



ADDENDUM #2
Community Planning & Permitting
Preliminary Design of Crossings at Kenosha Road at Coal Creek and State Highway 7 at
Dry Creek #3
RFP # 7210-21

March 10, 2021

The attached addendum supersedes the original Information and Specifications regarding RFP # 7210-21 where it adds to, deletes from, clarifies or otherwise modifies. All other conditions and any previous addendums shall remain unchanged.

Please see the attached Exhibit A: Kenosha Road at Coal Creek Project Location Details and Planned Creek Improvements at the end of this document.

Please note: Due to COVID-19, BIDS will only be accepted electronically by emailing purchasing@bouldercounty.org.

1. Question: Would it be possible to get any load rating and/or bridge inspection reports for these existing structures?

ANSWER: Please see the attached documents at the end of this addendum for the bridge inspection reports.

2. Question: Page 15 of the RFP states: "The response to this RFP, for items A-F below, is limited to a maximum of 20 8.5"x11" pages, excluding example alternatives analysis report, front and back covers, signature page, W-9, and proof of insurance, using no smaller than 11-point font and no less than 0.5" margins."
Would you consider excluding divider tabs from the 30-page limit, as well as the front and back covers?

ANSWER: Yes, divider tabs and front and back covers can be excluded from the page limit. Note, the limit is 20 pages, not 30 pages.

3. Question: Can you confirm that an alternatives analysis is not required for the SH 7 crossing?

ANSWER: This is correct. An alternatives analysis is not required for the CO 7 project.

4. Question: For task item 2.1, does Boulder County Public Works plan to schedule and facilitate the open houses? And is the consultant's responsibility limited to providing the exhibits for the meetings as described?

ANSWER: Boulder County will schedule, advertise, and facilitate the open houses. Consultant should plan on providing exhibits and having representative(s) attend the meetings to answer questions.

5. Question: Is the CO 7 Corridor Development Plan available for viewing?

ANSWER: The CO 7 Corridor Development Plan is available [here](#).

6. Question: Task 3.2 – What is meant by preliminary utility investigation? Does the County want a SUE Quality Level B report or something less?

ANSWER: Consultant to determine utilities (e.g. engineering ticket) within the project areas and whether the utilities are within their own easement and if they are above or below ground. No SUE level reporting is required.

7. Question: In reference to optional tasks 5.2 and 5.3 within the Task Table.

Task 5.2 – What is meant by supplemental Survey? A topographic survey of the project site is needed to compare existing and proposed roadway, bridge, and channel contours. The use of existing data as mentioned in task 3.1 may not be accurate enough for preliminary design.

ANSWER: As consultant has indicated, using existing data in task 3.1 will not be enough for a very thorough hydraulic analysis. However, the project has limited budget and may have to make do with what is available. If budget allows, survey of the pertinent stream cross-sections would be ideal.

Task 5.3 – It appears that a preliminary structure design is desired by the County. A Geotechnical Analysis and Report would be required to produce preliminary bridge plans. Would the County consider a Geotechnical Report as a required task?

ANSWER: The project has a limited budget and therefore for the needs of this project, preliminary structure design includes length of structure, width of

structure, structure clearance, girder type (e.g. steel, concrete) and need for piers. Based on that information and not knowing the geotechnical properties prepare a small write up of which foundation type (pile, caisson) may work better for the bridge type and potential soil conditions.

8. Question: What stream restoration area should be evaluated as part of this project. The Figure prepared by Icon shows a significantly larger upstream area for stream restoration than the other figure.

ANSWER: The ICON study covers a much larger stretch of Coal Creek, much of which is underway in one form or another. The ICON exhibit was included to give context for the work that is happening in the area. This project needs to look at realignment options and restoration needs from Kenosha Road downstream across the boulder county-owned property and underneath the irrigation ditch structure.

9. Question: Are the CHAMP models for Dry Creek and Coal Creek 1D or 2D models

ANSWER: The floodplain models for Dry Creek and Coal Creek are both 1D models. Note, the model for Coal Creek is recent, but not technically part of the CHAMP model.

Submittal Instructions:

Submittals are due at the email box only, listed below, for time and date recording on or before **10:00 a.m. Mountain Time on March 19, 2021.**

Please note that email responses are limited to a maximum of 50MB capacity. NO ZIP FILES OR LINKS TO EXTERNAL SITES WILL BE ACCEPTED. Electronic Submittals must be received in the email box listed below. Submittals sent to any other box will NOT be forwarded or accepted. This email box is only accessed on the due date of your questions or proposals. Please use the Delivery Receipt option to verify receipt of your email. It is the sole responsibility of the proposer to ensure their documents are received before the deadline specified above. Boulder County does not accept responsibility under any circumstance for delayed or failed email or mailed submittals.

Email purchasing@bouldercounty.org; identified as RFP # 7210-21 in the subject line.

All proposals must be received and time and date recorded at the purchasing email by the above due date and time. Sole responsibility rests with the Offeror to see that their bid is received on time at the stated location(s). Any bid received after due date and time will be returned to the bidder. No exceptions will be made.

The Board of County Commissioners reserve the right to reject any and all bids, to waive any informalities or irregularities therein, and to accept the bid that, in the opinion of the Board, is in the best interest of the Board and of the County of Boulder, State of Colorado.



**RECEIPT OF LETTER
ACKNOWLEDGMENT**

March 10, 2021

Dear Vendor:

This is an acknowledgment of receipt of Addendum #2 for RFP #7210-21, Preliminary Design of Crossings at Kenosha Road at Coal Creek and State Highway 7 at Dry Creek #3.

In an effort to keep you informed, we would appreciate your acknowledgment of receipt of the preceding addendum. Please sign this acknowledgment and email it back to purchasing@bouldercounty.org as soon as possible. If you have any questions, or problems with transmittal, please call us at 303-441-3525. This is also an acknowledgement that the vendor understands that **due to COVID-19, BIDS will only be accepted electronically by emailing purchasing@bouldercounty.org.**

Thank you for your cooperation in this matter. This information is time and date sensitive; an immediate response is requested.

Sincerely,

Boulder County Purchasing

Signed by: _____ **Date:** _____

Name of Company _____

End of Document

Colorado Department of Transportation

Highway Number (ON) 5D: 007C

Mile Post (ON) 11: 57.106 mi

Structure Inspection and Inventory Report (English Units)

Bridge Key: D-16-BW Inspection Date: 08/07/2017 Sufficiency Rating: 60.0 FO

NBI Reporting ID:	D-16-BW	Main Mat/Desgn 43A/B:	1	19	Bridge Cost 94:	\$165977
Rgn/Sect 2E/2M:	41	Appr Mat/Desgn 44A/B:	0	0	Roadway Cost 95:	\$16598
Tran Region 2T:	02	Main Spans Unit 45:	2		Total Cost 96:	\$182575
County Code 3:	013	Approach Spans 46:	0		Year of Cost Estimate 97:	2017
BOULDER		Horiz Clr 47:	29.30 ft		Brdr Brdg Code/% 98A/B:	-2
Place Code 4:	00000	Max Span 48:	16.6 ft		Border Bridge Number 99:	
non-city		Str Length 49:	34.9 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:	3	Width Curb to Curb 51:	29.30 ft		Direction of Traffic 102:	2
Level of Service 5C:	1	Width Out to Out 52:	31.1 ft		Temporary Structure 103:	-
Direction Suffix 5E:	0	Deck Area:	1085		Highway Systems 104:	1
Feature Intersected 6:		Min Clr Ovr Brdg 53:	99.99		Fed Lands Hiway 105:	0
DRAW		Min Undrclr Ref 54A:	N		Year Reconstructed 106:	
Facility Carried 7:		Min Underclr 54B:	0.0 ft		Deck Type 107:	N
SH 7 ML		Min Lat Clrnce Ref R 55A:	N		Wearing Surface 108A:	N
Alias Str No.8A:		Min Lat Undrclr R 55B:	0.0 ft		Membrane 108B:	N
		Min Lat Undrclr L 56:	0.0 ft		Deck Protection 108C:	N
Prll Str No. 8P:		Deck 58:	N		Truck ADT 109:	4.00 %
N/A		Super 59:	N		Trk Net 110:	1
Location 9:		Sub 60:	N		Pier Protection 111:	!
0.35 MI E OF 75th ST		Channel/Protection 61:	6		NBIS Length 112:	Y
Max Clr 10:	99.99	Culvert 62:	5		Scour Critical 113:	8
BaseHiway Net12:	1	Oprting Rtg Method 63:	0 Field Evaluatio		Scour Watch 113M:	-
IrsinvRout 13A:	000000007C	Operating Rating 64:	40.0		Future ADT 114:	29,800
IrsubRout No13B:	00	Operating Factor 64:			Year of Future ADT 115:	2031
Latitude 16:	40d 00' 52.60"	Inv Rtnng Method 65:	0 Field evaluation		CDOT Str Type 120A:	CBC
Longitude 17:	105d 10' 18.00"	Inventory Rating 66:	36.0		CDOT Constr Type 120B:	02
Detour Length 19:	3 mi	Inventory Factor 66:			Inspection Indic 122A:	-
Toll Facility 20:	3	Asph/Fill Thick 66T:	18.0 in		Inspection Trip 122AA:	0.00
Custodian 21:	01	Str. Evaluation 67:	5		Scheduling Status 122B:	0
Owner 22:	01	Deck Geometry 68:	2		Maintenance Patrol 123:	13
Functional Class 26:	02	Undrclr Vert/Hor 69:	N		Expansion Dev/Type 124:	O
Year Built 27:	1928	Posting 70:	5 At/Above Lega		Brdg Rail Type/Mod 125A/B:	F 0
Lanes On 28A:	2	Waterway Adequacy 71:	6		Posting Trucks 129A/B/C:	0.0 0.0 0.0
Lanes Under 28B:	0	Approach Alignment 72:	8		Str Rating Date 130:	10/20/2011
ADT 29:	20,000	Type Of Work 75A:	-2		Special Equip 133:	Unknown
Year of ADT 30:	2011	Work Done By 75B:	!		Vert Clr N/E 134A/B/C:	X 99.99 0.00
Design Load 31:	2 M 13.5 (H 15)	Length of Improvment 76:	35		Vert Clr S/W 135A/B/C:	X 99.99 0.00
Apr Rdwy Width 32:	27.00 ft	Insp Team Indicator 90B:	STANTEC		Vertical Clr Date:	01/01/1901
Median 33:	0	Inspector Name 90C:	BUTKOVICHJ		Weight Limit Color 139:	0, White
Skew 34:	53 °	Frequency 91:	24 months		Str Billing Type:	U
Structure Flared 35:	0	FC Frequency 92A:			Userkey 1, Insp System:	ONSYS
Sfty Rail 36a/b/c/d:	0 0 0 0	UW Frequency 92B:			Userkey 4, Insp Sched:	EVN AUG G14
Rail ht36h:	25.0 in	SI Frequency 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:			Userkey 7, 113 Doc Date:	
Service on/un 42A/B:	1 5	SI Date (Pins) 93C:			Inspection Key:	BPDJ

Inspector Name: BUTKOVICHJ

Data Responsibility: Asset Management Inspection Rating

Colorado Department of Transportation

Highway Number (ON) 5D: 007C _

Mile Post (ON) 11: 57.106 mi

Structure Inspection and Inventory Report (English Units)

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
241/1	Re Conc Culvert	ft	104	0%	0	83%	86	17%	18	0%	0
2-Cell 10 ft W x 4 ft H concrete box culvert.											
1010/1	Cracking	ft	1	0%	0	100%	1	0%	0	0%	0
Some vertical cracks open to 0.04 inch wide in all walls. Diagonal crack at the right end of Wall 1. 0.25 inch wide vertical crack at the left end of Wall 3. (Quantity of 1 used to eliminate double counting – Actual quantity is 15.)											
1080/1	Delamination/Spall/Patchec	ft	10	0%	0	0%	0	100%	10	0%	0
Heavy scale and spalling at the right end of Wall 1. Left end of Wall 2 is spalled at bottom for 1 linear ft. 1 ft diameter spall in base of Wall 2 on forward side near inlet. 1 ft diameter x 2 inch D spall at the left end of Wall 3 at the joint with the wingwall. The top slab is spalling below the left headwall in both cells, with some exposed rebar near Wall 3.											
1190/1	Abrasion(PSC/RC)	ft	91	0%	0	91%	83	9%	8	0%	0
Moderate to heavy stream abrasion with exposed aggregate on the floor of both cells, and light to moderate stream abrasion near the bottom of all walls. Wall 2 has heavy stream abrasion with exposed aggregate for about 4 ft at both ends near the bottom. (Quantity of 83 used in CS-2 to eliminate double counting – Actual quantity is 96.)											
6000/1	Scour	ft	2	0%	0	100%	2	0%	0	0%	0
2015: 1 ft to 2 ft of scour at the inlet end of Cell 2. Approximately 6 Inches of scour at outlets. 2017: 4 inches of scour at the inlet of Cell 1 and 6 inches at the inlet of Cell 2.											
333/1	Other Bridge Railing	ft	70	66%	46	34%	24	0%	0	0%	0
Type F (W-beam railing with timber posts). Timber posts bolted to the headwalls. Some light to moderate checks in the posts.											
515/1	Steel Protective Coating	sq.ft	70	100%	70	0%	0	0%	0	0%	0
Galvanized.											
3440/1	Eff (Stl Protect Coat)	ft	21	100%	21	0%	0	0%	0	0%	0
No significant defects.											
9327/1	Culvert Wingwalls	(EA)	4	0%	0	25%	1	75%	3	0%	0
Flared concrete wingwalls. Minor stream abrasion and light scale on all. Right rear is spalled at the top. A minor spall at the bottom of left rear. 1 square ft spall on right forward. 1 ft diameter spall in left forward at junction with Wall 3. Vertical cracks at the interface of the culvert walls. Footing is exposed 6 inches vertically at the right forward.											
9335/1	Culvert Headwalls	(EA)	2	0%	0	50%	1	50%	1	0%	0
Light diagonal cracks spaced 2 to 3 ft apart in the right headwall. The left headwall has a few light vertical cracks. Spall on the top of the right headwall over Cell 2.											
9501/1	Channel Cond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Draw. Fair alignment. A gravel and cobble bottom. A few trees in the channel. Year round flow in both cells. Fencing across the channel downstream about 25 ft from the end of the culvert.											
9502/1	ChannProtMatCond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Rock riprap on upstream banks, grouted on the rear bank. Up to 2 ft diameter rock riprap at the end of the left rear wingwall (left rear bank) appears to be adequate. Some asphalt placed at the end of the left forward wingwall. No significant defects noted.											
9504/1	BankCond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Many large trees downstream. Thick grass and weeds.											

Colorado Department of Transportation

Highway Number (ON) 5D: 007C _

Mile Post (ON) 11: 57.106 mi

Structure Inspection and Inventory Report (English Units)

9505/1	Debris Smart Flag	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Small branches on upstream nose of divider wall.

9530/1	Approach Guardrail A	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Transitions are not double nested, rails are not long enough, and ends are turned down.

A few spacers are also broken.

9600/1	Genl Remarks	(EA)	1	100%	1	0%	0	0%	0	0%	0
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PR LWBR Structure overtopped during September 2013 flooding event per resident adjacent to the culvert.

Debris has been removed. Add riprap at inlet of Cell 2 and southeast wingwall footing.

2013 FLOOD - 50% clogged with small tree sized debris still flowing.

Waterway Adequacy changed to 4 for this event. Debris has been removed prior to 2017 inspection.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
356.00	Bridge Rail-Upgrade	8/7/2017	_	2019	63450

Install adequate bridge and approach rail.

358.05	Superstructure-Repair Concrete	8/7/2017	_	2019	1000
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Clean and patch the various spalls in the walls, top slab, headwalls, and wingwalls.

360.03	Converted Work Candidates	5/19/2014	-1	2019	300
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Add rock (2 cu yds) at inlet end of both cells and along the right forward wingwall footing.

Bridge Notes

Hazard Reflective Panel at the Right Rear corner only. PR LWBR 1 to 2 ft of scour at inlet of cell #2.

Inspection Notes

Time: 7:20 AM Temp: 56 degrees Weather: Cloudy, light rain
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Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 007C _
Mile Post (ON) 11: 57.106 mi

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: 08/07/2017

Inspector: Unknown

Inspector (Team Leader): JIM BUTKOVICH

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

Highway Number (ON) 5D: 00000 V
 Mile Post (ON) 11: -1 mi
 Linear Ref. Sys. MP: 0.000 mi

Bridge Key: ERI-KENOSHA Inspection Date: 08/31/2020 Sufficiency Rating: 83.4 ND

NBI Reporting ID:	BC-38-7.9-CO	Main Mat/Desgn 43A/B:	5	04	Bridge Cost 94:	0.00
Rgn/Sect 2E/2M:	41	Appr Mat/Desgn 44A/B:	0	00	Roadway Cost 95:	0.00
Tran Region 2T:	02	Main Spans Unit 45:	1		Total Cost 96:	0.00
County Code 3:	013	Approach Spans 46:	0		Year of Cost Estimate 97:	2018
013 BOULDER		Horiz Clr 47:	26.00 ft		Brdr Brdg Code/% 98A/B:	-2 0.00
Place Code 4:	24950	Max Span 48:	29.0 ft		Border Bridge Number 99:	0
ERIE		Str Length 49:	31.5 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:	5	Width Curb to Curb 51:	26.00 ft		Direction of Traffic 102:	2
Level of Service 5C:	1	Width Out to Out 52:	28.0 ft		Temporary Structure 103:	-
Direction Suffix 5E:	0	Deck Area:	882		Highway Systems 104:	0
Feature Intersected 6:		Min Clr Ovr Brdg 53:	99.99		Fed Lands Hiway 105:	0
Coal Creek		Min Undrclr Ref 54A:	N		Year Reconstructed 106:	
Facility Carried 7:		Min Underclr 54B:	0.0 ft		Deck Type 107:	1
Kenosha Rd (CR 38)		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
ERI-KENOSHA		Min Lat Undrclr L 56:	0.0 ft		Deck Protection 108C:	0
Prll Str No. 8P:		Deck 58:	7		Truck ADT 109:	4.00 %
0		Super 59:	6		Trk Net 110:	0
Location 9:		Sub 60:	7		Pier Protection 111:	!
0.2 Mi W of Co Rd 901		Channel/Protection 61:	6		NBIS Length 112:	Y
Max Clr 10:	99.99	Culvert 62:	N		Scour Critical 113:	5
BaseHiway Net12:	0	Oprrng Rtg Method 63:	0	Field eval and	Scour Watch 113M:	N
IrsinvRout 13A:	00000000000	Operating Rating 64:	40.0		Future ADT 114:	3,370
IrsubRout No13B:	00	Operating Factor 64:			Year of Future ADT 115:	2036
Latitude 16:	40d 04' 10.00"	Inv Rtnng Method 65:	0	Field eval and	CDOT Str Type 120A:	CDTPG
Longitude 17:	105d 03' 32.50"	Inventory Rating 66:	36.0		CDOT Constr Type 120B:	21
Detour Length 19:	2 mi	Inventory Factor 66:			Inspection Indic 122A:	-
Toll Facility 20:	3	Asph/Fill Thick 66T:	7.0 in		Inspection Trip 122AA:	Unknown
Custodian 21:	03	Str. Evaluation 67:	6		Scheduling Status 122B:	-
Owner 22:	03	Deck Geometry 68:	4		Maintenance Patrol 123:	0
Functional Class 26:	19	Undrclr Vert/Hor 69:	N		Expansion Dev/Type 124:	B
Year Built 27:	1965	Posting 70:	5	At/Above Lega	Brdg Rail Type/Mod 125A/B:	F 2
Lanes On 28A:	2	Waterway Adequacy 71:	7		Posting Trucks 129A/B/C:	0.0 0.0 0.0
Lanes Under 28B:	0	Approach Alignment 72:	8		Str Rating Date 130:	03/16/1997
ADT 29:	1,994	Type Of Work 75A:	-2		Special Equip 133:	0.00
Year of ADT 30:	2016	Work Done By 75B:	-		Vert Clr N/E 134A/B/C:	X 99.90 0.00
Design Load 31:	5 MS 18 (HS 20)	Length of Improvement 76:	0		Vert Clr S/W 135A/B/C:	X 99.90 0.00
Apr Rdwy Width 32:	24.00 ft	Insp Team Indicator 90B:	HDR, INC		Vertical Clr Date:	01/01/1901
Median 33:	0	Inspector Name 90C:	BRUNOM		Weight Limit Color 139:	0, White
Skew 34:	0 °	Frequency 91:	24 months		Str Billing Type:	IIC
Structure Flared 35:	0	FC Frequency 92A:			Userkey 1, Insp System:	OFFSYS
Sfty Rail 36a/b/c/d:	0 0 0 0	UW Frequency 92B:			Userkey 4, Insp Sched:	ODD JUN N_0
Rail ht36h:	26.0 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:	ZPGY
Service on/un 42A/B:	1 5	SI Date (Pin) 93C:			Date Entered:	10/20/2020 12:0
					Entered By:	BRUNOM

Inspection Type:	Regular NBI
EOR:	Unknown

Data Responsibility: Asset Management Inspection Rating

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

Highway Number (ON) 5D: 00000 V

Mile Post (ON) 11: -1 mi

Linear Ref. Sys. MP: 0.000 mi

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	882	100%	882	0%	0	0%	0	0%	0

5 inch thick topping slab on 2 inch double tee top flange. Not visible.

510/1	Wearing Surfaces	sq.ft	819	100%	819	0%	0	0%	0	0%	0
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7 inches of asphalt. No significant defects.

109/1	Pre Opn Conc Girder/Bear	ft	252	0%	0	100%	252	0%	0	0%	0
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(4) 24 inch x 7 foot 0 inch double tee girder sections, (8 girders total). 21 inch long x 4 inch wide x 1 inch deep spall in joint of southwest end diaphragm.

1090/1	Exposed Rebar	ft	29	0%	0	100%	29	0%	0	0%	0
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Exposed and corroded rebar (no section loss), exterior face of Girder H at Abutment 1, 2 inches in diameter and along south edge of Girder H top flange for 60% length. Exposed and corroded rebar (no section loss) approximately 2 inches long in bottom stem of Girder F at Abutment 1 bearing. Exposed and corroded rebar (no section loss) along north edge of Girder A top flange for 30% length.

1110/1	Cracking (PSC)	ft	222	0%	0	100%	222	0%	0	0%	0
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Cracks up to 0.09 inches wide in fillet of all girders. Full quantity of 252 in CS2 not represented in condition states to eliminate double counting

215/1	Re Conc Abutment	ft	56	95%	53	5%	3	0%	0	0%	0
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Concrete wall. Insignificant width vertical and horizontal surface cracks.

1120/1	Efflorescence/Rust Stain	ft	3	0%	0	100%	3	0%	0	0%	0
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Few insignificant width vertical and horizontal surface cracks with efflorescence approximately 3 feet long in southwest corner of Abutment 1.

302/1	Compressn Joint Seal	ft	56	0%	0	100%	56	0%	0	0%	0
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At both Abutments. Not visible.

2350/1	Debris Impaction	ft	56	0%	0	100%	56	0%	0	0%	0
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Compression seal at both abutments covered and filled with 7 inches of asphalt.

330/1	Metal Bridge Railing	ft	63	84%	53	16%	10	0%	0	0%	0
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Galvanized W-beam rails on (5) 8 inch x 8 inch timber posts.

515/1	Steel Protective Coating	sq.ft	63	100%	63	0%	0	0%	0	0%	0
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Galvanized exhibits no significant defects.

1150/1	Check/Shake	ft	9	0%	0	100%	9	0%	0	0%	0
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Minor checks (approximately 10% penetration) in timber posts.

1170/1	Split/Delamination (Tim)	ft	1	0%	0	100%	1	0%	0	0%	0
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Broken timber blockout on north rail side, 2nd post from west.

9326/1	Bridge Wingwalls	(EA)	4	100%	4	0%	0	0%	0	0%	0
--------	------------------	------	---	------	---	----	---	----	---	----	---

Concrete wall monolithic with abutments.

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

Highway Number (ON) 5D: 00000 V
Mile Post (ON) 11: -1 mi
Linear Ref. Sys. MP: 0.000 mi

9338/1	Conc Curbs/SW	(LF)	63	100%	63	0%	0	0%	0	0%	0
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6 inch x 11 inch curb. Top surface of both curbs is exposed. Vegetation growing along curbs.

9501/1	Channel Cond	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Man modified, meandering, sandy bottom streambed with mostly unregulated flows through flat prairie valley floor. Channel filled in and evened out during September 2013 Flood.

9504/1	BankCond	(EA)	1	100%	1	0%	0	0%	0	0%	0
--------	----------	------	---	------	---	----	---	----	---	----	---

Very steep sloped (1:1) to normal water level with grass and brush on mild to steep slopes (3:1 to 2:1) to flat cultivated fields for overbanks beyond the channel. East berm at Abutment 2 washed out prior to 2018 inspection. Small berm at downstream end with no berm at upstream creates eddy current along Abutment 2.

9510/1	Waterway Adequ.	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Slight chance of overtopping the bridge.

9520/1	AppRdAlign	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Transverse crack in asphalt at west end of bridge has been sealed, but is re-cracking.

9530/1	Approach Guardrail A	(EA)	1	100%	1	0%	0	0%	0	0%	0
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(2) posts and (1) section of W-beam. Approach rails not long enough, no transition, end treatments flared. Northeast and southwest end of approach rails are too low.

9600/1	Genl Remarks	(EA)	1	100%	1	0%	0	0%	0	0%	0
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Supplemental delineation panels at all (4) corners. Utility just north of bridge.

Inspection References and Definitions:

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
306.00	Approach Railing-Repair	6/23/2016	_	2022	High

Raise end treatment approaches at northeast and southwest or replace per 306.05.

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

Highway Number (ON) 5D: 00000 V
 Mile Post (ON) 11: -1 mi
 Linear Ref. Sys. MP: 0.000 mi

306.04	Bridge Rail-Upgrade	8/31/2020	-	2022	High
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Upgrade bridge railings to meet current AASHTO/CDOT standards.

306.05	Approach Railing	1/18/2007	-	2022	High
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Upgrade approach rails and end treatments and install transitions to meet current AASHTO/CDOT standards.

352.02	Misc-Remove Vegetation	2/13/2013	-	2023	Low
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Remove dirt, gravel and vegetation growing at sides of deck.

353.08	Deck-Seal	2/11/2015	-	2023	Low
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Seal cracks in west end of deck.

358.03	Substructure-Rip Rap	6/5/2018	-	2023	Medium
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Mitigate erosion along Abutment 2.

Bridge Notes

Inventory route is west to east
 South side is upstream
 Superstructure is named Girder A through H from north to south
 Substructure is numbered 1 through 2 from west to east

Structure not re-rated in 2020 for increase in asphalt since the previous rating was done by field evaluation.
 Transferred to the Town of Erie from Boulder County per letter dated 3-1-11 by Pamela Hanson, P.E.
 Bridge ID BC-38-7.9-CO formerly Boulder County is now ERI-KENOSHA, Town of Erie. Flood damage 2013: Slopes, scour



View 1

ROADWAY LOOKING AHEAD ON INVENTORY



View 2

BRIDGE ELEVATION FROM UPSTREAM

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 3

UNDERSIDE OF SUPERSTRUCTURE



View 4

CHANNEL UPSTREAM

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 5

CHANNEL DOWNSTREAM



View 6

ROADWAY LOOKING BEHIND ON INVENTORY

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 7

GENERAL VIEW OF DECK SURFACE



View 8

GENERAL VIEW OF ABUTMENT 1

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 9

GENERAL VIEW OF ABUTMENT 2



View 10

SPLIT SPACER BLOCK AT 2ND POST FROM WEST IN NORTH RAIL

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 11

TWISTED SPACER BLOCKS IN SOUTH RAIL



View 12

HEAVY VEGETATION AT NORTHEAST APPROACH RAIL

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 13

BANK EROSION AT SOUTHEAST CORNER



View 14

EXPOSED AND CORRODED REBAR ALONG NORTH EDGE OF GIRDER A TOP FLANGE FOR 30% OF LENGTH

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 15

EXPOSED AND CORRODED REBAR ALONG SOUTH EDGE OF GIRDER H TOP FLANGE FOR 60% OF LENGTH



View 16

EXPOSED AND CORRODED REBAR APPROXIMATELY 2 INCHES LONG IN BOTTOM STEM OF GIRDER F AT ABUTMENT 1 BEARING

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 17

21 INCH LONG X 4 INCH WIDE X 1 INCH DEEP SPALL IN JOINT OF SOUTHWEST END DIAPHRAGM



View 18

TYPICAL CRACKS UP TO 0.09 INCHES WIDE IN GIRDER FILLETS

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION



View 19

2 INCH DIAMETER POP OUT WITH EXPOSED AND CORRODED REBAR IN GIRDER H
AT ABUTMENT 1



View 20

3 FEET OF VERTICAL AND HORIZONTAL SURFACE CRACKS WITH EFFLORESCENCE
THROUGHOUT SOUTHWEST CORNER OF ABUTMENT 1

STRUCTURE NO.: ERI-KENOSHA
CITY - ERIE, COUNTY - BOULDER

KENOSHA ROAD (CR 28) OVER COAL CREEK
INSPECTION DATE 8/31/2020

PREPARED BY HDR ENGINEERING, INC. FOR THE COLORADO DEPARTMENT OF TRANSPORTATION

ERI-KENOSHA

WINGWALLS:

10" THK. x 8'-0"
LONG C.I.P. CONC.

1'-0" CMP ROADWAY
DITCH DRAIN

FLOW
COAL
CREEK



NORTH

1'-0" CMP ROADWAY
DITCH DRAIN

24'-0" APPR. RDWY.

B.F. ABUT. 1

B.F. ABUT. 2

Q. COUNTY ROAD 38
(KENOSHA ROAD)

DIRECTION OF
INVENTORY

PLAN

31'-6" STR. LENGTH

ABUTMENTS:

C.I.P. CONCRETE

A1

A2

29'-0" MAX. SPAN

ELEVATION

LOOKING NORTH

28'-0" O/O

26'-0" C/C

GALV. W-BEAM RAILS ON 8"x8"
TIMBER POSTS & BLOCKING BOLTED
TO EDGE OF DECK @ 6'-3" O.C.

7" ASPHALT AVG. ON 5" THK. CONC.
TOPPING SLAB ON 2" THK. FLANGE
OF DOUBLE TEES

26"

RAIL HT.

20"

5/6"

A

B

C

D

E

F

G

H

(4) 2'-0"x7'-0" PRESTRESSED CONC. DOUBLE TEE SECTIONS

SECTION

LOOKING EAST

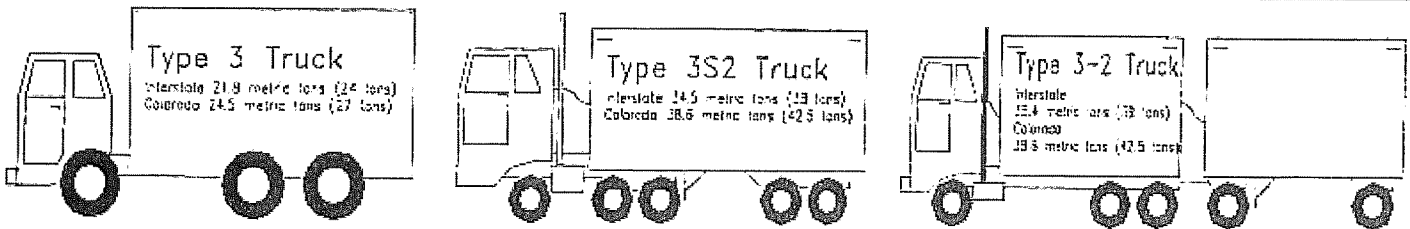
Now: ^{Town of Erie}
ERI-Kenosha

COLORADO DEPARTMENT OF TRANSPORTATION		Structure	
LOAD FACTOR RATING SUMMARY		WAS: BC-38-79-CO	
Rated Using		State Highway #	
Asphalt thickness: 0 mm (0 in.)		County Road 38	
<input checked="" type="checkbox"/> Colorado legal loads		Batch I.D.	
<input type="checkbox"/> Interstate legal loads		013099	
		Structure type	
		CDTPG	
		Parallel structure #	
		N/A	

Structural Member	GIRDER	CONC DECK		
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	Metric tons	(Tons)	Metric tons	(Tons)	Metric tons	(Tons)	Metric tons	(Tons)
Inventory MS 18 (HS 20)	32.7	(36.0)	32.7	(36.0)				
Operating MS 18 (HS 20)	36.4	(40.0)	36.4	(40.0)				

Type 3 truck				
Type 3S2 truck				
Type 3-2 truck				
Permit truck				



	Metric tons	Tons	Metric tons	Tons	Metric tons	Tons
Comments	REINSPECTED BUT NOT RERATED BY KIRKHAM MICHAEL 2003					
NO POSTING REQUIRED	REINSPECTED BUT NOT RERATED BY KIRKHAM MICHAEL 2004					
Rating updated from previous visual rating dated	3/15/04.					
Rated for 1/2" - 1" gravel over 5" C.I.P. conc. deck over 2" double tie top flange or 4" asphalt over top of deck in 1996.						

INSPECTED BUT NOT RATED
SEH, INC.

DATE: 3/26/13 BY: JASON TRIPLETT

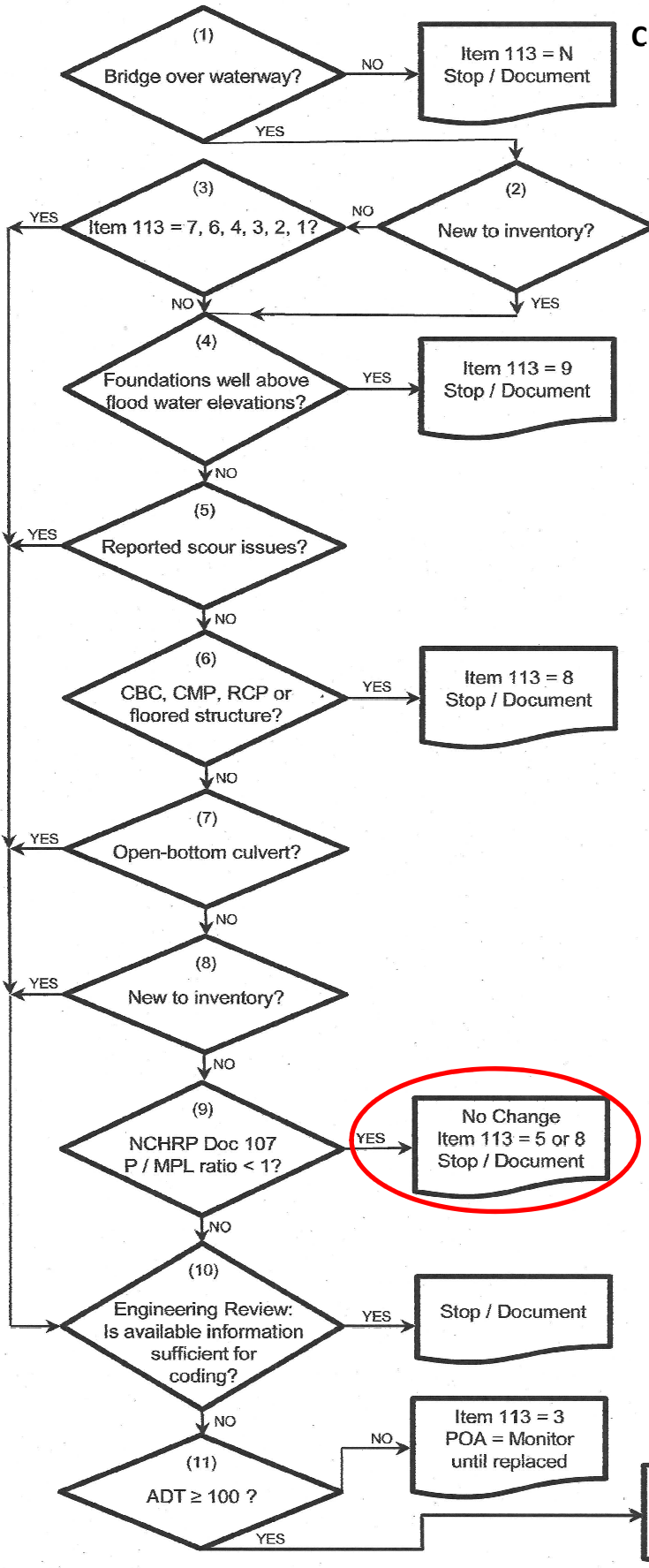
BRIDGE REINSPECTED BUT NOT RERATED BY HLA Infrastructure, Inc. - 1998

Rated by	Date	Check by	Date
<i>G. H. Hansen</i>	3/16/97	<i>Carl M. Vanoy</i>	3-1

Previous editions are obsolete and may not be used



CDOT OFF-SYSTEM BRIDGE SCOUR SCREENING CHART



STRUCTURE ID: ERI-KENOSHA
 FACILITY CARRIED: KENOSHA RD (CR 38)
 FEATURE INTERSECTED: COAL CREEK

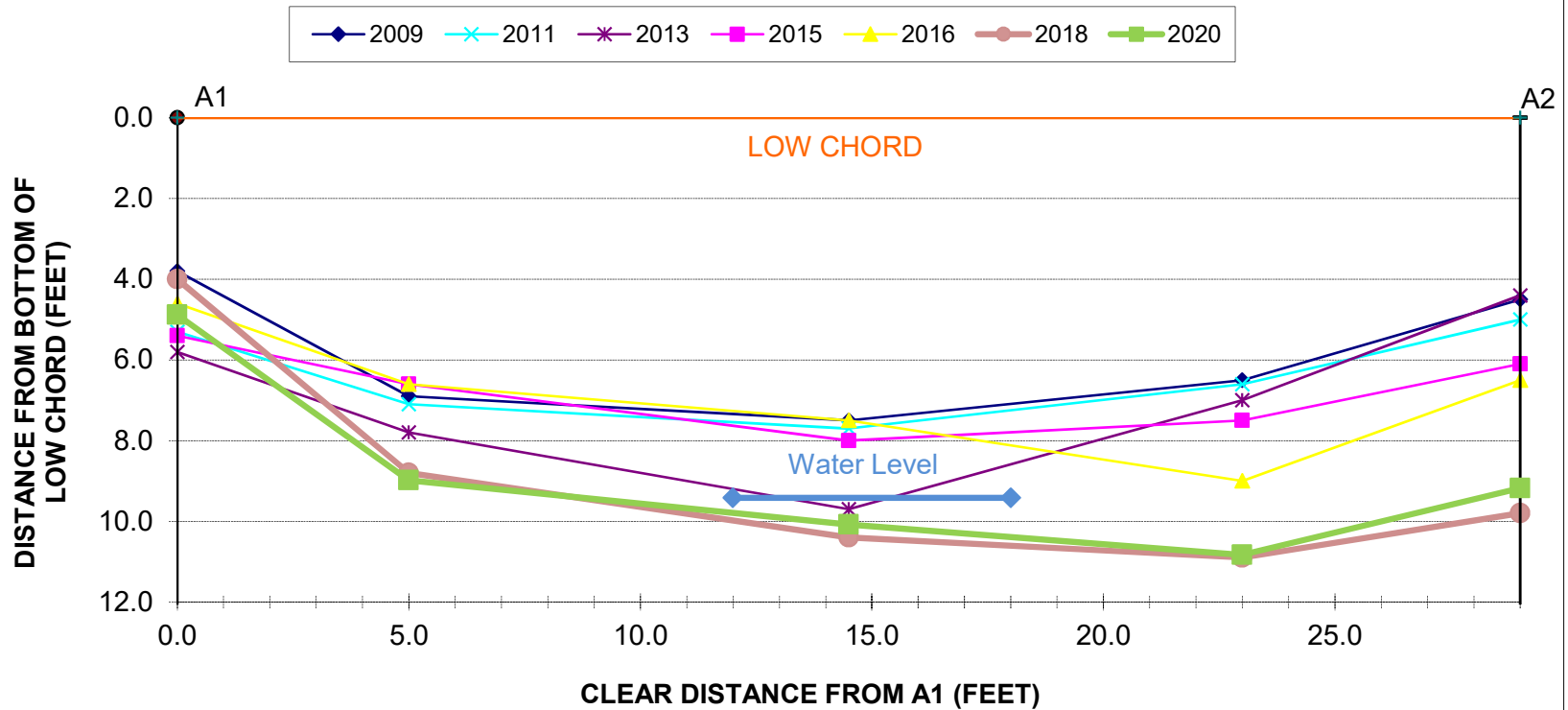
Structure Probability of Failure (P): N/A
 Minimum Performance Level (MPL): N/A
 Ratio (P/MPL): N/A

ITEM 113 = 5
 POA REQUIRED (Y/N): N
 POA COMPLETION DATE: N/A

EVALUATED BY: Matt Bruno
 ORGANIZATION: HDR Inc.
 DATE: 8/31/2020

REVIEWER COMMENTS:
 ERI-KENOSHA is a prestressed concrete double tee girder bridge spanning over Coal Creek. No scour issues were noted during the 2020 inspection. Item 113 = "5".

STREAMBED HISTORY



	0.0	5.0	14.5	23.0	29.0
2009	3.8	6.9	7.5	6.5	4.5
2011	5.3	7.1	7.7	6.6	5.0
2013	5.8	7.8	9.7	7.0	4.4
2015	5.4	6.6	8.0	7.5	6.1
2016	4.6	6.6	7.5	9.0	6.5
2018	4.0	8.8	10.4	10.9	9.8
2020	4.9	9.0	10.1	10.8	9.2

W.L.
9.7
9.4

STRUCTURE NUMBER: ERI-KENOSHA
 INSPECTION DATE: 8/31/2020

PERFORMED BY: MJB/AML