimate:

The cost estimate for individual maintenance items, shown in the CBR report, reflects the cost of materials and labour for completing a task; it does not include any costs associated with mobilization, demobilization, engineering or contract administration.



BC Ministry of Forests and Range

Permanent Bridge Inspection Report

Page 1 of 3
Date Printed: 2013/03/26
User Id: BCEID\WRILEY1
Database: PROD
Report Id: CBR001A

Structure #:	K445	Site #:	K445	Road Name:	PASAYTEN RIVER	Inspection Date:	2012/10/02
KM:	0.27	User km:	0.30	Crossing Name:	Similkameen R	Next Inspection Date:	2015/06/28
Project File ID #:	7573	Br.	01	Forest District:	Cascades Forest District		
Deck Type:	Timber - Untreated			Running Surface:	Timber Planks		
Superstructure	Glulam Girder			Abutments (Left/Right):	Pile -Permanent Materials		
Total Length (metres):	32.0	# Spans:	1	Span Length(s) (metres):	32		
UTM Zone:	10	UTM Easting:	674855	UTM Northing:	5446590		
Inspector Name:	M. Hanson			Year Built:	1982		
Access:							

ABUTMENTS

Bearings	Not Applicable	
Bracing	Not Applicable	
Ballast Wall	Good	
Corrosion Protection	Good	
Caps or Sills	Fair	Vertical check along length of woods end cap beam, no rot noted.
Fill	Good	
Hardware	Good	
Piles or Posts	Fair	All piles sounded, Pile 7 on the camp end abutment has heartwood rot starting 1,500 mm above ground level, 50 mm solid shell.
Riprap	Good	
Wing Wall	Fair	Flashing on the camp end downstream wing wall pile 2 is damaged with end rot on the top of the pile.

APPROACHES

Alignment	Good	
Bridge Ahead Signs Missing	1	
Brushing Required	Yes	Brushing is required, delineators are partially obstructed.
Delineator Missing Left	0	Both signs are damaged. One sign pointing in wrong direction.
Delineator Missing Right	0	Both signs are damaged. One sign pointing in wrong direction.
Fender Condition	None	No approach barriers or guide logs.
Road Surface	Good	

DECK

Span 1

Curb Rail/Blocks/Posts	Fair	Localized impact damage to W-beam and woods end downstream corner of curb rail.
Deck to Girder Bolts	Good	



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Structure #:	K445	Site #:	K445	Road Name:	PASAYTEN RIVER	Inspection Date:	2012/10/02					
Hardware	Good											
Hand Rails/Walkouts	Not Applicable											
Nails	Good											
Overall Deck Condition	Fair											
Running Planks	Fair	Minimal wearing of running planks and deck planks. Minor debris accumulation towards ends of bridge.										
Sub Deck	Good	Placed diagonally.										
Ties	Good											
SUPERSTRUCTURE												
Span 1												
Bracing	Not Applicable											
Diaphragms	Fair											
Girders	Fair	No significant checks noted. Creosote leaching out and covering face of girders.										
Hardware	Good											
Under Trussing	Not Applicable											
CHANNEL	Estimated Present Water Level Depth:				Estimated Present Water Level Width:							
	Estimated High Water Level Clearance:											
HAZARDS	High Water:	No	Scour:	No	Ice:	No	Debris:	No	Aggradation:	No		
	Comment:											
REPAIRS	#	Status	Priority	Estimate	Description							
	1	Recommended	High	\$1,000.00	Replace delineators (4 required)							
	2	Recommended	High	\$2,000.00	Replace damaged section of curb rail.							
	3	Recommended	Medium	\$300.00	Install bridge ahead sign (1 required)							
	4	Recommended	Medium	\$250.00	Replace flashing on top of camp end downstream wing wall pile 2.							
	5	Recommended	Low	\$150.00	Brush along approaches and around abutments.							
MONITORS	#	Description										
	1	Monitor rot in camp end abutment piles										
GENERAL	Professional Inspection Required?		No	Regional Review Date:				P. Eng Reviewer Name:				
	Replacement Date for full log haul traffic (year):			2032		Replacement Date for light vehicle traffic (year):			2032			
	Current Load Rating GVW (tonnes):		63		Design Load GVW (tonnes):		0		Design Vehicle Config.:			
	Inspector's Estimated Full Log Haul Replacement (year):				2032							
Corporate Bridge Register (CBR)												



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Structure #:	K445	Site #:	K445	Road Name:	PASAYTEN RIVER	Inspection Date:	2012/10/02
	Inspector's Comment:	The bridge is generally in good condition, no significant checks noted on the glulam girders. One pile at the camp end abutment has heartwood rot, no sign of crushing and likely does not affect the capacity of the abutment. We recommend monitoring the condition of the pile during future inspections.					
	PEng Reviewer's Comment:						
	District Staff Comment:						

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
K445	Similkameen R	Pasayten River	0.30	0.27		



Figure 1-1: Upstream elevation.



Figure 1-2: Looking towards woods end.



Figure 1-3: Looking towards camp end.



Figure 1-4: Looking downstream.



Figure 1-5: Looking upstream.



Figure 1-6: Typical deck condition.

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
K445	Similkameen R	Pasayten River	0.30	0.27		



Figure 1-7: Damaged delineator and curb rail.



Figure 1-8: Typical underside of deck.



Figure 1-9: Camp end abutment.

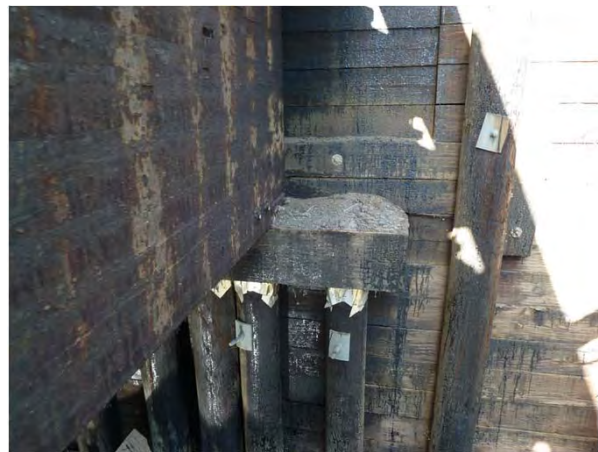


Figure 1-10: Downstream camp end cap beam.



Figure 1-11: Camp end pile #8.



Figure 1-12: Downstream camp end soldier pile.

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
K445	Similkameen R	Pasayten River	0.30	0.27		



Figure 1-13: Upstream camp end cap beam.



Figure 1-14: Woods end abutment.



Figure 1-15: Woods end cap beam.



Figure 1-16: Check in woods end cap beam.



Figure 1-17: Downstream face of girder 2.