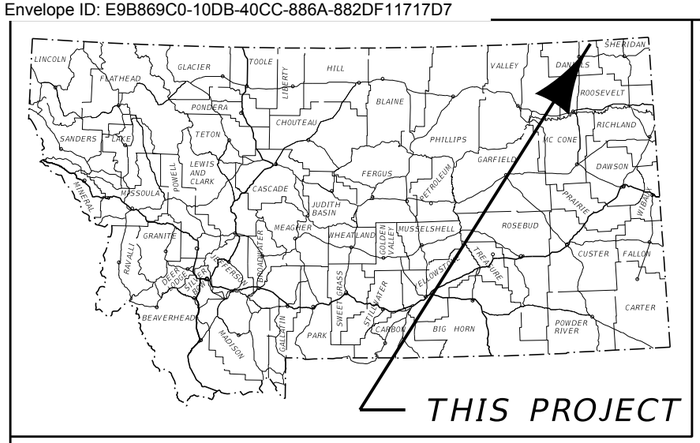
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MONTANA DEPARTMENT OF TRANSPORTATION

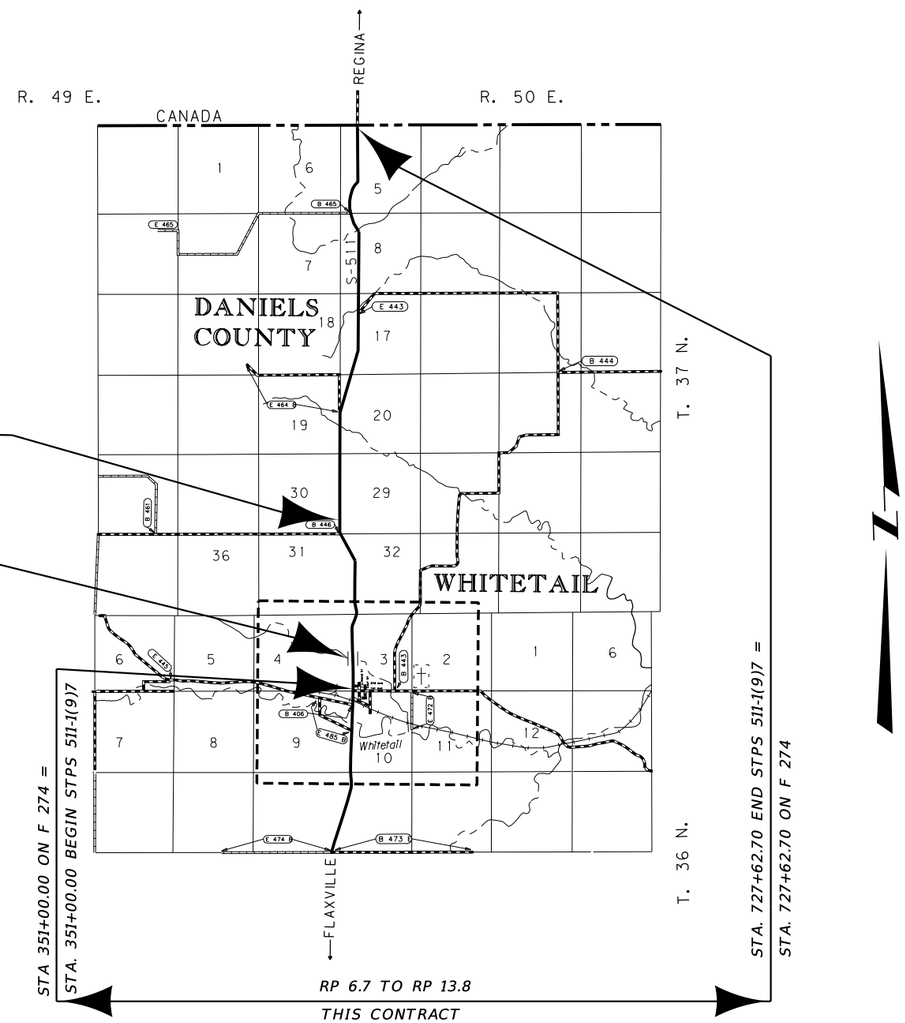
FEDERAL AID PROJECT STPS 511-1(9)7
MAJOR REHAB-PULVERIZATION
WHITETAIL - NORTH
DANIELS COUNTY

PROJECT DESIGN DATA		
PRESENT 2019	A.D.T. =	20
LETTING 2022	A.D.T. =	20
DESIGN 2042	A.D.T. =	30
	D.H.V. =	20
	TRUCKS =	0.0 %
	V. =	45 MPH
	18 KIP ESAL'S =	0 DAILY
	GROWTH RATE =	1.0 % ANNUALLY

LETTING DATE - _____

LENGTH 7.1 MILES

SURFACING SOURCES -
CONTRACTOR FURNISHED



ASSOCIATED PROJECT AGREEMENT NUMBERS	
R / W	
I.C.	
P. E.	STPS 511-1(8)7

MONTANA
DEPARTMENT OF TRANSPORTATION

MALCOLM "MACK" LONG
DIRECTOR OF TRANSPORTATION

APPROVED BY:

HIGHWAYS
ENGINEER

MONTANA
DAMIAN KRINGS
12113PE
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
Damian Krings
1C71361CE866454...

2/26/2021
DATE

3	MDT MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\9756000rdtl001.dgn	DESIGNED BY	E. PARRISH	4/13/2020	ROAD PLANS
2		1/26/2021	REVIEWED BY			
		8:10:57 AM CPS - U2160	CHECKED BY			UPN 9756000

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SIGNING PLANS	
SUMMARY	S1
SPECIFICATIONS	S2-S3
DETAILS	S3

NOTES

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.

AS-BUILTS

FOR HORIZONTAL ALIGNMENT AND STATIONING,REFER TO THE FOLLOWING "AS-BUILT" PROJECT(S):
F 274 (ORIGINAL CONSTRUCTION - 1934)

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.

LINEAR DATA

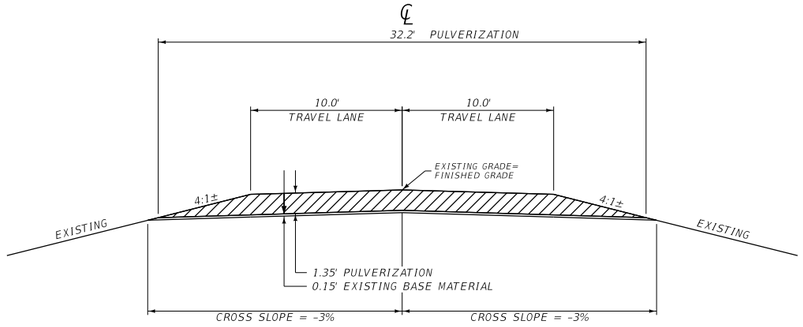
LENGTH OF ROADWAY	IN DANIELS COUNTY	2 LANE RURAL	37,605.70 ft
LENGTH OF BRIDGE	IN DANIELS COUNTY (NOT THIS CONTRACT)	2 LANE RURAL	57.00 ft
TOTAL LENGTH OF	STPS 511-1(9)7	2 LANE RURAL	37,662.70 ft

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TYPICAL SECTION NO. 1

MAINLINE

351+00.00 TO 366+05.00 B.E. TYP. 1
366+43.00 B.E. TO 456+00.00 B.E. TYP. 1
456+19.00 B.E. TO 727+62.70 TYP. 1



NOTE: MATCH EXISTING CROSS-SLOPES AT BRIDGE DECKS, HORIZONTAL CURVES, AND THE TIE-INS TO PTW AT THE BEGINNING AND END OF PROJECT.

NOTE: QUANTITES OF PULVERIZATION WERE ESTIMATED USING THE 3% NORMAL CROWN.

NOTE: SHAPE THE CROWN OF THE PULVERIZED MATERIAL TO A 3% NORMAL CROWN.

DO NOT PULVERIZE PAVEMENT ON BRIDGE DECKS

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SUMMARY

PULVERIZATION

STATION		square yards		REMARKS
FROM	TO	PULVERIZATION (PULVERIZE TO A DEPTH OF 1.35')		
351+00.00	366+05.00 B.E.	5,385		TYP. 1
366+43.00 B.E.	456+00.00 B.E.	32,046		TYP. 1
456+19.00 B.E.	727+62.70	97,114		TYP. 1
TOTAL		134,545		

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SUMMARY
SIGNING & DELINEATION QUANTITIES

MATERIAL	TOTAL	UNIT
SIGNS-ALUM REFL SHEET IV	33.0	SQ. FOOT
SIGNS-ALUM REFL SHEET XI	110.6	SQ. FOOT
SIGNS-ALUM SHEET INCR IV	20.0	SQ. FOOT
SIGNS-ALUM SHEET INCR XI		SQ. FOOT
OVERLAY-SHEET ALUMINUM		SQ. FOOT
POSTS-STEEL U SIGN	511	POUNDS
POLES-TREATED WOOD 4 IN	126	LINEAR FT.
POLES-TREATED WOOD 5 IN	28	LINEAR FT.
POLES-TREATED TIMBER-CLASS 4		LINEAR FT.
POLES-TREATED TIMBER-CLASS 3		LINEAR FT.
POSTS-TUBULAR STEEL		POUNDS
POSTS-TUBULAR STEEL-SQ-PERF		POUNDS
POSTS-STEEL STRUCTURAL SIGN		POUNDS
OVERHEAD STR/METAL-CANTILEVER		EACH
OVERHEAD STR/METAL-BRIDGE		EACH
HIGHWAY TRAFFIC STRIPING-WHITE		GAL.(S)
HIGHWAY TRAFFIC STRIPING-YELLOW		GAL.(S)
WORDS & SYMBOLS		GAL.(S)
DELINEATOR DES A		EACH
DELINEATOR DES B		EACH
DELINEATOR DES C		EACH
DELINEATOR DES D		EACH
DELINEATOR DES E		EACH
DELINEATOR DES F		EACH
DELINEATOR DES G		EACH
DELINEATOR DES H		EACH
REMOVE SIGNS	42	EACH
REMOVE SIGNS-GUIDE	1	EACH
RESET SIGNS		EACH
RESET SIGNS-GUIDE		EACH
FRANG SIGN POST BKWY-		EACH
FRANG SIGN POST BKWY-		EACH
SQ TUBLR SLIP BASE BKWY-3 IN		EACH

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SIGN LOCATION AND SPECIFICATIONS

REF. POST	RAMP NO.	SIGN NO.	PANEL SIZE	REFL SHTG TYPE: BACK-GROUND	REFL SHTG TYPE: LEGEND	FEET: CLEARANCE	FEET: SIGN SUPPORT SPACING	TYPE OF SUPPORT	FEET: CANTILEVER	FEET: SUPPORT LENGTH (ESTIMATED)	FEET: SUPPORT LENGTH (INSTALLED)	FEET: MOUNTING HEIGHT	FEET: FOUNDATION DEPTH	SIGN PANEL (SQ. FT.): SHEET ALUMINUM	SIGN PANEL (SQ. FT.): ALUMINUM SHEET INCREMENT	SIGN PANEL (SQ. FT.): ALUMINUM SHEET OVERLAY	TIMBER POLE (LINEAR FT.): 4" TOP DIA.	TIMBER POLE (LINEAR FT.): 5" TOP DIA.	STEEL POST(LBS.): ROUND TUBULAR	STEEL POST(LBS.): SQUARE TUBULAR	STEEL POST(LBS.): STRUCTURAL STEEL	STEEL POST(LBS.): "U" POST	BREAKAWAY	SIGNS REMOVE	SIGNS RESET	GUIDE REMOVE	GUIDE RESET	REMARKS
R.P. 6.721 RT		G511-6	96X30	IV	IV	20-0	4-10	5" Dia. POLE		X=13-0 Y=13-0		7-0	3-6		20.0=IV			14 14					X		1			CANADA PORT CLOSED NO ENTRY
R.P. 6.741 RT		R2-1=45	24X30	X1	-	10-0		4" Dia. POLE		12-4		5-0	3-0	5.0=X1			14							1					
R.P. 6.742 LT		R2-1=35	24X30	X1	-	10-0		4" Dia. POLE		12-4		5-0	3-0	5.0=X1			14							1					
R.P. 6.908 RT		R2-1=70 R2-3A=65	REMOVE																					1					
R.P. 6.947 LT		R2-1=45	24X30	X1	-	10-0		4" Dia. POLE		12-4		5-0	3-0	5.0=X1			14							1					
R.P. 6.959 RT		M3-1=NORTH M1-12=511	24X12 24X24	X1 X1	- -	10-0		4" Dia. POLE		13-0		5-0	3-0	2.0=X1 4.0=X1			14							1					M3-1=NORTH M1-5=511
R.P. 6.974 RT		R2-6A=60 R2-3A=55	REMOVE REMOVE																					1					
R.P. 6.994 RT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 6.994 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 6.999 RT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 6.999 LT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 7.000 RT		(2)D10-1	10X18	IV	IV	4-0		2 LB/FT STL "U"		9-6		4-0	3-0	2.6=IV									19	1					D10-1=MILE 7
R.P. 7.034 LT		R2-5A	REMOVE																					1					
R.P. 7.328 RT		OM-3	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 7.361 LT		OM-3	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.000 RT		(2)D10-1	10X18	IV	IV	4-0		2 LB/FT STL "U"		9-6		4-0	3-0	2.6=IV									19	1					D10-1=MILE 8
R.P. 8.390 LT		OM-3	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.643 LT		(2)D-3 R1-1	36X10 30X30	IV X1	IV X1	6-0		4" Dia. POLE		12-8		5-0	3-0	5.0=IV 5.2=X1			14							1					D-3=RADAR RD
R.P. 8.671 RT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.671 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.676 RT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.676 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 8.923 RT		CONSTRUCTRION SIGN	REMOVE																					1					ROUGH BREAKS AHEAD
R.P. 8.986 LT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 9.000 RT		(2)D10-1	10X18	IV	IV	4-0		2 LB/FT STL "U"		9-6		4-0	3-0	2.6=IV									19	1					D10-1=MILE 9
R.P. 9.979 RT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 9.991 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1									22	1				FY	
R.P. 10.000 RT		(2)D10-2	10X27	IV	IV	4-0		2 LB/FT STL "U"		10-0		4-0	3-0	3.8=IV									20	1					D10-2=MILE 10
R.P. 10.111 RT		W2-2	REMOVE																					1					
R.P. 10.314 LT		W2-2	REMOVE																					1					

X = STANDARD BREAKAWAY DEVICE:
- FOR WOOD POST SEE DETAILED DRAWING 619-20.
- FOR STRUCTURAL STEEL SEE DETAILED DRAWING 619-13.

FY = TYPE XI FLUORESCENT YELLOW SHEETING REQUIRED.

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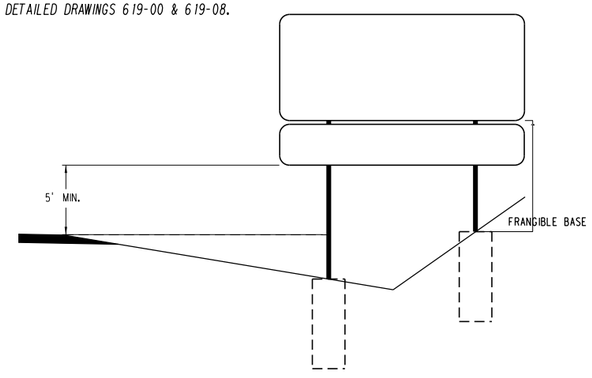
SIGN LOCATION AND SPECIFICATIONS

REF. POST	RAMP NO.	SIGN NO.	PANEL SIZE	REFL SHTG TYPE: BACK-GROUND	REFL SHTG TYPE: LEGEND	FEET: CLEARANCE	FEET: SIGN SUPPORT SPACING	TYPE OF SUPPORT	FEET: CANTILEVER	FEET: SUPPORT LENGTH (ESTIMATED)	FEET: SUPPORT LENGTH (INSTALLED)	FEET: MOUNTING HEIGHT	FEET: FOUNDATION DEPTH	SIGN PANEL (SQ. FT.): SHEET ALUMINUM	SIGN PANEL (SQ. FT.): ALUMINUM SHEET INCREMENT	SIGN PANEL (SQ. FT.): ALUMINUM SHEET OVERLAY	TIMBER POLE (LINEAR FT.): 4" TOP DIA.	TIMBER POLE (LINEAR FT.): 5" TOP DIA.	STEEL POST(LBS.): ROUND TUBULAR	STEEL POST(LBS.): SQUARE TUBULAR	STEEL POST(LBS.): STRUCTURAL STEEL	STEEL POST(LBS.): "U" POST	BREAK AWAY	SIGNS REMOVE	SIGNS RESET	GUIDE REMOVE	GUIDE RESET	REMARKS
R.P. 10.389 RT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1								22		1				FY	
R.P. 10.389 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1								22		1				FY	
R.P. 10.601 RT		OM-3R	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1								22		1				FY	
R.P. 10.728 LT		OM-3L	12X36	X1	-	4-0		2 LB/FT STL "U"		11-0		4-0	3-0	3.0=X1								22		1				FY	
R.P. 10.814 LT		CONSTRUCTRION SIGN	REMOVE																					1					ROUGH BREAK
R.P. 11.000 RT		(2)D10-2	10X27	IV	IV	4-0		2 LB/FT STL "U"		10-0		4-0	3-0	3.8=IV								20		1					D10-2=MILE 11
R.P. 11.615 RT		(2)D-3 R1-1	36X10 30X30	IV X1	IV X1	6-0		4" Dia. POLE		12-8		5-0	3-0	5.0=IV 5.2=X1			14							1					D-3=KOSKEY RD
R.P. 12.000 RT		(2)D10-2	10X27	IV	IV	4-0		2 LB/FT STL "U"		10-0		4-0	3-0	3.8=IV								20		1					D10-2=MILE 12
R.P. 13.000 RT		(2)D10-2	10X27	IV	IV	4-0		2 LB/FT STL "U"		10-0		4-0	3-0	3.8=IV								20		1					D10-2=MILE 13
R.P. 13.504 LT		R2-6A=60 R2-3A=55	REMOVE REMOVE																					1					
R.P. 13.534 LT		R2-1=70 R2-3A=65	REMOVE REMOVE																					1					
R.P. 13.534 LT		R2-1=45	24X30	X1	-	10-0		4" Dia. POLE		12-4		5-0	3-0	5.0=X1			14												
R.P. 13.554 LT		M3-3=SOUTH M1-12=511	24X12 24X24	X1 X1	- -	10-0		4" Dia. POLE		13-0		5-0	3-0	2.0=X1 4.0=X1			14							1					M3-3=SOUTH M1-5=511
R.P. 13.656 RT		W3-1	36X36	X1	X1	10-0		4" Dia. POLE		14-0		5-0	3-0	9.0=X1			14							1					
R.P. 13.720 MD		R1-1 B-1	30X30 USE AS IS	X1 -	X1 -									5.2=X1 -										1					R1-1=RSFO B-I=USE AS IS
TOTALS														33.0=IV 110.6=X1	20.0=IV		126	28				511	42	1				

FY = TYPE XI FLUORESCENT YELLOW SHEETING REQUIRED.

RSFO=REPLACE SIGN FACE ONLY

MINIMUM MOUNTING HEIGHTS SHOWN IN LOCATION AND SPECIFICATION SHEETS REFER TO THE BOTTOM OF THE MAJOR PANEL. MOUNTING HEIGHTS WILL INCREASE WITH ADDITIONAL PANELS.
SEE DETAILED DRAWINGS 619-00 & 619-08.



GUIDE SIGN MOUNTING HEIGHT DETAIL