Tracking No. 16-54773

FIRST MODIFICATION TO AGREEMENT FOR TEMPORARY PRIVATE CROSSINGS, HAUL ROAD, TWO SPUR ROADS, AND CROSSING APPROACHES

From: Kuhl, Brooke
To: Hausrath, Katherine
Cc: Ford, Jim; Harris, Harley; Capdeville, Mary
Subject: RE: Parrot bid package, minor modifications to the BNSF drawings
Date: Wednesday, April 25, 2018 1:54:09 PM

Katherine,
BNSF has reviewed the memo and the revised drawings you provided. We understand that there are no substantive changes to the design documents that impact the railway property and will accept the revised drawings. To memorialize, we proposing adding the memo, updated design documents and this email as Attachments to the Access Agreement.

Brooke

From: Hausrath, Katherine [mailto:KHausrath@mt.gov]
Sent: Monday, April 23, 2018 9:51 AM
To: Kuhl, Brooke <Brooke.Kuhl@BNSF.com>
Cc: Ford, Jim <JFord@mt.gov>; Harris, Harley <HarleyHarris@mt.gov>; Capdeville, Mary <mcapdeville@mt.gov>
Subject: RE: Parrot bid package, minor modifications to the BNSF drawings

EXTERNAL EMAIL

Brooke,

I just wanted to touch bases with you about the minor changes to the Parrot figures referenced below. Let me know how BNSF wants to proceed on memorializing these types of changes to the drawings that were attached to the access agreement.

Thanks,

Katherine Hausrath
Assistant Attorney General
Montana Natural Resource Damage Program
***NOTE NEW e-mail: khausrath@mt.gov ***

From: Hausrath, Katherine
Sent: Friday, March 23, 2018 12:35 PM
To: Brooke Kuhl (brooke.kuhl@BNSF.com) <brooke.kuhl@BNSF.com>
Cc: Ford, Jim <JFord@mt.gov>; Harris, Harley <HarleyHarris@mt.gov>; Capdeville, Mary <mcapdeville@mt.gov>
Subject: Parrot bid package, minor modifications to the BNSF drawings

Brooke,

As you may have already seen, we have put the Parrot Tailings bid package out for bid. In the process of finalizing the drawings, our engineers noted some cleanup changes that needed to occur

to the drawings that were attached to the State-BNSF access agreement. As noted on the first page of the BNSF access agreement, the drawings are subject to modification by agreement of the parties. I asked our engineers to prepare the attached memo that outlines the changes and confirms that there are not changes to the remaining drawings; there are not substantive changes to the work that is planned for the BNSF premises. I have also sent the revised drawings through our ftp site.

Could you please have the BNSF folks take a look at these and confirm that they don't have any concerns with the changes? Let me know if you think a written agreement from BNSF regarding the revised drawings is sufficient, or if you think we should prepare an amendment to the access agreement.

Thanks,

Katherine Hausrath
Assistant Attorney General
Montana Natural Resource Damage Program
Montana Department of Justice
P.O. Box 201425
1720 Ninth Avenue
Helena, MT 59620-1425
(406) 444-0290
Cell: (406) 422-2826
***NOTE NEW e-mail: khausrath@mt.gov ***

To: Jim Ford, Katherine Hausrath, NRDP

From: Josh Vincent, PE, Water & Environmental Technologies, Inc.
Mark Brooke, PE, Morrison-Maierle, Inc.

Re: **Construction Drawing vs. Access Agreement Drawing Comparison**

Date: March 20, 2018

Per our discussion at our meeting on March 15, 2018, NRDP requested a summary of the differences between the Construction Drawings to be included in the Bid #1 Bid Package and the drawings included in the BNSF Railway Company access agreement.

As you know, details of the design have continued to change throughout this process, and the design team has made continued updates to the Construction Drawings in order to provide the most current and detailed information to potential bidders. The design team feels that although the drawings vary slightly, there will be no material changes to on the ground work, as describe below. This memo compares Construction Plans for the Bid #1 Bid Documents (Dated March 20, 2018) with those plan sheets in the agreement. Variations are summarized in the following sections.

BNSF Access Agreement

<u>Sheet 1-3 - Parrot Tailings Removal Project Site Map (Dated 10/6/2017)</u>

- Sheet 1-3 in the Agreement is consistent with Sheet 1-3 of the Bid #1 Construction Drawings. There are no changes.

<u>Sheet 1-6 – Parrot Tailings Removal Bid Plan (Dated 10/6/2017)</u>

- Sheet 1-6 in the Agreement is consistent with Sheet 1-6 of the Bid #1 Construction Drawings. There are no changes.

<u>Sheet 1-7 (Dated 10/6/2017)</u>

- Sheet 1-7 in the Agreement is consistent with Sheet 1-7 of the Bid #1 Construction Drawings. There are some minor fencing and labeling changes to this sheet:
    - Staging area has been updated per BSB request.
    - Post construction fence along Patriot Railroad was determined to be unnecessary and was removed.

    - Fencing on vacant lot south of Second Street was moved slightly north to avoid replacement during ET Cover construction (Bid #2).
    - No changes to fencing on BNSF property were made.
    - “Protective Barrier” label was added.
    - Details references were updated.

<u>Sheet 1-9 – Property Boundary and Easement Map (Dated 10/11/2017)</u>

- Sheet 1-9 in the Agreement is consistent with Sheet 1-9 of the Bid #1 Construction Drawings. There are some minor changes to this sheet:
    - The Legend was updated to show “Parrot Tailings Removal Project Site” boundary and “Land Or Easement Holder”.

<u>Sheet 4-1 – Haul Road Sheet Index Plan (Dated 12/5/2017)</u>

- Sheet 4-1 in the Agreement is consistent with Sheet 4-1 of the Bid #1 Construction Drawings. There some minor changes to this sheet:
    - Stationing labels were removed from the Northwestern Energy power line.
    - Duplicative stationing labels were removed from haul road.
    - Labeling was cleaned up to better reflect site conditions.
    - No substantive changes were made to the the BNSF Premises, including the area depicted as “Existing BNSF Riprap Ditch or Cap Area."

<u>Sheet 4-2 – Haul Road Plan and Profile STA 0+00 to STA 13+00 (Dated 12/5/2017)</u>

- Sheet 4-2 in the Agreement is consistent with Sheet 4-2 of the Bid #1 Construction Drawings. There are some minor changes to this sheet:
    - Stationing labels were removed from the Northwestern Energy power line.
    - Duplicative stationing labels were removed from haul road.
    - Labeling was cleaned up to better reflect site conditions.
    - Construction notes 11, 12, and 13 were added to provide clarification on the Contractor’s responsibilities.
    - No substantive changes were made to the the BNSF Premises, including the area depicted as “Existing BNSF Riprap Ditch or Cap Area."

<u>Sheet 4-3 – Haul Road Plan and Profile STA 13+00 to STA 25+00 (Dated 10/11/2017)</u>

- Sheet 4-3 in the Agreement is consistent with Sheet 4-3 of the Bid #1 Construction Drawings. There are no changes.

<u>Sheet 4-5 – Haul Road Miscellaneous Details 1 of 2 (Dated 10/11/2017)</u>

- Sheet 4-5 in the Agreement is consistent with Sheet 4-5 of the Bid #1 Construction Drawings. There is one change to this sheet:
    - Construction Note 9 was added to provide clarification on the Contractor’s responsibilities.

<u>Sheet 4-6 – Haul Road Miscellaneous Details 2 of 2 (Dated 10/18/2017)</u>

- Sheet 4-6 in the Agreement is consistent with Sheet 4-6 of the Bid #1 Construction Drawings. There is one change to this sheet:
    - The wire gate detail was removed from the Construction Drawings. It was crossed out in the BNSF exhibit.

Sheet 4-7 – Haul Road Spur Plan and Profile (Dated 10/11/2017)

- Sheet 4-7 in the Agreement is consistent with Sheet 4-7 of the Bid #1 Construction Drawings. There are some slight changes to labeling, but no changes to line work or design features.

Sheet 4-7A – Haul Road Spur 2 Plan and Profile (Dated 10/18/2017)

- Sheet 4-7A in the Agreement is not included the Bid #1 Construction Drawings. There are no changes.

Sheet 4-9 – Haul Road Signing Plan (Dated 10/11/2017)

- Sheet 4-9 in the Agreement is consistent with Sheet 4-9 of the Bid #1 Construction Drawings. There are two changes to this sheet:
    - A "N.I.C" note was added to the "Haul Trucks Entering" Sign on Spur Road 2.
    - Construction Notes 5 and 6 were added to provide clarification on the Contractor's responsibilities.

Sheet 9-1 – Phase I Stormwater BMP Plan – Haul Road (Dated 12/15/2017)

- Sheet 9-1 in the Agreement is consistent with Sheet 9-1 of the Bid #1 Construction Drawings. There are some slight changes to labeling, but no changes to line work or design features.

Sheet 9-5 – Phase I Stormwater BMP Details – Haul Road (1 of 3) (Dated 12/4/2017)

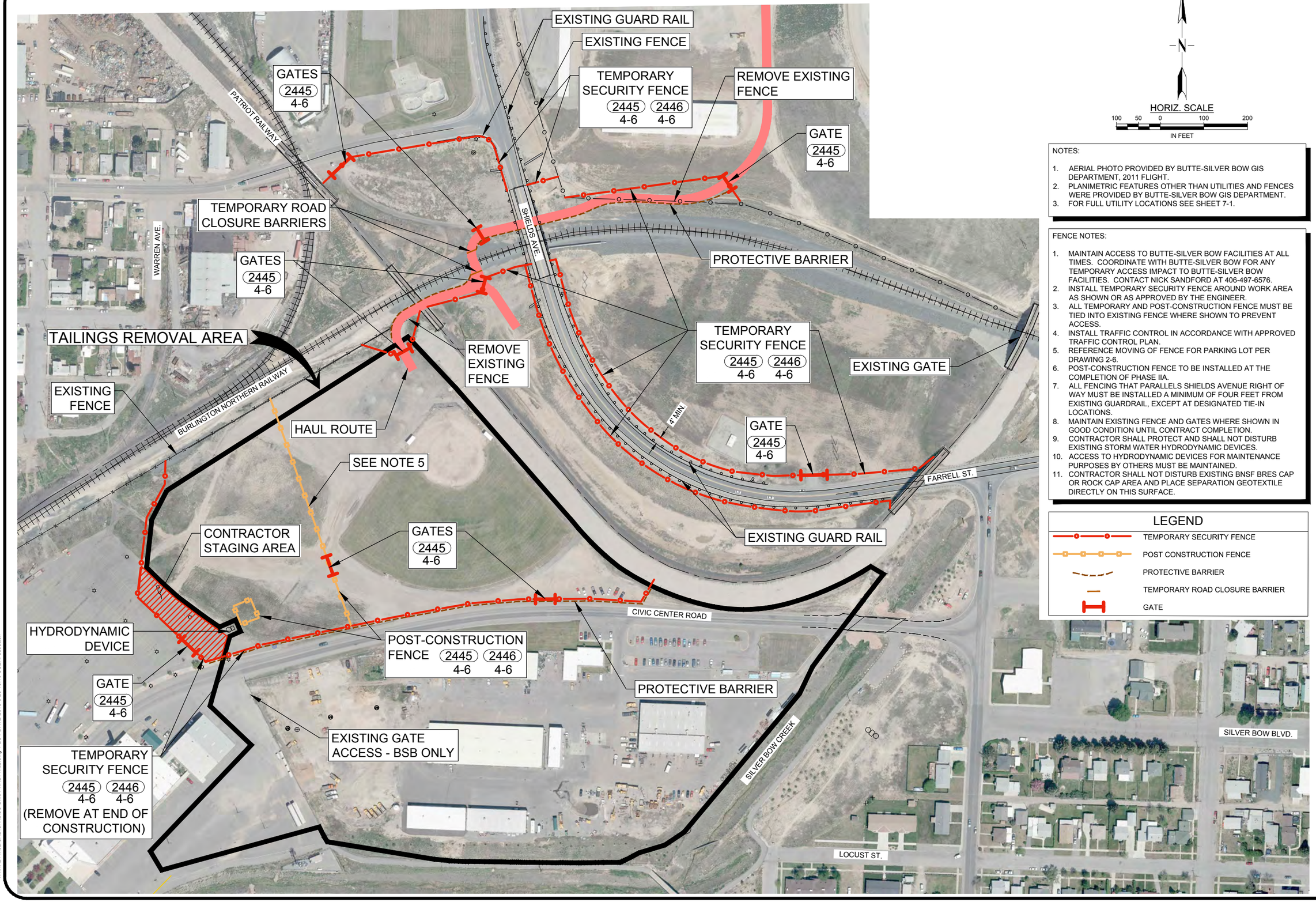
- Sheet 9-5 in the Agreement is consistent with Sheet 9-5 of the Bid #1 Construction Drawings. There are no changes.

Sheet 9-6 - Phase I Stormwater BMP Details – (2 of 3) (Dated 12/4/2017)
(Dated 10/11/2017)

- Sheet 9-6 in the Agreement is consistent with Sheet 9-6 of the Bid #1 Construction Drawings. There are no changes.

Sheet 9-7 - Phase I Stormwater BMP Details – Excavation Area (3 of 3) (Dated 12/4/2017)
(Dated 10/6/2017)

- Sheet 9-7 in the Agreement is consistent with Sheet 9-7 of the Bid #1 Construction Drawings. There are no changes.



HORIZ. SCALE

100 50 0 100 200

IN FEET

NOTES:

1. AERIAL PHOTO PROVIDED BY BUTTE-SILVER BOW GIS DEPARTMENT, 2011 FLIGHT.
2. PLANIMETRIC FEATURES OTHER THAN UTILITIES AND FENCES WERE PROVIDED BY BUTTE-SILVER BOW GIS DEPARTMENT.
3. FOR FULL UTILITY LOCATIONS SEE SHEET 7-1.

FENCE NOTES:

1. MAINTAIN ACCESS TO BUTTE-SILVER BOW FACILITIES AT ALL TIMES. COORDINATE WITH BUTTE-SILVER BOW FOR ANY TEMPORARY ACCESS IMPACT TO BUTTE-SILVER BOW FACILITIES. CONTACT NICK SANDFORD AT 406-497-6576.
2. INSTALL TEMPORARY SECURITY FENCE AROUND WORK AREA AS SHOWN OR AS APPROVED BY THE ENGINEER.
3. ALL TEMPORARY AND POST-CONSTRUCTION FENCE MUST BE TIED INTO EXISTING FENCE WHERE SHOWN TO PREVENT ACCESS.
4. INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH APPROVED TRAFFIC CONTROL PLAN.
5. REFERENCE MOVING OF FENCE FOR PARKING LOT PER DRAWING 2-6.
6. POST-CONSTRUCTION FENCE TO BE INSTALLED AT THE COMPLETION OF PHASE IIA.
7. ALL FENCING THAT PARALLELS SHIELDS AVENUE RIGHT OF WAY MUST BE INSTALLED A MINIMUM OF FOUR FEET FROM EXISTING GUARDRAIL, EXCEPT AT DESIGNATED TIE-IN LOCATIONS.
8. MAINTAIN EXISTING FENCE AND GATES WHERE SHOWN IN GOOD CONDITION UNTIL CONTRACT COMPLETION.
9. CONTRACTOR SHALL PROTECT AND SHALL NOT DISTURB EXISTING STORM WATER HYDRODYNAMIC DEVICES.
10. ACCESS TO HYDRODYNAMIC DEVICES FOR MAINTENANCE PURPOSES BY OTHERS MUST BE MAINTAINED.
11. CONTRACTOR SHALL NOT DISTURB EXISTING BNSF BRES CAP OR ROCK CAP AREA AND PLACE SEPARATION GEOTEXTILE DIRECTLY ON THIS SURFACE.

LEGEND

- TEMPORARY SECURITY FENCE
- POST CONSTRUCTION FENCE
- PROTECTIVE BARRIER
- TEMPORARY ROAD CLOSURE BARRIER
- GATE

No.	Description	Date	Drawn By

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Morrison Maierle
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MONTANA
JOSHUA T. VINCENT
No. 12994 PE
LICENSED PROFESSIONAL ENGINEER

PHASE I AND IIA CONTRACTOR STAGING AND ACCESS PLAN

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. SC-BM01-NRDPM02.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAS
CHECKED BY:	JT/JV/AL

DRAWING NO.
1-7

M:\NRDPM02\CAD\CIVIL\SC-BM01-NRDPM02.dwg PLOT DATE 2018-3-20 13:16 USER: dstratton

CONTROL POINT TABLE

HORIZONTAL DATUM: MONTANA COORDINATE SYSTEM NAD83(2007) ZONE 2500				
VERTICAL DATUM: NAVD88				
UNITS: INTERNATIONAL FEET				
CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1101	654012.959	1201529.426	5476.67	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1102	653276.494	1201854.397	5470.18	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1103	654433.667	1202147.837	5496.47	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1104	653991.333	1202538.283	5493.71	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1105	653263.095	1203072.870	5480.31	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1106	653765.127	1203575.050	5486.51	#5 Rebar with 1-1/4" WET Orange Plastic Cap
1107	654501.500	1203278.190	5498.17	#5 Rebar with 1-1/4" WET Orange Plastic Cap

SURVEY NOTES:

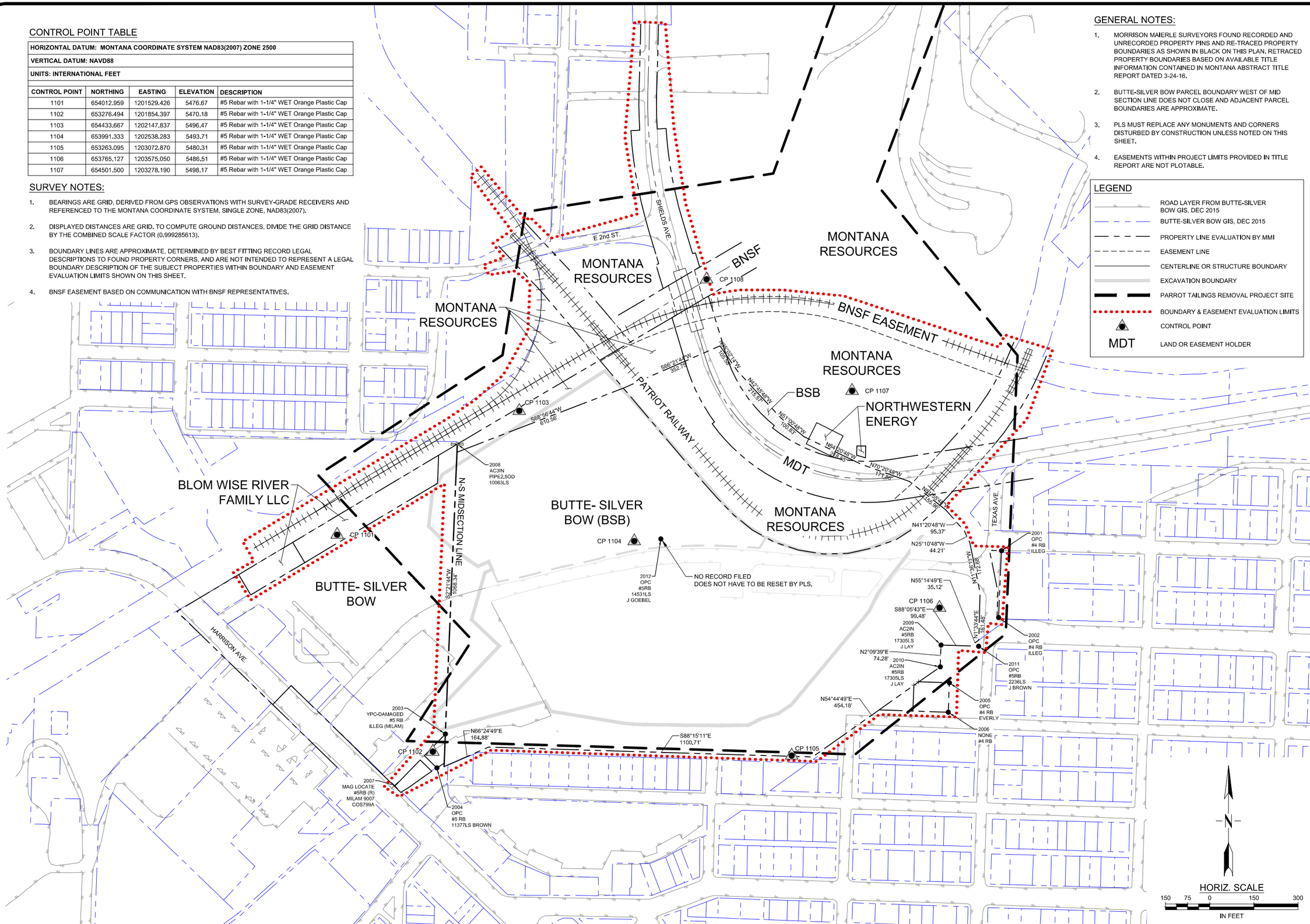
1. BEARINGS ARE GRID, DERIVED FROM GPS OBSERVATIONS WITH SURVEY-GRADE RECEIVERS AND REFERENCED TO THE MONTANA COORDINATE SYSTEM, SINGLE ZONE, NAD83(2007).
2. DISPLAYED DISTANCES ARE GRID. TO COMPUTE GROUND DISTANCES, DIVIDE THE GRID DISTANCE BY THE COMBINED SCALE FACTOR (0.999285613).
3. BOUNDARY LINES ARE APPROXIMATE, DETERMINED BY BEST FITTING RECORD LEGAL DESCRIPTIONS TO FOUND PROPERTY CORNERS, AND ARE NOT INTENDED TO REPRESENT A LEGAL BOUNDARY DESCRIPTION OF THE SUBJECT PROPERTIES WITHIN BOUNDARY AND EASEMENT EVALUATION LIMITS SHOWN ON THIS SHEET.
4. BNSF EASEMENT BASED ON COMMUNICATION WITH BNSF REPRESENTATIVES.

GENERAL NOTES:

1. MORRISON MAIERLE SURVEYORS FOUND RECORDED AND UNRECORDED PROPERTY PINS AND RE-TRACED PROPERTY BOUNDARIES AS SHOWN IN BLACK ON THIS PLAN. RETRACED PROPERTY BOUNDARIES BASED ON AVAILABLE TITLE INFORMATION CONTAINED IN MONTANA ABSTRACT TITLE REPORT DATED 3-24-16.
2. BUTTE-SILVER BOW PARCEL BOUNDARY WEST OF MID SECTION LINE DOES NOT CLOSE AND ADJACENT PARCEL BOUNDARIES ARE APPROXIMATE.
3. PLS MUST REPLACE ANY MONUMENTS AND CORNERS DISTURBED BY CONSTRUCTION UNLESS NOTED ON THIS SHEET.
4. EASEMENTS WITHIN PROJECT LIMITS PROVIDED IN TITLE REPORT ARE NOT PLOTABLE.

LEGEND

- ROAD LAYER FROM BUTTE-SILVER BOW GIS, DEC 2015
- BUTTE-SILVER BOW GIS, DEC 2015
- PROPERTY LINE EVALUATION BY MMI
- EASEMENT LINE
- CENTERLINE OR STRUCTURE BOUNDARY
- EXCAVATION BOUNDARY
- PARROT TAILINGS REMOVAL PROJECT SITE
- BOUNDARY & EASEMENT EVALUATION LIMITS
- CONTROL POINT
- MDT — LAND OR EASEMENT HOLDER



No.	Description	Date	Drawn By

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MONTANA MARK BROOKE 14384 PE REGISTERED PROFESSIONAL ENGINEER

PROPERTY BOUNDARY AND EASEMENT MAP

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 1-9 PROPERTY BNDRY & EASE MAP.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAH
CHECKED BY:	MB

DRAWING NO.
1-9

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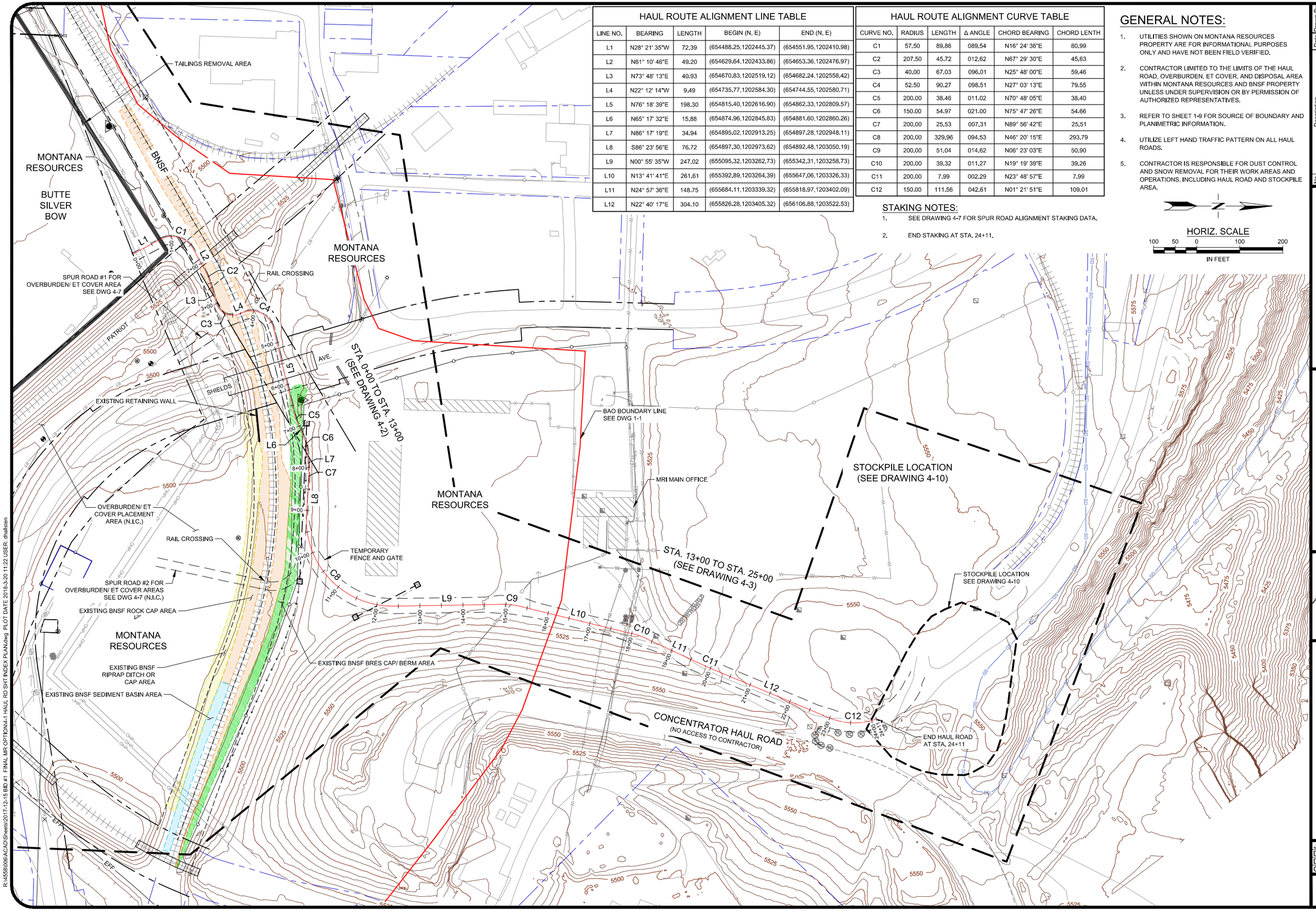

HAUL ROUTE ALIGNMENT LINE TABLE

LINE NO.	BEARING	LENGTH	BEGIN (N, E)	END (N, E)
L1	N28° 21' 35"W	72.39	(654488.25,1202445.37)	(654551.95,1202410.98)
L2	N61° 10' 46"E	49.20	(654629.64,1202433.86)	(654653.36,1202476.97)
L3	N73° 48' 13"E	40.93	(654670.83,1202519.12)	(654682.24,1202558.42)
L4	N22° 12' 14"W	9.49	(654735.77,1202584.30)	(654744.55,1202580.71)
L5	N76° 18' 39"E	198.30	(654815.40,1202616.90)	(654862.33,1202809.57)
L6	N65° 17' 32"E	15.88	(654874.96,1202845.83)	(654881.60,1202860.26)
L7	N86° 17' 19"E	34.94	(654895.02,1202913.25)	(654897.28,1202948.11)
L8	S86° 23' 56"E	76.72	(654897.30,1202973.62)	(654892.48,1203050.19)
L9	N00° 55' 35"W	247.02	(655095.32,1203262.73)	(655342.31,1203258.73)
L10	N13° 41' 41"E	261.61	(655392.89,1203264.39)	(655647.06,1203326.33)
L11	N24° 57' 36"E	148.75	(655684.11,1203339.32)	(655818.97,1203402.09)
L12	N22° 40' 17"E	304.10	(655826.28,1203405.32)	(656106.88,1203522.53)

HAUL ROUTE ALIGNMENT CURVE TABLE

CURVE NO.	RADIUS	LENGTH	Δ ANGLE	CHORD BEARING	CHORD LENTH
C1	57.50	89.86	089.54	N16° 24' 36"E	80.99
C2	207.50	45.72	012.62	N67° 29' 30"E	45.63
C3	40.00	67.03	096.01	N25° 48' 00"E	59.46
C4	52.50	90.27	098.51	N27° 03' 13"E	79.55
C5	200.00	38.46	011.02	N70° 48' 05"E	38.40
C6	150.00	54.97	021.00	N75° 47' 26"E	54.66
C7	200.00	25.53	007.31	N89° 56' 42"E	25.51
C8	200.00	329.96	094.53	N46° 20' 15"E	293.79
C9	200.00	51.04	014.62	N06° 23' 03"E	50.90
C10	200.00	39.32	011.27	N19° 19' 39"E	39.26
C11	200.00	7.99	002.29	N23° 48' 57"E	7.99
C12	150.00	111.56	042.61	N01° 21' 51"E	109.01

GENERAL NOTES:

1. UTILITIES SHOWN ON MONTANA RESOURCES PROPERTY ARE FOR INFORMATIONAL PURPOSES ONLY AND HAVE NOT BEEN FIELD VERIFIED.
2. CONTRACTOR LIMITED TO THE LIMITS OF THE HAUL ROAD, OVERBURDEN, ET COVER, AND DISPOSAL AREA WITHIN MONTANA RESOURCES AND BNSF PROPERTY UNLESS UNDER SUPERVISION OR BY PERMISSION OF AUTHORIZED REPRESENTATIVES.
3. REFER TO SHEET 1-9 FOR SOURCE OF BOUNDARY AND PLANIMETRIC INFORMATION.
4. UTILIZE LEFT HAND TRAFFIC PATTERN ON ALL HAUL ROADS.
5. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL AND SNOW REMOVAL FOR THEIR WORK AREAS AND OPERATIONS, INCLUDING HAUL ROAD AND STOCKPILE AREA.

STAKING NOTES:

1. SEE DRAWING 4-7 FOR SPUR ROAD ALIGNMENT STAKING DATA.
2. END STAKING AT STA. 24+11.

HORIZ. SCALE

100 50 0 100 200

IN FEET

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MONTANA
KENNETH BERTELSEN
18492 PE
REGISTERED PROFESSIONAL ENGINEER

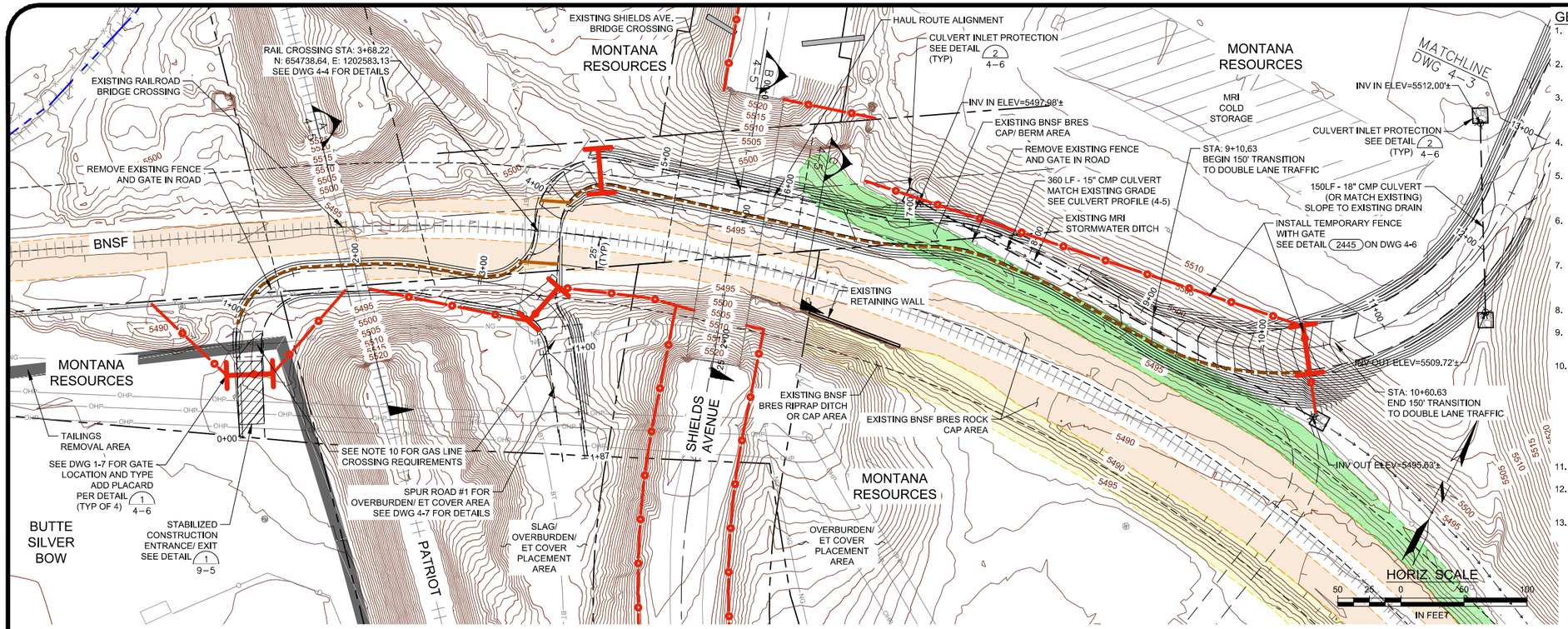
HAUL ROAD SHEET INDEX PLAN

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-1 HAUL RD SHT INDEX PLAN.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAH
CHECKED BY:	MB

DRAWING NO.
4-1

R:\4558\006\ACAD\Sheets\2017-12-15 BID #1 FINAL MR OPTION\4-1 HAUL RD SHT INDEX PLAN.dwg PLOT DATE:2018-3-20 11:22 USER: dhallsten

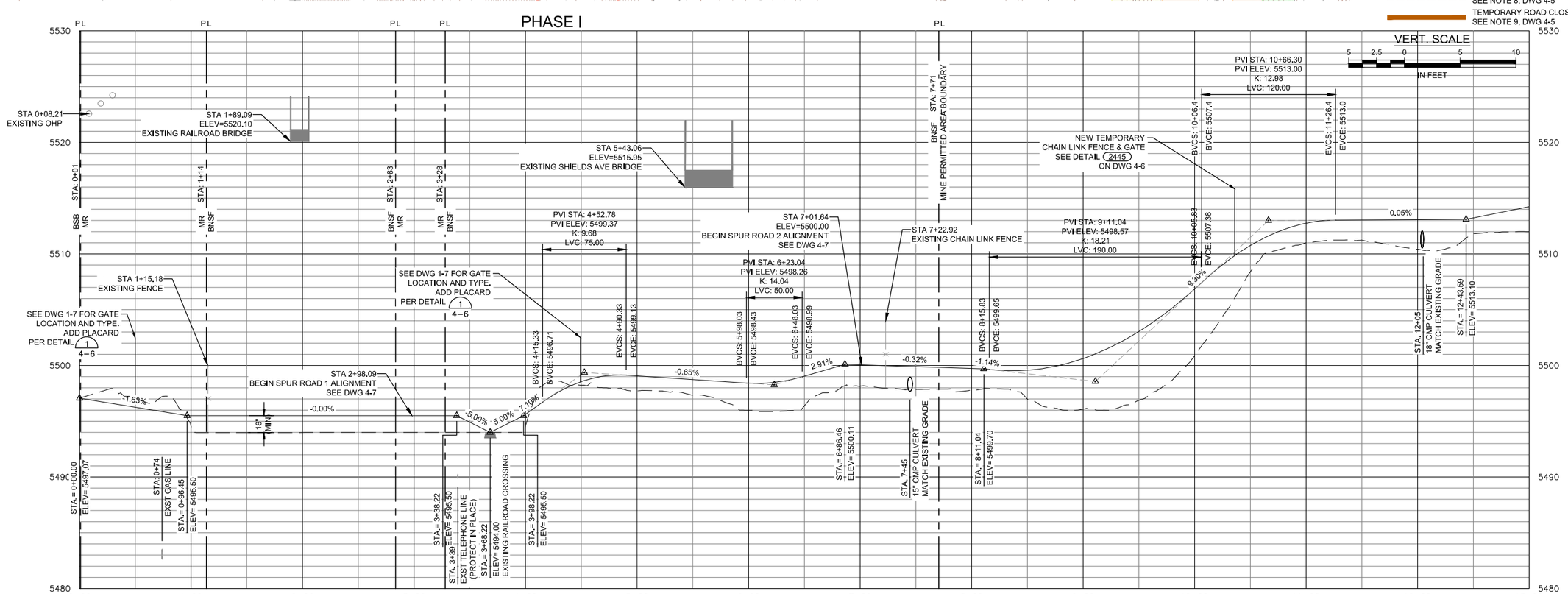


GENERAL NOTES:

1. UTILITIES SHOWN ON MONTANA RESOURCES PROPERTY ARE FOR INFORMATIONAL PURPOSES ONLY AND HAVE NOT BEEN FIELD VERIFIED.
2. SEE DRAWING 4-1 FOR HAUL ROUTE CENTERLINE ALIGNMENT STAKING TABLE.
3. HAUL ROAD WIDTH TRANSITIONS TO BE 10:1 PRIOR TO CURVE'S BEGINNING P.I. AND 10:1 AFTER CURVE'S END P.I. SEE TYPICAL HAUL ROAD SECTIONS ON DRAWING 4-5 FOR ROAD WIDTHS.
4. CONTRACTOR SHALL RE-USE AND RE-SET GATE AT STATION 0+00 AS NECESSARY TO PERFORM CONSTRUCTION OPERATIONS.
5. CONTRACTOR SHALL FOLLOW ALL CONDITIONS OF BNSF RAILROAD ACCESS AGREEMENT AND BE IN CONTACT WITH ROADMASTER WHEN ON BNSF PROPERTY.
6. GATES FOR ACCESS TO MONTANA RESOURCES AND BNSF PROPERTY SHALL BE CLOSED AND LOCKED OUTSIDE OF CONSTRUCTION HOURS AND WHEN HAUL ROAD IS NOT IN OPERATION.
7. CONTRACTOR SHALL NOT DISTURB EXISTING BNSF BRES CAP OR ROCK CAP AREA AND SHALL PLACE SEPARATION GEOTEXTILE DIRECTLY ON THIS SURFACE.
8. SEE PROFILE ON 4-5 FOR LONG CULVERT UNDER HAUL ROAD.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE HAUL EQUIPMENT FOR OPERATION ON THIS HAUL ROAD.
10. NORTHWESTERN ENERGY IS REQUIRING THAT A BRIDGE BE INSTALLED TO PROTECT THE GAS MAIN AT EACH CROSSING. THIS BRIDGE NEEDS TO BE ELEVATED ABOVE THE GROUND AT THE CROSSING AND EXTEND MIN 10 FT ON EITHER SIDE OF THE GAS MAIN. CONTRACTOR SHALL PROVIDE FINAL DRAWINGS OF THE HAUL ROAD LOCATION AND BRIDGE PLACEMENT TO THE ENGINEER FOR SUBMITTAL TO NWE BEFORE WORK BEGINS. NWE WILL ALSO REQUIRE ACCESS TO THE SITE FOR LEAK SURVEY PURPOSES ONCE A WEEK.
11. ALIGNMENT FOR OLD (BP#1) AND NEW ALIGNMENT PART OF (BP#2) N.I.C.
12. INSTALL FENCING IN ACCORDANCE WITH DRAWING 1-7. FENCING SHOWN ON THIS PLAN FOR CLARITY AND COORDINATION.
13. EXISTING FENCE IN HAUL ROAD SHALL BE REMOVED AND SALVAGED AS APPROVED BY THE ENGINEER.

LEGEND:

- PERMANENT FENCE
- GATE
- PROTECTIVE BARRIER, SEE NOTE 8, DWG 4-5
- TEMPORARY ROAD CLOSURE BARRIER, SEE NOTE 9, DWG 4-5



HAUL ROUTE PROFILE STA. 0+00 TO STA. 13+00

No.	Description	Date	Drawn By

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MONTANA PROFESSIONAL ENGINEER
KLANE BERTELSEN 18492 PE
REGISTERED

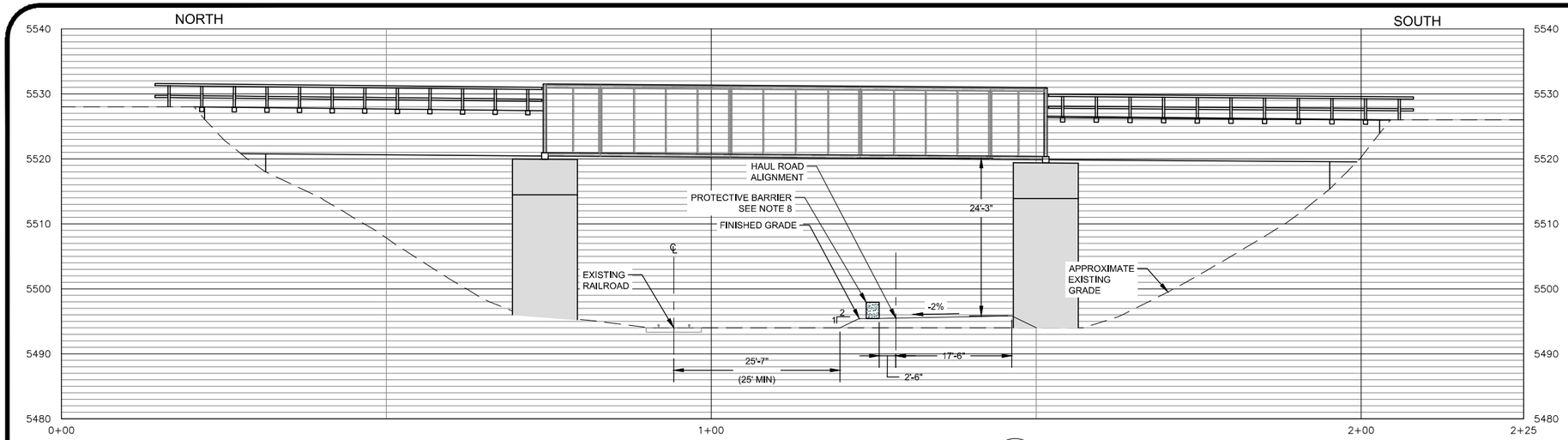
HAUL ROAD PLAN AND PROFILE STA. 0+00 TO STA. 13+00

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-2 HAUL RD P&P.dwg

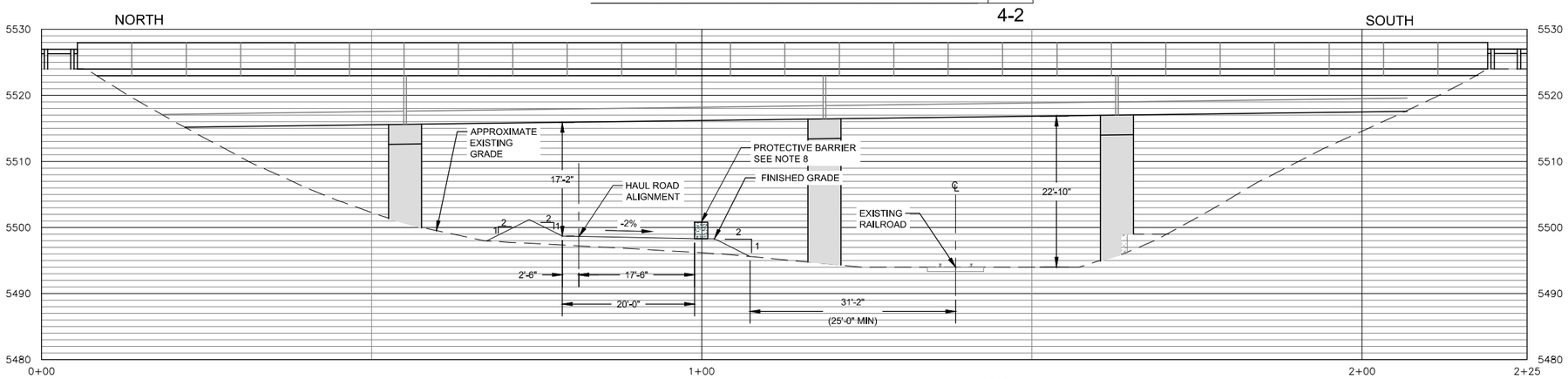
JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAH
CHECKED BY:	MB

DRAWING NO.
4-2

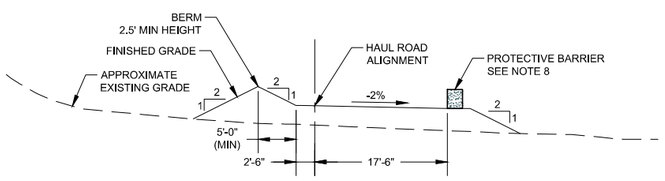
R:\4558\006\ACAD\Sheet\2017-12-15 BID #1 FINAL MR OPTION\4-2 HAUL RD P&P.dwg PLOT DATE:2018-3-20 11:23 USER: dhallsten



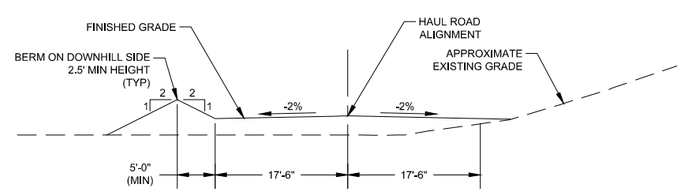
PATRIOT RAILROAD UNDERPASS SECTION (A) 4-2



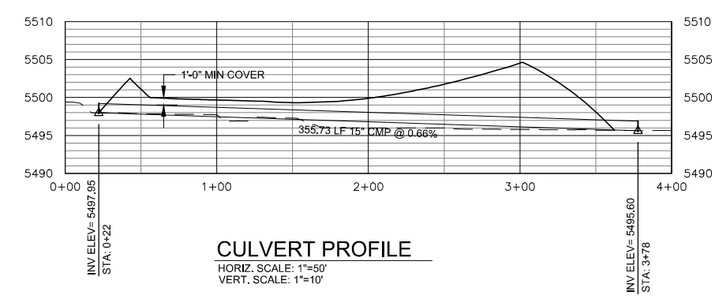
SHIELDS AVE. UNDERPASS SECTION (B) 4-2



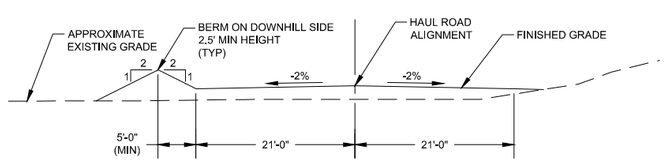
TYPICAL HAUL ROAD ONE-LANE SECTION (C) 4-2
SCALE: 1"=10'



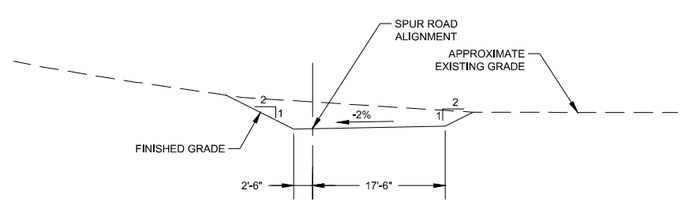
TYPICAL HAUL ROAD DOUBLE LANE STRAIGHT SECTION (E) 4-3
SCALE: 1"=10'



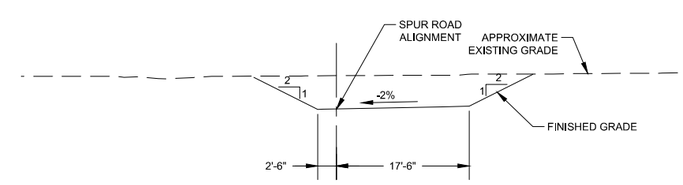
CULVERT PROFILE
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'



TYPICAL HAUL ROAD DOUBLE LANE CURVE SECTION (D) 4-3
SCALE: 1"=10'



TYPICAL SPUR ROAD #1 SECTION (F) 4-7
SCALE: 1"=10'



TYPICAL SPUR ROAD #2 SECTION (N.I.C.) (G) 4-7
SCALE: 1"=10'

GENERAL NOTES:

1. HAUL ROAD SECTION TO BE MIN 18-INCHES COMPACTED, 1.5-INCH MINUS OVER GEOTEXTILE SEPARATION FABRIC FROM STA 0+00 TO END.
2. SPUR ROAD 1 SECTION TO BE MIN 18-INCHES COMPACTED, 1.5-INCH MINUS OVER GEOTEXTILE SEPARATION FABRIC FROM STA 0+00 TO STA 1+87.
3. SPUR ROAD 2 SECTION TO BE 18-INCHES COMPACTED, 1.5-INCH MINUS OVER GEOTEXTILE SEPARATION FABRIC FROM STA 0+00 TO STA 6+50. (N.I.C.)
4. CONTRACTOR SHALL PROTECT ALL BRIDGE STRUCTURES ADJACENT TO HAUL ROAD. NO DOWNHILL BERM REQUIRED FROM STA. 0+00 TO STA. 6+50.
5. THE BERM HEIGHT SHALL BE CONSTRUCTED TO MIN MID-AXLE HEIGHT OF THE LARGEST VEHICLE CONTRACTOR PROPOSES TO OPERATE ON HAUL ROAD ON MONTANA RESOURCES PROPERTY.
6. CONTRACTOR SHALL KEEP ALL BMP'S AND OTHER STRUCTURES EXCEPT HAUL ROAD AND RAILROAD CROSSINGS 25' AWAY FROM CENTERLINE OF RAILROAD TRACK.
7. INSTALL BMP'S TO CONTROL RUNOFF FROM HAUL ROAD WITH THE BERMS AS APPROVED BY THE ENGINEER.
8. CONCRETE PROTECTIVE BARRIER:
   A. CONCRETE SHALL CONFORM TO SPECIFICATION SECTION 03310.
   B. REINFORCING STEEL SHALL CONFORM TO SPECIFICATION SECTION 03210.
   C. PLACE BARRIER ON LEVEL, COMPACTED SURFACE CONFORMING TO SPECIFICATION SECTION 02210.
   D. SPACING FROM EDGE OF FILL SLOPE SHALL BE 6-INCHES, MINIMUM.
   E. TOTAL HEIGHT OF BARRIER SHALL BE A MINIMUM OF 30-INCHES.
   F. BARRIER SECTIONS MAY BE CONNECTED VIA PIN OR TONGUE AND GROOVE.
   G. BARRIER BOTTOM WIDTH TO NOT EXCEED 30-INCHES. MIN TOP WIDTH 6".
9. TEMPORARY ROAD CLOSURE BARRIER SHALL CONSIST OF CONCRETE PROTECTIVE BARRIER PLACED ACROSS HAUL ROAD > 25' FROM CENTERLINE OF TRACK TO PREVENT VEHICLE ACCESS TO RAILROAD CROSSING.

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MONTANA PROFESSIONAL ENGINEER
KENNETH BERTELSEN
18492 PE
REGISTERED

HAUL ROAD MISCELLANEOUS DETAILS 1 OF 2

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-5 HAUL RD SECTIONS & DETAILS.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAH
CHECKED BY:	MB

DRAWING NO.
4-5

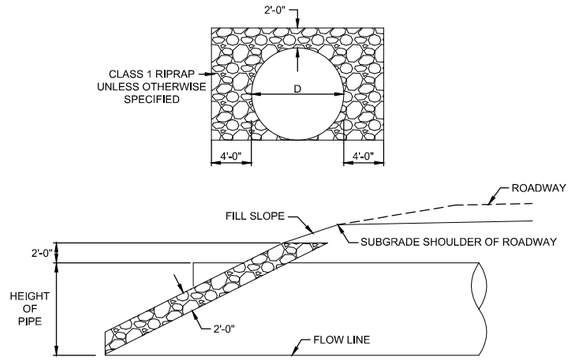
R:\4559\006\ACAD\Sheets\2017-12-15 BID #1 FINAL MR OPTION\4-5 HAUL RD SECTIONS & DETAILS.dwg PLOT DATE 2018-3-20 11:25 USER: dhallsten

DO NOT OPEN GATE
WITHOUT AUTHORIZATION FROM
PROJECT RAILROAD SAFETY OFFICER

NOTE:

1. PLACE PLACARD ON ALL GATES USED TO ACCESS RAILROAD PROPERTY OR EASEMENTS.

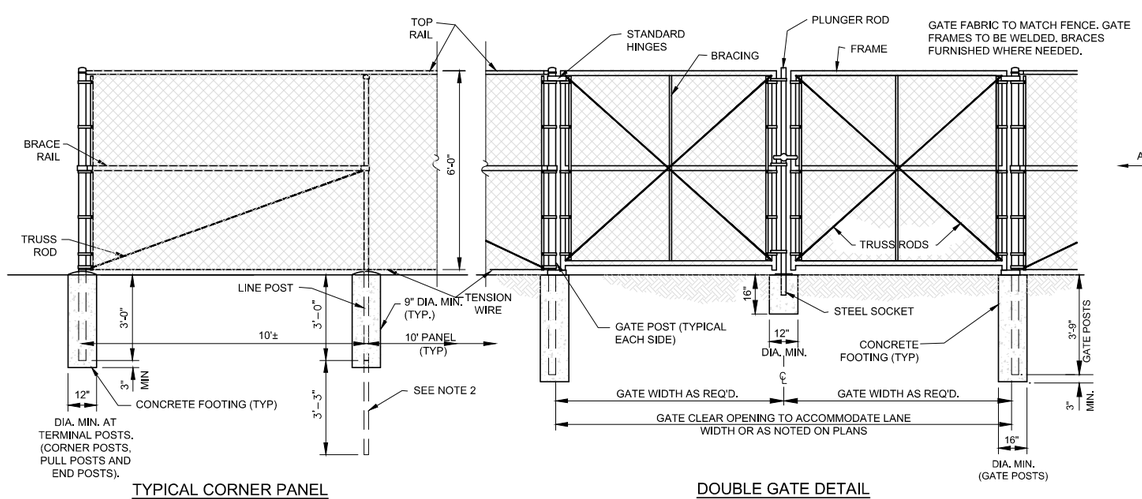
PLACARD DETAIL (1) 4-2 4-7
NTS



NOTES:

1. KEY ENDS OF RIPRAP WALLS INTO THE EMBANKMENT SLOPES A MINIMUM OF 2 FEET FROM OUTER FACE OF THE RIPRAP FOR THE FULL HEIGHT OF THE RIPRAP WALL.
2. SEE SPECIFICATIONS FOR GRADATION, CLASS AND CONSTRUCTION METHODS.

CULVERT INLET PROTECTION (2) 4-2 4-3
NTS



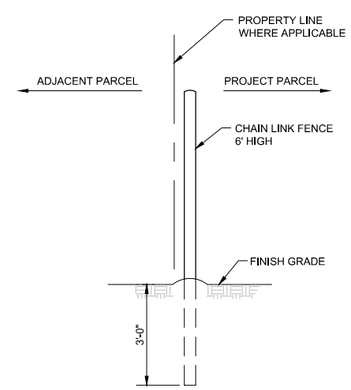
TYPICAL CORNER PANEL

DOUBLE GATE DETAIL

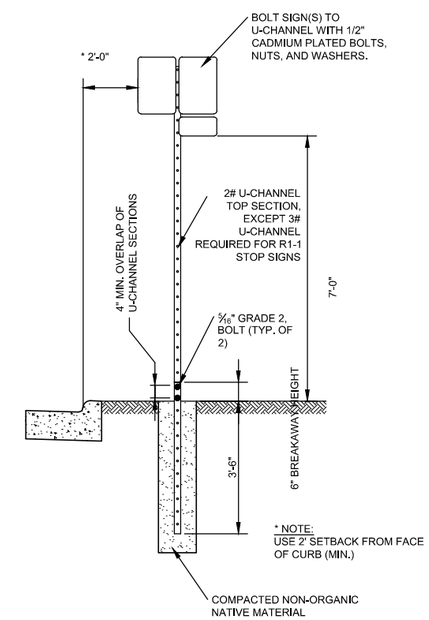
NOTES:

1. PROVIDE DOUBLE PANELS AT ALL CORNERS AND AT 300' MAXIMUM INTERVALS ON TANGENT. (TO BE USED FOR PULLING) DOUBLE PANELS SHALL BE PLACED AT END OF CURVES SHARPER THAN 5°, AND BE EVENLY SPACED BETWEEN AT ±20° CENTRAL ANGLE, 10° DEFLECTION ANGLE NOT TO EXCEED 250' CURVE.
2. AT INTERVALS NOT TO EXCEED 500', ONE POST WILL BE EXTENDED 3' INTO THE GROUND FOR LIGHTNING PROTECTION.

6 FOOT CHAIN LINK FENCE & GATE DETAIL (2445)
NTS



TYPICAL FENCE POST DETAIL (2446)
NTS



TYPICAL SIGN MOUNTING DETAIL (10146)
NOT TO SCALE

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MARK BROOKE
13384 PE
REGISTERED PROFESSIONAL ENGINEER

HAUL ROAD MISCELLANEOUS DETAILS 2 OF 2

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-6 HAUL ROAD MISC DETAILS.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
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DRAWING NO.
4-6

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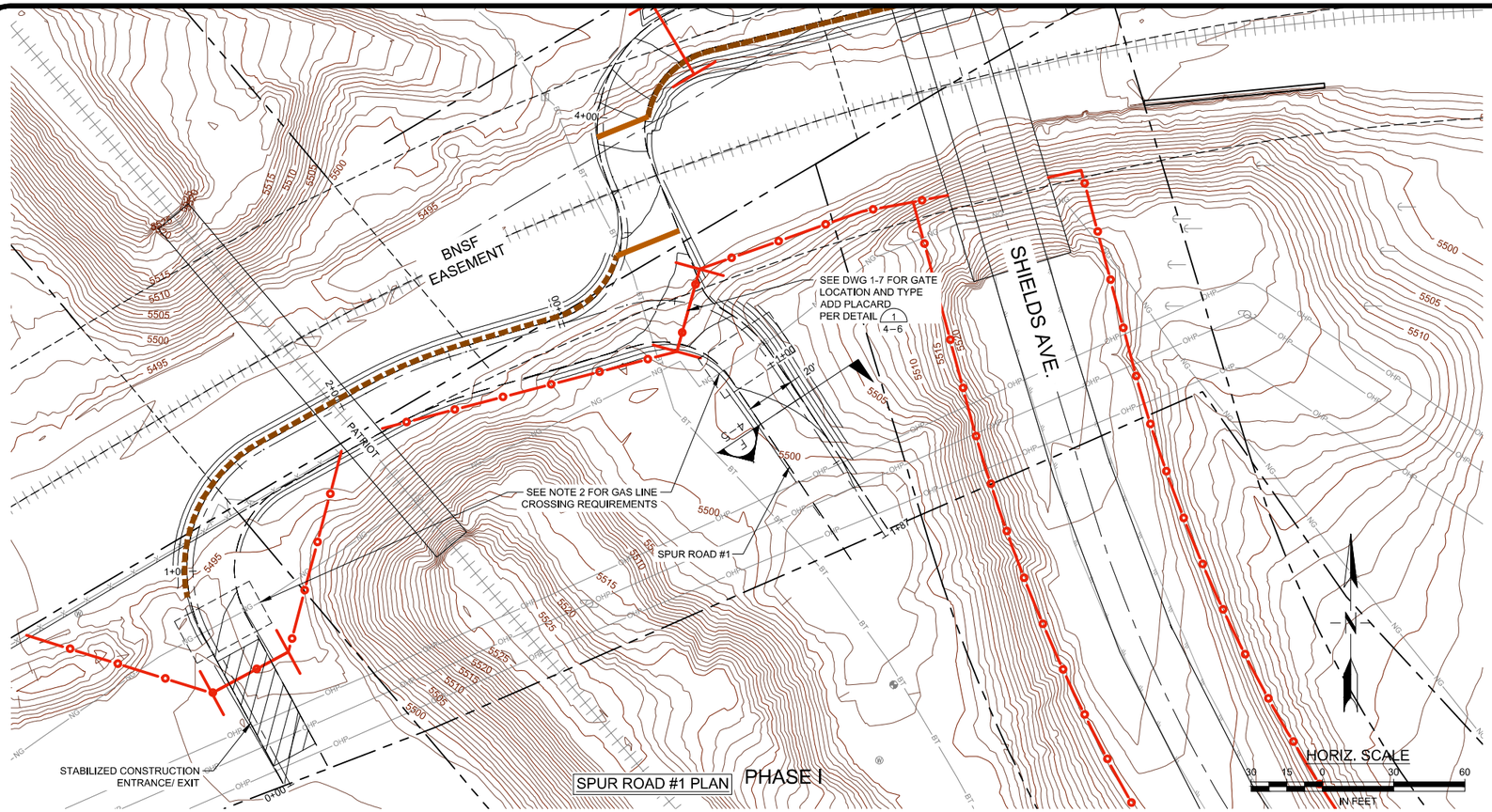

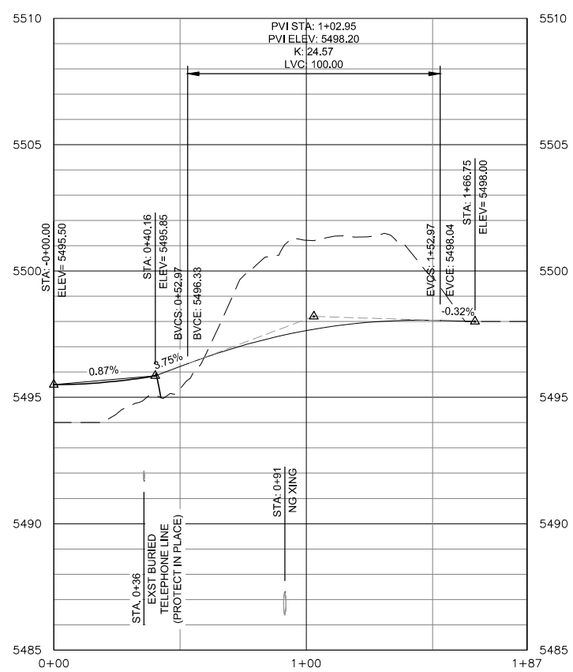

SPUR ROAD #1 PROFILE

GENERAL NOTES:

1. UTILITIES SHOWN ON PLAN AND PROFILE ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR AS NECESSARY.
2. NORTHWESTERN ENERGY IS REQUIRING THAT A BRIDGE BE INSTALLED TO PROTECT THE GAS MAIN AT EACH CROSSING. THIS BRIDGE NEEDS TO BE ELEVATED ABOVE THE GROUND AT THE CROSSING AND EXTEND MIN 10 FT ON EITHER SIDE OF THE GAS MAIN. CONTRACTOR SHALL PROVIDE FINAL DRAWINGS OF THE HAUL ROAD LOCATION AND BRIDGE PLACEMENT TO THE ENGINEER FOR SUBMITTAL TO NWE BEFORE WORK BEGINS. NWE WILL ALSO REQUIRE ACCESS TO THE SITE FOR LEAK SURVEY PURPOSES ONCE A WEEK.

LEGEND:

- PERMANENT FENCE
- GATE
- PROTECTIVE BARRIER, SEE NOTE 8, DWG 4-5
- TEMPORARY ROAD CLOSURE BARRIER SEE NOTE 9, DWG 4-5

No.	Description	Date	Drawn By

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HAUL ROAD SPUR PLAN AND PROFILE

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-7 SPUR P&P.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
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DRAWING NO.
4-7

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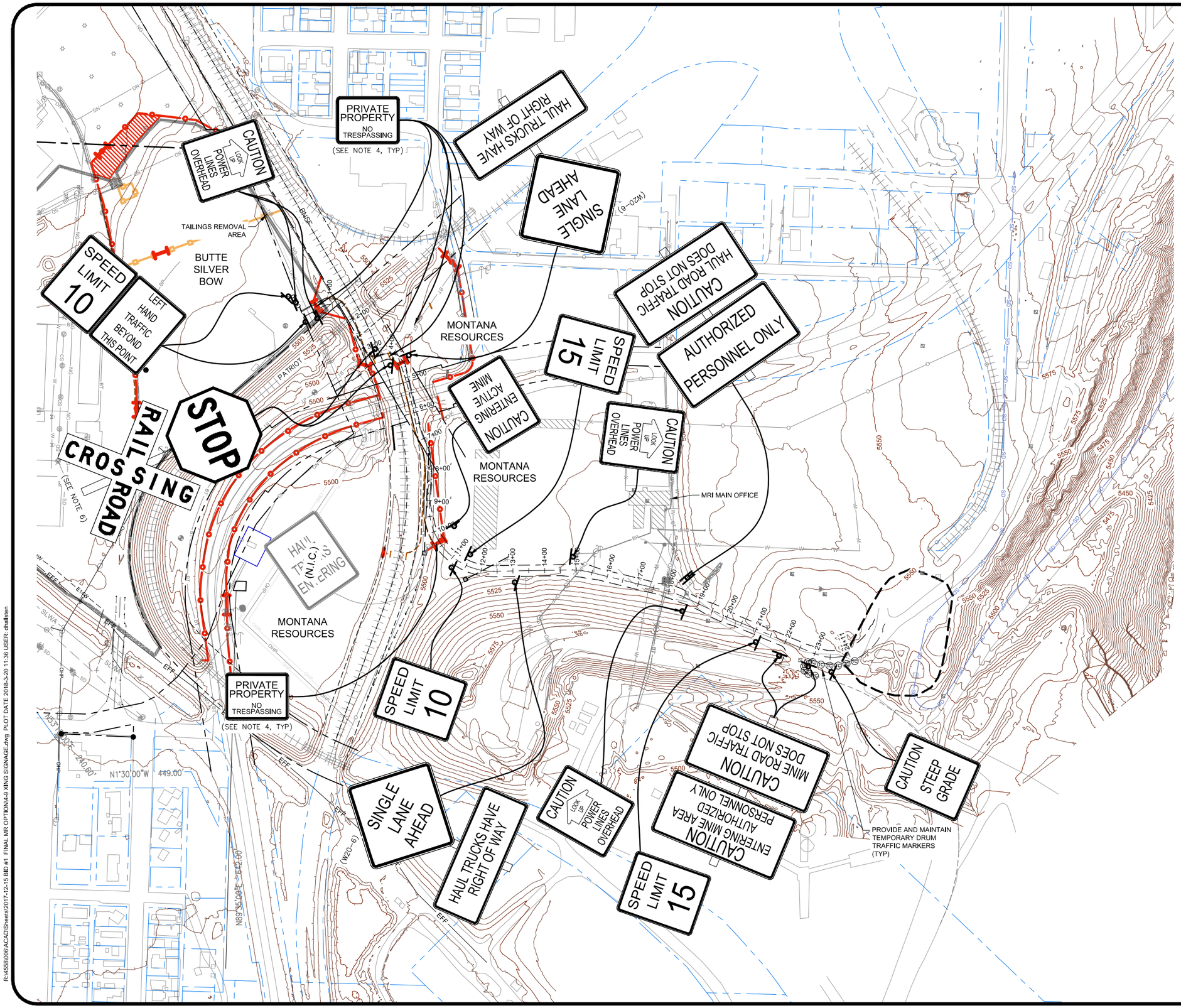

HORIZ. SCALE

150 75 0 150 300

IN FEET

GENERAL NOTES:

1. UTILITIES SHOWN ON MONTANA RESOURCES PROPERTY ARE FOR INFORMATIONAL PURPOSES ONLY AND HAVE NOT BEEN FIELD VERIFIED.
2. SEE DETAIL 10146 ON DRAWING 4-6 FOR SIGN POST AND MOUNTING REQUIREMENTS.
3. THIS PLAN SHOWS SIGN TYPE AND GENERAL LOCATION. SIGN LOCATIONS ARE APPROXIMATE. CONTRACTOR TO FIELD FIT UPON COMPLETION OF HAUL ROAD WITH APPROVAL FROM ENGINEER.
4. SIGN SHALL BE POSTED AT ALL GATES AND BARRIERS ON AND ENTERING BNSF PROPERTY VIA HAUL ROAD.
5. CONTRACTOR TO USE MUTCD STANDARD SIGNAGE WHEN POSSIBLE.
6. RAIL CROSSING/ STOP SIGNS INSTALLED BY BNSF.

LEGEND:

- PERMANENT FENCE
- GATE
- PROTECTIVE BARRIER SEE NOTE 8, DWG 4-5
- TEMPORARY ROAD CLOSURE BARRIER SEE NOTE 9, DWG 4-5

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KENNETH BERTELSEN
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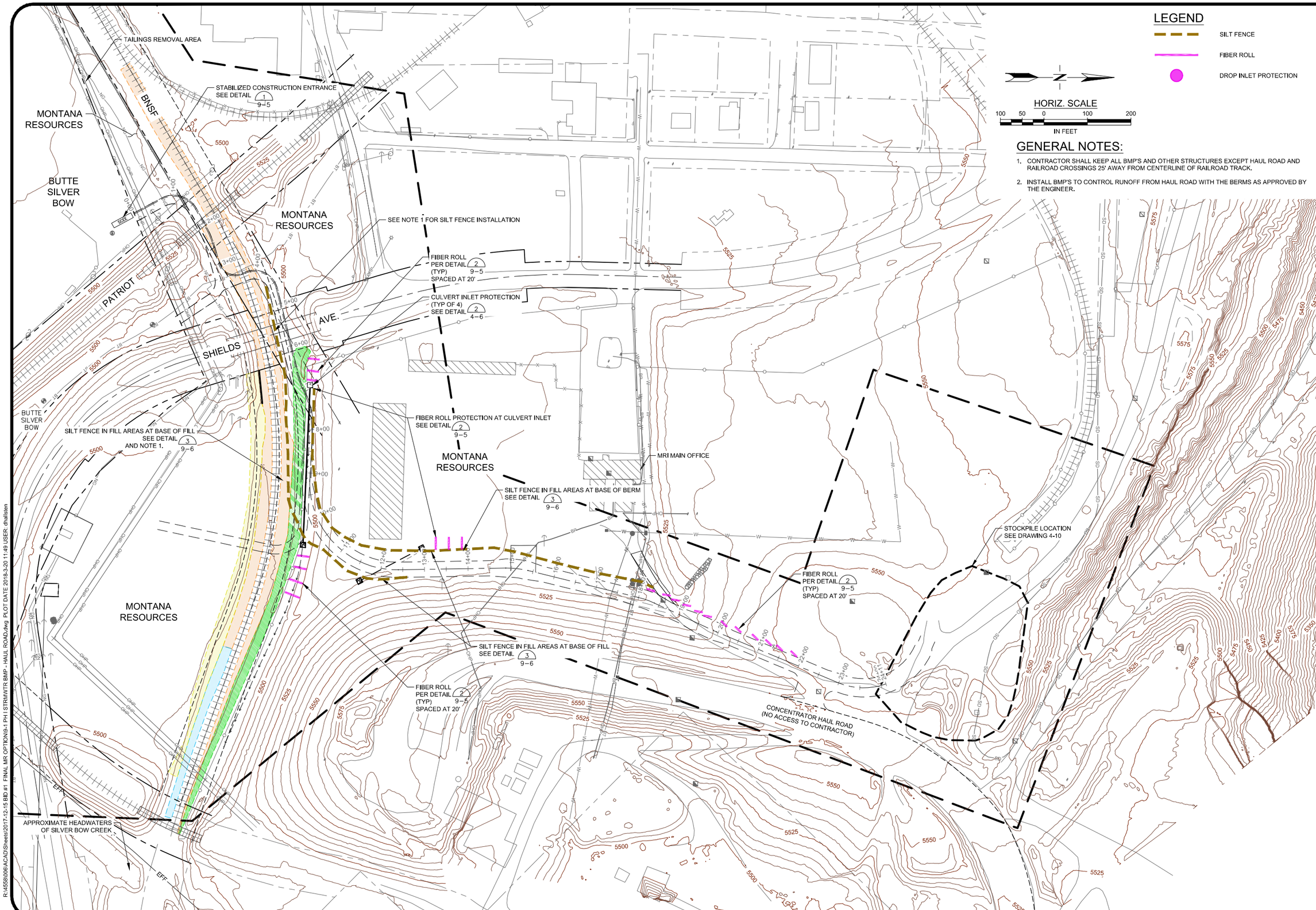
HAUL ROAD SIGNING PLAN

PROJECT NAME: BAO PARROT TAILINGS REMOVAL
LOCATION: BUTTE, MONTANA
FILE NO. 4-9 XING SIGNAGE.dwg

JOB NO:	NRDPM02
DATE:	3/20/18
DRAFTER:	DAH
CHECKED BY:	MB

DRAWING NO.
4-9

R:\4559\006\ACAD\Sheets\2017-12-15 BID #1 FINAL MR OPTION\4-9 XING SIGNAGE.dwg PLOT DATE 2018-3-20 11:36 USER: dhallsten


TAILINGS REMOVAL AREA
STABILIZED CONSTRUCTION ENTRANCE SEE DETAIL 1 9-5
MONTANA RESOURCES
BNSF
BUTTE SILVER BOW
MONTANA RESOURCES
SEE NOTE 1 FOR SILT FENCE INSTALLATION
FIBER ROLL PER DETAIL 2 9-5 (TYP) SPACED AT 20'
CULVERT INLET PROTECTION (TYP OF 4) SEE DETAIL 2 4-6
PATRIOT
AVE.
SHIELDS
BUTTE SILVER BOW
SILT FENCE IN FILL AREAS AT BASE OF FILL SEE DETAIL 3 9-6 AND NOTE 1.
FIBER ROLL PROTECTION AT CULVERT INLET SEE DETAIL 2 9-5
MONTANA RESOURCES
MRI MAIN OFFICE
SILT FENCE IN FILL AREAS AT BASE OF BERM SEE DETAIL 3 9-6
STOCKPILE LOCATION SEE DRAWING 4-10
FIBER ROLL PER DETAIL 2 9-5 (TYP) SPACED AT 20'
MONTANA RESOURCES
SILT FENCE IN FILL AREAS AT BASE OF FILL SEE DETAIL 3 9-6
FIBER ROLL PER DETAIL 2 9-5 (TYP) SPACED AT 20'
CONCENTRATOR HAUL ROAD (NO ACCESS TO CONTRACTOR)
APPROXIMATE HEADWATERS OF SILVER BOW CREEK
EFF
EFF
5500
5525
5550
5575
5600
5475
5450
5425
5400
5375
5350
5250
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
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