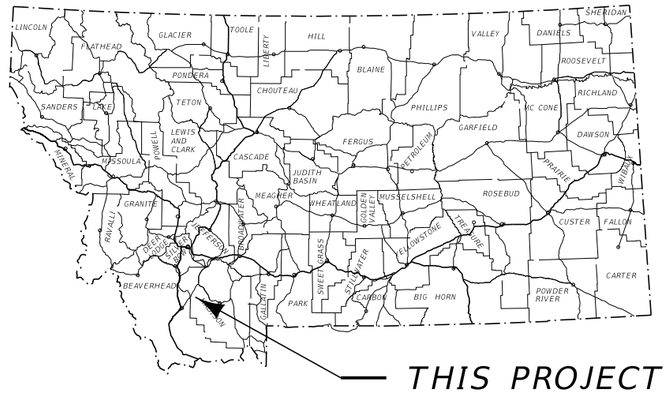
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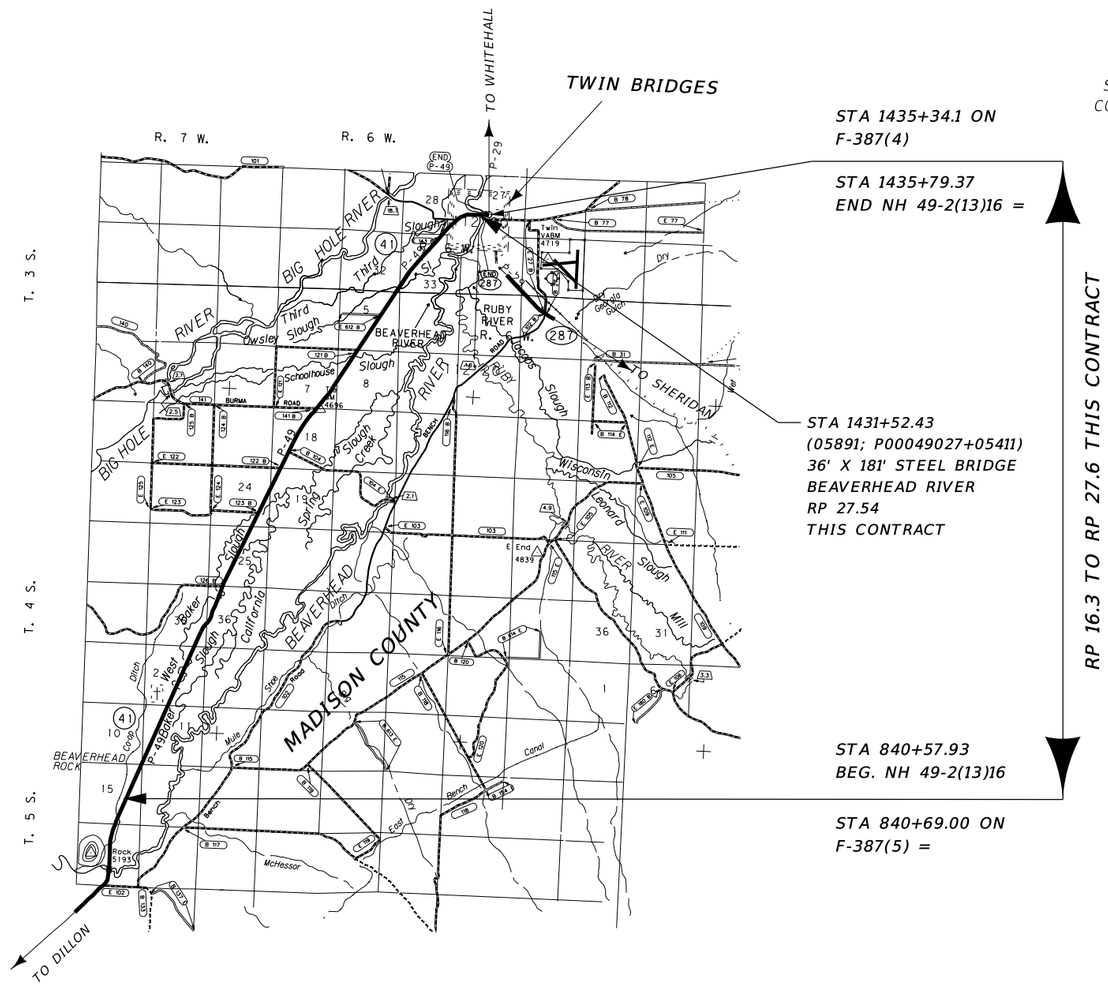


MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT NH 49-2(13)16
SEAL & COVER, GUARDRAIL, STRIPING, & DELINEATION
BEAVERHEAD ROCK-NORTH
MADISON COUNTY

PROJECT DESIGN DATA		
PRESENT 2018	A.D.T. =	2,030
LETTING 2022	A.D.T. =	2,111
DESIGN 2042	A.D.T. =	2,580
	D.H.V. =	310
	TRUCKS =	19.9%
	V. =	70 MPH
	18 KIP ESAL'S =	233 DAILY
	GROWTH RATE =	1.0% ANNUALLY

LENGTH 11.3 MILES



ASSOCIATED PROJECT AGREEMENT NUMBERS	
R / W	
I.C.	
P. E.	NH 49-2(12)16

MONTANA DEPARTMENT OF TRANSPORTATION

MALCOLM "MACK" LONG
DIRECTOR OF TRANSPORTATION

APPROVED BY:

HIGHWAYS ENGINEER

DocuSigned by:
Damian Krings
1C71361CE866454...

3/14/2022
DATE

MONTANA PROFESSIONAL ENGINEER
DAMIAN KRINGS
12113PE
LICENSED

3	MDT MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\9475000rdtl001.dgn	DESIGNED BY	P. RUMLEY	12/13/2018
2		12/29/2021	REVIEWED BY	T. MURFITT	
		9:40:11 AM CPS - U54.1	CHECKED BY	T. JOHNSON	10/19/2021

ROAD PLANS

UPN 9475000

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BRIDGE PLANS	
BRIDGE PLANS	B1

NOTES

BASIS OF PLAN QUANTITIES

SEAL	= 0.42 GAL. PER SQ.YARD
COVER	= 25 LBS. PER SQ.YARD
BITUMINOUS MATERIAL	= 8.5 LBS. PER GAL.

AS-BUILTS

FOR HORIZONTAL ALIGNMENT AND STATIONING AT PROJECT BEG. AND END, REFER TO THE FOLLOWING "AS-BUILT" PROJECT(S):

PROJECT DESC.	YEAR
F-387(4) (ORIGINAL CONST., BRIDGE)	1947
F-387(5) (ORIGINAL CONST.)	1953

WETLANDS

WETLANDS MAY EXIST ADJACENT TO THE ROADWAY AND BEYOND THE PROJECT LIMITS. A WETLAND DELINEATION HAS NOT BEEN COMPLETED FOR THIS PROJECT. IMPACTS TO WETLAND AREAS ARE NOT ANTICIPATED IN ASSOCIATION WITH THE PROPOSED WORK. NO PERMITS HAVE BEEN OBTAINED. ANY ACTION IMPACTING WETLAND AREAS WITHOUT THE APPROPRIATE PERMITTING IS THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITIES

CALL THE UTILITIES UNDERGROUND LOCATION CENTER (811) OR OTHER NOTIFICATION SYSTEM FOR THE MARKING AND LOCATION OF ALL LINES AND SERVICES BEFORE EXCAVATING. ALL CLEARANCES OR DEPTHS PROVIDED FOR UTILITIES ARE FROM EXISTING GROUND LINE.

LINEAR DATA

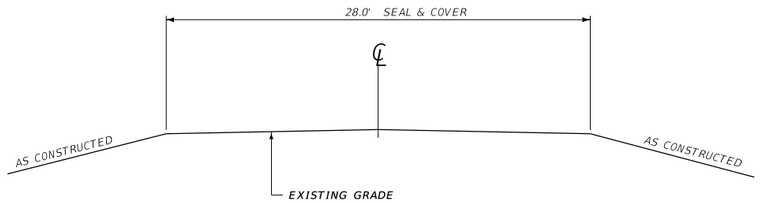
LENGTH OF ROADWAY	THIS CONTRACT	2 LANE RURAL	59,340.44 ft
LENGTH OF BRIDGE	THIS CONTRACT	2 LANE RURAL	181.00 ft
TOTAL LENGTH OF	NH 49-2(13)16	2 LANE RURAL	59,521.44 ft

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TYPICAL SECTION NO. 1

MAINLINE

STA 840+57.93 TO STA 1430+61.93 B.E. TYP. NO. 1
STA 1432+42.93 B.E. TO STA 1435+79.37 TYP. NO. 1



QUANTITIES			
UNIT	AGGREGATE COVER	UNIT	BITUMINOUS MATERIAL SEAL
AREA square feet cubic yards PER STATION tons PER STATION square yards PER STATION	311	square yards PER STATION tons PER STATION	311 0.56

3	MDT MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\9475000rdtyp001.dgn	DESIGNED BY	P. RUMLEY	12/13/2018	ROAD PLANS	BEAVERHEAD ROCK - NORTH	NH 49-2(13)16
2		12/29/2021	REVIEWED BY					
		9:40:26 AM CPS - U5441	CHECKED BY			MADISON COUNTY	UPN 9475000	3

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SUMMARY

GUARDRAIL

STATION		linear feet										each						REMARKS
		REMOVE GUARDRAIL		MGS LONG SPAN GUARDRAIL		MGS GUARDRAIL		BOX BEAM GUARDRAIL		MGS INTERSECTING ROADWAY TERMINAL SECTION		MASH W-BEAM TERMINAL SECTION		OPTIONAL BOX BEAM TERMINAL SECTION		BOX BEAM BRIDGE APPROACH SECTION TYPE 3		
FROM	TO	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
NEW RAIL																		
1406+75.65	1416+21.27							756.0						2				NEW BOX BEAM DUE TO DRIFTING*
1417+04.44	1419+07.44							108.0						2				NEW BOX BEAM DUE TO DRIFTING
1417+50.44	1419+84.81						200.0						1					
1419+84.81	1420+47.31				62.5													
1420+47.31	1421+56.69						75.0						1					
1420+21.77	1427+77.29							684.0						1		1		
REMOVE RAIL																		
1406+80.65	1407+86.25									112.5								**, INCLUDED IN REMOVAL OF GUARDRAIL
1407+86.25	1416+23.75	837.5																**
1416+99.69	1419+12.19	212.5																**
1417+27.81	1419+84.81		257.0															
1419+84.81	1420+21.77	50.0																REMOVE 4 FLANGED W-BEAM PED RAILS ON STRUCTURE
1420+21.77	1421+59.27		137.5															
1420+21.77	1429+28.67	906.9																
1426+92.33	1429+36.08		250.0															
SUBTOTAL		2,119.4	644.5	~	62.5	~	275.0	1,548.0	~	112.5	~	~	2	5	~	1	~	
TOTAL		2,763.9		62.5		275.0		1,548.0		112.5		2		5		1		

* - INSTALL EXCESS LENGTH OF BOX BEAM ON MELROSE RD. (SEE DETAIL)
** - SALVAGE CONCRETE POSTS (SEE SPECIAL PROVISIONS)

SURFACING

STATION		linear feet				FOR	AGGREGATE	BITUMINOUS MATERIAL	REMARKS
		GROSS	NET	+	-		square yards	tons	
FROM	TO						COVER TYPE 1	SEAL CHFRS-2P	
840+57.93									
1430+61.93 B.E.	1432+42.93 B.E.				181.00	BRIDGE			
B.E.	1435+79.37	59,521.44	59,340.44				184,549	332.3	TYPICAL NO. 1
TOTAL		59,521.44	59,521.44	~	181.00		184,549	332.3	

TEMPORARY BARRIER RAIL

STATION		linear feet		each		REMARKS
		TEMPORARY BARRIER RAIL	RESET TEMPORARY BARRIER RAIL	TEMPORARY IMPACT ATTANUATOR	RESET TEMPORARY IMPACT ATTENUATOR	
FROM	TO					
1430+31.93	1432+72.93	240	240	2	2	
SUBTOTAL		240	240	2	2	
TOTAL		240	240	2	2	

NOTE: MAINTAIN MINIMUM WIDTH OF 12 FT. DRIVING LANE

CONCRETE BARRIER RAIL

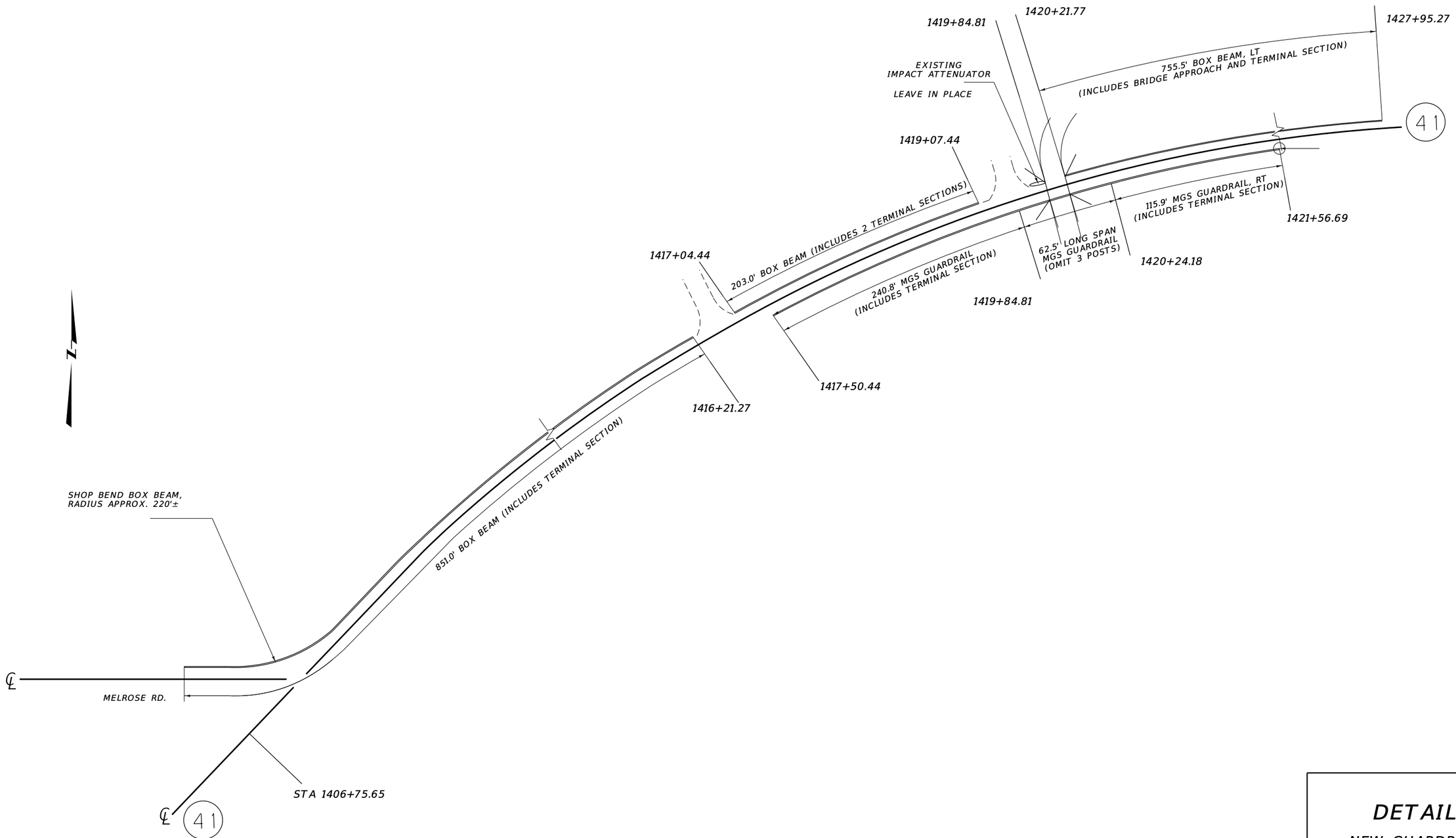
STATION		each	REMARKS
		REMOVE CONCRETE BARRIER RAIL	
FROM	TO		
1419+84.81	1420+21.77	3	RT, INCLUDES REMOVAL OF TAPERED CURBS
TOTAL		3	

PAVEMENT MARKINGS & ROADSIDE DELINEATION

ITEM	UNIT	INTERIM APPLICATION #	FINAL APPLICATION	TOTAL
STRIPING - WHITE PAINT	gallon	411		411
STRIPING - YELLOW PAINT	gallon	98		98
STRIPING - WHITE EPOXY	gallon		546	546
STRIPING - YELLOW EPOXY	gallon		130	130
CURB MARKING - YELLOW EPOXY	gallon		1	1
PANEL DELINEATOR DESIGN A	ea			320
PANEL DELINEATOR DESIGN D	ea			22
FINAL SWEEP AND BROOM	cr. mile			11.3

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DETAIL



DETAIL

NEW GUARDRAIL

(NO SCALE)

3	MDT MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\9475000rddet001.dgn	DESIGNED BY	P. RUMLEY	12/13/2018	ROAD PLANS	BEAVERHEAD ROCK - NORTH	NH 49-2(13)16
2		12/29/2021	REVIEWED BY					
		9:40:53 AM CPS - U544	CHECKED BY			MADISON COUNTY	UPN 9475000	5

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ASSOCIATED PROJECT AGREEMENT NUMBERS	
P.E.	NH 49-2(12)16

MONTANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS AND QUANTITIES

FEDERAL AID PROJECT NH 49-2(13)16

BEAVERHEAD ROCK - NORTH

MADISON COUNTY

BRIDGE IDENTIFICATION	
MDT STR ID	NBI NUMBER
05891	P00049027+05411

SCALES SHOWN ON BRIDGE PLAN SHEETS ARE FOR FULL SIZE (22 X 34) PRINTS REDUCED PRINTS ARE APPROXIMATELY ONE-HALF ORIGINAL SCALE

LIST OF DRAWINGS

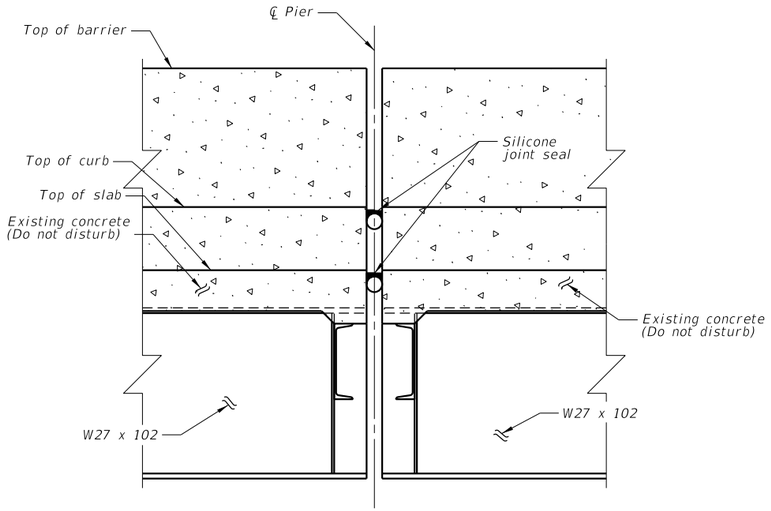
SHEET NO.	DWG. NO.	TITLE
BRIDGE DRAWINGS		
B1	24003	LIST OF DRAWINGS, ESTIMATED BRIDGE PLAN QUANTITIES, BRIDGE DECK CRACK SEAL, EXPANSION JOINT - PRECOMPRESSED

ESTIMATED BRIDGE PLAN QUANTITIES

STRUCTURE NAME	GENERAL LAYOUT NUMBER	LOCATION	BRIDGE DECK CRACK SEAL (YD^2)	EXPANSION JOINT - PRECOMPRESSED (LN,FT,)
BRIDGE OVER BEAVERHEAD RIVER	2750	PIER NO. 2		29.7
		PIER NO. 3		29.7
		SUPERSTUCTURE	564.3	
PROJECT TOTAL			564.3	59.4

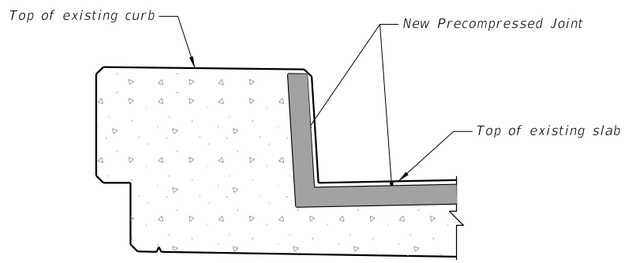
TABLE OF EXPANSION GAPS

LOCATION	TEMPERATURE (^0F)			CHANGE IN TEMPERATURE FOR 1/8" OF MOVEMENT
	120	60	-40	
PIER NO. 2	1 11/16"	2"	2 9/16"	27.0 ^0F
PIER NO. 3	1 7/16"	2"	3 1/8"	13.5 ^0F



EXISTING EXPANSION JOINT AT PIER NO. 2 AND PIER NO. 3

Scale ~ 1" = 1-0



NEW PRECOMPRESSED JOINT AT CURB

No Scale

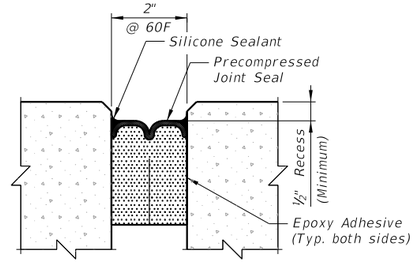
PRECOMPRESSED EXPANSION JOINT NOTES:

1) Joint openings vary in width. Determine joint opening sizes before ordering materials.

2) Clean existing opening thoroughly prior to placement of new precompressed joint seal.

3) See Special Provision for additional information.

4) DO NOT chip seal over the precompressed joints.



NEW PRECOMPRESSED JOINT SEAL DETAIL

No Scale

SHEET NO. B1

ESTIMATED BRIDGE PLAN QUANTITIES & PRECOMPRESSED EXPANSION JOINT

SCALE: As Shown

BRIDGE OVER BEAVERHEAD RIVER

AT STA. 1431+52.43

REVISED	REVISED	REVISED	REVISED	CHECKED	7/19/19	M.S.K.		
				DRAWN	12-21-18	D.G.G.		
				DESIGNED	12-21-18	D.G.G.		

C:\DGN\94750000bmrel001.dgn

10/4/2021 8:26:37 AM

MONTANA DEPARTMENT OF TRANSPORTATION BRIDGE BUREAU

ROUTE 00041

REF POINT 27+0.539

MDT STR. ID 05891

UPN NUMBER 9475000

DRAWING NO. 24003