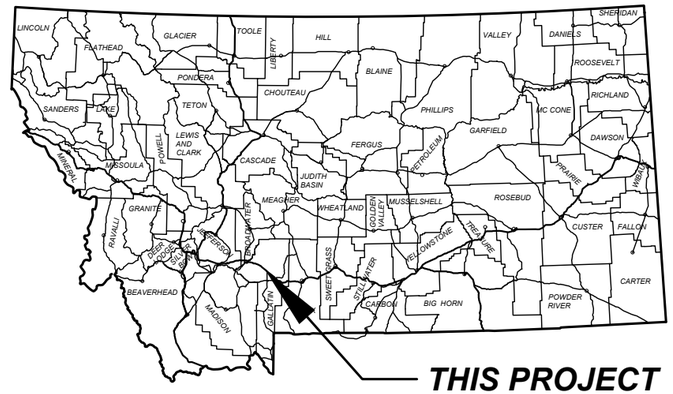
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MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT NH-CR 0602(102)

TRAFFIC SIGNALS, LIGHTING & ADA UPGRADES

JACKRABBIT - AMSTERDAM RD INT

GALLATIN COUNTY

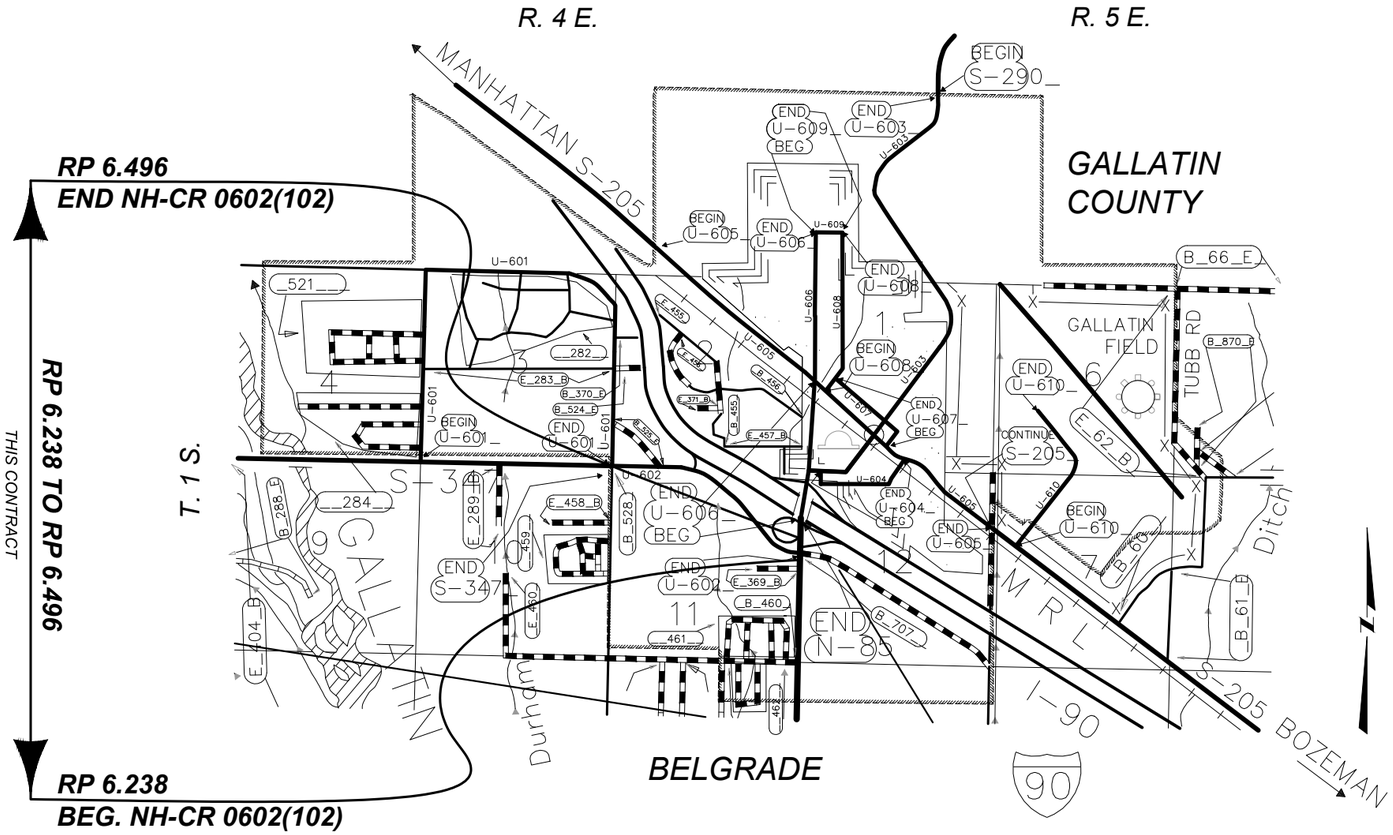
LENGTH N/A MILES

PROJECT DESIGN DATA

PRESENT	2022	A.D.T. =	24,540
LETTING	2025	A.D.T. =	26,810
DESIGN	2045	A.D.T. =	48,430
		D.H.V. =	5,090
		TRUCKS =	5.8%
		V. =	35 MPH
		18 KIP ESAL'S =	314
		GROWTH RATE =	3.0%

ASSOCIATED PROJECT AGREEMENT NUMBERS	
R/W	
I.C.	
P.E.	NH-CMDP 0699(8)

RELATED PROJECTS
WEST POST DEVELOPMENT PHASE 3 AND 4 - PACKAGE 6



DOWL

DOWL
APPROVED BY:

MONTANA
CODY W. SALO
16385 PE
PROFESSIONAL ENGINEER
LICENSED

DocuSigned by:
Cody Salo
DBA20EEE43C54B6...
4/3/2025
DATE

MONTANA
DEPARTMENT OF TRANSPORTATION

DocuSigned by:
Kelly Williams
EE7E5DDAB5A7471...
4/3/2025
DATE

SHEET NO.
1

TITLE SHEET

PROJECT NAME	JACKRABBIT-AMSTERDAM RD INT
COUNTY	GALLATIN COUNTY
PROJECT ID	NH-CR 0602(102)
UPN	9930001

DESIGNED BY	DOWL	---
REVIEWED BY	DOWL	---
CHECKED BY	DOWL	---
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MONTANA
Department of Transportation

ROAD PLANS

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ELECTRICAL PLANS

PLANS	E1-E7
SUMMARY	E1
DETAILS	E2-E6
PLANS	E7

NOTES

BASIS OF PLAN QUANTITIES

(QUANTITIES FOR ESTIMATING PURPOSES ONLY)

COMP. WEIGHT OF PL. MIX BIT. SURF.	= 3855 LBS. PER CUBIC YARD
BITUMINOUS MATERIAL	= 8.5 LBS. PER GAL.
SEAL	= 0.42 GAL. PER SQ. YARD
EMULSIFIED ASPHALT - TACK (ALL OTHER SURFACES)	= 0.05 GAL. PER SQ.YARD (UNDILUTED)

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.

WETLANDS

WETLANDS EXIST ADJACENT TO THE ROADWAY AND MAY EXIST BEYOND THE PROJECT LIMITS. WETLAND AREAS WITHIN THE PROJECT LIMITS HAVE BEEN DELINEATED AND ARE SHOWN ON THE PLANS. 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.

DELINEATED WETLAND AREAS

PUBLIC LAND SURVEY MONUMENTS

ALL MONUMENTS TO BE REMOVED AND RELOCATED OR RESET BY STATE FORCES.

CURB RADIUS

ALL CURB RADII CALL OUTS ARE TO THE TOP BACK OF CURB

CENTERLINE ALIGNMENT COORDINATE TABLE- JACKRABBIT LN

STATION	DESCRIPTION	N OR Y COORDINATE	E OR X COORDINATE	REMARKS
0+00.00	POT	557,144.9691	1,538,594.9312	
14+75.00	POT	558,619.1079	1,538,645.4464	

SHEET NO. 2

TABLE OF CONTENTS & NOTES

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT

COUNTY: GALLATIN COUNTY

PROJECT ID: NH-CR 0602(102)

UPN: 9930001

DESIGNED BY	DOWL	----
REVIEWED BY	DOWL	----
CHECKED BY	DOWL	----

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MONTANA Department of Transportation

ROAD PLANS

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CONTROL DIAGRAM

AMSTERDAM & JACKRABBIT INTERSECTION

SCALE: 1" = 200'

NOTE:

THIS PROJECT IS ON THE MONTANA COORDINATE SYSTEM NAD83-1992 NORTHING AND EASTING COORDINATES ARE EXPRESSED IN UNITS OF INTERNATIONAL FEET AND ELEVATIONS ARE IN UNITS OF U.S. SURVEY FEET. DIMENSIONS SHOWN ON THE PLANS ARE GRID. ALL SURVEY AND STAKING REQUIRE THE USE OF A COMBINATION SCALE FACTOR (CSF) TO CONVERT GRID DIMENSIONS TO GROUND DIMENSIONS (GRID DISTANCE / CSF = GROUND DISTANCE). THE CSF FOR THIS PROJECT IS 0.99941309

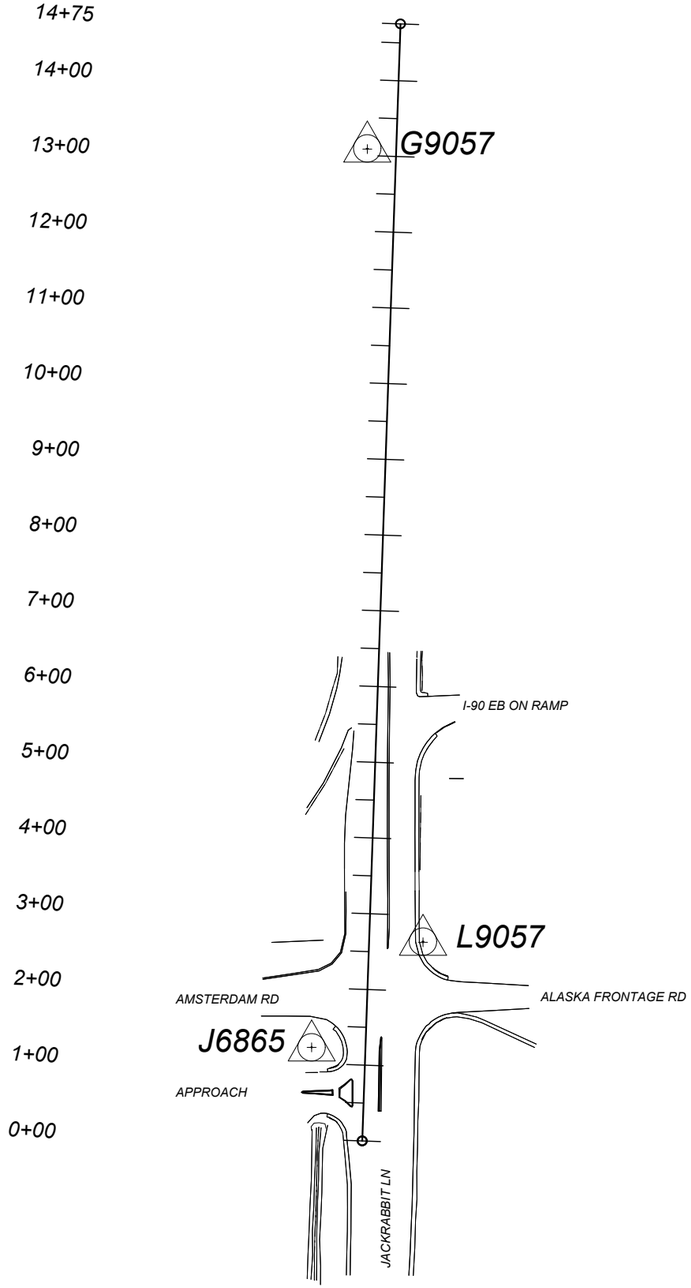
BEARING SOURCE

GRID -- MONTANA COORDINATE SYSTEM NAD 83-1992

LEVEL DATUM SOURCE

GRID -- MONTANA COORDINATE SYSTEM NAD 83-1992
NAVD 88 (GNSS DERIVED ELEVATIONS USING GEOID03)

POINT NAME/NUMBER	N OR Y COORDINATE	E OR X COORDINATE	POINT ELEVATION (FT)
J6865	557,268.4320	1,538,528.1430	4485.7800
L9057	557,407.1060	1,538,675.0750	4491.7200
I6865	557,424.8720	1,537,746.4110	4485.7700
G9057	558,453.9730	1,538,601.5160	4501.8600



I6865

N

SHEET NO. 3

CONTROL DIAGRAM

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY
DOWL	DOWL	DOWL
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MONTANA Department of Transportation

ROAD PLANS

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SUMMARY

SURFACING

STATION		AGGREGATE			BITUMINOUS MATERIAL	REMARKS
		sq. yards	tons	cu. yards	tons	
TO	FROM	COVER - TYPE 1	COMMERCIAL MIX PG 58H-34	CRUSHED AGG. COURSE	EMULSIFIED ASPHALT - CRS 2P	
0+14.70	0+33.18	13	3	4	0.02	JACKRABBIT LN & APPROACH - SW
0+89.76	1+14.53	29	8	10	0.05	JACKRABBIT LN & APPROACH - NW
1+14.53	1+51.52	27	7	9	0.05	JACKRABBIT LN & AMSTERDAM RD - SW
1+31.43	1+57.12	17	4	5	0.03	JACKRABBIT LN & AMSTERDAM RD - SE
5+15.02	5+33.78	12	3	4	0.02	JACKRABBIT LN & I-90 EB ON-RAMP - SE
5+87.67	6+07.97	27	7	9	0.05	JACKRABBIT LN & I-90 EB ON-RAMP - NE
SUBTOTAL		125	32	41	0.22	
TOTAL		~	~	~	~	

#FOR INFORMATION ONLY- INCLUDE IN COST OF NEW CURB AND GUTTER

LANDSCAPING

STATION		lump sum	sq. feet	sq. yards	REMARKS
TO	FROM	LANDSCAPING	SEEDING	*SODDING	
0+16.19	0+33.18	0.167		6.5	JACKRABBIT LN & APPROACH - SW
0+89.76	1+14.53	0.167	178		JACKRABBIT LN & APPROACH - NW
1+14.53	1+51.52	0.167	212		JACKRABBIT LN & AMSTERDAM RD - SW
1+31.43	1+57.12	0.167	224		JACKRABBIT LN & AMSTERDAM RD - SE
5+15.02	5+33.78	0.167	198		JACKRABBIT LN & I-90 EB ON-RAMP - SE
5+87.67	6+07.97	0.167	186		JACKRABBIT LN & I-90 EB ON-RAMP - NE
TOTAL		1.0	# 998	# 7	

FOR INFORMATION ONLY
* SEE DETAILS FOR SOD LOCATIONS

CURB AND GUTTER

STATION		linear feet				REMARKS
		CONCRETE CURB AND GUTTER		# REMOVE CURB AND GUTTER		
TO	FROM	LEFT	RIGHT	LEFT	RIGHT	
0+17.27	0+33.21	25.5		25.5		JACKRABBIT LN & APPROACH - SW
0+89.76	1+21.56	39.1		39.1		JACKRABBIT LN & APPROACH - NW
1+21.56	1+51.52	34.1		34.1		JACKRABBIT LN & AMSTERDAM RD - SW
1+33.28	1+55.71		26.1		26.1	JACKRABBIT LN & AMSTERDAM RD - SE
5+10.98	5+33.78		26.4		26.4	JACKRABBIT LN & I-90 EB ON-RAMP - SE
5+89.57	6+05.63		33.2		33.2	JACKRABBIT LN & I-90 EB ON-RAMP - NE
SUBTOTAL		98.7	85.7	98.7	85.7	
TOTAL		184.4		~		

FOR INFORMATION ONLY - INCLUDE IN THE COST OF NEW CURB AND GUTTER

GRADING

STATION		cu. yards	REMARKS
TO	FROM	STREET EXC.	
0+17.27	0+33.21	8	JACKRABBIT LN & APPROACH - SW
0+89.76	1+21.56	9	JACKRABBIT LN & APPROACH - NW
1+21.56	1+51.52	6	JACKRABBIT LN & AMSTERDAM RD - SW
1+33.28	1+55.71	9	JACKRABBIT LN & AMSTERDAM RD - SE
5+10.98	5+33.78	6	JACKRABBIT LN & I-90 EB ON-RAMP - SE
5+89.57	6+05.63	6	JACKRABBIT LN & I-90 EB ON-RAMP - NE
TOTAL		44	

SIDEWALK

STATION		sq. yards						REMARKS
		CONCRETE SIDEWALK		DETECTABLE WARNING DEVICES		# REMOVE SIDEWALK		
		6"		TYPE 1				
FROM	TO	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
0+17.27	0+33.21	18.6		1.1		13.5		JACKRABBIT LN & APPROACH - SW
0+89.76	1+21.56	29.5		1.1		18.5		JACKRABBIT LN & APPROACH - NW
1+21.56	1+51.52	24.2		1.1		21.4		JACKRABBIT LN & AMSTERDAM RD - SW
1+33.28	1+55.71		28.6		1.1		16.0	JACKRABBIT LN & AMSTERDAM RD - SE
5+10.98	5+33.78		20.0		1.1		19.7	JACKRABBIT LN & I-90 EB ON-RAMP - SE
5+89.57	6+05.63		20.7		1.1		14.6	JACKRABBIT LN & I-90 EB ON-RAMP - NE
SUBTOTAL		72.3	69.3	3.3	3.3	53.4	50.3	
TOTAL		141.6		6.6		~		

FOR INFORMATION ONLY - INCLUDE IN THE COST OF STREET EXCAVATION

PAVEMENT MARKINGS

ITEM	UNIT	INTERIM APPLICA-TION	FINAL APPLICA-TION	TOTAL
STRIPING - WHITE PAINT	gallon	1		1
WORDS & SYMBOLS - WHITE PAINT	gallon	1		1
STRIPING - WHITE EPOXY	gallon		25	25
STRIPING - YELLOW EPOXY	gallon		9	9
WORDS & SYMBOLS - WHITE EPOXY	gallon		18	18
CURB - YELLOW EPOXY	gallon		35	35

NOTE: PREPARE AND REPAINT ALL CURB MARKINGS ON THE PROJECT

SHEET NO. 4

SUMMARY

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY
DOWL	DOWL	DOWL
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MONTANA Department of Transportation

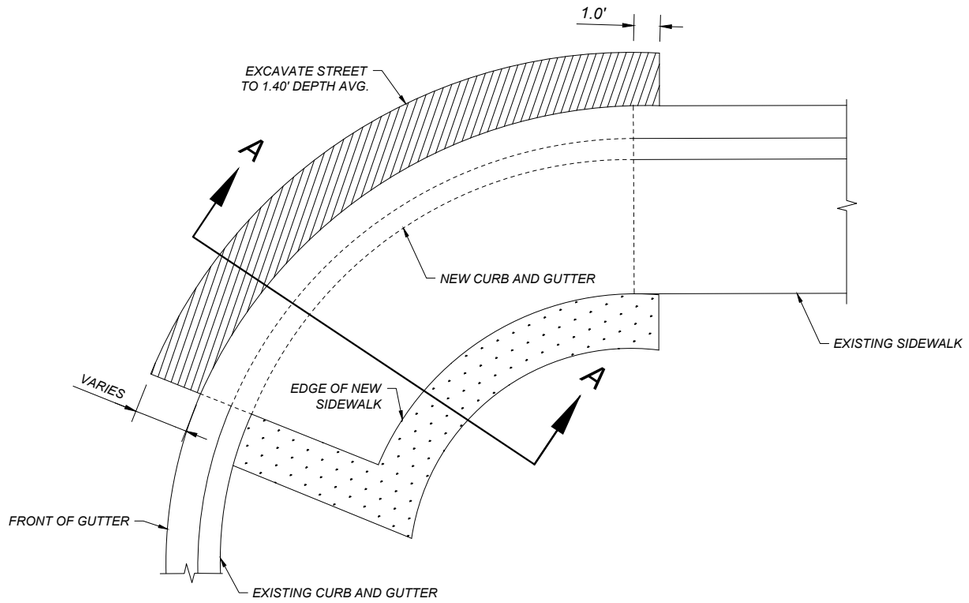
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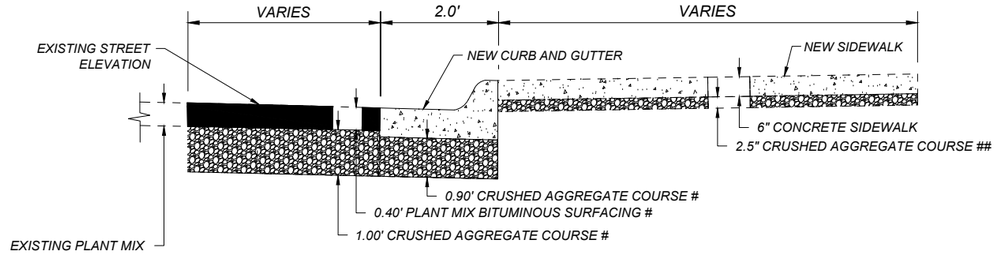
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DETAIL





SECTION A-A

MAXIMUM CONSTRUCTION LIMITS FOR REMOVAL OF EXISTING CURB AND GUTTER AND PLACEMENT OF FORMS FOR NEW CURB AND GUTTER.

SODDING, SEEDING, AND LANDSCAPING LIMITS. SEE CURB RAMP DESIGN DETAILS.

\# ITEMS ARE NOT MEASURED FOR PAYMENT AND ARE INCLUDED IN THE COST OF NEW CURB AND GUTTER.

\## ITEMS ARE NOT MEASURED FOR PAYMENT AND ARE INCLUDED IN THE COST OF NEW SIDEWALK.

DOWL

SHEET NO. 5

STREET EXCAVATION DETAIL

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT

COUNTY GALLATIN COUNTY

PROJECT ID NH-CR 0602(102)

UPN 9930001

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REVIEWED BY	DOWL
CHECKED BY	DOWL
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MONTANA Department of Transportation

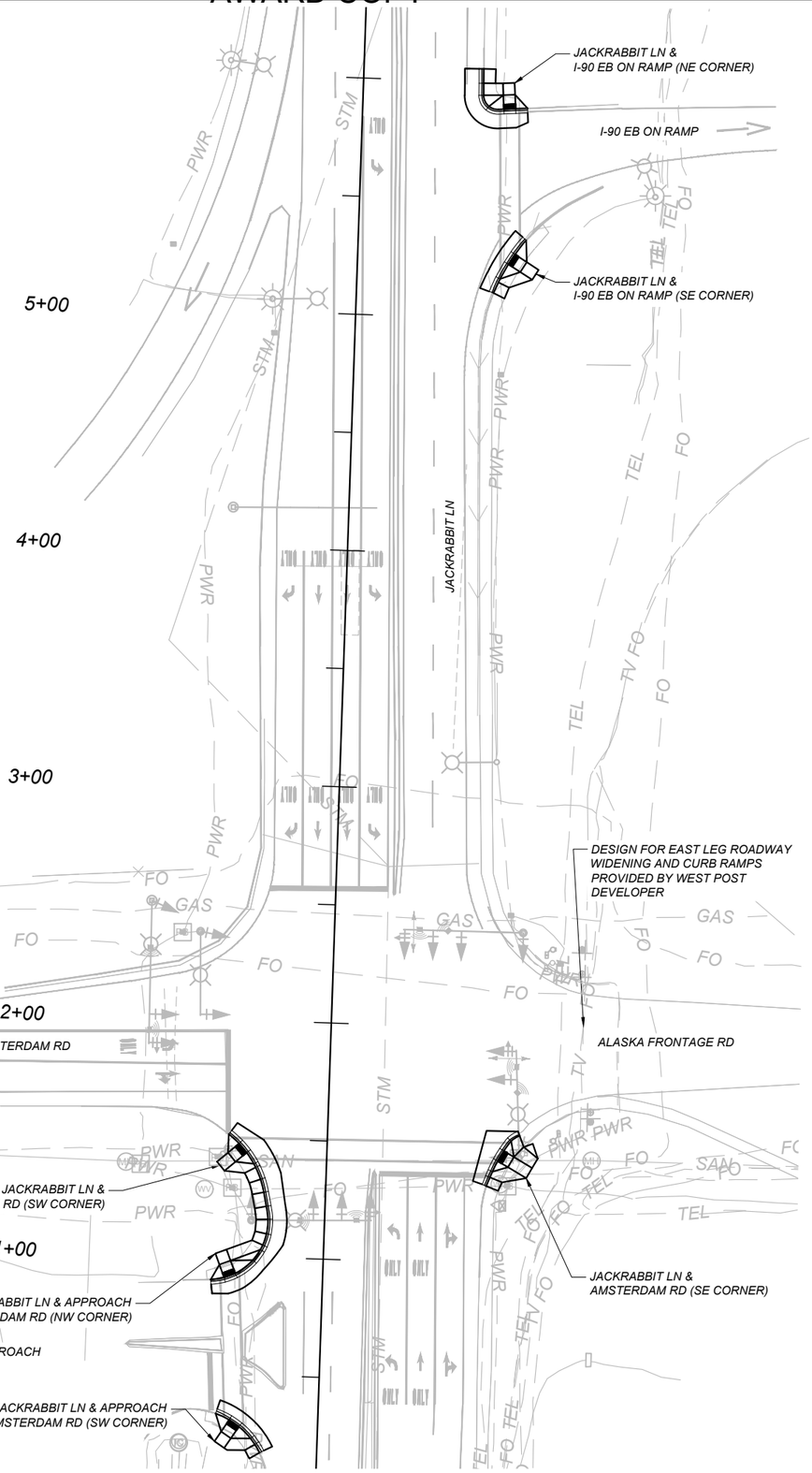
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DETAIL



DOWL

SHEET NO.
6

CURB RAMP DESIGN
LOCATION MAP

PROJECT NAME	JACKRABBIT-AMSTERDAM RD INT
COUNTY	GALLATIN COUNTY
PROJECT ID	NH-CR 0602(102)
UPN	9930001

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REVIEWED BY	DOWL	----
CHECKED BY	DOWL	----

MONTANA
Department of Transportation

ROAD PLANS

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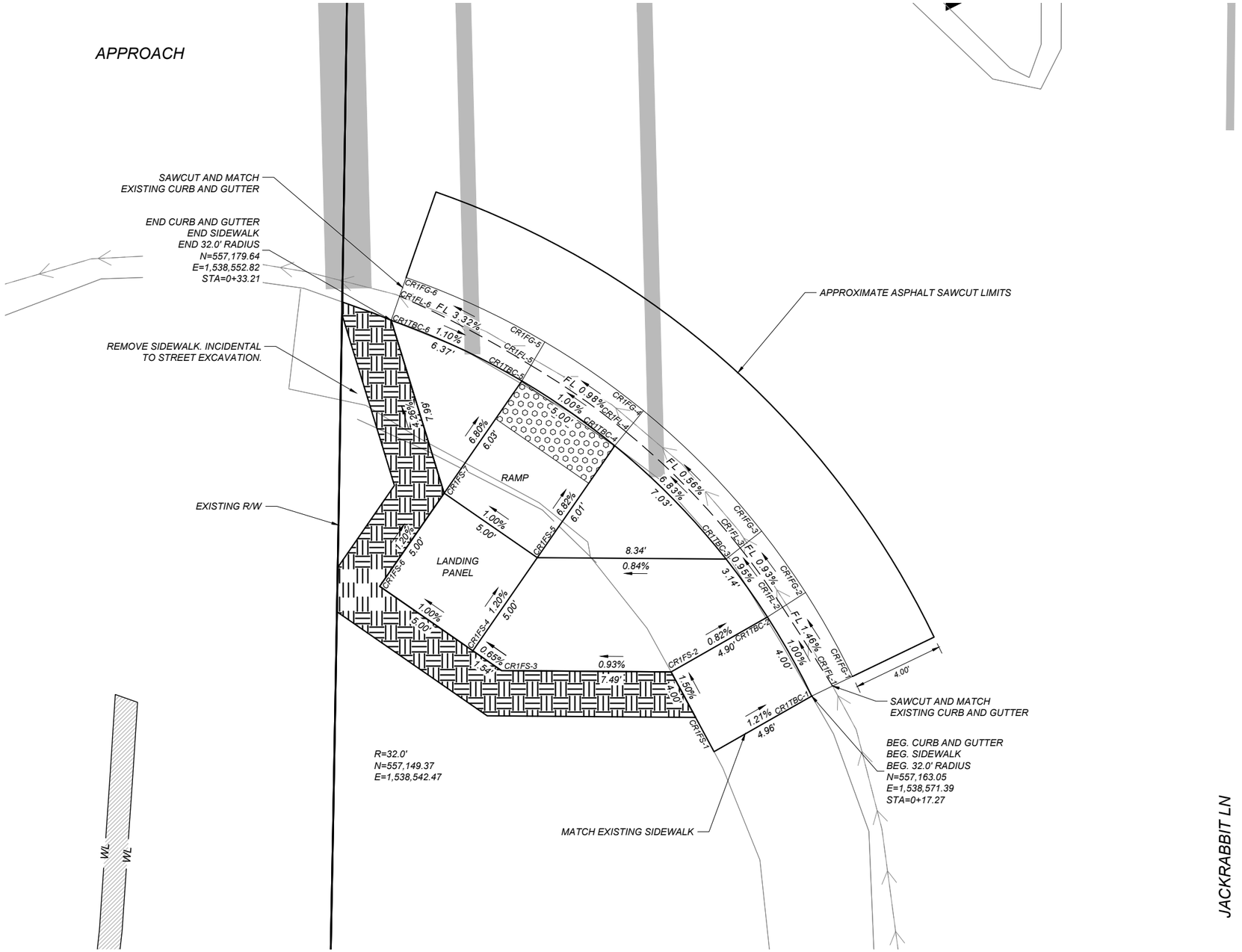
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DETAIL

INTERSECTION OF JACKRABBIT LN & APPROACH SOUTH OF AMSTERDAM RD
SOUTHWEST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR1FG-1	557,163.92	1,538,573.19	4485.97
CR1FG-2	557,167.62	1,538,571.12	4485.92
CR1FG-3	557,170.34	1,538,569.18	4485.89
CR1FG-4	557,175.65	1,538,563.96	4485.85
CR1FG-5	557,178.69	1,538,559.61	4485.80
CR1FG-6	557,181.53	1,538,553.48	4485.64
CR1FL-1	557,163.49	1,538,572.31	4485.94
CR1FL-2	557,166.97	1,538,570.10	4485.88
CR1FL-3	557,169.59	1,538,568.23	4485.85
CR1FL-4	557,174.72	1,538,563.20	4485.81
CR1FL-5	557,177.65	1,538,559.00	4485.76
CR1FL-6	557,180.71	1,538,553.20	4485.54
CR1FS-1	557,160.60	1,538,567.08	4486.48
CR1FS-2	557,164.12	1,538,565.19	4486.42
CR1FS-3	557,164.17	1,538,557.70	4486.35
CR1FS-4	557,165.05	1,538,556.43	4486.34
CR1FS-5	557,169.16	1,538,559.27	4486.28
CR1FS-6	557,167.90	1,538,552.32	4486.29
CR1FS-7	557,172.01	1,538,555.16	4486.23
CR1TBC-1	557,163.05	1,538,571.39	4486.42
CR1TBC-2	557,166.54	1,538,569.44	4486.38
CR1TBC-3	557,169.10	1,538,567.61	4486.35
CR1TBC-4	557,174.11	1,538,562.70	4485.87
CR1TBC-5	557,176.97	1,538,558.60	4485.82
CR1TBC-6	557,179.64	1,538,552.82	4485.89

LEGEND
FS = FINISHED SURFACE ELEV.
TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NEW SODDING

NOTES:

PROVIDE DETECTABLE WARNING DEVICES ON THE BOTTOM 2.0 FEET OF EACH RAMP AS SHOWN. SEE DTL. DWG. NO. 608-40 FOR DETECTABLE WARNING DEVICES DETAILS.

ALL DIMENSIONS AND ELEVATIONS ARE FEET UNLESS OTHERWISE NOTED.

ALL CURB AND GUTTER DIMENSIONS ARE ALONG TBC.

CONTRACTOR VERIFY ELEVATIONS IN THE FIELD PRIOR TO CONSTRUCTION.

MATCH EXISTING ELEVATIONS AT ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE. ELEVATIONS SHOWN AT MATCH LINE LOCATIONS ARE APPROXIMATE.

SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & APPROACH SOUTH OF AMSTERDAM RD CURB RAMP DETAILS

1" = 5'

DOWL

SHEET NO. 7

CURB RAMP DESIGNS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

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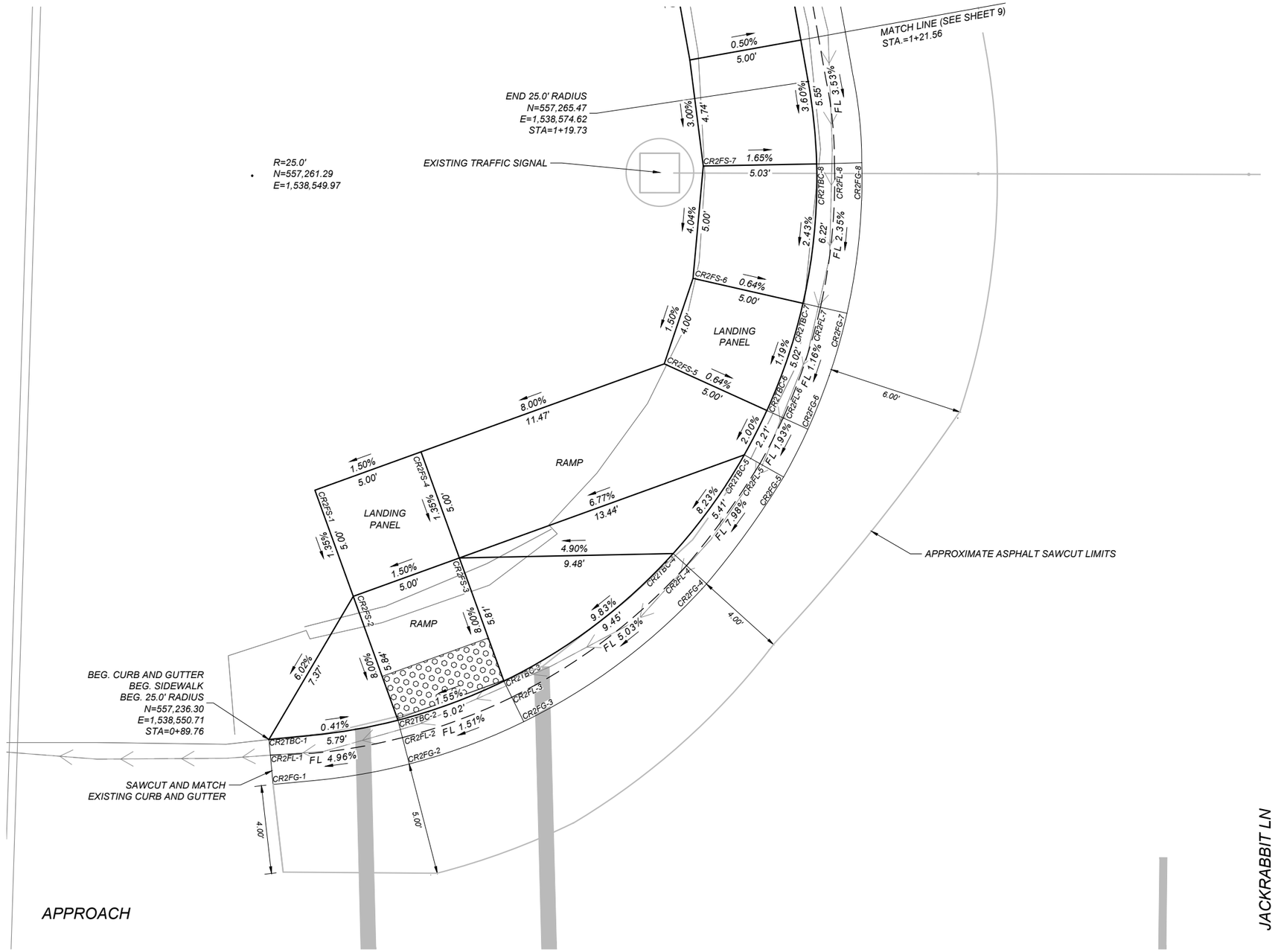
MONTANA Department of Transportation

ROAD PLANS

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DETAIL

INTERSECTION OF JACKRABBIT LN & APPROACH SOUTH OF AMSTERDAM RD
NORTHWEST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR2FG-1	557,234.31	1,538,550.90	4485.78
CR2FG-2	557,235.21	1,538,556.93	4486.08
CR2FG-3	557,237.09	1,538,562.01	4486.16
CR2FG-4	557,243.20	1,538,570.12	4486.65
CR2FG-5	557,247.93	1,538,573.53	4487.09
CR2FG-6	557,250.06	1,538,574.61	4487.14
CR2FG-7	557,255.19	1,538,576.34	4487.20
CR2FG-8	557,261.87	1,538,576.99	4487.35
CR2FL-1	557,235.60	1,538,550.78	4485.74
CR2FL-2	557,236.38	1,538,556.63	4486.03
CR2FL-3	557,238.17	1,538,561.48	4486.11
CR2FL-4	557,244.01	1,538,569.22	4486.60
CR2FL-5	557,248.53	1,538,572.48	4487.04
CR2FL-6	557,250.56	1,538,573.51	4487.09
CR2FL-7	557,255.46	1,538,575.16	4487.15
CR2FL-8	557,261.83	1,538,575.79	4487.30
CR2FS-1	557,247.35	1,538,552.75	4486.63
CR2FS-2	557,242.65	1,538,554.45	4486.56
CR2FS-3	557,244.35	1,538,559.15	4486.64
CR2FS-4	557,249.05	1,538,557.45	4486.70
CR2FS-5	557,252.95	1,538,568.24	4487.62
CR2FS-6	557,256.74	1,538,569.51	4487.68
CR2FS-7	557,261.72	1,538,569.97	4487.88
CR2TBC-1	557,236.30	1,538,550.71	4486.12
CR2TBC-2	557,237.15	1,538,556.43	4486.09
CR2TBC-3	557,238.88	1,538,561.13	4486.17
CR2TBC-4	557,244.54	1,538,568.63	4487.10
CR2TBC-5	557,248.92	1,538,571.79	4487.55
CR2TBC-6	557,250.88	1,538,572.79	4487.59
CR2TBC-7	557,255.63	1,538,574.39	4487.65
CR2TBC-8	557,261.81	1,538,574.99	4487.80

LEGEND

FS = FINISHED SURFACE ELEV.
TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NOTES:

PROVIDE DETECTABLE WARNING DEVICES ON THE BOTTOM 2.0 FEET OF EACH RAMP AS SHOWN. SEE DTL. DWG. NO. 608-40 FOR DETECTABLE WARNING DEVICES DETAILS.

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CONTRACTOR VERIFY ELEVATIONS IN THE FIELD PRIOR TO CONSTRUCTION.

MATCH EXISTING ELEVATIONS AT ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE. ELEVATIONS SHOWN AT MATCH LINE LOCATIONS ARE APPROXIMATE.

SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & APPROACH SOUTH OF AMSTERDAM RD CURB RAMP DETAILS

1" = 5'

SHEET NO. 8

CURB RAMP DESIGNS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY	
DOWL	DOWL	DOWL	9930001RDDETZ01.DWG

MONTANA Department of Transportation

ROAD PLANS

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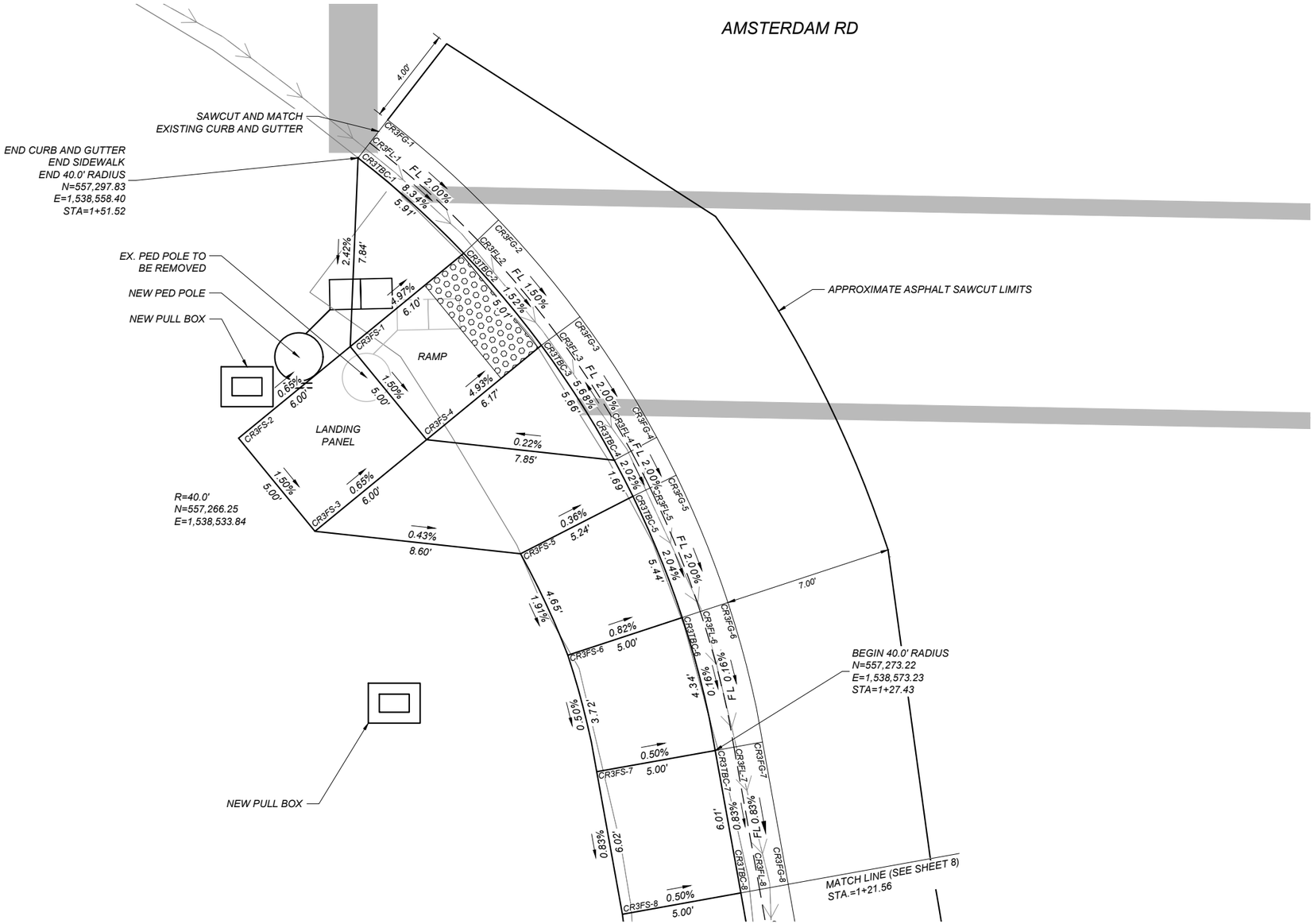
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AWARD COPY

DETAIL

INTERSECTION OF JACKRABBIT LN & AMSTERDAM RD
SOUTHWEST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR3FG-1	557,299.41	1,538,559.62	4488.10
CR3FG-2	557,295.25	1,538,564.23	4487.94
CR3FG-3	557,291.23	1,538,567.61	4487.87
CR3FG-4	557,286.23	1,538,570.80	4487.75
CR3FG-5	557,284.65	1,538,571.61	4487.72
CR3FG-6	557,279.37	1,538,573.76	4487.61
CR3FG-7	557,273.57	1,538,575.20	4487.60
CR3FG-8	557,267.66	1,538,576.26	4487.55
CR3FL-1	557,298.45	1,538,558.88	4488.02
CR3FL-2	557,294.41	1,538,563.36	4487.90
CR3FL-3	557,290.51	1,538,566.64	4487.82
CR3FL-4	557,285.65	1,538,569.74	4487.70
CR3FL-5	557,284.12	1,538,570.52	4487.67
CR3FL-6	557,278.99	1,538,572.61	4487.56
CR3FL-7	557,273.36	1,538,574.01	4487.55
CR3FL-8	557,267.45	1,538,575.07	4487.50
CR3FS-1	557,289.99	1,538,558.07	4488.26
CR3FS-2	557,286.19	1,538,553.43	4488.30
CR3FS-3	557,282.32	1,538,556.60	4488.23
CR3FS-4	557,286.13	1,538,561.24	4488.19
CR3FS-5	557,281.39	1,538,565.15	4488.19
CR3FS-6	557,277.18	1,538,567.11	4488.10
CR3FS-7	557,272.34	1,538,568.31	4488.08
CR3FS-8	557,266.42	1,538,569.37	4488.02
CR3TBC-1	557,297.83	1,538,558.40	4488.45
CR3TBC-2	557,293.87	1,538,562.78	4487.96
CR3TBC-3	557,290.04	1,538,566.01	4487.88
CR3TBC-4	557,285.27	1,538,569.04	4488.20
CR3TBC-5	557,283.78	1,538,569.81	4488.17
CR3TBC-6	557,278.74	1,538,571.86	4488.06
CR3TBC-7	557,273.22	1,538,573.23	4488.05
CR3TBC-8	557,267.31	1,538,574.29	4488.00

JACKRABBIT LN

LEGEND
FS = FINISHED SURFACE ELEV.
TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NOTES:

PROVIDE DETECTABLE WARNING DEVICES ON THE BOTTOM 2.0 FEET OF EACH RAMP AS SHOWN. SEE DTL. DWG. NO. 608-40 FOR DETECTABLE WARNING DEVICES DETAILS.

ALL DIMENSIONS AND ELEVATIONS ARE FEET UNLESS OTHERWISE NOTED.

ALL CURB AND GUTTER DIMENSIONS ARE ALONG TBC.

CONTRACTOR VERIFY ELEVATIONS IN THE FIELD PRIOR TO CONSTRUCTION.

MATCH EXISTING ELEVATIONS AT ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE. ELEVATIONS SHOWN AT MATCH LINE LOCATIONS ARE APPROXIMATE.

SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & AMSTERDAM RD CURB RAMP DETAILS

1" = 5'

SHEET NO. 9

CURB RAMP DESIGNS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY		REVIEWED BY		CHECKED BY	
DOWL	----	DOWL	----	DOWL	----

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MONTANA Department of Transportation

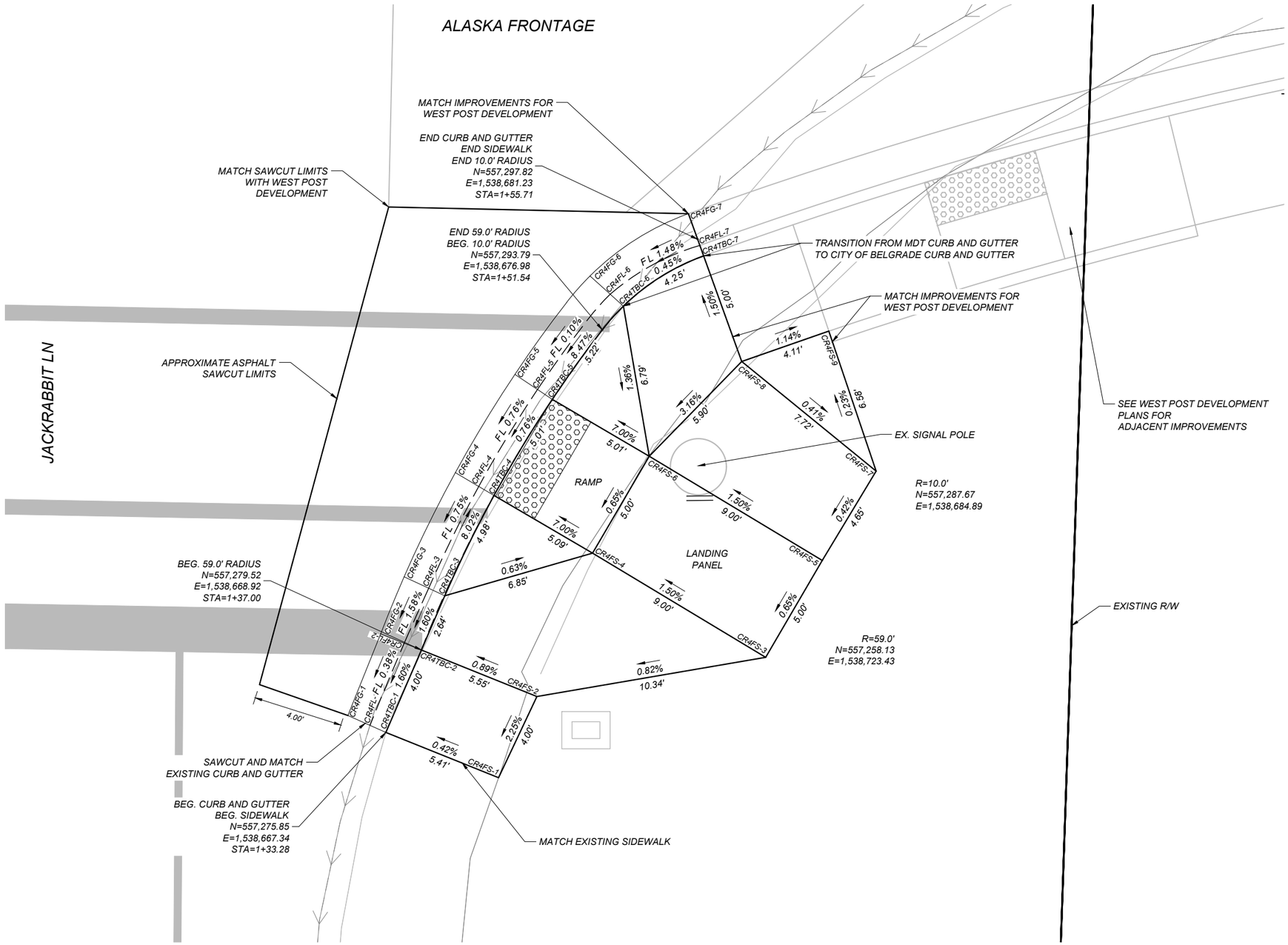
ROAD PLANS

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DETAIL

INTERSECTION OF JACKRABBIT LN & AMSTERDAM RD
SOUTHEAST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR4FG-1	557,276.60	1,538,665.64	4488.12
CR4FG-2	557,280.24	1,538,667.11	4488.10
CR4FG-3	557,282.78	1,538,668.15	4488.14
CR4FG-4	557,287.42	1,538,670.43	4488.18
CR4FG-5	557,291.80	1,538,673.09	4488.22
CR4FG-6	557,296.18	1,538,676.43	4488.23
CR4FG-7	557,298.95	1,538,680.81	4488.32
CR4FL-1	557,276.16	1,538,666.63	4488.04
CR4FL-2	557,279.82	1,538,668.16	4488.05
CR4FL-3	557,282.27	1,538,669.24	4488.09
CR4FL-4	557,286.81	1,538,671.47	4488.13
CR4FL-5	557,291.12	1,538,674.09	4488.17
CR4FL-6	557,295.37	1,538,677.33	4488.18
CR4FL-7	557,297.82	1,538,681.23	4488.26
CR4FS-1	557,273.83	1,538,672.36	4488.51
CR4FS-2	557,277.45	1,538,674.06	4488.60
CR4FS-3	557,279.19	1,538,684.26	4488.69
CR4FS-4	557,283.83	1,538,676.55	4488.55
CR4FS-5	557,283.51	1,538,686.78	4488.72
CR4FS-6	557,288.15	1,538,679.07	4488.58
CR4FS-7	557,287.49	1,538,689.18	4488.74
CR4FS-8	557,292.37	1,538,683.19	4488.77
CR4FS-9	557,293.73	1,538,687.07	4488.72
CR4TBC-1	557,275.85	1,538,667.34	4488.49
CR4TBC-2	557,279.52	1,538,668.92	4488.55
CR4TBC-3	557,281.94	1,538,669.96	4488.59
CR4TBC-4	557,286.40	1,538,672.15	4488.19
CR4TBC-5	557,290.69	1,538,674.75	4488.23
CR4TBC-6	557,294.84	1,538,677.92	4488.68
CR4TBC-7	557,297.07	1,538,681.49	4488.69

LEGEND

FS = FINISHED SURFACE ELEV.
TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NOTES:

PROVIDE DETECTABLE WARNING DEVICES ON THE BOTTOM 2.0 FEET OF EACH RAMP AS SHOWN. SEE DTL. DWG. NO. 608-40 FOR DETECTABLE WARNING DEVICES DETAILS.

ALL DIMENSIONS AND ELEVATIONS ARE FEET UNLESS OTHERWISE NOTED.

ALL CURB AND GUTTER DIMENSIONS ARE ALONG TBC.

CONTRACTOR VERIFY ELEVATIONS IN THE FIELD PRIOR TO CONSTRUCTION.

MATCH EXISTING ELEVATIONS AT ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE. ELEVATIONS SHOWN AT MATCH LINE LOCATIONS ARE APPROXIMATE.

SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & AMSTERDAM RD CURB RAMP DETAILS

1" = 5'

SHEET NO. 10

CURB RAMP DESIGNS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY
DOWL	DOWL	DOWL

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MONTANA Department of Transportation

ROAD PLANS

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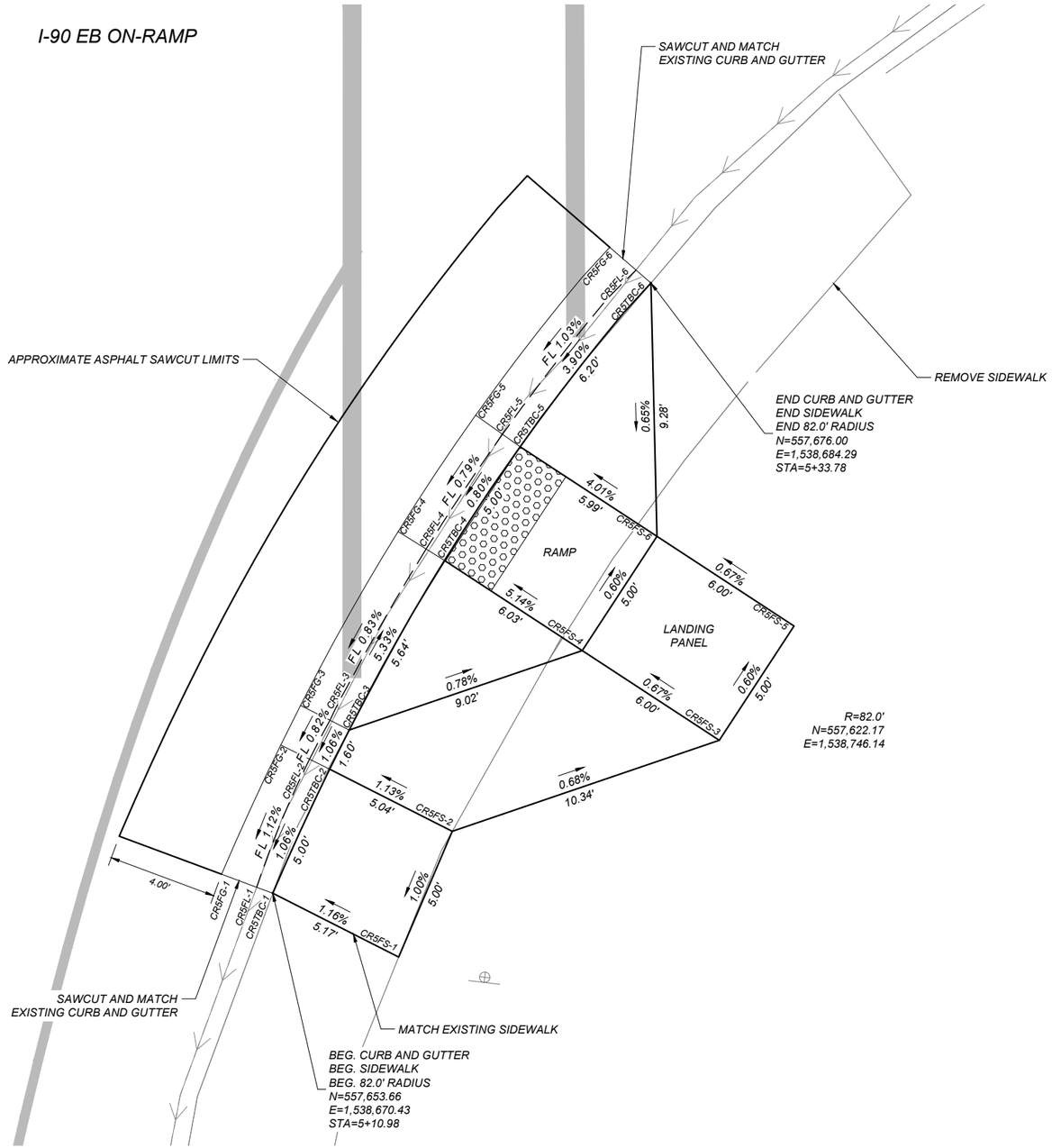
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DETAIL

INTERSECTION OF JACKRABBIT LN & I-90 EB ON-RAMP
SOUTHEAST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR5FG-1	557,654.35	1,538,668.55	4497.66
CR5FG-2	557,659.08	1,538,670.72	4497.73
CR5FG-3	557,660.53	1,538,671.45	4497.75
CR5FG-4	557,666.90	1,538,675.02	4497.81
CR5FG-5	557,671.16	1,538,677.86	4497.85
CR5FG-6	557,677.31	1,538,682.77	4497.92
CR5FL-1	557,653.88	1,538,669.84	4497.64
CR5FL-2	557,658.57	1,538,671.78	4497.70
CR5FL-3	557,659.99	1,538,672.52	4497.71
CR5FL-4	557,666.26	1,538,676.05	4497.77
CR5FL-5	557,670.46	1,538,678.85	4497.81
CR5FL-6	557,676.47	1,538,683.74	4497.89
CR5FS-1	557,651.32	1,538,675.04	4498.20
CR5FS-2	557,655.92	1,538,677.01	4498.25
CR5FS-3	557,659.26	1,538,686.79	4498.18
CR5FS-4	557,662.54	1,538,681.77	4498.14
CR5FS-5	557,663.44	1,538,689.52	4498.15
CR5FS-6	557,666.73	1,538,684.50	4498.11
CR5TBC-1	557,653.66	1,538,670.43	4498.14
CR5TBC-2	557,658.20	1,538,672.51	4498.19
CR5TBC-3	557,659.63	1,538,673.23	4498.21
CR5TBC-4	557,665.84	1,538,676.72	4497.83
CR5TBC-5	557,670.00	1,538,679.49	4497.87
CR5TBC-6	557,676.00	1,538,684.29	4498.17

LEGEND
FS = FINISHED SURFACE ELEV.
TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NOTES:

PROVIDE DETECTABLE WARNING DEVICES ON THE BOTTOM 2.0 FEET OF EACH RAMP AS SHOWN. SEE DTL. DWG. NO. 608-40 FOR DETECTABLE WARNING DEVICES DETAILS.

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SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & I-90 EB ON-RAMP CURB RAMP DETAILS

1" = 5'

SHEET NO. 11

CURB RAMP DESIGNS

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY
DOWL	DOWL	DOWL
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MONTANA Department of Transportation

ROAD PLANS

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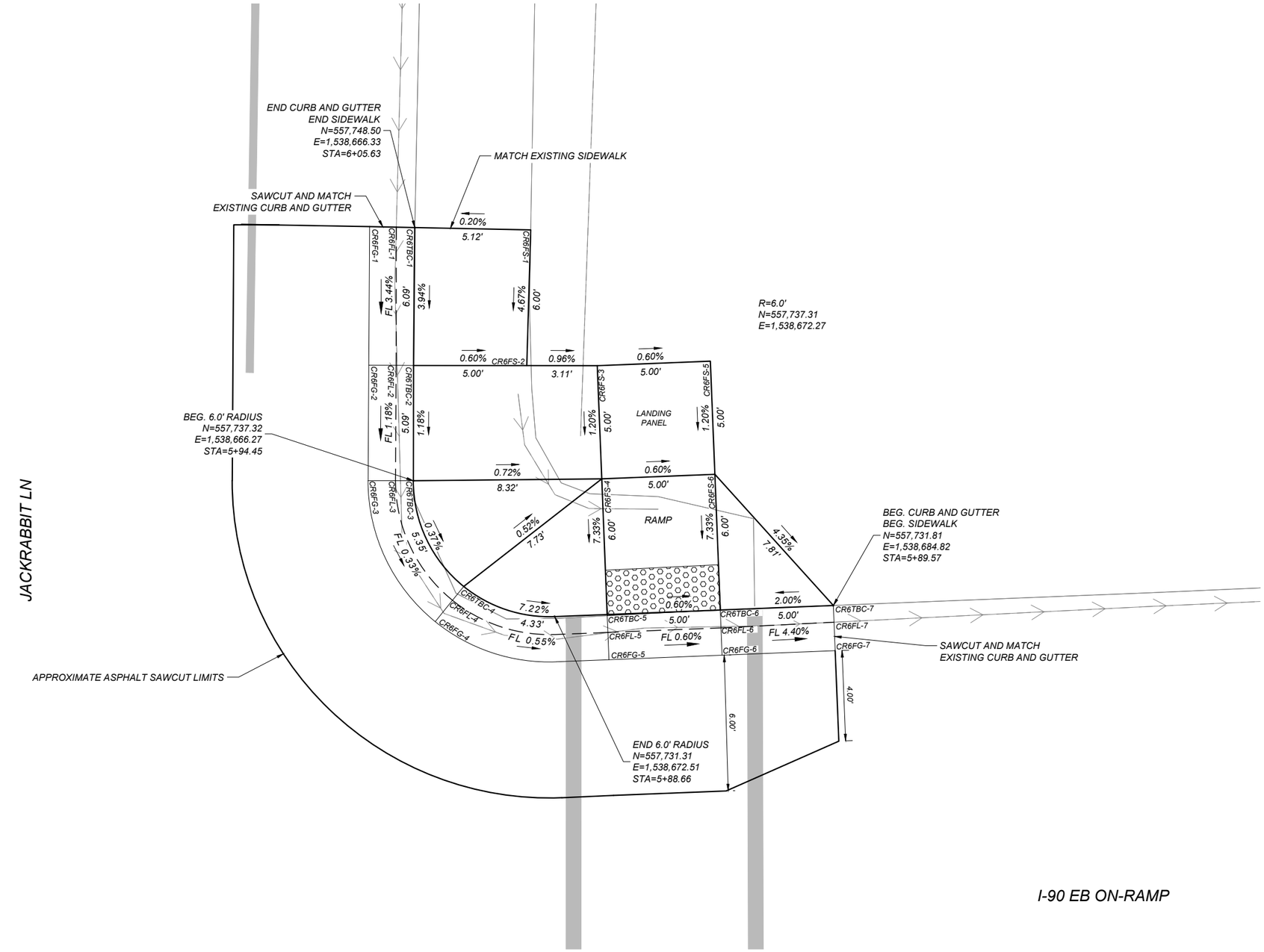
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DETAIL

INTERSECTION OF JACKRABBIT LN & I-90 EB ON-RAMP
NORTHEAST CORNER



POINT TABLE			
POINT	N OR Y	E OR X	ELEVATION
CR6FG-1	557,748.54	1,538,664.33	4499.89
CR6FG-2	557,742.42	1,538,664.30	4499.66
CR6FG-3	557,737.32	1,538,664.27	4499.60
CR6FG-4	557,731.09	1,538,667.23	4499.58
CR6FG-5	557,729.41	1,538,674.91	4499.46
CR6FG-6	557,729.61	1,538,679.90	4499.43
CR6FG-7	557,729.81	1,538,684.90	4499.21
CR6FL-1	557,748.52	1,538,665.51	4499.83
CR6FL-2	557,742.41	1,538,665.51	4499.62
CR6FL-3	557,737.32	1,538,665.48	4499.56
CR6FL-4	557,732.03	1,538,667.99	4499.54
CR6FL-5	557,730.62	1,538,674.86	4499.50
CR6FL-6	557,730.82	1,538,679.86	4499.47
CR6FL-7	557,731.07	1,538,684.85	4499.25
CR6FS-1	557,748.40	1,538,671.45	4500.37
CR6FS-2	557,742.40	1,538,671.28	4500.09
CR6FS-3	557,742.40	1,538,674.39	4500.06
CR6FS-4	557,737.40	1,538,674.59	4500.00
CR6FS-5	557,742.60	1,538,679.38	4500.03
CR6FS-6	557,737.60	1,538,679.58	4499.97
CR6TBC-1	557,748.50	1,538,666.33	4500.36
CR6TBC-2	557,742.41	1,538,666.28	4500.12
CR6TBC-3	557,737.32	1,538,666.27	4500.06
CR6TBC-4	557,732.65	1,538,668.49	4500.04
CR6TBC-5	557,731.41	1,538,674.83	4499.56
CR6TBC-6	557,731.61	1,538,679.82	4499.53
CR6TBC-7	557,731.81	1,538,684.82	4499.63

LEGEND
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TBC = TOP BACK OF CURB ELEV.
FL = FLOW LINE ELEV.
FG = FRONT OF GUTTER ELEV.

DETECTABLE WARNING DEVICES

NOTES:

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SEE DETAILED DRAWINGS FOR STANDARD SIDEWALK AND CURB & GUTTER DETAILS.

JACKRABBIT LN & I-90 EB ON-RAMP CURB RAMP DETAILS

1" = 5'

SHEET NO. 12

CURB RAMP DESIGNS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY	REVIEWED BY	CHECKED BY	
DOWL	DOWL	DOWL	9930001RDDETZ01.DWG

MONTANA Department of Transportation

ROAD PLANS

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SUMMARY
SIGNING & DELINEATION QUANTITIES

MATERIAL	TOTALS	UNIT
SIGNS-ALUM SHT INCR XI	73.0	SQFT
SIGNS-ALUM REFL SHEET XI	309.0	SQFT
REMOVE SIGN	13	EACH
REMOVE SIGN-GUIDE	5	EACH
POSTS-TUBULAR STEEL	254	LB
POSTS-STEEL U SIGN	40	LB
POSTS-STEEL STRUCTURAL SIGN	425	LB
POSTS-TUBULAR STEEL-SQ-PERF	306	LB
POLES-TREATED WOOD 4 IN	56	LNFT
POLES-TREATED WOOD 5 IN	18	LNFT
OVERHEAD STR/METAL-CANTILEVER	1	EACH
FRANG SIGN POST BKWY-S4 X 7.7	4	EACH
FRANG SIGN POST BKWY-3.5 IN RD	2	EACH
SQ TUBLR SLIP BASE BKWY-3 IN	2	EACH
DELINEATOR-FLEX SURF MTD YLW	10	EACH

DOWL

SHEET NO.
S1

SIGNING QUANTITIES

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY D. VERNON 01/2025
REVIEWED BY S. PATTERSON 01/2025
CHECKED BY A. MILES 01/2025

MONTANA
Department of Transportation

SIGNING PLANS

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SIGN LOCATION AND SPECIFICATION

LT	STATION / A.M.	RT	RAMP NO.	SIGN NO.	PANEL SIZE	SHTG TYPE BACK- GRND	SHTG TYPE LEGEND	FEET CLEARANCE	FEET SIGN SUPPORT SPACING	TYPE OF SUPPORT	CANTILEVER	FEET SUPPORT LENGTH (ESTIMATED)	FEET SUPPORT LENGTH (INSTALLED)	FEET MOUNTING HEIGHT	FEET FOUNDATION DEPTH	SIGN PANEL (SQ. FT.) SHEET ALUMINUM XI	SIGN PANEL (SQ. FT.) ALUM. SHEET INCREMENT XI	SIGN PANEL (SQ. FT.) ALUMINUM SHT OVERLAY	TIMBER POLE (LINEAR FT.) 4" TOP DIA.	TIMBER POLE (LINEAR FT.) 5" TOP DIA.	TIMBER POLE (LINEAR FT.) 6" 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
JACKRABBIT LN (FROM SOUTH TO NORTH)																																
	JRL-1	RT		R3-8	54" X 30"	XI		10'-0"	2'-9"	2.5" SQ. TUBE		X=12'-10" Y=13'-7"		7'-0"	3'-0"	11.3							129			▲					BBR	LEFT ONLY, STRAIGHT ONLY, STRAIGHT OR RIGHT
	0+22			M1-12	24" X 24"	XI		15'-0"		2.25"/2.5" SQ. TUBE		10'-8"		7'-0"	3'-0"	4.0										★	1				BBR	ROUTE MARKER 347
		RT		M1-1	24" X 24"	XI	XI									3.2							86									I-90
				M6-1	21" X 15"	XI										2.2																←
				M6-3A	21" X 15"	XI	XI									2.2																↑
	1+15			0HD3	72" X 24"	XI	XI									12.0																←ALASKA RD, AMSTERDAM RD→
LT				0HR3-5R	30" X 36"	XI										7.5											1					RIGHT ONLY
				0HR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				0HR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				0HR3-4	36" X 36"	XI	XI									9.0																NO U TURN
				0HR3-5L	30" X 36"	XI										7.5																LEFT ONLY
																																MOUNT ON SIGNAL MAST ARM
	1+32			G13-1	108" X 36"	XI	XI	15'-0"	5'-5"	S4X7.7		X=14'-4"		5'-0"	3'-6"		27.0							221		■					BBR	YELLOWSTONE NAT'L PARK→
		RT		D9-3A	24" X 24"	XI	XI					Y=14'-4"				4.0													1			CAMPER
				R5-047	24" X 24"	XI	XI									4.0																DOWNHILL SKIING
				M6-1A	21" X 15"	XI	XI									2.2																→
				D9-99C	24" X 6"	XI	XI									1.0																→
	1+45			0HD3	66" X 12"	XI	XI									5.5																JACKRABBIT LN
		RT		0HR3-6R	30" X 36"	XI										7.5												1				STRAIGHT OR RIGHT
				0HR3-5L	30" X 36"	XI										7.5																LEFT ONLY
																																MOUNT ON SIGNAL MAST ARM
	1+56			M1-12	24" X 24"	XI		5'-0"		3.5" DIA. PIPE		13'-7"		6'-0"	3'-0"	4.0										■						ROUTE MARKER 291
LT				M1-5	24" X 24"	XI										4.0						147					1				BBR	MONTANA ROUTE MARKER 85
				M6-1	21" X 15"	XI										2.2																←
				M6-1	21" X 15"	XI										2.2																→
				M1-1	24" X 24"	XI	XI									3.2																I-90
				M6-1A	21" X 15"	XI	XI									2.2																←
	2+41			0HD3	72" X 24"	XI	XI									12.0																←AMSTERDAM RD, ALASKA RD→
		RT		0HR3-6R	30" X 36"	XI										7.5												1				STRAIGHT OR RIGHT
				0HR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				0HR3-4	36" X 36"	XI	XI									9.0																NO U TURN
				0HR3-5L	30" X 36"	XI										7.5																LEFT ONLY
																																MOUNT ON SIGNAL MAST ARM
	2+49			0HD3	66" X 12"	XI	XI									5.5																JACKRABBIT LN
LT				0HR3-5R	30" X 36"	XI										7.5											1					RIGHT ONLY
				0HR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				0HR3-5L	30" X 36"	XI										7.5																LEFT ONLY
	2+94			M1-5	24" X 24"	XI		10'-0"		2.25"/2.5" SQ. TUBE		11'-7"		5'-0"	3'-0"	4.0										★	1				BBR	MONTANA ROUTE MARKER 85
LT				M1-12	24" X 24"	XI										4.0							91									ROUTE MARKER 347
				M6-3	21" X 15"	XI										2.2																↑
				M6-1	21" X 15"	XI										2.2																→
				R7-99R	REMOVE																											NO PARKING, STOPPING, OR...
				R7-1R	12" X 18"	XI	XI									1.5																NO PARKING ANY TIME →
	3+12			R2-1	36" X 48"	XI										12.0																SPEED LIMIT 35
		RT		R7-99L	REMOVE																							1			BBR	NO PARKING, STOPPING, OR...
				R7-1L	12" X 18"	XI	XI									1.5																NO PARKING ANY TIME ←
																																MOUNT ON LUMINAIRE POLE

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

■ FRANGIBLE SIGN POST BREAKAWAY DEVICE REQUIRED.

▲ SINGLE SQUARE TUBES (2 ½") REQUIRED.
MOUNTED IN HEAVY DUTY STUB.

★ TELESCOPED SQUARE TUBES (2 ½" & 2 ½") WITH SLIP BASE BREAKAWAY REQUIRED.
MOUNTED IN HEAVY DUTY STUB.

RSFO = REPLACE SIGN FACE ONLY

BBR = BACKBRACING REQUIRED

FY = FLUORESCENT YELLOW

DOWL

SHEET NO. S2

SIGN LOCATION & SPECIFICATION

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	01/2025
D. VERNON	
REVIEWED BY	01/2025
S. PATTERSON	
CHECKED BY	01/2025
A. MILES	

MONTANA Department of Transportation

SIGNING PLANS

2/4/2025 3:12 PM

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SIGN LOCATION AND SPECIFICATION

LT	STATION / A.M.	RT	RAMP NO.	SIGN NO.	PANEL SIZE	SHTG TYPE BACK- GRND	SHTG TYPE LEGEND	FEET CLEARANCE	FEET SIGN SUPPORT SPACING	TYPE OF SUPPORT	CANTILEVER	FEET SUPPORT LENGTH (ESTIMATED)	FEET SUPPORT LENGTH (INSTALLED)	FEET MOUNTING HEIGHT	FEET FOUNDATION DEPTH	SIGN PANEL (SQ. FT.) SHEET ALUMINUM XI	SIGN PANEL (SQ. FT.) ALUM. SHEET INCREMENT XI	SIGN PANEL (SQ. FT.) ALUMINUM SHT OVERLAY	TIMBER POLE (LINEAR FT.) 4" TOP DIA.	TIMBER POLE (LINEAR FT.) 5" TOP DIA.	TIMBER POLE (LINEAR FT.) 6" 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
	3+26			N7-1	36" X 48"	XI	XI	10'-0"		5" DIA.		17'-2"		7'-0"	3'-6"	12.0										X						ADOPT-A-HWY
LT				N7-1P	REUSE					POLE										18							1				BBR	BOY SCOUTS TROOP 649
	3+82			G10-1	84" X 48"	XI	XI	10'-0"	4'-3"	S4X7.7		X=12'-8" Y=13'-10"		7'-0"	3'-6"		28.0							204					1		BBR	↑ BUTTE, BILLINGS →
		RT																														
	4+17			OHR3-5R	30" X 36"	XI		10'-0"								7.5																RIGHT ONLY
LT				OHR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				OHR3-5	30" X 36"	XI										7.5																STRAIGHT ONLY
				OHR3-5L	30" X 36"	XI										7.5																LEFT ONLY
																																MOUNT ON 60' MAST ARM
	4+35			G8-1	108" X 24"	XI	XI										18.0												1		BBR	AMSTERDAM →
LT																																RSFO
	5+07			M3-4A	24" X 12"	XI	XI	7'-0"		3.5" DIA.		11'-9"		7'-0"	3'-0"	2.0										X						WEST
		RT		M3-2A	24" X 12"	XI	XI			PIPE						2.0						107					1				BBR	EAST
				M1-1	24" X 24"	XI	XI									3.2																I-90
				M1-1	24" X 24"	XI	XI									3.2																I-90
				M6-3A	21" X 15"	XI	XI									2.2																↑
				M6-1A	21" X 15"	XI	XI									2.2																→
NB JACKRABBIT LN I-90 EB ON-RAMP (FROM WEST TO EAST)																																
	5+56			D13-3	48" X 30"	XI	XI	10'-0"	2'-5"	4" DIA.		X=12'-2"		5'-0"	3'-0"	9.2													1		BBR	FREEWAY ENTRANCE
		RT								POLE		Y=12-10"							28												
	5+60			LA-1	24" X 12"	XI		10'-0"		2 LB/FT STL "U"		9'-8"		4'-0"	3'-0"	2.0									20		1					ENTERING CONTROLLED ACCESS HIGHWAY
		RT																														
SB JACKRABBIT LN I-90 EB ON-RAMP (FROM SOUTH TO NORTH)																																
	4+88			LA-1	24" X 12"	XI		10'-0"		2 LB/FT STL "U"		9'-8"		4'-0"	3'-0"	2.0									20		1					ENTERING CONTROLLED ACCESS HIGHWAY
LT																																
	5+00			D13-3	48" X 30"	XI	XI	10'-0"	2'-5"	4" DIA.		X=12'-2"		5'-0"	3'-0"	9.2													1		BBR	FREEWAY ENTRANCE
LT										POLE		Y=12-10"							28												
	5+20			W13-3	USE AS IS																										FY	RAMP 25 MPH
LT																																
AMSTERDAM RD (FROM EAST TO WEST)																																
	AMS-1			R3-8C	36" X 30"	XI										7.5											1					LEFT ONLY, STRAIGHT OR RIGHT, RSFO
LT																																
												ALL SHEET TOTALS				309.0	73.0		56	18		254	306	425	40		13		5			

DELINEATOR LEGEND

▲	DELINEATOR-FLEX SURF MTD-YELLOW	10

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

■ FRANGIBLE SIGN POST BREAKAWAY DEVICE REQUIRED.

▲ SINGLE SQUARE TUBES (2 ½") REQUIRED. MOUNTED IN HEAVY DUTY STUB.

★ TELESCOPED SQUARE TUBES (2 ½" & 2 ¼") WITH SLIP BASE BREAKAWAY REQUIRED. MOUNTED IN HEAVY DUTY STUB.

RSFO = REPLACE SIGN FACE ONLY

BBR = BACKBRACING REQUIRED

FY = FLUORESCENT YELLOW

SHEET NO. S3

SIGN LOCATION & SPECIFICATION

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY D. VERNON 01/2025
REVIEWED BY S. PATTERSON 01/2025
CHECKED BY A. MILES 01/2025

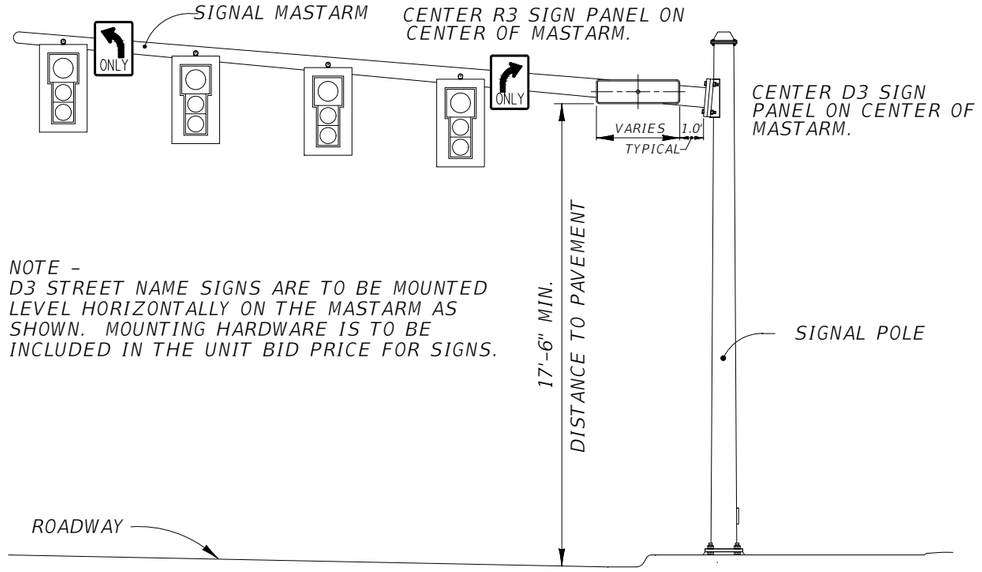
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MONTANA Department of Transportation

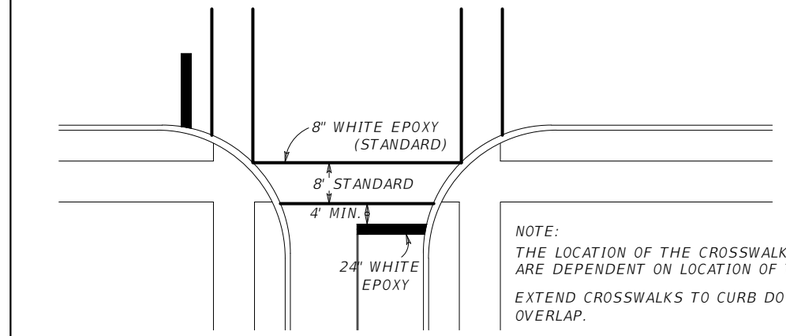
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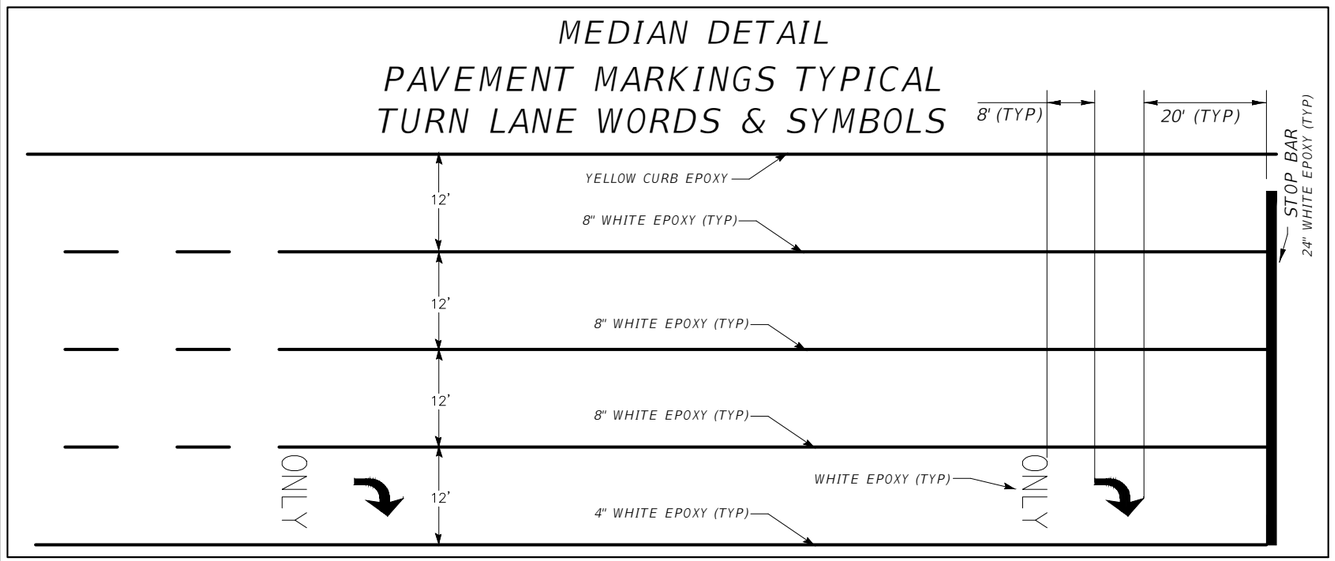
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D3 OVERHEAD SIGN DETAIL
NO SCALE

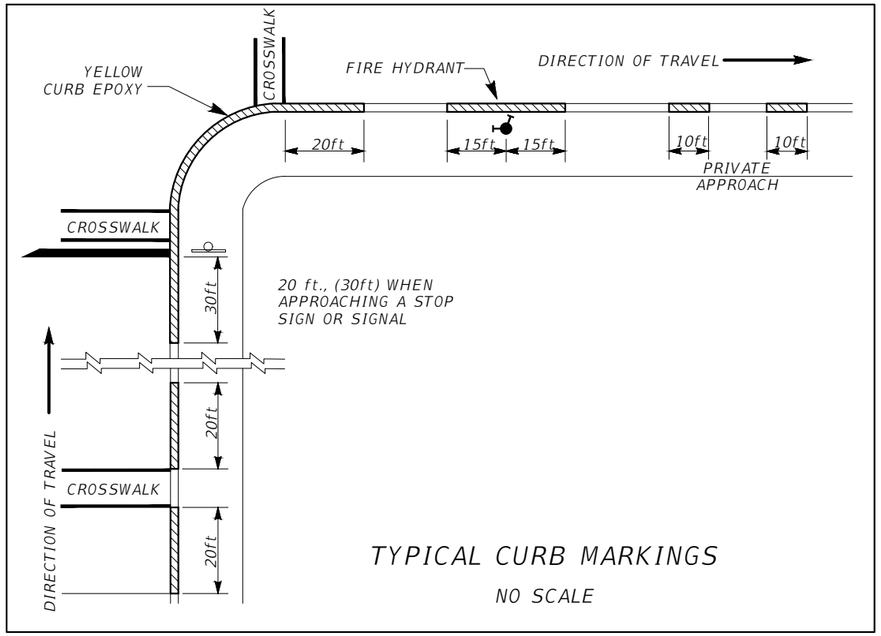


TYPICAL PAVEMENT MARKINGS
FOR PEDESTRIAN CROSSINGS



SEE DETAIL "FIGURE 19.4D, pg. 19.4(7) OF THE TRAFFIC ENGINEERING MANUAL FOR DETAILS OF INTERSECTIONS

NO SCALE



TYPICAL CURB MARKINGS
NO SCALE

SHEET NO.
S4

STANDARD SIGNING DETAILS

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

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MONTANA Department of Transportation

SIGNING PLANS

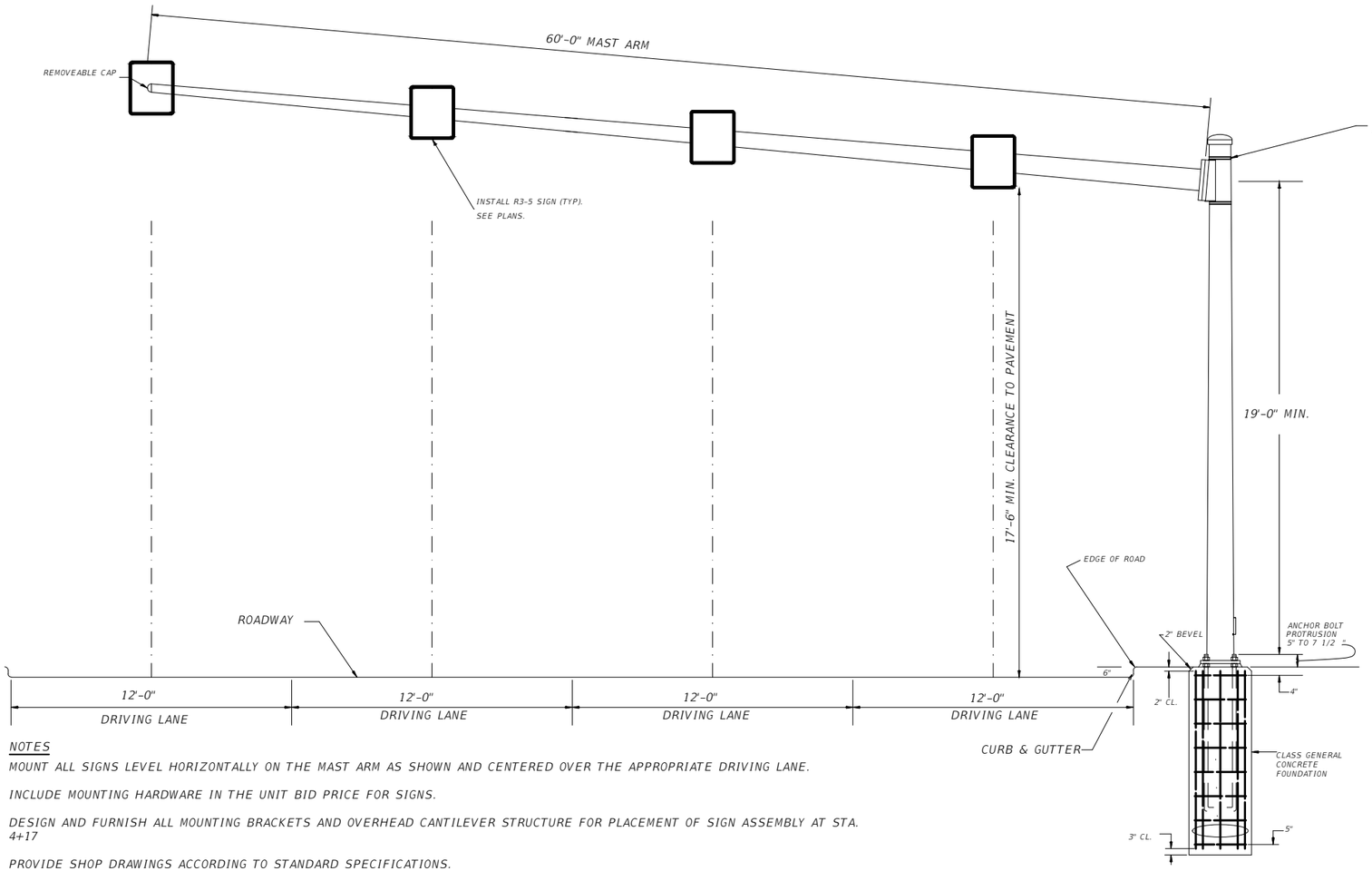
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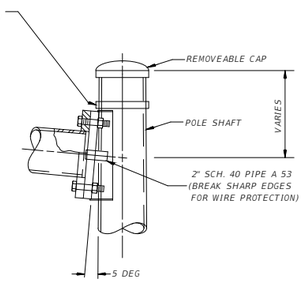
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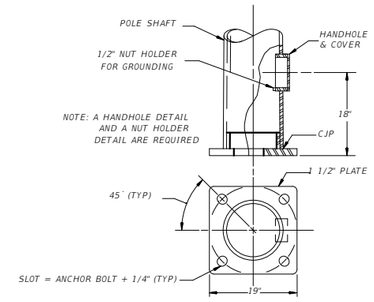
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OVERHEAD CANTILEVER STRUCTURE
(SIGN STRUCTURE IS FOR INFORMATION ONLY, CONTRACTOR TO DETERMINE FINAL DESIGN)

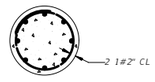




ARM CONNECTION



BASE DETAIL



TYPICAL FOUNDATION

NOTES

MOUNT ALL SIGNS LEVEL HORIZONTALLY ON THE MAST ARM AS SHOWN AND CENTERED OVER THE APPROPRIATE DRIVING LANE.

INCLUDE MOUNTING HARDWARE IN THE UNIT BID PRICE FOR SIGNS.

DESIGN AND FURNISH ALL MOUNTING BRACKETS AND OVERHEAD CANTILEVER STRUCTURE FOR PLACEMENT OF SIGN ASSEMBLY AT STA. 4+17

PROVIDE SHOP DRAWINGS ACCORDING TO STANDARD SPECIFICATIONS.

FABRICATE AND INSPECT STRUCTURE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE CURRENT AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, INCLUDING THE FATIGUE REQUIREMENTS IN SECTION 11 AND ANY AMENDMENTS THERETO.

UNLESS NOTED OTHERWISE, ALL MAJOR COMPONENTS ARE TO BE WELDED, BOLTED USING HIGH STRENGTH BOLTS, OR A COMBINATION OF BOTH.

ALL TUBE-TO-TRANSVERSE PLATE CONNECTIONS ARE TO BE CJP WELDS PER DETAIL 4.4 IN TABLE 11.9.3.1-1 OF THE SPECIFICATIONS.

UNLESS NOTED OTHERWISE, THE BID ITEM INCLUDES DESIGNING AND FURNISHING THE FOUNDATION AND OBTAINING THE BORING LOG.

WELDING INSPECTION REQUIREMENTS:

WELDS ARE TO BE INSPECTED PER STANDARD SPECIFICATION 703.04.4.

25% OF ALL PARTIAL PENETRATION WELDS AND FILLET WELDS, PER PIECE, REQUIRE MAGNETIC-PARTICLE TESTING PER AWS D1.1

100% OF ALL FULL PENETRATION GROOVE WELDS, INCLUDING PLATE CONNECTION WELDS, REQUIRE MAGNETIC-PARTICLE TESTING PER AWS D1.1.

WELDING PROCEDURES, SYMBOLS, BASE METAL SPECIFICATIONS & GRADES MUST BE CALLED OUT PRIOR TO FABRICATION OR APPROVAL.

GALVANIZE POLES AND ARMS TO ASTM DESIGNATION : A123

GALVANIZE ACCESSORIES TO ASTM DESIGNATION : A153

PROVIDE PERMANENT GRADE IDENTIFICATION ON THE EXPOSED END OF ALL ANCHOR BOLTS IN ACCORDANCE WITH ASTM F 1554 S3

DOWL

SHEET NO.
S5

STANDARD SIGNING DETAILS

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)/02(102)
UPN 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

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MONTANA Department of Transportation

SIGNING PLANS

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40 0 40 80
SCALE IN FEET

ALASKA RD
AMSTERDAM RD

REPLACE
R3-8C
AMS-1

REPLACE
M1-12
M1-5
M6-1
M6-1
M1-1
M6-1A
Sta. 1+56

REPLACE
OHD3
NEW
OHR3-5R
OHR3-5
OHR3-5L
Sta. 2+49

JACKRABBIT LN

REPLACE
M1-5
M1-12
M6-3
M6-1
REMOVE
R7-99R
NEW
R7-1R
Sta. 2+94

REPLACE
OHD3
OHR3-4
NEW
OHR3-5R
OHR3-5
OHR3-5
OHR3-5L
Sta. 1+15

0+00
1+00
2+00
3+00

AMSTERDAM RD.

ADOPT A HIGHWAY
KEEP IT GREEN
KEEP IT CLEAN
BOY SCOUTS TROOP #648

REPLACE
N7-1
REUSE
N7-1P
Sta. 3+26

JACKRABBIT LN.

100'

NEW
R3-8
JRL-1

REPLACE
M1-12
M1-1
M6-1
M6-3A
Sta. 0+22

REPLACE
G13-1
D9-3A
RS-047
M6-1A
D9-99C
Sta. 1+32

Yellowstone Nat'l Park

JACKRABBIT LN

REPLACE
OHD3
NEW
OHR3-6R
OHR3-5L
Sta. 1+45

EAST LEG
SIGNING TO BE
REPLACED BY
WEST POST
DEVELOPMENT

EAST LEG
SIGNING TO BE
REPLACED BY
WEST POST
DEVELOPMENT

ALASKA FRONTAGE RD.

AMSTERDAM RD
ALASKA RD

REPLACE
OHD3
OHR3-4
NEW
OHR3-5L
OHR3-5
OHR3-6R
Sta. 2+41

REPLACE
R2-1
REMOVE
R7-99L
NEW
R7-1R
Sta. 3+12

▲ YELLOW FLEXIBLE SURFACE MOUNT DELINEATOR

NOTE: EAST LEG PAVEMENT MARKING PLANS TO
BE PREPARED BY DEVELOPER

SHEET NO.
S6

SIGNING PLAN

PROJECT NAME JACKRABBIT-AMSTERDAM RD INT
COUNTY GALLATIN COUNTY
PROJECT ID NH-CR 0602(102)
UPN 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

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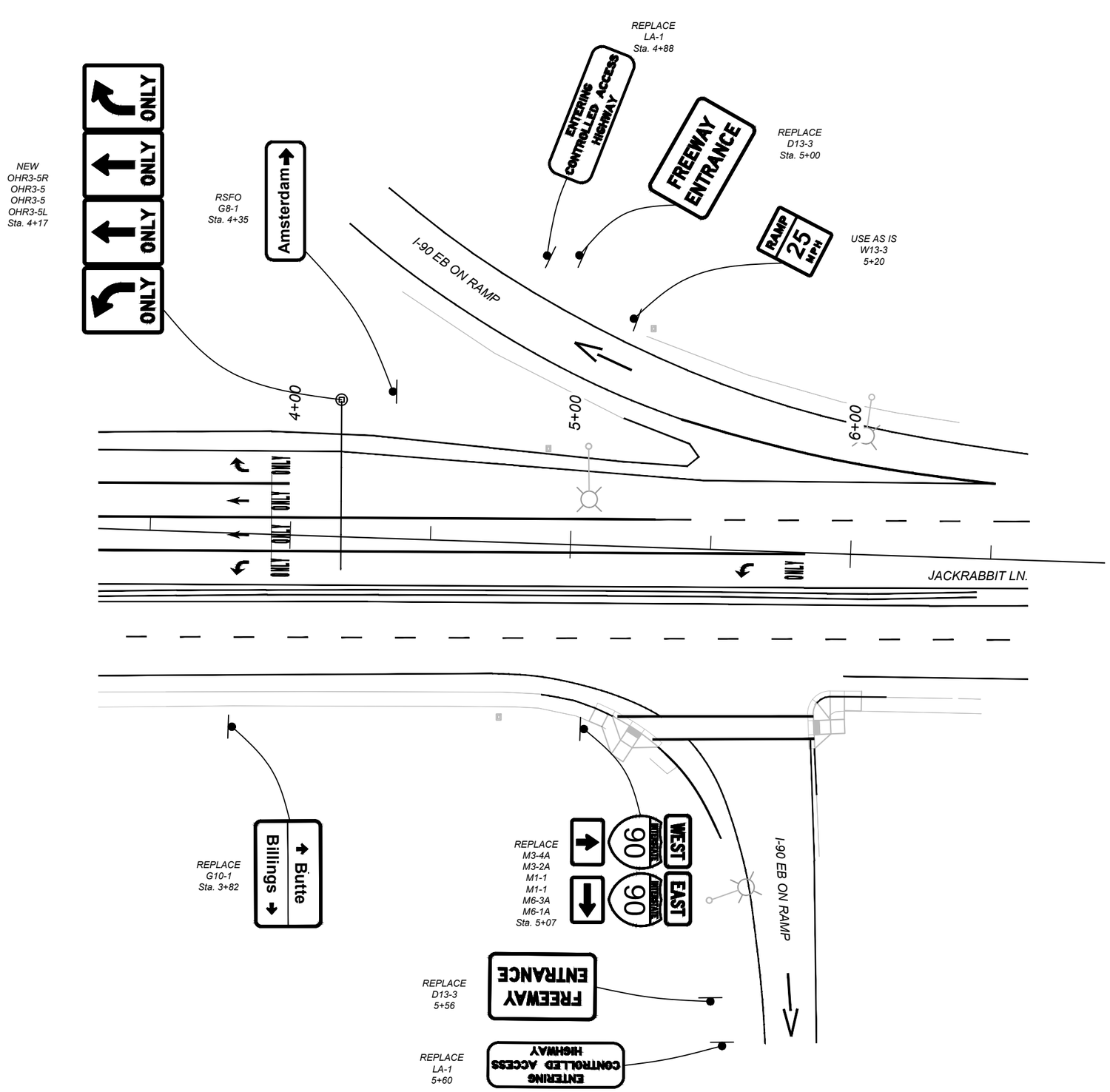
MONTANA
Department of Transportation

SIGNING PLANS

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DOWL

SHEET NO.
S7

SIGNING PLAN

PROJECT NAME
JACKRABBIT-AMSTERDAM RD INT

COUNTY
GALLATIN COUNTY

PROJECT ID
NH-CR 0602(102)

UPN
9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

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MONTANA
Department of Transportation

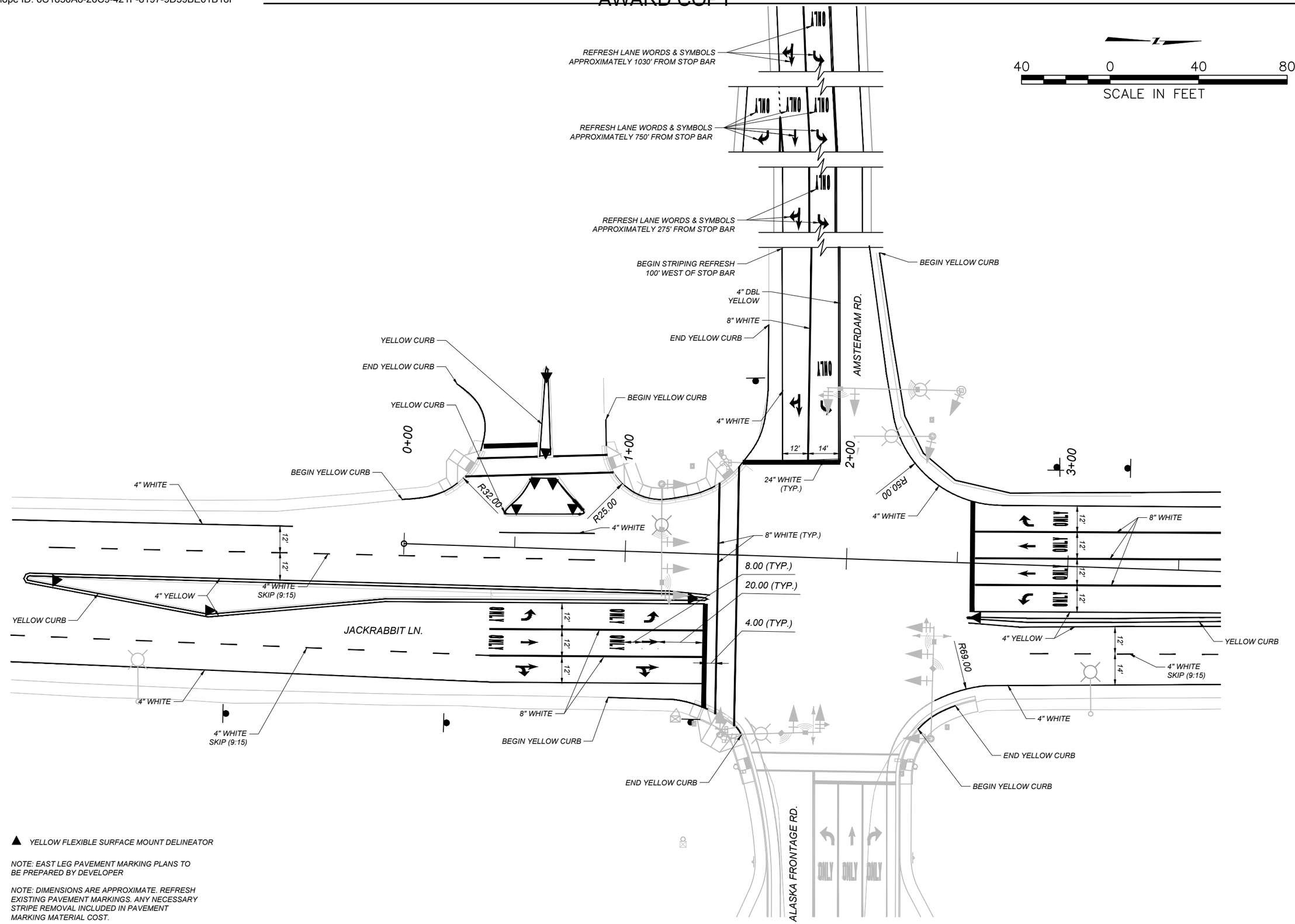
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DOWL



▲ YELLOW FLEXIBLE SURFACE MOUNT DELINEATOR

NOTE: EAST LEG PAVEMENT MARKING PLANS TO BE PREPARED BY DEVELOPER

NOTE: DIMENSIONS ARE APPROXIMATE. REFRESH EXISTING PAVEMENT MARKINGS. ANY NECESSARY STRIPE REMOVAL INCLUDED IN PAVEMENT MARKING MATERIAL COST.

SHEET NO. S8

STRIPING PLAN

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

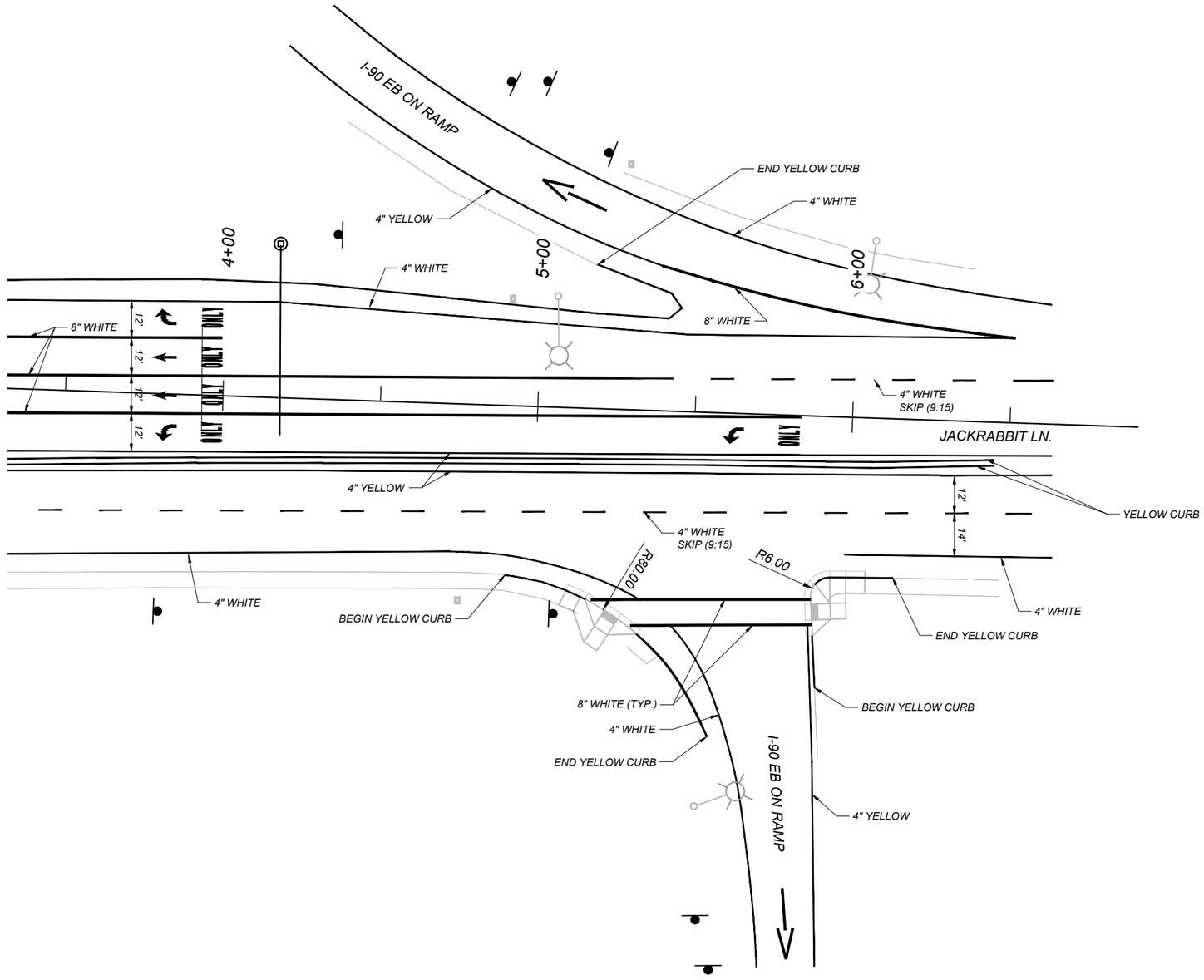
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MONTANA Department of Transportation

SIGNING PLANS

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NOTE: DIMENSIONS ARE APPROXIMATE. REFRESH EXISTING PAVEMENT MARKINGS. ANY NECESSARY STRIPE REMOVAL INCLUDED IN PAVEMENT MARKING MATERIAL COST.

DOWL

SHEET NO.
S9

STRIPING PLAN

PROJECT NAME
JACKRABBIT-AMSTERDAM RD INT

COUNTY
GALLATIN COUNTY

PROJECT ID
NH-CR 0602(102)

UPN
9930001

DESIGNED BY		REVIEWED BY		CHECKED BY	
D. VERNON	01/2025	S. PATTERSON	01/2025	A. MILES	01/2025

MONTANA
Department of Transportation

SIGNING PLANS

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ELECTRICAL QUANTITY SUMMARY

	ITEM NO.	MATERIAL	TOTAL	UNIT
	616 343 920	CONDUIT - PLASTIC 2 IN	162	LNFT
	616 343 930	CONDUIT - PLASTIC 3 IN	52	LNFT
	616 783 008	PULL BOX - COMPOSITE TYPE 3	5	EACH
	617 000 000	FOUNDATION - CONCRETE	7	CUYD
	617 033 314	CABLE - COPPER 5AWG14 - 600V	836	LNFT
	617 033 714	CABLE - COPPER 15AWG14 - 600V	618	LNFT
	617 123 104	CONDUCTOR - COPPER AWG4 - 600V	96	LNFT
	617 123 106	CONDUCTOR - COPPER AWG6 - 600V	195	LNFT
	617 123 110	CONDUCTOR - COPPER AWG10 - 600V	109	LNFT
	617 233 100	CONTROLLER-CAB PED-MODIFY	1	EACH
	617 303 300	HIGH EFFICACY LUMINAIRE LED	2	EACH
	617 503 130	SIG-TRAF 3 COL-1 WAY 12-12-12	2	EACH
	617 513 125	SIG-TRAF 4 COL-1 WAY 12-12-12-12	4	EACH
	617 553 000	SIG-TRAF-BACKPLATE-REFLECTIVE	8	EACH
	617 553 020	SIG-PEDESTRIAN TYPE 2	4	EACH
*	617 605 040	INSTALL CONTLR/TRAF-ACTUATOR	1	EACH
	617 673 100	SIG STANDARD TYPE 1-100	3	EACH
	617 713 100	SIG STANDARD TYPE 3-A-900-0	1	EACH
	617 725 601	SIG STANDARD MODIFY	1	EACH
	617 763 500	DETECTOR-RADAR/PRESENCE	4	EACH
	617 763 510	DETECTOR-RADAR/ADVANCE	4	EACH
	617 781 000	REMOVE AND SALVAGE MISC ELECTRICAL	1	LS
	617 903 255	PUSH BUTTON - PEDESTRIAN - TACTILE	4	EACH
	617 903 600	BROADBAND RADIO	1	EACH

* - INDICATES STATE FURNISHED MATERIAL

DOWL

SHEET NO.
E1

ELECTRICAL QUANTITIES

PROJECT NAME
JACKRABBIT-AMSTERDAM RD INT

COUNTY
GALLATIN COUNTY

PROJECT ID
NH-CR 0602(102)

UPN
9930001

DESIGNED BY		REVIEWED BY		CHECKED BY	
D. VERNON	01/2025	S. PATTERSON	01/2025	A. MILES	01/2025

MONTANA
Department of Transportation

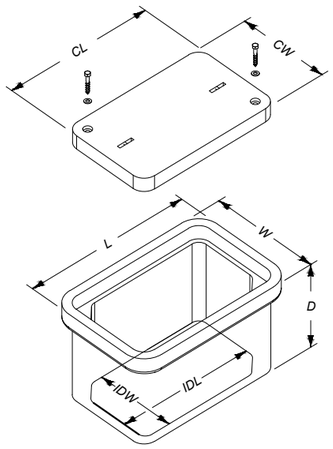
ELECTRICAL PLANS

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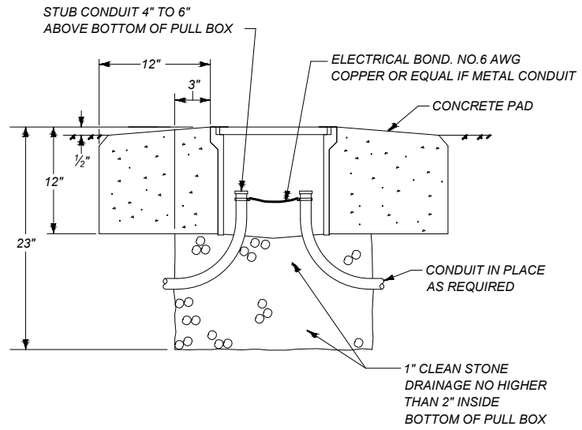
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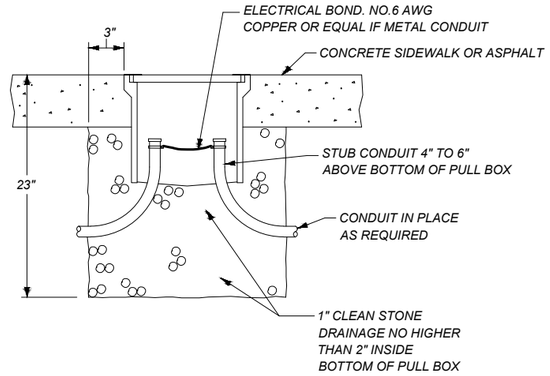
AWARD COPY



PULL BOX - COMPOSITE MINIMUM DIMENSIONS								
TYPE 1			TYPE 2			TYPE 3		
L	=	20"	L	=	25"	L	=	32"
W	=	13"	W	=	15"	W	=	19"
D	=	12"	D	=	12"	D	=	12"
I D L	=	17"	I D L	=	21"	I D L	=	28"
I D W	=	10"	I D W	=	11"	I D W	=	15"
C L	=	18"	C L	=	23"	C L	=	30"
C W	=	11"	C W	=	13"	C W	=	17"



PULL BOX INSTALLED IN DIRT



PULL BOX INSTALLED IN A SIDEWALK OR ASPHALT

PULL BOX-COMPOSITE

TYPE 1,2 & 3

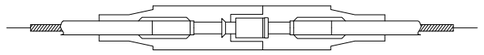
NO SCALE

PB2

REVISED: 15-APR-2014

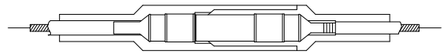
WATERTIGHT CONNECTORS

TYPES 1, 6, 11 & 16



NON-FUSED BREAKAWAY

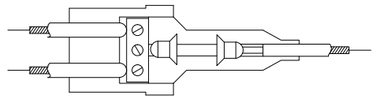
TYPES 2, 7, 12 & 17



FUSED BREAKAWAY

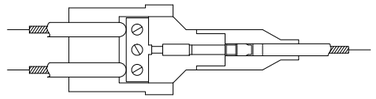
IDENTITY NO.	DESCRIPTIVE SYMBOL & WIRE SIZES
1	8 — 8
2	8 — 10
3	8, 8 — 10
4	8, 8 — 8
5	8, 8 — 8
6	6 — 6
7	6 — 10
8	6, 6 — 10
9	6, 6 — 6
10	6, 6 — 6
11	4 — 4
12	4 — 10
13	4, 4 — 10
14	4, 4 — 4
15	4, 4 — 4
16	10 — 10
17	10 — 10
18	10, 10 — 10
19	10, 10 — 10
20	10, 10 — 10
21	VARIES — VARIES

TYPES 3, 8, 13 & 18



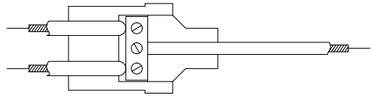
FUSED BREAKAWAY

TYPES 4, 9, 14 & 19



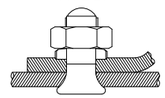
NON-FUSED BREAKAWAY

TYPES 5, 10, 15 & 20



NON-FUSED NON-BREAKAWAY

TYPE 21



COPPER SPLIT BOLT -
MAKE WATERTIGHT USING
SELF ADHERING MASTIC

PROVIDE A PLUG AND RECEPTACLE HOUSED IN WATER-RESISTANT, SYNTHETIC RUBBER CAPABLE OF BURIAL IN THE GROUND OR INSTALLATION IN SUNLIGHT. THE HOUSING, CONSISTING OF 2 SECTIONS, PROVIDES A WATERTIGHT SEAL AROUND THE CABLE AND A WATERTIGHT SEAL BETWEEN THE TWO SECTIONS AT THE POINT OF DISCONNECTION. SUPPLY EACH KIT WITH SUFFICIENT SILICONE COMPOUND TO LUBRICATE METAL PARTS AND THE RUBBER HOUSINGS FOR EASY ASSEMBLY.

WHERE INDICATED, CRIMP A COPPER PIN AND A COPPER RECEPTACLE TO THE CABLE. THE RECEPTACLE IS TO ESTABLISH CONTACT PRESSURE WITH THE PIN THROUGH THE USE OF A COPPER BERYLLIUM SPRING AND BE EQUIPPED WITH A DISPOSABLE MOUNTING PIN. THE PIN IS TO BE CONSTRUCTED OF AT LEAST HALF-HARD MATERIAL. THE CRIMPING PORTION IS TO BE FULLY ANNEALED WHILE THE REST OF THE PIN IS MAINTAINED IN ITS ORIGINAL STATE OF HARDNESS. THE RECEPTACLE IS TO BE FULLY ANNEALED. THE PIN AND RECEPTACLE ARE TO LOCK TOGETHER SO THE CONNECTION IS MAINTAINED WHEN A MINIMUM FORCE OF 20 POUNDS TENSION IS APPLIED TO THE ATTACHED CABLES.

PROVIDE FUSED CONNECTOR KITS CONTAINING A PAIR OF SPRING LOADED 90% CONDUCTIVITY CONTACTS FOR GRIPPING A STANDARD MIDGET FERRULE TYPE FUSE. THE CONTACTS MUST BE FULLY ANNEALED AND ADAPTED TO BE CRIMPED TO THE CABLE.

WATERTIGHT CONNECTORS

NO SCALE

SHEET NO.
E2

ELECTRICAL DETAILS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY: D. VERNON 01/2025
REVIEWED BY: S. PATTERSON 01/2025
CHECKED BY: A. MILES 01/2025

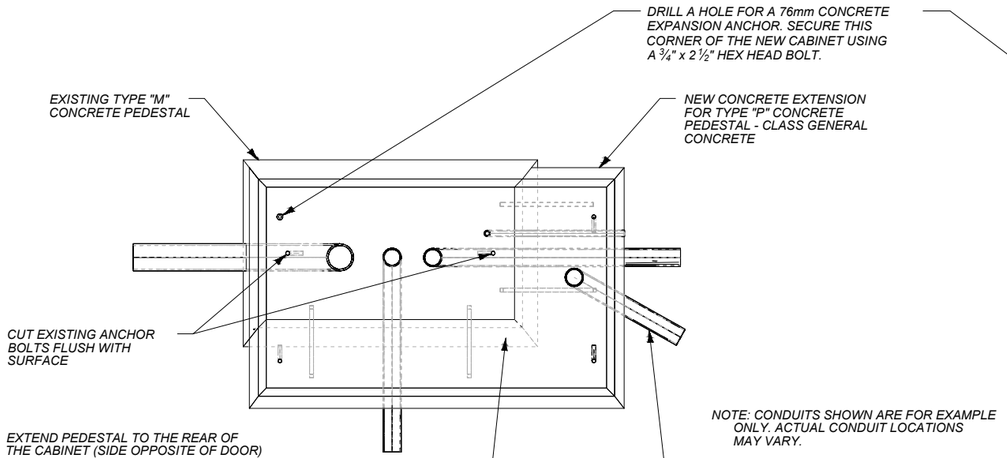
9930001ELDET01.DWG

MONTANA Department of Transportation

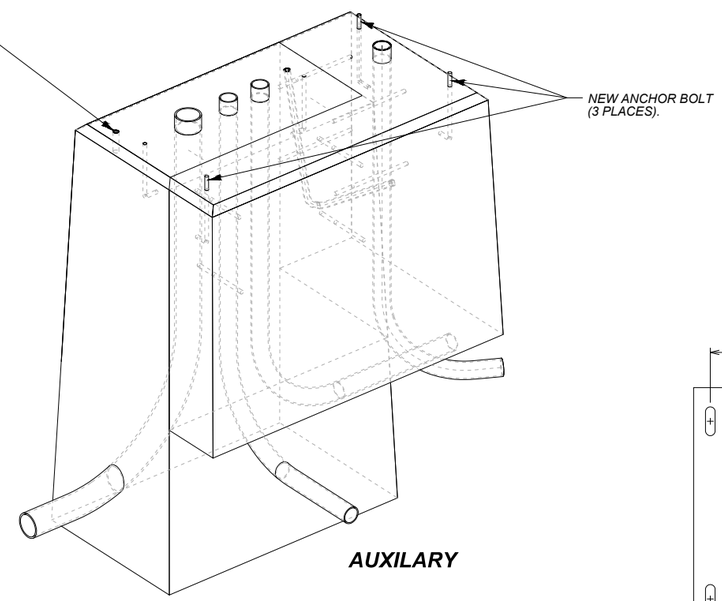
ELECTRICAL PLANS

2/4/2025 3:31 PM

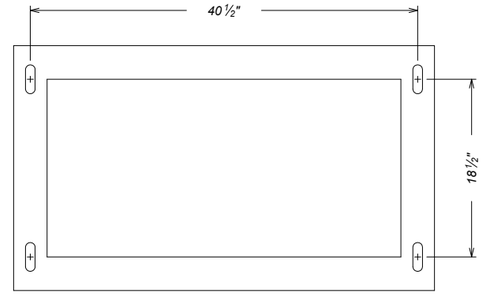
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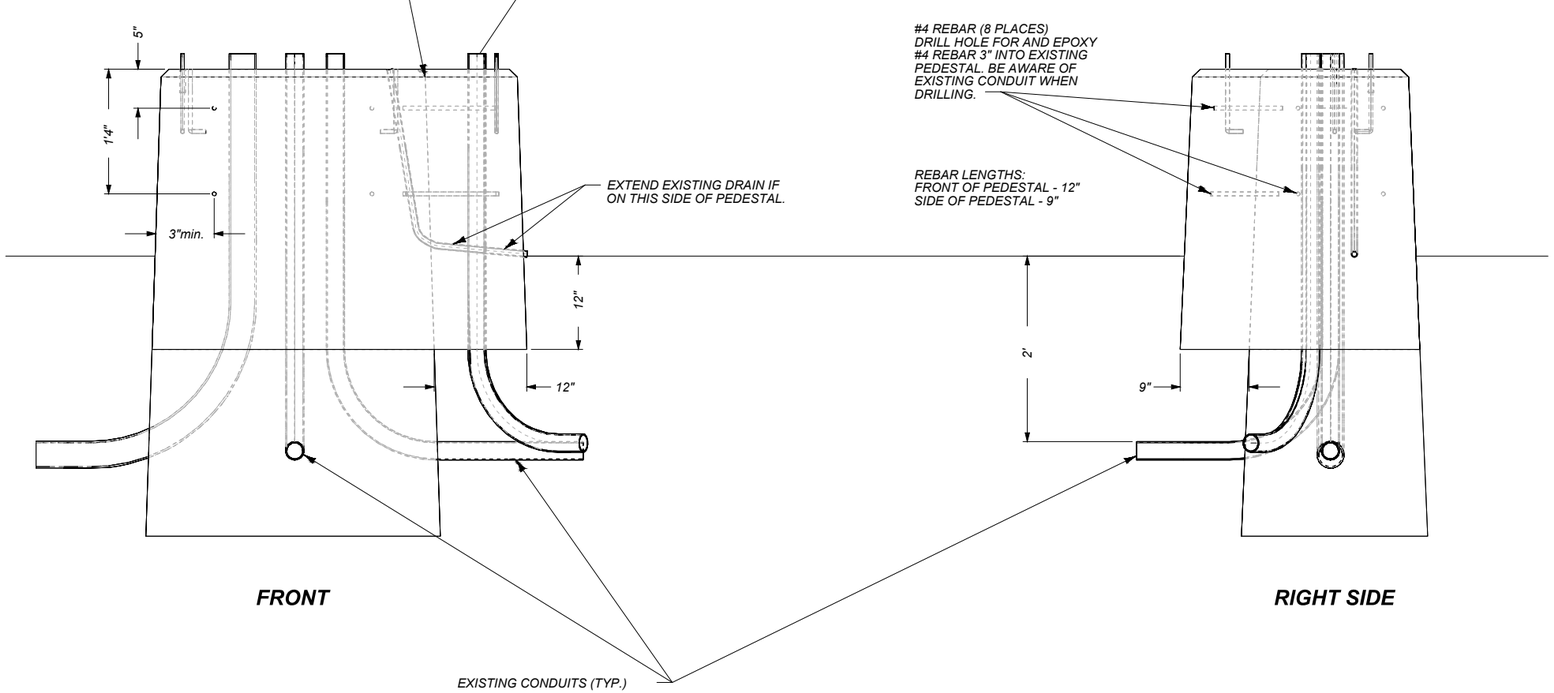
TOP



AUXILARY



ANCHOR BOLT PATTERN
FOR TYPE "P" CABINET
(VERIFY BEFORE PLACING ANCHOR BOLTS)



FRONT **RIGHT SIDE**

TYPE "M" TO TYPE "P"
CONTROLLER CABINET PEDESTAL
CONVERSION
NO SCALE

MTOP
REVISED 22-FEB-2000

SHEET NO.
E3

ELECTRICAL DETAILS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9933001

DESIGNED BY	REVIEWED BY	CHECKED BY
D. VERNON 01/2025	S. PATTERSON 01/2025	A. MILES 01/2025

9933001ELDETZ01.DWG

MONTANA Department of Transportation

ELECTRICAL PLANS

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DOWL

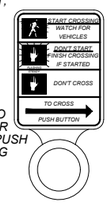
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AWARD COPY

ARROW TO BE LEFT OR RIGHT, OR BOTH AS REQUIRED.

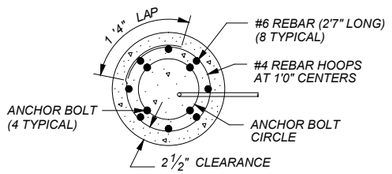
5" x 7 3/4" ALUMINUM SIGN, BLACK LETTERS ON WHITE BACKGROUND.

BACK OF CASTING SHAPED TO FIT CURVATURE OF POST. FOR MOUNTING ON PEDESTRIAN PUSH BUTTON POST, FORM CASTING TO FIT TOP OF POST.

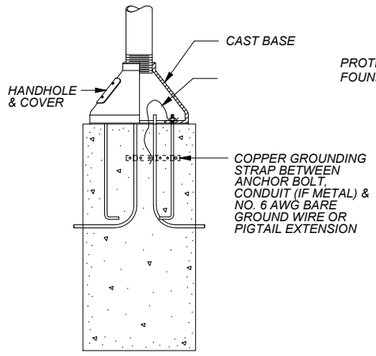


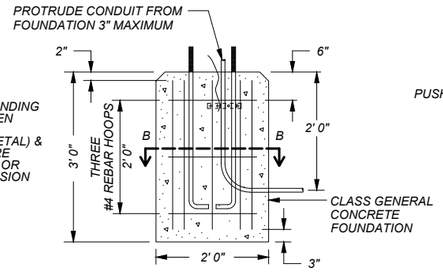
PEDESTRIAN PUSH BUTTON

USE GRADE 60 REINFORCING STEEL

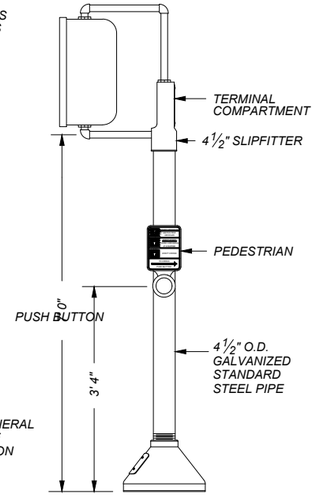


SECTION B-B





TYPE I-I00



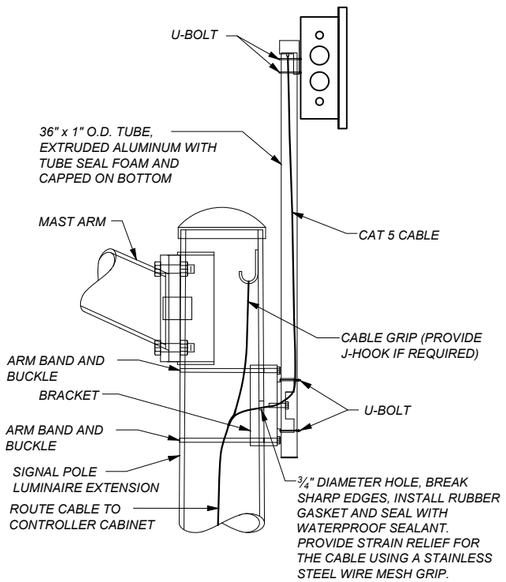
TYPE I-I00

TYPICAL OF FOUNDATIONS

TYPE I-100 SIGNAL STANDARDS, FOUNDATION DETAILS, AND PEDESTRIAN PUSH BUTTONS

NO SCALE

FLAT PANEL BROADBAND RADIO



INTERCONNECT ANTENNA MOUNTING TYPE 3-A SIGNAL POLE

BROADBAND RADIO MOUNTING

NO SCALE

RAD

REVISED 12-SEPT-2024

SHEET NO.

E4

ELECTRICAL DETAILS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT

COUNTY: GALLATIN COUNTY

PROJECT ID: NH-CR 0602(102)

UPN: 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

9930001ELDETZ01.DWG

MONTANA Department of Transportation

ELECTRICAL PLANS

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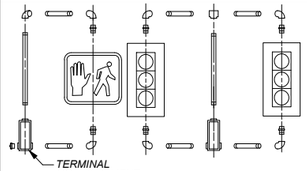
AWARD COPY

TABLE 1		POLE SHAFT						SIGNAL ARM					FOUNDATION			
	(A)	(B)	(C)	(D)	MIN. BASE DIA.	MIN. WALL THICK.	ANCHOR BOLTS	(E)	(F)	(G)	(H)	(J)	(K)	(L)	(M)	(N)
TYPE (A) LOWER SHAFT	15', 20', 25', 30', 35', 40'	19" SQ.	19"	2"	13½"	5/16"	1¼" x 48"	22" SQ.	23"	1½" - 6 UNC - 6" A325	2"	2"	12	12' 0"	11' 6"	3' 0"
TYPE (B) LOWER SHAFT	45', 50', 55', 60'	21" SQ.	21"	2"	15"	5/16"	2" x 48"	24" SQ.	25"	1½" - 6 UNC - 6" A325	2"	2"	12	12' 0"	11' 6"	4' 0"

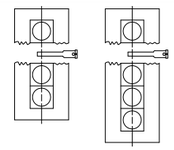
TABLE 2	MOUNTING POINTS							
	*1 SIGNAL	*2 EMERG. VEHICLE DETECTOR	*3 - *3C SIGN PANEL	*1A - *1C SIGNAL	*7 LUMINAIRE	*8 SIGNALS	*9 PED. SIGNAL	*10 CONTROLLER CAB.
DESIGN AREA	12.0 SQ.FT.	NIL	8.0 SQ.FT.	9.0 SQ.FT.	3.3 SQ.FT.	9.0 SQ.FT.	3.0 SQ.FT.	4.72 SQ.FT.
DESIGN WEIGHT	135 LB.	NIL	100 LB.	105 LB.	77 LB.	210 LB.	80 LB.	200 LB.

TABLE 3	(A)			
	15'	20' & 25'	30', 35', 40' & 45'	50', 55' & 60'
MTG.PTS.	*1, *2, *3	*1, *1A, *2, *3, *3A	*1, *1A, *1B, *2, *3, *3A, *3B	*1, *1A, *1B, *1C, *2, *3, *3A, *3B, *3C

TYPICAL SIGNAL MOUNTINGS

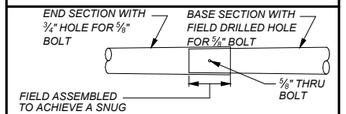


USE PIPE BRACKETS TO MOUNT TRAFFIC AND PEDESTRIAN SIGNALS TO THE POLE SHAFT UNLESS OTHERWISE SHOWN ON THE PLANS.



CONNECT SIGNALS TO MAST ARMS USING ELEVATOR PLUMBIZERS BETWEEN THE TOP AND SECOND SIGNAL DISPLAY.

SIGNAL ARM SLIP JOINT



SPAN	BASE SECTION LENGTH	END SECTION LENGTH
55'	12.60'	45.00'
60'	12.60'	50.00'

NOTES

DESIGN STANDARDS IN ACCORDANCE WITH THE 2015 AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (AND ANY AMENDMENTS THERETO).

DESIGN PARAMETERS

DESIGN WIND VELOCITY 700 YEAR MRI BASIC WIND SPEED

FATIGUE CATEGORY 2

HEIGHT AND EXPOSURE FACTOR Kz
z = 16 FEET
α = 9.5
zg = TAKEN AS 900 FEET FOR EXPOSURE C

DIRECTIONAL FACTOR Kd = 0.95, GUST FACTOR = 1.14 DRAG COEFFICIENTS LFRD TABLE 3.8.7-1

NO ICE LOADS OR GALLOPING

DESIGN AREA = AREA WITH MAXIMUM WIND LOAD (WIND IS PERPENDICULAR TO STANDARD, AS SHOWN).

DESIGN WEIGHT = DEAD LOAD.

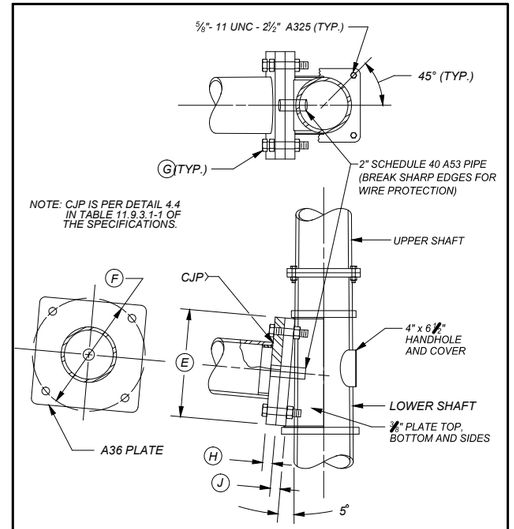
DESIGN ALL TYPE (A) LOWER SHAFTS FOR (A) = 40' AND A MOUNTING HEIGHT OF 45'.

DESIGN ALL TYPE (B) LOWER SHAFTS FOR (A) = 60' AND A MOUNTING HEIGHT OF 45'.

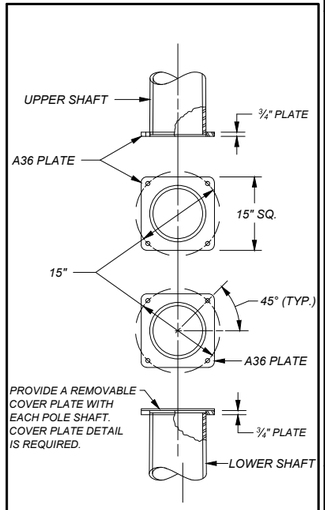
PROVIDE ANCHOR BOLTS CONFORMING TO ASTM F1554 GRADE 55 OR EQUAL. GALVANIZE AND THREAD THE TOP END (12" MIN.).

CALL OUT WELDING PROCEDURES, SYMBOLS, BASE METAL SPECIFICATIONS AND GRADES PRIOR TO FABRICATION OR APPROVAL.

GALVANIZE POLE SHAFTS, ARMS, AND ACCESSORIES PER ASTM A123. GALVANIZE HARDWARE PER ASTM F2329.

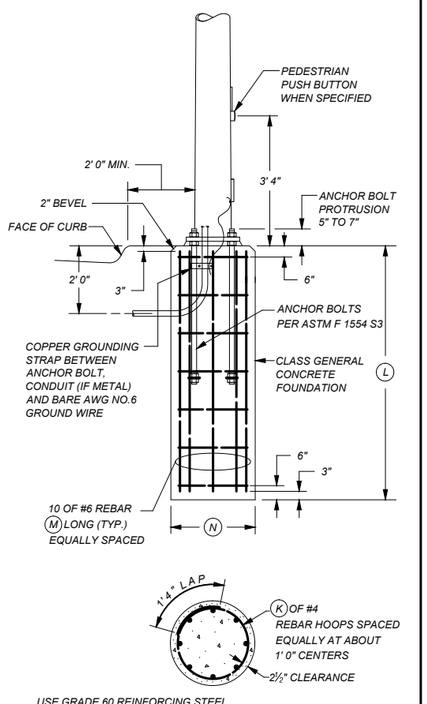


DETAIL 1 | SIGNAL ARM CONNECTION



DETAIL 2 | SHAFT TO SHAFT

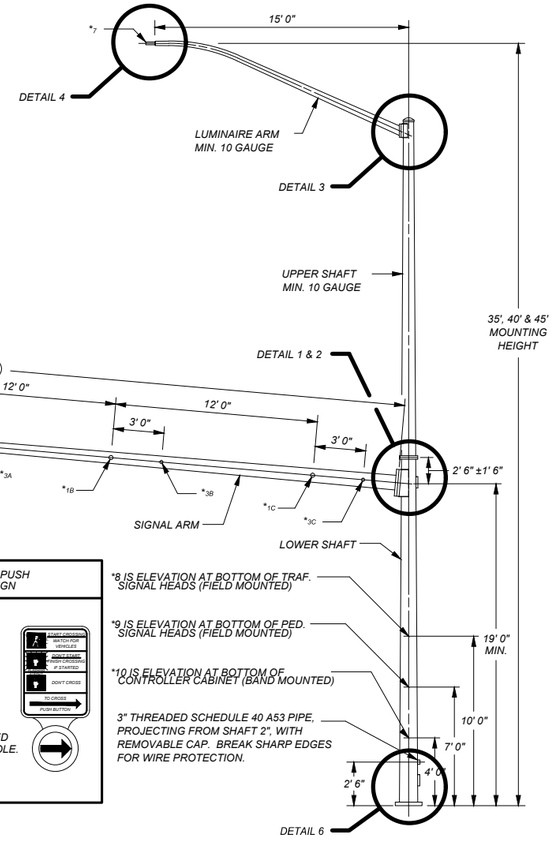
TYPICAL FOUNDATION



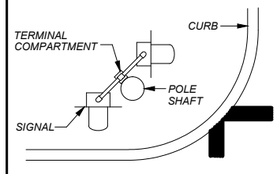
USE GRADE 60 REINFORCING STEEL

SIGNAL STANDARD TYPE





TYPICAL ORIENTATION FOR PIPE BRACKET MOUNTED SIGNALS

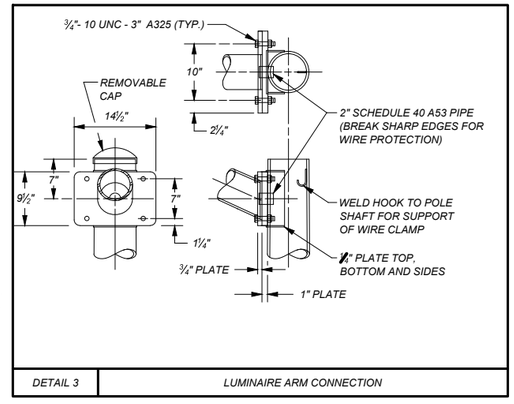


PEDESTRIAN PUSH BUTTON SIGN

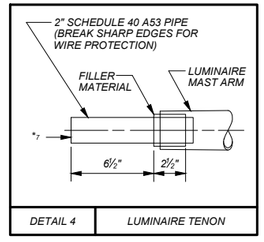
ARROW TO BE LEFT OR RIGHT, OR BOTH AS REQUIRED.

5" x 7" ALUMINUM SIGN, BLACK LETTERS ON WHITE BACKGROUND.

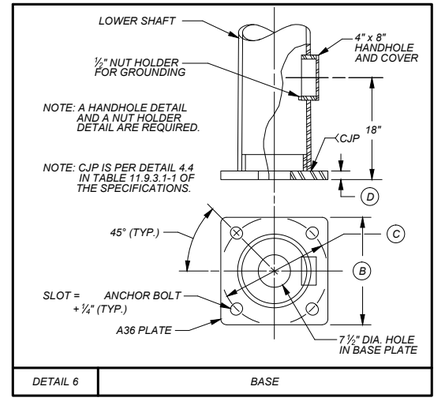
BACK OF CASTING SHAPED TO FIT CURVATURE OF POLE.



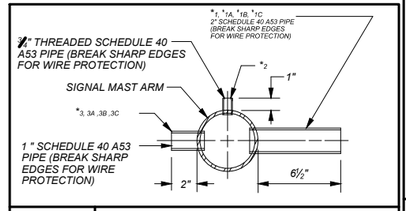
DETAIL 3 | LUMINAIRE ARM CONNECTION



DETAIL 4 | LUMINAIRE TENON



DETAIL 6 | BASE



DETAIL 5 | ARM TENONS

2015 LRFD
TYPE 2A & 3A SIGNAL STANDARDS, FOUNDATION DETAILS, AND TYPICAL SIGNAL MOUNTINGS

NO SCALE

REVISED 5-DEC-2023

SHEET NO. E5

ELECTRICAL DETAILS

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

	DESIGNED BY	REVIEWED BY	CHECKED BY
	D. VERNON	S. PATTERSON	A. MILES
	01/2025	01/2025	01/2025

9930001ELDET01.DWG

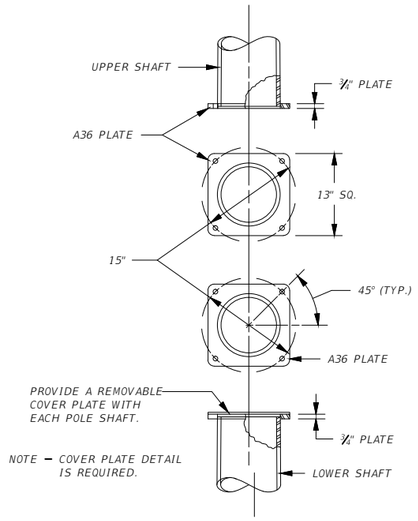
MONTANA Department of Transportation

ELECTRICAL PLANS

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Docusign Envelope ID: 6C1850A8-26C9-421F-8197-9D59BE61B18F

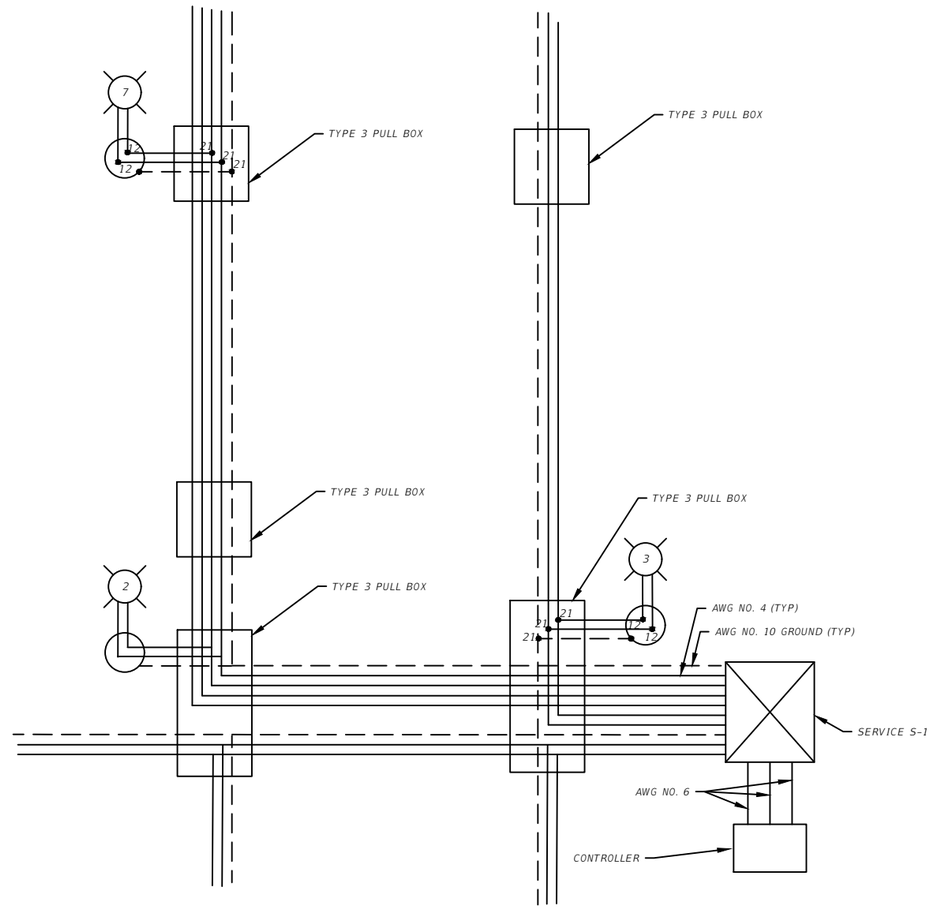


SHAFT TO SHAFT

MOUNTING PLATE DETAIL

FOR REFERENCE ONLY FOR LUMINAIRE EXTENSION

NO SCALE



LIGHTING WIRING DIAGRAM

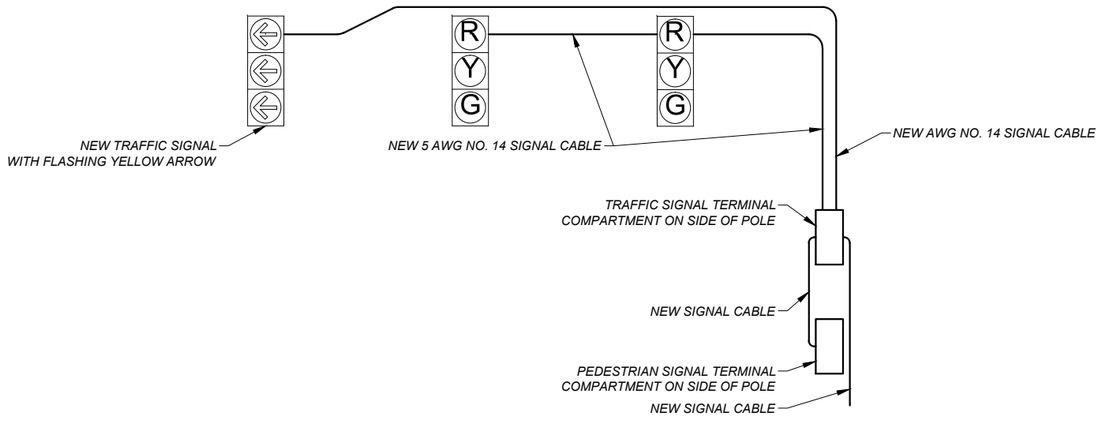
AMSTERDAM RD/JACKRABBIT LN

NO SCALE

LEGEND

\# *INDICATES NEW WATERTIGHT CONNECTOR, PER ELECTRICAL DETAIL DRAWING.*

USE FUSES RATED AT 6 AMPS.



TRAFFIC SIGNAL WIRING

NO SCALE

SHEET NO.

E6

ELECTRICAL DETAILS

PROJECT NAME ***JACKRABBIT-AMSTERDAM RD INT***

COUNTY ***GALLATIN COUNTY***

PROJECT ID ***NH-CR 0602(102)***

UPN ***9930001***

DESIGNED BY	01/2025
D. VERNON	
REVIEWED BY	01/2025
S. PATTERSON	
CHECKED BY	01/2025
A. MILES	

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MONTANA
Department of Transportation

ELECTRICAL PLANS

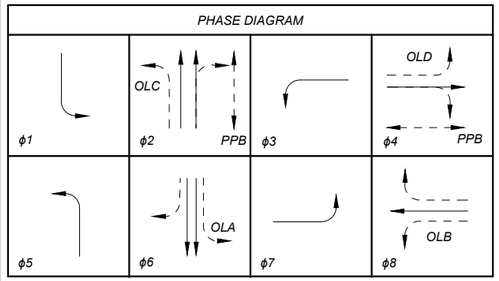
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AWARD COPY

DOWL

PHASE DIAGRAM

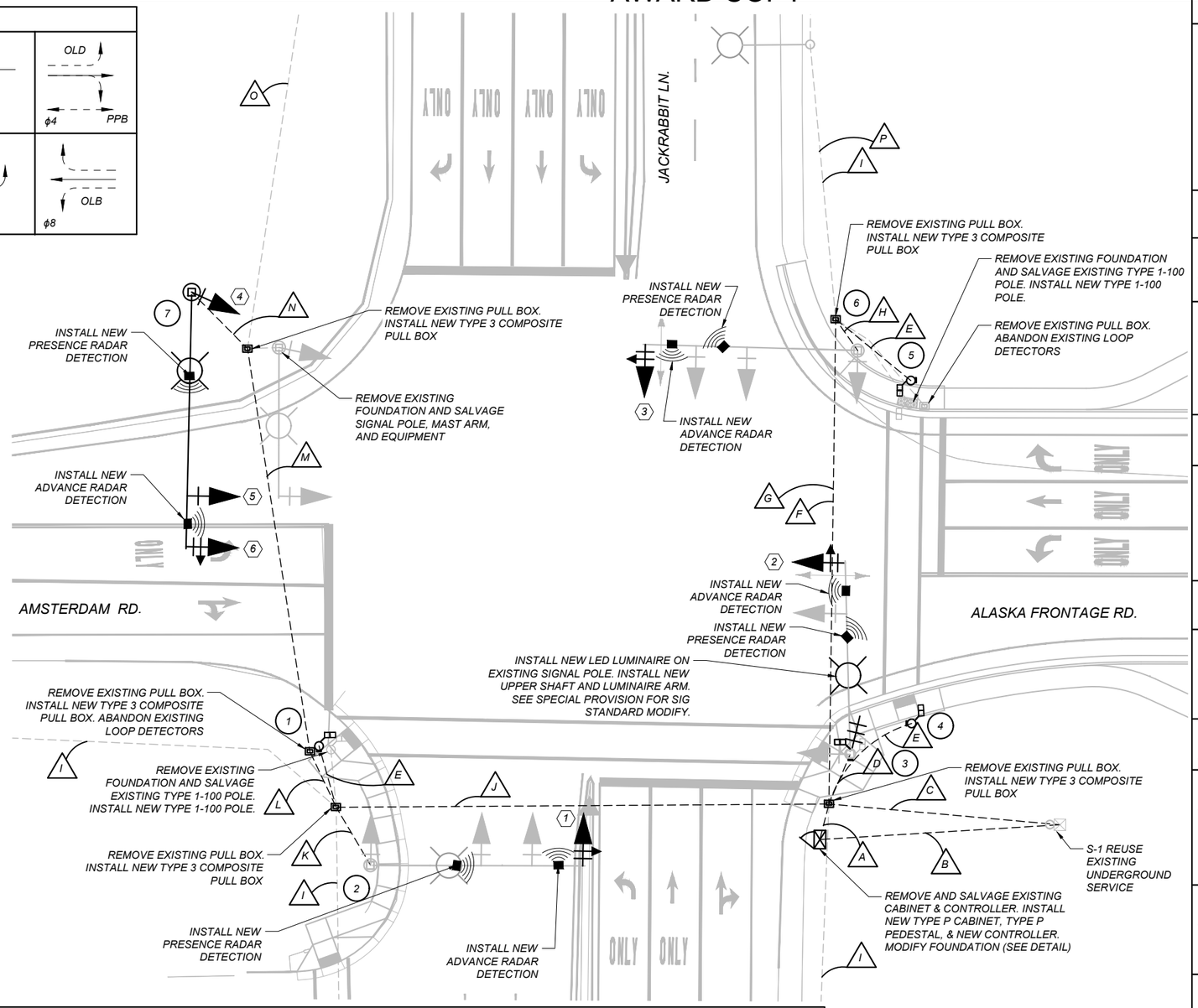


SYMBOLS

- SIGNAL POLE
- LUMINAIRE
- VEHICLE SIGNAL INDICATION
- TRAFFIC SIGNAL W/TURN ARROW
- PEDESTRIAN SIGNAL INDICATOR
- RADAR DETECTOR
- EMERGENCY PREEMPTION DETECTOR
- CONTROLLER
- SERVICE
- PULL BOX
- CONDUIT & WIRE
- BROADBAND RADIO
- PEDESTRIAN PUSH BUTTON

(#) = REMOVE AND SALVAGE EXISTING SIGNAL HEAD AND INSTALL NEW SIGNAL HEAD.

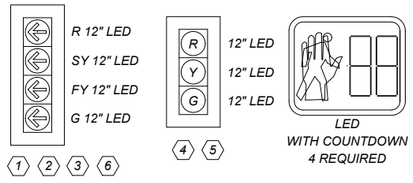
EXISTING CONDUIT & WIRING IS DERIVED FROM AS-BUILT DRAWINGS. ACTUAL CONDUIT & WIRING MAY VARY.



TRAFFIC SIGNAL POLE SCHEDULE

POLE NO.	ITEM NO.	TYPE	TYPE POLE BASE	FOUNDATION DIA. X DEPTH	PEDESTRIAN PUSH BUTTON		SIGNAL MAST ARM	LUMINAIRE MAST ARM	LUMINAIRE HEIGHT	LUMINAIRE LUMENS (DISTRIBUTION)	X COORDINATE	Y COORDINATE
					LEFT ARROW	RIGHT ARROW						
①	617 673 100	1-100	BREAKAWAY	2' X 3'	-	1	-	-	-	-	1,538,555.941	557,289.558
②	EXISTING	-	-	-	-	-	-	-	-	-	-	-
③	EXISTING	-	-	-	1	-	-	15'	45'	26,700 LUMENS (TYPE 3)	-	-
④	617 673 100	1-100	BREAKAWAY	2' X 3'	1	-	-	-	-	-	1,538,695.770	557,294.894
⑤	617 673 100	1-100	BREAKAWAY	2' X 3'	1	-	-	-	-	-	1,538,695.591	557,375.816
⑥	EXISTING	-	-	-	-	-	-	-	-	-	-	-
⑦	617 713 100	3-A-900-0	ANCHOR	4' X 12'	-	-	60'	15'	45'	26,700 LUMENS (TYPE 3)	1,538,525.870	557,396.712

NEW SIGNAL INDICATIONS



SY = STEADY YELLOW FY = FLASHING YELLOW
PROVIDE A REFLECTIVE BORDER ON BACKPLATES

INSTALL RETRO-REFLECTIVE TAPE ON 8 EXISTING BACKPLATES

CONDUIT AND WIRE SCHEDULE

A	NEW 4 OF 3" PLASTIC CONDUIT NEW 8 OF RADAR DETECTION CABLE NEW 1 OF CAT5 CABLE (BROADBAND RADIO) NEW 8 OF 5 AWG NO. 14 CONDUCTOR (PED SIGNAL & PUSH BUTTON) NEW 3 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) EXISTING 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) EXISTING 2 OF EMERGENCY PREEMPTION CABLE EXISTING 1 OF 6 PAIR AWG NO. 19 CABLE (INTERCONNECT) REMOVE 6 OF LOOP DETECTOR CABLE REMOVE 5 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL) REMOVE 2 OF AWG NO. 6 CONDUCTOR (CONTROLLER) REMOVE 1 OF AWG NO. 10 CONDUCTOR (GROUND)
B	NEW 1 OF 2" PLASTIC CONDUIT NEW 3 OF AWG NO. 6 CONDUCTOR (CONTROLLER)
C	EXISTING 1 OF 2" PLASTIC CONDUIT EXISTING 8 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 2 OF AWG NO. 10 CONDUCTOR (GROUND) REMOVE 2 OF AWG NO. 6 CONDUCTOR (CONTROLLER)
D	EXISTING 1 OF 2" STEEL CONDUIT EXISTING 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) EXISTING 1 OF EMERGENCY PREEMPTION CABLE EXISTING 2 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 2 OF AWG NO. 4 CONDUCTOR (LIGHTING) NEW 2 OF 5 AWG NO. 14 CONDUCTOR (PED SIGNAL & PUSH BUTTON) NEW 1 OF CAT5 CABLE (BROADBAND RADIO) NEW 2 OF RADAR DETECTION CABLE
E	NEW 1 OF 2" PLASTIC CONDUIT NEW 2 OF 5 AWG NO. 14 CONDUCTOR (PED SIGNAL & PUSH BUTTON) NEW 1 OF AWG NO. 10 CONDUCTOR (GROUND)
F	EXISTING 1 OF 2" PLASTIC CONDUIT EXISTING 1 OF EMERGENCY PREEMPTION CABLE EXISTING 2 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 1 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF 5 AWG NO. 14 CONDUCTOR (PED SIGNAL & PUSH BUTTON) REMOVE 2 OF LOOP DETECTOR CABLE REMOVE 2 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL)
G	EXISTING 1 OF 1.5" PLASTIC CONDUIT EXISTING 1 OF 6 PAIR AWG NO. 19 CABLE (INTERCONNECT) NEW 2 OF RADAR DETECTION CABLE
H	EXISTING 1 OF 2" PLASTIC CONDUIT EXISTING 1 OF EMERGENCY PREEMPTION CABLE EXISTING 2 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF RADAR DETECTION CABLE REMOVE 1 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL)
I	EXISTING 1 OF 1.5" PLASTIC CONDUIT EXISTING 2 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 1 OF AWG NO. 10 CONDUCTOR (GROUND)
J	EXISTING 2 OF 2" PLASTIC CONDUIT EXISTING 6 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 2 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 2 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF 5 AWG NO. 14 CONDUCTOR (PED SIGNAL & PUSH BUTTON) NEW 4 OF RADAR DETECTION CABLE REMOVE 4 OF LOOP DETECTOR CABLE REMOVE 3 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL)
K	EXISTING 1 OF 2" STEEL CONDUIT EXISTING 4 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 2 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF RADAR DETECTION CABLE REMOVE 1 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL)
L	EXISTING 1 OF 2" PLASTIC CONDUIT EXISTING 4 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 1 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF RADAR DETECTION CABLE REMOVE 1 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL) REMOVE 4 OF LOOP DETECTOR CABLE
M	EXISTING 1 OF 2" PLASTIC CONDUIT EXISTING 4 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 1 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF RADAR DETECTION CABLE REMOVE 1 OF 9 AWG NO. 14 CONDUCTOR (SIGNAL)
N	NEW 1 OF 2" PLASTIC CONDUIT NEW 2 OF AWG NO. 4 CONDUCTOR (LIGHTING) NEW 1 OF AWG NO. 10 CONDUCTOR (GROUND) NEW 1 OF 15 AWG NO. 14 CONDUCTOR (VEHICLE SIGNAL) NEW 2 OF RADAR DETECTION CABLE
O	EXISTING 1 OF 1.5" PLASTIC CONDUIT EXISTING 4 OF AWG NO. 4 CONDUCTOR (LIGHTING) EXISTING 1 OF AWG NO. 10 CONDUCTOR (GROUND)
P	EXISTING 1 OF 1.5" PLASTIC CONDUIT EXISTING 1 OF 6 PAIR AWG NO. 19 CABLE (INTERCONNECT)

SHEET NO.
E7

TRAFFIC SIGNAL PLAN

PROJECT NAME: JACKRABBIT-AMSTERDAM RD INT
COUNTY: GALLATIN COUNTY
PROJECT ID: NH-CR 0602(102)
UPN: 9930001

DESIGNED BY	D. VERNON	01/2025
REVIEWED BY	S. PATTERSON	01/2025
CHECKED BY	A. MILES	01/2025

9930001ELPLNZ01.DWG

MONTANA Department of Transportation

ELECTRICAL PLANS

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WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6

IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD

BELGRADE, MONTANA

AWARD COPY



NORTH

VICINITY MAP

NOT TO SCALE

Sheet Number	Sheet Title	
C1.1	COVER SHEET	1
C1.2	LEGENDS, NOTES & ABBREVIATIONS	2
C2.1	EXISTING CONDITIONS & DEMOLITION PLAN	3
C3.1	SUMMARY TABLES	4
C3.2	OVERALL SITE LAYOUT AND SIGNAGE & STRIPING PLAN	5
C4.1	SITE GRADING PLAN	6
C4.2	SITE GRADING PLAN	7
C5.1	CROSS SECTIONS	8

FILE: 22033_COVER_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

DRAWING HISTORY

DATE	DESCRIPTION
10/16/24	FINAL REVIEW
11/07/24	MDT REVIEW
02/04/25	FOR CONSTRUCTION
04/01/25	FOR CONSTRUCTION
-	-
-	-
-	-
-	-

MONTANA JOSEPH M STASZCZUK 28335PE LICENSED PROFESSIONAL ENGINEER

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LINETYPES

	EXISTING	PROPOSED
SANITARY SEWER	SS	SS
STORM DRAIN	SD	SD
WATER	W	W
CURB AND GUTTER		
EDGE OF ASPHALT	EDGE OF EX ASPHALT	
EDGE OF GRAVEL	EDGE OF EX GRAVEL	
FENCE - BARBED WIRE	X	X
FENCE - CHAINLINK/ WOVEN WIRE		
FENCE - VINYL	V	V
FENCE - WOOD		
FIBER OPTIC	FO	FO
GAS PIPELINE	G	G
LIQUID PROPANE PIPELINE	LP	LP
OIL PIPELINE	OIL	OIL
UNDERGROUND POWER	P	P
OVERHEAD POWER	OHP	OHP
TELEPHONE	T	T
TELEVISION/CABLE	TV	TV
CONTOUR	3157	3157
DEMO AREA		
PROPOSED ASPHALT		
PROPOSED CONCRETE		
PROPOSED GRAVEL		
PROPOSED CHIP SEAL		
EXISTING ASPHALT		

AWARD COPY

ABBREVIATIONS

AC = FINISHED GRADE AT ASPHALT
BC = FINISHED GRADE AT BUILDING CORNER
BRK = GRADE BREAK
BFV = BUTTERFLY VALVE
BVC = BEGIN VERTICAL CURVE
CS = CURB STOP
EA = FINISHED GRADE AT EDGE OF ASPHALT
EC = FINISHED GRADE AT EDGE OF CONCRETE
EVC = END VERTICAL CURVE
EW = FINISHED GRADE AT EDGE OF WALK
EX = APPROXIMATE EXISTING ELEVATION
FL = FINISHED GRADE AT FLOWLINE
FT = FEET
FG = FINISHED GRADE
GR = EXISTING GRADE AT GROUND
GV = GATE VALVE
HP = HIGH POINT
LF = LINEAL FOOT
LT = LEFT

(#) KEYNOTE CALL OUT (SEE KEYNOTE LEGEND)

PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
POC = POINT ON CURVE
PRC = POINT OF REVERSE CURVE
PT = POINT OF TANGENCY
PVI = POINT OF VERTICAL INTERSECTION
RED = REDUCER
RT = RIGHT
SD = STORM DRAIN
SDI = STORM DRAIN INLET
SDMH = STORM DRAIN MANHOLE
SRVC = SERVICE
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
TC = FINISHED GRADE AT TOP BACK OF CURB
TW = FINISHED GRADE AT TOP OF WALL
WTR = WATER
(TYP.) = TYPICAL

GRADING PLAN

1. CATCH CURB
2. SPILL CURB
3. TRANSITION FROM CATCH TO SPILL CURB
4. TAPER CURB HEAD 3'

CATCH CURB → TOP OF CURB - 0.375' = LIP
TOP OF CURB - 0.45' = FLOWLINE

SPILL CURB → TOP OF CURB - 0.583' = LIP
TOP OF CURB - 0.53' = FLOWLINE

SYMBOLS

- EXISTING WATER REDUCER
- PROPOSED WATER REDUCER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING CURB STOP
- PROPOSED CURB STOP
- FIRE DEPT. CONNECTION
- WELL
- EXISTING WATER MANHOLE
- WATER METER
- YARD HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- EXISTING STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- ROOF DRAIN
- TELEPHONE BOX
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- COMMUNICATIONS MANHOLE
- COMMUNICATIONS PEDESTAL
- FIBER OPTIC PEDESTAL
- GAS MANHOLE
- GAS METER
- GAS WELL
- GAS VALVE
- ELECTRIC JUNCTION BOX
- ELECTRIC PEDESTAL
- TRANSFORMER
- POWER MANHOLE
- POWER METER
- POWER POLE
- GUYWIRE
- LIGHT POLE
- SIGN
- BOLLARD
- EXISTING MONUMENT BOX
- PROPOSED MONUMENT BOX
- IRRIGATION BOX
- IRRIGATION VALVE
- BUSH
- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGNAL POLE
- FOUND CORNER MONUMENT AS NOTED
- SET CORNER MONUMENT, REBAR WITH CAP
- BENCHMARK
- SECTION QUARTER CORNER
- SECTION CORNER

NOTE:

-EXISTING UNDERGROUND INSTALLATIONS & PRIVATE UTILITIES SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF SUCH INFORMATION. SERVICE LINES (WATER, POWER, GAS, STORM, SEWER, TELEPHONE & TELEVISION) MAY NOT BE STRAIGHT LINES OR AS INDICATED ON THE PLANS. STATE LAW REQUIRES CONTRACTOR TO CALL ALL UTILITY COMPANIES BEFORE EXCAVATION FOR EXACT LOCATIONS.

-SEE FEDERAL AID PROJECT NO. NH-CR 0602 (102) JACKRABBING - AMSTERDAM ROAD INTERCHANGE PROJECT DOCUMENTS FOR CONTRACT AND CONSTRUCTION REQUIREMENTS.

FOR CONSTRUCTION

sanbell
Intelligent Infrastructure. Enduring Communities.

MONTANA JOSEPH M. STASZOUR 28336PE LICENSED PROFESSIONAL ENGINEER

DRAWING HISTORY

DESCRIPTION	DATE
FINAL REVIEW	10/16/24
MDT REVIEW	11/07/24
FOR CONSTRUCTION	02/04/25
FOR CONSTRUCTION	04/01/25
-	-
-	-
-	-
-	-

FILE: 22033_COVER_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD
BELGRADE, MONTANA

LEGENDS, NOTES & ABBREVIATIONS

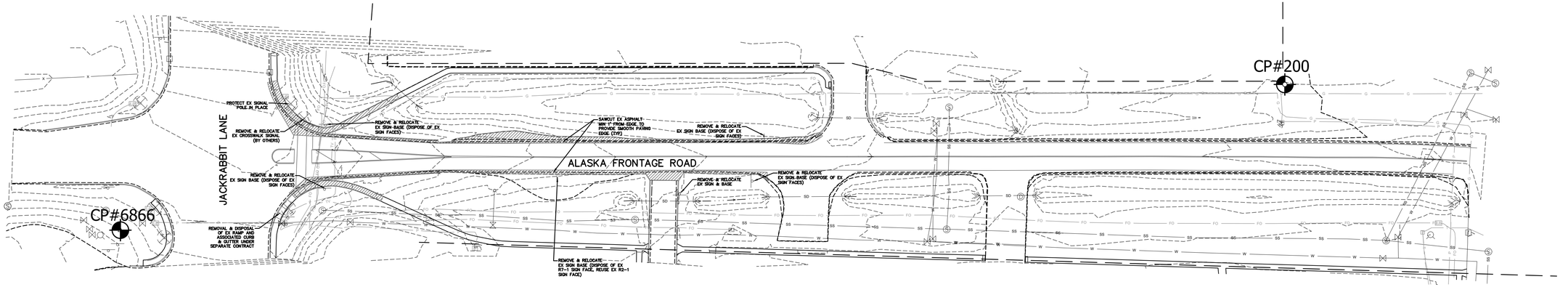
C1.2

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TRACT A
CERTIFICATE OF SURVEY No. 2275A



TRACT 1
CERTIFICATE OF SURVEY No. 342B

PROJECT SURVEY CONTROL				
Point #	Northing	Easting	Elevation	Description
200	557400.78	1539586.70	4482.05	PC /5/8 IN. REBAR W/ 2 IN. BLUE PLASTIC CAP
6866	557268.43	1538528.14	4485.78	CP /MDT 2 IN. ACR

DATUM: NAD83 MONTANA STATE PLANES, INTERNATIONAL FOOT
SURVEY COMPLETED 08/21/23 R.G., UPDATED 10/10/24 M.C.

NORTH

SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE SCALE ON 11X17 SHEET WITH 1:2 PLOT SCALE.

50 25 0 50 100

SCALE: 1" = 50'

FOR CONSTRUCTION

DRAWING HISTORY

DATE	DESCRIPTION
10/15/24	FINAL REVIEW
11/07/24	MDT REVIEW
02/04/25	FOR CONSTRUCTION
04/01/25	FOR CONSTRUCTION
-	-
-	-
-	-
-	-

FILE: 22033_EXISTING_PROD_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

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MONTANA
JOSEPH M. STASZOUR
28336PE
LICENSED
PROFESSIONAL ENGINEER

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD
BELGRADE, MONTANA

EXISTING CONDITIONS & DEMOLITION PLAN

C2.1

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SUMMARY

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Improvements to Jackrabbit Lane & Alaska Frontage Road		
Quantity	Unit	Description
764	CUYD	SPECIAL BORROW–NEAT LINE
1007	CUYD	EXCAVATION–UNCLASSIFIED
97	CUYD	TOPSOIL
233	CUYD	CRUSHED AGGREGATE COURSE
429	TON	COMMERCIAL MIX–PG 58H–34
202	GAL	EMULSIFIED ASPHALT–TACK COAT
4.8	TON	EMULSIFIED ASPHALT CRS–2P
0.1	CRMI	FINAL SWEEP AND BROOM
2701	SQYD	COVER–TYPE 1
48	SQYD	CONCRETE 6 IN
1423	SQYD	COLD MILLING
125	SQYD	REMOVE SIDEWALK
99	SQYD	SIDEWALK–CONCRETE 4 IN
978	LNFT	CURB SPECIAL DESIGN
3	GAL	WORDS & SYMBOLS–WHITE PAINT
4	GAL	WORDS & SYMBOLS–WHITE EPOXY
11	GAL	STRIPING–WHITE–EPOXY
5	GAL	STRIPING–YELLOW–EPOXY
8	GAL	STRIPING–WHITE–PAINT
4	GAL	STRIPING–YELLOW–PAINT
6	EACH	REMOVE SIGN
22.7	LNFT	SIGNS–ALUM REFL SHEET XI
129	LB	POSTS–TUBULAR STEEL–SQ–PERF
3	SQYD	DETEC WARNING DEVICES–TYPE 1

FOR CONSTRUCTION

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MONTANA
JOSEPH M. STASZOUR
28336PE
LICENSED
PROFESSIONAL ENGINEER

DRAWING HISTORY

DATE	DESCRIPTION
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-	-
-	-
-	-
-	-

FILE: 22033_OVERALL_PROD_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD
BELGRADE, MONTANA

SUMMARY TABLES

C3.1

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TRACT A
CERTIFICATE OF SURVEY No. 2275A

AWARD COPY

SAWCUT EX ASPHALT AS SHOWN TO PROVIDE SMOOTH PAVING EDGE

NO PARKING ANY TIME
REMOVE R3-4
REMOVE R7-1X
NEW R7-1
(12"x18")

NEW 4" CONCRETE (TYP)

NEW 6" CONCRETE

0+46.92
45.57' LT.

0+81.81
24.00' LT.

0+84.34
28.00' LT.

RELOCATED SIGN BASE

LIMITS OF THIS PROJECT. SEE JACKRABBIT-AMSTERDAM RD INT PROJECT FOR INFORMATION OUTSIDE THESE LIMITS.

JACKRABBIT LANE

R39.00'

0+71.31
25.44' LT.

NEW 24" WHITE EPOXY STOP BAR

NEW 4" SOLID WHITE EPOXY

NEW WHITE EPOXY (TYP)

NEW 8" SOLID WHITE EPOXY

0+79.31
24.08' LT.

0+84.14
13.00' LT.

0+84.07

5.00'
20'
8'
8'
8'

1+00
2+00
3+00
4+00
197.10'

NEW 8" SOLID WHITE EPOXY

0+00

APPROX. ℄ JACKRABBIT LANE

0+84.14
2.00' LT.

0+83.87
9.00' RT.

0+60.74
36.41' RT.

NEW 8" WHITE EPOXY CROSSWALK STRIPE

NEW 4" SOLID DOUBLE YELLOW EPOXY

1+31.15
24.00' RT.

NEW 4" SOLID WHITE EPOXY

ALASKA FRONTAGE ROAD

SAWCUT EX ASPHALT AS SHOWN TO PROVIDE SMOOTH PAVING EDGE

NEW CHIP SEAL OVER EX AND NEW ASPHALT (TYP)

3+49.24
24.00' LT.

3+49.24
13.00' LT.

3+49.24
2.00' LT.

3+49.24 PI

3+49.45
9.00' RT.

3+49.71
24.00' RT.

NEW 4" DASHED WHITE EPOXY LANE EXTENSION LINE (2:6 SKIP STRIPE)

NO PARKING ANY TIME
REMOVE R3-4
REMOVE R7-1X
NEW R7-1
(12"x18")

RELOCATED SIGN BASE

5+24.98
9.29' LT.

TIE NEW CURB & GUTTER INTO EXISTING

4+97.14 PI

5+00

5+66

4+97.33
15.15' RT.

NEW R3-8
(48"x30")
MOUNT ON DUAL
2.5" SQ TUBE POSTS

0+55.00
40.03' RT.

LIMITS OF THIS PROJECT. SEE JACKRABBIT-AMSTERDAM RD INT PROJECT FOR INFORMATION OUTSIDE THESE LIMITS.

R206.00'

R16.00'

NEW 4" CONCRETE (TYP)

RELOCATED SIGN BASE

NEW 6" CONCRETE

NEW RAMP AND ASSOCIATED CURB & GUTTER UNDER SEPARATE CONTRACT

RELOCATED FIRE HYDRANT LOCATION

RELOCATED SIGN BASE

NEW 6" CONCRETE

RELOCATED SIGN BASE

NO PARKING ANY TIME
REMOVE R3-4
REMOVE R7-1X
NEW R7-1
(12"x18")

NO PARKING ANY TIME
NEW R7-1
(12"x18")

STOP
NEW R1-1
(30"x30")

NO PARKING ANY TIME
REMOVE R3-4
REMOVE R7-1X
NEW R7-1
(12"x18")

SPEED LIMIT 35
EX R2-1
(24"x30")

NOTE:

ALL EXISTING SIGNS, SIGNPOSTS AND UTILITY POLES DETERMINED TO BE IN THE PATH OF THE WORK ZONE SHALL BE TEMPORARILY REMOVED AND LATER REPLACED IN THEIR PREVIOUS LOCATION. THE CONDITIONS OF MPWSS SECTION 02114 SHALL APPLY TO THIS SECTION WITH THE EXCEPTION THAT THERE SHALL BE NO SEPARATE MEASUREMENT AND PAYMENT FOR THIS ITEM. THE MEASUREMENT AND PAYMENT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE WORK.

THE APPROXIMATE LOCATIONS OF EXISTING UTILITY POLES HAVE BEEN SHOWN ON THE PLANS BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY THAT ANY EXISTING UTILITY POLES ARE CLEAR FROM ANY CONSTRUCTION ACTIVITY. EXISTING UTILITY POLES SHALL NOT BE DISTURBED WITH CONSTRUCTION ACTIVITY.

TRAFFIC SIGNING SHALL COMPLY WITH THE STANDARDS SET FORTH IN THE CURRENT EDITION OF THE MDT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MDT DETAILED DRAWINGS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND AS DETAILED ON THE PROJECT PLANS. PRECEDENCE SHALL BE GIVEN IN THE FOLLOWING ORDER: 1.) INFORMATION INCLUDED IN THE CONTRACT PLANS AND SPECIFICATIONS; 2.) MDT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND DETAILED DRAWINGS (CURRENT EDITIONS); AND 3.) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE FOLLOWING SPECIFIC DESIGN AND INSTALLATION STANDARDS SHALL BE MET PER THE ABOVE REFERENCES:

- •SIGN PANEL MATERIALS, COLOR, REFLECTIVITY, SHAPES AND SIZES
- •SIGN PANEL TO POST MOUNTING MATERIALS AND SPECIFICATIONS
- •POST TYPES AND SIZES, BREAKAWAY CONSIDERATIONS, ANCHOR TYPE AND SIZE, FOUNDATION TYPE, DEPTH, AND INSTALLATION SPECIFICATIONS
- •SIGN MOUNTING HEIGHT, OFFSET FROM ROADWAY, ORIENTATION OF SIGN FACE, AND INSTALLATION LOCATIONS

TRACT 1
CERTIFICATE OF SURVEY No. 342B

NORTH

SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE SCALE ON 11X17 SHEET WITH 1:2 PLOT SCALE.

20 10 0 20 40

SCALE: 1" = 20'

FOR CONSTRUCTION

sanbell
Intelligent Infrastructure. Enduring Communities.

JOSEPH W. STASZOUR 28336PE LICENSED PROFESSIONAL ENGINEER MONTANA

DRAWING HISTORY

DATE	DESCRIPTION	-	-	-	-
10/15/24	FINAL REVIEW				
11/07/24	MDT REVIEW				
02/04/25	FOR CONSTRUCTION				
04/01/25	FOR CONSTRUCTION				

FILE: 22033_OVERALL_PROD_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD

BELGRADE, MONTANA

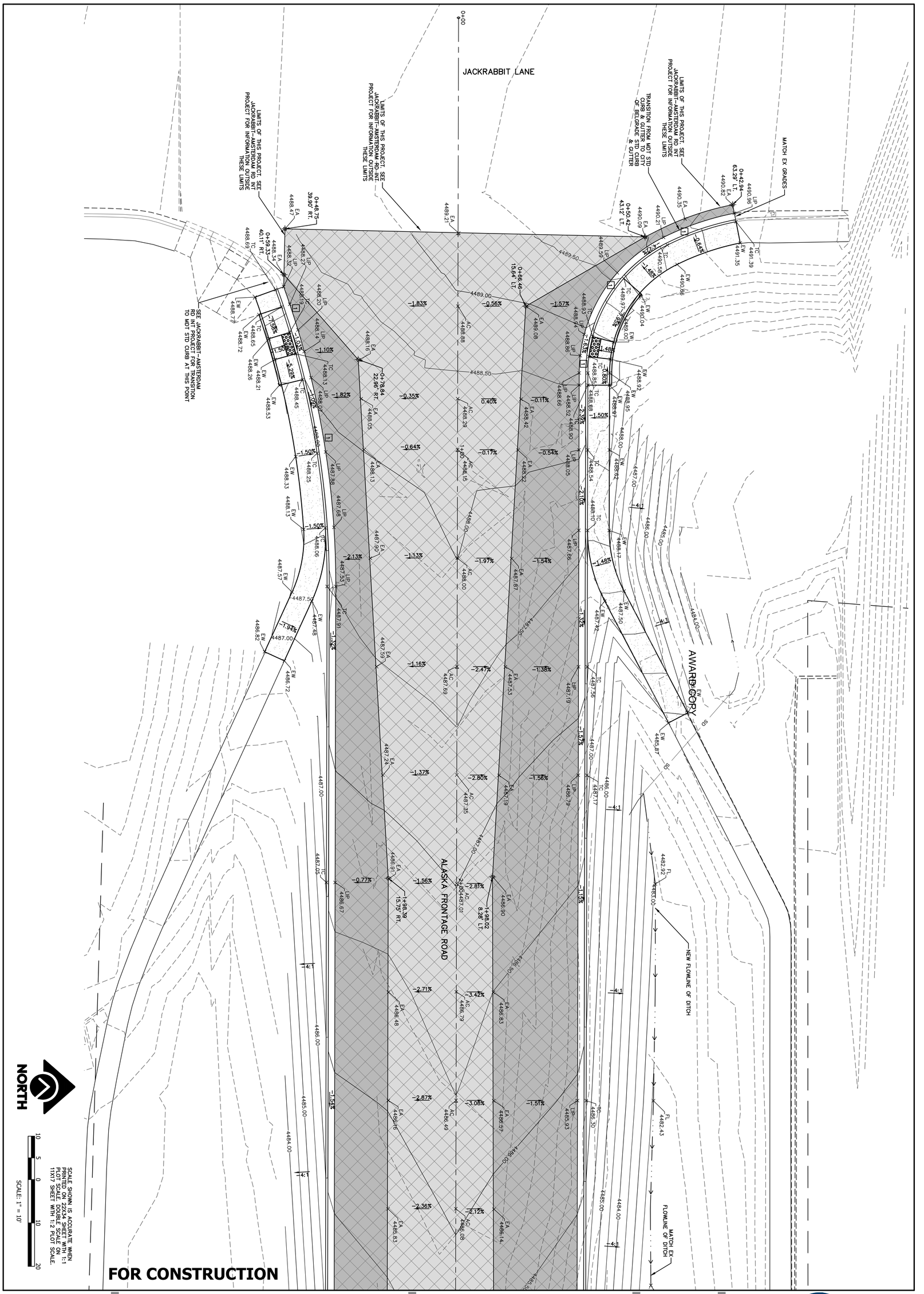
OVERALL SITE LAYOUT AND SIGNAGE & STRIPING PLAN

C3.2

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Docusign Envelope ID: 6C1B50A8-28C9-421F-8197-9D5B8E61B1BF



NORTH

SCALE: 1" = 10'

SCALE SHOWN IS ACCURATE WHEN PLOTTED ON 22"X34" SHEET WITH 1:1 PLOT SCALE. DOUBLE SCALE ON 11X17 SHEET WITH 1:2 PLOT SCALE.

FOR CONSTRUCTION

C4.1

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD

BELGRADE, MONTANA

SITE GRADING PLAN

FILE:	22033_GRADING_PROD_P6.DWG
PROJECT NO:	22033.01
CAD:	CMK
QUALITY ASSURANCE:	-

DRAWING HISTORY

DATE	DESCRIPTION
10/16/24	FINAL REVIEW
11/07/24	MDT REVIEW
02/04/25	FOR CONSTRUCTION
04/01/25	FOR CONSTRUCTION
-	-
-	-
-	-
-	-

JOSEPH M. STASKUNAS — 22033LS — MONTANA — LICENSED PROFESSIONAL ENGINEER

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Docusign Envelope ID: 6C1850A8-26C9-421F-8197-9D59BE61B18F

AWARD COPY

ALASKA FRONTAGE ROAD

MATCH EX FLOWLINE OF DITCH

ASPHALT SECTION THICKNESSES TO MATCH STREET SECTION (SEE TAPERED SECTION DETAIL SHEET C5.1)

NORTH

SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE SCALE ON 11X17 SHEET WITH 1:2 PLOT SCALE.

10 5 0 10 20

SCALE: 1" = 10'

FOR CONSTRUCTION

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JOSEPH W. STASZOUR 28336PE LICENSED PROFESSIONAL ENGINEER MONTANA

DRAWING HISTORY

DATE	DESCRIPTION
10/15/24	FINAL REVIEW
11/07/24	MDT REVIEW
02/04/25	FOR CONSTRUCTION
04/01/25	FOR CONSTRUCTION
-	-
-	-
-	-

FILE: 22033_GRADING_PROD_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD

BELGRADE, MONTANA

SITE GRADING PLAN

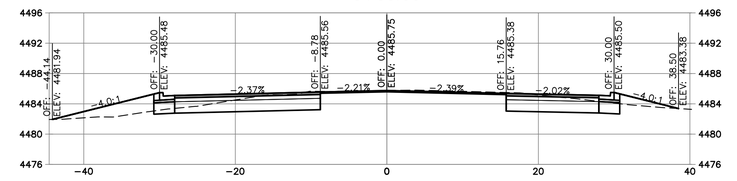
C4.2

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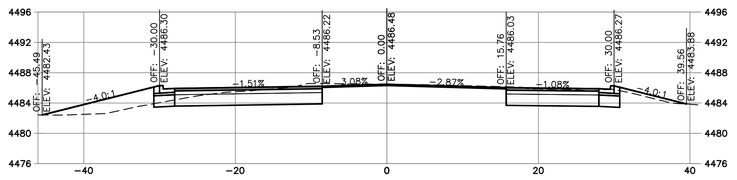
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ALASKA FRONTAGE ROAD

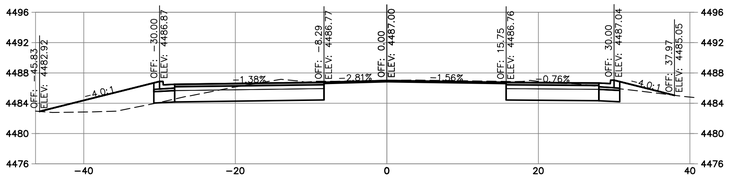
3+00.00



2+50.00



2+00.00



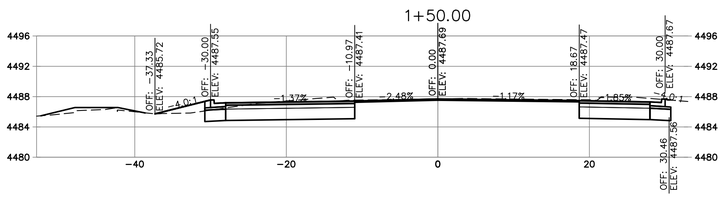
Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+53.63	0.00	37.30	0.00	0.00	0.00	0.00
1+00.00	0.37	77.09	0.32	98.24	0.32	98.24
1+50.00	4.72	77.21	4.71	142.86	5.02	241.10
2+00.00	33.46	72.94	35.35	139.03	40.38	380.13
2+50.00	26.61	72.23	55.62	134.42	96.00	514.55
3+00.00	25.14	62.91	47.92	125.13	143.92	639.68
3+49.24	21.93	64.37	42.92	116.06	186.84	755.74
4+00.00	7.94	102.17	28.29	155.98	215.12	911.73
4+50.00	5.11	43.56	12.09	134.93	227.21	1046.66
4+94.32	1.52	31.04	5.44	61.22	232.65	1107.87

AWARD COPY

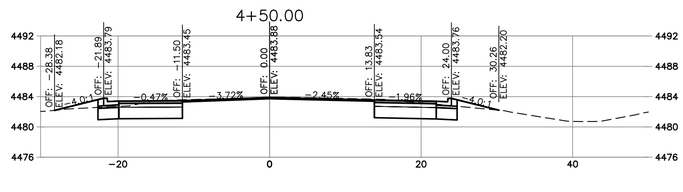
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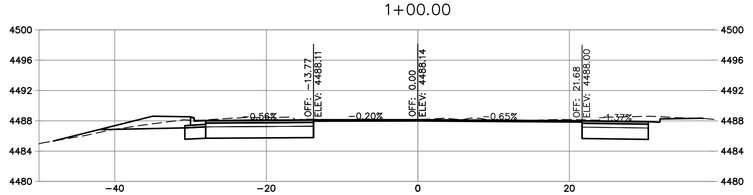
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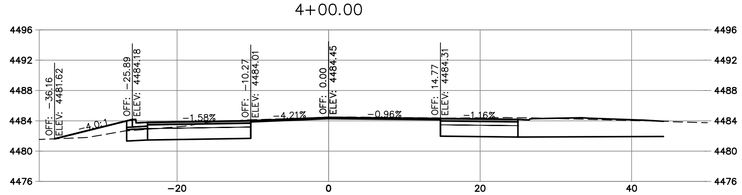
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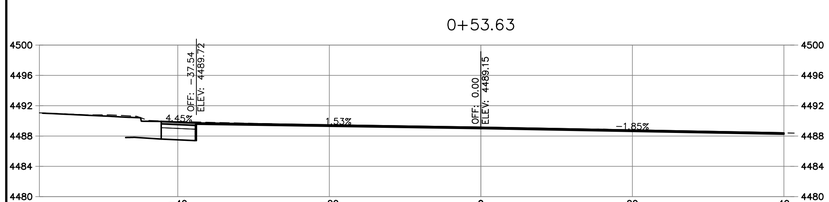
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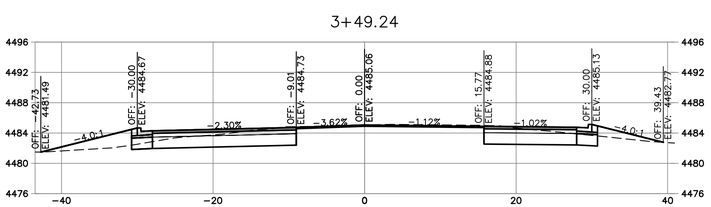
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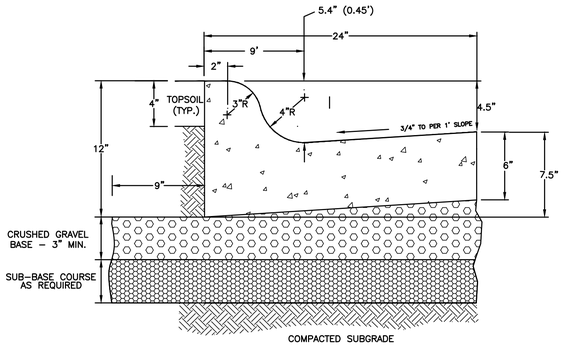


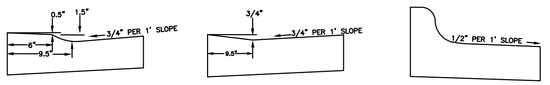
0+53.63



3+49.24







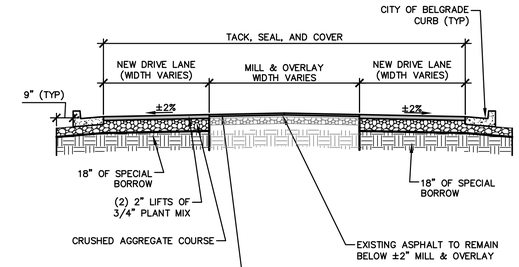
NOTES:

1. Subgrade or base course compaction shall conform to section 02230 (M.P.W. Specs., 1996 ed.)
2. Contraction joints shall be placed at 10' intervals and shall have a minimum depth of 3/4" and minimum width of 1/8".
3. 1/2" expansion joint material shall be placed at all P.C.s, P.T.s, curb returns and at not more than 300' intervals. The expansion material shall extend through the full depth of the curb and gutter.
4. No curb and gutter shall be placed without a final form inspection by the City Engineer or his representative.
5. Concrete shall be Class M-4000.
6. Crushed gravel base shall meet the requirements of Section 02235 (MPW SPECS, 2003 ed.) For curb and gutter replacement projects, washed rock may be used for the gravel base.

NOTE:
CITY OF BELGRADE CURB IS PAID FOR AS CURB-SPECIAL DESIGN.

CITY OF BELGRADE STANDARD CURB & GUTTER DETAIL

NOT TO SCALE

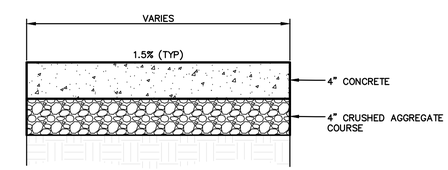


NOTE:
TACK COAT QUANTITIES BASED ON 2 APPLICATIONS IN NEW ROAD WIDENING SURFACING SECTION AND 1 APPLICATION IN MILL & OVERLAY SURFACING SECTION.

SURFACING SECTION PROVIDED BY THE CITY OF BELGRADE.

TAPERED ROAD SECTION – ALASKA FRONTAGE ROAD

NOT TO SCALE



TYPICAL SIDEWALK SECTION

NOT TO SCALE

10 5 0 10 20

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1"=10'

SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE HORIZONTAL AND VERTICAL SCALES ON 11X17 SHEET WITH 1:2 PLOT SCALE.

FOR CONSTRUCTION

sanbell
Intelligent Infrastructure. Enduring Communities.

MONTANA JOSEPH M STASZOUR 26335PE LICENSED PROFESSIONAL ENGINEER

DRAWING HISTORY

DATE	DESCRIPTION
10/16/24	FINAL REVIEW
11/07/24	MDT REVIEW
02/04/25	FOR CONSTRUCTION
04/01/25	FOR CONSTRUCTION
-	-
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-	-

FILE: 22033_XSECTION_P6.DWG
PROJECT NO: 22033.01
CAD: CMK
QUALITY ASSURANCE: -

WEST POST DEVELOPMENT

PHASE 3 AND 4 - PACKAGE 6
IMPROVEMENTS TO JACKRABBIT LANE & ALASKA FRONTAGE ROAD
BELGRADE, MONTANA

CROSS SECTIONS

C5.1

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