

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

Highway Number (ON) 5D: 00000 V  
Mile Post (ON) 11: 2.060 mi  
Linear Ref. Sys. MP: 2.060 mi

Bridge Key: CS152-0.4-S159      Inspection Date: 03/09/2021      Sufficiency Rating: 99.8      ND

NBI Reporting ID:	CS152-0.4-S159	Main Mat/Desgn 43A/B:	3	02	Bridge Cost 94:	0.00
Rgn/Sect 2E/2M:	57	Appr Mat/Desgn 44A/B:	0	00	Roadway Cost 95:	0.00
Tran Region 2T:	8	Main Spans Unit 45:	1		Total Cost 96:	0.00
County Code 3:	023	Approach Spans 46:	0		Year of Cost Estimate 97:	1980
023 COSTILLA		Horiz Clr 47:	40.00 ft		Brdr Brgd Code/% 98A/B:	-2
Place Code 4:	00000	Max Span 48:	47.4 ft		Border Bridge Number 99:	
non-city		Str Length 49:	51.4 ft		Defense Highway 100:	0
Rte.(On/Under) 5A:	1	Curb Wdth L/R 50A/B:	0.0 ft	0.0 ft	Parallel Structure 101:	N
Signing Prefix 5B:	4	Width Curb to Curb 51:	40.00 ft		Direction of Traffic 102:	2
Level of Service 5C:	1	Width Out to Out 52:	42.0 ft		Temporary Structure 103:	!
Direction Suffix 5E:	0	Deck Area:	2159		Highway Systems 104:	0
Feature Intersected 6:		Min Clr Ovr Brgd 53:	99.99		Fed Lands Hiway 105:	0
UNNAMED DRAINAGE		Min Undrclr Ref 54A:	N		Year Reconstructed 106:	
Facility Carried 7:		Min Underclr 54B:	0.0 ft		Deck Type 107:	1
COUNTY ROAD P.6		Min Lat Clrnce Ref R 55A:	N		Wearing Surface 108A:	6
Alias Str No.8A:		Min Lat Undrclr R 55B:	0.0 ft		Membrane 108B:	0
		Min Lat Undrclr L 56:	0.0 ft		Deck Protection 108C:	8
Prll Str No. 8P:		Deck 58:	7		Truck ADT 109:	2.00 %
N/A		Super 59:	7		Trk Net 110:	0
Location 9:		Sub 60:	6		Pier Protection 111:	!
0.4 MI E OF SAN LUIS		Channel/Protection 61:	7		NBIS Length 112:	Y
Max Clr 10:	99.99	Culvert 62:	N		Scour Critical 113:	8
BaseHiway Net12:	0	Oprrtg Rtg Method 63:	1 LF Load Facto		Scour Watch 113M:	N
IrsinvRout 13A:	023-0-2013	Operating Rating 64:	60.4		Future ADT 114:	2,101
IrssubRout No13B:	00	Operating Factor 64:			Year of Future ADT 115:	2038
Latitude 16:	37d 11' 42.21"	Inv Rtnng Method 65:	1 LF Load Facto		CDOT Str Type 120A:	CIK
Longitude 17:	105d 25' 5.27"	Inventory Rating 66:	36.2		CDOT Constr Type 120B:	00
Detour Length 19:	2 mi	Inventory Factor 66:			Inspection Indic 122A:	-
Toll Facility 20:	3	Asph/Fill Thick 66T:	1.0 in		Inspection Trip 122AA:	Unknown
Custodian 21:	02	Str. Evaluation 67:	7		Scheduling Status 122B:	-
Owner 22:	02	Deck Geometry 68:	6		Maintenance Patrol 123:	0
Functional Class 26:	09	Undrclr Vert/Hor 69:	N		Expansion Dev/Type 124:	O
Year Built 27:	2006	Posting 70:	5 At/Above Lega		Brdg Rail Type/Mod 125A/B:	Y 1
Lanes On 28A:	2	Waterway Adequacy 71:	8		Posting Trucks 129A/B/C:	
Lanes Under 28B:	0	Approach Alignment 72:	8		Str Rating Date 130:	03/28/2013
ADT 29:	1,429	Type Of Work 75A:	-1		Special Equip 133:	0.00
Year of ADT 30:	2018	Work Done By 75B:	!		Vert Clr N/E 134A/B/C:	X
Design Load 31:	5 MS 18 (HS 20)	Length of Improvment 76:	0		Vert Clr S/W 135A/B/C:	X
Apr Rdwy Width 32:	23.10 ft	Insp Team Indicator 90B:	STANTEC		Vertical Clr Date:	12/31/1900
Median 33:	0	Inspector Name 90C:	QYUENN		Weight Limit Color 139:	0, White
Skew 34:	0 °	Frequency 91:	24 months		Str Billing Type:	IIB
Structure Flared 35:	0	FC Frequency 92A:			Userkey 1, Insp System:	OFFSYS
Sfty Rail 36a/b/c/d:	1 1 1 1	UW Frequency 92B:			Userkey 4, Insp Sched:	ODD MAR S_0
Rail ht36h:	41.5 in	SI Frequency (Pin) 92C:			Userkey 5, UW Sched:	
Hist Signif 37:	5	FC Inspection Date 93A:			Userkey 6, Pin Sched:	
Posting status 41:	A	UW Inspection Date 93B:			Inspection Key:	JIHH
Service on/un 42A/B:	1 5	SI Date (Pin) 93C:			Date Entered:	3/23/2021 12:00
					Entered By:	RYEA

Inspection Type:	Regular NBI
EOR:	Unknown

Data Responsibility: Asset Management      Inspection      Rating

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**Element Inspection Report**

Elm/Env	Description	Unit	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4
12/1	Re Concrete Deck	sq.ft	2159	82%	1774	18%	385	0%	0	0%	0
Concrete on galvanized corrugated metal stay-in-place forms. Steel side plates and end of the deck plates. Previously noted: concrete surface had uneven finish. Noticeable vibration and slight deflection under loads. (8) transverse cracks spaced at 3 to 8 feet, hairline to 1/32 inch wide cracks, (2) longitudinal cracks at each end 2 feet either side of centerline of roadway, 6 feet long. Not visible due to asphalt.											
510/1	Wearing Surfaces	sq.ft	2056	89%	1828	11%	225	0%	3	0%	0
1 inch asphalt. Short transverse crack up to 0.20 inch wide in asphalt in northbound lane near west abutment (A1). Previous cracks in asphalt were tar sealed prior to 2021 inspection.											
3220/1	Crack (Wearing Sur)	sq.ft	228	0%	0	99%	225	1%	3	0%	0
See Element 510 comments.											
1130/1	Cracking (RC and Other)	sq.ft	385	0%	0	100%	385	0%	0	0%	0
See Element 12 comments.											
107/1	Steel Opn Girder/Beam	ft	720	100%	720	0%	0	0%	0	0%	0
(14) weathering steel wide flange beams. Starting to develop rust patina as designed. Noticeable dead load deflection to all girders. No diaphragms.											
515/1	Steel Protective Coating	sq.ft	720	100%	720	0%	0	0%	0	0%	0
Weathering steel. No significant defects.											
215/1	Re Conc Abutment	ft	84	94%	79	2%	2	4%	3	0%	0
Concrete, full retaining abutments. (2) lines of honeycombing in the south half of east abutment (A2). 32 inch long x 10 inch high x 3 inch deep spall under Girder E in A2. Spall under Girder N in west abutment (A1) patched prior to 2011 inspection. (4) ± vertical insignificant cracks in each abutment.											
1080/1	Delamination/Spall/Patch	ft	5	0%	0	40%	2	60%	3	0%	0
See Element 215 comments.											
330/1	Metal Bridge Railing	ft	103	100%	103	0%	0	0%	0	0%	0
Galvanized CDOT Type 10M rail mounted on steel posts mounted on tops of concrete curbs installed between 2009 and 2011 inspections. No significant defects.											
515/1	Steel Protective Coating	sq.ft	103	100%	103	0%	0	0%	0	0%	0
Galvanized. No significant defects.											
9326/1	Bridge Wingwalls	(EA)	4	100%	4	0%	0	0%	0	0%	0
Concrete, U-type. Honeycombing at southeast wingwall with a spall at junction with abutment. Cracks and spalls patched prior to 2011 inspection. South wingwalls are on outside of abutment. North wingwalls are flush with abutment. Insignificant cracks in all wingwalls.											
9338/1	Conc Curbs/SW	(LF)	103	100%	103	0%	0	0%	0	0%	0
Insignificant transverse/vertical cracks throughout.											
9501/1	Channel Cond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Small irrigation ditch. Main channel is bermed up to carry ditch profile under bridge.											
9504/1	BankCond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Stable, well defined. Vegetated along banks to south (downstream). Bare banks on upstream side where channel flows through a field.											
9520/1	AppRdAlign	(EA)	1	100%	1	0%	0	0%	0	0%	0
1 inch wide transverse crack in asphalt at back face of both abutments has been sealed. Type 3 approach rail with slotted rail terminal ends. Slotted rail section damaged at northwest end.											
9530/1	Approach Guardrail A	(EA)	1	100%	1	0%	0	0%	0	0%	0
Galvanized Thrie-beam transitions, approach rails are long enough, and end panel treatments. Damage to slotted W-beam section at end of northwest approach rail.											
9600/1	Genl Remarks	(EA)	1	100%	1	0%	0	0%	0	0%	0
Type 3 object markers at all (4) ends of approach rails.											

**Inspection References and Definitions:**

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## Crack Width Descriptions for Reinforced Concrete:

Insignificant cracking (in.) = Less than 0.012 wide

Moderate cracking (in.) = 0.012 to 0.05 wide

Wide cracking (in.) = Greater than 0.05 wide

## Rust Codes (R Codes):

R1 = Peeling of the paint, pitting, surface rust, etc., no measurable section loss.

R2 = Flaking, minor section loss (< 10% thickness loss).

R3 = Flaking, swelling, mod section loss (10% < thickness loss < 30%).

R4 = Heavy section loss (> 30% thickness loss), may have holes through base metal.

## Crack Width Descriptions for Prestressed Concrete:

Insignificant cracking (in.) = Less than 0.004 wide

Moderate cracking (in.) = 0.004 to 0.009 wide

Wide cracking (in.) = Greater than 0.009 wide

## Concrete Scaling Codes (S Codes):

S1 = Light scale up to 1/4" deep.

S2 = Moderate scale up to 1/2" deep with agg. exposed.

S3 = Heavy scale up to 1" deep with some agg. loose or missing.

S4 = Critical scale > 1" deep with reinforcing bars exposed and general disintegration of the concrete.

## Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Priority
306.08	Approach Railing-Repair	3/5/2019	1	2023	Medium

Replace damaged slotted W-beam section at end of northwest approach rail.

353.04	Deck-Seal	3/22/2015	1	2022	Low
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Seal cracks in asphalt in deck overlay.

358.05	Substructure-Patch spalls	3/5/2019	1	2023	Medium
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Patch spall in east abutment (A2) under Girder E.

## Bridge Notes

## Inspection Notes

Date - 3/9/2021

Temp: 47 degrees Time: 2:30 PM Weather: Partly cloudy, breeze

## Scour Item 113 Documentation

CS152-0.4-S159 SCOUR Item 113 Screening Memo 2016 04 20.pdf

## Bat Present At Bridge

No

## Inspection Access Requirements

## Scheduling Notes

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Scope:

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

Team Leader Inspection Check-off:

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

Inspection Team: STANTEC

Inspection Date: 03/09/2021

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Inspector: Unknown

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Inspector (Team Leader): QYUEN NGO