

**Oregon Department of Transportation
Bridge Inspection Report**

District :	10	Structure :	North Unit Canal, Smith Rock Rd	Bridge ID :	15452
Fac Crossed :	NORTH UNIT CAN/SMITHROCK	Owner :	County Hwy Agency	Fac Carried :	SMITH ROCK ROAD
Suff Rating :	76.9	County :	Deschutes	Mile Point :	3.50 mi
AC Depth :	3.00	Record Type :	1	Insp Date :	02/26/2021
Bridge Length :	66.00 ft	Insp Freq :	24	Inspector 1 :	JOHN HARMS (C0079)
		Bridge Width :	33.00 ft	Inspector 2 :	

Signature: 

Element Condition States (New AASHTO report)

Element	Structure Unit	Environment	Quantity	Units	CS 1	CS 2	CS 3	CS 4	Temp
31-Timber Deck	1	2	2200	(SF)	880	1320	0	0	
1150-Check/Shake	1	2	1100	(SF)	0	1100	0	0	
1170-Split/Delamination (Timber)	1	2	220	(SF)	0	220	0	0	
511-AC Wearing Surface	1	2	2200	(SF)	1640	440	110	10	
111-Timber Open Girder	1	2	1250	(LF)	920	330	0	0	
1150-Check/Shake	1	2	330	(LF)	0	330	0	0	
210-Re Conc Pier Wall	1	3	33	(LF)	0	33	0	0	
1080-Delamination/Spall/Patched Area	1	3	4	(LF)	0	4	0	0	
1130-Cracking (RC and Other)	1	3	2	(LF)	0	2	0	0	
1190-Abrasion(PSC/RC)	1	3	27	(LF)	0	27	0	0	
215-Re Conc Abutment	1	3	66	(LF)	58	8	0	0	
1130-Cracking (RC and Other)	1	3	8	(LF)	0	8	0	0	
306-Other Joint	1	2	66	(LF)	0	66	0	0	
2310-Leakage	1	2	66	(LF)	0	66	0	0	
332-Timb Bridge Railing	1	2	132	(LF)	0	127	5	0	
1020-Connection	1	2	15	(LF)	0	10	5	0	
1150-Check/Shake	1	2	85	(LF)	0	85	0	0	
1170-Split/Delamination (Timber)	1	2	32	(LF)	0	32	0	0	
980-Approach Roadway Embank	1	2	1	(EA)	0	1	0	0	
999-Roadway Impact	1	2	1	(EA)	0	1	0	0	

Appraisal			NBI Category		
Appraisal	NBI #	Rating	Category	NBI #	Rating
Scour	113	U Unknown Scour	Deck Condition	58	6 Satisfactory
Bridge Rail	36A	0 Substandard	Superstructure	59	7 Good
Transitions	36B	0 Substandard	Substructure	60	6 Satisfactory
Approach Rail	36C	0 Substandard	Channel	61	8 Protected
Rail Ends	36D	0 Substandard	Culvert/Retaining Walls	62	N N/A (NBI)
Structural	67	5 Above Min Tolerable			
Deck	68	6 Equal Min Criteria			
Clearance	69	N Not applicable (NBI)			
Waterway	71	8 Equal Desirable			
Approach Alignment	72	8 Equal Desirable Crit			

Remarks

31-Timber Deck

1150-Check/Shake
CHECKS THROUGHOUT UNDERSIDE OF DECK.

1170-Split/Delamination (Timber)
SPLITS THROUGHOUT DECKING

511-AC Wearing Surface
wear with potholes and cracks

111-Timber Open Girder

NOTICIBLE DEFLECTION UNDER DEAD LOAD

1150-Check/Shake
Span 1 Girders 4,6,15,16 ; Span 2 Girders 3,5,8,12,14; Longitudinal Checks.

210-Re Conc Pier Wall

BENT2-12"X12"X6" SPALL AT EAST U.S. END BASE OF WALL. ABRASION ALONG BASE

215-Re Conc Abutment

SOME CRACKING AT ABUTMENTS. TIMBER SILL PLATES ARE NOT FULLY BEARING ON THE TOP OF THE CONCRETE END BENTS.

306-Other Joint

2310-Leakage
AC CRACKS AT APPROACHES.

332-Timb Bridge Railing

RAIL WEATHERED W/ CHECKS AND SPLITS THROUGHOUT.

1020-Connection
THE POST CONNECTIONS TO THE BRIDGE HAVE LOOSE FASTNERS. RAIL POST NOT ATTACHED TO BRIDGE AT SOUTHWEST CORNER

980-Approach Roadway Embank

EROSION AT SOUTHEAST CORNER.

999-Roadway Impact
BUMPS AT APPROACHES.

Notes
Inspection Notes
Bridge Notes

Detour map added and length changed by Erick Cain 03/16/2010.

Bridge Hydraulics Notes

Review of the scour code. Not sufficient info. Scour code changes to "U". BDN for HMW, 4/6/2020

Maintenance Recommendations
As of: 5/12/2021

Priority	Crew	Wrk Cnd	Notes	Est.cost	Status	Rec Date
Critical	Local Agency	31 Timber Deck Seal Cracks ACWS	REPAIR WEARING SURFACE	1500	Under Review	03/30/2015
Routine/Schedule	Local Agency	215 RC Abutment Other	IMPROVE BEARING UNDER THE TIMBER SILL PLATES AT THE END BENTS	2000	Under Review	03/30/2015
Routine/High	Local Agency	330 Steel Bridge Rail (Steel) Replace Connectors	REATTACH RAIL POST AT SOUTHWEST	1000	Under Review	02/26/2021
Routine/Schedule	Local Agency	332 Timber Bridge Rail (Timber) Other	Consider Guardrail improvements	0	Under Review	03/20/2013
Routine/Schedule	Local Agency	980 Misc Approach Roadway Embankment Repair Erosion	REPAIR EROSION AT SHOULDERS	1000	Under Review	11/17/2003

*Completed items not included on default search

Load Rating

Rating Date :	01/29/2017	Posting Req :	3 10.0-19.9%below
Design Load :	5 MS 18 (HS 20)	Posting Status :	P Posted for load
Operating Load :	24.7 ton	OR Method :	8 LRFR RF HL93
Inventory Rating :	19.1 ton	IR Method :	8 LRFR RF HL93

Truck	Rating Factor	% Below	Posting Required	Controlling Member	Actual Posting	Posting Date
Type 3	1.27	5 At/Above Legal Loads	No	Int. Stringer, span 1 of 1 +M at 0.5L		
Type 3S-2	1.14	5 At/Above Legal Loads	No	Int. Stringer, span 1 of 1 +M at 0.5L		
Type 3-3	1.56	5 At/Above Legal Loads	No	Int. Stringer, span 1 of 1 +M at 0.5L		

SU4	1.04	5 At/Above Legal Loads	No	Int. Stringer, span 1 of 1 +M at 0.5L		
SU5	0.97	4 0.1-9.9%below	Yes	Int. Stringer, span 1 of 1 +M at 0.5L	30.0	11/01/2018
SU6	0.88	3 10.0-19.9%below	Yes	Int. Stringer, span 1 of 1 +M at 0.5L	30.0	11/01/2018
SU7	0.84	3 10.0-19.9%below	Yes	Int. Stringer, span 1 of 1 +M at 0.5L	32.0	11/01/2018
EV2			NO			
EV3			NO			

Load Rating Notes

Bridge was posted for SU5-SU7 on November 1, 2018

Load Rating Condition Comparison Chart

Category	NBI #	Rating Condition	Current Condition
Traffic Impact		CS2 Condition State 2	CS2
Deck Condition	58	6	6
Superstructure	59	7	7
Substructure	60	6	6
Temporary Repairs	103		
Wearing Surface Thickness		3.00	3.00

Inspection Schedule

Activity	Conducted On	Frequency	Next Inspection
Routine Inspection	02/26/2021	24	02/01/2023
X-Channel	02/26/2021	48	02/01/2025
Timber Boring	02/27/2015	120	02/01/2025

Oregon Department of Transportation Structure Inventory and Appraisal Report

Suff Rating: 76.9

**Bridge NO: 15452
Insp Date: 02/26/2021**

(2) Highway District	District 10	(42A) Type Service On	1	(75) Type of Work	
(3) County	Deschutes	(42B) Type Service Under	5	(76) Improvement Length	
(4) City	00000	(43) Struct Main	7 Wood or Timber 02 Stringer/Girder	(90) Inspection Date	02/26/2021

(5) Inventory Route	141021840	(44) Struct Appr	0 Not Applicable 00 Not Applicable	(91) Inspection Frequency	24
(6) Feature INT	NORTH UNIT CANSMITHROCK	(45) Number Main Spans	2	(92) Critical Feat Insp (A) Fracture Critical (B) Underwater Insp	
(7) Facility Carried	SMITH ROCK ROAD	(46) Number Appr Spans	0	(94) Cost of Improvement	
(8) Structure Number	15452 C42 00350	(47) Horizontal Clearance	32.00 ft	(95) Roadway Improvement	
(9) Location	3.44 MI. EAST OF HWY 97	(48) Maximum Span Length	33.00 ft	(96) Project Improvement	0
(10) Vert Clearance	99.99 ft	(49) Structure Length	66.00 ft	(97) Year of Improvement	
(11) Mile Post	3.50 mi	(50A) Sidewalk Width LT	0.00 ft	(98) Border BRST-Code	
(12) Base Highway Network	0	(50B) Sidewalk Width RT	0.00 ft	(100) Defense Highway	0
(13) LRS Inventory Route	000000000000	(51) Bridge Roadway Width	32.00 ft	(101) Parallel Structure	N
(16) Latitude	44° 20' 55.93"	(52) Deck Width	33.00 ft	(102) Direction of Traffic	2
(17) Longitude	121° 6' 54.14"	(53) Vert Clear Over Deck	99.99 ft	(103) Temporary Structure	
(19) Bypass Detour	0.56 mi	(54) Vert Clear Under Deck	N 0.00 ft	(104) Highway System	0
(20) TOLL	3 On free road	(55) Min Lat Underclear CD	N 0.00 ft	(105) Federal Lands HWY	0
(21) Custodian	County Highway Agency	(56) Min Lat Underclear	L 0.00 ft	(106) Year Reconstructed	
(22) Owner	County Highway Agency	(58) Deck	6	(107) Deck Structure	8
(26) Func Class	07 Rural Mjr Collector	(59) SuperStructure	7	(108) Wearing Surface	600
(27) Year Built	1971	(60) SubStructure	6	(109) Truck ADT	19%
(28) Lanes	on: 2 / under: 0	(61) Channel	8	(110) Designated National Network	0
(29) Average Daily Traffic	362	(62) Culvert	N	(111) Pier Protection	
(30) Year of ADT	2020	(63) Oper Rating Method	8	(112) NBIS Bridge Length	Y
(31) Design Load	5 MS 18 (HS 20)	(64) Operating Rating	24.70 ton	(113) Scour Critical Bridge	U
(32) Approach Roadway	26.00 ft	(65) Inv Rating Method	8	(114) Future ADT	417
(33) Bridge Median	0 No median	(66) Inventory Rating	19.10 ton	(115) Year of Future ADT	2025
(34) Skew	0°	(67) Structure Condition	5	(116) Vert-Lift Clearance	
(35) Structure Flared	0 No flare	(68) Deck Geometry	6	(117) Est Maint Cost	
(36) Traffic Safety Feature	0000	(69) Underclearance	N	(118) Culvert Length	
(37) Historical Significance	5	(70) Posting	3	(119) Culvert Inside Height	
(38) Navigation Control	0	(71) Waterway Adequacy	8	(120) Inspector	JOHN HARMS (C0079)
(39) Navigation Vert Clear	0.00 ft	(72) APPR RDWY Alignment	8	(122) Highway/CO RD	218403
(40) Navigation Horz Clear	0.00 ft			(125) Embankment Erosion	5
(41) Open Status	P				

Quality Assurance:

WS Depth	3.00	(52) Deck Width	33.00 ft	(70) Posting	3
(28) Lanes	on: 2 / under: 0	(53) Vert Clear Over Deck	99.99 ft	(71) Waterway Adequacy	8
(32) Approach Roadway	26.00 ft	(58) Deck	6	(72) APPR RDWY Alignment	8
(41) Open Status	P	(59) SuperStructure	7	(95) Roadway Improvement	
(43) Struct Main	7 Wood or Timber	(60) SubStructure	6	(103) Temporary Structure	
(44) Struct Appr	0 Not Applicable	(61) Channel	8	(108) Wearing Surface	600
(46) Number Appr Spans	0	(62) Culvert	N	(113) Scour Critical Bridge	U
(51) Bridge Roadway Width	32.00 ft			(125) Embankment Erosion	5

Bridge Clearance Documents: Not Available

Bridge Detours Maps: [15452.tif](#)

Bridge Images: [IM15452_A0.JPG](#) [IM15452_A1.JPG](#) [IM15452_A2.JPG](#) [IM15452_A3.JPG](#) [IM15452_A4.JPG](#) [IM15452-A0.JPG](#) [IM15452-A1.JPG](#) [IM15452_A0.JPG](#) [IM15452_A1.JPG](#)

Job Hazard Assessment: Not Available

Cross Channel Documents: [XC15452.pdf](#) [XC15452_.pdf](#)

Gusset Plate Documents: Not Available

Fracture Critical Inspection Documents: Not Available

Fatigue Prone Assessment: Not Available

Under Water: Not Available

Scour Plan Of Action: Not Available

Timber Boring: [TB15452.pdf](#)

Pin Hanger: Not Available

Deck Surveys: Not Available

Draw Bridges: Not Available

Supplemental: Not Available

Critical Findings: Not Available

Tunnel Maps: Not Available

Tunnel Access: Not Available



Oregon Department of Transportation
Highway Division
Bridge Operations Section
Local Agency Bridge Photos

Bridge No. 15452
Deschutes County
Date: February 2021



Advanced Warning Viewing East



Advanced Warning Viewing West



Oregon Department of Transportation
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Local Agency Bridge Photos

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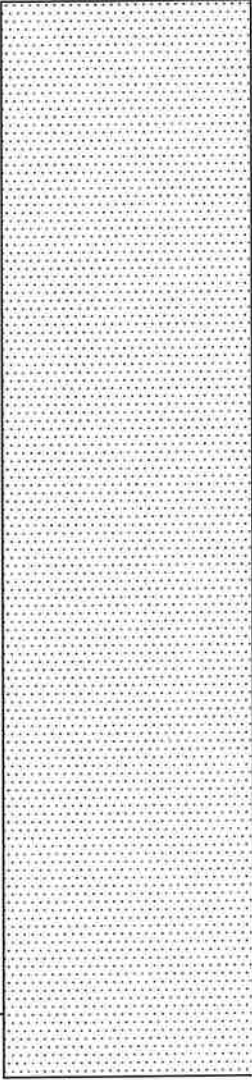
Load Posting Viewing East



Load Posting Warning Viewing West

TIMBER BORING REPORT

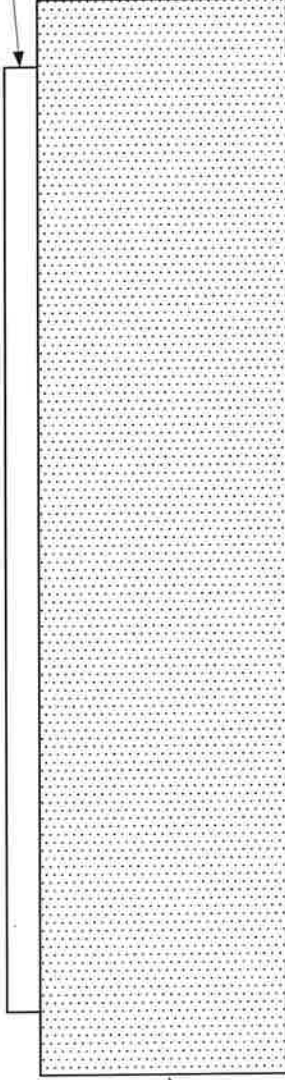
12"X12" SILL PLATE



CONCRETE
ABUTMENT

BENT 1 (WEST ABUTMENT)

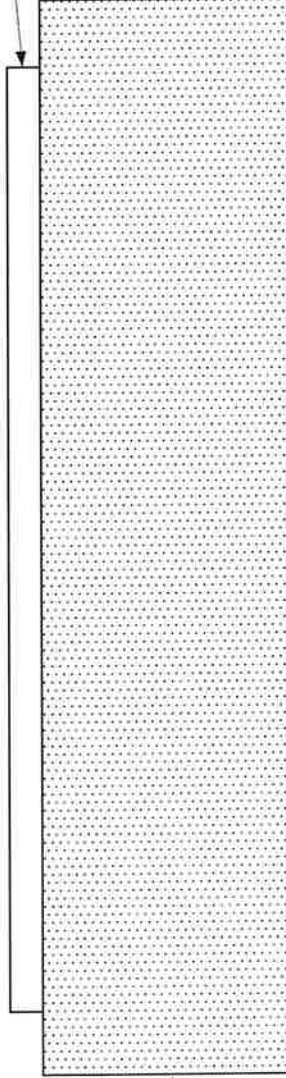
12"X12" SILL PLATE



CONCRETE
ABUTMENT

BENT 2 (VIEWING WEST)

12"X12" SILL PLATE



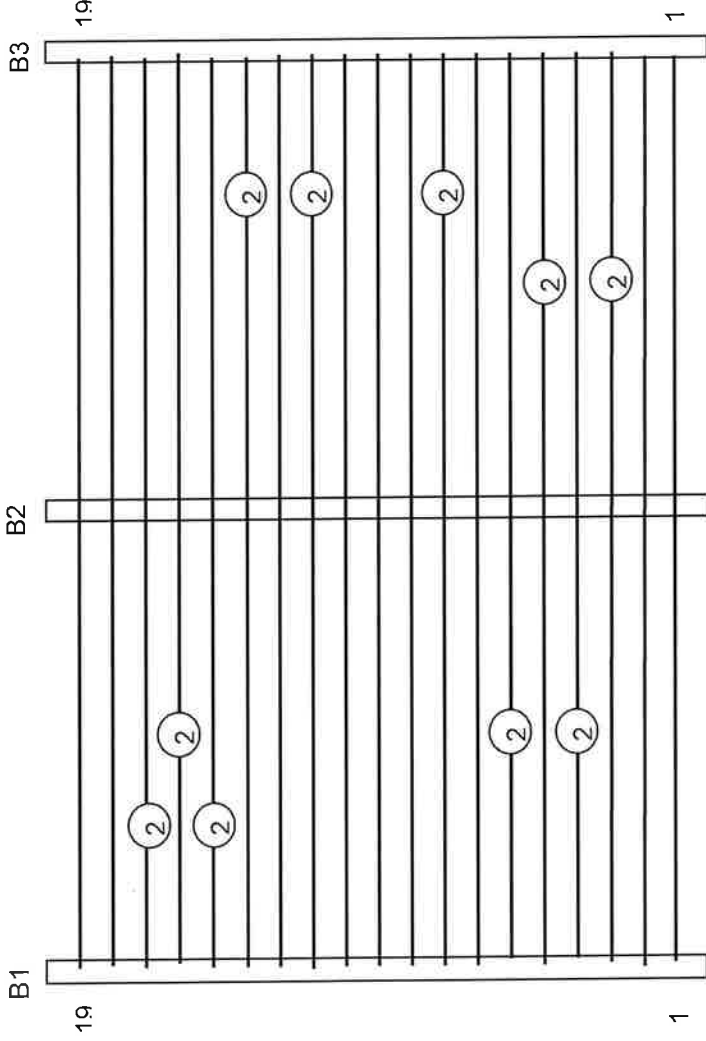
CONCRETE
ABUTMENT

BENT 3 (EAST ABUTMENT)



COUNTY: DESCHUTES
BRIDGE NO.: 15452
NAME: SMITH ROCK ROAD
OWNER: COUNTY
CONDUCTED: FREQUENCY NEXT
2-27-2015 10 YRS 2-1-2025

TIMBER BORING REPORT



PLAN VIEW



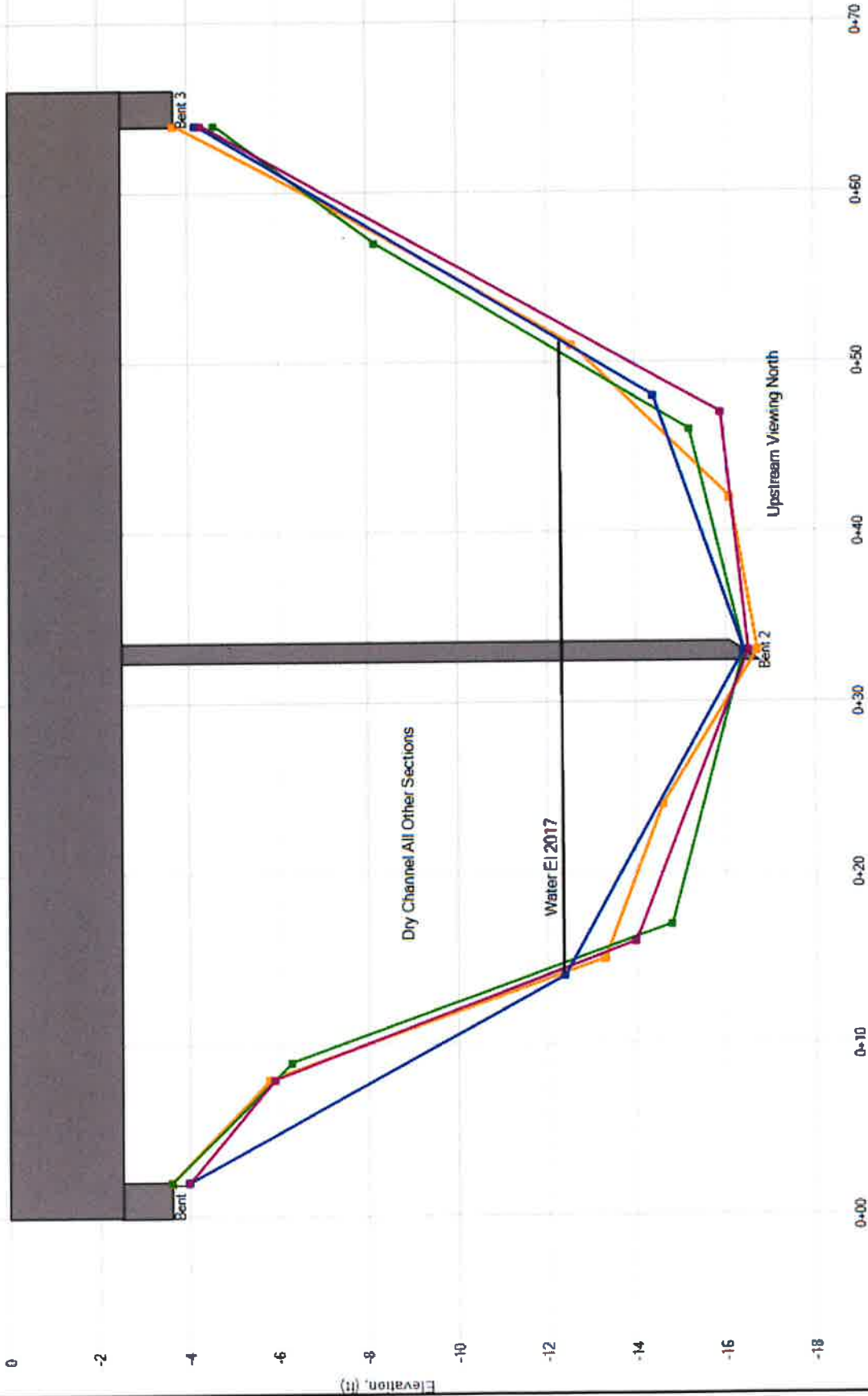
COUNTY: DESCHUTES
BRIDGE NO.: 15452
NAME: SMITH ROCK ROAD
OWNER: COUNTY
CONDUCTED: 2-27-2015
FREQUENCY: 10 YRS
NEXT: 2-1-2025

Br. No. 15452

2 Deschutes County

North Unit Canal-Upstream
Measurements to Top of Felloe Guard

Smith Rock Road



Elevation, (ft)

Station, (ft)