

ADDENDUM NO. TWO

REQUEST FOR PROPOSALS

136TH AVENUE BRIDGE OVER BIG DRY CREEK

PROJECT NO. 24-591

CITY OF THORNTON, CO

TO: Prospective Proposing Firms and all others concerned

DATE: April 18, 2024

PURPOSE: To provide additional information and clarification to the solicitation documents for the above-referenced Project.

1. The following information shall become part of the original Request for Proposal (RFP) for this Project.

A. The first paragraph of the RFP is hereby deleted and replaced with the following:

*“The City of Thornton, CO (“Thornton”) respectfully requests separate sealed Proposals for Design Engineering Services for the **136th Avenue Bridge over Big Dry Creek, Project No. 24-591** (hereinafter referred to as “Project”). Proposals will be received until **5:00 p.m.**, local time, **May 1, 2024** in the Contract Administration Office, 9500 Civic Center Drive, 2nd Floor City Hall, Thornton, CO 80229-4326.”*

The intent of the change is to extend the Proposal Due Date to 5:00 p.m. on May 1, 2024. Any reference to the proposal due date shall be understood to be extended, whether specifically referenced or not.

B. The most recent Bridge Inspection Report accomplished by CDOT dated January 28, 2022 as included as Reference Material Only. It shall not be considered part of the Contract Documents.

2. The following questions and answers are provided for additional clarification to the RFP.

Question 1: “Can the design use 11x17 pages?”

Answer 1: Yes.

Question 2: “Since the project is adding a turn lane only, does the City want a new pavement design completed as part of the project, or should the

- consultant use the same asphalt pavement section that's specified in the as-built plans and is already in place in the adjacent driving lanes?
- Answer 2: The Design will require pavement design and geotechnical investigation for the eastbound lane located on the west side of the bridge over Big Dry Creek. This lane will be located in the area that is currently landscaped.
- Question 3: "Is traffic data collection, analysis, and traffic signal timing required?"
- Answer 3: No.
- Question 4: "Section C.2, on page 37/54 refers to Traffic Signal Replacement. Please clarify the scope for traffic signal design, relocation, or replacement at each of the intersections."
- Answer 4: The Traffic Signal pole, pull boxes, and pedestrian pole currently located on the southeast corner of the 136th Avenue and Grant Street intersection will need to be relocated to accommodate the new lane.
- Question 5: "CDOT requires electrical calculations to be stamped by an EE professional engineer. Does the city require this as well?"
- Answer 5: The City requires all Bid and Construction plans to be stamped by a Professional Engineer. Electrical Calculations will need to be stamped by an Electrical Engineer as well.
- Question 6: "Will the existing trail under the bridge remain?"
- Answer 6: There is currently not a trail under the bridge. However, the Thorncreek concrete cart path to the south is outside the scope of this project and will remain. Additionally, the design shall include the existing pedestrian sidewalk on the south side of the bridge.
- Question 7: "On the As-Built document sheet 98, the Manning N for the overbank is lower than the channel. Is this correct?"
- Answer 7: Thornton cannot verify the information at this time. However, this issue will need to be addressed during the design process.
- Question 8: "Is the power line to the south of the bridge to be relocated?"
- Answer 8: Yes.
- Question 9: "Is the rating file of the bridge available?"
- Answer 9: The most current Bridge Inspection Report dated January 28, 2022 is attached for your review.
- Question 10: "From the most recent LOMR, there doesn't seem to be any existing freeboard under the bridge. Is there a debris freeboard requirement by the City?"
- Answer 10: Additional freeboard at this crossing is not part of the scope of this project.

Question 11: "Can you confirm that we can submit either electronically
or hardcopy?"

Answer 11: Per the RFP, Yes. Proposals will be received via hardcopy at the
Contracts Office at Thornton City Hall or electronically via the
BidnetDirect.com website.

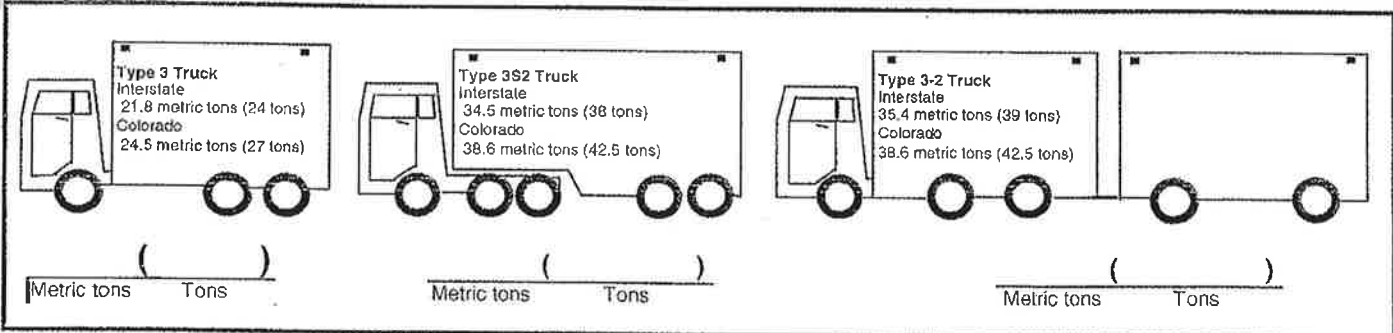
3. All other terms and conditions shall remain unchanged except as provided by this
Addendum. Proposing firms must acknowledge receipt of this Addendum in their
Proposal.

END OF ADDENDUM NO. TWO

DocuSigned by:
Patrick Hinterberger 4/18/2024
8DA8F281E4154C8...
Patrick Hinterberger Date
Contracts Supervisor

COLORADO DEPARTMENT OF TRANSPORTATION LOAD FACTOR RATING SUMMARY		Structure No.	THN-136WAS-BDC
Rated using : Asphalt thickness <u>75 mm (3 in.)</u> <input checked="" type="checkbox"/> Colorado legal loads <input type="checkbox"/> Interstate legal loads		Over	Big Dry Creek
		Road No.	136th Avenue
		Structure Type	CPGC
		Parallel Structure No.	N/A
		Batch I.D.	

Structural member	Girder		Negative Moment		Slab			
	Metric tons	(Tons)	Metric tons	(Tons)	Metric tons	(Tons)		Metric tons
Inventory	37.7	(41.6)	36.8	(40.6)	49.4	(54.5)		()
Operating	89.6	(98.8)	61.4	(67.7)	82.3	(90.8)		()
Type 3 truck		()		()		()		()
Type 3S2 truck		()		()		()		()
Type 3-2 truck		()		()		()		()
Permit truck		()		()		()		()



Comments **POSTING NOT REQUIRED**

3" asphalt on 8" concrete deck composite on BT42 prestressed concrete girders @ 6'-6" o.c., 2 spans

Slab: f'c=4500 psi; fy=60,000 psi; Ast=#5@6" (2.5" clr); Asc=#5@9" (1" clr)

Neg. Mom: Ast=#9@6" (d=51.31" w/ 5" haunch @ CL brg)

Girder: f'ci=6700 psi; f'c=7500 psi; F*s=270,000 psi (low relax); A*s=7.378 sq in; Fj=1494 kips;

Ee=11.88"; Ems=4.24"; Lh=9.69'

Rated by <u>Mark McDonald</u>	Date <u>3/24/2004</u>	Checked by <u>Dan Bechtold</u>	Date <u>4/1/2004</u>
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Routine Inspection Colorado Department of Transportation Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 00000 U
Mile Post (ON) 11: -1 mi
Linear Ref. Sys. MP: 5.015 mi

Bridge Key: THN-136WAS-BDC Inspection Date: 01/28/2022 Suff Rating: 90.4 FO G/F/P Condition: Good

NBI Reporting ID:	THN-136WAS-BDC	Main Mat/Desgn 43A/B:	6	02	Bridge Cost 94:	0.00
District (Region/Sect):	Reg 1 MSec 5	Appr Mat/Desgn 44A/B:	0	00	Roadway Cost 95:	0.00
Tran Region 2T:	02	Main Spans Unit 45:	2		Total Cost 96:	0.00
County Code 3:	001	Approach Spans 46:	0		Year of Cost Estimate 97:	1980
001 ADAMS		Horiz Clr 47:	25.10	ft	Brdr Brdg Code/% 98A/B:	-2 0.00
Place Code 4:	77290	Max Span 48:	94.0	ft	Border Bridge Number 99:	
THORNTON		Str Length 49:	197.8	ft	Defense Highway 100:	0
Rte.(On/Under) 5A:	1	Curb Wdth L/R 50A/B:	8.5	ft 8.5	Parallel Structure 101:	N
Signing Prefix 5B:	5	Width Curb to Curb 51:	72.17	ft	Direction of Traffic 102:	2
Level of Service 5C:	1	Width Out to Out 52:	95.8	ft	Temporary Structure 103:	-
Direction Suffix 5E:	0	Deck Area:	18944		Highway Systems 104:	0
Feature Intersected 6:		Min Clr Ovr Brdg 53:	99.90		Fed Lands Hiway 105:	0
BIG DRY CREEK		Min Undrclr Ref 54A:	N		Year Reconstructed 106:	
Facility Carried 7:		Min Underclr 54B:	0.0	ft	Deck Type 107:	2
136TH AVENUE		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:	1
		Min Lat Undrclr L 56:	0.0	ft	Deck Protection 108C:	1
Prll Str No. 8P:		Deck 58:	8		Truck ADT 109:	4.00 %
N/A		Super 59:	7		Trk Net 110:	0
Location 9:		Sub 60:	7		Pier Protection 111:	1
0.6 MI E OF I-25		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:	1	LF Load Fact	Scour Watch 113M:	N
IrsinvRout 13A:	014-0-2013	Operating Rating 64:	67.70		Future ADT 114:	29,282
IrsesubRout No13B:	00	Operating Factor 64:	-		Year of Future ADT 115:	2041
Latitude 16:	39d 56' 34.90"	Inv Rtg Method 65:	1	LF Load Fact	CDOT Str Type 120A:	CPGCG
Longitude 17:	104d 58' 49.30"	Inventory Rating 66:	40.60		CDOT Constr Type 120B:	41
Detour Length 19:	2 mi	Inventory Factor 66:	-		Expansion Dev/Type 124:	A
Toll Facility 20:	3	Asph/Fill Thick 66T:	3.0	in	Brdg Rail Type/Mod 125A/B:	R 0
Custodian 21:	04	Str. Evaluation 67:	7		Posting Trucks 129A/B/C:	- - -
Owner 22:	04	Deck Geometry 68:	3		Str Rating Date 130:	03/24/2004
Functional Class 26:	19	Undrclr Vert/Hor 69:	N		Special Equip 133:	Unknown
Year Built 27:	2004	Posting 70:	5	A/Above Lega	Vert Clr N/E 134A/B/C:	X 99.00 0.00
Lanes On 28A:	6	Waterway Adequacy 71:	7		Vert Clr S/W 135A/B/C:	X 99.00 0.00
Lanes Under 28B:	0	Approach Alignment 72:	8		Vertical Clr Date:	12/31/1900
ADT 29:	22,524	Type Of Work 75A:	-2		Weight Limit Color 139:	0, White
Year of ADT 30:	2021	Work Done By 75B:	1		Userkey 1, Insp System:	OFFSYS
Design Load 31:	9 MS22.5(HS25)or gr	Length of Improvment 76:	0		Userkey 4, Insp Sched:	EVN JAN C_0
Apr Rdwy Width 32:	72.00 ft	Insp Team Indicator 90B:	COLLINS ENGIN		Userkey 5, UW Sched:	
Median 33:	3	Inspector Name 90C:	BRANHAMK		Userkey 6, Pin Sched:	
Skew 34:	0 °	Frequency 91:	24	months	FHWA Bridge Risk:	LOW
Structure Flared 35:	0	FC Frequency 92A:			FHWA UW Risk:	NA
Sfty Rail 36a/b/c/d:	1 0 0 0	UW Frequency 92B:			FHWA Load Rating Risk:	LOW
Rail ht36h:	44.0 in	SI Frequency (Pin) 92C:			CBTE:	NA
Hist Signif 37:	5	FC Inspection Date 93A:			Inspection Key:	DFVX
Posting status 41:	A	UW Inspection Date 93B:			Date Entered:	2/16/2022 12:00
Service on/un 42A/B:	5 5	SI Date (Pin) 93C:			Entered By:	CHRISTYK

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 U

Mile Post (ON) 11: -1 mi

Linear Ref. Sys. MP: 5.015 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	18949	100%	18948	0%	0	0%	1	0%	0

Cast-in-place concrete on precast deck panels. Only the exterior faces of the deck slab are visible. The deck topside is covered in asphalt and deck underside is covered by the precast deck panels and girder top flanges.

The south deck overhang exhibited a spall measuring 6 inches in diameter by 2 inches deep, 20 feet west of pier (P2). (CS3 Spall 1 SF)

510/1	Wearing Surfaces	sq.ft	14277	96%	13777	4%	500	0%	0	0%	0
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The deck asphalt wearing surface exhibited S1 abrasion in the wheel lines.

The deck asphalt wearing surface exhibited a few unsealed medium width longitudinal cracks; most had been tar sealed. (CS2 Crack 500 SF)

3220/1	Crack (Wearing Su	sq.ft	500	0%	0	100%	500	0%	0	0%	0
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See Element 510 comments.

1080/1	Delamination/Spall/Pali	sq.ft	1	0%	0	0%	0	100%	1	0%	0
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See Element 12 comments.

109/1	Pre Opn Conc Girder/Bear	ft	2967	97%	2862	3%	102	0%	3	0%	0
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The exterior top flange of Girder 1O exhibited a spall with exposed rebar measuring 2.5 feet long by 4 inches wide by 4 inches deep, 20 feet west of Pier 2 (P2) (CS3 Spall 3 LF). There was an insignificant crack with surface white efflorescence measuring 18 inches long just below this spall (Overlapping Defect).

The top flange of Girder 1E exhibited a spall measuring 6 inches in diameter by 3/4 inch deep at the West Abutment (A1). (CS2 Spall 1 LF)

The bottom flange of Girder 2H exhibited a spall measuring 6 inches long by 3 inches wide by 1/4 inch deep near P2. (CS2 Spall 1 LF)

The underside of the top flanges of several girders exhibited short transverse insignificant cracks with surface white efflorescence. (CS2 Efflorescence 100 LF)

521/1	Conc Prot Coating	sq.ft	396	100%	396	0%	0	0%	0	0%	0
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Coating on the exterior girders. Graffiti at the west end of Girder 1A and east end of Girder 2O.

Water/drip stains on the bottom and sides of the exterior girders.

1080/1	Delamination/Spall/Pali	ft	5	0%	0	40%	2	60%	3	0%	0
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See Element 109 comments.

1120/1	Efflorescence/Rust Sta	ft	100	0%	0	100%	100	0%	0	0%	0
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See Element 109 comments.

205/1	Re Conc Column	each	5	100%	5	0%	0	0%	0	0%	0
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No significant defects were noted on columns.

Sept. 2013 Flood: 9/21/2013, Channel has cut 4 foot steep banks east of pier (P2) columns and 1 to 3 foot deep scour cones around each. Main channel is in Span 2.

2020 and 2022 Inspection: Main channel is in Span 1. 1 to 2 foot deep scour cones around Column 2B only.

521/1	Conc Prot Coating	sq.ft	5	100%	5	0%	0	0%	0	0%	0
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Graffiti on Pier 2 (P2).

215/1	Re Conc Abutment	ft	192	96%	184	4%	8	0%	0	0%	0
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Both abutments exhibited a few vertical insignificant cracks.

The backwall of the East Abutment (A3) exhibited surface white efflorescence near Girders 2G and 2I, and the West Abutment (A1) exhibited surface white efflorescence at the ends. (CS2 Efflorescence 8 LF)

521/1	Conc Prot Coating	sq.ft	192	100%	192	0%	0	0%	0	0%	0
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Graffiti on the north half of the West Abutment (A1).

1120/1	Efflorescence/Rust Sta	ft	8	0%	0	100%	8	0%	0	0%	0
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See Element 215 comments.

234/1	Re Conc Pier Cap	ft	96	100%	96	0%	0	0%	0	0%	0
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No significant defects noted.

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

Highway Number (ON) 5D: 00000 U

Mile Post (ON) 11: -1 mi

Linear Ref. Sys. MP: 5.015 mi

521/1	Conc Prot Coating	sq.ft	96	100%	96	0%	0	0%	0	0%	0
No significant defects noted.											
300/1	Strip Seal Exp Joint	ft	192	0%	0	100%	192	0%	0	0%	0
<p>Over sleeper slabs. The sidewalk cover plate at the southwest corner was missing. The sidewalk cover plate at the southeast corner had (1) missing cap screw and the others were loose. The concrete headers exhibited insignificant transverse cracks.</p> <p>The strip seal expansion joints exhibited partial loose debris impaction that does not appear to impact the joint movement. (CS2 Debris Impaction 192 LF)</p>											
2350/1	Debris Impaction	ft	192	0%	0	100%	192	0%	0	0%	0
See Element 300 comments.											
321/1	Re Conc Approach Slab	sq.ft	5750	0%	0	100%	5750	0%	0	0%	0
<p>Not visible, covered with asphalt.</p> <p>The approach slabs had settled slightly as evident from the 1.5 inch differential along the edge of the wingwalls at the corners allowing moisture to infiltrate. (CS2 Settlement 5750 SF)</p>											
510/1	Wearing Surfaces	sq.ft	5750	100%	5730	0%	0	0%	20	0%	0
<p>The approach slab wearing surface exhibited S1 abrasion randomly throughout.</p> <p>The gap in the wearing surface along the centerline has been sealed. There were potholes up to 2 inches deep adjacent to the sealed gap (CS3 - Pothole 10 SF).</p>											
3210/1	Del/Spall/Patch/Poi	sq.ft	20	0%	0	0%	0	100%	20	0%	0
See Element 510 comments.											
4000/1	Settlement	sq.ft	5750	0%	0	100%	5750	0%	0	0%	0
See Element 321 comments.											
333/1	Other Bridge Railing	ft	396	0%	0	100%	396	0%	0	0%	0
<p>There is a pedestrian rail mounted to the concrete parapet. The paint on the pedestrian rail exhibited failure in areas of rusting. Each vertical post of the pedestrian rail exhibited R2-R3 rusting.</p> <p>Note: Item 36H=42 inches while total rail height with pedestrian rail = 60 inches.</p> <p>The concrete parapet exhibited medium width vertical cracks. (CS2 Cracking 396 LF)</p>											
9325/1	Slope Prot/Berms	(EA)	2	100%	2	0%	0	0%	0	0%	0
Rock riprap at both abutments.											
9326/1	Bridge Wingwalls	(EA)	4	100%	4	0%	0	0%	0	0%	0
All wingwalls exhibited insignificant vertical cracks. Graffiti on the southeast and northwest wingwalls.											
9338/1	Conc Curbs/SW	(LF)	593	100%	593	0%	0	0%	0	0%	0
The sidewalks and the median exhibited insignificant transverse cracks. The southwest corner had a 1.5 inch lip which is a tripping concern.											
9343/1	Pole Attachment	(EA)	2	100%	2	0%	0	0%	0	0%	0
Light pole at each end of the pier. R1 rust in the splash zone.											
9501/1	Channel Cond	(EA)	1	100%	1	0%	0	0%	0	0%	0
Meandering sand and silt channel. The channel under the bridge is an erodible silt channel with a cutbank on the east channel measuring up to 4 feet high. Grass and large trees upstream and downstream.											
9520/1	AppRdAlign	(EA)	1	100%	1	0%	0	0%	0	0%	0
1 inch +/- gaps between the asphalt roadway and headers.											
9600/1	Genl Remarks	(EA)	1	100%	1	0%	0	0%	0	0%	0
Transient debris under west span (Span 1). Bird nests cover exterior girders.											

Inspection References and Definitions:

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

Highway Number (ON) 5D: 00000 U

Mile Post (ON) 11: -1 mi

Linear Ref. Sys. MP: 5.015 mi

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
154.01	Approach Rdway-Patch Bituminous	1/10/2018	1	2023	High

Seal gaps in the roadway at the ends of the strip seal joint headers.

206.01	Channel-Remove Debris	1/10/2018	1	2027	Low
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Remove transient debris beneath bridge.

306.08	Approach Railing	1/10/2018	1	2023	High
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Install transitions, approach rails, and rail ends to meet current CDOT/AASHTO standards.

353.04	Joints-Clean	1/28/2020	1	2024	Medium
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Clean sand and gravel out of strip seal expansion joints.

354.02	Superstructure-Repair Concrete	1/10/2018	1	2027	Low
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Patch spall in top flange of Girder 10 approximately 20 ft west of pier (P2).

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358.03	Substructure-Rip Rap	1/10/2018	1	2027	Low
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Place riprap at the pier columns.

358.99	Joints-Repair	1/10/2018	1	2024	Medium
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Seal the interface and gap between the wingwalls and approach slabs at the corners.

360.99	Deck-Repair Sidewalk	1/10/2018	1	2023	High
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Replace the cover plate at the southwest sidewalk, replace missing cap screw, and tighten the cap screws at the cover plate at the southeast corner.

Bridge Notes (Inspection > Inventory > Admin)

STRUCTURE IS INVENTORIED WEST TO EAST
 SOUTH SIDE IS UPSTREAM
 SUPERSTRUCTURE ELEMENTS ARE NUMBERED GIRDERS A TO O FROM NORTH TO SOUTH
 SUBSTRUCTURE ELEMENTS ARE NUMBERED FROM WEST TO EAST: ABUTMENT 1 (A1), PIER 2 (P2),
 ABUTMENT 3 (A3)

1/28/2022 - Channel code 7 changed to a 6 due to minor streambed movement evident.

Inspection Notes (Inspection > Condition)

Date: 1/28/2022

Temp: 38 degrees F Time: 10:00 AM Weather: Clear, calm

Scour Item 113 Documentation (Inspection > CDOT Bridge)

THN-136WAS-BDC SCOUR Item 113 Screening Memo 2016 08 16.pdf

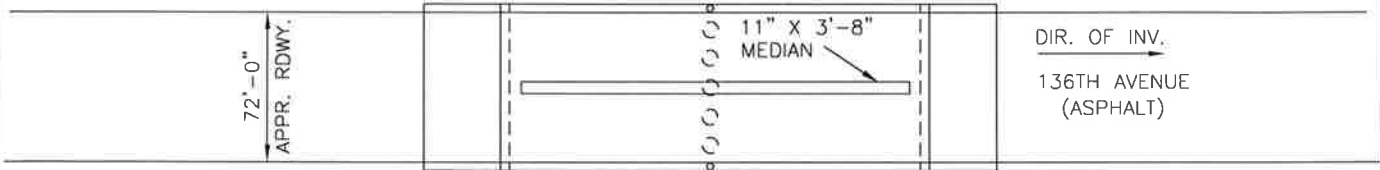
Bat Present At Bridge (Inspection > Inventory > Agency Items > userkey9)

No

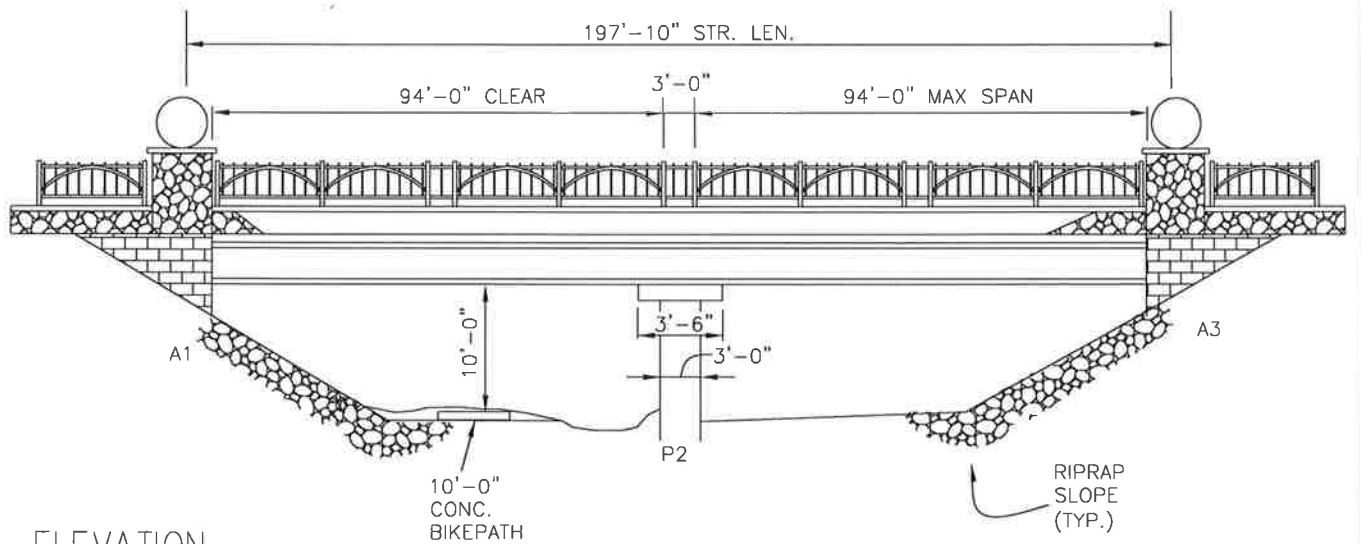
Inspection Access Requirements (Inspection > CDOT Bridge)**Scheduling Notes (Inspection > Schedule)**

THN-136WAS-BDC

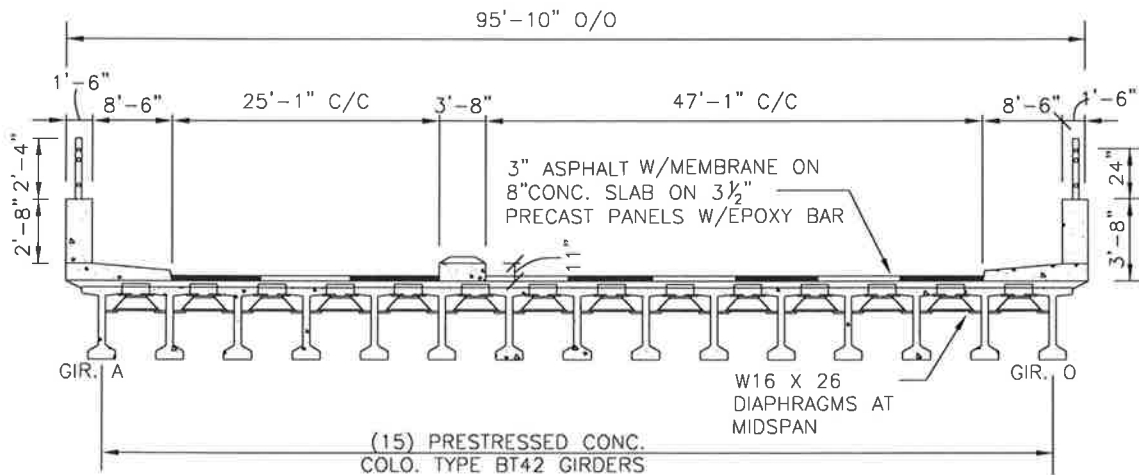
JAN. 28, 2022



PLAN

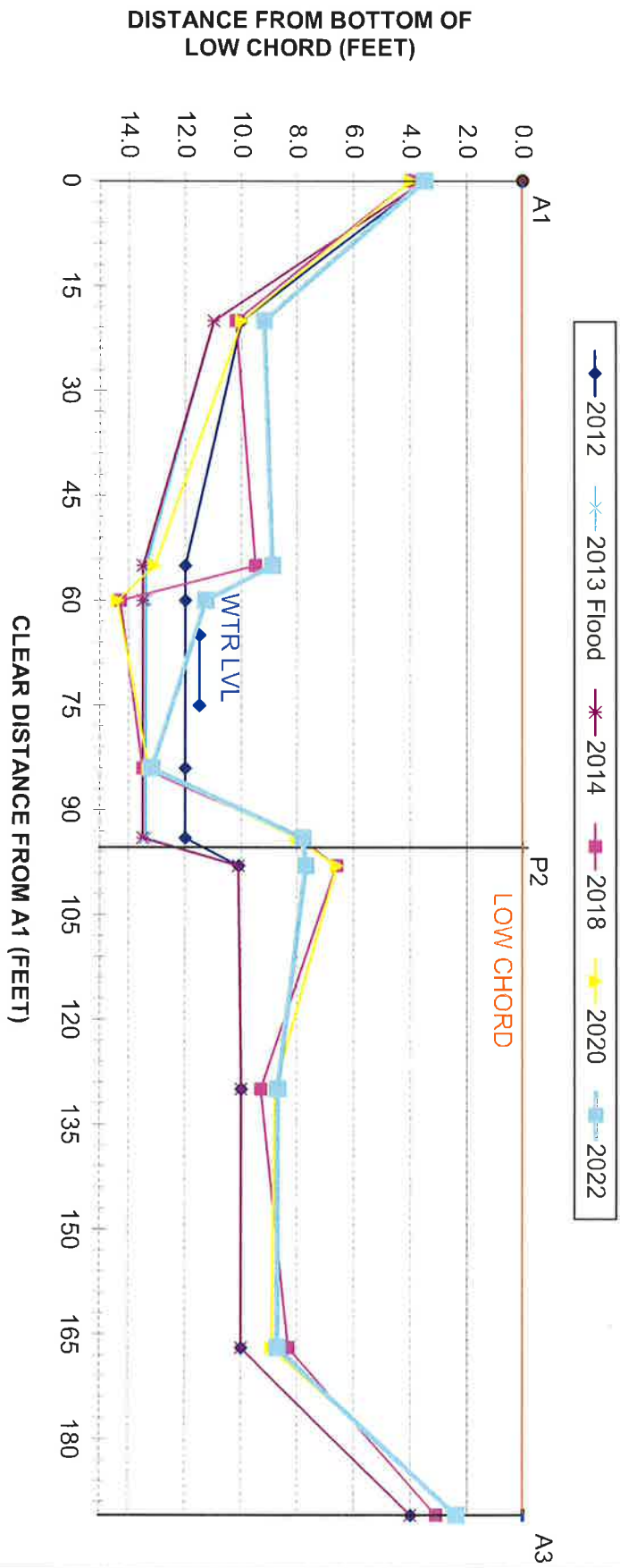


ELEVATION LOOKING NORTH



SECTION LOOKING EAST

STREAMBED HISTORY



	0	20	55	60	84	94	98	130	167	191	WTR LVL
2012	3.5	10.0	12.0	12.0	12.0	12.0	10.1	10.0	10.0	4.0	11.0
2013 Flood	3.5	11.0	13.4	13.4	13.4	13.4	10.1	10.0	10.0	4.0	11.6
2014	3.5	11.0	13.5	13.5	13.5	13.5	10.1	10.0	10.0	4.0	11.0
2018	4.0	10.2	9.5	14.3	13.5	7.9	6.6	9.3	8.3	3.1	12.3
2020	4.0	10.0	13.1	14.4	13.3	8.0	6.6	8.8	8.9	2.3	11.8
2022	3.5	9.2	8.9	11.3	13.2	7.8	7.7	8.7	8.7	2.4	11.5

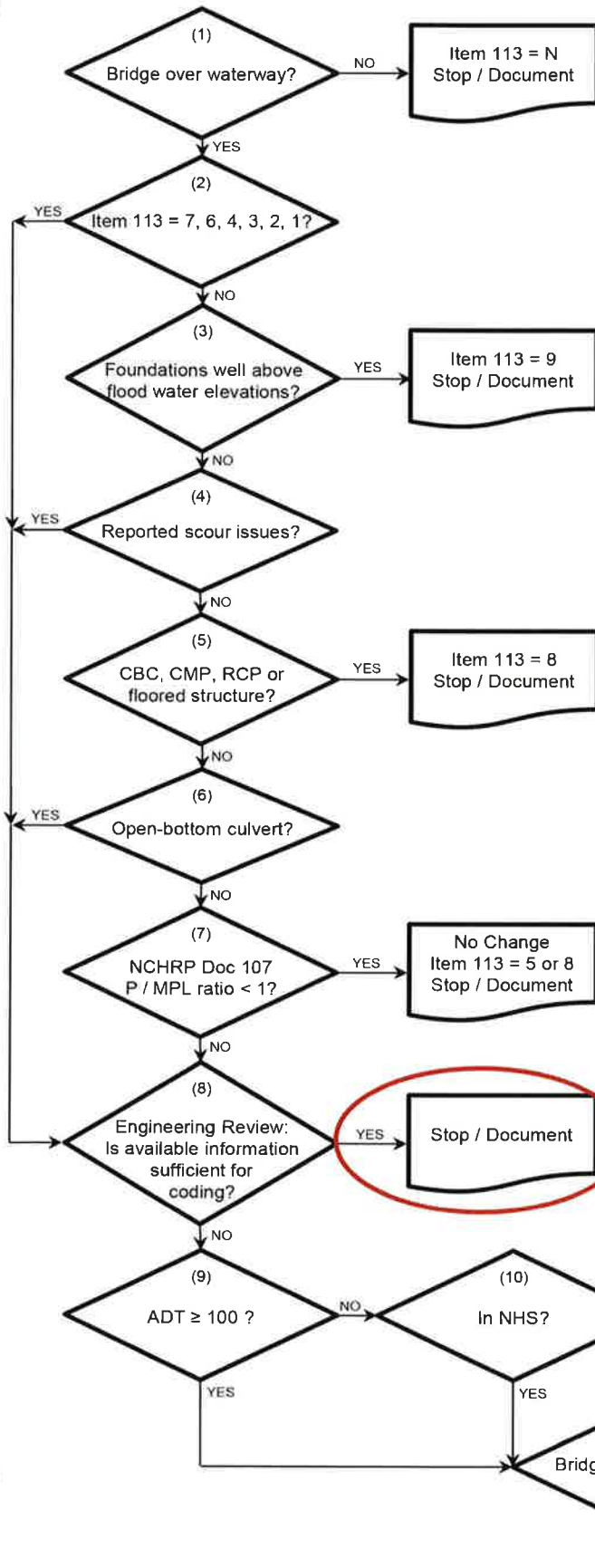
STRUCTURE NUMBER: THN-136WAS-BDC
 INSPECTION DATE: 1/28/2022

PERFORMED BY: KLB/HNP



COLORADO
Department of
Transportation

CDOT OFF-SYSTEM BRIDGE SCOUR SCREENING CHART



STRUCTURE ID: THN-136WAS-BDC
 FACILITY CARRIED: 136th Avenue
 FEATURE INTERSECTED: Big Dry Creek

Structure Probability of Failure (P): 0.000005
 Minimum Performance Level (MPL): 0.0002
 Ratio (P/MPL): 0.025

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

EVALUATED BY: Kyle Nixon
 ORGANIZATION: Stantec Consulting
 DATE: 8/16/2016

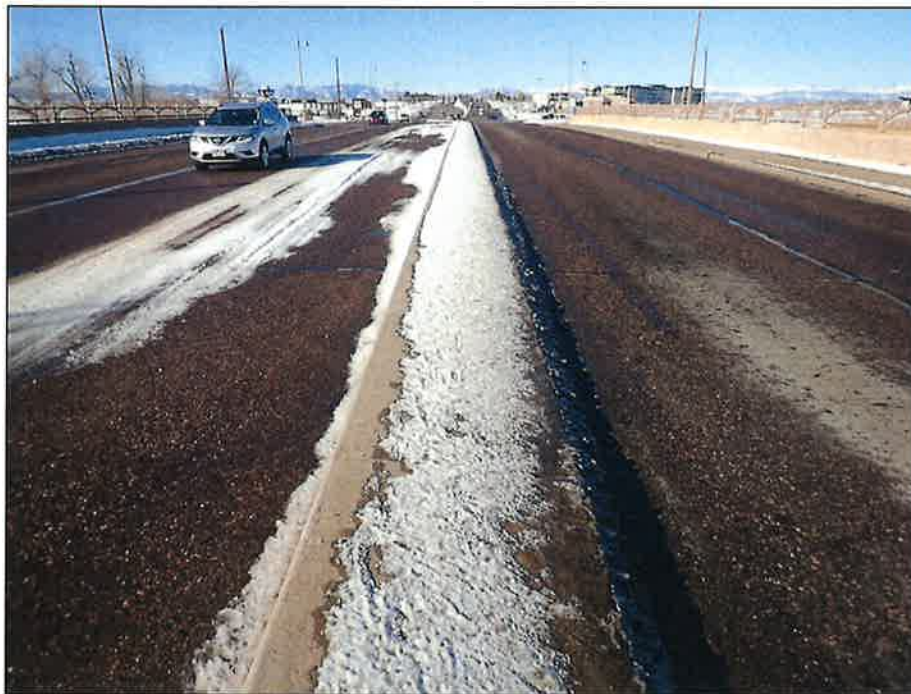
REVIEWER COMMENTS:
 This bridge is currently rated Item 113 = "8". This bridge came to individual review because it was flagged for scour in the bridge inspection record. Structure is a 2 span CPGC built in 2004. Construction plans show the abutments to be on steel piles and the pier to be on drilled caissons. Foundations are embedded into local bedrock, well below the calculated scour limits. The abutments have rock riprap armor; however, the pier does not have armor protection. The 2014 bridge inspection notes a September 2013 flood caused 4ft channel cuts with steep banks east of pier P2 and 1-3ft deep scour cones around each pier column. Previous inspections also note localized scour around the pier columns. There is no history of pier caisson foundations being exposed. Streambed profile history shows the channel to change gradually over time, with a 2ft drop in elevation in the main flow channel from 2012 to 2014. The 2014 bridge inspection recommends placement of riprap at the pier. Because the scour level is shown to be within the limits of piles/caissons, the recommendation for this bridge is to change Item 113 to "5". (QC by LML, 2/23/2017)

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Roadway, Looking East



Roadway, Looking West

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Elevation, Looking North



Elevation, Looking South

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Superstructure, Looking West



Channel Looking South Upstream

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Channel Looking North Downstream



Typical Unsealed Cracks and Tar-Sealed Longitudinal Cracks in the Deck Asphalt Wearing Surface, Looking North

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Spall with Exposed Rebar in the Exterior Top Flange of Girder 1O, 20 Feet West of Pier 2, Looking East



Spall in the Top Flange of Girder 1E at the West Abutment, Looking South

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Typical Short Transverse Cracks with Efflorescence in the Underside of the Top Flanges of Several Girders, Looking South



Missing Sidewalk Cover Plate and a 1.5 Inch Lip at the Southwest Corner, Looking East

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Typical Partial Loose Debris Impactation of the Strip Seal Expansion Joints,
Looking South



Typical Settled Approach Slab, Evident from the Differential Along the
Edge of the Wingwalls at the Corners, Looking East

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Typical Settled Approach Slab, Evident from the Differential Along the Edge of the Wingwalls at the Corners, Looking West



Typical Potholes Adjacent to the Sealed Gap in the Approach Slab Wearing Surfaces, Looking Northwest