

HistoricBridges.org - National Bridge Inventory Data Sheet

2013 Inventory

The National Bridge Inventory contains data submitted by state transportation departments to the Federal Highway Administration in coded format.

Form Interface Design: www.historicbridges.org. Data Conversion Assistance By www.bridgehunter.com. None of the involved parties make any guarantee of accuracy.

Basic Information

Washington [53]	Pierce County [053]	Tacoma [70000]	0.7 N JCT I-5	47-14-59.34 = 47.249817	122-24-51.16 = -122.414211
85015000000000	Highway agency district	3	Owner	City or Municipal Highway Agency [04]	Maintenance responsibility
City or Municipal Highway Agency [04]					
Route	3262	EAST LINCOLN AVE	Toll	On free road [3]	Features intersected
PUYALLUP RIVER					
Design - main	Steel [3]	Design - approach	Steel [3]	Kilometerpoint	1609 km = 997.6 mi
3	Truss - Thru [10]	1	Stringer/Multi-beam or girder [02]	Year built	1929
				Year reconstructed	1944
				Skew angle	0
				Structure Flared	
				Historical significance	Bridge is not eligible for the NRHP. [5]
Total length	142 m = 465.9 ft	Length of maximum span	51.8 m = 170.0 ft	Deck width, out-to-out	10.7 m = 35.1 ft
		Bridge roadway width, curb-to-curb	9.1 m = 29.9 ft		
Inventory Route, Total Horizontal Clearance	9.1 m = 29.9 ft	Curb or sidewalk width - left	0 m = 0.0 ft	Curb or sidewalk width - right	1 m = 3.3 ft
Deck structure type	Concrete Cast-in-Place [1]				
Type of wearing surface	Monolithic Concrete (concurrently placed with structural deck) [1]				
Deck protection					
Type of membrane/wearing surface					

Weight Limits

Bypass, detour length	Method to determine inventory rating	Load Factor(LF) [1]	Inventory rating	33.3 metric ton = 36.6 tons
0.3 km = 0.2 mi	Method to determine operating rating	Load Factor(LF) [1]	Operating rating	44.1 metric ton = 48.5 tons
Bridge posting	Equal to or above legal loads [5]	Design Load	M 18 / H 20 [4]	

Functional Details

Average Daily Traffic	6000	Average daily truck traffi	36	%	Year	2011	Future average daily traffic	8788	Year	2030
Road classification	Collector (Urban) [17]		Lanes on structure	2		Approach roadway width	9.8 m = 32.2 ft			
Type of service on bridge	Highway-pedestrian [5]		Direction of traffic	2 - way traffic [2]		Bridge median				
Parallel structure designation	No parallel structure exists. [N]									
Type of service under bridge	Waterway [5]		Lanes under structure	0		Navigation control				
Navigation vertical clearanc	0 = N/A		Navigation horizontal clearance	0 = N/A						
Minimum navigation vertical clearance, vertical lift bridge						Minimum vertical clearance over bridge roadway	5.69 m = 18.7 ft			
Minimum lateral underclearance reference feature	Feature not a highway or railroad [N]									
Minimum lateral underclearance on right	0 = N/A					Minimum lateral underclearance on left	0 = N/A			
Minimum Vertical Underclearance	0 = N/A		Minimum vertical underclearance reference feature	Feature not a highway or railroad [N]						
Appraisal ratings - underclearances	N/A [N]									

Repair and Replacement Plans

Type of work to be performed	Work done by	Work to be done by contract [1]		
Bridge rehabilitation because of general structure deterioration or inadequate strength. [35]	Bridge improvement cost	139000	Roadway improvement cost	14000
	Length of structure improvement	128.9 m = 422.9 ft	Total project cost	209000
	Year of improvement cost estimate	2013		
	Border bridge - state		Border bridge - percent responsibility of other state	
	Border bridge - structure number			

Inspection and Sufficiency

Structure status	Open, no restriction [A]	Appraisal ratings - structural	Equal to present minimum criteria [6]
Condition ratings - superstructure	Satisfactory [6]	Appraisal ratings - roadway alignment	Equal to present minimum criteria [6]
Condition ratings - substructure	Satisfactory [6]	Appraisal ratings - deck geometry	Meets minimum tolerable limits to be left in place as is [4]
Condition ratings - deck	Very Good [8]		
Scour	Bridge foundations determined to be stable for the assessed or calculated scour condition. [8]		
Channel and channel protection	Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in a stable condition. [8]		
Appraisal ratings - water adequacy	Equal to present desirable criteria [8]	Status evaluation	
Pier or abutment protection		Sufficiency rating	74
Culverts	Not applicable. Used if structure is not a culvert. [N]		
Traffic safety features - railings			
Traffic safety features - transitions			
Traffic safety features - approach guardrail			
Traffic safety features - approach guardrail ends			
Inspection date	October 2012 [1012]	Designated inspection frequency	24 Months
Underwater inspection	Unknown [Y60]	Underwater inspection date	September 2008 [0908]
Fracture critical inspection	Every two years [Y24]	Fracture critical inspection date	October 2012 [1012]
Other special inspection	Not needed [N]	Other special inspection date	

BRIDGE INSPECTION REPORT

Ver Date: 12/03/2013

Agency: TACOMA

Status: **Released**

Printed On: 10/03/20

Program Mgr: Roman G. Peralta

Bridge No. F12	Page: 1/4	Structure Type
Bridge Name EAST LINCOLN AVENUE	Route 03262	Location 0.7 N JCT I-5
Structure ID 08501500	MilePost 10.00	Intersecting PUYALLUP RIVER

Inspector's Signature	SDS	IDent#	G9912	Co-Inspector's Signature	EBV
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										Inspections Performed				
6		Structural Adqcy (657)	N		Pier/Abut/Protect (679)	1929	Year Built (332)	IT	NT	HRS	Date	Rep	Type	
4		Deck Geometry (658)	8		Scour (680)	1944	Year Rebuilt (336)	Y	24	2.0	10/12/2012	Routine		
9		Underclearance (659)	6		Retaining Walls (682)	49	Oper Rating (551)	Y	24	8.0	10/12/2012	Fract Crit		
5		Operating Level (660)	9		Pier Protection (683)	37	Inv Rating (554)	D	60	2.5	09/19/2013	Underwater		
6		Alignment Adqcy (661)	0		Bridge Rails (684)	A	Open Close (293)					Special		
8		WaterwayAdqcy (662)	0		Transition (685)	1808	Vert Over Deck (360)					Interim		
8		Deck Overall (663)	0		Guardrails (686)	0000	Vert Under (374)					Equipment		
8		Drains Condition (664)	0		Terminals (687)	N	Vert Und Code (378)					Damage		
6		Superstructure (671)	Y		Revise Rating (688)	0.00	Asphalt Depth					Safety		
3		Number Utilities (675)			Photos Flag (691)	35	Speed Limit					Short Span		
6		Substructure (676)	Y		Soundings Flag (693)									
8		Chan/Protection (677)			Measure Clearance (694)									
9		Culvert (678)												
										Total: 2.5				
										Suff Rating: 73.95		73.95		

BMS Elements							
Element	Element Description	Total	Units	State 1	State 2	State 3	State 4
12	Concrete Deck	14100	SF	14100	0	0	0
35	Concrete Deck Soffit	14100	SF	14100	0	0	0
90	Steel Rolled Girder	234	LF	234	0	0	0
113	Steel Stringer	2520	LF	2520	0	0	0
126	Steel Thru Truss	840	LF	840	0	0	0
152	Steel Floor Beam	759	LF	759	0	0	0
214	Concrete Web Wall between Columns	3	LF	3	0	0	0
215	Concrete Abutment	103	LF	103	0	0	0
227	Concrete Submerged Pile/Column	6	EA	6	0	0	0
234	Concrete Pier Cap / Crossbeam	36	LF	36	0	0	0
266	Concrete Sidewalk & Supports	3995	SF	3990	0	5	0
311	Moveable Bearing (roller, sliding, etc)	12	EA	0	0	12	0

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313	Fixed Bearing	12	EA	0	12	0	0
330	Metal Bridge Railing	940	LF	818	120	2	0
340	Metal Pedestrian Railing	470	LF	350	120	0	0
361	Scour	3	EA	3	0	0	0
362	Impact Damage	2	EA	1	1	0	0
402	Hot Poured and/or Premolded Joint Filler	510	LF	510	0	0	0
404	Compression Seal / Concrete Header	128	LF	128	0	0	0
412	Strip Seal - Anchored	38	LF	38	0	0	0
904	Organic Zinc/Urethane Paint System	0	SF	0	0	0	0

Notes

0	Bridge inventoried west to east; west toward Portland Ave. UBIT deployable only on the south side of bridge.
1	Full fracture critical inspection performed in 2012. A standard bucket truck was used to inspect the upper truss and a UB50 was used to inspect the floor system from the south side. See fracture critical report in the files tab for the 2012 FC Inspection.
9	Underwater inspection of the East Lincoln Avenue Bridge was conducted by Echelon Engineering on September 19, 2013. Piers 2-4 were located in the channel at the time of the inspection. Based on the observed condition, all inspected substructure components appear sound. No evidence of any cracking, spalling or other significant deterioration of the underwater concrete elements was noted. Minor abrasive scale (i.e. ~1/2 inch deep) was note on all surfaces exposed to flow. Inspection of the Pier 2 web wall noted minor spalling along a horizontal cold joint. Additionally, openings in the Pier 3 and 4 web walls were noted where square timbers that had been cast into the concrete, have deteriorated, are now missing and have been subsequently filled with concrete. Although minor spalling of the edges and minor voids were evident, no rust bleeding, exposed reinforcing or other significant damage was noted to be associated with these openings. Inspection of the Pier 3 and 4 web walls also noted cracking and minor deterioration of the horizontal cold joints. No exposure of the footings or of the foundation piles was found. Minor debris build-up was evident at the upstream end of Pier 3 and trapped in the downstream timber debris deflectors of Piers 3 and 4. This debris build-up has caused localized scour in these areas. No other significant general or localized scour patterns were identified. Conditions appear similar to that reported in the 2008 underwater inspection report.
12	A new deck was constructed in 2011 for spans 2 and 3. Spans 1 and 4 were provided with a modified concrete overaly.
35	Spans 2 and 3 were newly constructed in 2011. Spans 1 and 4 have some spalls and hairline cracks in the soffit
90	Bridge was painted in 2011. All rust was sand blasted away and 3 coats of paint applied. No rust visible on any of the girders.
113	All stringers have been sand blasted and painted. Stringer run in the direction of the truss. No defects noted.
126	The truss was sand blasted to bare metal and repainted in 2011. High loads have impacted several of the sway braces. No defects were found in the truss. 2012 FC Inspection. See notes in the files tab for FC inspection.
152	All floor beams were sand blasted to bare metal in 2011 and repainted. See additional BMS comments for this element in the files tab.
214	2012 Inspection. No change from last inspection. Web walls at Piers 2, 3, and 4. Wall at Pier 2 has vertical leaching cracks on the east face.
215	Abutment 1 has several cracks, but none of concern. Abutment 2 has a new wall from the 2011 repair.

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Bridge No.	F12	Page:	3/4	Structure Type	
Bridge Name	EAST LINCOLN AVENUE	Route	03262	Location	0.7 N JCT I-5
Structure ID	08501500	MilePost	10.00	Intersecting	PUYALLUP RIVER

227	2012 Inspection. Same comments as last inspection. Concrete columns at Piers 2, 3, and 4 have exposed aggregate and abrasion to approximately 1" depth below high water line, but no exposed rebar was found. Column 38 has vertical leaching cracks at the top, southwest face.
234	All pier caps have been cleaned as part of 2011 repair.
266	The existing sidewalk was not replaced as part of the 2011 repair. There are cracks and some spalls throughout the sidewalk. Most of the spalls on the underside have been repairs.
311	Moveable bearings are located at Piers 1, 3, and 5. The moveable bearings were cleaned and painted as part of the 2011 repair project.
313	Fixed bearings are at Piers 2 and 4. The bearings have been cleaned and painted as part of the 2011 repair project.
330	The metal railig was sand blasted and painted in 2011. No defects noted.
340	The pedestrian railing was sand blasted and painted in 2011. No defects noted.
361	Abutment 1, pier2, & pier 3 are in the water. Abutment 4 is on land and well above typical water level. A Bridge Scour Evaluation form was complete in 2012. See Files Tab. The bridge is not scour critical and is functioning well.
362	Impact damage to east portal and sway frames. Traffic scrapes on south truss.
402	Pour expansion joints are located in spans 2, 3, & 4. These joints are not true expansion joints as they do not extend full depth. All joints were new in 2011 and all look in new condition.
404	New compression seals are located at abutment 1, pier 2, pier 4 and abutment 5. All compression seals were installed in 2011 and look to be in like new condition, except abutment 1 has some minor cracking.
412	A new strip seal joint was provided in 2011 at pier 3.
671	2012 Inspection. The superstructure overall is coded a 6 becuase there is some section loss in the floor beams. The active corrosion has been stopped by the 2011 repair. The floor beams have been made composite by constructing a new deck in 2011.
675	Utility size and locations as follows: 3 ft. diameter cast iron pipe attached to outside face of the north truss. 12" diameter pipe suspended off south edge of south sidewalk (carries petroleum products). 4" diameter pipe under south sidewalk.
676	Substructure Overall is coded '6' due to the condition of the columns which have minor deterioration from abrasion.
680	The 680 code has been changed from 3 to 8. See the attached Bridge Scour Evaluation in the Files tab. This bridge is pile supported and not scour critical.
693	Sounding was taken on 10/28/2010 by the inspection team, see File SI-3A.
904	The entire bridge was sand blasted down to bare metal and painted in 2011. All paint is in new condition.

Repairs

Repair No	Pr	R	Repair Description	Noted	Maint	Verified

Inspections Performed and Resources Required

Report Type	Date	IT	Frq	Hrs	Insp	CertNo	Coinsp	Note
Routine	10/12/12		24	2.0	DRS	G0604	cns	2012 Routine and FC inspections
Resources		Use	Hour	Min	Req	Max	Notes	
Scheduling Restrictions		TRF					The 2008 traffic window was from 9:00 am to 4:00 pm	
		C						

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Third Party Notification OT

Contact Jim Fraley, Damage Protection Team Leader of British Petroleum, 425-981-2517 prior to inspection.

Fracture Critical 10/12/12 24 8.0 DRS G0604 cns

Resources	Use	Hour	Min	Req	Max	Notes
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UBIT	50	4.00		50	50	UBIT inspection in 2008 with UB60 deployed over the ends of the trusses, UB50 deployed through the south truss. Panel points too small for UB60 and bridge too wide for UB30. Power cables and large utility pipes on adjacent structure prevent deploying off the north side.
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Bucket	BK	4.00		BK	BK	A bucket truck was used in 2008 to inspect the upper truss members. The heat straightening truck could also be used for the upper connection inspection.
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Platform	ANY	0.00		ANY	ANY	Heat straightening truck used in 2002 and 2004 to inspect the upper truss members.
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Flagging	LA	10.00				Contact the City of Tacoma at 253-591-5263 to arrange for traffic control.
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Underwater	09/19/13	D	60	2.5	SDS	G9912	EBV	Echelon Engineering performed the underwater inspection on 9/19/2013.
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Resources	Use	Hour	Min	Req	Max	Notes
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