

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

Highway Number (ON) 5D: 0

Mile Post (ON)11: 0.000 mi

Bridge Name: F-17-KQ Inspection Date: 2/27/2013 Sufficiency Rating: 97.3 Not Eligible

NBI Reporting ID:	F-17-KQ
Rgn/Sectn 2E/2M:	68
Trans Region 2T	02
County Code 3:	035
DOUGLAS	
Place Code 4:	00000
non-city	
Rte.(On/Under)5A:	1
Signing Prefix 5B:	5
Level of Service 5C:	1
Directional Suffix 5E:	0
Feature Intersected 6:	
C470 ML	
Facility Carried 7:	
LUCENT BLVD	
Alias Str No.8A:	
Pril Str No. 8P	
Location 9:	
LUCENT BLVD	
Max Clr 10:	328.1 ft
BaseHiway Net12:	0
IrsinvRout 13A	0000000000
IrrsubRout No13B:	00
Latitude 16:	39d 33' 34"
Longitude 17:	105d 00' 28"
Range18A:	68 W
Township18B:	68
Section18C:	4
Detour Length 19:	0.6 mi
Toll Facility 20:	3
Custodian 21:	1
Owner 22:	1
Functional Class 26:	17
Year Built 27:	1997
Lanes on 28A:	7
Lanes Under 28B:	4
ADT 29:	35,000
Year of ADT 30:	2008
Design Load 31:	5
Apr Rdwy Width 32:	90.0 ft
Median 33:	3
Skew 34:	15.00 °
Structure Flared 35:	0
Sfty Rail 36a/b/c/d:	1 1 1 1
Rail ht36h:	42 "in"

Hist Signif 37:	5
Posting status 41:	A
Service on/un 42A/B:	6 1
Main Mat/Desgn 43A/B:	4 6
Appr Mat/Desgn 44A/B:	0 0
Main Spans Unit 45:	2
Approach Spans 46:	0
Horiz Clr 47:	54.1 ft
Max Span 48:	124.6 ft
Str Length 49:	237.1 ft
Curb Wdth L/R 50A/B:	5.4 ft 5.4 ft
Width Curb to Curb 51	96.4 ft
Width Out to Out 52:	119.3 ft
Deck Area:	28,272. sq. ft
Min Clr Ovr Brgd 53:	99.99
Min Undrclr Ref 54A:	H
Min Undrclr 54B:	17.2 ft
Min Lat Clrnce Ref R 55A:	H
Min Lat Undrclr R 55B:	21.9 ft
Min Lat Undrclr L 56:	19.2 ft
Deck 58:	7
Super 59:	8
Sub 60:	8
Channel/Protection 61:	N
Culvert 62:	N
Oprtg Rtg Method 63:	5 No rating
Operating Rating 64:	36.0
Inv Rtg Method 65:	5
Inventory Rating 66:	36.0
Asph/Fill Thick 66T:	000 "in"
Str. Evaluation 67:	8
Deck Geometry 68:	5
Undrclr Vert/Hor 69:	7
Posting 70:	5
Waterway Adequacy 7	N
Approach Alignment 72:	8
Type of Work 75A:	
Work Done By 75B:	
Length of Improvment 76:	0.0 ft
Insp Team Indicator 90B:	WHITE TEAM
Inspector Name 90C:	CHURCHESK
Frequency 91:	24 months
FC Frequency 92A:	
UW Frequency 92B:	
SI Frequency 92C:	
FC Inspection Date 93A:	

UW Inspection Date 93B	
SI Date 93C:	
Bridge Cost 94:	\$ 0
Roadway Cost 95:	\$ 0
Total Cost 96:	\$ 0
Year of Cost Estimate 97:	
Brdr Brgd Code/% 98A/B:	
Border Bridge Number 99:	
Defense Highway 100:	0
Parallel Structure 101:	N
Direction of Traffic 102:	2
Temporary Structure 103	
Highway System 104:	0
Fed Lands Hiway 105:	0
Year Reconstructed 106	0000
Deck Type 107:	1
Wearing Surface 108A	1
Membrane 108B:	0
Deck Protection 108C:	1
Truck ADT 109:	3 %
Trk Net 110:	0
Pier Protection 111:	
NBIS Length 112:	Y
Scour Critical 113:	N
Scour Watch 113M:	
Future ADT 114:	40,000
Year of Future ADT 115	2028
CDOT Str Type 120A:	SBGC
CDOT Constr Type 120B	U
Inspection Indic 122A:	
Inspection Trip 122AA	
Inspection Schedule ID:	ODD MAY E14
Maintenance Patrol 123:	23
Expansion Dev/Type124	D
Brdg Rail Type/Mod 125A/B	R 1
Posting Trucks 129A/B/C	0 0 0
Str Rating Date 130:	1/1/1901
Special Equip 133:	
Vert Clr N/E 134A/B/C:	X 99.99 0
Vert Clr S/W 135A/B/C	X 99.99 0
Vertical Clr Date:	5/5/1905
Weight Limit Color: 139	0
Str Billing Type:	U
Userkey 1 - System:	ONSYS
Userkey 7-Update Indid	

Inspector Name: CHURCHESK

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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
23/4	Bare Conc Dk w/Brs	(SF)	28,272	100 %	28,272	0 %	0	0 %	0	0 %	0	0 %	0
102/4	Paint Stl Box Girder	(LF)	1,631	100 %	1,631	0 %	0	0 %	0	0 %	0	0 %	0
210/4	R/Conc Pier Wall	(LF)	111	100 %	111	0 %	0	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	247	100 %	247	0 %	0	0 %	0	0 %	0	0 %	0
300/4	Strip Seal Exp Joint	(LF)	380	68 %	260	26 %	100	5 %	20	0 %	0	0 %	0
301/4	Pourable Joint Seal	(LF)	218	100 %	218	0 %	0	0 %	0	0 %	0	0 %	0
310/4	Elastomeric Bearing	(EA)	14	100 %	14	0 %	0	0 %	0	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	100 %	4	0 %	0	0 %	0	0 %	0	0 %	0
333/4	Other Bridge Railing	(LF)	474	100 %	474	0 %	0	0 %	0	0 %	0	0 %	0
338/4	Conc Curbs/SW	(LF)	948	99 %	938	1 %	10	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
359/4	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
530/4	Approach Guardrail A	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
23/4	Bare Conc Dk w/Brs	The concrete deck surface is transversely tined. Several light transverse cracks. Few diag. cracks at corners. Some shrinkage cracks over piers. Scattered hairline random cracks. Steel stay-in-place forms on the bottom, between box girders.
102/4	Paint Stl Box Girder	Look good. Some (runaway tire?) scuffs on Girders 2B & 2C near Abutment 3. Ends of steel box girders are embedded at Abutment 3. No access into these (4 ft. tall) steel box girders, unusual for steel.
210/4	R/Conc Pier Wall	Few hairline to light random shrinkage cracks. Some minor scale near the bottom of Wall 2B. Walls are protected by flex-beam rails.
215/4	R/Conc Abutment	Typical light vertical cracks in both, some with efflorescence. Minor spall in end diaphragm adjacent to Girder 2B at Abutment 3. Waterstained full width of Abut. 1 = failed joint above. Active leaking down backwall of Abutment 1 in Bays A, B, and C, and at Girder F. (See 2013 photos of ice on bearing seat, and down breastwall at left end.)

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Elem/Env	Description	Element Notes
300/4	Strip Seal Exp Joint	Above both sleeper slabs, and above Abutment 1. Open 1½ inches at Abutment 1, and the gland is torn in a few areas (particularly near the median). Torn gland allows roadway drainage to leak onto Abutment 1 bearing seat. (See 2013 Photos) Some chips in concrete end dam along Abutment 1 joint in NBnd lanes. Joint at rear approach is open about 2 inches, and joint at forward approach is open 1¾ inches.
301/4	Pourable Joint Seal	Poured joint above Abutment 3, and adjacent to strip seal expansion joint above Abutment 1. Some minor chipping along edges of joints, and sealant is pushed down in spots.
310/4	Elastomeric Bearing	Pads at Abutment 1 and Pier 2; full width of the bottom flange of steel box girders and 3 inches thick. Up to 2 inches of ice around Bearing 1A during 2013 inspection. (See Photo)
321/4	R/Conc Approach Slab	Some light longitudinal cracks in both.
325/4	Slope Prot/Berms	Concrete slope paving on both abutment slopes and berms. Horizontal cracks in several panels. Panel along #1 Left wingwall has settled about 2 inches. Weeds are growing through some joints.
326/4	Bridge Wingwalls	U-Type abutment wings. Some seepage and/or efflor. along the horiz. construction joints. Light diag. crack with efflor. in #3 Left. (See 2007 Photo)
333/4	Other Bridge Railing	Concrete Type R bridge rail (Jersey barrier), with pedestrian chain link fence on top. Some vertical, horizontal, and shrinkage cracks (some with efflorescence) in concrete portion. Pedestrian fence on top of left rail has been bent about 9 inches out of alignment due to traffic impact near Abutment 3.
338/4	Conc Curbs/SW	Includes the median, and two 5½ ft. wide sidewalks. Several minor chips. Light vertical cracks in median. Steel plate covering the expansion joints is missing in the left sidewalk at Abutment 1, and in the right sidewalk at the #1 approach. (See 2007 Photo)
340/4	Superstr Cnc Coating	On bridge railing and deck overhangs. Peeling at bottom of bridge rail.
341/4	Substr Conc Coating	On abutments, wingwalls, and pier walls. Looks good.
359/4	Soffit Smart Flag	Many light transverse cracks with efflorescence.
530/4	Approach Guardrail A	Railing at right rear approach has been bent about 1 ft. out of alignment from traffic impact. Few minor dents and scrapes in railing at other approaches.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
356.02	Curb & RI	3/13/2007	-1	2016	1000

Replace the missing cover plates over the expansion joints in left sidewalk above Abutment 1, and in right sidewalk at the #1 approach.

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Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
**364.01	Exp Jts	2/3/2009	-1	2016	3000

Repair or replace the torn gland for the strip seal expansion joint above Abutment 1, which is leaking. (Abutment is stained full width of bridge.)

Bridge Notes

Unable to access the interior of the steel box girders.

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Inspection Notes

Temperature: 31°
Time: 1:05
Weather: Clear

Scope:

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

Team Leader Inspection Check-off:

- FCM's Vertical Clearance
- Posting Signs Stream Bed Profile
- Essential Repair Verification

Inspection Team:

Inspection Date: 02/27/2013

Inspector: CHURCHESK

Inspector (Team Leader)