

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 025A

Mile Post (ON)11: 209.225 mi

Bridge Key: F-16-NO Inspection Date: 6/30/2011 Sufficiency Rating: 97.5 Not Eligible

Rgn/Sectn 2E/2M:	68	Hist Signif 37:	5	UW Inspection Date 93B:	
Trans Region 2T:	02	Posting status 41:	A	SI Date 93C:	
County Code 3:	031	Service on/un 42A/B:	1 0	Bridge Cost 94:	\$ 0
DENVER		Main Mat/Desgn 43A/B:	6 5	Roadway Cost 95:	\$ 0
Place Code 4:	20000	Appr Mat/Desgn 44A/B:	6 5	Total Cost 96:	\$ 0
DENVER		Main Spans Unit 45:	5	Year of Cost Estimate 97:	
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	1	Horiz Clr 47:	30.0 ft	Border Bridge Number 99:	
Level of Service 5C:	7	Max Span 48:	149.2 ft	Defense Highway 100:	1
Directional Suffix 5E:	0	Str Length 49:	664.2 ft	Parallel Structure 101:	N
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
INTERCHANGE ROW	R	Width Curb to Curb 51:	30.0 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	30.0 ft	Highway System 104:	1
RAMP TO I 25 NBND		Deck Area:	19,934.8 sq. ft	Fed Lands Hiway 105:	0
Alias Str No.8A:		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	0000
		Min Undrclr Ref 54A:	N	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	0.0 ft	Wearing Surface 108A:	6
		Min Lat Clrnce Ref R 55A:	N	Membrane 108B:	2
Location 9:	328.05117409:	Min Lat Undrclr R 55B:	0.0 ft	Deck Protection 108C:	1
JCT I-25 AT 6TH AVE IN DE		Min Lat Undrclr L 56:	0	Truck ADT 109:	6 %
Max Clr 10:	99.99	Deck 58:	7	Trk Net 110:	1
BaseHiway Net12:	0	Super 59:	8	Pier Protection 111:	#
IrsinvRout 13A:	0000000000	Sub 60:	8	NBIS Length 112:	Y
IrsSubRout No13B:	00	Channel/Protection 61:	N	Scour Critical 113:	N
Latitude 16:	39d 43' 33"	Culvert 62:	N	Scour Watch 113M:	
Longitude 17:	105d 00' 48"	Oprtng Rtg Method 63:	1 LF Load Fact	Future ADT 114:	3,700
Range18A:	68	Operating Rating 64:	83.0	Year of Future ADT 115:	2025
Township18B:	68	Inv Rtnng Method 65:	1	CDOT Str Type 120A:	CBGC
Section18C:	4	Inventory Rating 66:	50.0	CDOT Constr Type 120B:	10
Detour Length 19:	2.0 mi	Asph/Fill Thick 66T:	004 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	8	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	9	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	N	Maintenance Patrol 123:	7
Functional Class 26:	11	Posting 70:	5	Expansion Dev/Type124:	D
Year Built 27:	1989	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	R 0
Lanes on 28A:	1	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	0	Type of Work 75A:		Str Rating Date 130:	12/11/1998
ADT 29:	3,400	Work Done By 75B:		Special Equip 133:	1
Year of ADT 30:	2005	Length of Improvment 76:	0.0 ft	Vert Clr N/E 134A/B/C:	X 99.99 0.00
Design Load 31:	6	Insp Team Indicator 90B:	RED TEAM	Vert Clr S/W 135A/B/C:	X 99.99 0.00
Apr Rdwy Width 32:	30.0 ft	Inspector Name 90C:	TATALASKIT	Vertical Clr Date:	1/1/1901
Median 33:	0	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	0.00 °	FC Frequency 92A:	-1	Str Billing Type:	U
Structure Flared 35:	0	UW Frequency 92B:	-1	Userkey 1 - System:	ONSYS
Sfty Rail 36a/b/c/d:	1 1 1 1	SI Frequency 92C:	-1	Userkey 7-Update Indic:	
Rail ht36h:	36 "in"	FC Inspection Date 93A:			

Inspector Name: TATALASKIT

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
26/4	Conc Deck/Coatd Bars	(SF)	19,926	0 %	0	100 %	19,926	0 %	0	0 %	0	0 %	0
104/4	P/S Conc Box Girder	(LF)	1,330	98 %	1,305	2 %	25	0 %	0	0 %	0	0 %	0
210/4	R/Conc Pier Wall	(LF)	108	100 %	108	0 %	0	0 %	0	0 %	0	0 %	0
234/4	R/Conc Cap	(LF)	45	87 %	39	13 %	6	0 %	0	0 %	0	0 %	0
307/4	Modular Expansion Jt	(LF)	59	97 %	57	3 %	2	0 %	0	0 %	0	0 %	0
314/4	Pot Bearing	(EA)	4	0 %	0	100 %	4	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	1,330	100 %	1,330	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
26/4	Conc Deck/Coatd Bars	4 Inches asphalt. 1 inch of newer asphalt overlay extending almost to rail. Previous cracks cannot be seen. Deck bottom in good condition where exposed on soffits, but timber formwork left in place in cells and is tight with no signs of moisture or rot.
104/4	P/S Conc Box Girder	Interior: (per 2001 insp.) Hairline horiz. crack in Web 1A, rear 1/4; light crack along base of Web 2A, full length of span; patched blowout of Web 3A 20-25 feet from P3; cell 4B has many rock pockets; Web 5C has hairline horiz. cracking in web extending 25 feet from Pier 6. End walls at end piers (P1 & P6) have a few hairline vert. & diag. cracks; end walls at P2 - P5 are nearly crackless. Typical hairline to light horiz. cracks at access holes in webs and horiz. and vert cracks at the access holes through diaphragms in Span 3. Entered all girder cells 2010 inspection, no significant change to cracks mentioned. Exterior: Light vert. crack on right side (Web 1C) 3 ft. from Pier 1 end, extends 2/3 up from the bottom. Minor spall at drain bracket bolt on Web 1A at Pier 1.
210/4	R/Conc Pier Wall	Includes end piers, P1 & P6. Piers 2, 3, 4, & 5 are monolithic with superstructure. Hairline horiz. cracks in fwd. face of P2, about 6 ft. below superstructure. Drain pipe has been re-attached to Pier 6 wall, but there are some minor spalls around original bolts.
234/4	R/Conc Cap	Caps at top of end piers P1 & P6 for expansion bearings. P1 = 20 ft., P6 = 25 ft. Few light vert. cracks in both. Some delam. (about 8 sf) at lt. fwd. face of Pier 1. Diag. shear cracks from both bearings to the edge of pier walls. Some contamination at P6 (efflor. and deposits are building on bottom of cap about midlength between bearings.)
307/4	Modular Expansion Jt	3-Seal modular jt. at both ends of this bridge between F-16-OK at rear, & F-16-OH at forward. Glands full of dirt. Concrete end dams have 7-8 longit. cracks. Per 1996 inspection the forward joint has 2 ft. of rust at #4 (of 6) support below glands, indicates some minor leakage. #1 open 11.75 inches i- i steel armor, and #6 open 11.5 inches. Glands pulling out at a couple ft. in Rt. shoulder at P6.

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314/4	Pot Bearing	Expansion pot bearings at Pier 1 & Pier 6 both in near full contraction position (0.5 inch +/- from ends of stainless steel slide surf on bottom of sole plates) probably due to excessive post-tension creep. The guide plates mounted on the tops of pistons at Bearing B have the edges protruding beyond the sole plate; 1.375 inch at Bearing 1B and 0.875 inch at Bearing 6B. (Measurements from 2001 report), same in 2010.
331/4	Conc Bridge Railing	Typical vert. cracks in concrete Jersey barrier (Type R rail), some contaminated with moisture, evidenced on exterior sides.
340/4	Superstr Cnc Coating	On girders, overhangs, and rail. Some graffiti and blotted out graffiti on rail.
341/4	Substr Conc Coating	On pier walls and caps. Some blotted out graffiti on walls. Some graffiti on Span 1 side of Pier 2 wall.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
352.01	Cln & Wash	6/30/2011		2013	250

Clean out scupper drains at Piers 1 & 6 that are completely clogged at top. See 6/11 PHOTO.

Bridge Notes

Access through bottom flange requires 3/4 inch wrench needed to open and a Snooper or high ranger also required for interior access. The doors are 30 to 50 feet above mostly flat field.
 Did not enter or use snooper during 2007 & 2011 inspections. Setup A-40 2010 Inspection, right side.
 Creep has sheared the 4 bottom bracket bolts at the drain tube on left side of Pier 1: 4 upper bracket bolts appear OK; see 4-2001 PHOTO.

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Inspection Notes

Time: 11:00
Temp: 94
Weather: P/C

Scope:

NBI: Element: Underwater: Fracture Critical: Other: Type:

Inspector: TATALASKIT

Inspection Team:

Inspection Date: 06/30/2011

Inspector

Inspector