

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

Highway Number (ON) 5D: 0025A 1

Mile Post (ON)11: 97.671 mi

Bridge Key: K-18-AY Inspection Date: 4/12/2010 Sufficiency Rating: 60.5 FO

Rgn/Sectn 2E/2M:	24	Hist Signif 37:	3	UW Inspection Date 93B:	
Trans Region 2T:	04	Posting status 41:	A	SI Date 93C:	
County Code 3:	101	Service on/un 42A/B:	1 1	Bridge Cost 94:	\$ 380,525
PUEBLO		Main Mat/Desgn 43A/B:	4 2	Roadway Cost 95:	\$ 38,053
Place Code 4:	62000	Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 570,788
PUEBLO		Main Spans Unit 45:	4	Year of Cost Estimate 97:	2006
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	1	Horiz Clr 47:	40.0 ft	Border Bridge Number 99:	
Level of Service 5C:	1	Max Span 48:	65.6 ft	Defense Highway 100:	1
Directional Suffix 5E:	0	Str Length 49:	240.1 ft	Parallel Structure 101:	L
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
US 50 ML		Width Curb to Curb 51:	40.0 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	44.0 ft	Highway System 104:	1
25 ML SBND		Deck Area:	10,560. 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:	H	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	18.0 ft	Wearing Surface 108A:	6
K-18-AX		Min Lat Clrnce Ref R 55A:	H	Membrane 108B:	0
Location 9:		Min Lat Undrclr R 55B:	5.3 ft	Deck Protection 108C:	0
IN PUEBLO		Min Lat Undrclr L 56:	4.29999992	Truck ADT 109:	5 %
Max Clr 10:	99.99	Deck 58:	6	Trk Net 110:	1
BaseHiway Net12:	1	Super 59:	7	Pier Protection 111:	#
IrsinvRout 13A:	000000025A	Sub 60:	6	NBIS Length 112:	Y
IrsSubRout No13B:	00	Channel/Protection 61:	N	Scour Critical 113:	N
Latitude 16:	38d 15' 22"	Culvert 62:	N	Scour Watch 113M:	
Longitude 17:	104d 36' 25"	Optprtng Rtg Method 63:	1 LF Load Factr	Future ADT 114:	41,378
Range18A:	64 W	Operating Rating 64:	40.2	Year of Future ADT 115:	2027
Township18B:	64	Inv Rtnng Method 65:	1	CDOT Str Type 120A:	CIC
Section18C:	6	Inventory Rating 66:	24.1	CDOT Constr Type 120B:	0.
Detour Length 19:	0.6 mi	Asph/Fill Thick 66T:	005 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	5	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	3	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	3	Maintenance Patrol 123:	68
Functional Class 26:	11	Posting 70:	5	Expansion Dev/Type124:	P
Year Built 27:	1958	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	Y 0
Lanes on 28A:	3	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	4	Type of Work 75A:	33	Str Rating Date 130:	5/23/2006
ADT 29:	30,650	Work Done By 75B:	1	Special Equip 133:	-1
Year of ADT 30:	2007	Length of Improvment 76:	240.2 ft	Vert Clr N/E 134A/B/C:	E 19.08 18.92
Design Load 31:	5	Insp Team Indicator 90B:	Gold Team (Ken	Vert Clr S/W 135A/B/C:	W 19.58 19.33
Apr Rdwy Width 32:	44.0 ft	Inspector Name 90C:	STADIGM	Vertical Clr Date:	6/6/2000
Median 33:	1	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	54.00 °	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:	37 "in"	FC Inspection Date 93A:			

Inspector Name: STADIGM

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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
13/1	Unp Conc Deck/AC Ovl	(SF)	10,560	100 %	10,560	0 %	0	0 %	0	0 %	0	0 %	0
107/1	Paint Stl Opn Girder	(LF)	1,440	68 %	979	14 %	201	18 %	254	0 %	6	0 %	0
205/1	R/Conc Column	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
215/1	R/Conc Abutment	(LF)	150	93 %	140	7 %	10	0 %	0	0 %	0	0 %	0
234/1	R/Conc Cap	(LF)	213	91 %	193	9 %	20	0 %	0	0 %	0	0 %	0
304/1	Open Expansion Joint	(LF)	225	100 %	225	0 %	0	0 %	0	0 %	0	0 %	0
306/1	Asphaltic Plg Exp Jt	(LF)	140	100 %	140	0 %	0	0 %	0	0 %	0	0 %	0
311/1	Moveable Bearing	(EA)	24	50 %	12	50 %	12	0 %	0	0 %	0	0 %	0
313/1	Fixed Bearing	(EA)	6	100 %	6	0 %	0	0 %	0	0 %	0	0 %	0
325/1	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/1	Bridge Wingwalls	(EA)	4	75 %	3	25 %	1	0 %	0	0 %	0	0 %	0
334/1	Metal Rail Coated	(LF)	480	100 %	480	0 %	0	0 %	0	0 %	0	0 %	0
338/1	Conc Curbs/SW	(LF)	480	96 %	460	0 %	0	4 %	20	0 %	0	0 %	0
343/1	Pole Attachment	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
358/1	Deck Cracking SmFlag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
359/1	Soffit Smart Flag	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
371/1	Traff Imp Dck SmFlag	(LF)	41	20 %	8	0 %	0	80 %	33	0 %	0	0 %	0

Elem/Env	Description	Element Notes
13/1	Unp Conc Deck/AC Ovl	5 inches of asphalt. See Element 358.
107/1	Paint Stl Opn Girder	R1 to R2 corrosion on ends of girders, at abutments and piers. Top flanges are starting to break out from the deck, at abutments. Some R3 corrosion on diaphragms, at piers. See Tally Sheet.
205/1	R/Conc Column	Columns are protected by Type 4 Barriers. Look good.
215/1	R/Conc Abutment	Many light vertical cracks in backwalls, and abutments. A 1/16 inch diagonal crack, with efflor. and water stains, in Bay C at A5. The A5 seat has a few minor vertical cracks on the face, and light scale at the Left edge. A1 has moderate map cracks below Girder #1F, and the seat is cracked at the Right end. The A1 seat below Girder E, has a delam. crack. Waterstains, and several inches of dirt on the seats.
234/1	R/Conc Cap	Shear cracks in caps. A few light vertical cracks. Light horizontal cracking near the top of Cap #4, below Girder 4A. Areas of delam. cracking on the P4 Cap, below Girders 3A, and 4A. Pier 2 has delam. cracking under Girder A, on both faces. Pier 3 has delam. cracks on the Left end, on the Forward face. Waterstains on all caps.
304/1	Open Expansion Joint	All joints have leaked in the past, but are currently sealed by an overlay.

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306/1	Asphaltic Plg Exp Jt	At abutments. Dishing in wheel lines. Cracking and D-cracking along the plug joint, at both of the approach roadways.
311/1	Moveable Bearing	Rockers are at A1, P2, P4, and A5. Rockers at both abutments are tipped in the expansion position. All rockers at abutments have R1 corrosion, and are dirty. Minor R1 corrosion at Pier #2, and Pier #4.
313/1	Fixed Bearing	Fixed at Pier #3. Minor R1 corrosion.
325/1	Slope Prot/Berms	A vertical retaining wall at the toe of the A5 slope pavement. Both slopes are pulled away 1 inch from the abutments. Joint material at A5 is slipping down at the Left edge of the berm. Light to moderate horizontal cracks.
326/1	Bridge Wingwalls	Stubs type wingwalls on the Left. A wall on the Right. The Right wingwall at A5, has heavy diagonal crack, which has been patched. The flared retainer wall, connected to the A5 Left wingwall, is pushed 2.5 inches, and is open 3.5 inches.
334/1	Metal Rail Coated	Galvanized Type Y railing. Lower rails on the Left side in Span 4, and Span 3, are bent from vehicle impact. See Element 371.
338/1	Conc Curbs/SW	Light scale and sand on tops. Transverse cracks. A few spalls with exposed rebar in faces. Broken at #5 Left (5 L.F.).
343/1	Pole Attachment	2 concrete light pole pedestals on the Left, the Forward one has no pole. Look O.K.
358/1	Deck Cracking SmFlag	Transverse and longitudinal cracks throughout, some are sealed. Longitudinal and random cracking in wheel lines, some have been tar sealed.
359/1	Soffit Smart Flag	Many transverse and diagonal cracks with efflor., some with rust stains. The worst in Bay E. A few areas of delam. cracks, and a few spalls with exposed corroded rebar. Several delams. and spalls with exposed corroded rebar, in Bay 1E; (see 05/12/2004 PHOTO). Spalling at piers in overhangs, with exposed corroded rebar. Spalling with exposed rebar, on the Left overhang, near A1. A few areas at haunches above abutments and piers, with cracking and spalling. See 05/19/2008 Sketch.
371/1	Traff Imp Dck SmFlag	Lower rail on the Left side in Span 4, a couple of sections are bent from auto impact. IMP-MM/?YY, INSP-06/06/2000, REP-00/00/00. IMP-MM/?YY, INSP-05/19/2008, REP-00/00/00 - 2 lower sections of the Left rail in Span 3 are bent (up to 6.5 inches out of alignment), and buckled, and the top rail is slightly bent (see 05/19/2008 PHOTOS).

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
356.01	Curb & RI	4/10/2002	-1	2013	500

Replace sections of the Left rail, at the north end, and replace the adjacent transition rail.

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Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
355.02	Cln & Pnt	4/10/2002	-1	2013	1000

Clean and spot paint the bridge as needed, including bearings.

*356.01	Replace	5/19/2008	-1	2013	500
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Replace 2 lower Left rails bent out of alignment (6.5 inches and 5 inches), and buckled at transition in Span 3; (see 05/19/2008 PHOTOS).

353.08	Replace	4/12/2010		2013	1000
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Seal cracks in the deck pavement.

352.02	Cln & Wash	4/10/2002	-1	2013	200
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Clean dirt off abutment seats.

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Bridge Notes

Utility: one 2 to 3 inch diameter galvanized pipe, attached to the Left curb.
A utility line runs along the Forward side of P4.

Inspection Notes

TIME: 1:00 TEMP: 70 WEATHER: Mostly Cloudy

Scope:

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

Inspector: STADIGM

Inspection Team:

Inspection Date: 04/12/2010

Inspector

Inspector