16-inch South Bend Crude Oil Pipeline

McKenzie & Golden Valley Counties

Amended Consolidated Application for
Certificate of Corridor Compatibility & Route Permit
Case No. PU-21-048

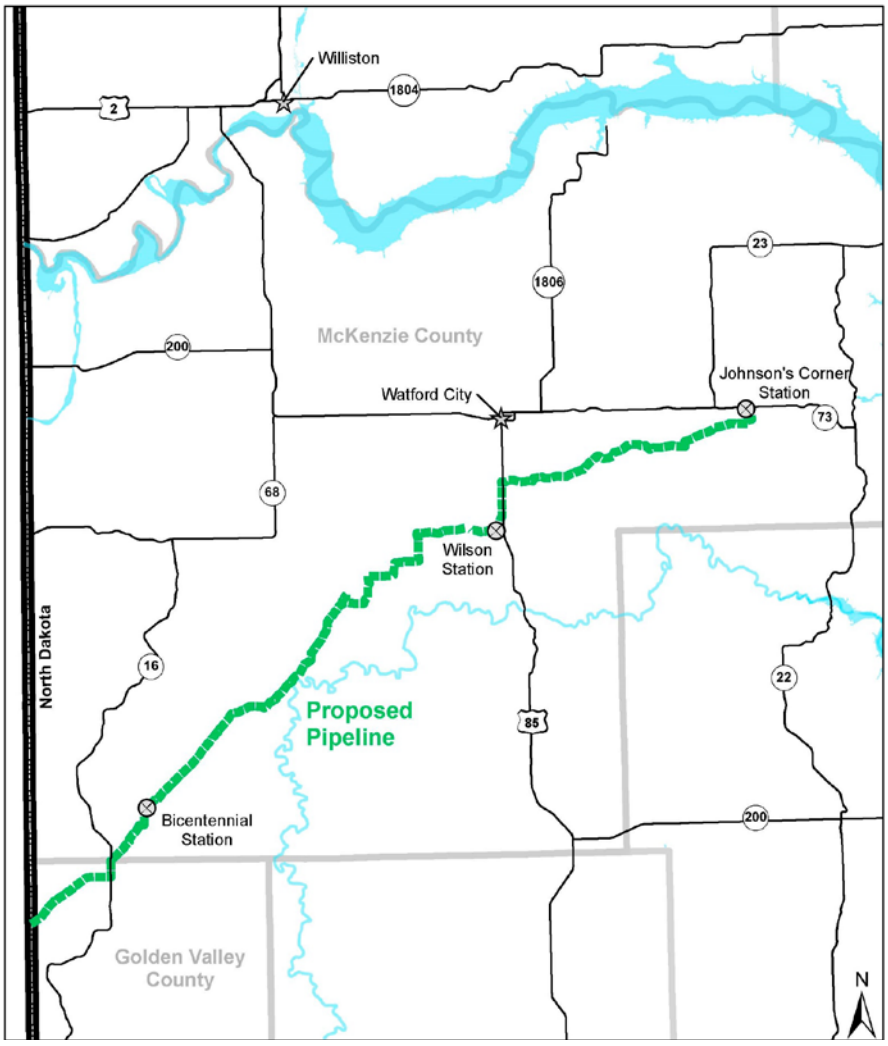

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Table of Contents

Regulatory Cross-Reference Guide iv
List of Exhibits viii
Introduction 1
1 Description of Proposed Facility 1
1.1 Type 1
1.2 Size 2
1.3 Length 2
1.4 Aboveground Facilities 2
2 Design of the Proposed Facility 4
2.1 Design 4
2.2 Purpose and Need of the Facility 4
2.3 General Area to be Served 4
2.4 Capacity 4
2.5 Technology to be Deployed/Employed 4
2.6 Product 5
2.7 Final Destination of Product 5
2.8 Width of Right-of-Way (ROW) 5
2.9 Estimated Distance between Surface Structures for Pipeline Facilities 5
2.10 Maximum Design Operating Pressure and Temperature for Pipeline Facilities 5
2.11 Estimated Total Cost of Construction 6
2.12 Preferred Location of Facility 6
2.13 Preferred Location of Corridor 6
2.14 Description of ROW Preparation and Construction and Reclamation Procedures 6
2.15 Landowner Notification, Easement Acquisition, and Compensation 7
3 Schedule 7
3.1 Obtaining Certificate of Corridor Compatibility 7
3.2 Obtaining Route Permit 7
3.3 Completing ROW Acquisition 7
3.4 Starting Construction 7
3.5 Completing Construction 7
3.6 Testing Operations 7
3.7 Commencing Operations 7
4 Alternatives 8
4.1 No Action Alternative 8
4.2 New Pipeline Route 8
5 Environmental Studies 8
5.1 Wetland and Waterbody Inventory 9
5.2 Vegetation Inventory 11
5.3 Wildlife Inventory 11
5.4 Exclusion Areas 14
5.5 Federally Protected Species Review 14
5.5.1 Federally Listed Wildlife Species 15
5.6 Areas Where Unique or Rare Species Would Be Irreversibly Damaged 18
5.7 Areas within 1,200 Ft of ICBM Facility or 30 Ft of Direct Line of IBM Launch Facility 18
5.8 Avoidance Areas 19
5.9 Federal Resource Review 19

5.10 State Resource Review 20
5.11 Local Resource Review 20
5.12 Historical Resources Not Designated as Exclusion/Avoidance Areas 20
5.13 Geologically Unstable Areas 21
5.14 Areas within 500 Feet of a Residence, School, or Place of Business 24
5.15 Reservoirs and Municipal Water Supplies 24
5.16 Water Sources for Organized Rural Water Districts 25
5.17 Irrigated Land 25
5.18 Areas of Recreational Significance but Not Designated Exclusion Areas 25
5.19 Selection Criteria 25
5.19.1 Agricultural Impacts 26
5.19.2 Family Farms and Ranches 27
5.19.3 Land Suitable for Irrigation 28
5.19.4 Surface Drainage and Groundwater Flow Patterns 28
5.19.5 Sound-Sensitive Land Uses 28
5.19.6 Visual Effect on Adjacent Areas 28
5.19.7 Extractive and Storage Resources 29
5.19.8 Wetlands, Woodlands, and Wooded Areas 29
5.19.9 Radio and TV Reception and Other Communication or Electronic Facilities 29
5.19.10 Human Health and Safety 29
5.19.11 Animal Health and Safety 29
5.19.12 Plant Life 30
5.20 Policy Criteria 30
5.20.1 Location and Design 30
5.20.2 Training and Utilization of In-State Labor 31
5.20.3 Economies of Construction and Operation 31
5.20.4 Use of Citizen Coordinating Committees 31
5.20.5 Commitment of Portion of Transmitted Product for Use In-State 31
5.20.6 Labor Relations 31
5.20.7 Coordination of Facilities 31
5.20.8 Monitoring Impacts 31
5.20.9 Using Existing and Proposed ROWs and Corridors 32
5.20.10 Other Existing or Proposed Transmission Facilities 32
6 Agency Notifications and Permitting 32
6.1 U.S. Fish and Wildlife Service 33
6.2 U.S. Army Corps of Engineers 34
6.3 Department of Defense- Air Force Cable Affairs 34
6.4 North Dakota State Historic Preservation Office 34
6.5 North Dakota Game and Fish Department 34
6.6 Lake Ilo National Wildlife Refuge 35
6.7 North Dakota Parks and Recreation Department 35
6.8 North Dakota Department of Trust Lands 35
6.9 North Dakota State Water Commission 35
6.10 McKenzie County Planning Department 36
6.11 McKenzie County Commission 36
6.12 McKenzie County Weed Board 36
6.13 Golden Valley County Planning Department 36
6.14 Golden Valley County Commission 36

6.15 Golden Valley Weed Board 37
6.16 North Dakota Department of Agriculture 37
6.17 North Dakota Industrial Commission Pipeline Authority 37
6.18 North Dakota Department of Environmental Quality 37
6.19 North Dakota Department of Transportation Dickinson and Williston District 37
6.20 USFS McKenzie Range District 38
6.21 North Dakota Soil Conservation Committee 38
6.22 North Dakota Geological Society 38
6.23 North Dakota Labor Department 38
6.24 Grail Township 38
6.25 North Dakota Indian Affairs Commission 38
6.26 North Dakota Governor 39
6.27 North Dakota Energy Impact Office 39
6.28 North Dakota Department of Human Services 39
6.29 North Dakota Department of Commerce 39
6.30 North Dakota Department of Career & Technical Education 39
6.31 North Dakota Attorney General 40
6.32 North Dakota Aeronautics Commission 40
6.33 Job Service of ND 40
6.34 Federal Aviation Administration 40
6.35 ND Transmission Authority 40
6.36 ND Forest Service 40
6.37 20th Airforce 91st Missile Wing 41
6.38 Grand Forks Airforce Base 41
6.39 Federal Bureau of Land Management 41
6.40 Military Aviation & Installation Assurance Siting Clearinghouse 41
7 Other Factors Considered 41
7.1 Public Health, Welfare, Natural Resources, and the Environment 41
7.2 New Transmission Tech to Minimize Adverse Environmental Effects 42
7.3 Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility 42
7.4 Unavoidable Adverse Direct and Indirect Environmental Effects 42
7.5 Corridor or Route Alternatives Developed During the Hearing that Minimize Adverse Effects 43
7.6 Irreversible and Irretrievable Commitments of Natural Resources if Designated 43
7.7 Direct and Indirect Economic Impacts of the Facility 43
7.8 Existing Plans for Other Developments in the Vicinity 44
7.9 Effect of the Proposed Route on Existing Scenic Areas, Historic Sites, Structures, & etc. 44
7.10 Effect of the Proposed Route on Areas Unique 44
7.11 Problems Raised by Federal, State, and Local Agencies 45
7.12 Policies and Commitments to Limit Environmental Impact 45
8 Mitigation Measures 46
8.1 Measures to Preserve the Human Environment 46
8.2 Measures to Protect Terrain and Geological Resources 47
8.3 Measures to Protect Soils 47
8.4 Measures to Protect Vegetation and Wildlife 47
8.5 Measures to Protect Land Use Permits 49
9 Development 49
9.1 Present and Future Natural Resource Development in the Area 49
10 Qualifications of Preparers 50

REGULATORY CROSS-REFERENCE GUIDE

AUTHORITY	DESCRIPTION	SECTION
Chapter 49-22.1	***CENTURY CODE – Title 49 ENERGY CONVERSION AND TRANSMISSION FACILITY***	
49-22.1-06	Application for a Certificate for a Corridor	
1.a	Description of size and type of facility	1.0, 2.1
1.b	Summary of any studies of environmental impacts	5.0
1.c	Need for the facility	2.2
1.d	Site for energy conversion facility	N/A
1.e	Preferred transmission (pipeline) corridor	2.13, Exhibit A
1.f	Analysis of merits and detriments of facility location	4.0
1.g	Mitigating measures	8.0
1.h	Corridor evaluation pursuant to 49-22.1-09 and 49-22.1-03	5.0, 7.0
1.i	Other relevant information	7.0
49-22.1-07	Application for Route Permit	
1.a	Description of size and type of facility	1.0
1.b	Description of the location	Intro, 1.4, 2.14, 2.15
1.c	Route evaluation relative to 49-22.1-09 and 49-22.1-03	5.0, 7.0
1.d	Mitigating measures	8.0
1.e	Right-of-way preparation, construction, and reclamation	2.14
1.f	Statement identifying how: 1. Landowners informed of right-of-way acquisition 2. How landowners will be compensated	2.15
1.g	Other relevant information	7.0
49-22.1-09	Factors to be considered in evaluating corridor and route applications	
1	Research and investigation into effects of the project on public health, welfare, natural resources, and the environment	5.0, 6.0, 7.0, and 8.1
2	Effects of transmission technology and design to minimize adverse effects	7.2
3	Potential beneficial uses of waste energy from energy conversion facility	7.3
4	Unavoidable adverse direct and indirect environmental effects	7.4
5	Corridor or route alternatives developed during the hearing which minimize adverse effects	7.5
6	Irreversible and irretrievable commitments of natural resources if designated	7.6
7	Direct and indirect economic impacts of the facility	7.7
8	Existing plans for other developments at or in the vicinity	7.8
9	Effect of project on scenic areas, historic sites and structures, paleontological and archaeological sites	7.9
10	Effect of route on unique biological areas	7.10

AUTHORITY	DESCRIPTION	SECTION
11	Problems raised by federal, state, or local entities	7.11
	ADMINISTRATIVE CODE - ARTICLE 69-06 ***ENERGY CONVERSION AND TRANSMISSION FACILITY SITING***	
69-06-05-01	Application for a Transmission Facility Permit (Corridor Certificate)	
2.a.(1)	Type of facility proposed	1.0
2.a.(2)	Purpose of facility	2.2
2.a.(3)	Technology to be deployed	2.5
2.a.(4)	Type of product to be transmitted	2.6
2.a.(5)	Source of product being transmitted	2.6
2.a.(6)	Final destination of product being transmitted	2.7
2.a.(7)	Size and design detail and any alternative size and design	1.0, 2.1, 4.0
2.a.(7)(a)	The width of right-of-way	2.8
2.a.(7)(b)	The approximate length of facility	1.3
2.a.(7)(c)	The estimated span length for electric facilities	N/A
2.a.(7)(d)	The anticipated type of structure for electric facilities	N/A
2.a.(7)(e)	The voltage for electric facilities	N/A
2.a.(7)(f)	The requirement for and general location of any new associated facilities	2.9
2.a.(7)(g)	The estimated distance between pipeline surface structures	2.9
2.a.(7)(h)	The pipe size	1.2
2.a.(7)(i)	The maximum design for pipeline operating pressure and temperature	2.10
2.a.(7)(j)	The maximum design pipeline flow rate	2.4
2.a.(7)(k)	The number and general location of compressor or pumping stations	1.4
2.b.	Time schedule	3.0
2.b.(1)	Obtaining the certificate of corridor compatibility	3.1
2.b.(2)	Obtaining the route permit	3.2
2.b.(3)	Completing right-of-way acquisition	3.3
2.b.(4)	Starting construction	3.4
2.b.(5)	Completing construction	3.5
2.b.(6)	Testing operations	3.6
2.b.(7)	Commencing operations	3.7
2.c.	A copy of each evaluative study or assessment of the environmental impact of the proposed facility submitted to the agencies listed in section 69-06-01-05 and each response received	5.0, 6.0
2.d.	Need for the facility	2.2
2.e.	Description of alternatives	4.0
2.f.	Corridor width	2.13
2.g.	Study area to enable the NDPSC to evaluate the factors in the Century Code section 49-22.1-09;	5.0
2.h.	Discussion of factors in Century Code 49-22-09.1 to aid NDPSC's evaluation	6.0, 8.0

AUTHORITY	DESCRIPTION	SECTION
2.i.	A discussion of the applicant's policies and commitments to limit the environmental impact of its facilities, including copies of the board resolutions and management directives	7.12
2.j.	Map of criteria that led to route location	Exhibit A
2.k.	Discuss relative value of each criteria and how the location was selected; how operation will affect criteria	5.0
2.l.	Mitigating measures	8.0
2.m.	Qualifications of each person involved in location study	10.0
2.n.	Map identifying criteria that led to the route location and new facilities	Exhibit A
2.o.	8 1/2 X 11 black and white map suitable for newspaper publication	Separate
2.p.	Discussion of present and future natural resource development in the area	9.1
2.q.	Maps and GIS data meeting NDPSC requirements	Exhibit A, Exhibit C electronic GIS data
69-06-08-02	Transmission Facility Corridor and Route Criteria	--
1	Exclusion areas	5.4
1.a.	Designated or registered national: parks, sites, landmarks, monuments, wilderness	5.9
1.b.	Designated or registered state: parks, sites, monuments, archeological sites, nature preserves	5.10
1.c.	County parks and recreational areas, municipal parks, parks owned or administered by other governmental subdivisions	5.11
1.d.	Areas of critical habitat	5.5
1.e.	Areas where unique or rare species would be irreversibly damaged	5.6
1.f.	Area within one thousand two hundred feet of ICBM facility	5.7
1.g.	Areas within thirty feet of direct line of ICBM launch facilities	5.7
2	Avoidance areas	5.8
2.a.	Designated or registered national: historic districts, wildlife areas, wild, scenic or recreational rivers, wildlife refuges, grasslands	5.9
2.b.	Designated or registered state: wild, scenic, recreational rivers, game refuges, game management areas, forest management lands, grasslands	5.10
2.c.	Historical resources which are not specifically designated as exclusion or avoidance areas	5.12
2.d.	Areas which are geologically unstable	5.13
2.e.	Within five hundred feet of a residence, school, or place of business	5.14
2.f.	Reservoirs and municipal water supplies	5.15
2.g.	Water sources for organized rural water districts	5.16
2.h.	Irrigated land (does not apply to underground transmission facility)	5.17
2.i.	Area of recreational significance but not designated exclusion areas	5.18
3	Selection criteria. Impact on:	5.19

AUTHORITY	DESCRIPTION	SECTION
3.a.(1)	Agricultural production	5.19.1
3.a.(2)	Family farms and ranches	5.19.2
3.a.(3)	Land economically suitable for irrigation	5.19.3
3.a.(4)	Surface drainage patterns and groundwater flow patterns	5.19.4
3.b.(1)	Sound sensitive land uses	5.19.5
3.b.(2)	Visual effect on adjacent area	5.19.6
3.b.(3)	Extractive and storage resources	5.19.7
3.b.(4)	Wetlands, woodlands, and wooded areas	5.19.8
3.b.(5)	Radio and TV reception and other communication or electronic facilities	5.19.9
3.b.(6)	Human health and safety	5.19.10
3.b.(7)	Animal health and safety	5.19.11
3.b.(8)	Plant life	5.19.12
4	Policy criteria	5.20
4.a.	Location and design	5.20.1
4.b.	Training and utilization of instate labor	5.20.2
4.c.	Economies of construction and operation	5.20.3
4.d.	Use of citizen coordinating committees	5.20.4
4.e.	Commitment of portion of transmitted product for use in state	5.20.5
4.f.	Labor relations	5.20.6
4.g.	Coordination of facilities	5.20.7
4.h.	Monitoring of impacts	5.20.8
4.i.	Using existing and proposed rights-of-way and corridors	5.20.9
4.j.	Other existing or proposed transmission facilities	5.20.10

LIST OF EXHIBITS

Exhibit A: Project Route Maps

- A.1: Aerial Mapbook
- A.2: Topographic Mapbook
- A.3: Raptor Survey Corridor Map

Exhibit B: Agency Consultations

- B.1: NDIC Pipeline Authority
- B.2: ND State Water Commission
- B.3: ND Department of Environmental Quality
- B.4: ND DOT Dickinson District
- B.5: ND DOT Williston District
- B.6: ND Department of Trust Lands
- B.7: McKenzie County Planning Department
- B.8: Golden Valley County Planning Department
- B.9: US Army Corps of Engineers
- B.10: ND Parks and Rec
- B.11: ND Game and Fish Department
- B.12: Lake Ilo National Wildlife Refuge
- B.13: U.S. Fish and Wildlife Service
- B.14: U.S. Air Force
- B.15: Department of Agriculture
- B.16: ND Soil Conservation Committee
- B.17: McKenzie County Commission
- B.18: Golden Valley County Commission
- B.19: USFS McKenzie Ranger District
- B.20: McKenzie County Weed Board
- B.21: ND Geological Survey
- B.22: Golden Valley County Weed Control
- B.23: Grail Township
- B.24: ND Labor Department
- B.25: ND Indian Affairs Commission
- B.26: ND Governor
- B.27: ND Energy Development Impact Office
- B.28: ND Department of Human Services
- B.29: ND Department of Commerce
- B.30: ND Department of Career & Technical Education
- B.31: ND Attorney General
- B.32: ND Aeronautic Commission
- B.33: Job Service of ND

- B.34: Federal Aviation Administration
- B.35: ND Transmission Authority
- B.36: ND Forest Service
- B.37: 20th Airforce 91st Missile Wing
- B.38: Grand Forks Airforce Base
- B.39: Federal Bureau of Land Management
- B.40: Military Aviation & Installation Assurance Siting Clearinghouse

Exhibit C: ESRI ArcGIS Shapefiles

Exhibit D: PSC Requested Documents

- D.1: McKenzie County Weed Management Plan
- D.2: 10 Year Spill History

Exhibit E: Archeological Reports

Exhibit F: Tetra Tech Report

INTRODUCTION

Bridger Pipeline LLC (Bridger), submits this single amended consolidated application for a Certificate of Corridor Compatibility and Route Permit to the North Dakota Public Service Commission (NDPSC) for the construction of approximately 80 miles of an 145-mile (total length), sixteen (16)-inch crude oil transmission pipeline. The pipeline will be known as the South Bend Pipeline (Project).

Bridger is seeking approval for a Certificate of Corridor Compatibility for a Project Corridor that will align with the centerline of the pipeline route and is generally 300 feet wide. The pipeline is located within McKenzie and Golden Valley Counties in North Dakota and Fallon and Wibaux Counties in Montana. The proposed pipeline would transport crude oil from Eighty-Eight Oil, LLC (EEOLLC) existing Johnson's Corner Terminal in North Dakota to Bridger's existing Sandstone Station approximately 8.5 miles west of Baker, Montana. Approximately 80 miles of the 145 mile pipeline is located in North Dakota.

Bridger seeks NDPSC approval for construction of this Project for those portions located in North Dakota, in accordance with Chapter 49-22.1 and Section 69-06-08-02 of the North Dakota Administrative Code and the NDPSC's Energy Conversion and Transmission Facility Siting Guidelines.

As part of the requested Route Permit, Bridger seeks a route construction buffer of 20 feet on each side of the proposed Project Route to provide flexibility and account for in-field constructability constraints. Specifically, as part of the NDPSC's order for the Project, Bridger requests the NDPSC include the following language when designating the route, "The designated route includes a route construction buffer of 20 feet on each side of the designated route, contingent upon not impacting an avoidance area unless Bridger receives written authorization, from the Commission before conducting any associated construction activities, that Bridger may impact the avoidance area. Construction activities must not impact an exclusion area." This language is consistent with the language previously utilized by the NDPSC in Ordering Paragraph No. 3 of its May 19, 2021, Findings of Facts, Conclusions of Law and Order for Bridger's 8-inch crude oil pipeline in Case No. PU-20-430, Docket No. 67.

1 DESCRIPTION OF PROPOSED FACILITY

1.1 Type

The Project originates at EEOLLC's Johnson's Corner Terminal located near Johnson's Corner, North Dakota and runs 145 miles southwest to Bridger's Sandstone Station west of Baker, Montana. The pipeline would interconnect with Bridger's existing North Dakota facilities at Wilson Station, Bicentennial Station and their respective crude oil transmission network.

The steel pipe utilized for construction of the Project will meet United States Department of Transportation ("US DOT") regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project will be constructed per 49 C.F.R. Subpart 195(D). The Project will be pressure tested in accordance with the requirements in 49 C.F.R. Subpart 195(E). The Project will be operated and maintained per 49 C.F.R. Subpart 195(F).

1.2 Size

Construction of the Project will involve the installation of 16-inch outside diameter, steel, API-5L, FBE coated, Grade X-52 ERW Line Pipe with a nominal wall thickness of 0.312 inches. Bore pipe will have a nominal wall thickness of 0.375 inches. The maximum operating pressure (MOP) of the pipeline will be 1,440 pounds of pressure per square inch gauge (psig). Average operating pressure will be 600-800 psig.

Valves will be 16-inch ANSI 600 manufactured in accordance with American Petroleum Institute (API) Standard 6D "API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service." Valves will be installed pursuant to US DOT regulations. The MOP of the valves will be 1,440 psig or greater. The pipeline will operate at or near ambient temperature not reaching over 100°F max. Temperature is not a design parameter, therefore there is no determination of maximum.

1.3 Length

The Project will involve approximately 145 miles of pipe installation with 80 miles constructed in North Dakota.

1.4 Aboveground Facilities

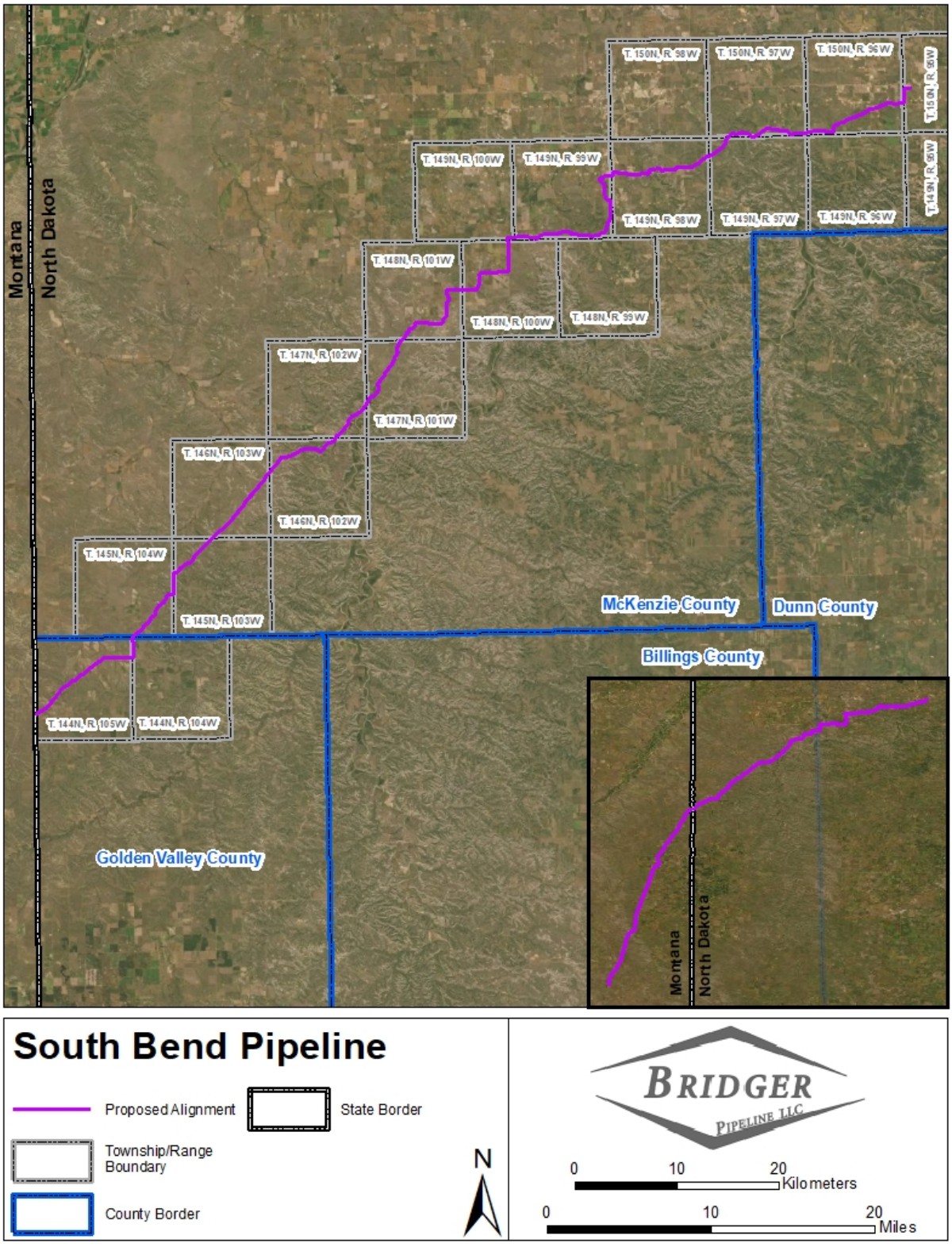
The Project’s segments will be buried underground. Surface structures are limited to pipeline markers, rectifier sites, pig launchers and receivers, and block valves. Some small fenced-in enclosures will be installed along the route and within the Project Corridor to house associated power, communication, and control systems to allow valves to be operated remotely.

The installation and locations of rectifier sites will be assessed based on cathodic protection readings conducted once the pipeline is installed. It is possible that no new rectifiers will need to be installed and Bridger can utilize their existing rectifiers within their currently operating systems to provide cathodic protection for this proposed pipeline.

Two pumps and a launcher will be installed at the existing Johnson’s Corner Terminal and two operational pumps, a launcher, and a receiver will be installed at the existing Bicentennial Station.

The Project will have 19 block valves located midline, eight of which will be located in North Dakota. See Exhibit A for valve locations.

Figure 1 – General Project Location Map



2 DESIGN OF THE PROPOSED FACILITY

2.1 Design

The Project is a 16-inch outside diameter crude oil transmission pipeline extending from the Johnson's Corner Terminal to the Sandstone Station. The steel pipe utilized for construction of the Project will meet United States Department of Transportation (US DOT) regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project will be constructed per 49 C.F.R. Subpart 195(D). The Project will be operated and maintained per 49 C.F.R. Subpart 195(F).

2.2 Purpose and Need of the Facility

The purpose of the Project is to transport crude oil produced in western and northwestern North Dakota to the Sandstone Station, near Baker, Montana, eventually connecting into the Guernsey, Wyoming market for further marketing and transportation nationally. This pipeline will be part of the only direct route for Bakken oil to the trading hub in Cushing, OK.

The Project will provide needed capacity to transport increased petroleum from western North Dakota where oil production is expected to increase until 2025.[1]

The Project will add: (1) additional outbound pipeline capacity in North Dakota; (2) more access to liquid market options for Bridger customers; and (3) a pipeline transportation alternative to trucking or railing crude oil to other shipping points and markets.

2.3 General Area to be Served

The Project will provide needed capacity to transport increased petroleum from western North Dakota where oil production is expected to increase until 2025.

2.4 Capacity

The installed capacity of the Project is 105,000 bpd, with the potential for capacity to be expanded to 250,000 bpd.

2.5 Technology to be Deployed/Employed

The Project will be designed, constructed, maintained, and inspected to the US DOT Pipeline and Hazardous Materials Safety Administration regulations utilizing industry standards and company policies. The system will be controlled and monitored 24 hours a day, seven days a week, and 365 days a year by trained control room personnel. Additionally, the system will be equipped with a monitoring and alarm system that continuously monitors the flow and pressure of the system and readily signifies anything outside normal operating conditions.

[1] U.S. Energy Information Administration, "U.S. Crude Oil Production to 2025: Updated Projection of Crude Types," *available at* https://www.eia.gov/analysis/petroleum/crudetypes/pdf/crudetypes.pdf (accessed February 28, 2020).

2.6 Product

The Project will transport crude oil produced from the Bakken/Three Forks Formation.

2.7 Final Destination of Product

The Project will transport crude oil produced from western and northwestern North Dakota to the Sandstone Station, near Baker, Montana, eventually connecting into the Guernsey, Wyoming market for further marketing and transportation nationally.

Bridger does not own any of the crude petroleum transported in its pipeline system. Bridger does not determine markets or destinations for petroleum commodities. Bridger's business is to provide a service which is available to anyone tendering commodities for transportation. Bridger attempts to anticipate the need for additional pipeline capacity by relying upon forecasts for throughput generated by shippers on the system.

Bridger's system of operating pipelines provides flexibility of transporting North Dakota's crude petroleum to multiple national markets.

2.8 Width of Right-of-Way (ROW)

The Project's construction ROW will be approximately 100 feet wide. Additional temporary workspace may be necessary during construction, maintenance, and inspection in areas such as steep slopes, and areas adjacent to streams and road crossings, for safety reasons, and construction activities associated with these features.

The Project will have an approximate 50-foot permanent ROW. Bridger will notify landowners of normal operating modifications or maintenance to the Project that is carried out within the 50-foot permanent ROW. The width of the permanent ROW was established based on the need to provide adequate space and line separation for construction and future line maintenance.

2.9 Estimated Distance between Surface Structures for Pipeline Facilities

The Project is largely underground. Unlike electrical transmission lines, no major features of this system will be installed aboveground. Aboveground features will be limited to minor features such as; pipeline markers, block valves, cathodic protection test sites, pig launchers and receivers, and rectifier sites, typically miles apart based on convenient access points along a public ROW. The Project will have tie-ins at Bicentennial Station and Wilson Station. Operation and maintenance buildings are currently located at Bridger's Sandstone Station and EEOLLC's Johnson's Corner Terminal.

2.10 Maximum Design Operating Pressure and Temperature for Pipeline Facilities

The maximum allowable operating pressure of the pipeline will be 1440 psig. The pipeline will operate at or near ambient temperature. 100°F max. Temperature is not a design parameter, therefore there is no determination of maximum.

2.11 Estimated Total Cost of Construction

Installed cost of the Project will be approximately $122 million.

2.12 Preferred Location of Facility

The North Dakota portion of the Project is located in Golden Valley and McKenzie Counties. The Project originates at the Johnson's Corner Terminal in McKenzie County, and runs 145 miles to Bridger's Sandstone Station which is located near Baker, Montana. Approximately 80 miles of pipe will be located in North Dakota. The pipeline interconnects with Bridger facilities at Bicentennial Station and Wilson Station.

Bridger requests that the NDPSC issue a route permit consistent with the Project route depicted in Exhibit A hereto and that said permit include a route deviation buffer of up to 20 feet directly adjacent to each side of the proposed route. The request provides flexibility during construction to allow for minor adjustments to accommodate landowner requests, unforeseen conditions, and general construction operations.

2.13 Preferred Location of Corridor

A majority of this Project will parallel existing utility corridors and pipelines in order to avoid or minimize potential environmental and human impacts associated with installing a new pipeline. Bridger is seeking approval for a corridor that follows the proposed Project route along a generally 300-foot-wide corridor (Project Corridor). In select instances, the Pipeline Corridor is wider than 300 feet to provide flexibility for routing and additional workspace to accommodate construction and unique areas. The requested Project Corridor aligns with the "Survey Area" more particularly depicted in Exhibit A hereto. Thirteen miles of the Project Corridor from Bicentennial Station to the MT border will be adjacent to an existing Belle Fourche Pipeline Company corridor permitted in 1978 under NDPSC Permit No. 11, Case No. 9787. The two pipelines are approximately 45-160 feet apart for ten of the thirteen miles.

Underground pipelines minimize potential impacts on human and animal welfare. Construction of the Project is expected to cause short term disruption to the environment, but will not result in long-term changes to the environment.

2.14 Description of ROW Preparation and Construction and Reclamation Procedures

The construction ROW will be cleared, grubbed, and graded to allow for pipeline construction. Soil segregation will be completed to standard operating procedures. All trenching will be performed mechanically with either an excavator or a ditching machine to a depth allowing a minimum of four feet from the top of the pipe to the top of the cover. When rock is present, an excavator with rock teeth will be used. Boring and horizontal directional drilling pipe installation will be performed if crossing under a road, railroad, pipeline/utility, waterbody, or areas where trenching is deemed unsafe or impractical. Casing of the pipelines will not be used because it leads to corrosion issues. Typically, the ROW will be continuously cleared of all construction material, uncovered rocks, and compacted areas. Holes and ruts will be filled and graded. Reclamation of the ROW will be completed at the end of the pipeline construction.

2.15 Landowner Notification, Easement Acquisition, and Compensation

Bridger has finalized easement agreements with all landowners along the Project route. Construction of the Project will minimize impacts to agriculture where feasible.

Bridger is committed to providing landowners complete information about the pipeline and associated facilities and keeping them informed throughout the lifetime of the Project. Bridger will coordinate with landowners to discuss crop loss payments, and to address any unique property concerns, as needed.

3 SCHEDULE

3.1 Obtaining Certificate of Corridor Compatibility

The Certificate of Corridor Compatibility Application was submitted in January 2021 and this Amendment is being submitted in March 2022. Bridger requests the issuance of a Certificate of Corridor Compatibility at the PSC's earliest convenience.

3.2 Obtaining Route Permit

The Route Permit Application was submitted in January 2021 and this Amendment is being submitted in March 2022. Bridger requests the issuance of a Route Permit at the PSC's earliest convenience.

3.3 Completing ROW Acquisition

Right-of-Way acquisition has been completed.

3.4 Starting Construction

Construction is expected to begin the 2nd quarter 2022, contingent on approval from the Commission.

3.5 Completing Construction

Construction for the Project is anticipated to last approximately six to eight months after construction begins.

3.6 Testing Operations

The pipeline will be hydro-tested in accordance with PHMSA part 195 regulations prior to being placed into service. Test operations will occur following construction of the Project.

3.7 Commencing Operations

Bridger anticipates placing the pipeline in service by the end of 2022 or as soon as construction and testing are complete.

4 ALTERNATIVES

The pipeline will be a permanent, ongoing system. As such, Bridger has a continuing commitment to conduct its operations in an environmentally responsible manner. Substantial, continual effort is placed on pipeline integrity, operational safeguards, emergency response, and landowner relationships, all of which reduce the impact of the pipeline on the environment. Bridger supplements the support from the existing internal environmental staff with engineering and environmental consultants as necessary to assure compliance with environmental regulations and applicable policy. A brief discussion of other possible alternatives is provided below.

4.1 No Action Alternative

The status quo could continue, supported by trucking crude oil to existing pipeline unloading facilities and/or rail trans-ship facilities. However, finding qualified cargo tank operators, which is already a critical issue, will continue to be difficult. Further, transportation via truck will result in additional wear and tear to county and state roads due to high truck traffic. Pipeline transportation has several advantages to the trucking alternative: (1) reduces truck traffic on the area's road network; (2) provides access to a wider range of markets; and (3) results in a more efficient and safer mode of transportation by reducing costs and the potential for accidents. A "no action" alternative is not preferred because it does not reasonably meet the needs of Bridger and its customers.

4.2 New Pipeline Route

The Project route is designed to parallel existing underground utilities and pipelines, and limit impacts to land and waterbodies. An alternative route is not a preferred alternative to the Project route because it would create new environmental impacts.

5 ENVIRONMENTAL STUDIES

Studies were undertaken to evaluate the Project's potential impacts on recreational, environmental, and cultural resources. Environmental data collected to date includes information on soils, land use, wetland and water body crossings, protected species, and cultural resources. Bridger will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information as required during the permitting process.

Analysis of the Project entailed both desktop studies and field surveys. A one-mile-wide study corridor was utilized for the entire 80-mile Project route in North Dakota (Study Area). Desktop studies for the Study Area reviewed items such as Class I archeological file search and a wildlife database search. Field surveys were conducted along the entire route on foot within the generally 300-foot-wide Project Corridor ("Survey Area" as more particularly depicted in Exhibit A) and over larger areas as specified herein.

Bridger engaged Keitu Engineers & Consultants, Inc. (Keitu) and Beaver Creek Archaeology, Inc. (BCA) to perform the environmental and cultural resource siting studies for the Project.

BCA performed a Class I archeological file search in August of 2019 of the Study Area. A Class III field survey was performed on the Survey Area in September/October of 2019, in June/July 2020, and Spring 2021.

In total, 37 sites were located within the Survey Area /APE. Of these 37 sites, 20 are determined to be ineligible for nomination to the National Register of Historic Places (NRHP), and no avoidance measures are recommended. Four sites are unevaluated with no avoidance measures recommended. All 24 sites will be avoided by the Project. Three sites (32MZ141, 32MZ59, and 32MZ499) underwent evaluative testing and were found to be ineligible with no avoidance measures recommended. Avoidance or mitigation was recommended for the remaining 10 sites, four of which are located on USFS property and six are located private or State Trust Land.

BCA found "No Historic Properties Affected" provided all sites requiring avoidance measures are avoided. SHPO concurred with BCA's findings. See Section 5.12 for additional details.

In the summer of 2019, fall of 2019, and spring of 2020, Keitu conducted plant life field surveys within the Survey Area and wildlife and habitat field surveys within the one-mile wide Study Area to identify and assess the presence of wildlife and habitat for threatened and endangered species. An aerial raptor nest survey was conducted in January 2020 covering a two-mile-wide corridor (one mile on each side of the route). See Exhibit A.3 Raptor Survey Corridor Map. Additionally, a Sharp-tailed grouse lek survey was completed in April 2020 on United States Forest Service (USFS) lands.

Outreach with the United States Fish & Wildlife Service (USFWS), Federal DOT, State DOT, North Dakota Game & Fish, and United States Army Corps of Engineers began at a monthly interagency meeting on August 1, 2019 to discuss the Project's avoidance of impacts to sensitive areas and species including the Dakota skipper. Since the initial interagency meeting, discussion and consultation has been ongoing with the USFWS Bismarck Ecological Services Office. The USFS is the lead action agency for the Project due to a portion of the route traversing USFS property. A formal kickoff meeting with the USFS occurred on December 1, 2019. At this meeting, the main topic discussed was the potential occurrence of the Dakota skipper within the vicinity of the proposed pipeline route. The USFS requested that Bridger complete a habitat assessment and presence/absence survey for the species. Consultation remains ongoing with the USFS for the Project. The presence/absence survey was completed in July 2020, one instance of Dakota Skipper was identified and reported to the USFS and USFWS. The survey report is completed. Bridger will implement avoidance, minimization, and mitigation measures as needed and deemed necessary by the agencies. See Section 8.4 for additional discussion.

Keitu conducted a database search for all other Exclusion or Avoidance Criteria outlined in the North Dakota Administrative Code within the Study Area. Items reviewed included federal, state, & county parks, protected and sensitive plants and animals, and civil and social structures such as recreational areas, businesses, rural homes, and farmsteads.

5.1 Wetland and Waterbody Inventory

Bridger, through its consultants, conducted a desktop survey using aerial photographs, U.S. Geological Survey (USGS) topographic maps, and the USFWS National Wetland Inventory to identify wetlands within the Project Corridor. Keitu Engineers & Consultants, Inc. followed standard United States Army Corps of Engineers (USACE) offsite inspections protocol for identifying wetlands and waterbodies as described in the Corps of Engineers Wetlands Delineation Manual (Part IV, Section D, Subsection 1). A field wetland delineation was not completed because the Project does not impact any wetlands that are jurisdictional to the USACE, therefore an USACE permit is not required.

The USACE Regulatory program regulates work and structures that are located in, under or over navigable waters of the United States. Two groups of water bodies are regulated; "traditionally navigable waters" under Section 10 of the Rivers and Harbors Act of 1899 and "waters of the United States" under Section 404 of the Clean Water Act. In western North Dakota and eastern Montana "Section 10" waters include only the Missouri River and the downstream portion of the Yellowstone River. Neither of these rivers are being crossed by the proposed Project.

On April 21, 2020 the USACE in conjunction with the US Environmental Protection Agency and the US Department of Defense published a new definition of "Waters of the United States" (WOTUS) which became effective June 22, 2020. *See*, 85 Fed. Reg. 22250 (April 21, 2020) [1]. The revised definition of WOTUS is far narrower and more limited than the prior definition. "Waters of the United States" are now defined as territorial seas, traditional navigable waters and tributaries to those waters, lakes, ponds, and impoundments of jurisdictional waters, and wetlands adjacent to jurisdictional. Wetlands, unless directly adjacent to a traditional navigable water, tributary, or lake, pond or impoundment of a jurisdictional water, are no longer regulated by the USACE.

On April 21, 2020 Keitu held a telephone consultation with the USACE North Dakota Regulatory Office Program Manager Patricia McQueary to confirm the rule's new interpretation and application. Keitu forwarded Ms. McQueary a summary of the discussion via email to confirm key points of this discussion.

The Project does not cross a navigable water i.e. Section 10 waterbody; nor does it cross a tributary to a Section 10 water or their adjacent wetlands i.e. Section 404 waterbody under the new definition of WOTUS. Therefore, USACE permitting for waterbody crossings is not required for the Project.

With respect to wetlands and waterbodies non-jurisdictional to USACE, the Project crosses 12 named creeks and 101 other wetland or waterbodies according to the USFWS National Wetland Inventory accessed in March 2020. See the mapbook in Exhibit A for the location of the wetlands and waterbodies. The table below describes the location of the 12 named creeks within the Project Corridor.

Table 5.1.1
Creeks

Stream ID	Creek Name	Length (Feet)
STR 1	North Fork Creek	28.81
STR 2	Cherry Creek	17.56
STR 3	Seven Mile Creek	21.16
STR 4	Red Wing Creek	10.41
STR 5	Bowline Creek	12.28
STR 6	Cedar Creek	8.75
STR 7	East Hay Draw Creek	36.46
STR 8	Poker Jim Creek	3.57
STR 19	Bennie Peer Creek	41.04
STR 10	North Fork Smith Creek	18.96
STR 11	South Fork Smith Creek	11.11
STR 12	C S Creek	7.06

[1] https://www.epa.gov/sites/production/files/202001/documents/navigable_waters_protection_rule_prepbulication.pdf.

Construction of the Project will not result in the permanent drainage or filling of wetlands or waterbodies. Bridger will horizontally directionally drill (HDD) any waterbodies with standing water, including Cherry Creek, and adjacent wetlands in the Project Corridor.

Block valves will be installed on both sides of Cherry Creek and will be motor operated with a pressure transmitter.

In accordance with North Dakota Dept. of Environmental Quality (ND DEQ) requirements pertaining to North Dakota Pollutant Discharge Elimination System General Construction Stormwater Permit, a SWPPP will be completed prior to the start of construction activities. A copy of Bridger's NDPDES General Permit will be filed with the Commission when obtained.

A separate report from this Consolidated Application was not completed due to the nature of the work being redundant. This section (Wetland and Waterbody Inventory 5.1) and the wetlands and waterbody information located on the, Exhibit A, Project maps identifies features within the Project Corridor. Thus, a separate Wetlands Delineation Report was not necessary because it would duplicate information set forth herein.

5.2 Vegetation Inventory

Botany surveys were performed along the Survey Area in McKenzie and Golden Valley Counties from July to October 2019 and June/July 2020. Four surveyors conducted a thorough inspection of private land, which consisted of cropland, rangeland, and pastureland.

The Project Corridor crosses predominantly agricultural land, which is discussed in detail in Section 6.18.1. Crested wheatgrass (*Agropyron cristatum*) and smooth brome (*Bromus inermis*) were primarily found in abundance throughout the majority of the route. Other grasses that were commonly identified were: blue grama (*Bouteloua gracilis*), side oats grama (*Bouteloua curtipendula*), little bluestem (*Schizachyrium scoparium*), western wheatgrass (*Agropyron smithii*), Indian grass (*Sorghastrum nutans*), prairie junegrass (*Koeleria macrantha*), and needle and thread grass (*Hesperostipa comate*). Other vegetation often found established in the Survey Area include alfalfa (*Medicago sativa*), big sagebrush (*Artemisia tridentata*), cudweed sagewort (*Artemisia ludoviciana*), fringed sagewort (*Artemisia frigida*), curlycup gumweed (*Grindelia squarrosa*), kochia (*Kochia scoparia*), yellow sweetclover (*Melitosus* officinalis), purple prairie clover (*Dalea purpurea*), purple coneflower (*Echinacea angusifolia*), prairie coneflower (*Ratibida columnifera*), prairie rose (*Rose arkansana*), prickly pear cactus (*Opuntia humifusa*), rubber rabbitbrush (*Ericameria nauseosa*), yucca (*Yucca glauca*), silver leaf scurfpea (*Pediomelum argophyllum*), skeletonweed (*Chondrilla juncea*), common yarrow (*Achillea millefolium*), creeping juniper (*Juniperus horizontalis*), silver buffaloberry (*Shepherdia argentea*), chokecherry (*Prunus virginiana*), cottonwood (*Populus deltoides*), and western snowberry (*Symphoricarpos occidentalis*).

No sensitive, threatened, or endangered plant species were detected in the Survey Area.

5.3 Wildlife Inventory

Investigations were conducted on potential impacts the Project could inflict upon wildlife. Prior to field surveys, information was gathered from a variety of sources to compile data on the existing status of wildlife within the Study Area. These sources included Geographic Information System (GIS) database review, literature, and personal communications with the North Dakota Game & Fish (NDGF), the USFWS,

and the North Dakota Parks and Recreational Department (NDPRD). Prior to field surveys, Keitu reviewed in-house GIS data that includes information updated annually from the USFS, USFWS, and NDGF on known locations of sensitive species. Field surveys were conducted on the Study Area via foot and via all-terrain vehicle. Field data was collected with a Trimble GEOXH 6000 GPS.

Common terrestrial wildlife identified in the Study Area included coyote *(Canis latrans)*, ground squirrel (*Urocitellus richardsonii*), ring-necked pheasant (*Phasianus colchicus*), sharp-tailed grouse (*Tympanuchus phasianellus*), Hungarian partridge (*Perdix perdix*), whitetail deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana),* various songbirds, migratory waterfowl, and raptors. Wildlife species on the North Dakota Species of Conservation Priority list that were documented during 2019 field surveys included bobolink (*Dolichonyx oryzivorus*), sharp-tailed grouse (Tympanuchus phasianellus), Northern harrier (*Circus cyaneus*), chestnut-collared longspur (*Calcarius ornatus*), grasshopper sparrow (*Ammodramus savannarum*), and black-tailed prairie dog (*Cynomys ludovicianus*).

Four prairie dog towns were observed while conducting the wildlife survey, two on private landowner's property and two on USFS lands. Two prairie dog towns are located within the Project Corridor on USFS property. Prairie dog towns support a large community of wildlife species and can be prone to disruption by construction projects. Prairie dogs are management indicator species and occur throughout Western North Dakota.

The black-footed ferret is listed as an endangered species under the Endangered Species Act. The black-footed ferret was historically found across the Great Plains but has since been extirpated from North Dakota primarily due to poisoning of prairie dog colonies, conversion of native prairie to tilled agriculture, and disease. Black-footed ferrets rely on prairie dogs as their main source of sustenance and a single ferret may eat over 100 prairie dogs annually. It is estimated that a minimum 9,884 acres will support a viable population of black-footed ferrets. The largest prairie dog colony located within the Study Area is approximately 250 acres on private property. None of the prairie dog towns in the Study Area are large enough to support a population of black-footed ferrets. Avoidance measures may include narrowing ROW, fencing to exclude construction traffic away from colonies, and reducing ROW vehicle speed. Bridger will work with the USFS on avoidance measures to the prairie dog colonies during construction. Disruptions of prairie dog colonies will be avoided to the extent practicable to minimize impacts. Review of the impacts to the prairie dog towns was conducted by the USFS. The USFS concurred with the BE that the Project "may impact" black-tailed prairie dog, but did not recommend or require any additional mitigation measures to be taken. The Project will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species. No black-footed ferrets were observed during the field studies nor are their records of sightings in the Study Area.

Sharp-tailed Grouse are a state species of Conservation Priority, Level II in North Dakota. A Level II species are those having a: moderate level of conservation priority or a high level of conservation priority but a substantial level of non-state wildlife grant funding is available to them. A Sharp-tailed Grouse lek survey was completed in April 2020 and confirmed four leks were present within the Study Area but not within the Project Corridor. Bridger will not construct within one mile (line-of-sight) of an active lek from March 1 – June 15th per USFS requirements.

The North Dakota raptor species of concern detailed by the NDPRD, Natural Heritage Inventory (NHI) with potential to be located in Golden Valley and McKenzie Counties include the following: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), merlin

(*Falco columbarius*), prairie falcon (*Falco mexicanus*), turkey vulture (*Cathartes aura*), American peregrine falcon (Falco peregrinus anatum), and the burrowing owl (*Athene cunicularia*).

An aerial raptor and nest survey was conducted on January 20 and 21, 2020. During the aerial survey, three surveyors (seated in front-left, rear-left, and rear-right positions of the helicopter) thoroughly examined the area within a 2-mile-wide survey corridor to locate raptors and raptor nests. The survey methods were consistent with the USFWS survey protocols. Complete survey coverage was obtained by traversing the survey corridor focusing on areas likely to contain nests including woody draws and steep bluff faces while visually scanning all areas of potential nesting habitat. Locations of NDGF and USFS shapefiles depicting previously known raptor nests were also focused on. When a possible nest was discovered, the helicopter would slow to a hover, at a distance great enough to prevent flushing if the nest was occupied and in the shortest amount of time needed to determine condition, type of nest, contents, and obtain accurate GPS location coordinates. The timing of the survey was conducive to locating nests in deciduous trees as "leaf out" had not occurred at this time.

No occupied nests were found during the survey. A total of four unoccupied nests were recorded within the two mile corridor (see Exhibit A.3) but none are located within the Project Corridor. While it is impossible to say with certainty that raptors will not occupy the recorded empty nests in the near future, based on the size of three of the nests, it would be improbable. The one remaining nest, an unoccupied golden eagle nest, was recorded on a cliff in McKenzie County. Due to its location, this nest will not be directly impacted by the Project's construction. Per USFWS "Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances", short-term land use and human activities may progress near a nest or nest territory designated as unoccupied. For long-term use activities, unoccupied nests should be conserved as recommended by the USFWS (see Table 5.3). Unoccupied nests of species which are not raptors of concern should be conserved for a minimum of five years. Prior to construction unoccupied nests will be surveyed if construction takes place within nesting season.

Table 5.3
Recommended conservation periods for unoccupied nests of Raptor Species of Concern[1]

Species		Years
Bald Eagle	*Halieetus leucocephalus*	5
Northern Harrier	*Circus cyaneus*	Habitat Conservation*
Northern Goshawk	*Accipiter gentilis*	3
Swainson's Hawk	*Buteo swainsoni*	3
Ferruginous Hawk	*Buteo regalis*	5
Golden Eagle	*Aquila chrysaetos*	10
Peregrine Falcon	*Falco peregrinus*	Indefinite
Flammulated Owl	*Otus flammeolus*	5*
Burrowing Owl	*Athene cunicularia*	5*
Short-Eared Owl	*Asio flammeus*	3

*Species may not return to individual nest, but may nest in aggregates in suitable habitat
[1] U.S. Fish and Wildlife Service, Region 9. 2008. Guidelines for Raptor Conservation in the Western United States.

No raptor species of concern were observed during the survey. However, if an occupied nest is spotted during construction, a construction buffer zone will be required. The length of the buffer zone will be dependent on the species identified, consistent with USFWS guidance.

The Project has been sited to avoid and minimize adverse environmental impacts. Potential impacts to avian and raptor species were evaluated as part of the Project' environmental review and adverse impacts are not anticipated. The NDGF stated the Project is not anticipated to have adverse impacts on wildlife or

wildlife habitat. Bridger is also coordinating with the USFS with review by the USFWS on avoiding and minimizing migratory bird impacts, therefore no separate migratory bird plan will be filed due to the nature of the work being redundant.

Findings are electronically presented as ESRI ArcGIS software compatible data files in Exhibit C.

5.4 Exclusion Areas

Exclusion Areas are geographic areas that must be excluded in the consideration of a route for a transmission facility. A corridor may contain an Exclusion Area; however, Exclusion Areas may not encompass more than 50 percent of the Project corridor width at any point, unless there is no reasonable alternative. Exhibit A contains maps depicting Exclusion and Avoidance Areas along the Survey Area.

Exclusion and Avoidance Areas located within the Project Corridor are shown in Tables 5.4 and 5.8 below.

Table 5.4
Exclusion Areas
NDPSC Certificate of Corridor Compatibility and Route Permit

Exclusion Area	Located within the Project Corridor	Crossed by Project Route	Description of Exclusion Area and Proposed Buffer
National Parks, Memorial Parks, Historic Sites and Landmarks, Natural Landmarks, Monuments, and Wilderness Areas	None	None	
State Parks, Historic Sites, Monuments, Historical Markers, Archaeological Sites, Nature Preserves	None	None	
County Parks and Recreation Areas, Municipal Parks, Parks Administered by other Governmental Subdivisions	None	None	
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	None	None	
Areas Where Animal or Plant Species Unique or Rare to the State Would be Irreversibly Damaged	None	None	
Areas Within 1,200 Feet of an ICBM Launch or Launch Control Facility	None	None	
Areas Within 30 Feet of a Direct Line Between ICBM Launch or Launch Control Facilities to Avoid Microwave Interference	None	None	

5.5 Federally Protected Species Review

Bridger consulted with the NDGF, USFWS, and the NDPRD NHI to identify species and ecologically significant habitats within the Project Corridor. Possible areas of concern discussed were federally listed endangered, threatened, candidate, sensitive, or watch species, state-listed protected species, and critical habitat that is located on or within the Project Corridor.

The USFWS was provided with the proposed Project route with a request for comments. Consultation is ongoing. See Exhibit B for a copy of Bridger's formal consultation letter. The USFWS has jurisdiction over issues under the authority of the Migratory Bird Treaty Act, the Endangered Species Act, and the Bald and Golden Eagle Protection Act. The following comments were provided regarding Threatened and Endangered Species (Exhibit B.13):

Dakota Skipper

The Dakota skipper (*Hesperia dacotae*) is a small prairie butterfly listed as a threatened species under the ESA. Dakota skippers are obligate residents of high quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. In Northwestern North Dakota, Dakota skippers inhabit dry-mesic hill prairies with abundant purple coneflower (*Echinacea angustifolia*), but also use mesic to wet-mesic tallgrass prairie habitats characterized by wood lily (*Lilium philadelphicum*) and mountain death camas (smooth camas; *Zigadenus elegans*). Their dispersal ability is very limited due in part to their short adult life span and single annual flight. Extirpation from a site may be permanent unless it occurs within about 0.6 miles of an inhabited site that generates a sufficient number of emigrants. Avoidance of impacts to native prairie habitat is recommended to reduce the risk of adverse effects to this species. If such areas are unavoidable, surveys for Dakota skippers are advisable. Critical habitat has been designated for this species in North Dakota (McKenzie County).

The proposed crude oil pipeline includes areas of native prairie. The disturbance of these lands could further fragment and eliminate existing native prairie habitat. Recent surveys for the Dakota skipper have identified this species in the vicinity of the proposed action. According to the USFWS response, Dakota skippers occupy native prairie habitat, thus occupancy surveys were completed in areas of suitable habitat or occupancy, in July 2020.

Northern Long-Eared Bat

The Northern long-eared bat (*Myotis septentrionalis*) is a medium-sized brown bat listed as threatened under the Endangered Species Act. The species is known to be present in North Dakota during the breeding and migration seasons. These bats primarily roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees in the summer. The pupping season occurs in June and July. Hibernacula have not been documented in North Dakota. Summer survey guidelines for the Northern long-eared bat are identical for those established for the Indiana bat (*Myotis sodalist*).

White-nose syndrome- a fungus affecting hibernating bats- is considered a significant threat to this species, but individuals may be harmed by other activities such as modifications to hibernacula, timber harvest, human disturbance, and collisions with wind turbines. A 4(d) rule has been published that exempts taking of Northern long-eared bats in certain circumstances.

Additional Comments

With the continued fragmentation and loss of native prairie habitat in North Dakota, the USFWS recommends Keitu Engineering and Bridger Pipeline work with willing developers to voluntarily offset any unavoidable loss of native prairie habitat that may compensate for potential impacts to endangered or migratory species that likely occupy the project corridor.

A field survey was conducted from July to October 2019 of the Survey Area for botany and wildlife. The results of this field survey are presented in Section 5 as part of this consolidated permit application.

5.5.1 Federally Listed Wildlife Species

The following are federally listed Wildlife Threatened and Endangered Species listed from the USFWS

Information and Planning Consultation tool for the proposed project area.

Pallid sturgeon are located within the Study Area as they inhibit the Missouri and Yellowstone Rivers with sand or gavel bars. However, due to a lack of suitable habitat within the Study Area, the proposed Project will likely not result in take of the pallid sturgeon. The whooping crane, interior least tern, piping plover, Dakota skipper, northern long-eared bat, and red knot have the potential to occur within the Study Area as migrants. However, due to the low probability of occurrence and only temporary disturbance during construction, adverse impacts to these species are unlikely to occur. Field surveys in the summer of 2019 indicated potential suitable habitat for the whooping crane, interior least tern, piping plover, Dakota skipper, northern long-eared bat, and red knot.

Pallid Sturgeon

Pallid sturgeons inhabit the bottoms of large, shallow, silty rivers with sand and gravel bars of the Missouri and Yellowstone Rivers in North Dakota. Pallid sturgeon detections are distributed over 11 counties in North Dakota. The proposed project does not cross any waterbodies. The Yellowstone River is 20 miles to northwest of the project and the Missouri River is 12.5 miles to the east. No pallid sturgeons were observed during the survey. The Study Area does not encompass the Missouri and/or Yellowstone Rivers or shallow rivers with sand or gravel bars, to provide suitable habitat for this species.

No adverse effects for pallid sturgeon are anticipated as a result of this Project. This Project does not cross through or near suitable habitat. The USFS and USFWS both concluded with a determination of "no effect" on the pallid sturgeon as a result of the Project.

Whooping Crane

The whooping crane migrates through the west central counties of North Dakota during the spring months of April through May and the fall months September through October. Primary breeding grounds are located at Wood Buffalo National Park in Canada's Northwest Territories and migrate to Aransas National Wildlife Refuge in Texas. Whooping crane detections are distributed over all 53 counties in North Dakota. Whooping cranes prefer shallow wetlands, such as prairie potholes, associated with cattails, bulrushes, and sedges and feed in cultivated fields. No whooping cranes were observed during the field survey. Cultivated land does exist within the survey corridor; however, wetland habitat is sparse.

No adverse impacts to the whooping crane are anticipated as a result of the Project. The USFS and USFWS concluded with a determination of "no effect" on whooping cranes as a result of the Project; however, it is possible that whooping cranes may migrate through the Project area during migration. If a whooping crane is sighted within one mile of the Project area during construction, Bridger will cease construction within one mile of that part of the Project or within line-of-sight of the crane. If a sighting occurs, the USFWS and USFS would be contacted immediately and Bridger would coordinate with the USFWS before any construction could resume after the bird(s) leave the area.

Dakota skipper

In North Dakota, Dakota skippers can be found within two general habitat types classified by the USFWS, "Type A" and "Type B". Type A consists of low-lying, wet-mesic prairie with little topographic relief that occurs on near-shore glacial lake deposits. Type A habitat does not exist within the Survey Area. Type B habitat for the Dakota skipper typically supports a high diversity and abundance of native forbs in rolling

dry prairies. These two types of native prairie habitat are important for the Dakota skipper because they provide valuable nectar sources through native forbs and are difficult to re-establish once degraded or disturbed. The Dakota skipper in western North Dakota inhabits native prairie on rolling terrain over gravelly glacial moraine dominated by little bluestem, as well as big bluestem, needlegrasses, or porcupine grasses. Dakota skipper detections are distributed over five counties in North Dakota.

Dakota skipper absence/presence surveys were conducted by USFWS permitted surveyors for North Dakota in June and July of 2020. One female Dakota skipper was observed during these surveys. The Survey Area does provide bluestem/needlegrass/coneflower habitat (Type B) in native prairielands mostly located on hill sides and hill tops, and areas that have avoided major previous disturbance.

The USFS and USFWS determined that the Project "may affect but is not likely to adversely affect" the threatened Dakota skipper. Bridger is committed to undertake conservations measures recommended by the USFS to mitigate adversely affecting the Dakota skipper to the greatest extent possible. No construction activities will take place along the pipeline ROW during the Dakota skipper flight period of June 10-July 25. Bridger has also agreed to directionally drill all suitable DASK habitats identified and depicted on the maps associated with the biological assessment. Suitable DASK habitats will be temporarily fenced and flagged to avoid impacts from vehicles, construction equipment or other habitat altering equipment traveling along the ROW. Airborne dust will be reduced during Project construction on all construction locations, including any additional haul roads and access roads whenever needed and/or determined by the USFS. A qualified monitor will remain on-site during the life of construction to ensure compliance with all design features. During reclamation activities, USFS-approved revegetation seed mixes will be used. No herbicide will be sprayed from June 1 to July 31 annually, and only spot spraying of noxious and invasive weeds will be completed. Herbicide type and spot spraying application will be completed according to label directions with the intent to avoid drift to high quality Dakota skipper habitat. The USFS has determined that there will be no adverse modification to designated Dakota skipper critical habitat as a result of the Project.

Northern Long-eared Bat

The northern long-eared bat is currently listed by the USFWS as threatened in North Dakota. On April 2, 2015, the USFWS published the final listing in the Federal Registrar with an effective date of May 4, 2015. The USFWS listed the northern long-eared bat as threatened and chose to exercise the option of issuing an interim 4(d) rule to allow for more flexible implementation of the ESA. The 4(d) rule reduces ESA conflicts by allowing some activities that do not harm the species to continue while focusing efforts on threats that make a difference in the species' recovery.

This bat species occupies a wide range of rocky and forested habitats. Summer day roosts include abandoned buildings, bridges, hollow trees, stumps, and under loose bark, and rock fissures. There are no known hibernacula for the northern long-eared bat in North Dakota. Suitable winter habitat for northern long-eared bats consists of caves and abandoned mines neither of which occur in the Project Corridor. However, nearby trees and rocky outcrops can act as suitable summer day roosts.

The USFS and USFWS concurred with the determination that the Project "may affect, but not likely to adversely affect" the northern long-eared bat, as a result, Bridger will not remove any trees greater than 3 DBH from April 1 through September 30 as recommended by the USFS.

Piping Plover

The piping plover is a small shore bird that inhabits barren sand and gravel shorelines of lakes and rivers and avoids dense vegetation. The breeding season is from late April to early August in areas in North Dakota that include the shores of the Missouri and Yellowstone Rivers and the prairie wetlands in the Missouri Coteau. Piping plovers that summer in the northern plains, winter in the Gulf of Mexico. They rarely stop during migration and may travel from breeding to wintering grounds in as little as one nonstop flight. More than three-fourths of piping plovers in North Dakota nest on prairie alkali lakes, while the remaining are found along the Missouri River. Piping plover Designated Critical Habitat consists of prairie alkali wetlands and surrounding shoreline; river channels and associated sandbars and islands; reservoirs and inland lakes and their sparsely vegetated shorelines, peninsulas and islands. Piping plover detections are distributed over 25 counties in North Dakota. The nearest Designated Critical Habitat is approximately 12.5 miles east of the Project. No piping plovers or active nesting sites were observed during the field surveys.

The USFS and USFWS concurred with the determination that the Project "may affect, but is not likely to adversely affect" piping plovers. Potential adverse effects to piping plovers are insignificant based on the conservation measures detailed in the BA.

Rufa Red Knot

The rufa red knot utilizes North Dakota as migration stopover in the spring and fall. Migration occurs over long distances annually between its breeding ground in the Canadian Arctic and several wintering regions, including the southeast United States, the northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. The Yellowstone River is 20 miles to the northwest of the project and the Missouri River is 12.5 miles to the east. Red knot detections are distributed over 25 counties in North Dakota. In North America, the red knot is commonly found along sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments and lagoons, peat banks. The primary food items for the red knot in non-breeding habitats include blue mussels, juvenile mussels, clams, snails, polycheate worms, insect larvae, and crustaceans. Red knots migration is sporadic and uncommon but the potential exists that they may use wetlands found in the Project Corridor for stopover habitat. Potential stopovers for Red Knot are few, small, and distant with no known records in McKenzie County.

The USFS and USFWS concurred with the determination that the Project "may affect, but is not likely to adversely affect" the rufa red knot. Potential adverse effects to rufa red knots are insignificant based on the conservation measures detailed in the BA.

5.6 Areas Where Unique or Rare Species Would Be Irreversibly Damaged

Based upon agency correspondence and field surveys, the proposed Project will not result in irreversible impacts that are detrimental to sensitive plant and animal species or their habitats.

5.7 Areas within 1,200 Ft of ICBM Facility or 30 Ft of Direct Line of IBM Launch Facility

Based on available information, the Air Force has no Intercontinental Ballistic Missile (ICBM) launch or launch control assets within the Project area. An email was sent to the U.S. Air Force on October 8, 2019 and an email response was received on October 9, 2019 that there are no assets near the Project.

5.8 Avoidance Areas

Avoidance Areas are areas that may not be considered in the routing of a transmission facility unless it is shown that there is no reasonable alternative under the circumstances. A buffer zone of a reasonable width to protect the area must be included. A corridor may contain Avoidance Areas as long as the Avoidance Areas do not encompass more than 50 percent of the Project Corridor width at any point, unless no reasonable alternative exists. The following table identifies and discusses Avoidance Areas within the Project Corridor.

Four categories of Avoidance Areas were identified within the Project Corridor (see Table 5.7 below). National Grasslands, historical resources not specifically designated as Exclusion or Avoidance Areas, and six geographically unstable areas were identified. The Avoidance Areas do not encompass more than fifty percent of the width of the corridor.

Table 5.8
Avoidance Areas

Avoidance Area	Located within the Project Corridor	Crossed by Project Route	Description of Avoidance Area and Proposed Buffer
National Historic Districts, Wildlife Areas, Wild, Scenic, or Recreational Rivers, Wildlife Refuges, Grasslands	Yes	Yes	National Grasslands Routing in consultation with USFS
State Wild, Scenic or Recreational Rivers, Game Refuges, Game Management Areas, Management Areas, Forests, Forest Management Lands, Grasslands	None	None	
Historical Resources not specifically designated as Exclusion or Avoidance Areas	Yes	None	Impacts to sites will be avoided by the location of Project routing, and implementing the avoidance and mitigation measures recommended by BCA and approved by SHPO
Geologically Unstable Areas	Yes, Six	None	
Areas within 500 Feet of a Residence, School, or Place of Business	No	No	
Reservoirs and Municipal Water Supplies	None	None	
Water Sources for Organized Rural Water Districts	None	None	
Irrigated Land	None	None	
Areas of Recreational Significance Not Designated as Exclusion Areas	None	None	

5.9 Federal Resource Review

A review of publicly available data and field studies of the Project Corridor was conducted to confirm the presence or absence of registered historic districts, wildlife areas, wild, scenic or recreational rivers, wildlife refuges, or grasslands within the Study Area or crossed by the Project route. This review confirmed the absence of designated or registered national historic districts, wildlife areas, wild, scenic or recreational rivers, and wildlife refuges within the Project Corridor or crossed by the Project route. Nineteen (19) miles of the Little Missouri National Grasslands are located within the Project Corridor and will be crossed by the Project route. The USFS has been notified of the Project, a SF-299 Application for Transportation and Utility Systems and Facilities on Federal Lands Permit has been submitted, and an

Environmental Assessment (EA) and an updated Biological Assessment (BA) were prepared for USFS review.

The BA was prepared in accordance with legal requirements set forth under the National Forest Management Act, the Dakota Prairie Grasslands Land and Resource Management Plan, and Endangered Species Act, Sections 4(b)(2)(16 USC 1533) and 7 (16 USC 1536 (c)), and follows the standards established in 50 CFR Part 402-Interagency Cooperation-Endangered Species Act of 1973, the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 2342352353), the National Environmental Policy Act (42 U.S. 4321 et seq.), Executive Order 11990 "Protection of Wetlands" and Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds." BA's are completed to determine if the project has potential effects on ESA listed species. The species determinations were based upon evidence gathered during research and field inspections regarding the presence or absence of the species and potential habitat within the project and study area. The report is not included in this application because there are several locations of habitat that cannot be released publically.

The EA reviews the proposed projects potential impacts on resources such as: botany, cultural/heritage, engineering, fisheries, fuels, hydrology, lands/special uses, minerals, range, recreation, scenic resources, soils, special management areas, silviculture, solid waste, geology, and wildlife. Each specialist from the USFS reviews the topic of their expertise to ensure the proposed project will have no or minimal impacts to resources on the Little Missouri National Grasslands prior to providing the Finding of No Significant Impact (FONSI).

As of December 2021, the USFS and the USFWS have completed their review of the BA. The Environmental Assessment review has been completed by the USFS area specialists. The USFS issued the FONSI and the signed FONSI is located in Exhibit B.19.

5.10 State Resource Review

A review of publicly available information was conducted and confirmed the absence of designated or registered state wild, scenic, or recreational rivers, forests, forest management lands, or grasslands within the Project Corridor or crossed by the Project route.

5.11 Local Resource Review

A review of publicly available information was conducted and confirmed the absence of designated or registered local (municipal and county) parks and recreational areas within the Project Corridor or crossed by the Project route.

5.12 Historical Resources Not Designated as Exclusion/Avoidance Areas

The Project involves USFS managed property. Keitu Engineers & Consultants, Inc. has hired Beaver Creek Archaeology, Inc. (BCA) on behalf of Bridger to conduct a Class I file search, a Class III intensive cultural resource inventory, and to complete a cultural resource survey report for submittal to the USFS who, in turn, submits the report to the North Dakota State Historic Preservation Office (SHPO). This inventory covers 3,434 acres of the 3,565-acre Survey Area the remainder of which has been surveyed by BCA for different projects within the past 10 years.

In total, 37 sites were located within the Survey Area /APE. Of these 37 sites, 20 are determined to be ineligible for nomination to the National Register of Historic Places (NRHP), and no avoidance measures are recommended. Four sites are unevaluated with no avoidance measures recommended. All 24 sites will be avoided by the Project. Three sites (32MZ141, 32MZ59, and 32MZ499) underwent evaluative testing and were found to be ineligible with no avoidance measures recommended. Avoidance or mitigation was recommended for the remaining 10 sites, four of which are located on USFS property and six are located private or State Trust Land.

The four sites (32MZ120, 32MZ121, 32MZ266, and 32MZ2224) located on USFS property are either unevaluated or are ineligible for inclusion on the NRHP however, all four sites have been recommended for avoidance. Avoidance measures will include maintaining a minimum 50' to 100' avoidance buffer, defined by temporary fencing, archaeological monitoring when construction activities are within 100' of the buffered and fenced boundaries, and horizontal directional drilling in proximity to certain sites.

For the six sites (32GV27, 32MZ19, 32MZ267, 32MZ858, 32MZ2810, and 32MZ3406) located on private or State Trust Land, five sites are unevaluated, and one site is eligible for inclusion on the NRHP. All six sites are recommended for avoidance. Avoidance measures will include maintaining a 50' foot avoidance buffer, defined by temporary fencing, archaeological monitoring when construction activities are within 100' of the buffered and fenced boundaries, and horizontal directional drilling in proximity to certain sites.

BCA found "No Historic Properties Affected" provided all sites requiring avoidance measures are avoided. SHPO concurred with BCA's findings in a concurrence letter dated June 22, 2021.

A copy of BCA's report is presented in Exhibit E.

5.13 Geologically Unstable Areas

There are three major phenomena associated with seismic hazards: faults, seismicity, and ground motion. A fault is a fracture along which the blocks of crust on either side have moved relative to one another parallel to the fracture. Rapid slippage of blocks of crust past each other can cause energy to be released, resulting in an earthquake. No active faults have been identified in the Study Area, according to the USGS Geologic Hazards Science Center. An active fault is one in which movement can be demonstrated to have taken place within the last 10,000 years.

North Dakota historically contains little earthquake activity and is therefore not in an area of seismicity. The USGS ground motion hazard mapping indicates that potential ground motion hazard in the Project Study Area is low. The hazard map uses estimated peak ground acceleration expressed as a percentage of the acceleration due to Earth's gravity.

In North Dakota, most flooding occurs in the spring, when the winter snow cover melts. While flooding is generally considered a geologic hazard, the potential for a flood to negatively impact the Project is minimal. No part of this line is located in a ND floodplain.

The North Dakota Geological Survey database was reviewed to identify areas of potential geologic instability within the Study Area. A desktop review based on GIS data, NRCS soil map data and topographic information identified eight potential landslide areas within the Study Area; however, none are crossed by the Project route. See Table 5.12 and subsequent discussion of each area.

The potential for geologic hazards is reduced because the Project is located in relatively flat and stable terrain as opposed to active mountain belts or coastal area. However, six (6) areas of potential geologic instability (Areas A, B, D, E, F, & G) are located within the Project Corridor and cannot be definitively eliminated based on generalized data. Field assessments were conducted in the six areas by a geotechnical specialist at Tetra Tech in July 2020. A copy of their report which includes all the field evaluations performed for the South Bend Pipeline Segment at that time is included as Exhibit F for reference. Applicable observations and recommendations for this Project are summarized in Table 5.12, below.

Table 5.12
Landslide Prone Areas

Area	Latitude & Longitude	Crossed by Project Route	Initial Evaluation	Risk Ranking	Recommended Actions	Planned Mitigation
A	47.785839°, -102.906472°	No	Evaluated by Tetra Tech	High	Regrade & Re-vegetate	Regrade & Re-vegetate
B	47.728725°, -103.245574°	No	Evaluated by Tetra Tech	Medium	Periodic Assessment	None
C	47.676515°, -103.397770°	No	No Further Assessment Required			
D	47.339739°, -103.901176°	No	Evaluated by Tetra Tech	Medium	None	None
E	47.336974°, -103.905431°	No	Evaluated by Tetra Tech	High	Regrade & Re-vegetate	Regrade & Re-vegetate
F	47.269246°, -104.028820°	No	Evaluated by Tetra Tech	Low	None	None
G	47.269229°, -104.029326°	No	Evaluated by Tetra Tech	Medium	Continued Observation	None
H	47.265444°, -104.036084°	No	No Further Assessment Required			

Area A: (Tetra Tech Report, Potential Slope 4)

The proposed pipeline construction disturbance corridor intersects its first landslide risk area at point 1. The proposed position of the pipeline places it 60 feet beyond the toe of the existing slope.

The estimated slope angle was calculated as 10°, well below the angle of repose for a slope made-up entirely of dry sand (which is 34°), indicating a stable slope. However, because the pipeline is to be placed at the toe of the slope, possible sliding or slumping could occur as a result of soil disturbance. While the slumping would add more soil on top of the installed line resulting as an additional depth of cover, a field assessment of this site was recommended.

Geotechnical specialists from Tetra Tech Inc. evaluated Area A. They concluded, "The risk for potential impacts to the proposed South Bend pipeline is low, however, given that the proximal distance from the proposed pipeline to the toe of the slope is 60 feet or greater." They suggested the slope be regraded, install erosion control measures, and regular monitoring.

This area will be regraded in the course of construction of the pipeline, and revegetated with low lying forbs and grasses as recommended by the geotechnical specialists.

Area B: (Tetra Tech Report, Potential Slope 7)

The proposed route places the pipeline approximately 500 feet away from the landslide deposit area identified by the ND Geological Survey data. However, the proposed route has the pipeline intersecting a small drainage area that could be considered part of the larger "landslide risk" area. Because the pipeline is to intersect this slope, possible sliding or slumping could occur as a result of soil disturbance. This area was therefore included in the evaluation process.

The estimated slope of this drainage area was calculated as 6.1°, well below the angle of repose for a slope made-up entirely of dry sand (which is 34°), indicating slope stability. Combined with the distance from prior surface movement, the initial evaluation classified this area as stable.

Geotechnical specialists from Tetra Tech Inc. evaluated Area B. They concluded, "There is a small drainage with an intermittent stream located at the toe of the slope with has caused some historical erosion; however, the area has revegetated and appears to have stabilized at the time of the assessment. Several small slumps were also observed near the toe of the slope within the drainage channel. No recent movement was apparent at the time of assessment. Overall the slope appeared to be stable at the time of the assessment with no signs of active movement or instability." They suggest periodically assessing the slope for indications of slope movement associated with slumping and erosion near the toe of the slope.

Area C:
The distance from the nearest point of a landslide deposit area (identified by NDGS) to the proposed pipeline route is 192 feet, placing this risk area well outside of the construction corridor. Still, an estimated slope angle was calculated for the nearest feature of the landslide deposit to the route. The estimated slope was calculated as 5.7°, well below the angle of repose for a slope made-up entirely of dry sand (which is 34°) and indicates slope stability. Pipeline construction is not expected to affect slope stability at this location because the risk area lies completely outside of the construction corridor.

Area D: (Tetra Tech Report, Potential Slope 5)
The pipeline intersects two slopes (points 25 and 26) on either side of a stream bed. The estimated slope angles were calculated as 9.3° for both point 25 and 26. This angle is well below the angle of repose for a slope made-up entirely of dry sand and indicates slope stability. But, because the pipeline is to intersect this slope, possible sliding or slumping could occur as a result of soil disturbance, therefore a field assessment of these sites was conducted.

Tetra Tech evaluated Area D and concluded "The slope was stable at the time of evaluation" and suggested no further action.

Area E: (Tetra Tech Report, Potential Slope 6)

Tetra Tech evaluated Area E and ranked the area high mass failure potential due to its steep slope but identified only a possible tension crack near the top of the slope. The surface was well vegetated and showed no signs of recent movement. However, Tetra Tech recommended regrading the area to remove the steep slope areas and revegetate with low height plants.

Bridger will mitigate risks associated in this area in accordance with the Tetra Tech recommendations and in consultation with the landowner to determine the most appropriate mitigation measures at the site.

Area F: (Tetra Tech Report, Potential Slope 1)

The proposed pipeline route crosses a shallow stream bed. The estimated slope angles for point 29 were calculated for the Southwest slope as 4.3° and for the NE slope as 8.3°. For point 30 the estimated slope angle was calculated as 5.0°. All of these angles are well below the angle of repose for dry sand and indicate stable slopes. However, disturbing soil at this point may decrease slope stability and cause land sliding or slumping, therefore a field assessment of these sites was recommended.

Tetra Tech evaluated Area F and observed "No apparent indications of instabilities or erosion" and suggested no further action.

Area G: (Tetra Tech Report, Potential Slope 2)
The proposed pipeline route intersects a NDGS identified landslide deposit mid-slope (point 30). The estimated slope angles for point 29 were calculated for the Southwest slope as 4.3° and for the NE slope as 8.3°. For point 30 the estimated slope angle was calculated as 5.0°. All of these angles are well below the angle of repose for dry sand and indicate stable slopes. However, disturbing soil at either point 29 or 30 may decrease slope stability and cause land sliding or slumping, therefore a physical assessment of these sites was recommended.

Tetra Tech evaluated Area G and observed the slope is moderate, but relative short in length. While the slope is well vegetated, there is a well-defined drainage area at the toe of the slope. The Tetra Tech staff stated the slope appeared stable with no apparent signs of recent erosion at the time of assessment, and suggested that the features be observed for signs of change.

Bridger will mitigate any risks associated with this feature in accordance with the recommendations of Tetra Tech and in consultation with the landowner to determine the most appropriate mitigation measures at the site.

Area H:
The proposed route intersects a gently sloping bank on one side of a stream bed. The estimated slope angle (calculated for the steepest portion of this slope, nearest the stream) was calculated to be 7.3°, well below the angle of repose for a slope made-up entirely of dry sand which indicates slope stability. Since even the steepest area is relatively shallow and very limited in size, the initial evaluation classified this area as stable.

5.14 Areas within 500 Feet of a Residence, School, or Place of Business

There are no inhabited residences, schools, or places of business within five hundred feet of the Project route.

5.15 Reservoirs and Municipal Water Supplies

The closest North Dakota cities to the Project are Watford City and Keene located in McKenzie County. These cities water is not supplied by aquifers. McKenzie County Water Resource District purchases its water from the Western Area Water Supply Authority (WAWSA). WAWSA is fed by the Missouri River and the water is treated at the Williston Treatment Plant.

Approximately 7.5 miles of the east end of the Project crosses the Southwest Water Authority pipeline, specifically the area served by the Dickinson Water Treatment Plant.

Within the Study Area, the Fox Hills and Tongue River aquifer systems are the most common water well. These water wells are most likely used for private domestic, livestock and industrial purposes. The Study Area does overlie the Tobacco Garden, Cherry Creek and Bennie Peer glacial aquifers.

This line does not cross any reservoirs or municipal water sources. The proposed Project will not adversely affect any reservoirs or municipal water supplies.

5.16 Water Sources for Organized Rural Water Districts

Within McKenzie and Golden Valley Counties, groundwater uses are intended for domestic, livestock and industrial purposes. Most groundwater is derived from precipitation. Excess water infiltrates down until it reaches the zone of saturation, at which time it becomes accessible to wells. Most aquifers occur in the Fox Hills, Tongue River, Fort Union, and Sentinel Butte Formations. Maximum potential yields of these aquifers range from around 50 gal/min to as much as 250 gal/min. The water from these aquifers are commonly soft to very hard and contain sodium bicarbonate.

Per the ND DEQ Interactive Viewer of Wellhead/Source Water Protection Areas, this Project will not affect any wellhead or source water protection areas

This Project is not expected to impact North Dakota ground water quality.

5.17 Irrigated Land

The Project will not impact irrigated lands. Land that is most efficient for irrigation is relatively level and has soils that are well drained and highly permeable. The route crosses silt and clay soils which contain low permeability, making them unsuitable for irrigated agriculture. A desktop survey of Google Earth and field survey confirms the absence of irrigated lands within the Survey Area.

5.18 Areas of Recreational Significance but Not Designated Exclusion Areas

Areas of recreational significance are not located within the Project Corridor or crossed by the Project route.

5.19 Selection Criteria

The NDPSC's rules specify Selection Criteria to be considered in designating a pipeline corridor or route. Specifically, the NDPSC considers whether adverse effects from the location, construction, and maintenance of the facility as they relate to these criteria, will be at an acceptable minimum, and whether these effects will be managed and maintained at an acceptable minimum.

The Selection Criteria that were considered for the Project include:

- Agricultural Production
- Family Farms and Ranches
- Land Suitable for Irrigation

- Surface Drainage and Groundwater Flow Patterns
- Sound Sensitive Areas
- Visual Effects
- Extractive and Storage Resources
- Wetlands, Woodlands, and Wooded Areas
- Communication or Electric Control Facilities
- Human Health and Safety
- Animal Health and Safety
- Plant Life

The following sections discuss the potential impacts and measures to avoid or minimize the impacts related to each of the Selection Criteria.

5.19.1 Agricultural Impacts

The Project will be installed within a new ROW in McKenzie and Golden Valley Counties in northwestern North Dakota. A significant portion of the Project route crosses agricultural and pasture lands where crop and livestock production are the extensive economic activity. Land use along the route is comprised of approximately 20 miles agricultural land and 50 miles pasture or rangeland. The primary crops cultivated in the area include hay fields, oats, sunflowers, and alfalfa.

Pipeline construction may result in temporary effects on agricultural land use. However, Bridger will institute appropriate management practices to restore all areas to pre-construction conditions, to the extent reasonably practicable.

Bridger will follow their Weed Management Plan as filed with McKenzie County Weed District for the whole route in North Dakota. Golden Valley Weed District has been contacted twice and to date Bridger has not received a reply therefore a county specific plan for Golden Valley was not created. See Exhibit D for filed McKenzie County Weed Plan.

Bridger will require that construction equipment be cleaned before arriving on site to prevent the introduction of undesirable species to the surrounding ROW. Bridger will implement the following mitigation measures when undesirable species are found within the construction ROW:

- Bridger will make an effort to prevent the spread of noxious weed seeds during clearing and grading activities, and will use straw mulch and seed mix that are free of noxious weed seed to re-vegetate the ROW. Contractors and construction inspectors will receive information to help them identify noxious weeds. Bridger will also utilize environmental inspectors to help identify and prevent the spread of undesirable species.

- During pre-construction walkovers, Bridger's environmentally trained inspectors may flag and document areas containing noxious weeds. The construction crews are informed of these areas. Bridger instructs the contractors to minimize the amount of construction equipment and limit the number of passes by this equipment through infested areas. Construction mats are used to minimize the transport of weed seed or plant material via construction equipment.

- Equipment and construction mats are cleaned immediately after passing through infested

areas. Cleaning consists of removing large soil clods and/or plant parts from the equipment and construction mats using shovels and brooms and, when necessary, washing the equipment with water or cleaning using compressed air. Soil and water from cleaning activities are not allowed to flow to non-infested areas.

The pipeline will be installed at a depth that exceeds the typical tillage depth. Following construction, agricultural lands will be returned to pre-construction conditions to the extent reasonably practicable. Therefore, the Project is not anticipated to interfere with normal agricultural operations on cropland after construction. Construction operations are expected to be conducted after the harvest season and prior to the growing season when feasible. Therefore, minimal disruption to agricultural production is anticipated.

Above-ground facilities on cropland are limited to line markers and cathodic protection rectifiers. Therefore, the Project will result in minimal long-term loss of farmland use. Bridger will consult with landowners to place above-ground appurtenances in areas that cause the least amount of disturbance to landowner operations. Landowners will be compensated by either long-term lease agreements or by the purchase of the land for these sites.

Bridger will ensure all fencing and grates that are being used for containing livestock will be maintained properly during construction. All livestock related facilities such as cattle fencing or grates would be repaired if damaged during construction or maintenance. Bridger employees will be made aware during construction and maintenance activities to close all fences and gates.

Private livestock water pipelines are adjacent and within the Project Corridor. Prior to construction or maintenance Bridge would identify all underground water pipelines to minimize risk of being damaged. Pipeline routed for approximately 80% of the route to be within or adjacent to Bridger’s existing ROW which aids in reducing risk to utility strikes. While water pipeline impacts are not anticipated, Bridger would make necessary repairs and ensure livestock have water during repairs.

Prime farmland is not located within the Project Corridor and will not be affected by this Project.

Bridger will take appropriate precautions to protect livestock and crops affected by maintenance and inspection of this project. The Project will not generate negative effects for agricultural land use such as landscape modifications or an introduction of noxious weeds or invasive species when agricultural areas are reclaimed. Bridger will continue to implement mitigation post Project construction.

5.19.2 Family Farms and Ranches

The construction or maintenance activities will not alter the patterns of landownership or create long-term disruptions of family farming operations. The construction zone will be located partially within an existing ROW and paralleling another line. Bridger’s crop loss compensation program will compensate landowners if any crop damage were to occur during construction. Crop damage resulting from future pipeline maintenance and repairs will also be addressed by Bridger. All maintenance equipment used will be limited to access routes in agreement with the landowners to minimize disruption to soil, drainage, and crops.

Once constructed the Project will require periodic maintenance activity, which could have an indirect short-term disruption to livestock operations, and inconvenience to farm activities. Bridger will work to minimize interference with these activities while the Project is in operation.

5.19.3 Land Suitable for Irrigation

Land that is most efficient for irrigation is relatively level and has soils that are well drained and highly permeable. The route crosses silt and clay soils which contain low permeability, making them unsuitable for irrigated agriculture.

Both the desktop survey using information available on the North Dakota GIS system and as confirmed by a field on-foot survey of the route confirms the absence of irrigated lands within the Survey Area. No aboveground irrigation systems were identified along the route. No Landowners identified irrigation systems on their properties.

5.19.4 Surface Drainage and Groundwater Flow Patterns

Because the Project consists almost exclusively of underground pipe, the Project will not alter surface drainage patterns. Aboveground apertures such as cathodic test stations, rectifiers and pig launchers and receivers are isolated along the route and have a minimal aboveground presence that they will not alter surface drainage. The underground depth of pipe is well above the local groundwater table elevation except in very limited areas where bored beneath standing water. Since pipe is placed well below standing water, no impact to flowing surface water that occurs relative to the minor protuberances into the topmost aquifers which intersects with streams, the overall cross section area of pipe through these areas is "de minimus" compared to the acres of hydraulic surface involved. Consequently, the Project will not have any measurable impact on the average flow rate nor pattern of groundwater flow.

In the unlikely case that streams, swales, ditches, or other natural drains were altered during the Project, they will be restored as best as practical to pre-construction conditions.

5.19.5 Sound-Sensitive Land Uses

There are no inhabited residence located within 500 feet of the Pipeline Route.

During construction, residences in close proximity to the construction may experience short-term increases in construction-related noise. The heavy construction equipment needed to construct the Project may generate short-term increases in ambient noise levels. Increases in ambient noise levels due to heavy equipment operation will be limited to the period of construction, typically during daylight hours. No significant noise is expected to be generated by the Project during normal operations.

5.19.6 Visual Effect on Adjacent Areas

The aboveground structures associated with the pipeline will be finished with "earth-toned" painted surfaces. These structures are common throughout the landscape and not considered to be obtrusive. Surface facilities to be installed along the route will be limited to valves, pig launchers and receivers, pipeline markers, and rectifiers.

Other than these permanent above-ground facilities, the Project's impacts to visual effects will be limited to periods of construction activities.

5.19.7 Extractive and Storage Resources

No extractive or storage resources were identified which would be affected by the Project. Due to the narrow and linear nature of the pipeline ROW, future extractive development will not be substantially affected by the Project.

5.19.8 Wetlands, Woodlands, and Wooded Areas

Bridger, through its consultants, conducted a desktop survey using aerial photographs and USGS topographic maps identifying wetlands along the Project Corridor.

No wetlands or waterbodies will be permanently drained or filled as part of the Project, and no future effects are anticipated. Construction of the Project will not result in the permanent drainage or filling of wetlands.

No fertilizer, lime, or mulch would be applied in wetlands as part of the Project. The long-term operation and maintenance of the pipeline will not have adverse effects on wetland function or value as all features through wetlands are underground.

During Keitu's work, 35 upland tree areas were geographically referenced within the Survey Area. Keitu recorded all trees with a diameter breast height of 1 inch or greater. It was determined that approximately 4335 trees, saplings, or shrubs are located within the Survey Area.

Impacts to trees will be avoided to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline. It may become necessary to clear some mature trees during construction; however, Bridger will work with the appropriate state agencies and private landowners to determine appropriate replacement measures following construction.

Bridger will satisfy the tree replacement requirements agreed upon by the NDPSC.

5.19.9 Radio and TV Reception and Other Communication or Electronic Facilities

No impacts on television or radio reception or communication or electronic control facilities are anticipated as a result of the Project.

5.19.10 Human Health and Safety

Bridger Pipeline LLC operates in western North Dakota, eastern Montana and Wyoming. By building and operating this extensive network, Bridger has become one of the largest pipeline companies in North Dakota and is very experienced in managing construction and operating pipeline systems that protect the public's health and safety.

5.19.11 Animal Health and Safety

Construction activity within the Project Corridor will have temporary impacts on domestic animals and wildlife. The clearing of vegetation will temporarily reduce cover, nesting, and foraging habitat for some species. However, species will generally move into adjacent habitats, away from the disturbance area. Once habitat alterations are reclaimed, wildlife is anticipated to reestablish within the area.

Project trenching activities and associated spoil piles may result in a short-term barrier restricting the movement of some wildlife species (typically two to four weeks at any one area). Except for short-term interruptions during construction and maintenance, existing public roads, farm lanes, and livestock crossings will be kept open, providing crossing access for wildlife. During construction, Bridger may erect temporary fencing, as necessary, to keep livestock and wildlife away from the pipeline trench, and will minimize the length of time the trench is left open. Short-term barriers may also be utilized to keep livestock away from active construction and maintenance. Bridger will work with landowners to ensure access to fresh water sources are not impacted.

5.19.12 Plant Life

The Project is not anticipated to permanently impact plant life, however in areas where vegetation has to be removed to perform inspection or maintenance activities, it will be reestablished to regulation standards from county agencies and the satisfaction of landowners. Permanent impacts on vegetation are not anticipated.

5.20 Policy Criteria

5.20.1 Location and Design

Bridger believes that the Project utilizes an optimal alignment. Although four types of Avoidance Areas were identified within the Project Corridor (see Table 6.8), the Project has been sited to minimize impacts to these areas, and the Project’s route parallels approximately 45 miles of existing pipelines in North Dakota.

Bridger engaged consultants to conduct environmental desktop studies, field studies, and a Class I and III archeological study. The purpose of these studies is to identify environmental and cultural resources and to avoid and minimize impacts to these areas.

Construction of the Project will involve the installation of 16-inch outside diameter, steel, API-5L, PSL2, Grade X-52 ERW Line Pipe with a nominal wall thickness of 0.312 inches. Bore pipe will have a nominal wall thickness of 0.375 inches. The MOP of the pipeline will be 1,440 psig. The Average operating pressure will be 600 -800 psig.

Valves will be 16-inch ANSI 600 manufactured in accordance with API Standard 6D "API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service." Valves will be installed pursuant to US DOT regulations. The MOP of the valves will be 1,440 psig.

The steel pipe utilized for construction of the Project will meet US DOT criteria outlined in 49 C.F.R. § 195.100. The Project will be constructed per 49 C.F.R. § 195.200 and will be operated and maintained per 49 C.F.R. § 195.400.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

5.20.2 Training and Utilization of In-State Labor

During construction, skilled and unskilled labor, both local and non-local, will be employed to construct the pipeline. Bridger, as operator of the Project, has established a comprehensive orientation, technical, safety, emergency, and on-the-job training program that is in compliance with the Operator Qualification rules issued by PHMSA under 49 C.F.R. Part 195. As personnel progress in pipeline operation and maintenance positions, they receive hundreds of hours of formal and on-the-job training. Demonstrations of competence are shown through reviews of job performance, periodic pipeline control system simulations, emergency exercises, welding certification tests, and other functions required to continue safe pipeline operation and maintenance.

5.20.3 Economies of Construction and Operation

The Project is believed to be the most cost-effective and operationally sound means of meeting Bridger's delivery obligations.

5.20.4 Use of Citizen Coordinating Committees

No citizen coordinating committee is anticipated as a result of the Project. Bridger does not believe such a committee is necessary given the Project is located in an area of the state where crude oil gathering and transmission pipelines already exist. As such, the public is familiar with the permitting, construction, and operation of pipeline facilities.

5.20.5 Commitment of Portion of Transmitted Product for Use In-State

Bridger does not own any of the crude petroleum transported in its pipeline system and does not determine markets or destinations for petroleum commodities.

5.20.6 Labor Relations

The Project will have no anticipated effect on labor relations within North Dakota.

5.20.7 Coordination of Facilities

The 16-inch line and associated pumping, control and operating systems is used in conjunction with other segments of the Bridger pipeline network to optimize system capacity.

5.20.8 Monitoring Impacts

Any construction-related impacts will be mitigated through the use of best management practices, appropriate construction techniques, and environmental inspection during and following completion of construction. Following construction, a thorough inspection will be performed to ensure restoration efforts were successful. Monitoring and treatment of noxious weeds and/or invasive species will be conducted on an annual basis to ensure a high degree of control and maximize treatment effectiveness.

5.20.9 Using Existing and Proposed ROWs and Corridors

The Project will be constructed in a 100-foot-wide temporary construction ROW. Bridger has acquired 50-foot-wide permanent easements for the Project. Approximately 50% of the Project will be partially constructed within or next to an existing ROW.

Bridger will acquire the right to utilize additional temporary workspace from the landowners, where necessary. The use of unauthorized workspace will be prohibited without the landowner's approval. In all cases, the amount of additional temporary workspace utilized will be kept to the minimum necessary to safely conduct work.

5.20.10 Other Existing or Proposed Transmission Facilities

No specific transmission facilities by Bridger are planned for the next 10 years. However, given the production activity in Bridger's service area of Western North Dakota and the demand for crude oil transportation by pipeline, additional new pipeline projects by Bridger are possible.

6 AGENCY NOTIFICATIONS AND PERMITTING

Keitu contacted federal, state, and local agencies and entities designated in North Dakota Administrative Code § 69-06-01-05 regarding the Project. Letters and/or emails were submitted with an accompanying overview map of the Project. A summary of these consultations is provided in Table 6, and further details on each consultation are included in the following sections. Sample notifications and responses are located in Exhibit B.

Table 6
Agency Notifications

Agencies Contacted	Form of Contact	Date of Contact	Date of Reply
US Army Corps of Engineers	Mailed Letter	10/4/2019 12/16/2019	1/8/2020
ND Parks and Recreation	Mailed Letter	9/30/2019	11/8/2019
ND Game and Fish Department	Mailed Letter	9/30/2019	10/28/2019
Lake Ilo National Wildlife Refuge	Mailed Letter	9/30/2019 12/16/2019	
U.S. Fish and Wildlife Service	Mailed Letter	9/27/2019 12/16/2019	12/30/2019
McKenzie County Planning Department	Mailed Letter	10/15/2019	10/29/2019
McKenzie County Commission	Mailed Letter	9/30/2019 12/16/2019	
Golden Valley County Planning Department	Mailed Letter	9/27/2019 12/16/2019	1/6/2020
Golden Valley County Commission	Mailed Letter	9/27/2019 12/16/2019	1/6/2020
Minot Air Force Base - Cable Affairs	Email	10/8/2019	10/9/2019
NDIC Pipeline Authority	Mailed Letter	9/30/2019 12/16/2019	
ND State Water Commission	Mailed Letter	9/30/2019	10/29/2019
ND Department of Env. Quality	Mailed Letter	9/30/2019 12/16/2019	12/9/2019

Table 6 Agency Notifications			
Agencies Contacted	**Form of Contact**	**Date of Contact**	**Date of Reply**
ND DOT Dickinson District	Mailed Letter	9/30/2019 12/16/2019	1/13/2020
ND DOT Williston District	Mailed Letter	9/30/2019 12/16/2019	1/13/2020
ND Department of Trust Lands	Mailed Letter	9/27/2019	10/2/2019
ND Soil Conservation Committee	Mailed Letter	9/30/2019 12/16/2019	
ND Department of Agriculture	Mailed Letter	9/30/2019 12/16/2019	
USFS McKenzie Ranger District	Mailed Letter	9/30/2019 12/16/2019	EA FONSI signed
McKenzie County Weed Board	Mailed Letter	9/27/2019 12/16/2019	Weed plan was approved April 2020
ND Geological Survey	Mailed Letter	9/27/2019	10/7/2019
Golden Valley County Weed Board	Mailed Letter	9/27/2019 12/16/2019	
Grail Township	Mailed Letter	3/05/2020	
ND Labor Department	Mailed Letter	1/4/2021	
ND Indian Affairs Commission	Mailed Letter	1/4/2021	
ND Governor	Mailed Letter	1/4/2021	
ND Energy Development Impact Office	Mailed Letter	1/4/2021	
ND Department of Human Services	Mailed Letter	1/4/2021	
ND Department of Commerce	Mailed Letter	1/4/2021	1/19/2021
ND Department of Career & Technical Education	Mailed Letter	1/4/2021	
ND Attorney General	Mailed Letter	1/4/2021	
ND Aeronautics Commission	Mailed Letter	1/4/2021	
Job Service of ND	Mailed Letter	1/4/2021	
Federal Aviation Administration	Mailed Letter	1/4/2021	
ND Transmission Authority	Mailed Letter	3/2/2022	
ND Forest Service	Mailed Letter	3/2/2022	
20th Airforce 91st Missile Wing	Mailed Letter	3/2/2022	
Grand Forks Airforce Base	Mailed Letter	3/2/2022	
Federal Bureau of Land Management	Mailed Letter	3/2/2022	
Military Aviation & Installation Assurance Siting Clearinghouse	Email	3/2/2022	
ND State Historic Preservation Office	Contacted by Beaver Creek Archaeology, Inc.		March 2021

6.1 U.S. Fish and Wildlife Service

The USFWS administers several programs designed to identify and protect plant and animal species listed under the Endangered Species Act, critical habitats for listed species, migratory birds, bald and golden eagles, as well as wetland and grassland easements. Notification letters were sent to the USFWS on

September 27, 2019 and December 16, 2019 which included a description of the project, site map, and a request for comments regarding issued under USFWS jurisdiction.

A formal written response was received from the USFWS – Bismarck Ecological Services Office, dated December 30, 2019. The letter provided comments concerning, endangered species, Dakota skipper, northern long-eared bats, and eagle guidance. The USFS also consulted with the USFWS during the approval of the BA and BE that were prepared for this project.

6.2 U.S. Army Corps of Engineers

The USACE is responsible for administering federal laws that regulate certain activities in the waters of the United States. The authority applicable to this responsibility is Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), which prohibits the discharge of dredged or fill material into waters of the United States without authorization in the form of a USACE permit. A notification letter was sent to the USACE on October 4, 2019 and December 16, 2019 which included a description of the project, site maps, and a request for comments regarding issues under USACE jurisdiction.

A response from the USACE was received on January 8, 2020. The letter included the DA ENG Form 4345 and a Nationwide Permit Fact Sheet # 12.

6.3 Department of Defense- Air Force Cable Affairs

The United States Department of Defense possesses assets associated with intercontinental ballistic missiles and launch facilities in North Dakota. A notification email was sent to the U.S. Air Force which included a description of the project, site map, and a request for comments regarding issues under U.S. Air Force jurisdiction.

The United States Department of Defense – Air Force Cable Affairs confirmed on October 9, 2019 they have no assets near the Project.

6.4 North Dakota State Historic Preservation Office

According to the North Dakota Energy Conversion and Transmission Facility Siting Act, among the "*factors to be considered [by the Commission] in evaluating applications and designation of sites, corridors, and routes,"* is the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. The agency responsible for these sites is the NDSHPO. As previously mentioned, BCA was contracted to conduct a Class III Cultural Resource Inventory. The NDSHPO reviewed the project studies and the concurrence letters are located in Exhibit B

6.5 North Dakota Game and Fish Department

The NDGF has oversight of the State's game species, State Conservation Priority Species, Wildlife Management Areas, and Private Land Open to Sportsman lands. A notification letter was sent to the NDGF on September 30, 2019 which included a description of the Project, site maps, and a request for comments regarding issues under NDGF jurisdiction.

A formal response was received on October 28, 2019. The NDGF's primary concern was disturbance of native prairie and wooded draws. It was recommended that Cherry Creek be crossed via HDD, steps be taken to protect wetlands, and that aerial raptor surveys be conducted.

6.6 Lake Ilo National Wildlife Refuge

A notification letter was sent to the Lake Ilo National Wildlife Refuge on September 30, 2019 and December 16, 2019 which included a description of the Project, site maps, and a request for comments regarding issues under Lake Ilo National Wildlife Refuge jurisdiction.

To date, no formal written response has been received from the Lake Ilo National Wildlife Refuge.

6.7 North Dakota Parks and Recreation Department

The NDPRD, Natural Resource Division has authority and expertise regarding recreation and biological resources in North Dakota, with a particular emphasis on rare species and ecological communities. The NDPRD maintains a database detailing the location and recorded occurrences of animal and plant species of special concern. The NDPRD is also responsible for the management of state park lands and Land and Water Conservation funded recreation projects. A notification letter was sent to the NDPRD on September 30, 2019 which included a description of the Project, site maps, and a request for comments regarding issues under NDPRD jurisdiction.

A formal response was received on November 8, 2019 stating the NDPRD recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. No species of concern that NDPRD noted are within the Proposed Corridor.

6.8 North Dakota Department of Trust Lands

The North Dakota Department of Trust Lands was sent a notification letter on September 27, 2019 which included a description of the Project, site map, and request for comments regarding the presence of Mineral Trust Lands and School Trust Lands in the Study Area.

An alignment was sent to Kayla Graber in October 2019. Signed Trust Land easements were received in December 2021.

6.9 North Dakota State Water Commission

The NDSWC was sent a notification letter on September 30, 2019 which included a description of the Project, site map, and a request for comments regarding issues under NDSWC jurisdiction.

A written response was received from the NDSWC on October 29, 2019 that the project has been reviewed by NDSWC staff. There were no floodplains identified where the project is located and the project does not require a conditional or temporary use permit.

6.10 McKenzie County Planning Department

A notification letter was sent to the McKenzie County Planning Department on October 15, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the McKenzie County Planning Department.

An email response was received on October 29, 2019. The planning and zoning office's primary considerations would be to work with their department for land use evaluations and approvals. Bridger is currently working with McKenzie County on road crossings and temporary approach permits.

6.11 McKenzie County Commission

A notification letter was sent to the McKenzie County Commission on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the McKenzie County Commission.

To date, no formal written response has been received from McKenzie County Commission.

6.12 McKenzie County Weed Board

A notification letter was sent to the McKenzie County Weed Board on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the McKenzie County Weed Board.

A response via email was received on December 23, 2019. The McKenzie County Weed Board requires a weed management plan to be submitted and approved prior to construction. The requested weed management plan was submitted and subsequently approved on April 13, 2020.

6.13 Golden Valley County Planning Department

A notification letter was sent to the Golden Valley County Planning Department on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Golden Valley County Planning Department.

An email response was received on January 6, 2020 discussing the County's pipeline permit process.

6.14 Golden Valley County Commission

A notification letter was sent to the Golden Valley County Commission on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Golden Valley County Commission.

A notification was received from Henry Gerving of the Golden Valley Commission stating a pipeline permit is required for the project. A permit application was submitted and approved in August 2020.

6.15 Golden Valley Weed Board

A notification letter was sent to the Golden Valley County Weed Board on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Golden Valley County Weed Board.

To date, no formal written response has been received from Golden Valley County Weed Board.

6.16 North Dakota Department of Agriculture

A notification letter was sent to the North Dakota Department of Agriculture on September 30, 2019 and on December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Human Services.

To date, no formal written response has been received from North Dakota Department of Agriculture.

6.17 North Dakota Industrial Commission Pipeline Authority

A notification letter was sent to the North Dakota Industrial Commission Pipeline Authority on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Industrial Commission Pipeline Authority.

To date, no formal written response has been received from North Dakota Industrial Commission Pipeline Authority.

6.18 North Dakota Department of Environmental Quality

A notification letter was sent to the ND DEQ on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the ND DEQ.

A written response was received on December 9, 2019. The Department believes the environmental impacts will be minor and provided comments with respect to construction. Comments include: aggregate to be used for roads, care during construction near water, discharge permits, aquifers in the construction area, solid waste management, and minimizing impacts to human health.

6.19 North Dakota Department of Transportation Dickinson and Williston District

A notification letter was sent to the North Dakota DOT Dickinson and Williston District on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota DOT Districts.

A response was received by the ND DOT Bismarck office on January 13, 2020. The letter requested a meeting to discuss right-of-way acquisition pertaining to the crossing of Highway 85.

A meeting with the ND DOT was held to discuss parallel encroachment and crossing of Hwy 85 in March 2020, attendees were Scott Besmer (KLJ), Chad Orn (NDDOT), Matt Linneman (NDDOT), Joel Wilt (NDDOT), Daniel Christenson (NDDOT), and Monte Doctor (State of ND).

6.20 USFS McKenzie Range District

A notification letter was sent to the USFS McKenzie Range District on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Soil Conservation Committee.

Close contact has been maintained pertaining to an Environmental Assessment that was written for the South Bend project. Biological Assessment was submitted to the USFS on August 31, 2020 and was approved. The EA was submitted for public comment in December 2021 and a FONSI has be signed.

6.21 North Dakota Soil Conservation Committee

A notification letter was sent to the North Dakota Soil Conservation Committee on September 27, 2019, and December 16, 2019 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Soil Conservation Committee.

To date, no formal written response has been received from North Dakota Soil Conservation Committee.

6.22 North Dakota Geological Society

A notification letter was sent to the North Dakota Geological Society on September 27, 2019, which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Geological Society.

A written response was received on October 7, 2019. The letter provided landslide area mapping near the pipeline route.

6.23 North Dakota Labor Department

A notification letter was sent to the North Dakota Labor Department on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Labor Department.

To date, no formal written response has been received from North Dakota Labor Department.

6.24 Grail Township

A notification letter was sent to Grail Township on March 5, 2020 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Township.

To date, no formal written response has been received from Grail Township.

6.25 North Dakota Indian Affairs Commission

A notification letter was sent to the North Dakota Indian Affairs Commission on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Indian Affairs Commission.

To date, no formal written response has been received from North Dakota Indian Affairs Commission.

6.26 North Dakota Governor

A notification letter was sent to the North Dakota Governor on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Governor.

To date, no formal written response has been received from North Dakota Governor.

6.27 North Dakota Energy Impact Office

A notification letter was sent to the North Dakota Energy Impact Office on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Energy Impact Office.

To date, no formal written response has been received from North Dakota Energy Impact Office.

6.28 North Dakota Department of Human Services

A notification letter was sent to the North Dakota Department of Human Services on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Human Services.

To date, no formal written response has been received from North Dakota Department of Human Services.

6.29 North Dakota Department of Commerce

A notification letter was sent to the North Dakota Department of Commerce on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Commerce.

A telephone call with a follow-up email response was received from North Dakota Department of Commerce. They requested additional information about the project, a subsequent email was sent to provide the requested information.

6.30 North Dakota Department of Career & Technical Education

A notification letter was sent to the North Dakota Department of Career & Technical Education on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Career & Technical Education.

To date, no formal written response has been received from North Dakota Department of Career & Technical Education.

6.31 North Dakota Attorney General

A notification letter was sent to the North Dakota Attorney General on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Attorney General.

To date, no formal written response has been received from the North Dakota Attorney General.

6.32 North Dakota Aeronautics Commission

A notification letter was sent to the North Dakota Aeronautics Commission on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Aeronautics Commission.

To date, no formal written response has been received from North Dakota Aeronautics Commission.

6.33 Job Service of ND

A notification letter was sent to the Job Service of ND on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of Job Service of ND.

To date, no formal written response has been received from Job Service of ND.

6.34 Federal Aviation Administration

A notification letter was sent to the Federal Aviation Administration on January 4, 2021 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Federal Aviation Administration.

To date, no formal written response has been received from the Federal Aviation Administration.

6.35 ND Transmission Authority

A notification letter was sent to the ND Transmission Authority on March 3, 2022 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the ND Transmission Authority.

To date, no formal written response has been received from the ND Transmission Authority.

6.36 ND Forest Service

A notification letter was sent to the ND Forest Service on March 3, 2022 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the ND Forest Service.

To date, no formal written response has been received from the ND Forest Service.

6.37 20th Airforce 91st Missile Wing

A notification letter was sent to the 20th Airforce 91st Missile Wing on March 3, 2022 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the 20th Airforce 91st Missile Wing.

To date, no formal written response has been received from the 20th Airforce 91st Missile Wing.

6.38 Grand Forks Airforce Base

A notification letter was sent to the Grand Forks Airforce Base on March 3, 2022 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Grand Forks Airforce.

To date, no formal written response has been received from the Grand Forks Airforce.

6.39 Federal Bureau of Land Management

A notification letter was sent to the Federal Bureau of Land Management on March 3, 2022 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Federal Bureau of Land Management.

To date, no formal written response has been received from the Federal Bureau of Land Management.

6.40 Military Aviation & Installation Assurance Siting Clearinghouse

A notification email was sent to the Military Aviation & Installation Assurance Siting Clearinghouse on March 3, 2022 which included a description of the Project, shapefiles, and a request for comments regarding issues under the jurisdiction of the Military Aviation & Installation Assurance Siting Clearinghouse.

To date, no formal written response has been received from the Military Aviation & Installation Assurance Siting Clearinghouse.

7 OTHER FACTORS CONSIDERED

7.1 Public Health, Welfare, Natural Resources, and the Environment

A discussion of the studies conducted for the Project and anticipated effects of the location, construction, and operation of the pipeline on public health and welfare, natural resources, and the environment is included in Sections 5, 6, and 7.

7.2 New Transmission Tech to Minimize Adverse Environmental Effects

The Project does not include new energy conversion or transmission technologies. The pipeline design is consistent with existing pipeline technologies. However, Bridger is constantly evaluating new energy conservation technologies to reduce the energy consumed in its operations.

Pipeline Control Center

Bridger control center operators are trained in applied hydraulics and pipeline control. They are trained to operate the pipeline at a natural flow rate using efficient combinations of pumps, thereby minimizing energy consumption. Operators have the capability to start and stop pumps and monitor pipeline operating conditions to assist in achieving an energy efficient operation.

Energy Efficient Pumps and Motors

For new installations, Bridger purchases high efficiency pumps, motors and variable frequency/speed drives at a premium initial cost in an effort to conserve long range energy requirements. Pumps are hydraulically designed and selected to obtain a high best efficiency point (BEP) at the desired flow rates. The forecasts are continually being evaluated and if the flow rate is outside the BEP range, operational changes are typically implemented to improve efficiency. Installation of variable speed/frequency drives is used to minimize starting current and maximize pump efficiency in all operating conditions.

Drag Reducing Agents (DRA)

Bridger currently uses drag reducing agents in selected segments of its pipeline system. Injection of DRA reduces flow turbulence of liquid hydrocarbons which results in reduced pressure loss between stations. This allows a high flow rate (increased throughput) at the same operating pressure, or a decrease in operating pressure while maintaining flow rate. These two scenarios allow increased throughput or decreased power use. The flexibility furthers opportunities to shift power use to improve economics or accommodate the utilities. In these cases, the economic benefits realized with the implementation of the DRA program have outweighed the material cost of the DRA. As a result, lower unit energy costs and greater efficiency have occurred.

7.3 Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility

The Project does not involve new energy conversion facilities; no usable waste energy will result from the Project.

7.4 Unavoidable Adverse Direct and Indirect Environmental Effects

Unavoidable adverse direct and indirect environmental effects for construction of the Project are minimal and include temporary construction-related effects on vegetation, wildlife, agricultural operations, transportation, and noise levels as described throughout the Application. Impacts to agricultural

operations are anticipated to be minimal and impacts to transportation are anticipated to be short-term. Impacts on vegetation and wildlife will also be minimal. Vegetation will be removed from the ROW prior to construction, and the area will be restored and re-seeded following construction. Wildlife may temporarily avoid the ROW during construction, but no long-term impacts are anticipated. Noise level increases are associated only with construction. In addition, Bridger implements thorough mitigation measures to minimize construction-related impacts.

7.5 Corridor or Route Alternatives Developed During the Hearing that Minimize Adverse Effects

The route was selected based on avoidance and minimization of impacts to environmental resources. The route is described in Section 1. Keitu conducted field surveys within the generally 300-foot-wide Survey Area to determine the potential presence and extent of wetlands and water bodies, including potentially jurisdictional waters of the U.S., within the Survey Area for the proposed Project. Concurrently with the wetland/water-body determinations, Keitu conducted a wildlife survey and habitat assessment that covered threatened and endangered species; a tree, sapling, and shrub enumeration survey; and a noxious weed survey. All studies were done to select the route which would minimize adverse effects.

7.6 Irreversible and Irretrievable Commitments of Natural Resources if Designated

Bridger is not aware of any irreversible or irretrievable commitments of natural resources that would result from the requested approvals.

7.7 Direct and Indirect Economic Impacts of the Facility

Upon construction, the Project will present an optimization of new and existing pipeline capacity to meet the need for additional liquid petroleum transportation to the region.

Crude oil produced in North Dakota is generally shipped by pipeline to one of three market hubs: (1) Tesoro's Mandan, North Dakota refinery; (2) the Guernsey, Wyoming interconnection hub; and/or (3) the Clearbrook, Minnesota interconnection hub. Crude oil can also be transported by truck to Canada, and by rail directly to refineries, or to East, West, and Gulf Coast markets.

The "geographical market risk" of limited transportation options suffered by oil producers in the rapidly expanding crude oil production market in northwestern North Dakota has caused millions of dollars per year in lost revenue. With constrained export capacity, local production lacks access to alternative markets, making it vulnerable to regional price swings.

Over the past several years, the North Dakota Pipeline Authority has been working with producers and regional pipeline companies to address the issues surrounding the safe transportation of the surge in crude oil volume.

The purpose of the Project is to provide "midstream" transportation alternatives for the expanding volumes of crude oil being produced in North Dakota and to facilitate efficient access to downstream takeaway markets. The pipeline system will be constructed to allow crude to flow in either direction. This feature allows for greater flexibility and access to more sales points depending on market conditions, and acts as a balancing point allowing the best price for North Dakota crude producers. The Project will also serve to displace trucking operations that seek to move barrels of crude oil. The Project will ultimately

help bring North Dakota sweet crude to more markets in the United States, therefore allowing for a more competitive price.

In addition to increasing the crude oil transmission capacity within North Dakota, the Project will provide other benefits. For example, operation of the Project has the potential to increase the tax base of McKenzie and Golden Valley Counties. Construction of the Project will offer job opportunities during construction, which will be partially filled with local contractors and/or personnel. Pipeline construction workers are hired from pipeline contractors, equipment contractors, suppliers, and regional testing firms.

In addition, environmental consultants and construction inspectors will be employed during construction and restoration. North Dakota-based consulting firms were selected to assist with the site selection and permitting process. Wages paid to non-local contractors and/or personnel benefit the regional economy through expenditures for supplies, lodging, fuel, and other services.

7.8 Existing Plans for Other Developments in the Vicinity

Bridger is not aware of any other development by state, local or governmental entities at or in the vicinity of the Project Corridor.

7.9 Effect of the Proposed Route on Existing Scenic Areas, Historic Sites, Structures, & etc.

The SHPO has reviewed the Class I and Class III Inventory Reports upon BCA's completion of the reports. Significant adverse impacts to historic and cultural resources are not anticipated.

7.10 Effect of the Proposed Route on Areas Unique Because of Biological Wealth or Rare/Endangered Species Habitat

Bridger has consulted with the NDGF, the USFWS, and the NDPRD to identify species and ecologically significant habitats within the ROW and the Project Corridor. Possible areas of concern discussed were federally listed endangered, threatened, candidate, sensitive, or watch species, state-listed protected species, and critical habitat that is located on or within the pipeline route.

The NDGF was provided with the proposed route and after review stated, "We do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided these recommendations were implemented where appropriate during project construction."

The USFWS was provided with the proposed route and it is currently under review. Areas that are analyzed by the USFWS include federally listed endangered, threatened, candidate species, and designated critical habitat in North Dakota.

A field survey was conducted in July - October 2019 using a generally 300-foot-wide corridor for botany and wildlife. No sensitive wildlife or botany issues were identified within the Project Corridor. Dakota Skipper habitat was identified with the Project Corridor, absence/presence survey was completed in the summer of 2020. The results of this field study are presented in Section 5 submitted as part of this consolidated application.

The ND state listed Species of Concern that have been identified within the Study Area are discussed in Section 5.3. Based on the conclusions of the field studies, the Project is not anticipated to adversely affect the listed species or their habitat.

7.11 Problems Raised by Federal, State, and Local Agencies

No concerns other than those identified in Section 7.10 have been raised by commenters or identified by Bridger or its consultants.

7.12 Policies and Commitments to Limit Environmental Impact

Bridger Pipeline LLC is all part of the True Companies of Casper, Wyoming. True Companies operates pipeline systems in western North Dakota, eastern Montana and Wyoming. The True Companies have been family owned and operated since 1948, and now have over 1,000 employees in Wyoming, Colorado, Montana, North Dakota, Utah, Texas, Louisiana, Mississippi, New Mexico, Missouri, Oklahoma and Arizona.

Bridger works to protect the environment, home to its employees and customers. Protection of the environment is an integral element in the conduct of Bridger. Environmental protection efforts will span the entire Project, from planning through conversion, and into full operation.

The major causes of pipeline leaks in the United States are corrosion (both internal and external), excavation damage, pipe and weld failure, incorrect operations, or natural causes (e.g. floods or outside force). To prevent these categories of failures, Bridger will improve or maintain the Project to meet or exceed industry and governmental requirements and standards. Specifically the steel pipe meets US DOT Pipeline and Hazardous Material Safety Administration federal codes under 49 CFR Part 195 (referred to hereafter as PHMSA regulations) and follow standards issued by the American Society of Mechanical Engineers, National Association for Corrosion Engineers and API. As a safety factor, the Project is designed to withstand pressures over and above its normal operating pressures and will operate according to codes and regulations. All pipe is inspected and integrity-tested at the factory and transported per the highest technical standards. PHMSA conducts regularly scheduled field inspections of the pipeline facilities to ensure compliance with federal regulatory requirements, including the integrity testing of the pipeline through the use of internal inspection devices.

The pipeline will be subjected to careful testing to verify its integrity and compliance with specifications. The line is subjected to hydrostatic testing per DOT/PHMSA regulations to an accurate and safe maximum allowable operating pressure.

As previously mentioned, the pipeline will be maintained and inspected according to PHMSA regulations, industry codes and prudent pipeline operating techniques and will continue to be examined under the same scrutiny. All of Bridger's mainline liquids pipelines are externally coated to resist corrosion, internally inspected at regular intervals using in-line inspection technology, and equipped with a cathodic-protection system to prevent external corrosion. Bridger's cathodic protection system and internal inspection program were implemented prior to these techniques becoming a regulatory standard.

U.S. Department of Transportation PHMSA administers a comprehensive pipeline safety program. PHMSA's regulations address pipeline safety, design, construction, operation and maintenance. In

accordance with 49 C.F.R. Part 194, Bridger submits its Operated Systems Oil Spill Response Plan to PHMSA for review and approval.

Bridger takes spill response preparedness seriously and with the utmost diligence. In 2021, Bridger conducted four tabletop exercises and seven boom deployment exercises in North Dakota and is in the process to complete four tabletop exercises and seven boom deployment exercises in 2022. Local county emergency response teams are routinely invited to these exercises. In addition to Bridger's own response resources, Bridger is a charter member of the Sakakawea Area Spill Response LLC (spill cooperative). There are various annual One-Call/ Public Awareness training exercises that Bridger participates in. During those training exercise Bridger has the opportunity to further meet and greet with local/county responders.

The Bridger System ROWs are patrolled and inspected by air at least every three weeks but not less than 26 times per year to watch for abnormal conditions or dangerous activities, e.g., unauthorized excavation, along the routes of the lines. Bridger also conducts extensive public education and outreach programs that meet or exceed industry (API Recommended Practice 1162) and PHMSA (49 CFR 195.440) requirements concerning public awareness of pipelines and pipeline-safety matters. All Bridger lines are marked with signage and warnings, per federal regulations, at road and highway crossings, railroad crossings, and other locations to alert the public to the presence of underground lines and to provide information, contact numbers, and emergency data. Bridger's 10-year spill history can be found in Exhibit D.

Pipeline workers and contractors performing critical tasks are qualified under Occupational Safety and Health Administration safety standards and PHMSA "operator qualification" rules and are subjected to federal drug and alcohol testing requirements. Bridger meets, and often exceeds, these requirements so that human error in construction and operation is minimized.

8 MITIGATION MEASURES

During the initial construction kickoff meeting the contractor will advise contractors of federal and state environmental requirements they are to follow and sensitive areas they need to be aware of. Construction meetings will be held with crews each morning, the crews will be reminded if there are sensitive or areas that need extra mitigations measures that they will be working near that day. Workers will be periodically reminded by team leads in accordance with the contractor's notification protocols.

Avoidance areas will be marked on maps provided to construction personnel and will be flagged and marked with fence. Maps will include any areas that require buffers and timing restrictions. Areas that are not listed as Avoidance area but are of important nature such as noxious weeds will be marked with flags, and/or flagged lathe.

8.1 Measures to Preserve the Human Environment

Bridger requires its construction contractors to clean up and dispose of any trash deposited during ROW preparation and by construction crews on a daily basis. Waste and scrap produced during construction is always removed and properly disposed of in accordance with applicable regulations prior to the completion of construction.

Bridger minimizes noise and dust resulting from construction near residences to the maximum extent practicable.

Bridger will obtain all applicable permits for road crossings from McKenzie County. Bridger will also obtain permission from all owners of private roads, including oil lease roads, to cross said roads. Temporary signs will be posted at each crossing as appropriate to alert motorists of construction activity. Improved roads will be bored, minimizing interference with traffic flow caused by construction activities.

8.2 Measures to Protect Terrain and Geological Resources

Bridger will restore the area affected by construction to pre-construction contours to the greatest extent practicable. Measures such as slope breakers, erosion control blankets, and re-vegetation may be employed to maintain the stability of slopes along the ROW. No crown of backfill material will be left over the trench in wetlands.

Restoration following construction will be compatible with the safe operation, maintenance, and inspection of the Project.

Fuel and all other hazardous materials will be stored in accordance with the requirements of the contractor’s SPCC Plan, if applicable. The SPCC Plan will describe response, containment, and cleanup measures. However, even for small quantities of oil-based liquids, containers and fueled equipment will not be stored within 100 feet of surface water.

8.3 Measures to Protect Soils

During construction or maintenance activities, temporary erosion and sedimentation control measures may include installation of silt fence, straw bales, slope breakers, trench breakers, erosion control fabric and mulch, in any areas of the Project deemed susceptible to soil erosion.

Erosion will be controlled through the use of best management practices and implemented as part of the Project’s storm water pollution prevention plan.

Construction is scheduled to begin in 2022. Concern has been expressed previously by the ND Public Service Commission for Fall / Winter operations, specifically the ability to segregate topsoil from subsoil after the ground freezes. If construction commences while ground conditions remain frozen, best management practices will be employed to promote proper soil segregation.

A baseline soil analysis study was not conducted for the Project. During construction of the Project, topsoil depth will be assessed in-field by experienced construction personnel. Heavy equipment operators will be competent in the practice of properly segregating topsoil from subsoil. Additionally, construction crews will be supervised by personnel experienced in topsoil and subsoil segregation and able to identify topsoil.

8.4 Measures to Protect Vegetation and Wildlife

Bridger and its contractors will effectively control or limit the spread of invasive plant species through control treatments and avoiding existing populations where possible. Treatments will be initiated prior to

activity to disperse propagules in the area of disturbance. Monitoring and treatment should then be conducted on an annual basis to ensure a high degree of control and maximize treatment effectiveness.

Bridger will take appropriate precautions to protect livestock and crops affected by maintenance and inspection of this project. Operation of the pipeline is not anticipated to significantly affect terrestrial wildlife, fisheries resources, or other aquatic species.

Shelter belts and trees will be protected by Bridger to the extent possible in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

Past surveys in the near vicinity of this Project location had positively confirmed the presence of the butterfly. A Dakota skipper survey was conducted in June/July 2020, one Dakota Skipper was positively identified with one kilometer of the Project centerline. The following USFS and USFWS approved mitigation measures will be undertaken by Bridger before and after the construction of the proposed project:

- Area with confirmed presence will avoid surface disturbance.
- Have suitable response equipment/spill trailer at the site on standby for immediate response, should it be required.
- Avoid all construction activities within ¼ mile of any suitable vegetative habitat regardless of confirmed presence during the adult flight season of June 10 to July 15 each year.
- Actively mitigate dust from construction activities.
- If construction occurs within the adult flight season, a biologist familiar with designated wildlife and sensitive plant species mark the boundaries of potential habitat with visual barriers such as snow fence or wooden stakes prior to start of construction activities. No "buffer" or set back will be required.

The USFS has designated a utility corridor for the Project which includes suitable vegetative habitat for the Dakota skipper. As a result, avoidance of all specified vegetation within the proposed USFS utility corridor is not feasible. An Environmental Assessment and an updated Biological Assessment were completed and have been approved by the USFS and USFWS.

Best management practices will be employed as necessary to control dust emissions. Project related traffic speeds will be controlled on the construction right-of-way and along unimproved roads. Dust abatement techniques on unpaved or un-vegetated areas or other areas susceptible to wind erosion will be utilized as necessary and as determined by Bridger. No separate Dust Control Plan will be filed due to Bridger's commitments discussed above and in Section 8.1.

If an occupied raptor or migratory bird nest is spotted during construction, a construction buffer zone will be required. The length of the buffer zone will be dependent on the species identified, consistent USFWS guidance.

A sharp-tailed grouse lek survey completed in April 2020 confirmed four leks were present within the Study Area. Bridger will not construct within 1 mile (line-of-sight) of an active lek from March 1 – June 15 per USFS requirements.

8.5 Measures to Protect Land Use Permits

Bridger will obtain and comply with applicable land use permitting requirements for any necessary maintenance or future construction activities.

9 DEVELOPMENT

9.1 Present and Future Natural Resource Development in the Area

Bridger has consulted with federal, state, and local agencies regarding the Project. As a result of these consultations, Bridger was not made aware of any current or future developments of natural resources in the area that would affect the proposed Project.

10 QUALIFICATIONS OF PREPARERS

The qualifications of the personnel who contributed to the consolidated application are as follows:

(1) Tad True, Vice President – Bridger Pipeline LLC

Degree: Bachelor of Business Administration, University of Notre Dame
Experience: 14-year experience in petroleum transportation field

(2) Robert Stamp, Commercial/Engineering Supervisor – Bridger Pipeline LLC

Degree: Bachelor of Mechanical Engineering, Valparaiso University
Experience: 29-year experience in petroleum transportation field as well as regulatory affairs and compliance.
Professional License
Registered Professional Engineer: Wyoming and Colorado

(3) Ken Dockweiler, Director – Land, Government, and Compliance - Bridger Pipeline LLC

Experience: 29-year experience in petroleum transportation field with 18 years focused in regulatory affairs and compliance.

(4) Kathleen Spilman, Managing Director – Keitu Engineers & Consultants, Inc.

Degrees: Bachelor of Science - Chemical Engineering, University of North Dakota Masters in Management, University of Mary
Experience: 40-year experience in petroleum refining and fuels transportation field as well as regulatory affairs and compliance.
Professional License
Registered Professional Engineer: North Dakota, Montana

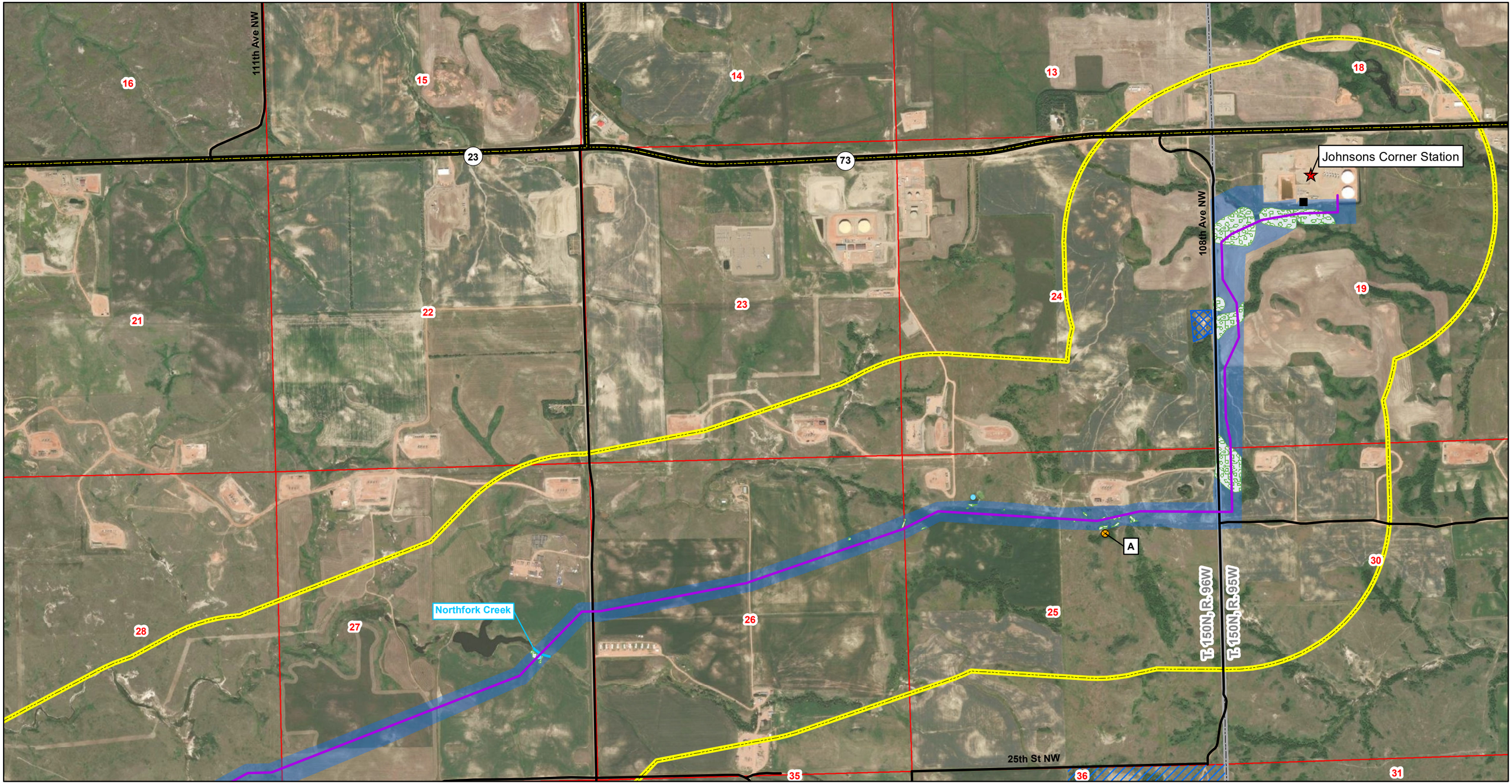
(5) Karine Finken, Project Manager — Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science – Natural Resource Management, University of Minnesota - Crookston
Experience: 8-years’ experience in natural resource management

(6) Jaimee Antognazzi, Operations Manager - Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science – Environmental Health, Dickinson State University
Experience: 12 years’ experience in regulatory affairs and compliance.
Professional Certification: Certified Safety Professional

Exhibit A.1
Aerial Mapbook



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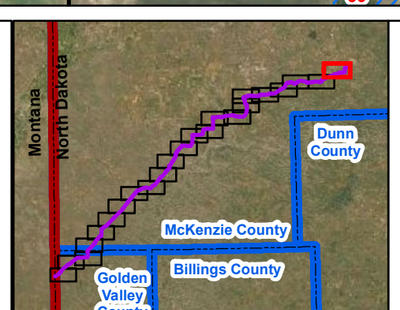

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Page 1 of 23
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McKenzie County, North Dakota

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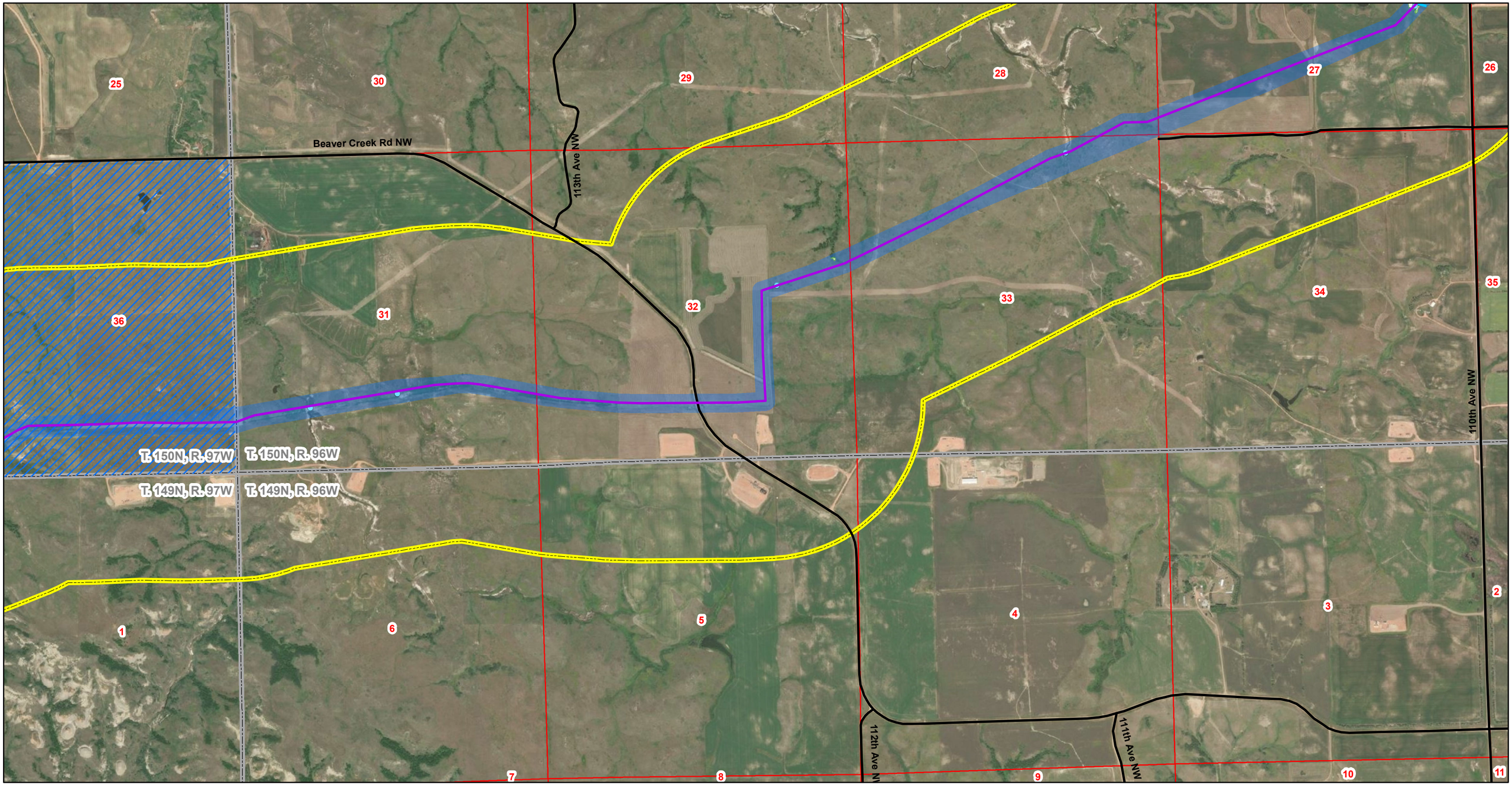

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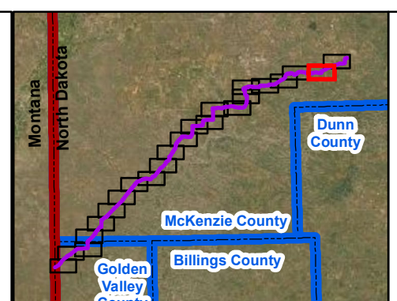

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Page 2 of 23
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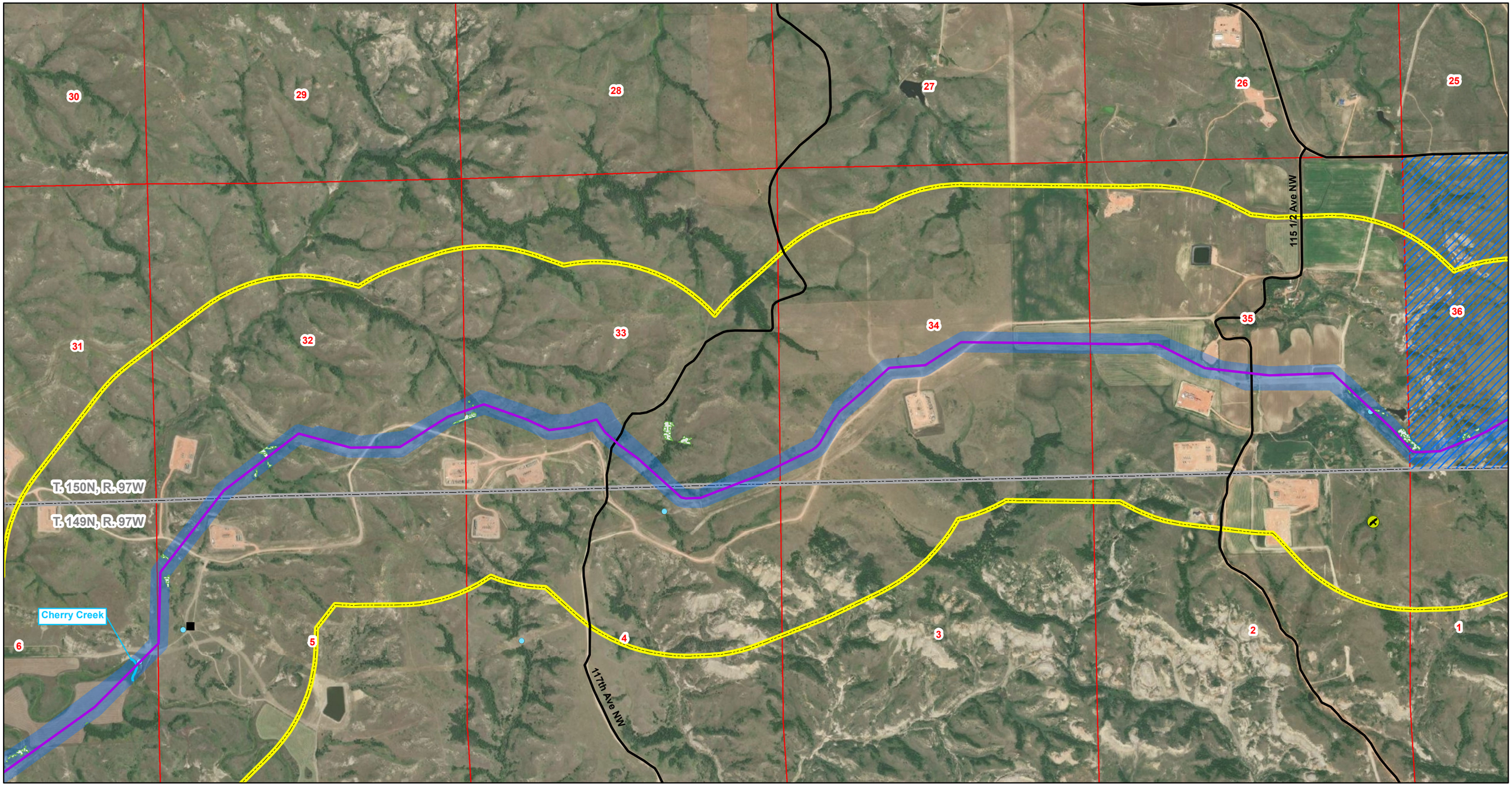

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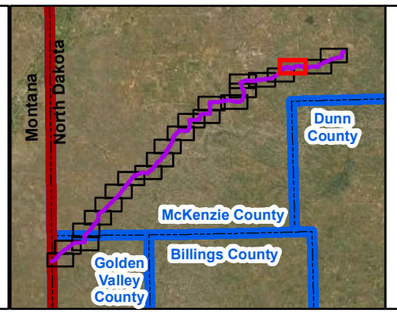

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McKenzie County, North Dakota

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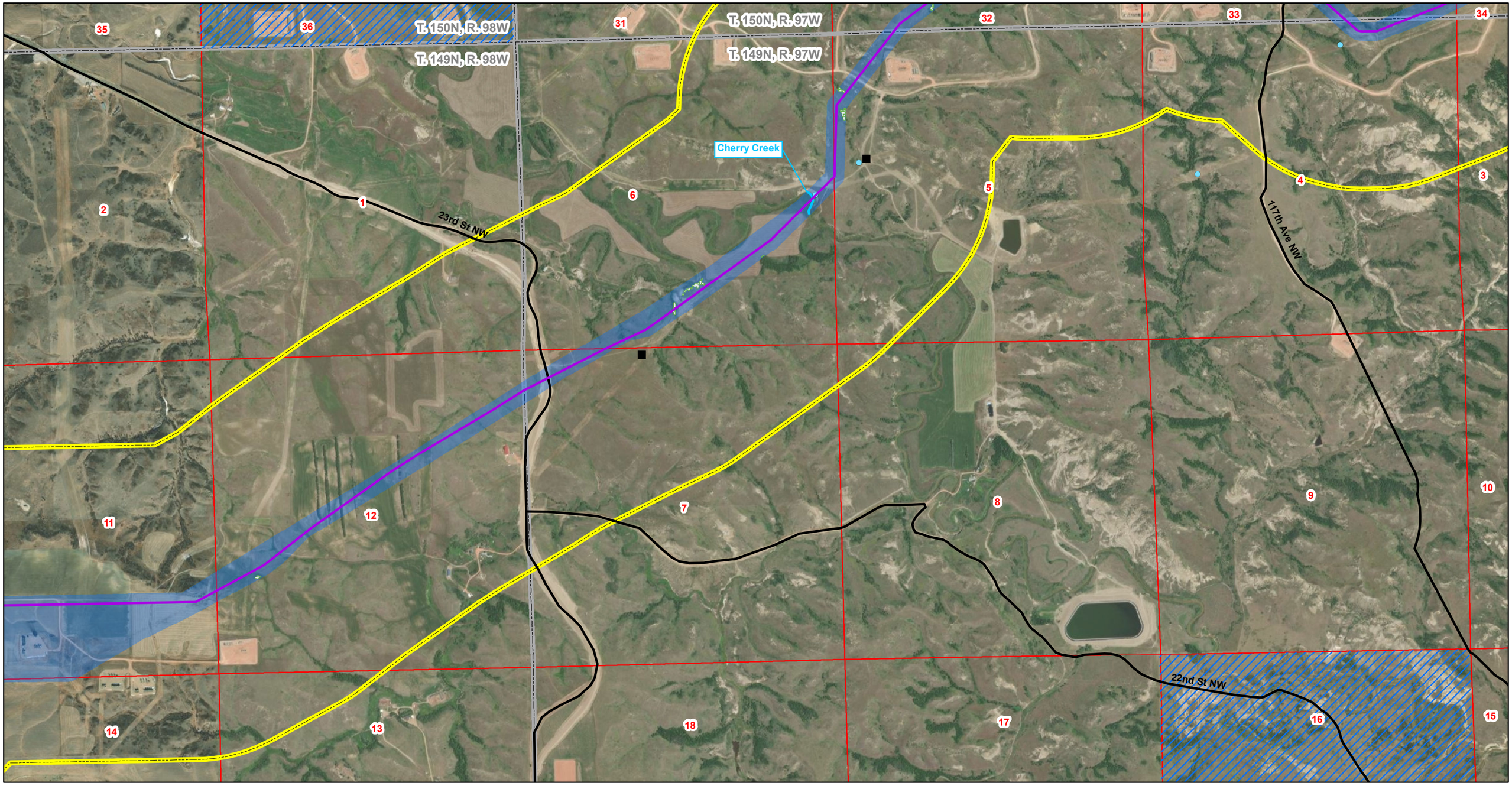

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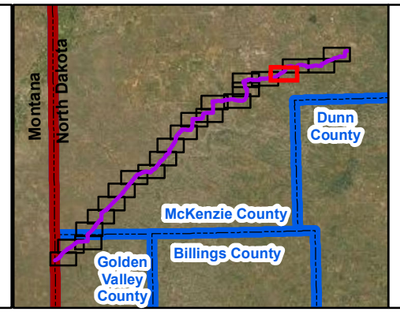

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McKenzie County, North Dakota

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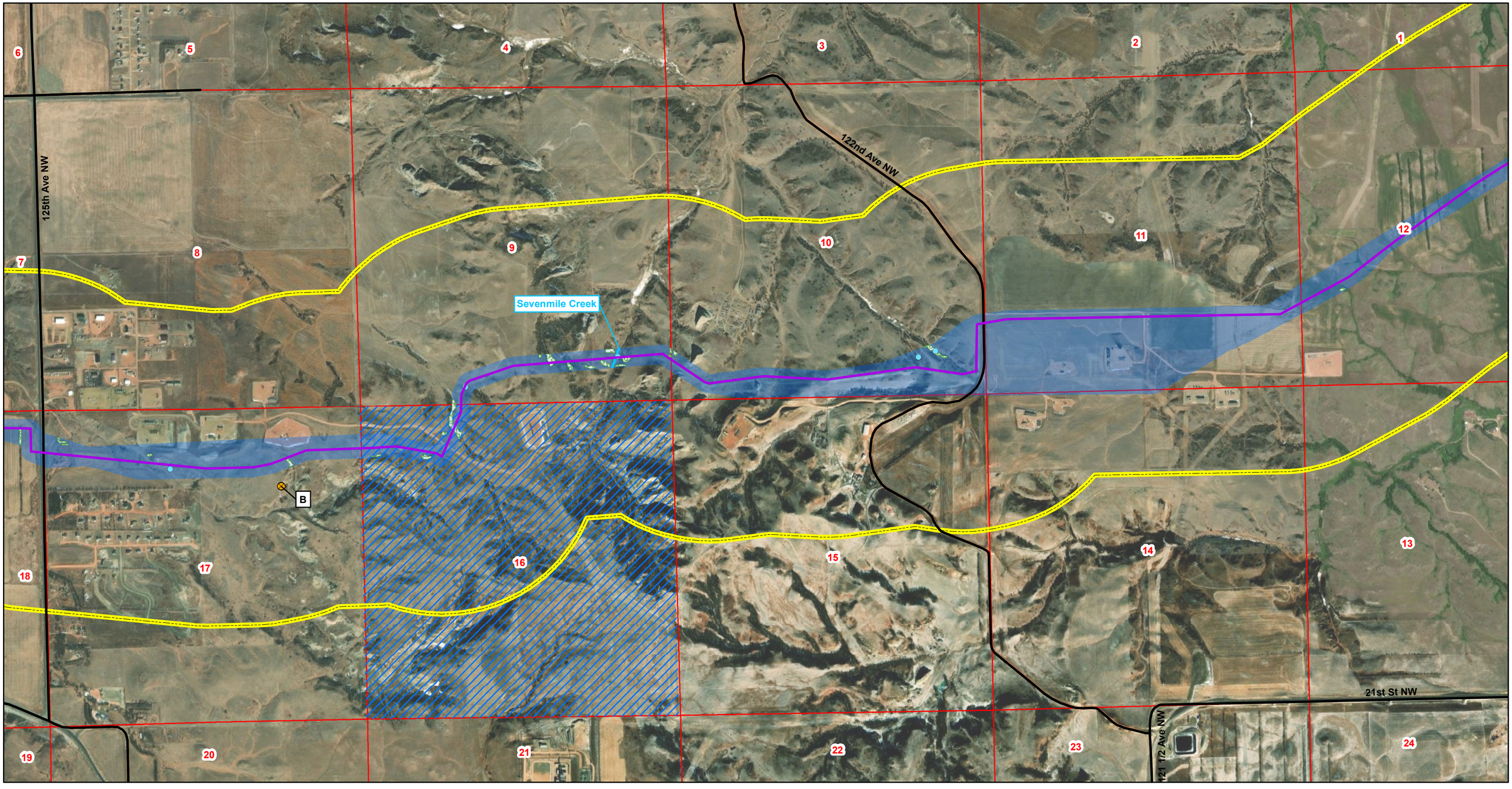

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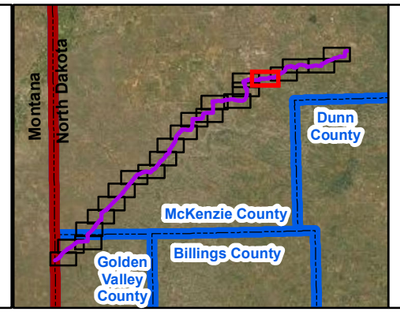

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McKenzie County, North Dakota

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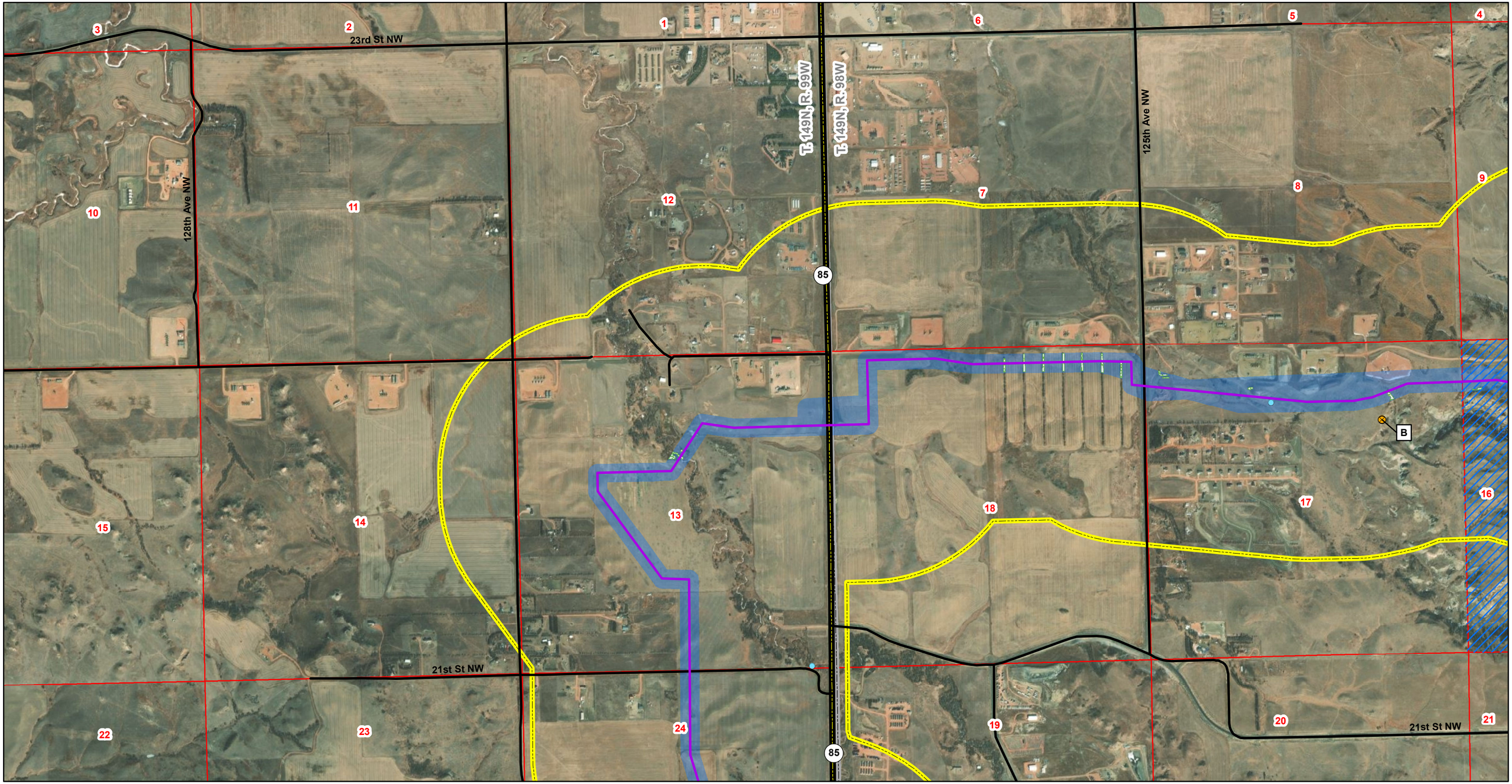

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Page 6 of 23
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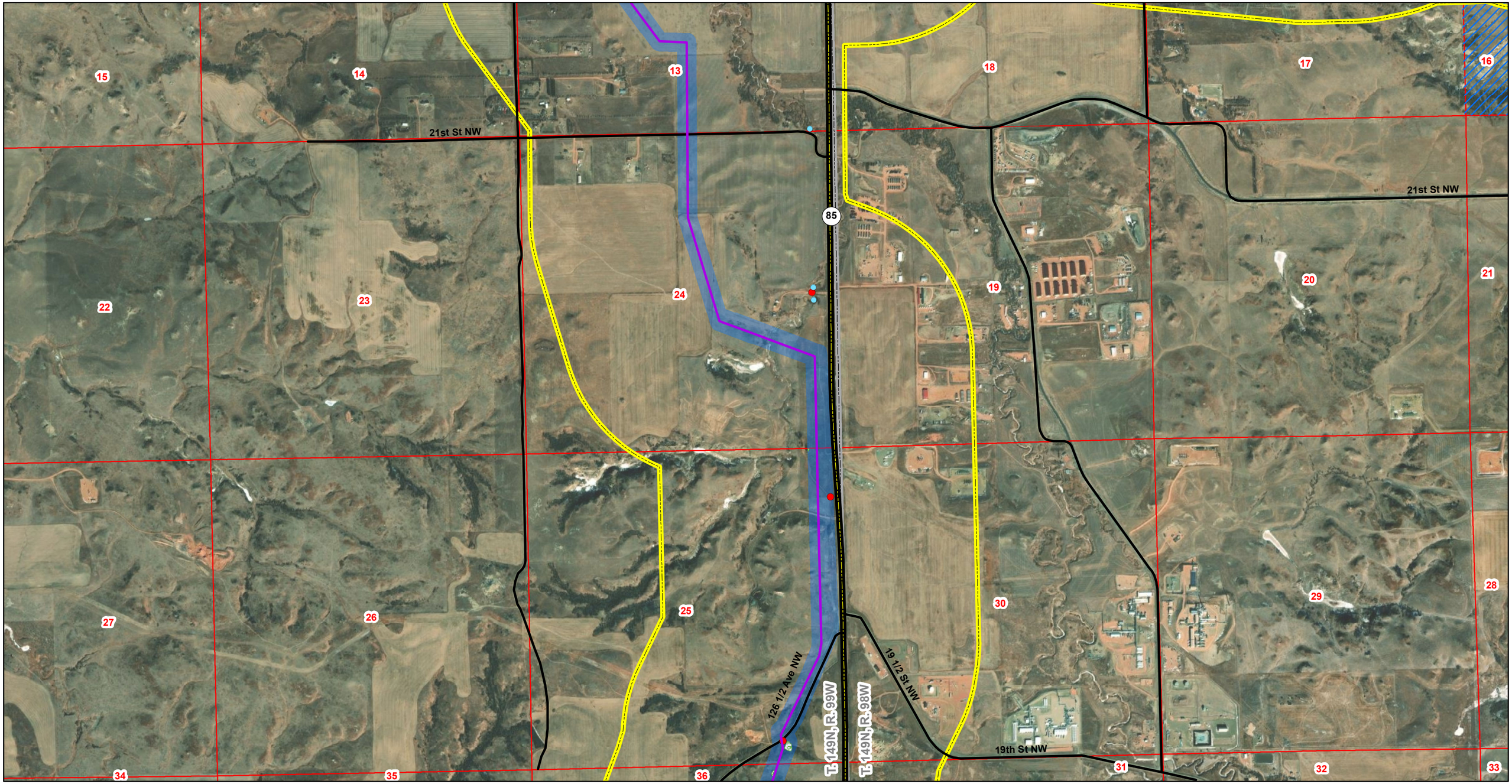

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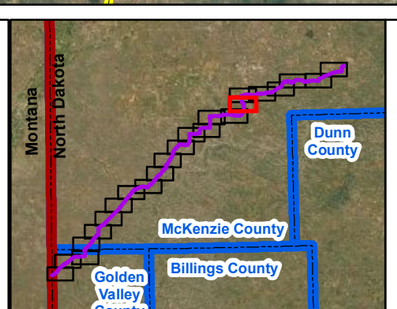

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Page 7 of 23

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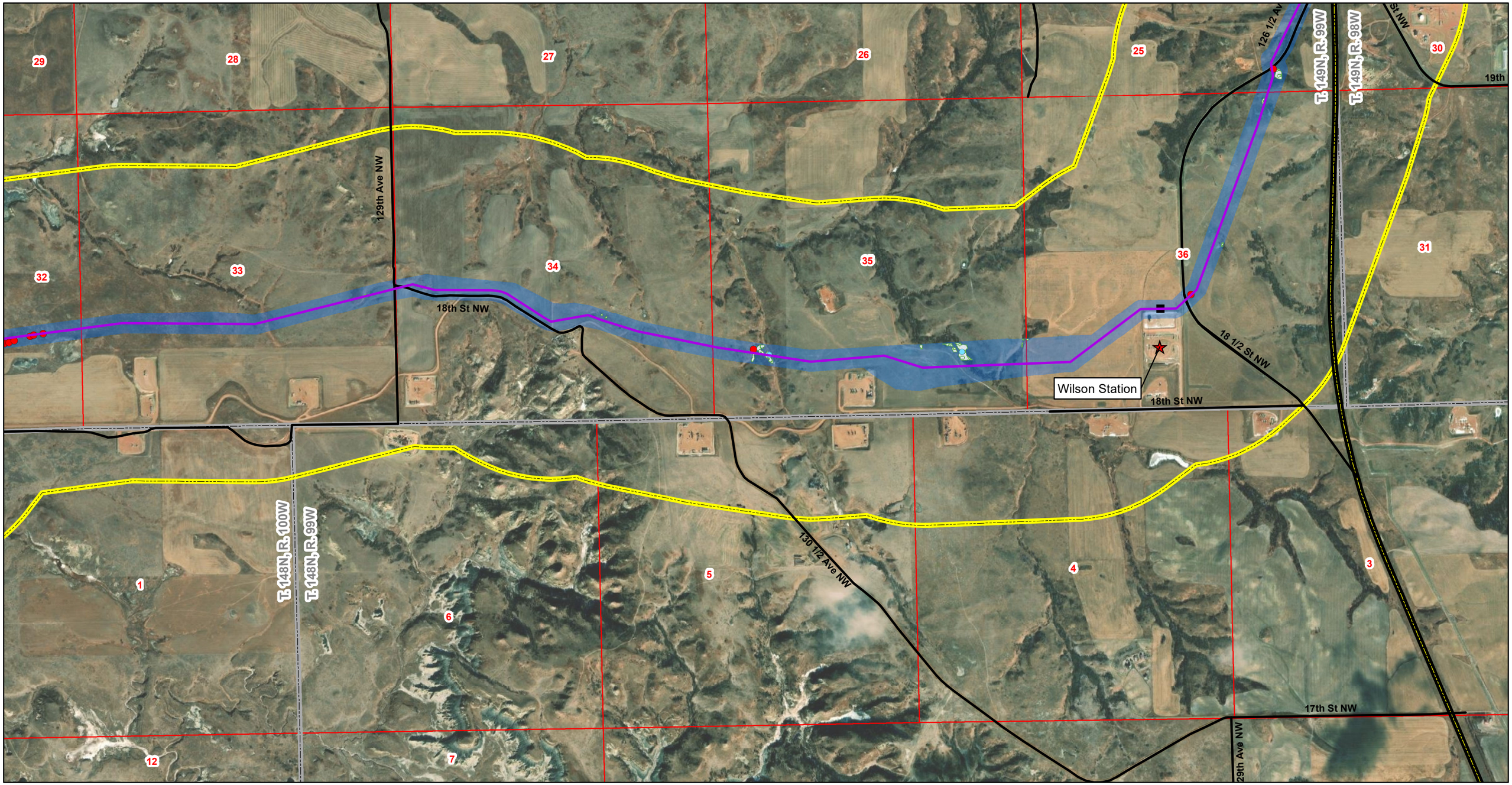

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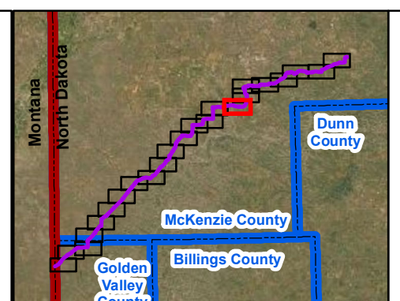

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Page 8 of 23
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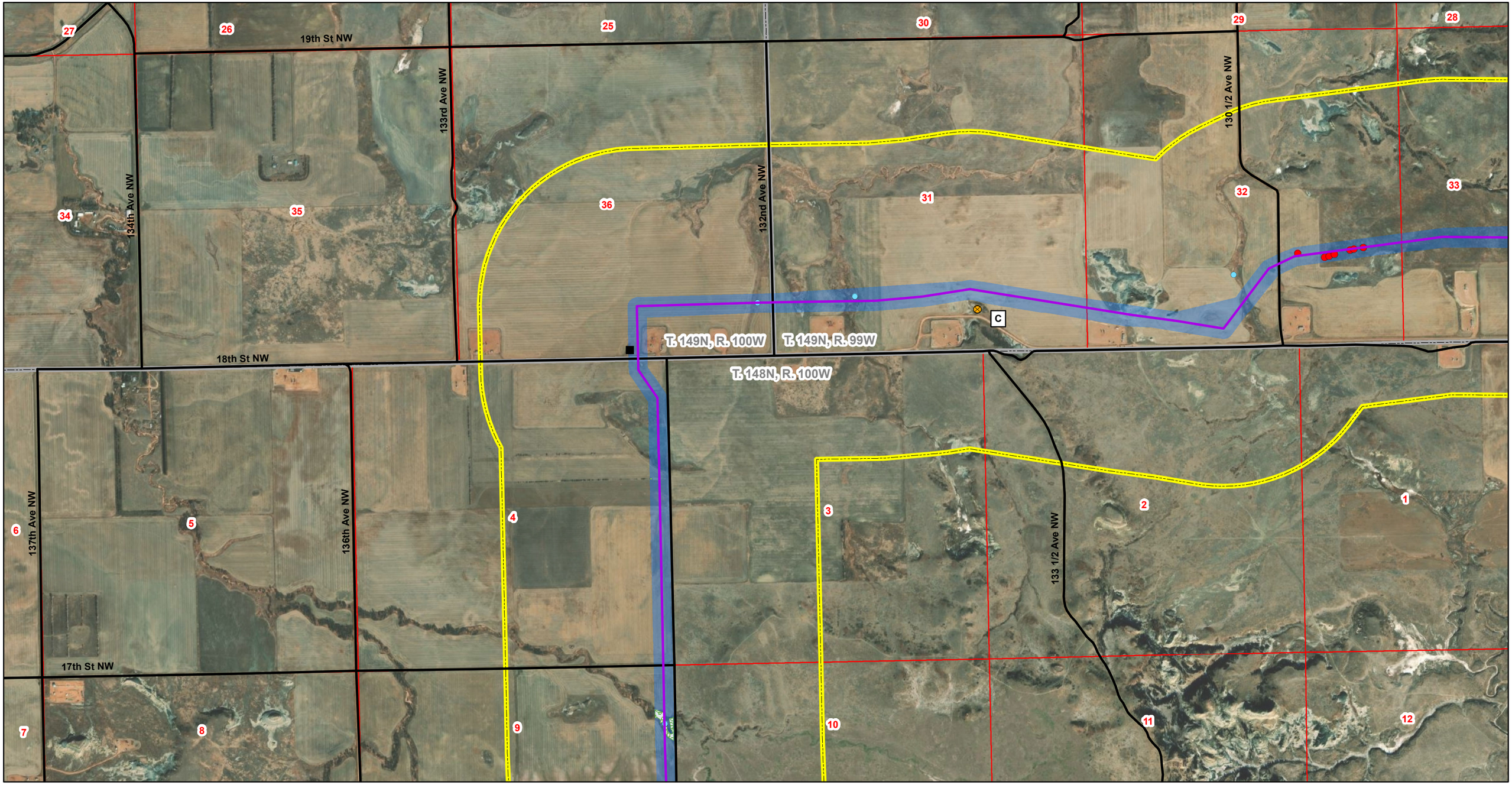

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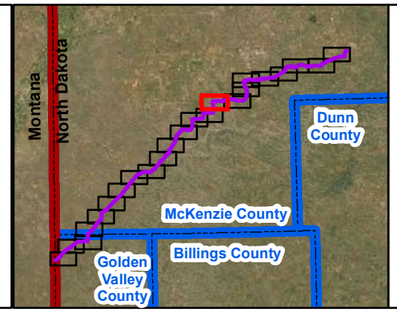

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Page 9 of 23
T. 149N, R. 100W & R. 99W
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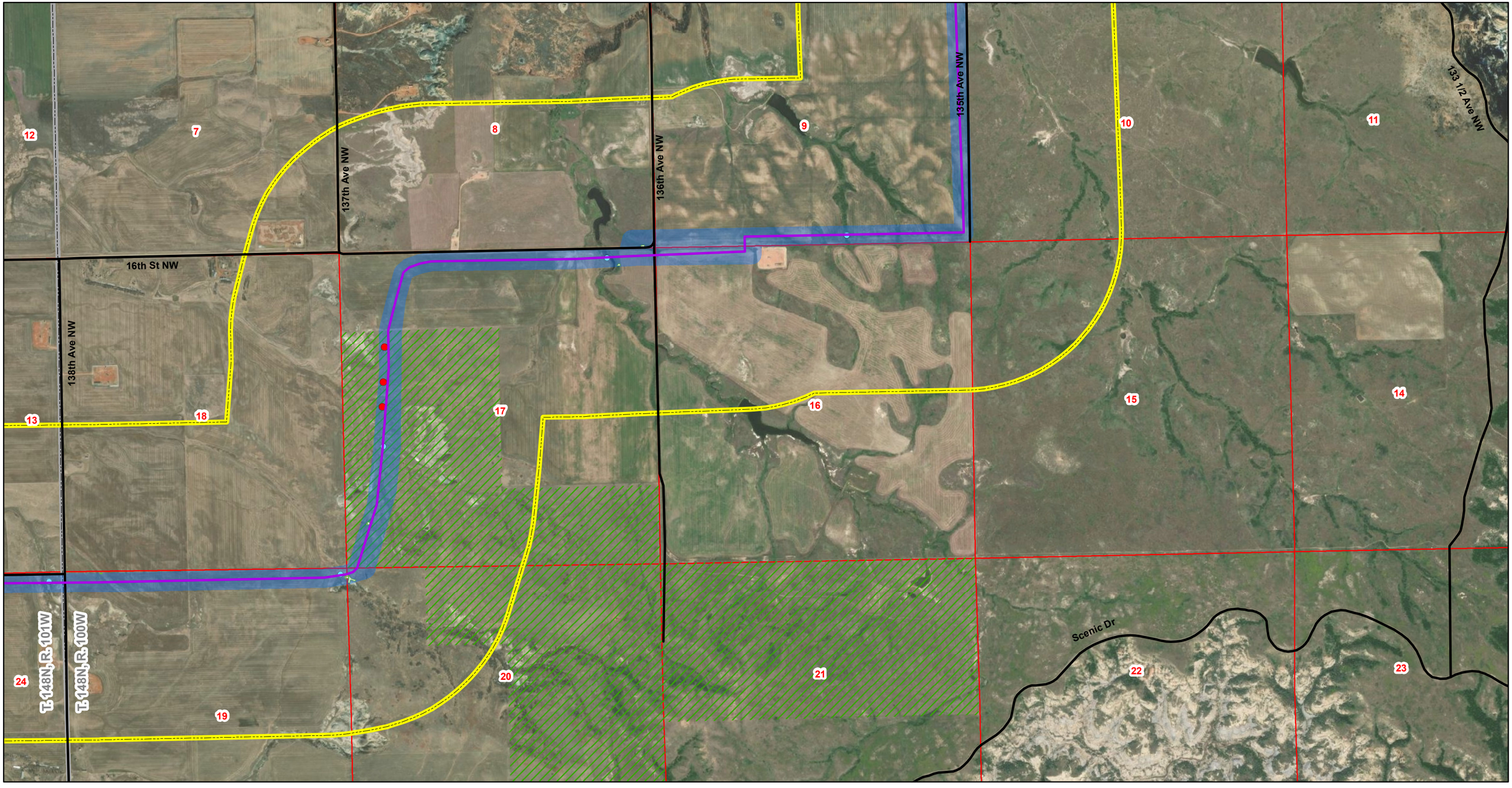

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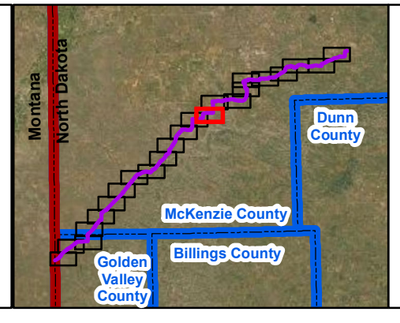

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Page 10 of 23
T. 148N, R. 101W & R. 100W
McKenzie County, North Dakota

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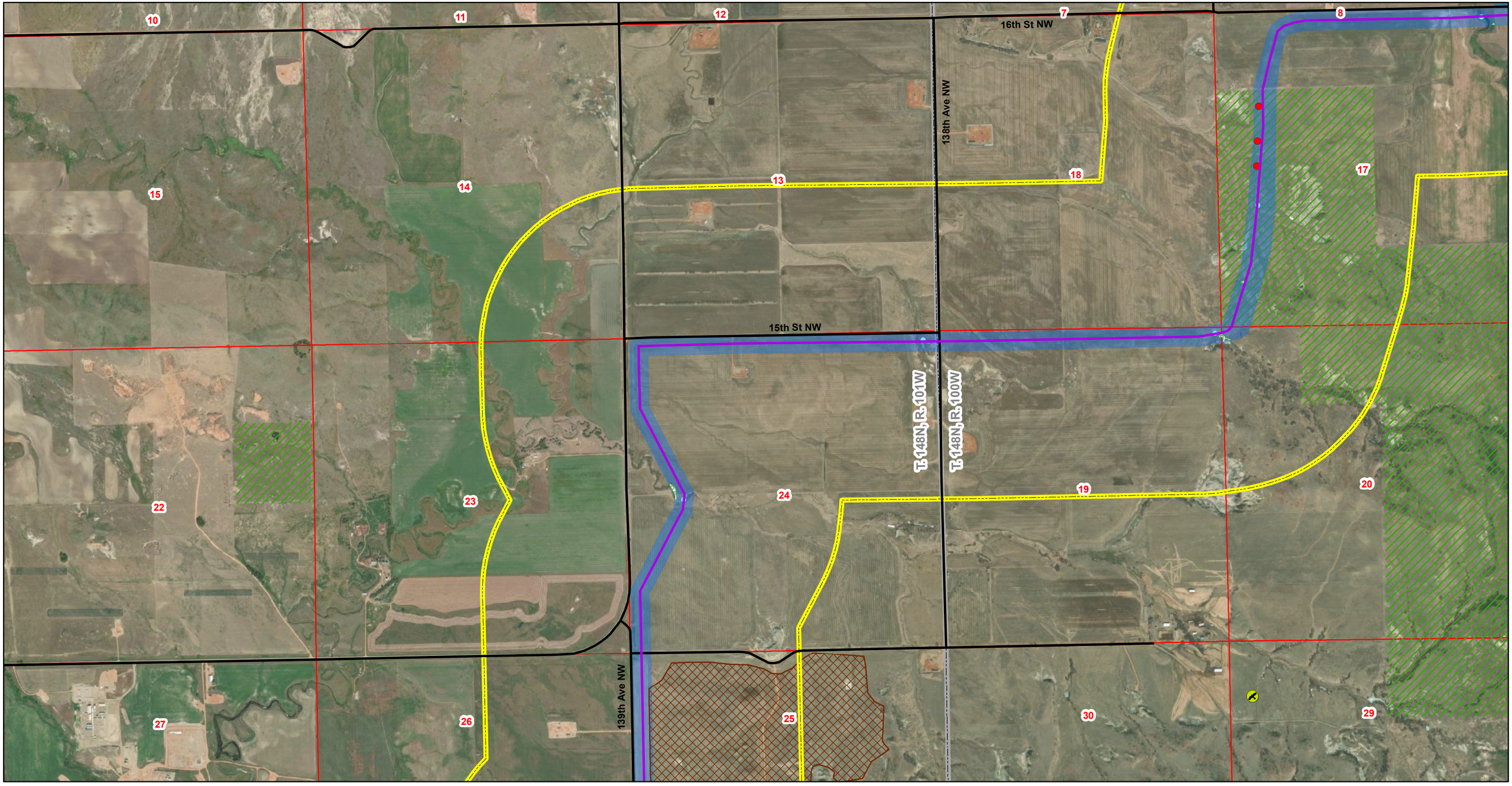

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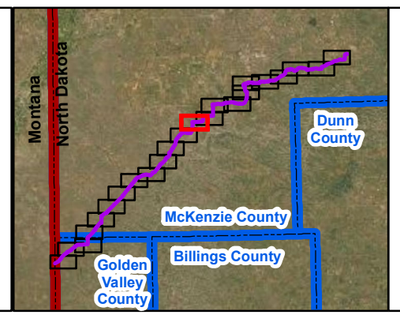


Figure: A.1

Page 11 of 23

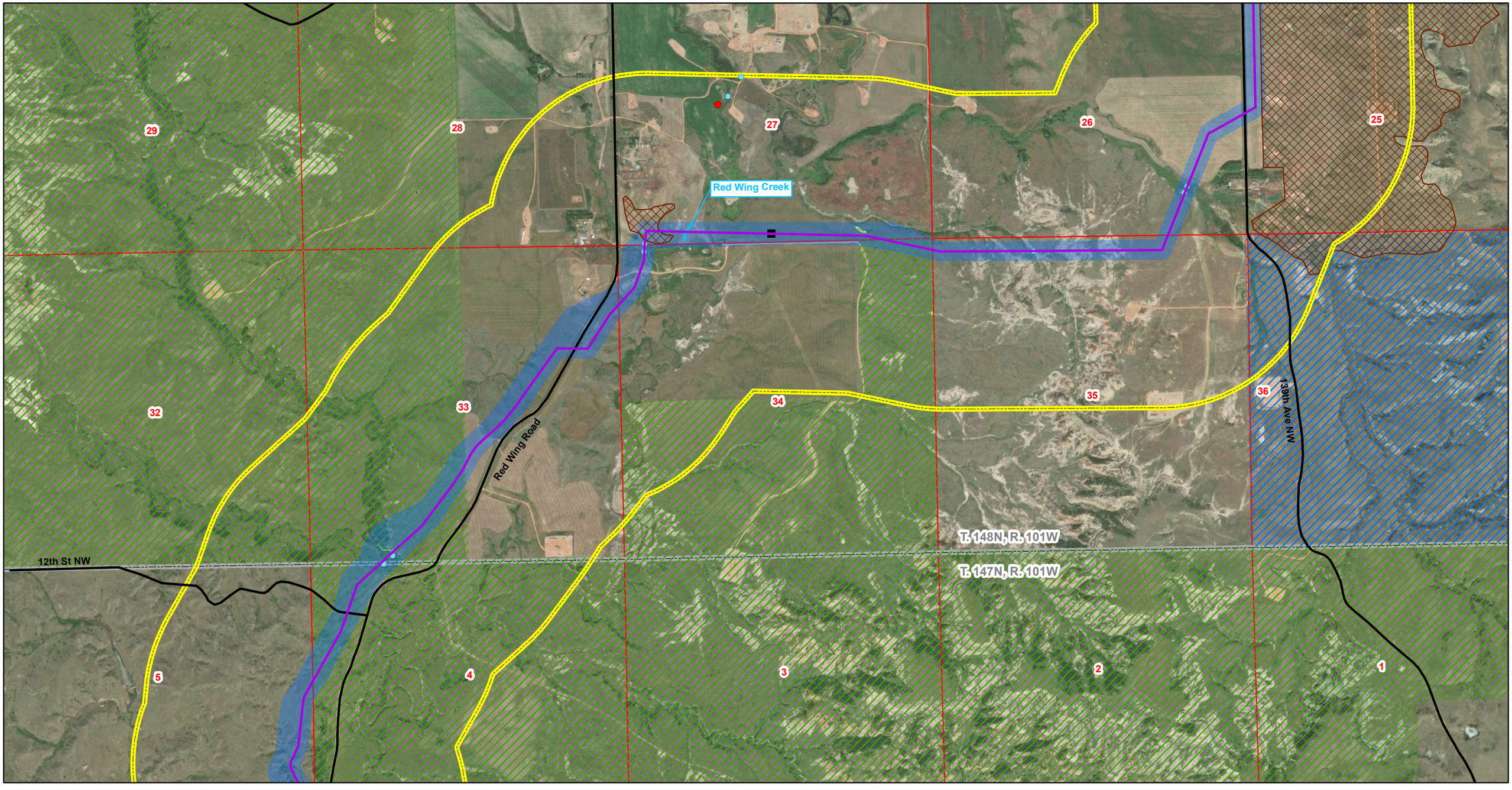
T. 148N, R. 101W & R. 100W

McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
- Roads
- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

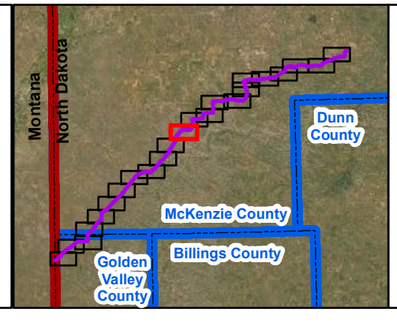


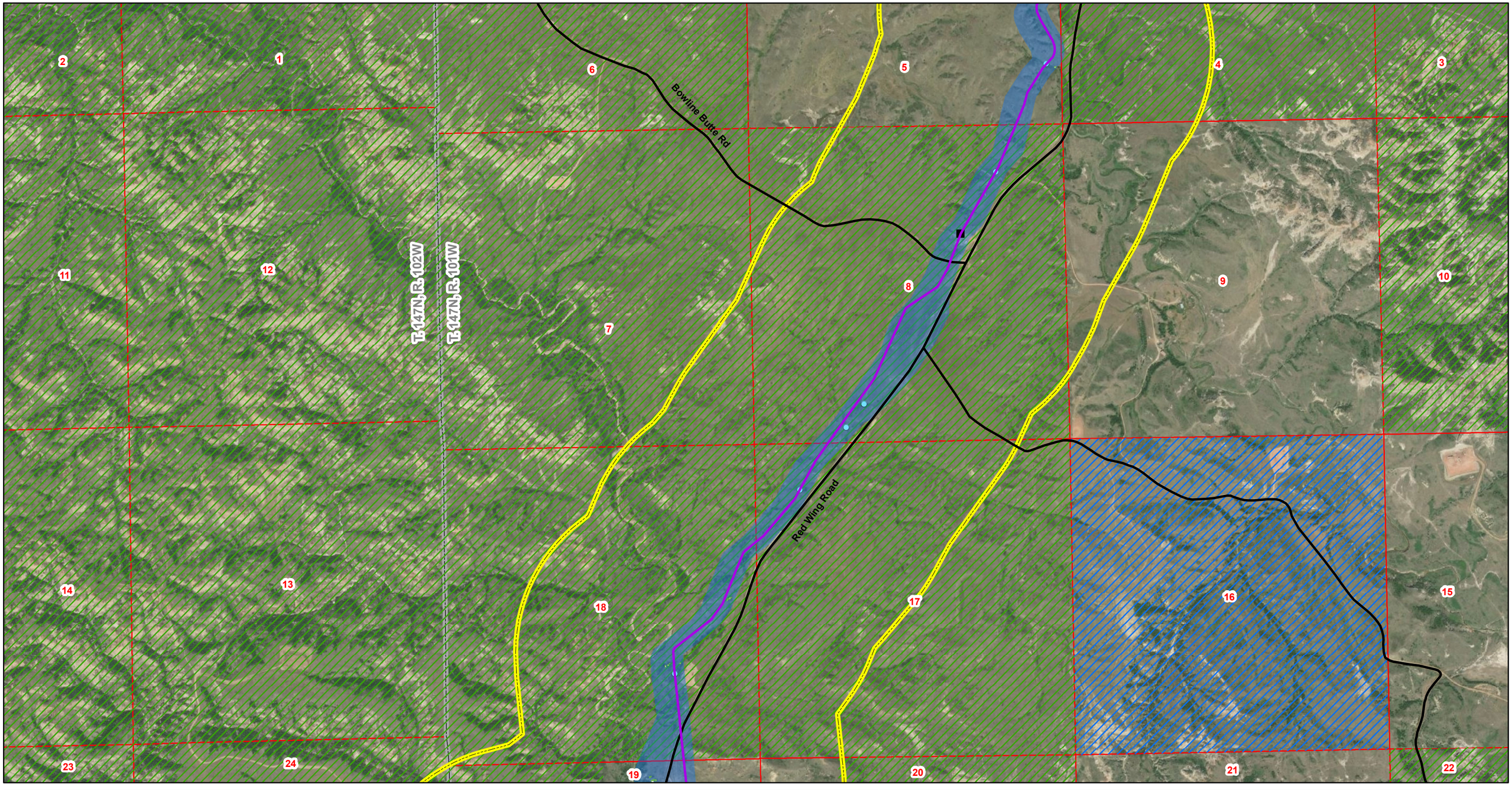
Figure: A.1

T. 148N, R. 101W & T. 147N, R. 101W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
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- Residence/Building
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- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

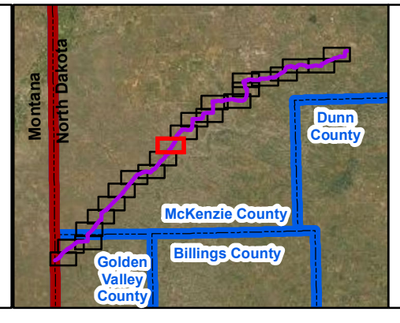


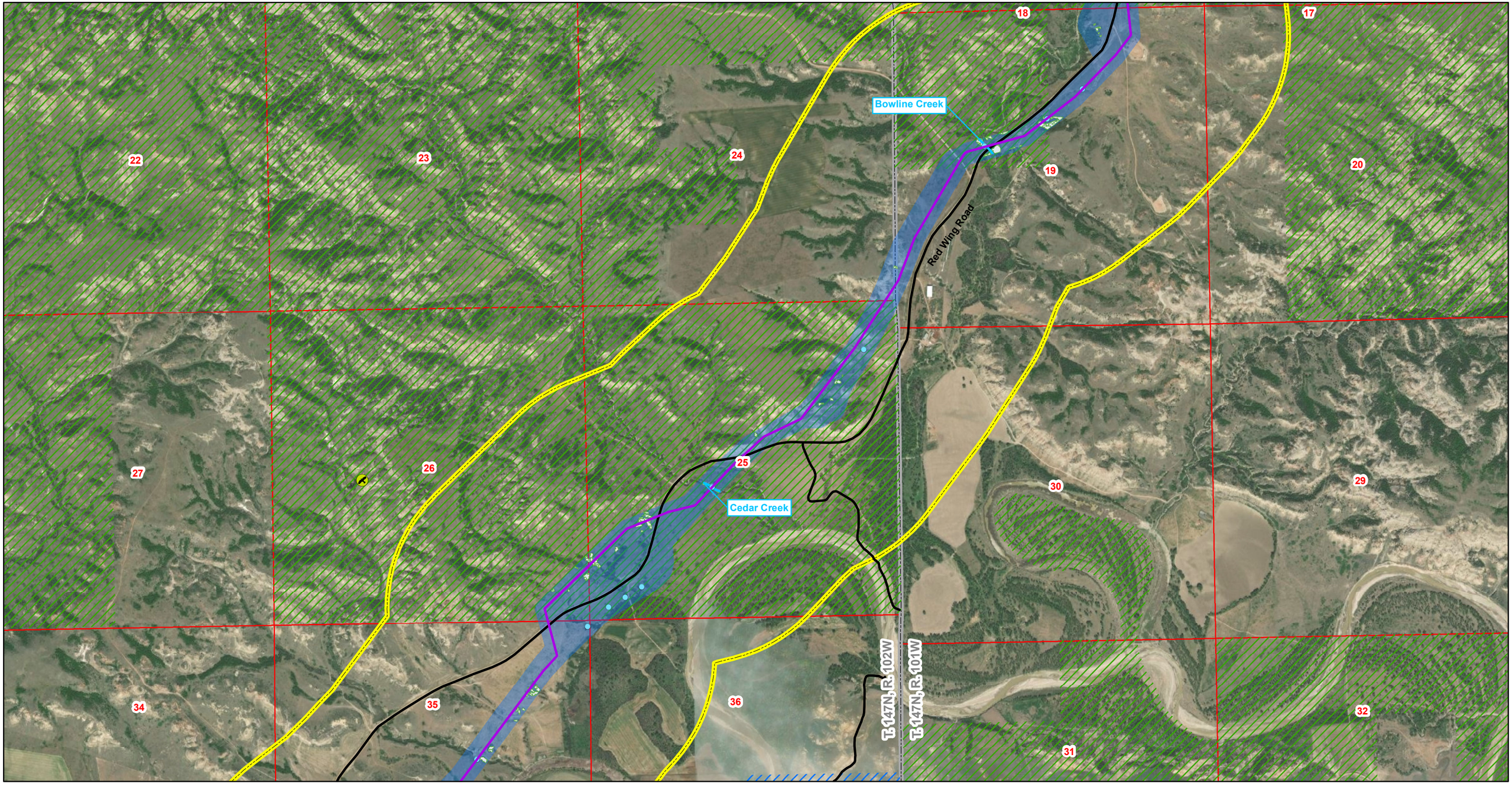
Figure: A.1

Page 13 of 23
T. 147N, R. 102W & R. 101W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

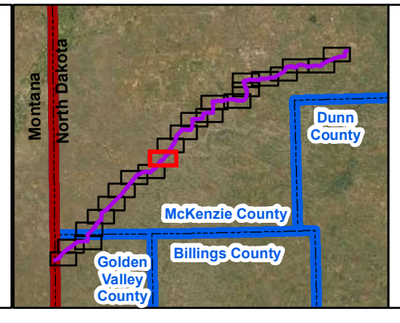


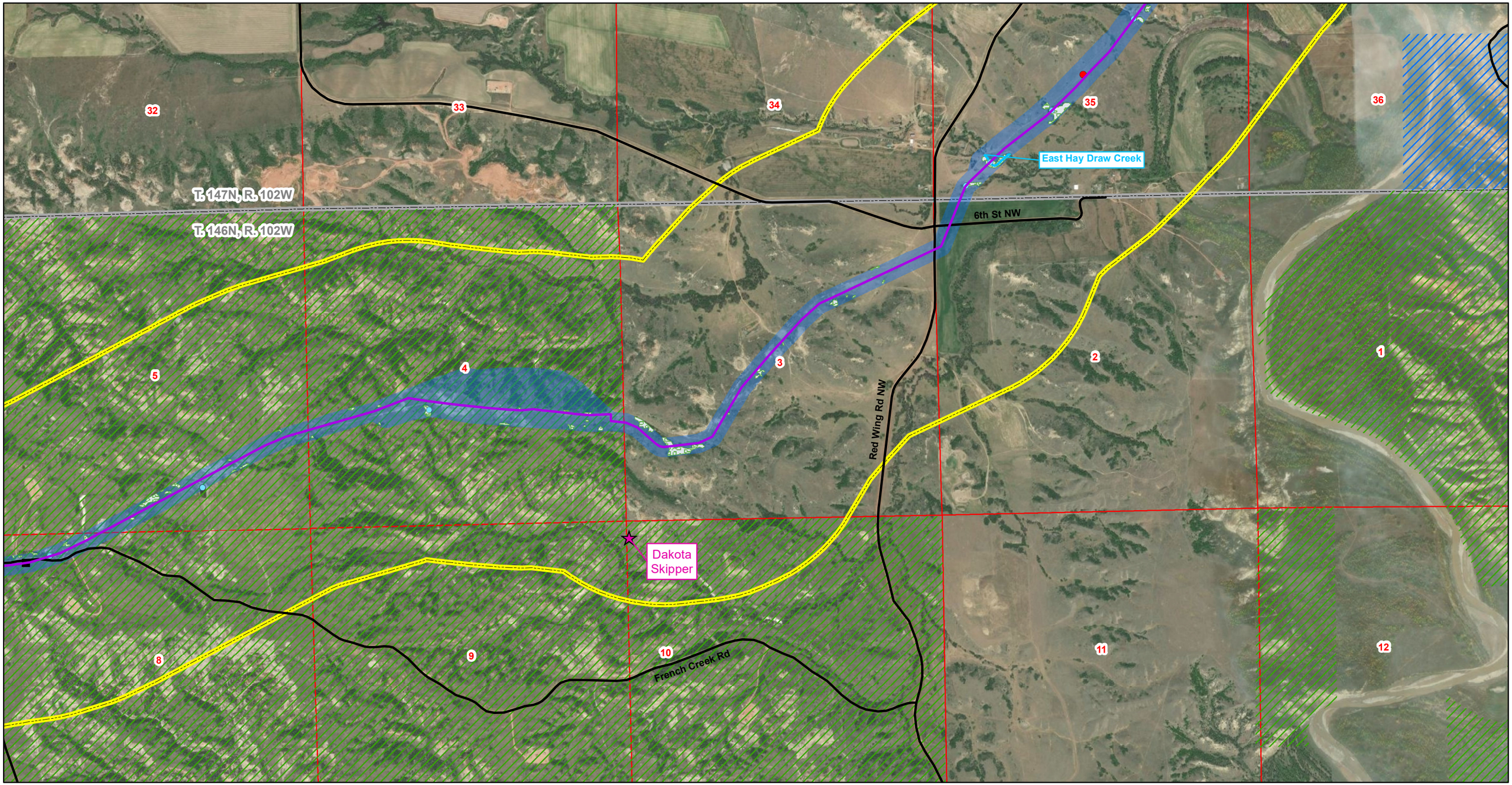
Figure: A.1

T. 147N, R. 102W & R. 101W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

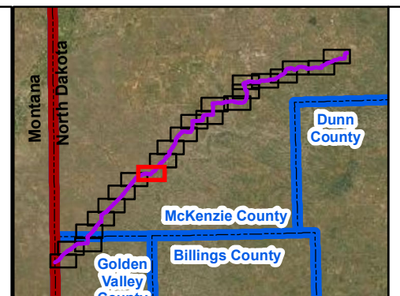

Figure: A.1

Page 15 of 23

T. 147N, R. 102W & T. 146N, R. 102W

McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N

E. Bennie Peer Creek Rd

French Creek Rd

T. 146N, R. 103W

T. 146N, R. 102W

Poker Jim Creek

149th Ave NW

Cinnamon Creek Rd NW

3 1/2 St NW

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
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- ND Lands
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- Township/Range Boundary
- Section Boundary

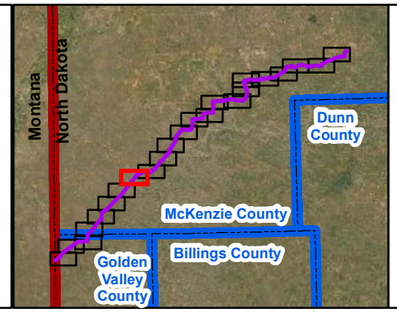


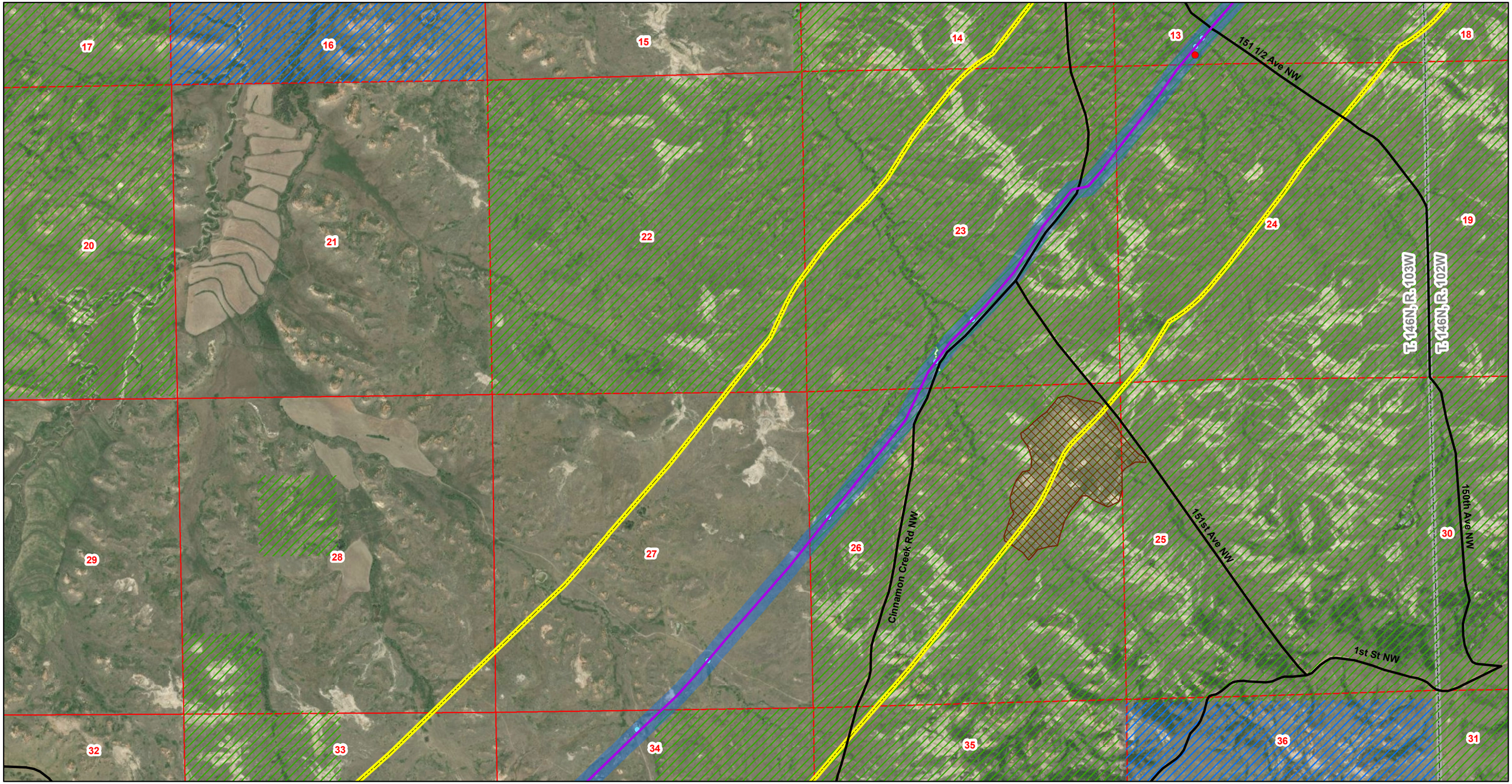
Figure: A.1

T. 146N, R. 103W & T. 146N, R. 102W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
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- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

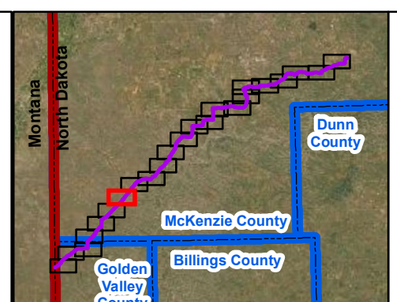


Figure: A.1

Page 17 of 23

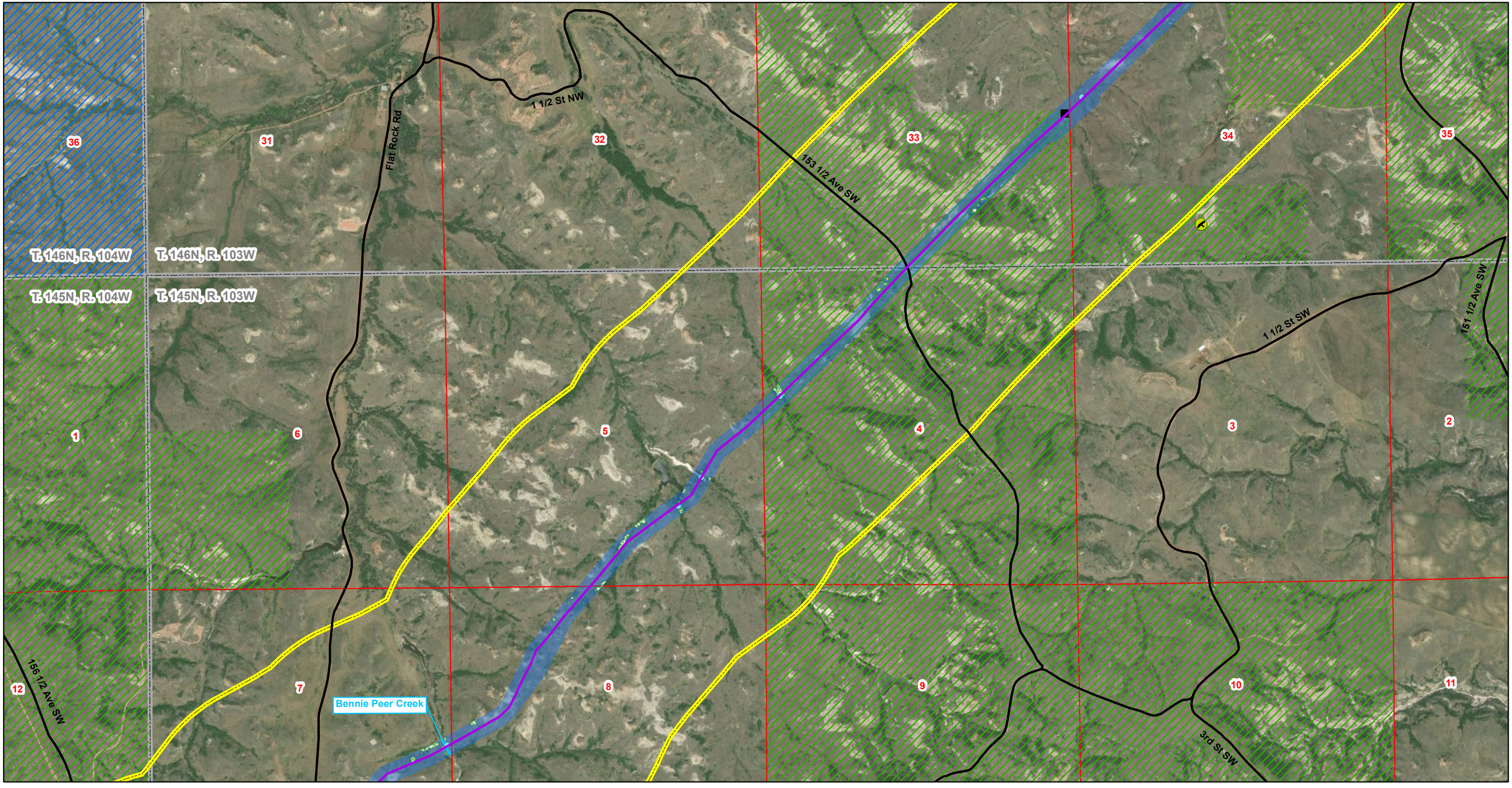
T. 146N, R. 103W & T. 146N, R. 102W

McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
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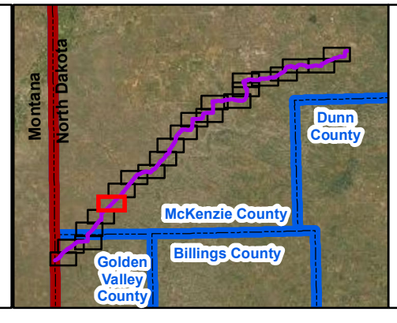


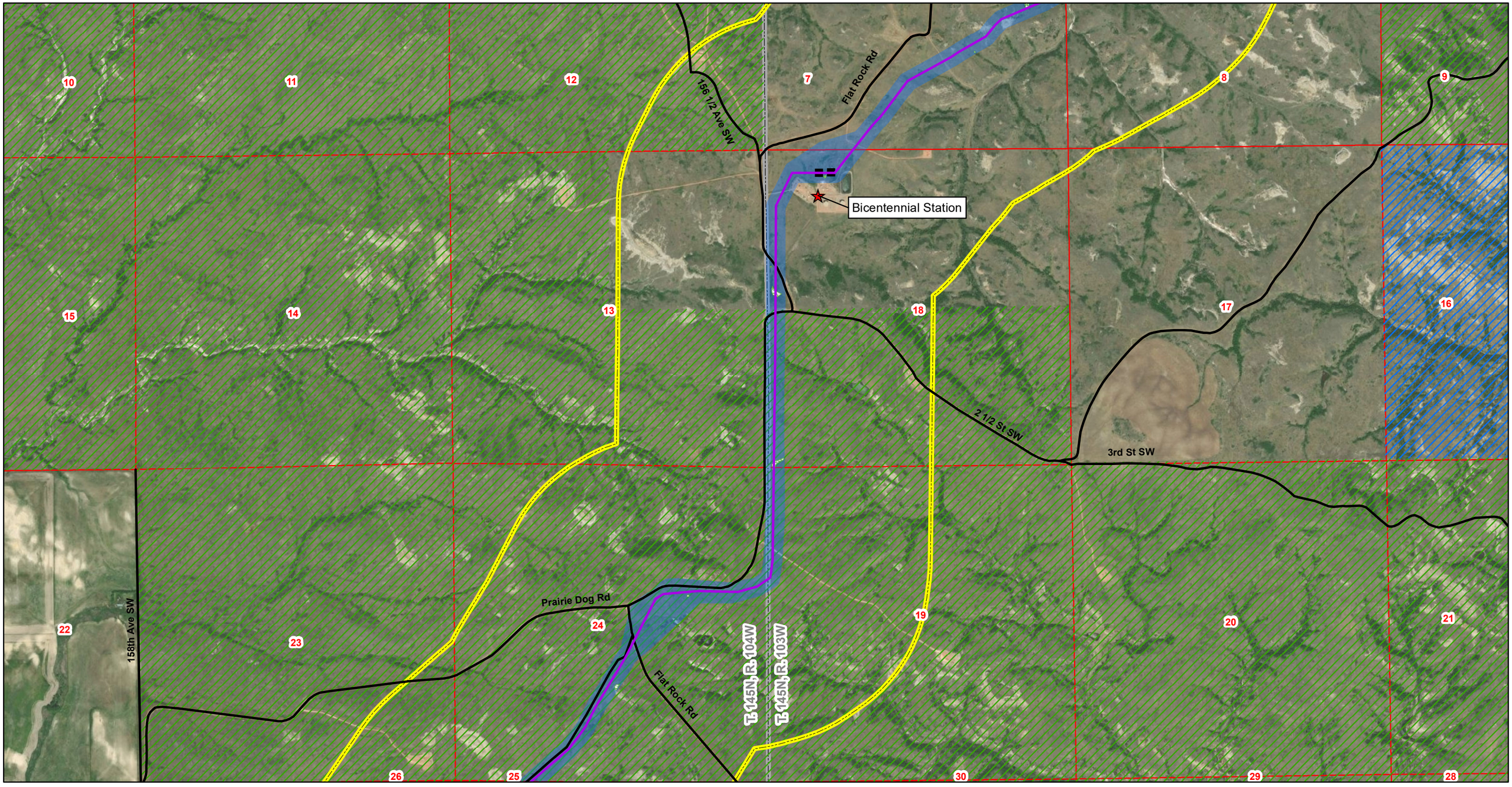
Figure: A.1

T. 146N, R. 103W,
T. 145N, R. 104W & R. 103W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

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- Noxious Weeds
- Unoccupied Raptor Nest
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- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

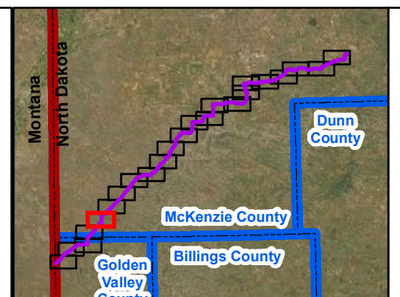


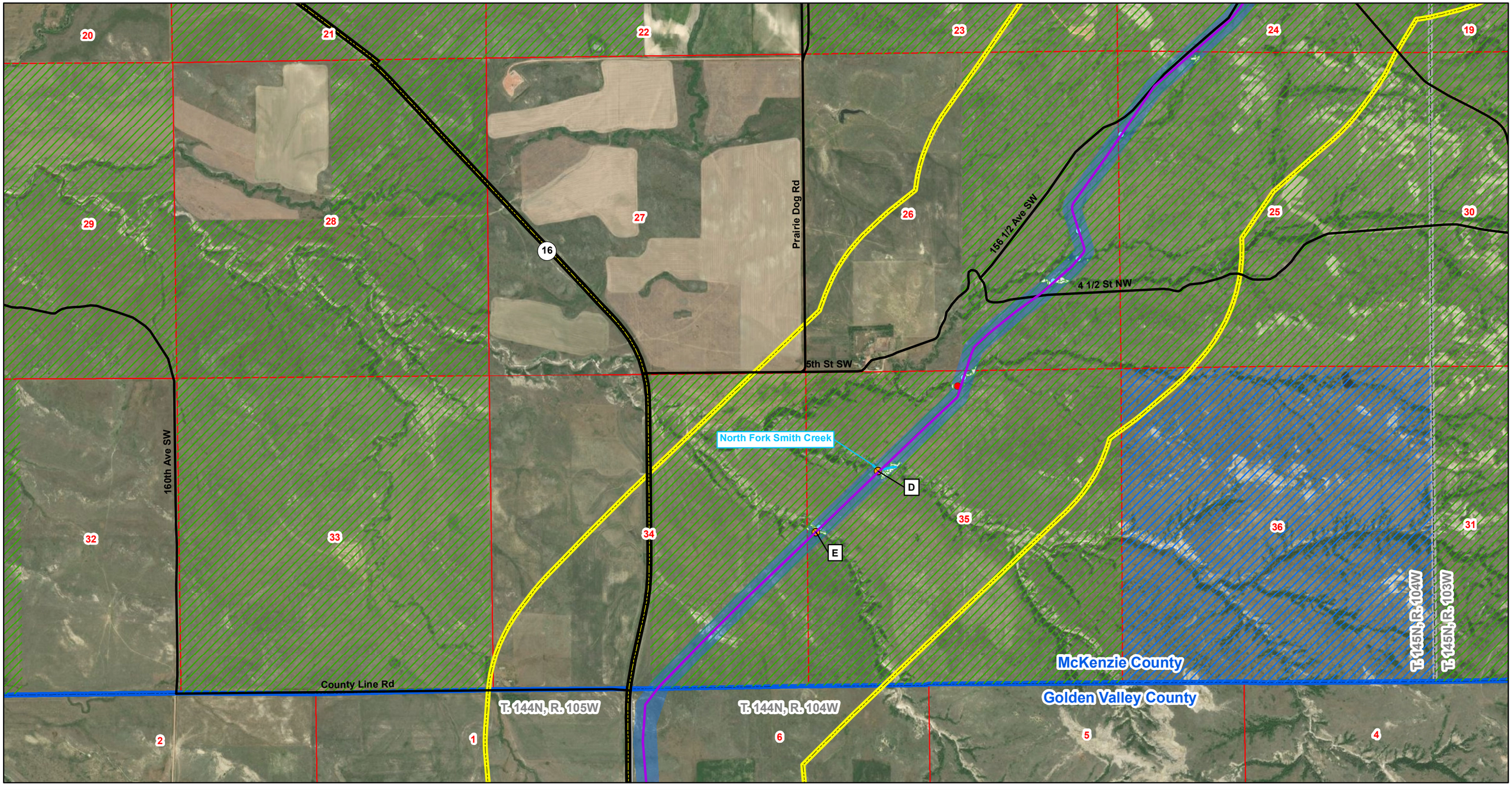
Figure: A.1

Page 19 of 23
T. 145N, R. 104W & R. 103W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
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- Noxious Weeds
- Unoccupied Raptor Nest
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- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

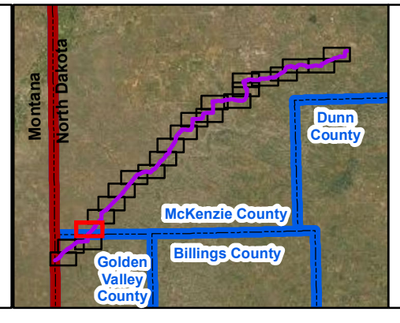


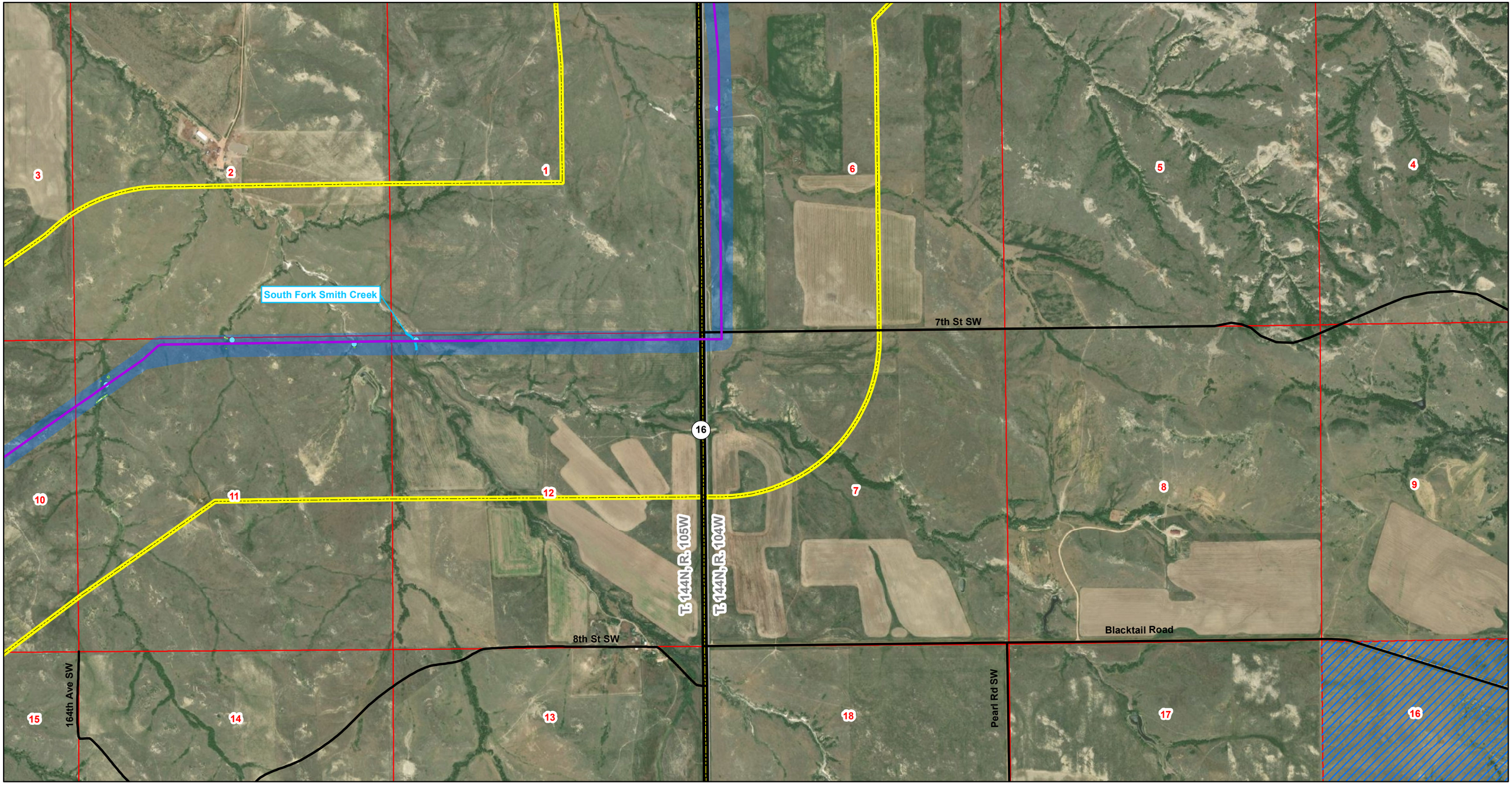
Figure: A.1

Page 20 of 23
T. 145N, R. 104W,
T. 144N, R. 105W & R. 104W
McKenzie & Golden Valley Counties, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

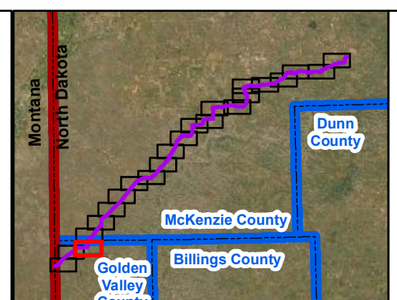


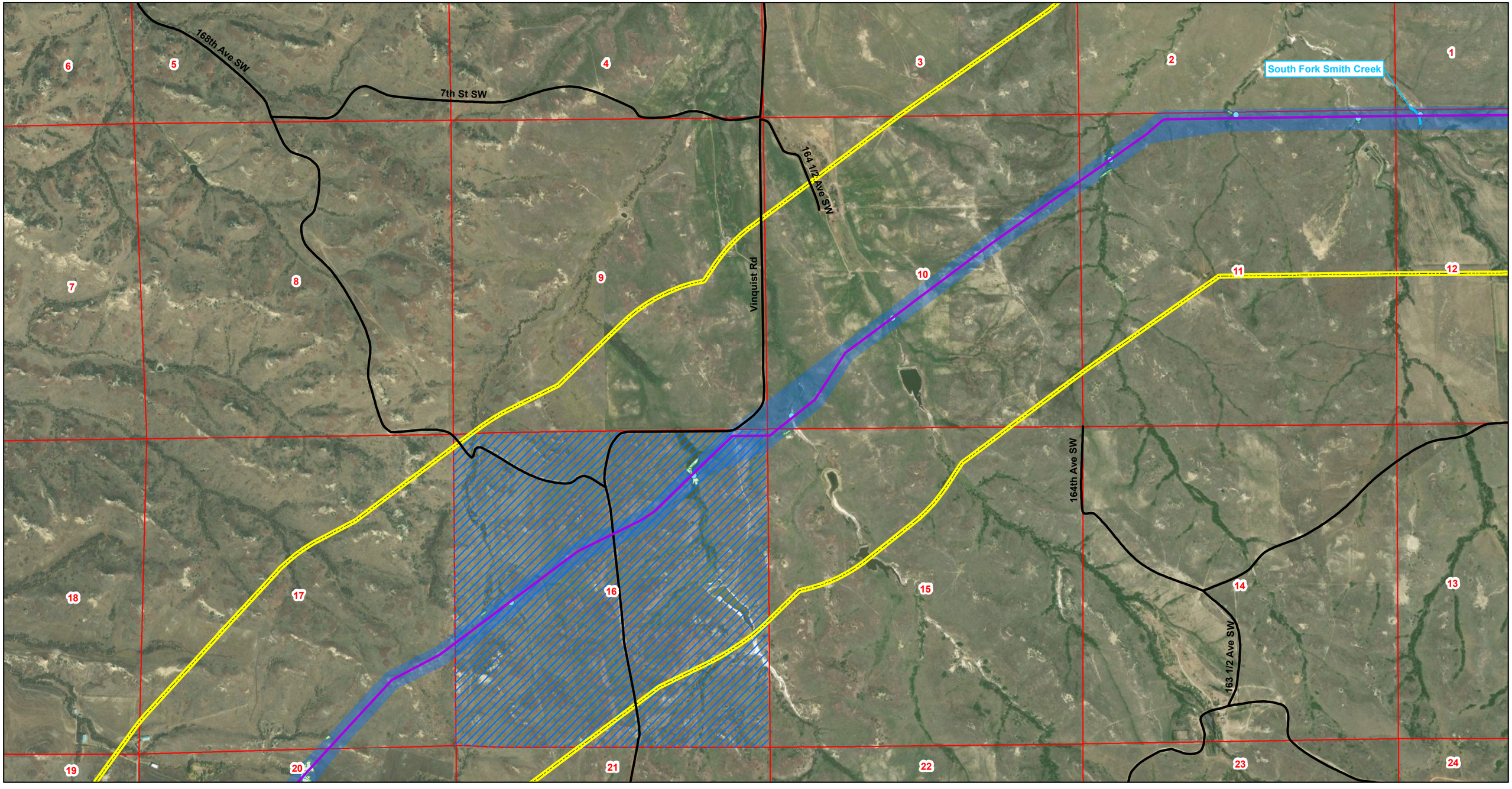
Figure: A.1

T. 144N, R. 105W & R. 104W
Golden Valley County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
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- Study Area
- Residence/Building
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- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary
- Section Boundary

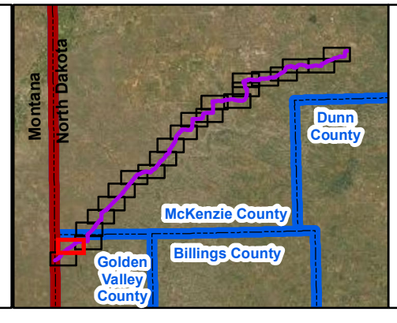


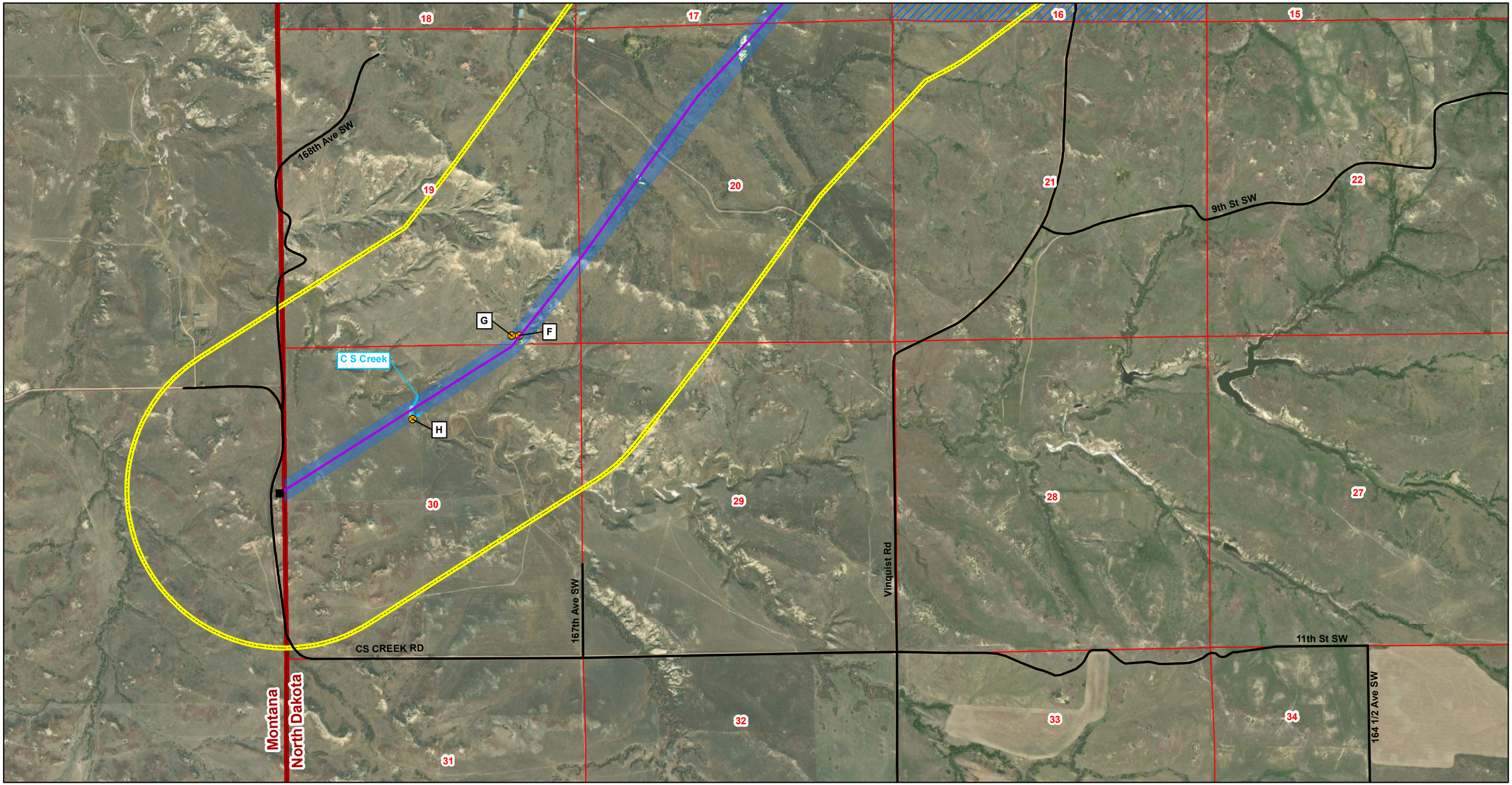
Figure: A.1

T. 144N, R. 105W
Golden Valley County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

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- Section Boundary

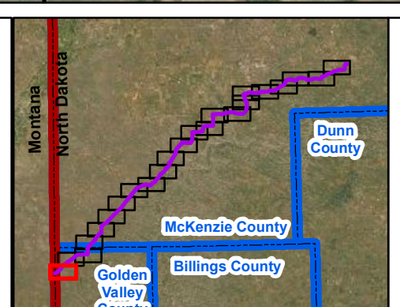


Figure: A.1

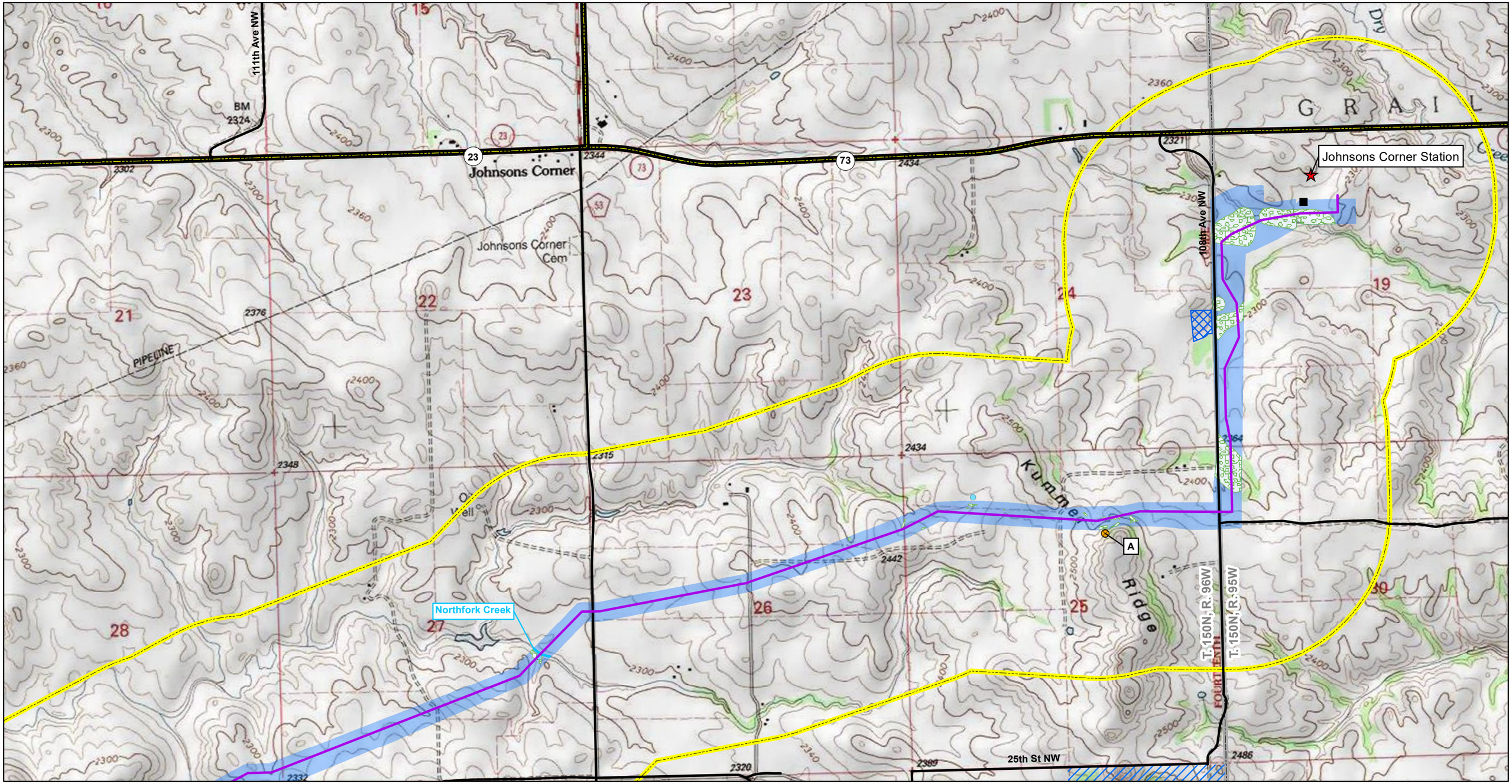
Page 23 of 23
T. 144N, R. 105W
Golden Valley County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet

Exhibit A.2
Topographic Mapbook



South Bend Pipeline

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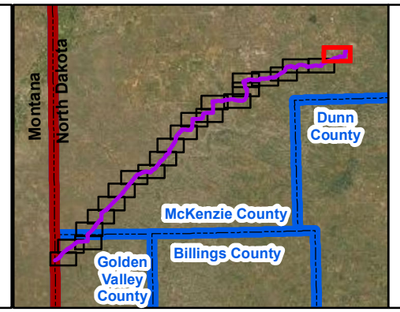


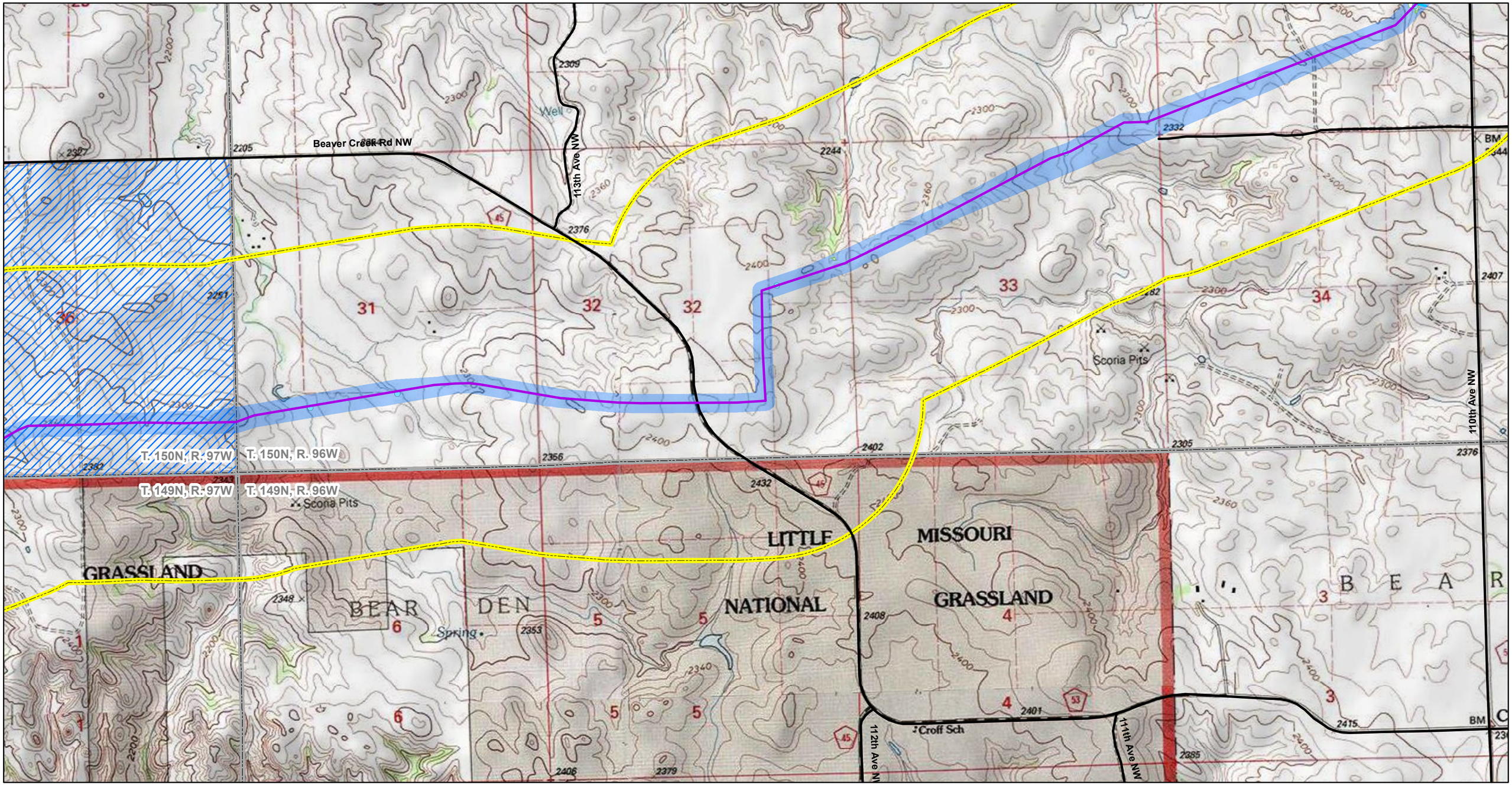
Figure: A.2

Page 1 of 23
T. 150N, R. 96W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

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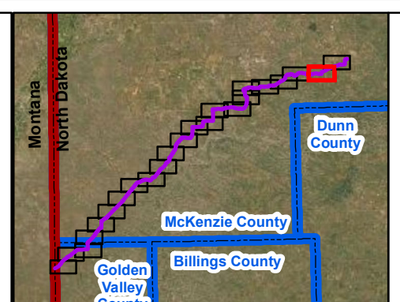


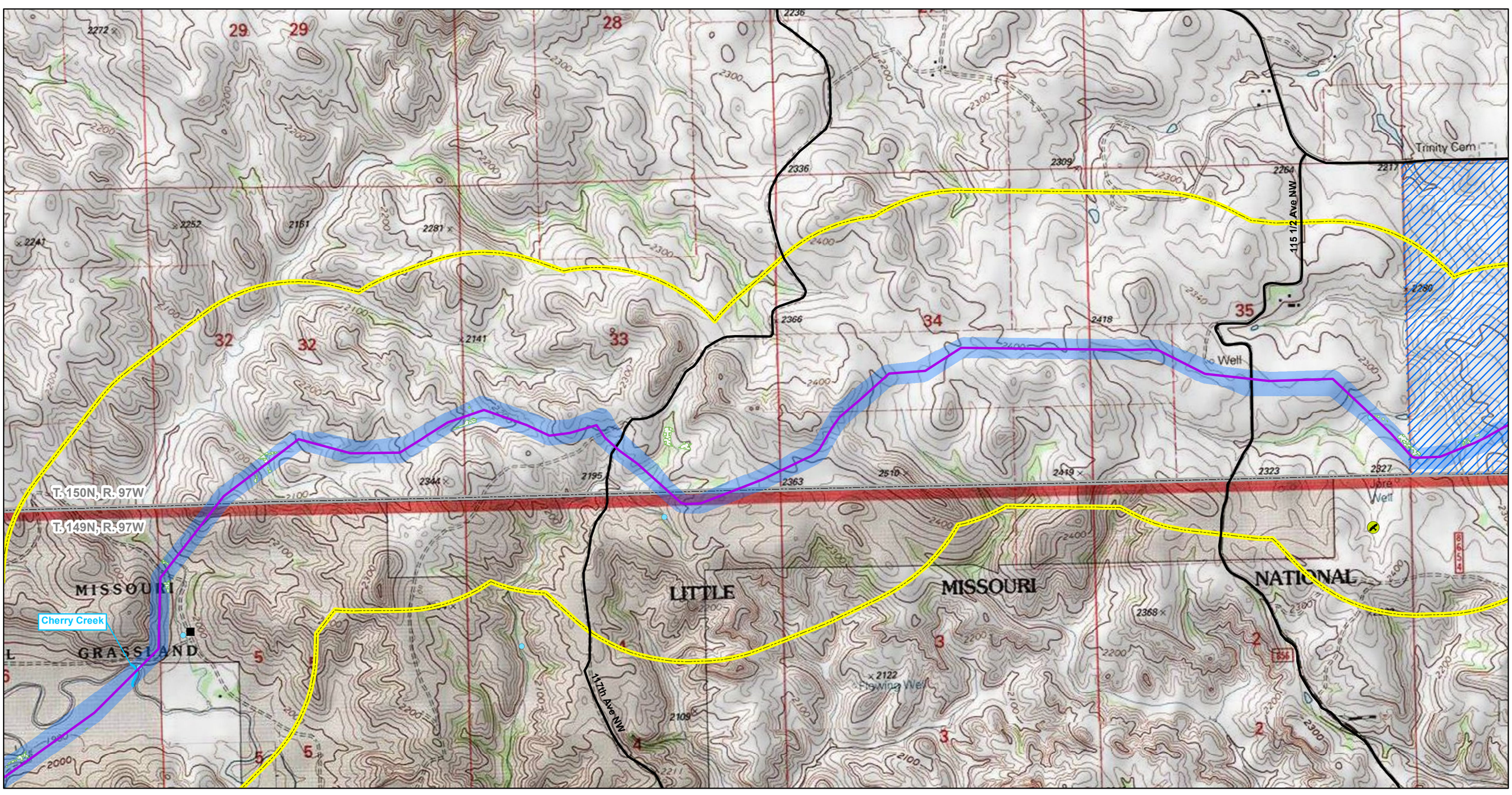
Figure: A.2

T. 150N, R. 97W & R. 96W
T. 149N, R. 97W & R. 96W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

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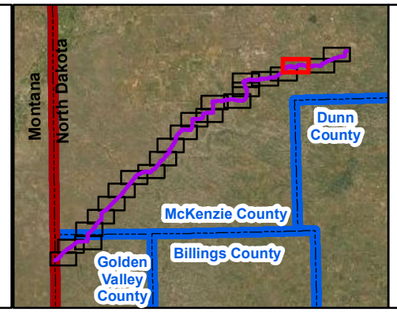


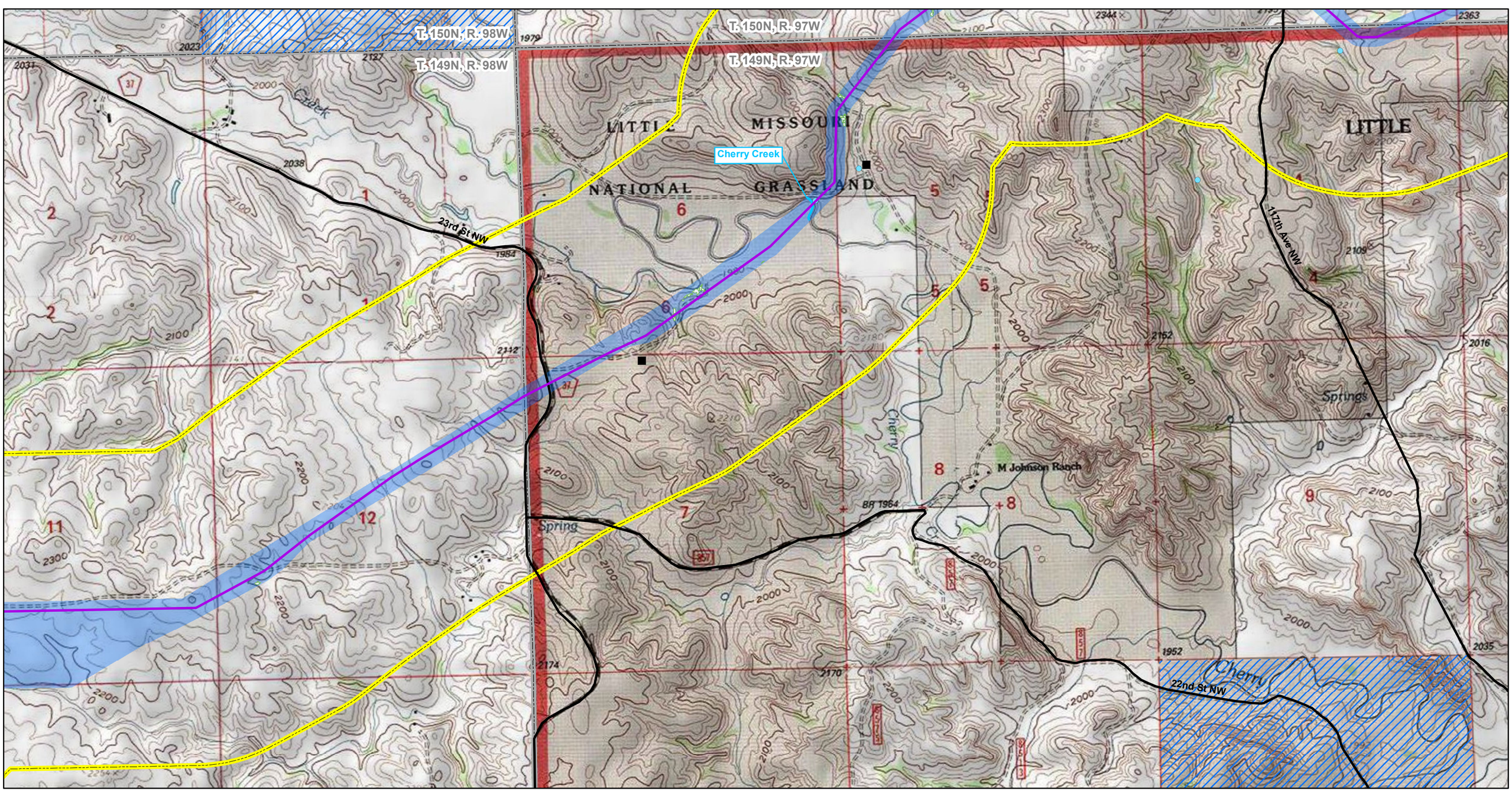
Figure: A.2

T. 150N, R. 97W &
T. 149N, R. 97W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

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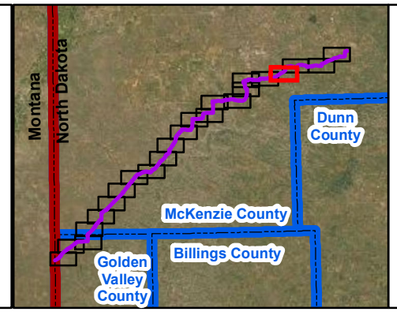


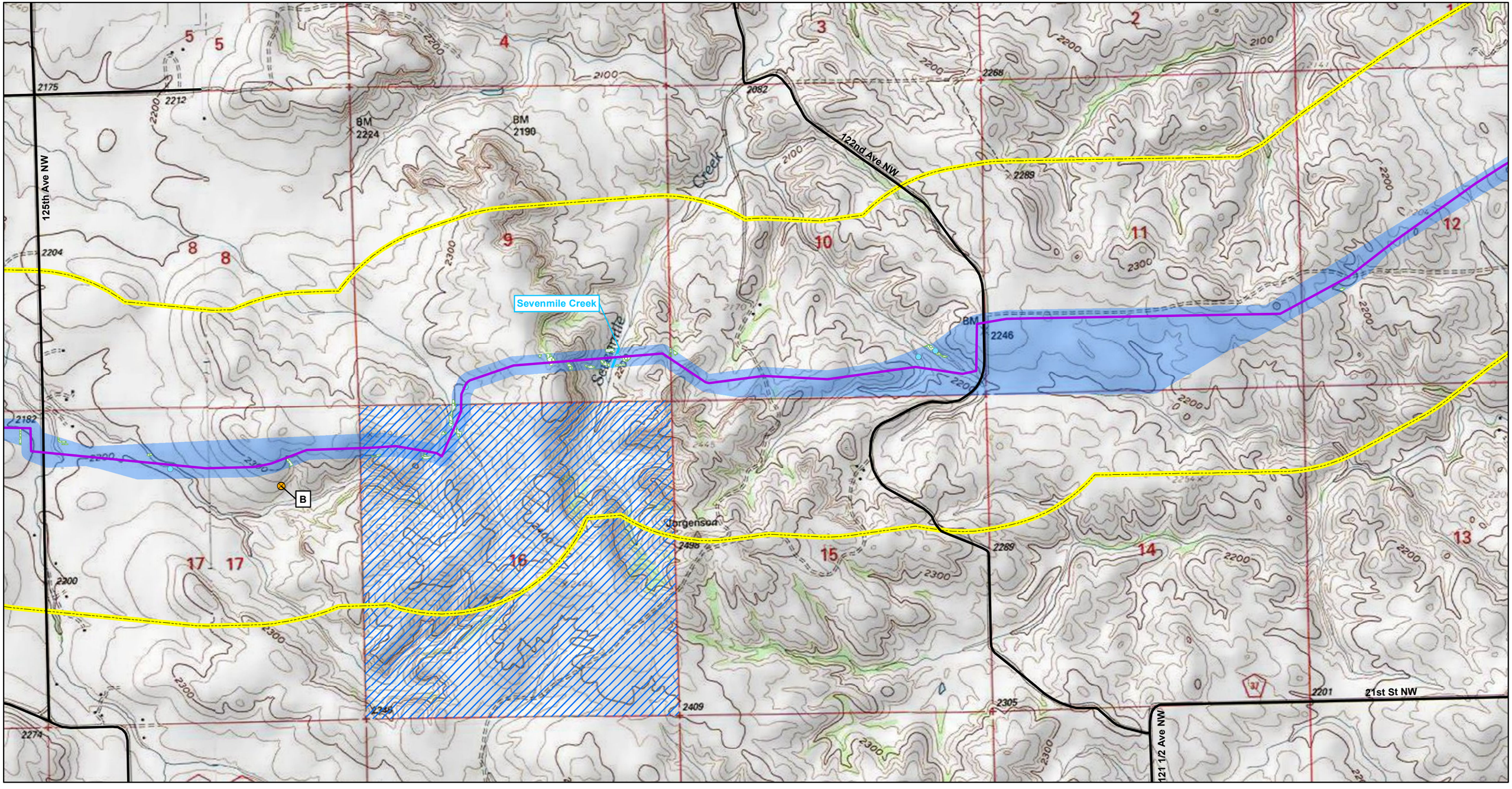
Figure: A.2

T. 150N, R. 97W,
T. 149N, R. 98W & R. 97W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

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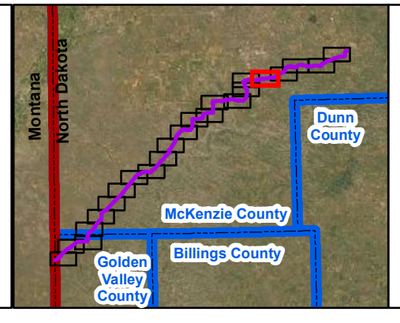


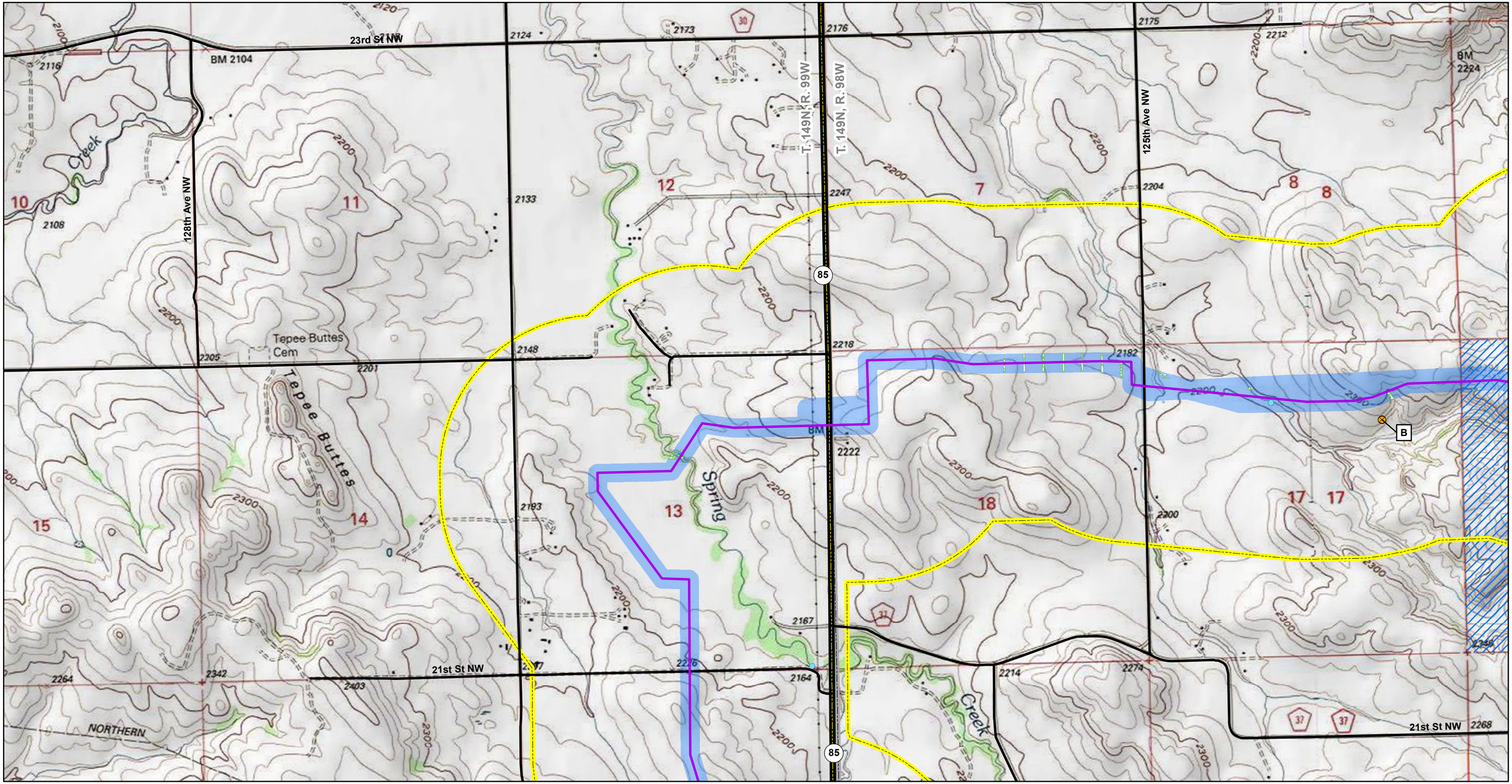
Figure: A.2

T. 149N, R. 98W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
- Roads
- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

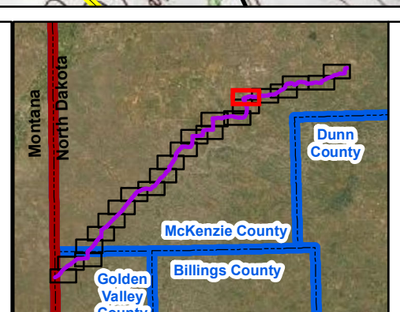


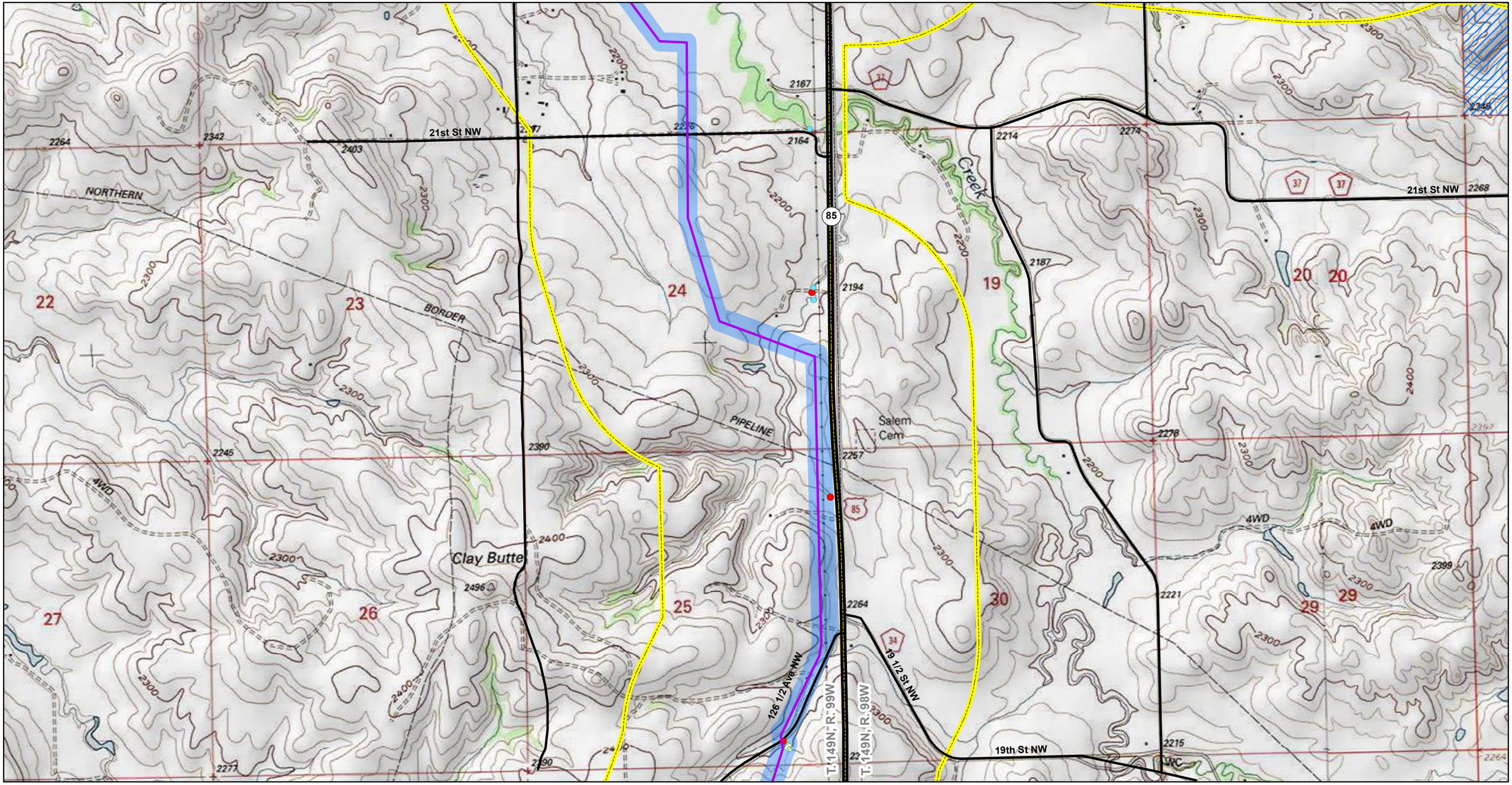
Figure: A.2

T. 149N, R. 99W & R. 98W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

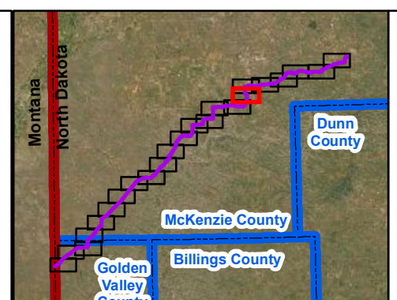


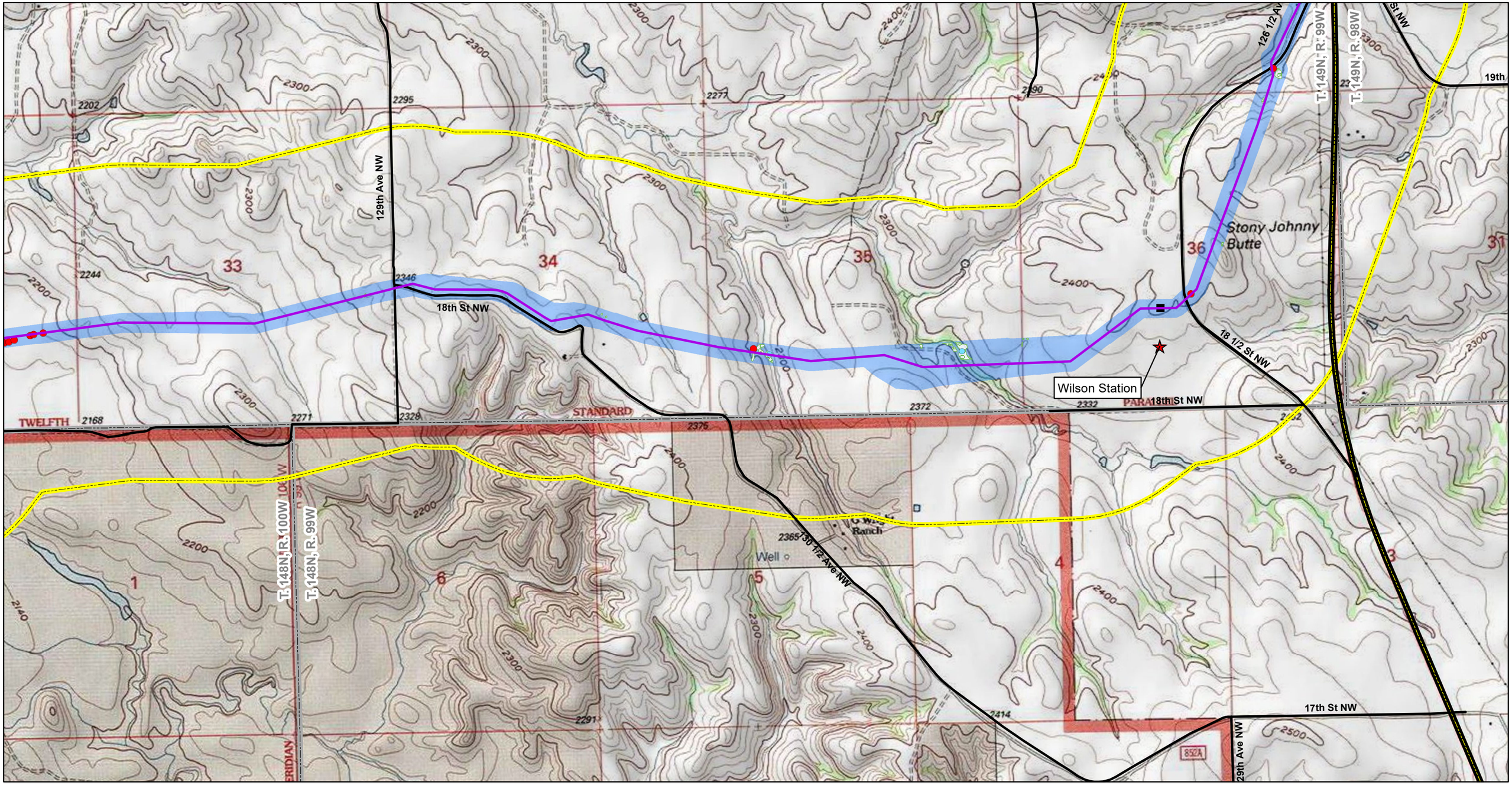
Figure: A.2

T. 149N, R. 99W & R. 98W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

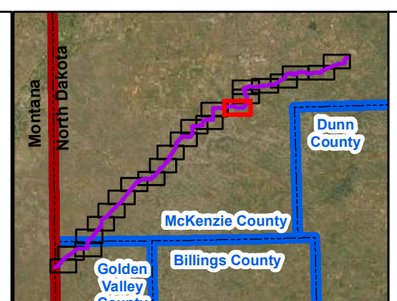


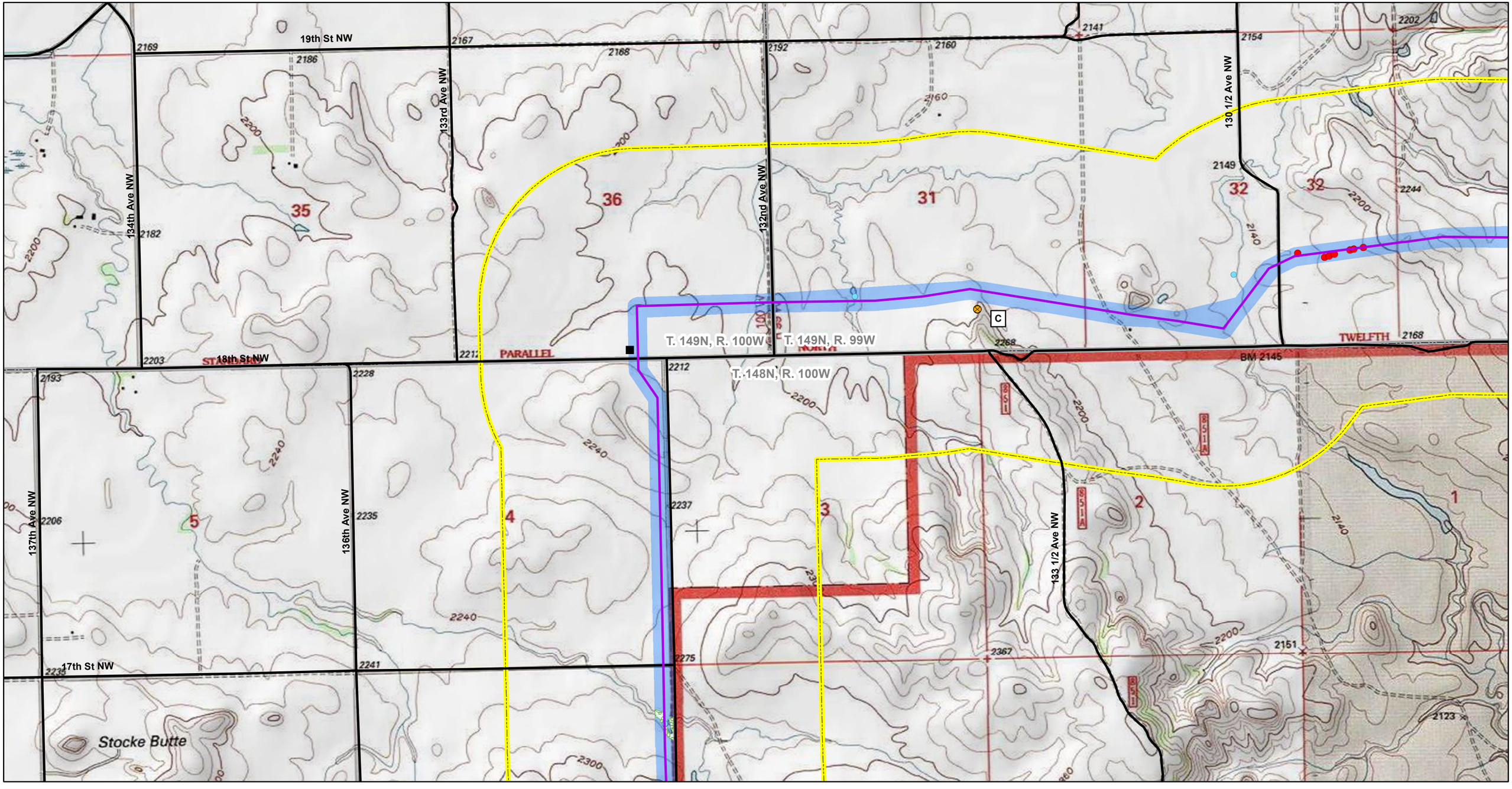
Figure: A.2

T. 149N, R. 99W & R. 98W
T. 148N, R. 100W & R. 99W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Highway
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- Study Area
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- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

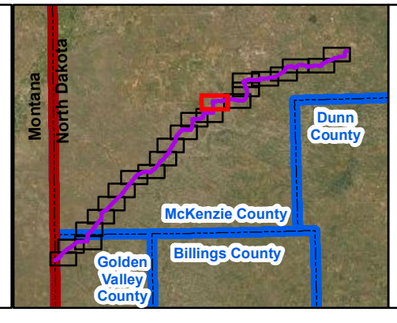

Figure: A.2

T. 149N, R. 100W & R. 99W
T. 148N, R. 100W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N

South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Highway
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- Study Area
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- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

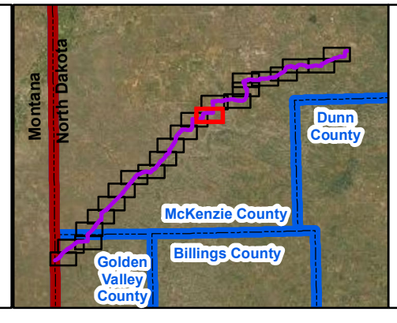


Figure: A.2

Page 10 of 23

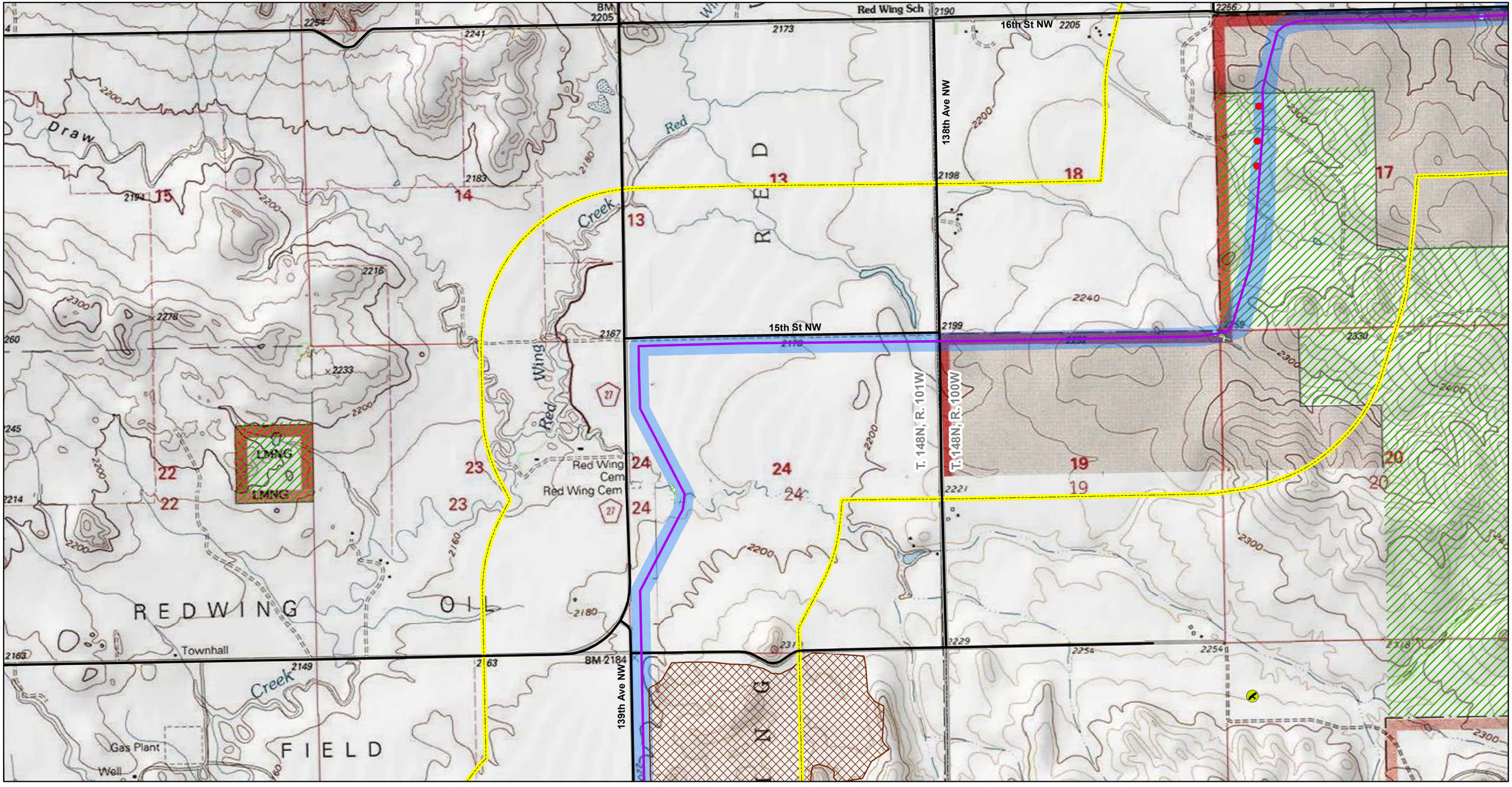
T. 148N, R. 101W & R. 100W

McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
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- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

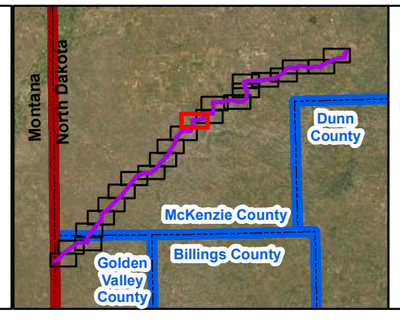


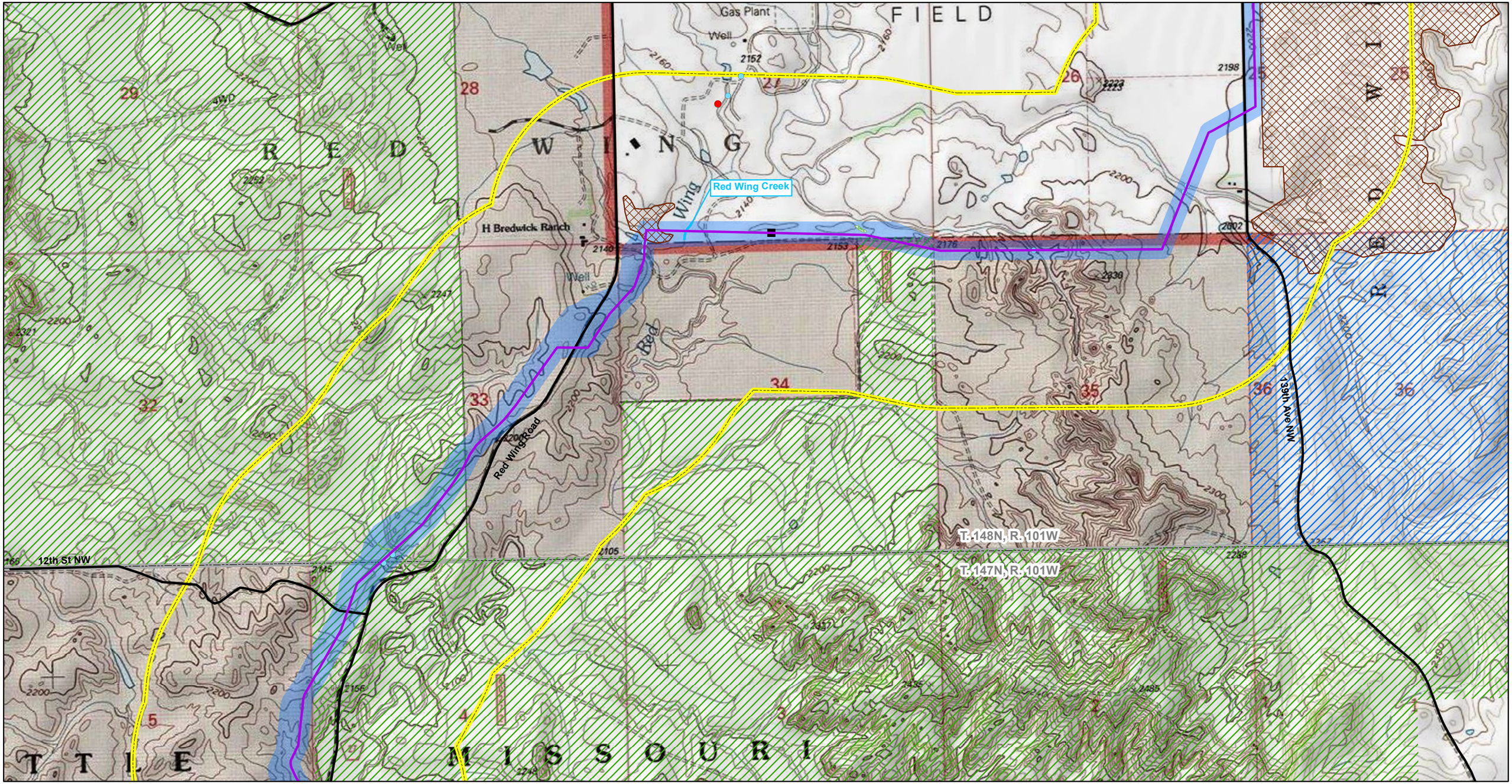
Figure: A.2

T. 148N, R. 101W & R. 100W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

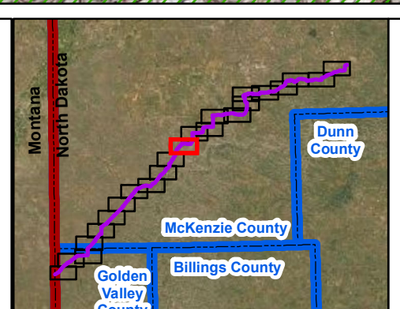


Figure: A.2

Page 12 of 23

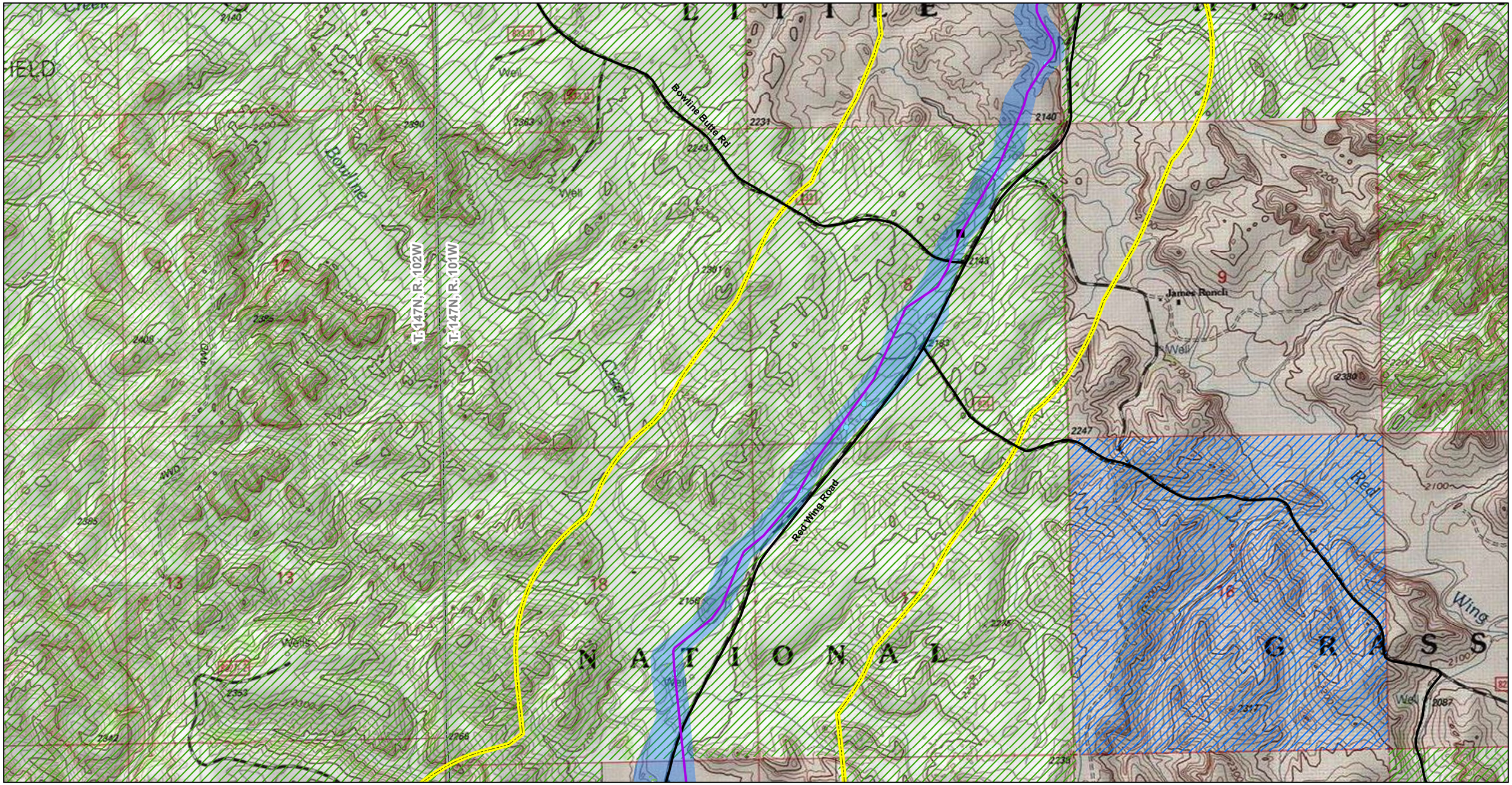
T. 148N, R. 101W & T. 147N, R. 101W

McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

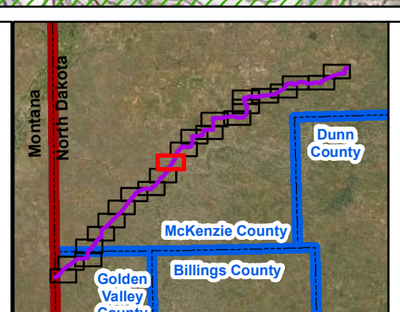


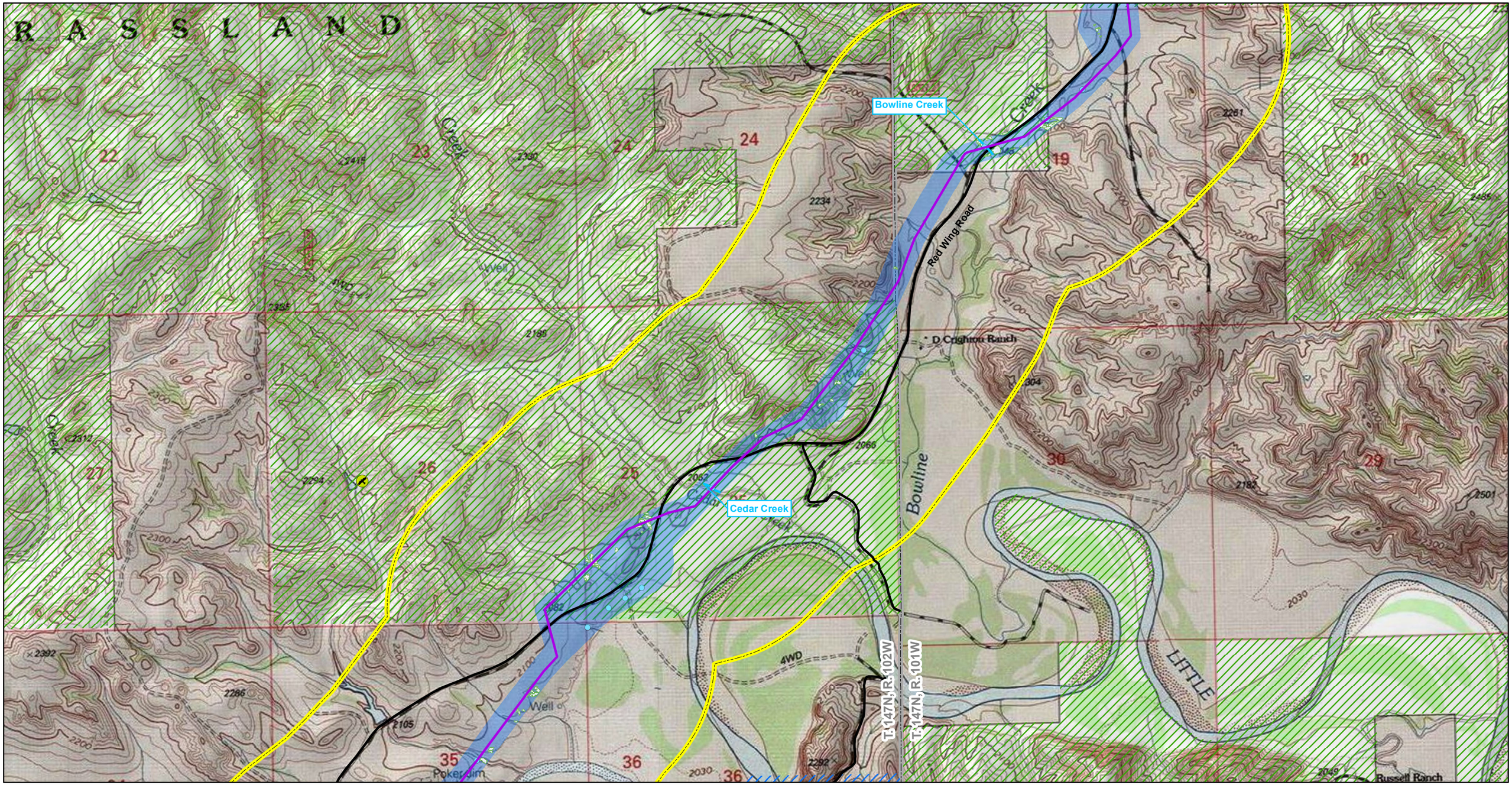
Figure: A.2

Page 13 of 23
T. 147N, R. 102W & R. 101W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

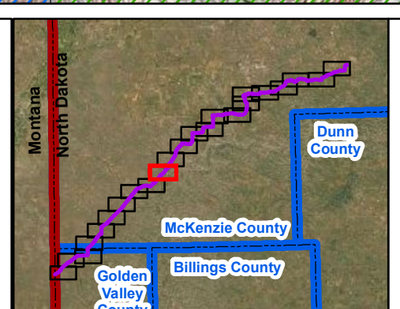


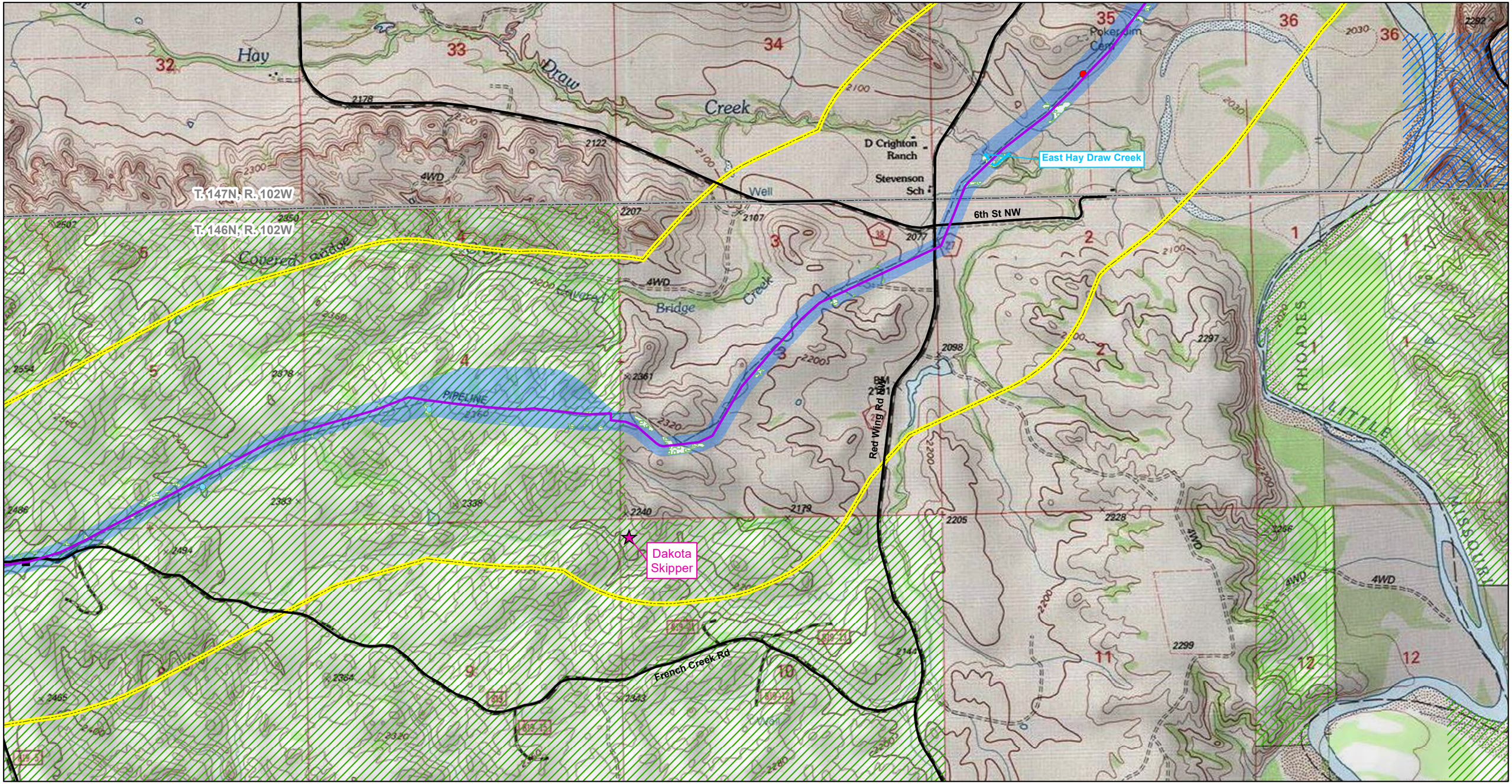
Figure: A.2

T. 147N, R. 102W & R. 101W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

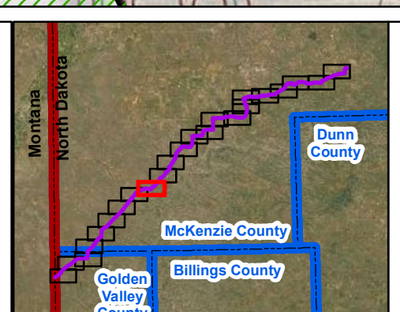


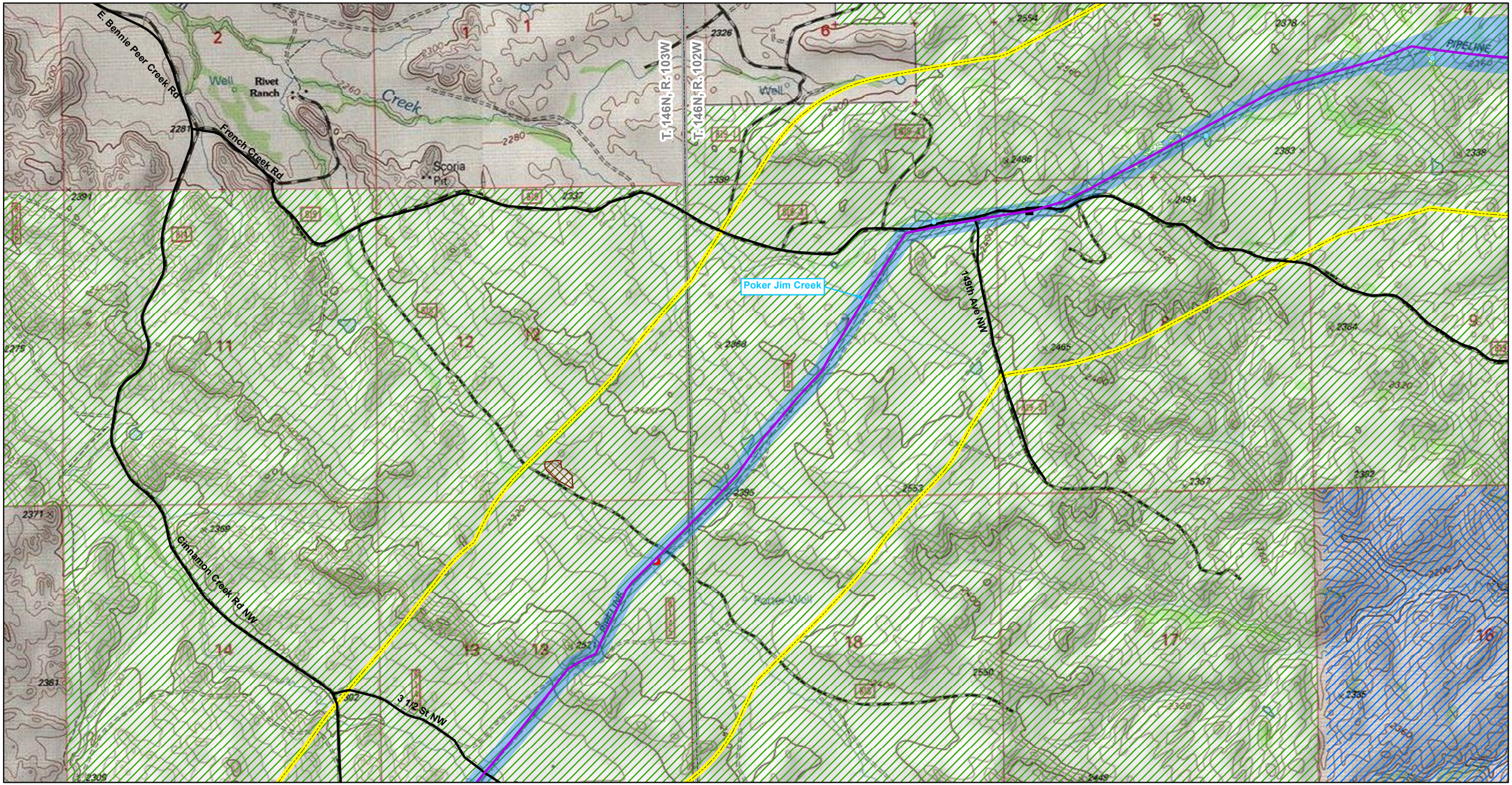
Figure: A.2

T. 147N, R. 102W & T. 146N, R. 102W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

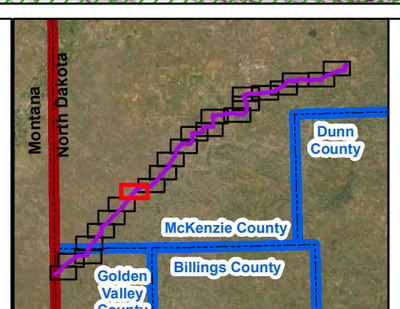


Figure: A.2

Page 16 of 23

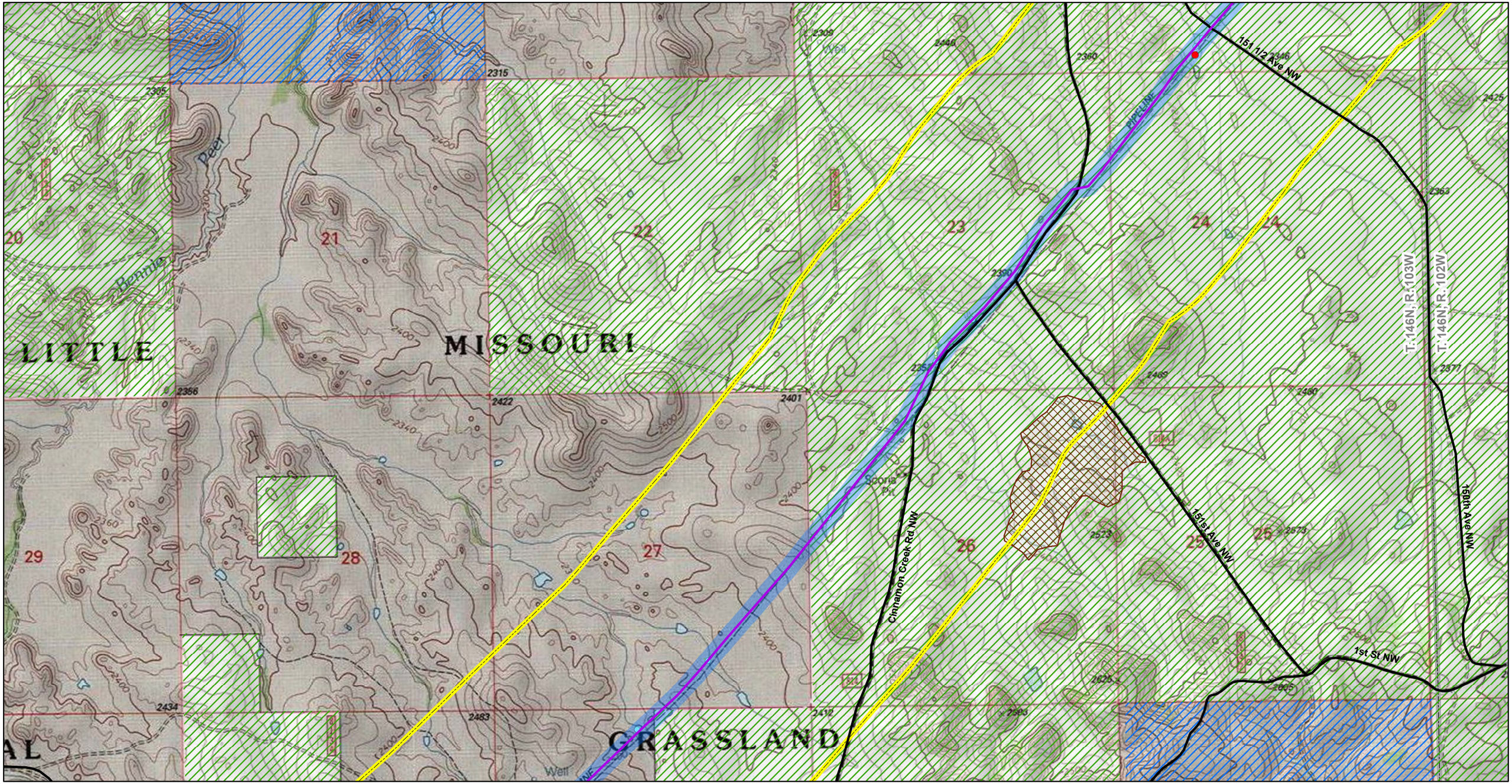
T. 146N, R. 103W & T. 146N, R. 102W

McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
- Proposed Alignment
- Named Streams
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- Highway
- Project Survey Area
- Study Area
- Residence/Building
- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

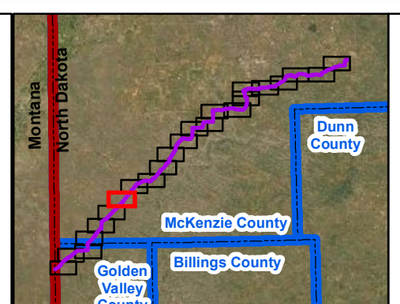


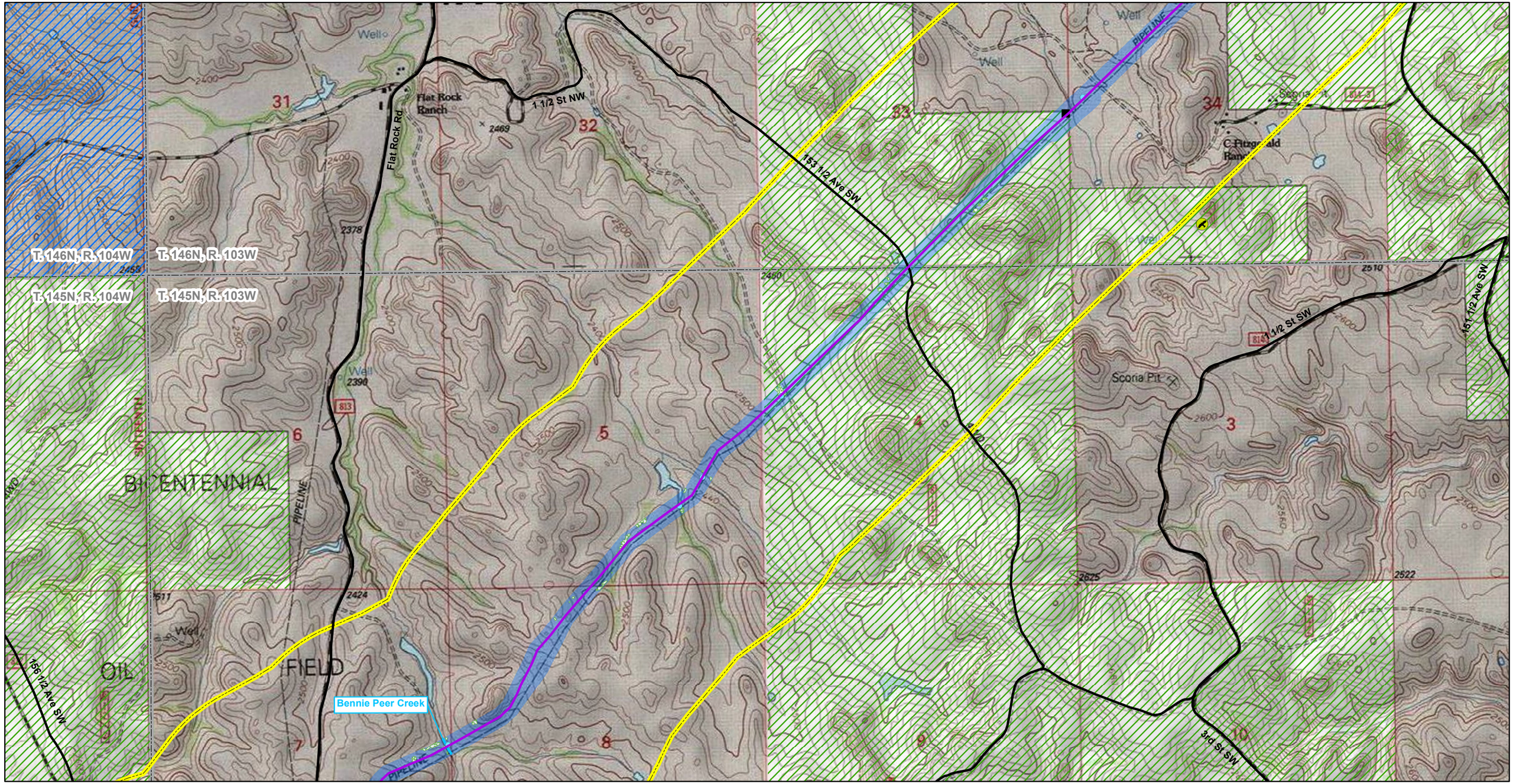
Figure: A.2

T. 146N, R. 103W & T. 146N, R. 102W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
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- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
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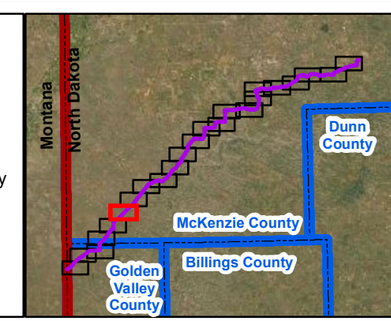


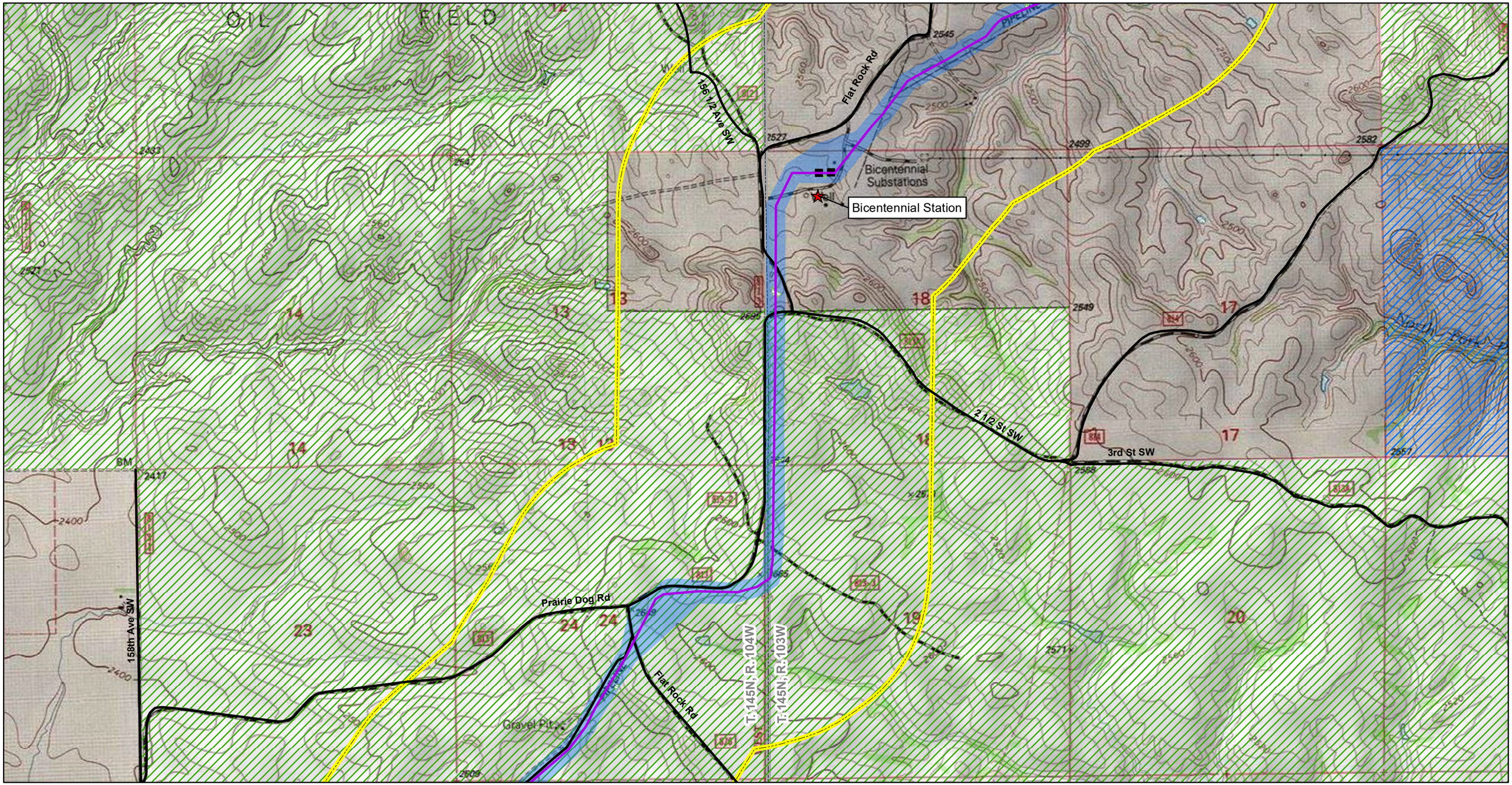
Figure: A.2

Page 18 of 23
T. 146N, R. 103W,
T. 145N, R. 104W & R. 103W
McKenzie County, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
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- County Boundary
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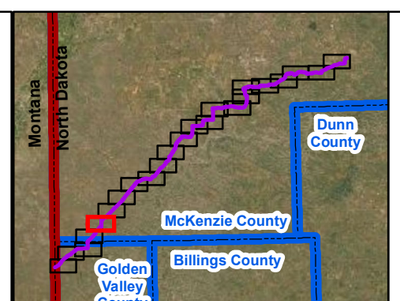


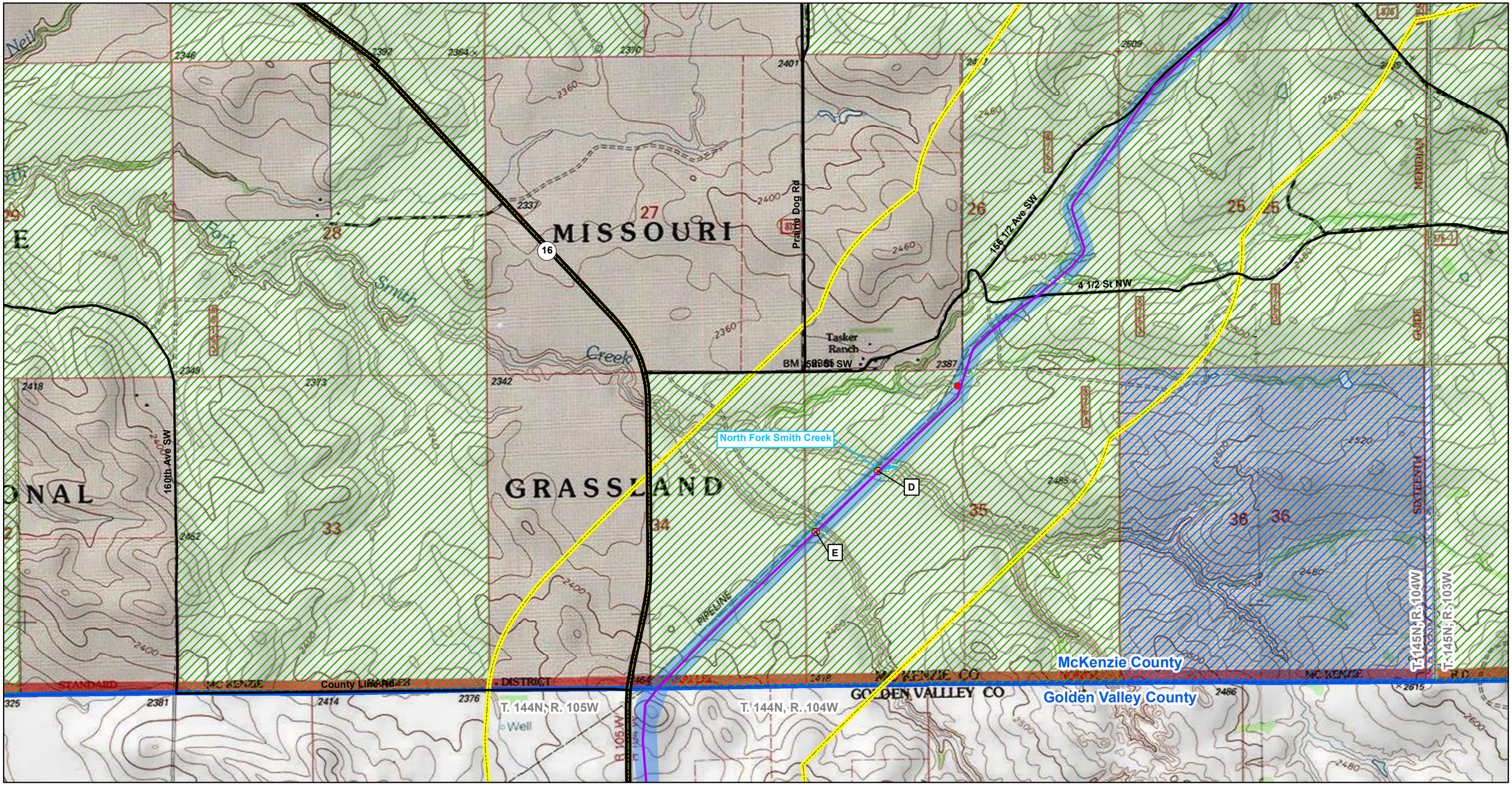
Figure: A.2

T. 145N, R. 104W & R. 103W
McKenzie County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
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- Unoccupied Raptor Nest
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- Prairie Dog Town
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- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

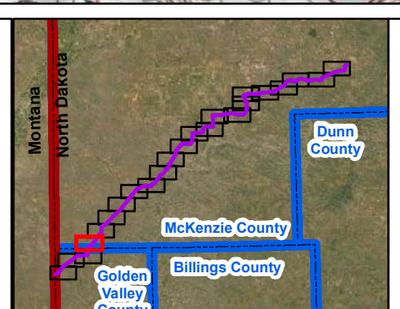


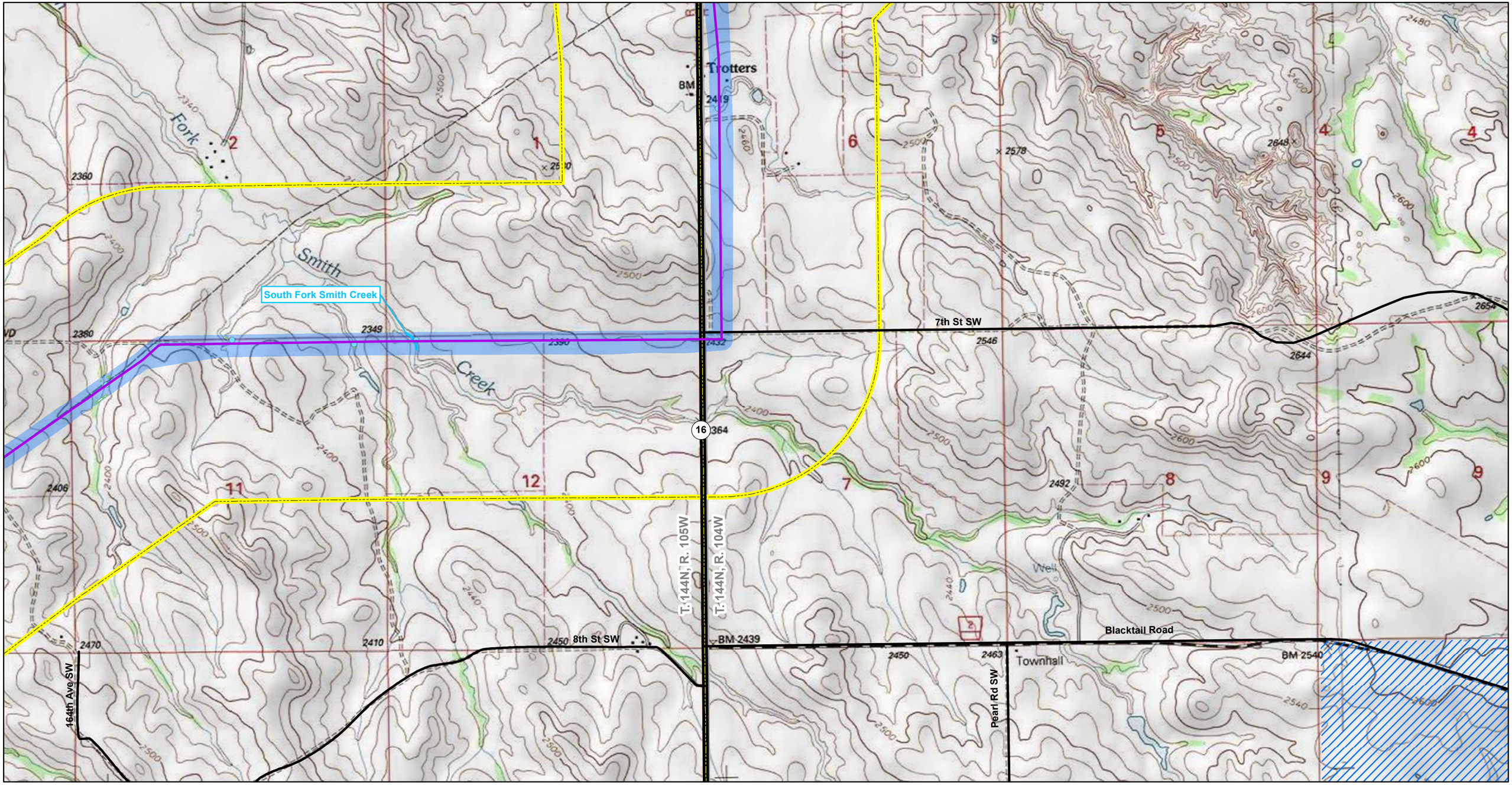
Figure: A.2

T. 145N, R. 104W,
T. 144N, R. 105W & R. 104W
McKenzie & Golden Valley Counties, North Dakota

0 375 750 Meters

0 1,500 3,000 Feet

N



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
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- Noxious Weeds
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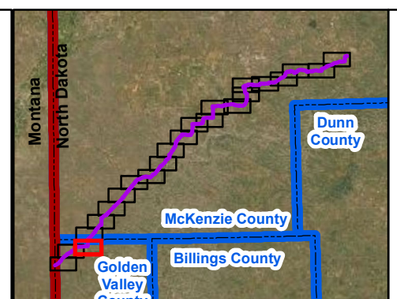


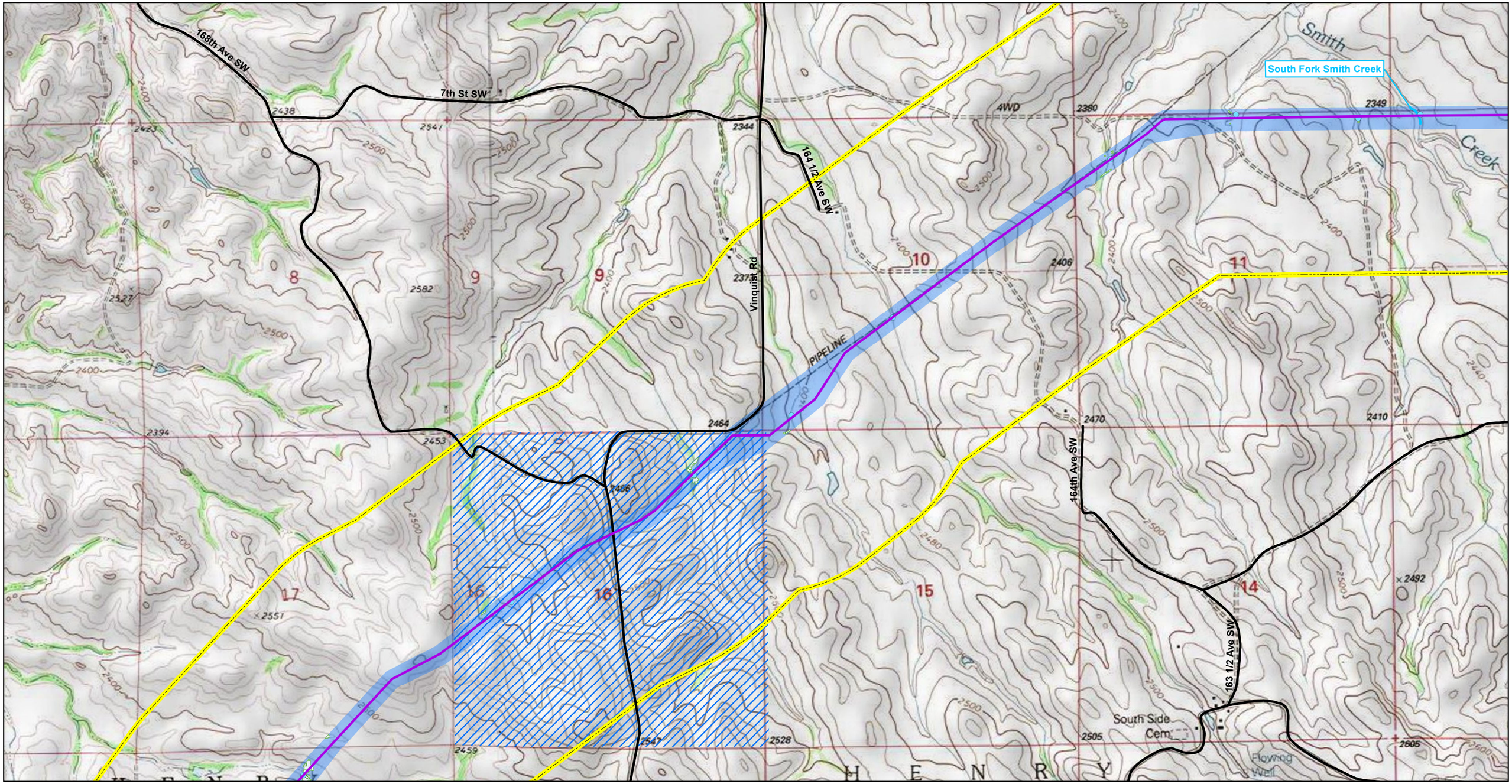
Figure: A.2

T. 144N, R. 105W & R. 104W
Golden Valley County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
- Dakota Skipper
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- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- Prairie Dog Town
- USFS Lands
- ND Lands
- State Boundary
- County Boundary
- Township/Range Boundary

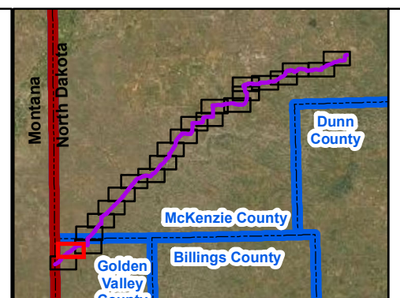


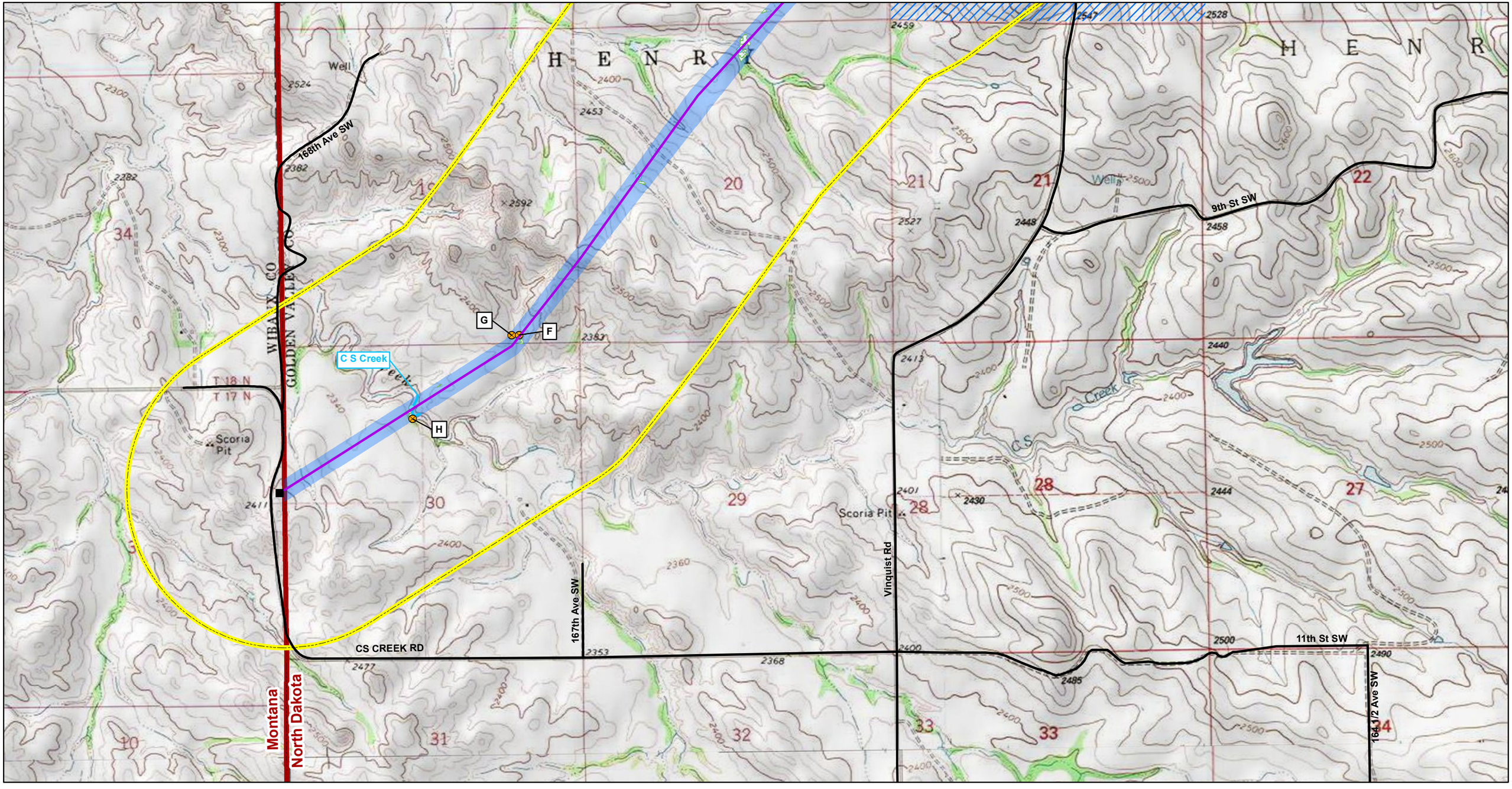
Figure: A.2

T. 144N, R. 105W
Golden Valley County, North Dakota

N

0 375 750 Meters

0 1,500 3,000 Feet



South Bend Pipeline

- Facility
- Potential Landslide Prone Areas
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- Wetlands
- Noxious Weeds
- Unoccupied Raptor Nest
- Block Valve
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- State Boundary
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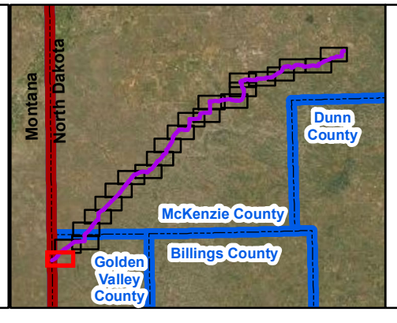


Figure: A.2

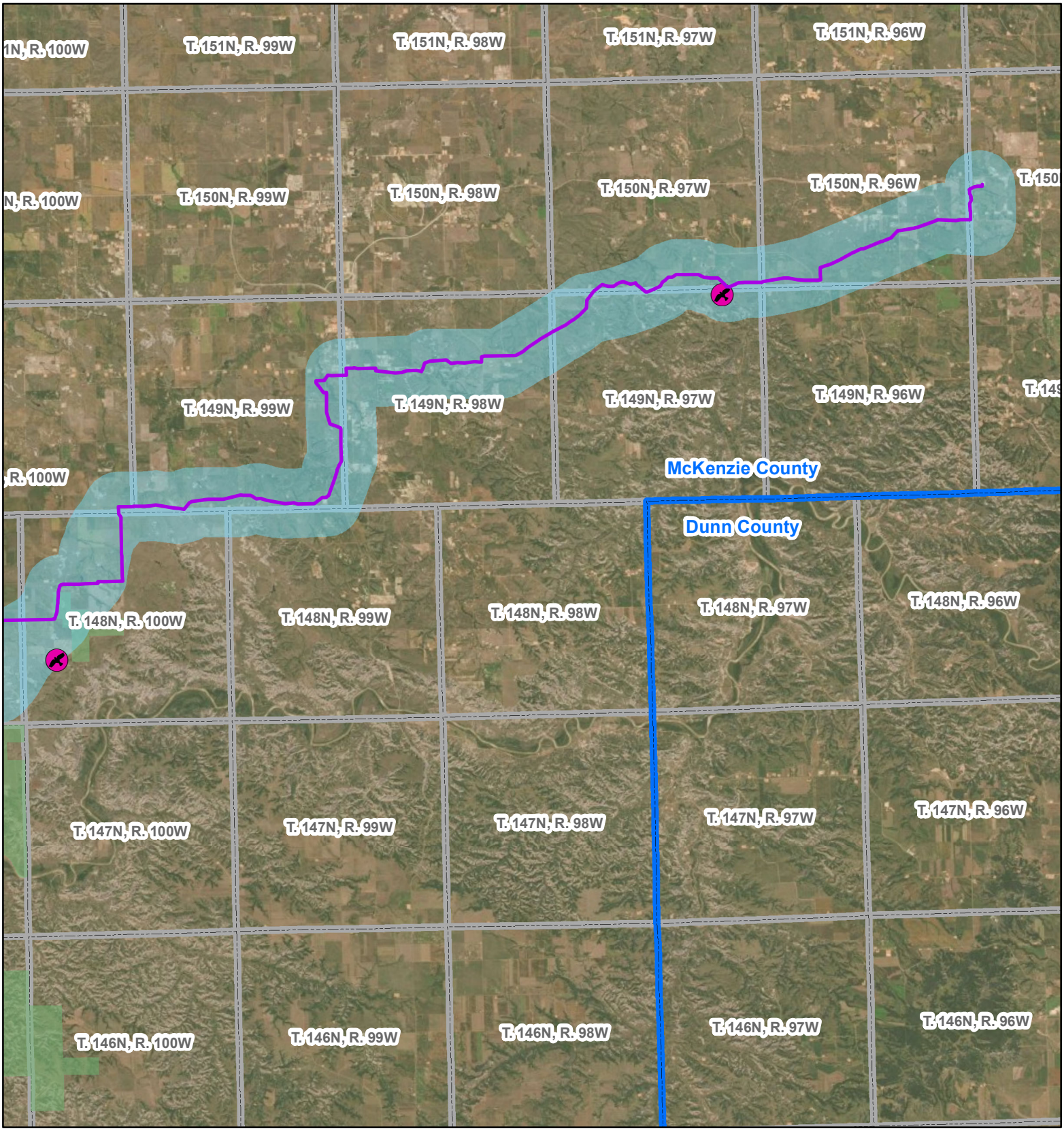
Page 23 of 23
T. 144N, R. 105W
Golden Valley County, North Dakota

N

0 375 750 Meters

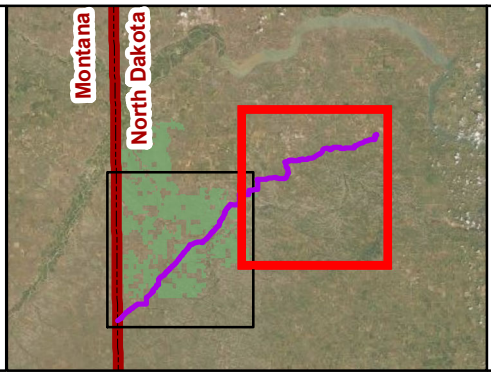
0 1,500 3,000 Feet

Exhibit A.3
Raptor Survey Corridor Map



Raptor Survey Area

- Unoccupied Raptor Nest
- Proposed Alignment
- Raptor Survey Area
- USFS Lands
- State Boundary
- County Boundary
- Township/Range Boundary

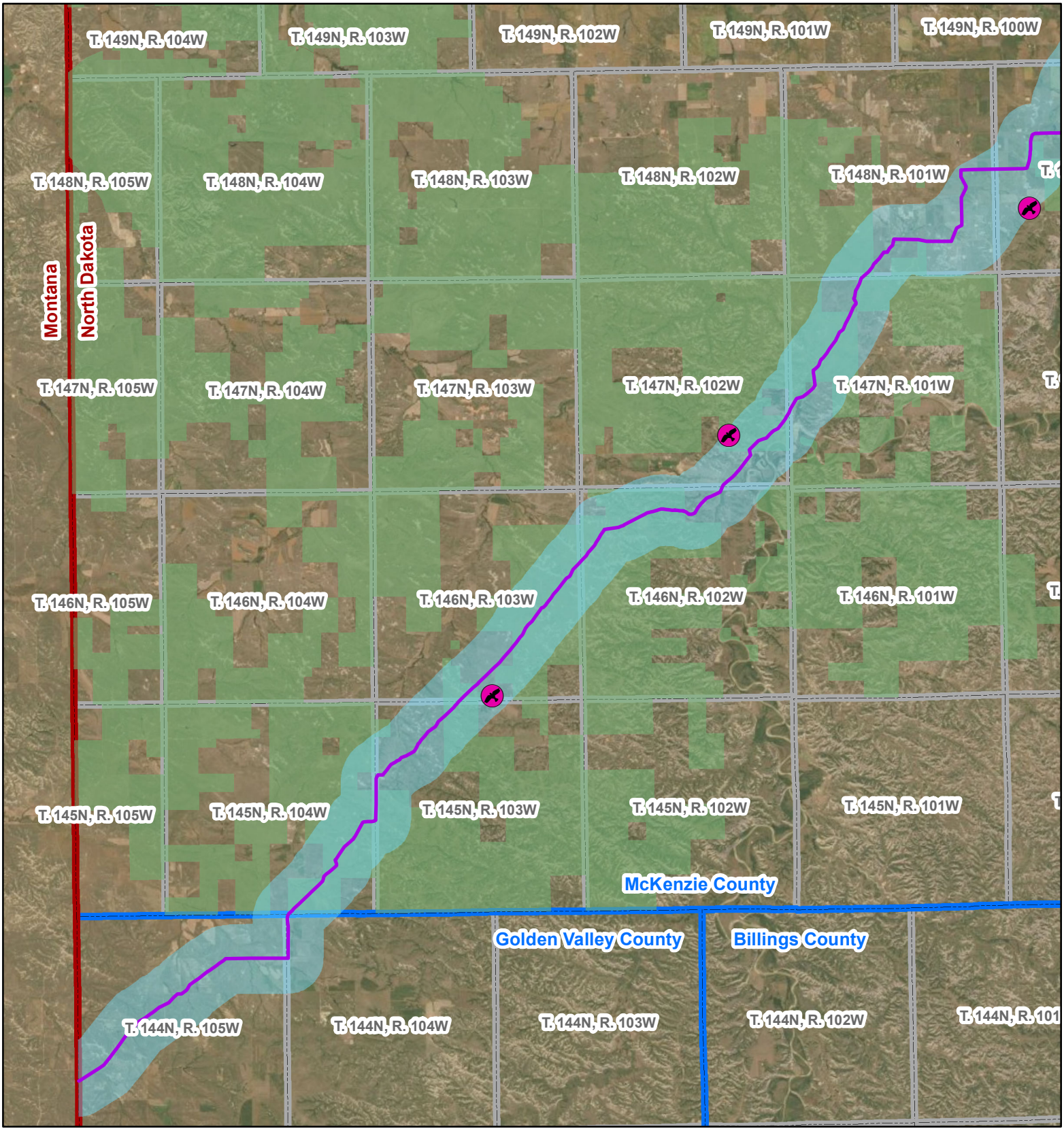


McKenzie and Golden Valley Counties, North Dakota

0 3 6 Kilometers

0 2.5 5 Miles

N



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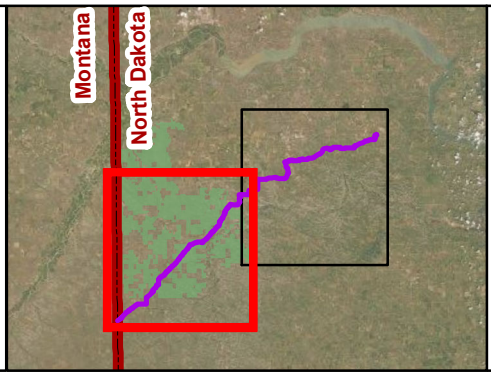

McKenzie and Golden Valley Counties, North Dakota

0 3 6 Kilometers

0 2.5 5 Miles

N

Exhibit B
Agency Correspondence

Exhibit B.1
NDIC Pipeline Authority

September 30, 2019

Justin Kringstad
North Dakota Industrial Commission
Pipeline Authority
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Justin Kringstad
North Dakota Industrial Commission
Pipeline Authority
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.2
ND State Water Commission

September 30, 2019

Dawn Martin
Planning Division
North Dakota State Water Commission
900 East Boulevard Avenue, Dept 770
Bismarck, ND 58505-0850

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

NORTH Dakota | Water Commission

Be Legendary.™

October 29, 2019

Jaimee Antognazzi
Keitu Engineers & Consultants, Inc.
PO Box 98
Mandan, ND 58554-0098

Dear Ms. Antognazzi:

This is in response to your request for a review of the environmental impacts associated with the Bridger 16" Crude Oil Pipeline project.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- There are no floodplains identified and/or mapped where this proposed project is to take place. No permits relative to the NFIP are required based on the current effective FIRM and State minimum standards.

- Initial review indicates the project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the project, a water permit will be required per North Dakota Century Code § 61-04-02. Please consult with the Water Appropriations Division of the Office of the State Engineer if you have any questions at (701) 328-2754 or waterpermits@nd.gov.

- The State Water Commission maintains a network of observation wells across the state for monitoring the water levels and quality in glacial and bedrock aquifers. These wells are often installed in road and highway rights-of-way to limit inconvenience to the adjacent landowners. State Water Commission observation wells have a yellow protective casing extending between 1 and 3 feet above ground surface, and their locations are marked with a stake. If an observation well is encountered during project activities and must be removed, please contact the Water Appropriations Division. The State Water Commission hopes to keep all observation wells, but otherwise will ensure the well is properly abandoned.

- Permits for temporary surface water diversions within the Little Missouri River Basin, if issued, have additional conditions per an Interim Policy signed by the State Engineer on June 22, 2017. Please consult with the Water Appropriations Division of the Office of the State Engineer at (701) 328-2754 or waterpermits@nd.gov if you have any questions.

Thank you for the opportunity to provide review comments. Should you have further questions, please contact me at 701-328-4970 or stevebest@nd.gov.

Sincerely,

Steven Best
Planner III

SB:dm/1570

Exhibit B.3
ND Department of Environmental Quality

September 30, 2019

Dave Glatt
North Dakota Department of Environmental Quality
918 East Divide Avenue
Bismarck, ND 58501-1947

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Dave Glatt
North Dakota Department of Environmental Quality
918 East Divide Avenue
Bismarck, ND 58501-1947

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

December 9, 2019

Jaimee Antognazzi
Operations Manager
Keitu Engineers & Consultants
PO Box 98
Mandan, ND 58554-0098

Re: Bridger Pipeline, LLC 16-inch Crude Oil Pipeline in Golden Valley, McKenzie Counties

Dear Mr. Antognazzi:

The North Dakota Department of Environmental Quality has reviewed the information concerning the above-referenced project received at the department on October 01, 2019, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Aggregate to be used for road construction should not contain any erionite. Aggregate sources should be tested for erionite following guidelines found at https://deq.nd.gov/erionite. For questions regarding erionite testing, please call Sandi Washek at 701-328-5188.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Oil and gas projects disturbing one or more acres are required to obtain a permit to discharge storm water if runoff from the project will carry eroded material to a water of the state. A permit is not required for oil and gas projects if runoff from the project will not carry eroded material to a water of the state. Further information on the storm water permit may be obtained from the department's website or by calling the Division of Water Quality (701-328-5210). In addition, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

4. The proposed construction project overlies the Tobacco Garden, Cherry Creek and Bennie Peer glacial drift aquifers; the Tobacco Garden and Cherry Creek aquifers are designated sensitive aquifers. In addition, the project is very close to the Little Missouri River aquifer, which is also a sensitive groundwater area. Several domestic and/or stock water supply wells and non-community wellhead protection areas are located within, or nearby, the project's intended route.

Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills must be immediately reported to this department and appropriate remedial actions performed.

5. All solid waste materials must be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are strongly encouraged. As appropriate, segregation of inert waste from non-inert waste can generally reduce the cost of waste management. Further information on waste management and recycling is available from the department's Division of Waste Management at (701) 328-5166.

6. Projects that involve construction of pipelines should select locations that minimize the potential for impacts to human health and the environment during and after construction by avoiding, when possible, source water protection areas and sensitive surface and groundwater environments. Additionally, when possible, pipeline routes should select areas with natural barriers to both surface and ground waters. Human health and the environment should be further protected by developing a spill response plan that emphasizes rapid deployment of prepositioned assets necessary to contain spills and subsequent cleanup. Proper surveillance and monitoring for early detection of leaks should be required.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Director
North Dakota Department of Environmental Quality

LDG:dlp
Attach.

Construction and Environmental Disturbance Requirements

The following are the minimum requirements of the North Dakota Department of Environmental Quality for projects that involve construction or environmental disturbance in or near waters of the State of North Dakota. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect waters of the state. All projects must be constructed to minimize the loss of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of soil and sediment loss using erosion and sediment controls. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, and land resources must be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction must be managed to minimize impacts to aquatic systems. Follow safe storage and handling procedures to prevent the contamination of water from fuel spills, lubricants, and chemicals. Stream bank and stream bed disturbances must be controlled to minimize slit movement, nutrient upsurges, plant dislocations, and any physical, chemicals, or biological disruption. The use of pesticides or herbicides in or near surface waters is allowed under the department's pesticide application permit with notification to the department.

Fill Material

Any fill material placed below the ordinary high-water mark must be free of topsoil, decomposable materials, and persistent synthetic organic compounds; including, but not limited to, asphalt, tires, treated lumber, and construction debris. The department may require testing of fill materials. All temporary fill must be removed. Debris and solid wastes must be properly disposed or recycled. Impacted areas must be restored to near original condition.

Exhibit B.4
ND DOT – Dickinson District

September 30, 2019

District 5 – Dickinson
North Dakota Department of Transportation
1700 Third Avenue West, Suite 101
Dickinson, ND 58601-3009

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

District 5 – Dickinson
North Dakota Department of Transportation
1700 Third Avenue West, Suite 101
Dickinson, ND 58601-3009

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.5
ND DOT – Williston District

September 30, 2019

District 7 – Williston
North Dakota Department of Transportation
605 Dakota Parkway West
Williston, ND 588802-0698

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

District 7 – Williston
North Dakota Department of Transportation
605 Dakota Parkway West
Williston, ND 588802-0698

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

From:	Keitu Mail
To:	Karine Finken
Subject:	Fwd: Bridger 16"Crude Oil Pipeline Corridor
Date:	Thursday, February 06, 2020 8:28:28 AM

Zach Peterson

Sent from my iPhone

Begin forwarded message:

From: "Wilt, Joel M." <jwilt@nd.gov>
Date: February 6, 2020 at 8:06:28 AM CST
To: "zpeterson@keitu.com" <zpeterson@keitu.com>
Subject: Bridger 16"Crude Oil Pipeline Corridor

Zach, I received you letter dated December 16, 2019, requesting we voice any concerns with the pipeline corridor in North Dakota. Usually this type of request will be sent to our central office in Bismarck. I don't know if you did that but this letter says 2nd attempt. In case you have not sent this to central office, I will tell you that there are plans to four lane US 85 south of Watford City. Any plans to place this pipeline adjacent or under this highway should consider strategies to minimize any impact to the roadway and the pipeline. Currently US 85 is a two lane facility and R/W acquisition for a four lane facility is anticipated to begin. Thanx

Joel M. Wilt, P.E.
Williston District Engineer - NDDOT
605 Dakota Parkway West
Williston, ND 58801
ph (701)774-2700

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January 13, 2020

Zach Peterson
Environmental Specialist
Keitu Engineers & Consultants
1403 27th St. NW
Mandan, ND 58554

CORRIDOR COMPATIBILITY APPLICATION AND ROUTE PERMIT APPLICATION
BRIDGER PIPELINE - 160-MILE CRUDE OIL SUPPLY PIPELINE, MCKENZIE AND GOLDEN VALLEY COUNTIES, NORTH DAKOTA

We have reviewed your December 16, 2019, letter.

The North Dakota Department of Transportation (NDDOT) has reviewed your letter and based on the map included it appears that part of the pipeline route will parallel US Highway 85. Federal Highway Administration (FHWA) approved the Record of Decision (ROD) in March of 2019 to four-lane US Highway 85 from the I-94 Interchange to the Watford City Bypass, which includes the area the pipeline would parallel. The ROD and Final Environmental Impact Statement (FEIS) can be found at https://www.dot.nd.gov/projects/williston/US85I94/.

To accommodate the four-laning, as noted in the ROD and FEIS, right-of-way acquisition will be necessary. To understand the intentions and to limit disruptions to both Bridger Pipeline, LLC and NDDOT, NDDOT would request a meeting to discuss. Please contact Joyce Schmidt at (701) 328-2130 to coordinate a meeting.

Also, a Utility Occupancy Application and Permit for any crossings in NDDOT right of way would need to be submitted. Additionally, if any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineers, Rob Rayhorn at 701-227-6500 and Joel Wilt, Williston at 701-774-2700.

CHAD M. ORN, P.E., DIRECTOR – OFFICE OF PROJECT DEVELOPMENT

57/cmo/js
c: Rob Rayhorn Dickinson District Engineer
Joel Wilt, Williston District Engineer
Matt Linneman, Materials and Research Engineer & US Highway 85 Project Manager
Mark Gaydos, Environmental and Transportation Services Engineer
Brian Kroshus, Public Service Commission Chairman
Julie Fedorchak, Public Service Commission
Randy Christmann, Public Service Commission

Exhibit B.6
ND Department of Trust Lands

September 30, 2019

Mike Humann, Director
Surface Management District
ND Department of Trust Lands
1707 N 9th Street, PO Box 5523
Bismarck, ND 58506-5523

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Jaimee Antognazzi

From: Jaimee Antognazzi <jantognazzi@keitu.com>
Sent: Wednesday, October 2, 2019 4:11 PM
To: 'kgraber@nd.gov'
Subject: Bridger 16 inch crude line
Attachments: ND_Alignment.kmz

Hi Kayla-

Attached is the kmz for the Bridger 16 inch crude line. Please let me know if you need anything else.

Thanks,

Jaimee Antognazzi, CSP
Operations Manager
Keitu Engineers & Consultants
1403 27th Street NW
Mandan, ND 58554
(701) 667-1808 Ext# 105

EASEMENT: Pipeline-Oil Transmission Pipeline **ROW #8565 (Pg 1)**

STATE OF NORTH DAKOTA
BOARD OF UNIVERSITY AND SCHOOL LANDS

The State of North Dakota acting by and through the Board of University and School Lands and its agent, the Commissioner of University and School Lands (GRANTOR), in consideration of $306,969.00, which has been received, conveys to BRIDGER PIPELINE LLC, 455 N POPLAR ST PO DRAWER 2360, CASPER, WY 82601 (GRANTEE), an easement to construct, operate, maintain and remove one 16-inch diameter steel oil transmission pipeline with the right of ingress and egress, over certain land hereafter referred to as the "easement area", which is a strip of land 33.0 feet wide, 16.5 feet on each side of the following described centerline:

NW4 of Section 16, T149N, R98W, McKenzie County

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 16, THENCE ON AN AZIMUTH OF 178°41'53" A DISTANCE OF 689.13 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 087°58'27" A DISTANCE OF 274.60 FEET; THENCE ON AN AZIMUTH OF 086°37'02" A DISTANCE OF 376.50 FEET; THENCE ON AN AZIMUTH OF 099°19'44" A DISTANCE OF 692.87 FEET; THENCE ON AN AZIMUTH OF 121°44'42" A DISTANCE OF 101.87 FEET; THENCE ON AN AZIMUTH OF 023°25'36" A DISTANCE OF 813.67 FEET; THENCE ON AN AZIMUTH OF 001°02'11" A DISTANCE OF 109.78 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 268°54'49" A DISTANCE OF 875.97 FEET FROM THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 16.
THE CENTERLINE IS 2,369.29 FEET OR 143.59 RODS LONG, AND THE EASEMENT AREA CONTAINS 1.79 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A1-A5" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

SW4 of Section 36, T150N, R97W, McKenzie County

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 36, THENCE ON AN AZIMUTH OF 358°29'44" A DISTANCE OF 392.23 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 135°02'10" A DISTANCE OF 92.39 FEET; THENCE ON AN AZIMUTH OF 095°39'35" A DISTANCE OF 62.62 FEET; THENCE ON AN AZIMUTH OF 088°16'15" A DISTANCE OF 397.68 FEET; THENCE ON AN AZIMUTH OF 068°11'19" A DISTANCE OF 628.87 FEET; THENCE ON AN AZIMUTH OF 063°00'52" A DISTANCE OF 218.40 FEET; THENCE ON AN AZIMUTH OF 059°55'33" A DISTANCE OF 349.19 FEET; THENCE ON AN AZIMUTH OF 067°09'50" A DISTANCE OF 187.35 FEET; THENCE ON AN AZIMUTH OF 088°58'05" A DISTANCE OF 845.44 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 358°30'18" A DISTANCE OF 868.80 FEET FROM THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 36.
THE CENTERLINE IS 2,781.94 FEET OR 168.60 RODS LONG, AND THE EASEMENT AREA CONTAINS 2.11 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A6-A8" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

SE4 of Section 36, T150N, R97W, McKenzie County

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER OF SECTION 36, THENCE ON AN AZIMUTH OF 358°30'18" A DISTANCE OF 868.80 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 088°58'05" A DISTANCE OF 101.70 FEET; THENCE ON AN AZIMUTH OF 087°34'19" A DISTANCE OF 881.86 FEET; THENCE ON AN AZIMUTH OF 090°48'23" A DISTANCE OF 787.37 FEET; THENCE ON AN AZIMUTH OF 088°29'58" A DISTANCE OF 870.29 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 358°32'55" A DISTANCE OF 861.56 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 36.
THE CENTERLINE IS 2,641.22 FEET OR 160.07 RODS LONG, AND THE EASEMENT AREA CONTAINS 2.00 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A9-A13" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

THE TOTAL CENTERLINE IS 7,792.45 FEET OR 472.26 RODS LONG, AND THE EASEMENT AREA CONTAINS 5.90 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A1-A13" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

MTH

1. The Pipeline-Oil Transmission Pipeline shall be built only on the centerline(s) as described above. GRANTEE may also temporarily use an additional 17.0 feet of temporary right of way on the working side of the Pipeline-Oil Transmission Pipeline as a construction right of way. This construction right of way shall be subject to the topsoil reservation and reclamation provisions of this easement and must be abandoned upon the completion of construction and reclamation.

2. The top of the Pipeline-Oil Transmission Pipeline must be buried at least 48 inches below the ground's surface.

3. GRANTEE may install the following described appurtenance(s) upon or below the surface: N/A. For this/these additional appurtenance(s), GRANTEE has paid N/A as further consideration. GRANTEE shall, when necessary, protect all above ground appurtenances with a fence adequate to prevent livestock access and shall paint all above ground structures; except wire fences, anchors, guy wires, steel towers, and wood poles; with earth tone colors.

4. If construction of the Pipeline-Oil Transmission Pipeline is not completed within two years after GRANTOR signs this easement, this easement automatically terminates.

5. GRANTEE shall make a satisfactory settlement with the surface tenant for damage to seeded annual crops, fences or other improvements owned by the tenant, caused by construction, operation, maintenance or removal of the Pipeline-Oil Transmission Pipeline and shall notify the surface tenant of the construction schedule at least one week before construction.

6. GRANTEE, or its agent, shall have a legible copy of this easement with them on site for reference during construction, operation, maintenance or reclamation and shall present the copy upon GRANTOR's request.

7. This easement is subject to all of the GRANTOR's existing rights and privileges.

8. If, prior to or during construction, archeological or paleontological items are discovered or such items are disturbed, GRANTEE shall cease construction activities immediately. GRANTEE shall then promptly notify GRANTOR and must not resume construction until written approval is given by GRANTOR.

9. GRANTEE shall, prior to construction, maintenance or removal, reserve the top 12 inches of soil from areas subject to topsoil and subsoil mixing. The reserved soil must be stockpiled to minimize wind and water erosion. Upon completion of construction, and maintenance or removal, GRANTEE shall promptly reclaim the disturbed area. It must be recontoured to conform to the adjacent natural topography, rocks exposed by excavation must be hauled off or reburied on the property, the reserved soil must be evenly respread over the disturbed area, and the entire disturbed area must be revegetated with a mixture of native perennial grasses as shown in Exhibit "B". Reclamation is not complete until rocks are removed from the surface, erosion is controlled and the surface is revegetated with a mixture of native perennial grasses.

10. GRANTEE shall implement reasonable measures to prevent accelerated erosion. If an erosion problem develops, GRANTEE shall promptly take the necessary actions to correct it and shall repair any erosion damage.

11. GRANTEE shall not discharge oil, gas liquids, salt water, or any other hazardous liquids or toxic substances onto the easement area or land adjacent to the easement area. All discharges of oil, gas liquids, salt water, or other hazardous liquids or toxic substances shall be stopped as soon as possible after discovery and acted upon immediately to halt movement of such discharges. Any such discharges shall be reported immediately to the GRANTOR. The GRANTEE shall then restore the affected area as closely as possible to its original condition.

12. GRANTEE shall control all noxious weeds in the easement area.

13. GRANTEE may cut or trim trees and shrubs, but only to the extent they interfere with or endanger the operation or maintenance of the Pipeline-Oil Transmission Pipeline.

14. GRANTEE shall maintain the natural water flow and drainage.

15. GRANTEE shall take necessary precautions to prevent fires. In the event of a fire caused by the GRANTEE or its agent, GRANTEE shall compensate the GRANTOR's surface lessee(s) for their losses including forage, crop and any other losses; and shall compensate GRANTOR for any loss it suffers due to the fire.

16. GRANTEE shall conduct all activities associated with the Pipeline-Oil Transmission Pipeline in a manner that avoids the degradation of air, land, and water quality and that protects the area's visual resources.

17. GRANTOR reserves the right to use the easement area and to allow others to use the easement area for purposes compatible with GRANTEE's use. If someone other than GRANTOR uses the easement area in a manner inconsistent with GRANTEE's use, GRANTOR is not liable or responsible.

18. Through this easement, GRANTEE is not acquiring any subsurface interest. Subsurface interests include, but are not limited to oil, gas, coal, cement materials, sodium sulfate, sand and gravel, scoria, road material, building stone, chemical substances, metallic ores, uranium ores, or colloidal or other clays. If any subsurface interest is or will likely be excluded from mining or development because of the presence of this easement or the Pipeline-Oil Transmission Pipeline allowed by this easement, or if the location of the Pipeline-Oil Transmission Pipeline interferes or will likely interfere with the mining or development of subsurface interests outside of the easement area, this easement will terminate. GRANTOR will give GRANTEE at least sixty (60) days prior written notice of this easement's termination under this paragraph. If GRANTEE wishes to have the Pipeline-Oil Transmission Pipeline relocated within the tract and if GRANTOR determines that a suitable location exists within the tract, GRANTOR agrees to grant a new easement for such relocated Pipeline-Oil Transmission Pipeline without additional compensation, but GRANTEE shall bear all relocation costs.

19. If GRANTOR determines at any time during the existence of the easement, that the easement negatively interferes with or in any manner and to any extent affects the marketability, market value, development, or the value for development of the state-owned land specifically described below, GRANTOR may take any one of the following actions. One, terminate this easement. Two, require GRANTEE at GRANTEE'S expense to move the Pipeline-Oil Transmission Pipeline to another location within the affected tract, if it is determined by the GRANTOR that a suitable location exists within the tract. Three, require GRANTEE to compensate GRANTOR, at the amount set by the GRANTOR, for the loss GRANTOR incurs because of the easement's presence. The rights given in this paragraph are personal to the GRANTOR and only the GRANTOR may exercise them.

Twp	Rng	Sec	Sub Division	County
149	98	16	NW4	McKenzie
150	97	36	SE4	McKenzie
150	97	36	SW4	McKenzie

20. GRANTEE agrees to defend, indemnify and hold harmless GRANTOR from any claims by any person that are in any way related to GRANTEE's use of the easement area, including all costs, expenses, and attorney fees that in any manner result from or arise out of this agreement. It is GRANTEE's exclusive right and responsibility to construct, maintain, and remove the Pipeline-Oil Transmission Pipeline. GRANTEE further accepts liability and indemnifies GRANTOR, and its officers and employees, from all costs, expenses and attorneys fees incurred in establishing and litigating the indemnification coverage provided above. The legal defense provided by GRANTEE to the GRANTOR under this paragraph must be free of any conflicts of interest, even if this requires GRANTEE to retain separate legal counsel for GRANTOR. The obligations of this paragraph shall continue after this agreement terminates.

21. Any fixtures, structures, installations or facilities constructed or installed by GRANTEE, are the property of GRANTEE and may be removed by GRANTEE at any time.

22. GRANTEE shall remove all improvements, both above ground and underground, from the easement area when the easement is abandoned or in any other way terminated, unless authorized to do otherwise in writing by GRANTOR.

23. This easement shall be a covenant running with the land and shall be binding on the heirs, successors, and assigns of the parties hereto.

24. This easement is subject to all existing easements and nothing in this easement supersedes any rights previously granted.

25. GRANTOR neither warrants nor agrees to defend title to the easement area.

26. This easement is also subject to the conditions in Exhibits "A1-A13" and "B" which are attached and made a part of this easement.

MTH

Dated this 14 day of December, 2021, at Bismarck, North Dakota.

GRANTOR:

STATE OF NORTH DAKOTA
BOARD OF UNIVERSITY & SCHOOL LANDS

Jodi Smith

Jodi Smith, Commissioner
of University and School Lands

STATE OF NORTH DAKOTA)
) ss.
COUNTY OF BURLEIGH)

On this 14th day of December, 2021, before me personally appeared Jodi Smith, Commissioner of University and School Lands, acting on behalf of the Board of University and School Lands of North Dakota, known to me to be the person who executed this instrument and acknowledged to me that he executed the same.

DIANE M WEIXEL
Notary Public
State of North Dakota
My Commission Expires July 2, 2025

(SEAL)

Diane M. Weixel

Notary Public

GRANTEE:

BRIDGER PIPELINE LLC

(signature) On Behalf of Bridger Pipeline LLC

STATE OF Wyoming)
) ss.
COUNTY OF Natrona)

On this 13th day of January, 2022, before me personally appeared H.A. Tad True, Member (title), acting on behalf of Bridger Pipeline LLC, known to me to be the person who executed this instrument and acknowledged to me that he executed the same.

(SEAL)

NOTARY PUBLIC
THOMAS E. LITMAN
STATE OF WYOMING
COUNTY OF NATRONA
My Commission Expires June 28, 2024

Thomas E. Litman

Notary Public

g:\surface\row\document drafts - row\easements\#8565 bridger (oil trans).docx

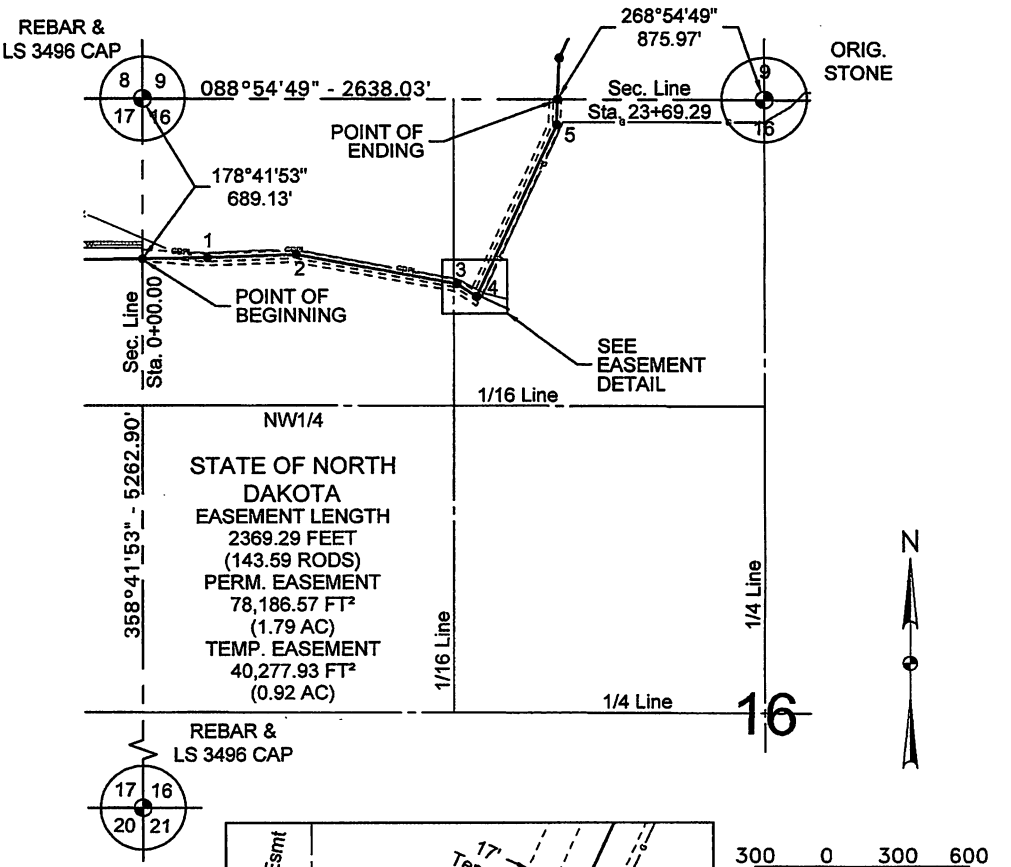
Form Date: 12/13/2021

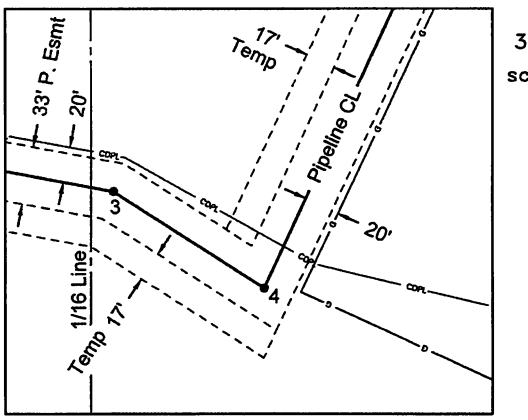
MTH

ROW #8565
Exhibit "A1"

SOUTH BEND PIPELINE

PROPOSED
NW1/4 OF SEC. 16, T.149N, R.98W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"





300 0 300 600
scale 1"=600' feet

EASEMENT DETAIL
INSET SCALE 1"=80'

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA PROPOSED EASEMENT ON AND ACROSS THE NW1/4 OF SEC. 16, T.149N, R.98W.	JOB NO. 1907_00533 TRACT NUMBER ND-16-149-98-NW1/4 SHEET 1 of 5
DRAWN BY: BAL	DATE: 02/20/2020	REVISED: 10/09/2020 BL	

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MTH

ROW #8565
Exhibit "A2"

SOUTH BEND PIPELINE

PROPOSED
NW1/4 OF SEC. 16, T.149N, R.98W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

PI #	STATIONING	LATITUDE	LONGITUDE	DIRECTION	DISTANCE
Sec. Line	0+00.00	47°43'49.38" N	103°14'25.32" W	087°58'27"	274.60'
1	2+74.60	47°43'49.41" N	103°14'21.30" W	086°37'02"	376.50'
2	6+51.10	47°43'49.55" N	103°14'15.79" W	099°19'44"	692.87'
3	13+43.97	47°43'48.29" N	103°14'05.83" W	121°44'42"	101.87'
4	14+45.84	47°43'47.74" N	103°14'04.58" W	023°25'36"	813.67'
5	22+59.51	47°43'55.03" N	103°13'59.60" W	001°02'11"	109.78'
Sec. Line	23+69.29	47°43'56.12" N	103°13'59.53" W		

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-18-149-98-NW1/4
DRAWN BY: BAL	DATE: 02/20/2020	REVISED: 10/09/2020 BL	PROPOSED EASEMENT ON AND ACROSS THE NW1/4 OF SEC. 16, T.149N, R.98W.
			SHEET 2 of 5

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ROW #8565
Exhiibt "A3"

SOUTH BEND PIPELINE

PROPOSED
NW1/4 OF SEC. 16, T.149N, R.98W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Northwest Quarter of Section 16, Township 149 North, Range 98 West of the 5th Principal Meridian, McKenzie County, State of North Dakota, being more particularly described as follows:

COMMENCING at the northwest corner of said Section 16, thence on an azimuth of 178°41'53" a distance of 689.13 feet to the POINT OF BEGINNING; thence on an azimuth of 087°58'27" a distance of 274.60 feet; thence on an azimuth of 086°37'02" a distance of 376.50 feet; thence on an azimuth of 099°19'44" a distance of 692.87 feet; thence on an azimuth of 121°44'42" a distance of 101.87 feet; thence on an azimuth of 023°25'36" a distance of 813.67 feet; thence on an azimuth of 001°02'11" a distance of 109.78 feet to the POINT OF ENDING. Said point lies on an azimuth of 268°54'49" a distance of 875.97 feet from the northeast corner of the Northwest Quarter of said Section 16.

Covering in all 2369.29 feet (143.59 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH, NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in December, 2019.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2380 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-149-98-NW1/4
DRAWN BY: BAL	DATE: 02/20/2020	REVISED: 10/09/2020 BL	PROPOSED EASEMENT ON AND ACROSS THE NW1/4 OF SEC. 16, T.149N, R.98W.
			SHEET 3 of 5

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ROW #8565
Exhibit "A4"

SOUTH BEND PIPELINE

PROPOSED
SEC. 16, T.149N, R.98W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

GPS SURVEY-AFFIDAVIT

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that a Trimble R-8 Model 4 was used to perform this survey as given in this application and is accurate and correct to within 2-5 centimeters.

Dated at 12:00PM, this 9th day of July, 2021.

Signed _____

Title LAND SURVEYOR

Address KLJ
1830 3rd Avenue East Suite 202
Kalispell, MT 59901-5578

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS 7193
DATE 07/09/21
NORTH DAKOTA

STATE OF Montana)
County of Flathead)

On this 9th day of July, in the year 2021, before me Angela G. Clark, a Notary Public for the State of Montana, personally appeared Daniel Curtis Wagner known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

Angela G. Clark
Notary Public for the State of Montana

ANGELA G. CLARK NOTARY SEAL MONTANA STATE OF MONTANA
ANGELA G CLARK
NOTARY PUBLIC FOR THE
STATE OF MONTANA
RESIDING AT KALISPELL, MONTANA
MY COMMISSION EXPIRES
MARCH 05, 2025

DISTANCE ACROSS PROPERTY (FEET): 2369.29
DISTANCE ACROSS PROPERTY (RODS): 143.59
AREA OF PERMANENT EASEMENT (AC): 1.79

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO: 1907_00533 TRACT NUMBER: ND-16-149-98
DRAWN BY: BAL DATE: 5/12/2020 REVISED: 10/09/2020 BL		PROPOSED EASEMENT ON AND ACROSS SEC. 16, T.149N, R.98W.	SHEET: 5 of 5

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MTH

ROW #8565
Exhibit "A5"

SOUTH BEND PIPELINE

PROPOSED
SEC. 16, T.149N, R.98W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

DISTANCE ACROSS PROPERTY (FEET): 2369.29
DISTANCE ACROSS PROPERTY (RODS): 143.59
AREA OF PERMANENT EASEMENT (AC): 1.79

ACREAGE TAKEN FROM EACH FORTY OR GOVERNMENT LOT OF STATE LAND

			Forwarded	1.79	acres
NE1/4NE1/4		acres	NE1/4SW1/4		"
NW1/4 "		"	NW1/4 "		"
SW1/4 "		"	SW1/4 "		"
SE1/4 "		"	SE1/4 "		"
NE1/4NW1/4	0.78	acres	NE1/4SE1/4		acres
NW1/4 "	1.01	"	NW1/4 "		"
SW1/4 "		"	SW1/4 "		"
SE1/4 "		"	SE1/4 "		"
Forward	1.79	"	Total	1.79	acres

Signature of Applicant (as the same is to appear in the deed) _____

By _____

Address _____

_____

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that the description of the right of way as given in this application is accurate and correct in every particular and that the monument referenced herein described as follows:

_____.

Dated at 12:00 PM, this 9th day of JULY, 2021.

Signed _____

Title LAND SURVEYOR

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS-7193
DATE 07/09/21
NORTH DAKOTA

STATE OF Montana)
County of Flathead)

On this 9th day of July, in the year 2021, before me Angela M. Clark, a Notary Public for the State of Montana, personally appeared Daniel Curtis Wagner known to me to be the person whose name subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

ANGELA M. CLARK
NOTARY PUBLIC FOR THE
STATE OF MONTANA
RESIDING AT KALISPELL, MONTANA
MY COMMISSION EXPIRES
MARCH 05, 2025

SEAL

Angela M. Clark
Notary Public for the State of Montana

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA PROPOSED EASEMENT ON AND ACROSS SEC. 16, T.149N, R.98W.	JOB NO. 1907_00533 TRACT NUMBER ND-16-149-98 SHEET 4 of 5
DRAWN BY: BAL	DATE: 5/12/2020	REVISED: 10/09/2020 BL	

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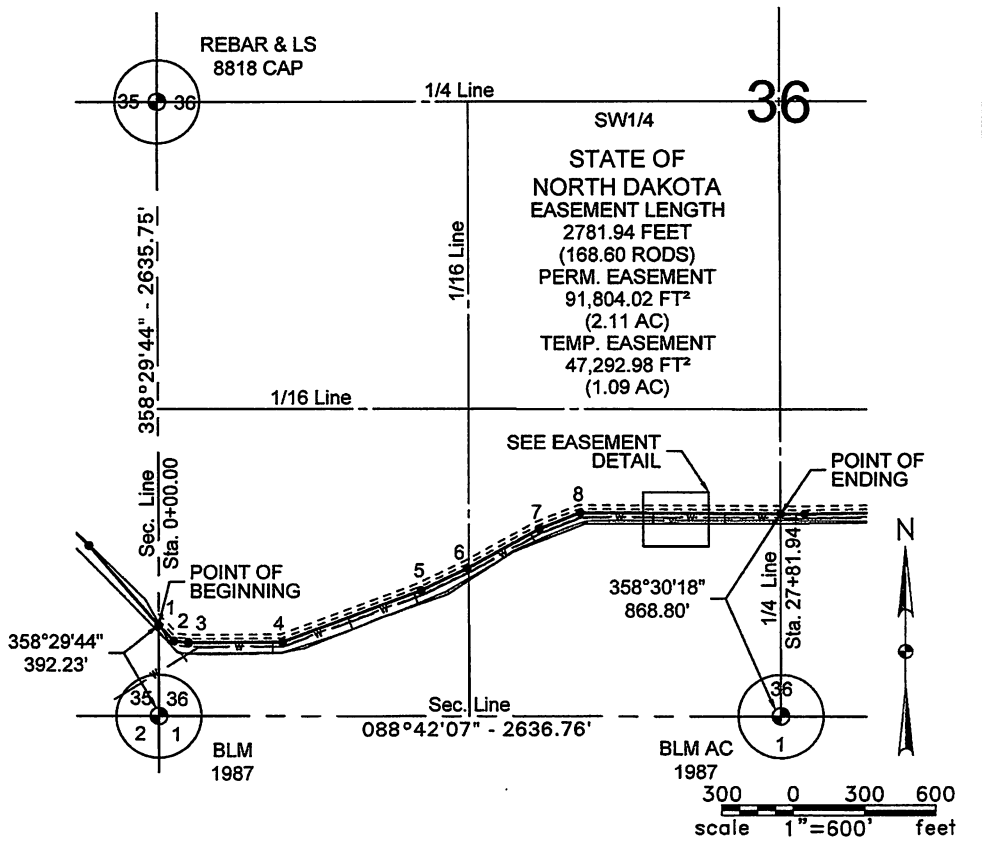
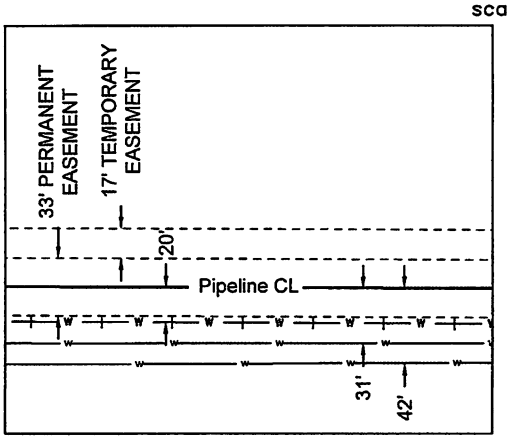
ROW #8565
Exhibit "A6"

SOUTH BEND PIPELINE

PROPOSED
SW1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"





EASEMENT DETAIL
INSET SCALE 1"=80'

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-36-150-97-SW1/4
DRAWN BY: CDV DATE: 6/22/2020 REVISED: 7/29/2021 BL		PROPOSED EASEMENT ON AND ACROSS THE SW1/4 OF SEC. 36, T.150N, R.97W.	SHEET 1 of 8

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MTH

SOUTH BEND PIPELINE

PROPOSED
SW1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

PI #	STATIONING	LATITUDE	LONGITUDE
S. Line/1	0+00.00	47°45'43.04" N	103°02'51.78" W
2	0+92.39	47°45'42.38" N	103°02'50.85" W
3	1+55.01	47°45'42.30" N	103°02'49.94" W
4	5+52.69	47°45'42.32" N	103°02'44.12" W
5	11+81.56	47°45'44.48" N	103°02'35.49" W
6	13+99.96	47°45'45.41" N	103°02'32.60" W
7	17+49.15	47°45'47.06" N	103°02'28.11" W
8	19+36.50	47°45'47.74" N	103°02'25.56" W
1/4 Line	27+81.94	47°45'47.68" N	103°02'13.18" W

DIRECTION	DISTANCE
135°02'10"	92.39'
095°39'35"	62.62'
088°16'15"	397.68'
068°11'19"	628.87'
063°00'52"	218.40'
059°55'33"	349.19'
067°09'50"	187.35'
088°58'05"	845.44'

KLJ

Bridger Pipeline, LLC
455 N. Poplar
P.O. Drawer 2360
Casper, WY 82601

DRAWN BY: CDV | DATE: 8/22/2020 | REVISED: 7/29/2021 BL

BRIDGER PIPELINE, LLC
STATE OF NORTH DAKOTA
PROPOSED EASEMENT ON AND ACROSS THE
SW1/4 OF SEC. 36, T.150N, R.97W.

JOB NO. 1907_00533
TRACT NUMBER ND-38-150-97-SW1/4
SHEET 2 of 8

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ROW #8565
Exhibit "A8"

SOUTH BEND PIPELINE

PROPOSED
SW1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Southwest Quarter of Section 36, Township 150 North, Range 97 West of the 5th Principal Meridian, McKenzie County, State of North Dakota, being more particularly described as follows:

COMMENCING at the southwest corner of said Section 36, thence on an azimuth of 358°29'44" a distance of 392.23 feet to the POINT OF BEGINNING; thence on an azimuth of 135°02'10" a distance of 92.39 feet; thence on an azimuth of 095°39'35" a distance of 62.62 feet; thence on an azimuth of 088°16'15" a distance of 397.68 feet; thence on an azimuth of 068°11'19" a distance of 628.87 feet; thence on an azimuth of 063°00'52" a distance of 218.40 feet; thence on an azimuth of 059°55'33" a distance of 349.19 feet; thence on an azimuth of 067°09'50" a distance of 187.35 feet; thence on an azimuth of 088°58'05" a distance of 845.44 feet to the POINT OF ENDING. Said point lies on an azimuth of 358°30'18" a distance of 868.80 feet from the southeast corner of said Southwest Quarter of Section 36.

Covering in all 2781.94 feet (168.60 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH, NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in June, 2020 and June, 2021.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-36-150-97-SW1/4
DRAWN BY: CDV DATE: 6/22/2020 REVISED: 7/29/2021 BL		PROPOSED EASEMENT ON AND ACROSS THE SW1/4 OF SEC. 36, T.150N, R.97W.	SHEET 3 of 8

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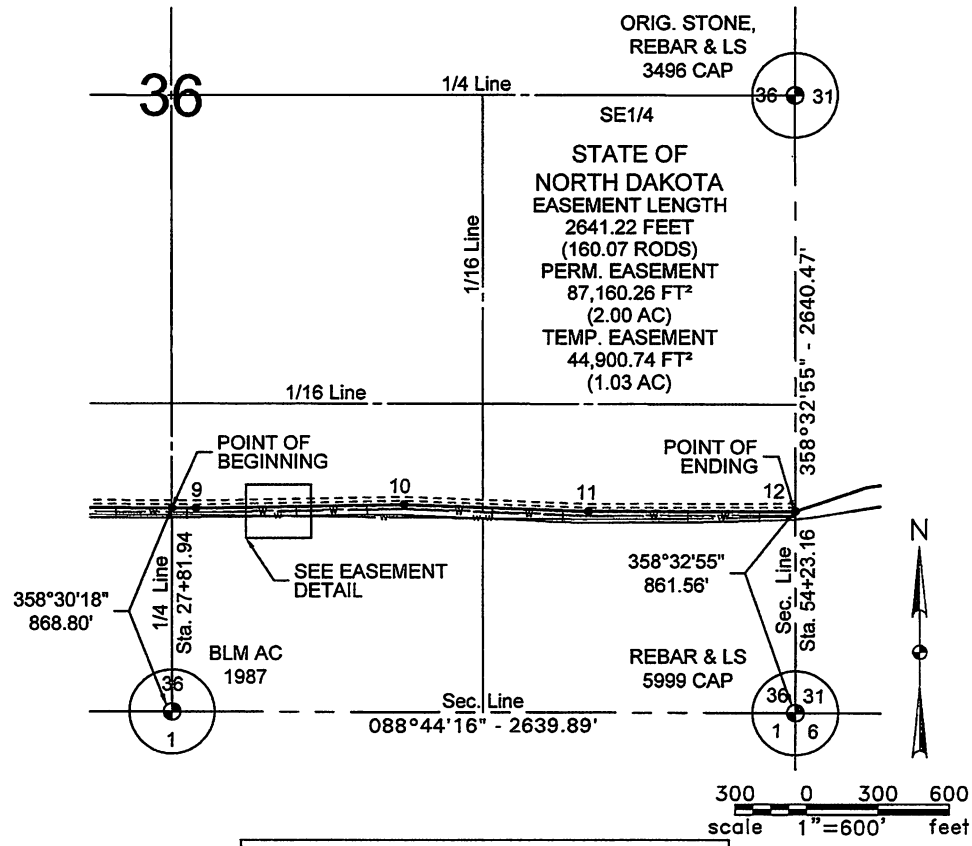
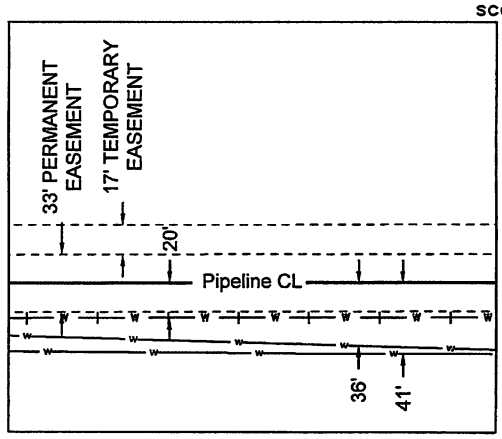
ROW #8565
Exhibit "A9"

SOUTH BEND PIPELINE

PROPOSED
SE1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"





EASEMENT DETAIL
INSET SCALE 1"=80'

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-36-150-97-SE1/4
DRAWN BY: CDV DATE: 6/22/2020 REVISED: 7/29/2021 BL		PROPOSED EASEMENT ON AND ACROSS THE SE1/4 OF SEC. 36, T.150N, R.97W.	SHEET 4 of 8

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ROW #8565
Exhibit "A10"

SOUTH BEND PIPELINE

PROPOSED
SE1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

PI #	STATIONING	LATITUDE	LONGITUDE	DIRECTION	DISTANCE
1/4 Line	27+81.94	47°45'47.68" N	103°02'13.18" W		
				088°58'05"	101.70'
9	28+83.64	47°45'47.67" N	103°02'11.70" W		
				087°34'19"	881.86'
10	37+65.50	47°45'47.82" N	103°01'58.79" W		
				090°48'23"	787.37'
11	45+52.87	47°45'47.51" N	103°01'47.27" W		
				088°29'58"	870.29'
S. Line/12	54+23.16	47°45'47.52" N	103°01'34.53" W		

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-38-150-97-SE1/4
DRAWN BY: CDV	DATE: 6/22/2020 REVISED: 7/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE SE1/4 OF SEC. 36, T.150N, R.97W.	SHEET 5 of 8

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SOUTH BEND PIPELINE

PROPOSED
SE1/4 OF SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Southeast Quarter of Section 36, Township 150 North, Range 97 West of the 5th Principal Meridian, McKenzie County, State of North Dakota, being more particularly described as follows:

COMMENCING at the southwest corner of said Southeast Quarter of Section 36, thence on an azimuth of 358°30'18" a distance of 868.80 feet to the POINT OF BEGINNING; thence on an azimuth of 088°58'05" a distance of 101.70 feet; thence on an azimuth of 087°34'19" a distance of 881.86 feet; thence on an azimuth of 090°48'23" a distance of 787.37 feet; thence on an azimuth of 088°29'58" a distance of 870.29 feet to the POINT OF ENDING. Said point lies on an azimuth of 358°32'55" a distance of 861.56 feet from the southeast corner of said Section 36.

Covering in all 2641.22 feet (160.07 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH, NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in June, 2020 and June, 2021.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-38-150-97-SE1/4
DRAWN BY: CDV	DATE: 6/22/2020 REVISED: 7/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE SE1/4 OF SEC. 36, T.150N, R.97W.	SHEET 6 of 8

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ROW #8565
Exhibit "A12"

SOUTH BEND PIPELINE

PROPOSED
SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

DISTANCE ACROSS PROPERTY (FEET): 5423.16
DISTANCE ACROSS PROPERTY (RODS): 328.67
AREA OF PERMANENT EASEMENT (AC): 4.11

ACREAGE TAKEN FROM EACH FORTY OR GOVERNMENT LOT OF STATE LAND

			Forwarded	0.00	acres
NE1/4NE1/4		acres	NE1/4SW1/4		"
NW1/4 "		"	NW1/4 "		"
SW1/4 "		"	SW1/4 "	1.07	"
SE1/4 "		"	SE1/4 "	1.04	"
NE1/4NW1/4		acres	NE1/4SE1/4		acres
NW1/4 "		"	NW1/4 "		"
SW1/4 "		"	SW1/4 "	1.00	"
SE1/4 "		"	SE1/4 "	1.00	"
Forward	0	"	Total	4.11	acres

Signature of Applicant (as the same is to appear in the deed) _____

By _____

Address _____

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that the description of the right of way as given in this application is accurate and correct in every particular and that the monument referenced herein described as follows:

Dated at 11:36 AM, this 30th day of JULY, 2021.

Signed _____

Title LAND SURVEYOR

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS-7193
DATE 07/30/21
NORTH DAKOTA

STATE OF Montana)
County of Flathead)

On this 30 day of July, in the year 2021, before me Tina M. Kemp Ap, a Notary Public for the State of Montana, personally appeared Daniel Wagner known to me to be the person whose name subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

TINA M KEMPF
NOTARY PUBLIC for the
State of Montana
Residing at Columbia Falls, Montana
My Commission Expires
March 01, 2023

TINA M KEMPF NOTARIAL SEAL STATE OF MONTANA

Notary Public for the State of Montana

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA PROPOSED EASEMENT ON AND ACROSS SEC. 36, T.150N, R.97W.	JOB NO. 1907_00533 TRACT NUMBER ND-36-150-97 SHEET 7 of 8
DRAWN BY: CDV	DATE: 6/22/2020	REVISED: 7/29/2021 BL	

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ROW #8565
Exhibit "A13"

SOUTH BEND PIPELINE

PROPOSED
SEC. 36, T.150N, R.97W.
OF THE 5TH PRINCIPAL MERIDIAN, MCKENZIE COUNTY, NORTH DAKOTA
EXHIBIT "A"

GPS SURVEY-AFFIDAVIT

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that a Trimble R-8 Model 4 was used to perform this survey as given in this application and is accurate and correct to within 2-5 centimeters.

Dated at 11:36 Am, this 30th day of July, 2021

Signed

Title Land Surveyor

Address KLJ
1830 3rd Avenue East Suite 202
Kalispell, MT 59901-5578

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS-7193
DATE 07/30/21
NORTH DAKOTA

STATE OF Montana)
)
County of Flathead)

On this 30 day of July, in the year 2021, before me Tina M. Kempff, a Notary Public for the State of Montana, personally appeared Daniel Wagner known to me to be the person whose name he subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

TINA M KEMPFF
NOTARY PUBLIC for the
State of Montana
Residing at Columbia Falls, Montana
My Commission Expires
March 01, 2023

Notary Public for the State of Montana

DISTANCE ACROSS PROPERTY (FEET): 5423.16
DISTANCE ACROSS PROPERTY (RODS): 328.67
AREA OF PERMANENT EASEMENT (AC): 4.11

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-36-150-97
DRAWN BY: CDV	DATE: 6/22/2020	REVISED: 7/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS SEC. 36, T.150N, R.97W.	SHEET 8 of 8

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EASEMENT: Pipeline-Oil Transmission Pipeline

ROW #8565
Exhibit "B"

NORTH DAKOTA
BOARD OF UNIVERSITY & SCHOOL LANDS
(ND Department of Trust Lands)

Native Grass Seeding Specifications

Species	lbs. PLS*/acre
Western wheatgrass	8
Slender wheatgrass	5
Green needlegrass	4
Side-oats grama	2
	19

*PLS - Pure Live Seed (based on 50 PLS/sq. feet)

1. The seed bed should be firmly packed (footprints left in the soil should be less than 1/2 inch deep).

2. An early spring seeding (before May 24th) is preferred. A dormant fall seeding (after October 20th) is acceptable.

3. A cover crop of oats at 10 lbs. PLS/acre must be seeded on the disturbed area.

4. A drill designed specifically for native grass seeding will give the best seeding results. The seed should be planted at a depth of 1/2 to 1 inch. Precaution must be taken not to plant the seed too deeply in the soil or poor germination will result.

5. On areas where equipment cannot be used, broadcast seed and rake or drag to cover seed. Where seed is broadcast, double the seeding rate.

6. Use only North Dakota certified seed.

Caution: Be sure to clean out the drill before seeding to avoid any contamination with smooth brome grass or crested wheatgrass that may remain in the drill from previous use on private land. These are invasive grasses in native prairie and are not allowed on school trust lands. Contamination with or use of crested wheatgrass or smooth brome will result in the applicant being required to spray out the grass and reseed with the above native grass seed mixture. Sweet clover and alfalfa are also not allowed – only the above native grass seed mixture may be used for revegetation on school trust land.

MTH

EASEMENT: Pipeline-Oil Transmission Pipeline **ROW #8613 (Pg 1)**

STATE OF NORTH DAKOTA
BOARD OF UNIVERSITY AND SCHOOL LANDS

The State of North Dakota acting by and through the Board of University and School Lands and its agent, the Commissioner of University and School Lands (GRANTOR), in consideration of $253,493.50, which has been received, conveys to BRIDGER PIPELINE LLC, 455 N POPLAR ST PO DRAWER 2360, CASPER, WY 82601 (GRANTEE), an easement to construct, operate, maintain and remove one 16-inch diameter steel oil transmission pipeline with the right of ingress and egress, over certain land hereafter referred to as the "easement area", which is a strip of land 33.0 feet wide, 16.5 feet on each side of the following described centerline:

SW4 of Section 16, T144N, R105W, Golden Valley County

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 16, THENCE ON AN AZIMUTH OF 359°17'17" A DISTANCE OF 1725.26 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 053°05'37" A DISTANCE OF 925.05 FEET; THENCE ON AN AZIMUTH OF 053°09'57" A DISTANCE OF 607.77 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 154°08'01" A DISTANCE OF 2911.27 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 16.
THE CENTERLINE IS 1,532.82 FEET OR 92.90 RODS LONG, AND THE EASEMENT AREA CONTAINS 1.16 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A1-A2" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

NW4 of Section 16, T144N, R105W, Golden Valley County

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 16, THENCE ON AN AZIMUTH OF 154°08'01" A DISTANCE OF 2911.27 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 053°09'57" A DISTANCE OF 1044.04 FEET; THENCE ON AN AZIMUTH OF 059°25'11" A DISTANCE OF 80.86 FEET; THENCE ON AN AZIMUTH OF 063°43'16" A DISTANCE OF 540.13 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 179°20'36" A DISTANCE OF 1742.98 FEET FROM THE NORTHEAST CORNER OF SAID NORTHWEST QUARTER OF SECTION 16.
THE CENTERLINE IS 1,665.03 FEET OR 100.91 RODS LONG, AND THE EASEMENT AREA CONTAINS 1.26 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A3-A4" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

NE4 of Section 16, T144N, R105W, Golden Valley County

COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER OF SECTION 16, THENCE ON AN AZIMUTH OF 179°20'36" A DISTANCE OF 1742.98 FEET TO THE POINT OF BEGINNING; THENCE ON AN AZIMUTH OF 063°43'16" A DISTANCE OF 608.04 FEET; THENCE ON AN AZIMUTH OF 057°30'00" A DISTANCE OF 281.08 FEET; THENCE ON AN AZIMUTH OF 045°45'41" A DISTANCE OF 1079.14 FEET; THENCE ON AN AZIMUTH OF 046°11'28" A DISTANCE OF 733.31 FEET; THENCE ON AN AZIMUTH OF 089°22'32" A DISTANCE OF 535.39 FEET TO THE POINT OF ENDING. SAID POINT LIES ON AN AZIMUTH OF 179°23'28" A DISTANCE OF 84.99 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 16.
THE CENTERLINE IS 3,236.96 FEET OR 196.18 RODS LONG, AND THE EASEMENT AREA CONTAINS 2.45 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A5-A6" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

THE TOTAL CENTERLINE IS 6,434.83 FEET OR 389.99 RODS LONG, AND THE EASEMENT AREA CONTAINS 4.87 ACRES, MORE OR LESS. THE EASEMENT AREA IS FURTHER DESCRIBED AND ILLUSTRATED IN EXHIBIT "A1-A8" WHICH IS ATTACHED TO AND IS A PART OF THIS EASEMENT.

1. The Pipeline-Oil Transmission Pipeline shall be built only on the centerline(s) as described above. GRANTEE may also temporarily use an additional 17.0 feet of temporary right of way on the working side of the Pipeline-Oil Transmission Pipeline as a construction right of way. This construction right of way shall be subject to the topsoil reservation and reclamation provisions of this easement and must be abandoned upon the completion of construction and reclamation.

2. The top of the Pipeline-Oil Transmission Pipeline must be buried at least 48 inches below the ground's surface.

3. GRANTEE may install the following described appurtenance(s) upon or below the surface: N/A. For this/these additional appurtenance(s), GRANTEE has paid N/A as further consideration. GRANTEE shall, when necessary, protect all above ground appurtenances with a fence adequate to prevent livestock access and shall paint all above ground structures; except wire fences, anchors, guy wires, steel towers, and wood poles; with earth tone colors.

4. If construction of the Pipeline-Oil Transmission Pipeline is not completed within two years after GRANTOR signs this easement, this easement automatically terminates.

5. GRANTEE shall make a satisfactory settlement with the surface tenant for damage to seeded annual crops, fences or other improvements owned by the tenant, caused by construction, operation, maintenance or removal of the Pipeline-Oil Transmission Pipeline and shall notify the surface tenant of the construction schedule at least one week before construction.

6. GRANTEE, or its agent, shall have a legible copy of this easement with them on site for reference during construction, operation, maintenance or reclamation and shall present the copy upon GRANTOR's request.

7. This easement is subject to all of the GRANTOR's existing rights and privileges.

8. If, prior to or during construction, archeological or paleontological items are discovered or such items are disturbed, GRANTEE shall cease construction activities immediately. GRANTEE shall then promptly notify GRANTOR and must not resume construction until written approval is given by GRANTOR.

9. GRANTEE shall, prior to construction, maintenance or removal, reserve the top 12 inches of soil from areas subject to topsoil and subsoil mixing. The reserved soil must be stockpiled to minimize wind and water erosion. Upon completion of construction, and maintenance or removal, GRANTEE shall promptly reclaim the disturbed area. It must be recontoured to conform to the adjacent natural topography, rocks exposed by excavation must be hauled off or reburied on the property, the reserved soil must be evenly respread over the disturbed area, and the entire disturbed area must be revegetated with a mixture of native perennial grasses as shown in Exhibit "B". Reclamation is not complete until rocks are removed from the surface, erosion is controlled and the surface is revegetated with a mixture of native perennial grasses.

10. GRANTEE shall implement reasonable measures to prevent accelerated erosion. If an erosion problem develops, GRANTEE shall promptly take the necessary actions to correct it and shall repair any erosion damage.

11. GRANTEE shall not discharge oil, gas liquids, salt water, or any other hazardous liquids or toxic substances onto the easement area or land adjacent to the easement area. All discharges of oil, gas liquids, salt water, or other hazardous liquids or toxic substances shall be stopped as soon as possible after discovery and acted upon immediately to halt movement of such discharges. Any such discharges shall be reported immediately to the GRANTOR. The GRANTEE shall then restore the affected area as closely as possible to its original condition.

12. GRANTEE shall control all noxious weeds in the easement area.

13. GRANTEE may cut or trim trees and shrubs, but only to the extent they interfere with or endanger the operation or maintenance of the Pipeline-Oil Transmission Pipeline.

14. GRANTEE shall maintain the natural water flow and drainage.

15. GRANTEE shall take necessary precautions to prevent fires. In the event of a fire caused by the GRANTEE or its agent, GRANTEE shall compensate the GRANTOR's surface lessee(s) for their losses including forage, crop and any other losses; and shall compensate GRANTOR for any loss it suffers due to the fire.

MTH

16. GRANTEE shall conduct all activities associated with the Pipeline-Oil Transmission Pipeline in a manner that avoids the degradation of air, land, and water quality and that protects the area's visual resources.

17. GRANTOR reserves the right to use the easement area and to allow others to use the easement area for purposes compatible with GRANTEE's use. If someone other than GRANTOR uses the easement area in a manner inconsistent with GRANTEE's use, GRANTOR is not liable or responsible.

18. Through this easement, GRANTEE is not acquiring any subsurface interest. Subsurface interests include, but are not limited to oil, gas, coal, cement materials, sodium sulfate, sand and gravel, scoria, road material, building stone, chemical substances, metallic ores, uranium ores, or colloidal or other clays. If any subsurface interest is or will likely be excluded from mining or development because of the presence of this easement or the Pipeline-Oil Transmission Pipeline allowed by this easement, or if the location of the Pipeline-Oil Transmission Pipeline interferes or will likely interfere with the mining or development of subsurface interests outside of the easement area, this easement will terminate. GRANTOR will give GRANTEE at least sixty (60) days prior written notice of this easement's termination under this paragraph. If GRANTEE wishes to have the Pipeline-Oil Transmission Pipeline relocated within the tract and if GRANTOR determines that a suitable location exists within the tract, GRANTOR agrees to grant a new easement for such relocated Pipeline-Oil Transmission Pipeline without additional compensation, but GRANTEE shall bear all relocation costs.

19. If GRANTOR determines at any time during the existence of the easement, that the easement negatively interferes with or in any manner and to any extent affects the marketability, market value, development, or the value for development of the state-owned land specifically described below, GRANTOR may take any one of the following actions. One, terminate this easement. Two, require GRANTEE at GRANTEE'S expense to move the Pipeline-Oil Transmission Pipeline to another location within the affected tract, if it is determined by the GRANTOR that a suitable location exists within the tract. Three, require GRANTEE to compensate GRANTOR, at the amount set by the GRANTOR, for the loss GRANTOR incurs because of the easement's presence. The rights given in this paragraph are personal to the GRANTOR and only the GRANTOR may exercise them.

Twp	Rng	Sec	Sub Division	County
144	105	16	NE4	Golden Valley
144	105	16	NW4	Golden Valley
144	105	16	SW4	Golden Valley

20. GRANTEE agrees to defend, indemnify and hold harmless GRANTOR from any claims by any person that are in any way related to GRANTEE's use of the easement area, including all costs, expenses, and attorney fees that in any manner result from or arise out of this agreement. It is GRANTEE's exclusive right and responsibility to construct, maintain, and remove the Pipeline-Oil Transmission Pipeline. GRANTEE further accepts liability and indemnifies GRANTOR, and its officers and employees, from all costs, expenses and attorneys fees incurred in establishing and litigating the indemnification coverage provided above. The legal defense provided by GRANTEE to the GRANTOR under this paragraph must be free of any conflicts of interest, even if this requires GRANTEE to retain separate legal counsel for GRANTOR. The obligations of this paragraph shall continue after this agreement terminates.

21. Any fixtures, structures, installations or facilities constructed or installed by GRANTEE, are the property of GRANTEE and may be removed by GRANTEE at any time.

22. GRANTEE shall remove all improvements, both above ground and underground, from the easement area when the easement is abandoned or in any other way terminated, unless authorized to do otherwise in writing by GRANTOR.

23. This easement shall be a covenant running with the land and shall be binding on the heirs, successors, and assigns of the parties hereto.

MTH

24. This easement is subject to all existing easements and nothing in this easement supersedes any rights previously granted.

25. GRANTOR neither warrants nor agrees to defend title to the easement area.

26. This easement is also subject to the conditions in Exhibits "A1-A8" and "B" which are attached and made a part of this easement.

MTH

Dated this 14 day of December, 20 21, at Bismarck, North Dakota.

GRANTOR:

STATE OF NORTH DAKOTA
BOARD OF UNIVERSITY & SCHOOL LANDS

Jodi Smith, Commissioner
of University and School Lands

STATE OF NORTH DAKOTA)
) ss.
COUNTY OF BURLEIGH)

On this 14th day of December, 20 21, before me personally appeared Jodi Smith, Commissioner of University and School Lands, acting on behalf of the Board of University and School Lands of North Dakota, known to me to be the person who executed this instrument and acknowledged to me that he executed the same.

(SEAL) DIANE M WEIXEL
Notary Public
State of North Dakota
My Commission Expires July 2, 2025

Notary Public

GRANTEE:

BRIDGER PIPELINE LLC

(signature) On Behalf of Bridger Pipeline LLC

STATE OF Wyoming)
) ss.
COUNTY OF Natrona)

On this 13th day of January, 20 22, before me personally appeared N.A. Tad True, Member (title), acting on behalf of Bridger Pipeline LLC, known to me to be the person who executed this instrument and acknowledged to me that he executed the same.

(SEAL)

NOTARY PUBLIC
THOMAS E. LITMAN
STATE OF WYOMING
COUNTY OF NATRONA
My Commission Expires June 28, 2024

Notary Public

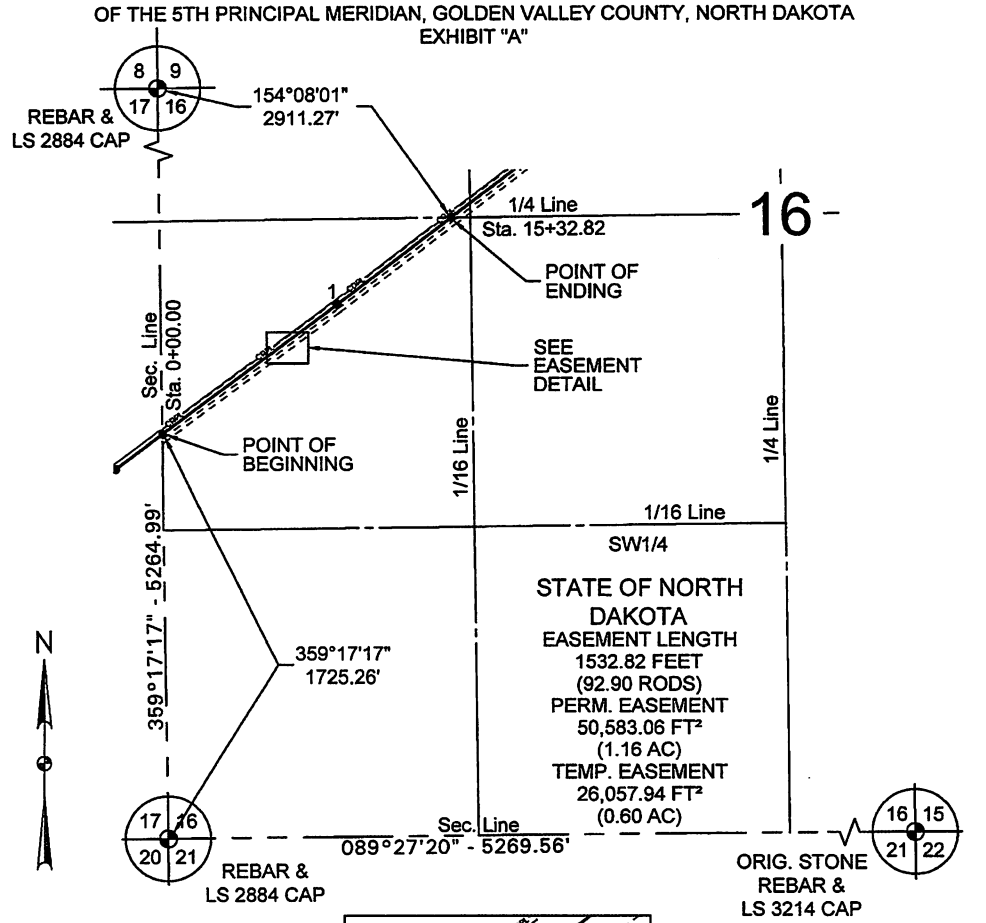
g:\surface\row\document drafts - row\easements\#8613 bridger (oil trans).docx

MTH

ROW #8613
Exhibit "A1"

SOUTH BEND PIPELINE

PROPOSED
SW1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"



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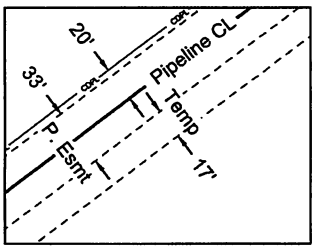
scale 1"=600' feet



EASEMENT DETAIL
INSET SCALE 1"=80'

PI #	STATIONING	LATITUDE	LONGITUDE
Sec. Line	0+00.00	47°17'17.16" N	104°00'12.86" W
1	9+25.05	47°17'22.55" N	104°00'02.03" W
1/4 Line	15+32.82	47°17'26.08" N	103°59'54.90" W

DIRECTION	DISTANCE
053°05'37"	925.05'
053°09'57"	607.77'

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA PROPOSED EASEMENT ON AND ACROSS THE SW1/4 OF SEC. 16, T.144N, R.105W.	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105-SW1/4 SHEET 1 of 8
DRAWN BY: RFS	DATE: 02/12/2020	REVISED: 6/29/2021 BL	

Jun 28, 2021 - 2:59 PM - K:\Projects\OilGas\BridgerPipeline\1907_00533_RedwingBaker\CADD\Preliminary\T144R105_Esmt.dwg

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MTH

ROW #8613
Exhibit "A2"

SOUTH BEND PIPELINE

PROPOSED
SW1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Southwest Quarter of Section 16, Township 144 North, Range 105 West of the 5th Principal Meridian, Golden Valley County, State of North Dakota, being more particularly described as follows:

COMMENCING at the southwest corner of said Section 16, thence on an azimuth of 359°17'17" a distance of 1725.26 feet to the POINT OF BEGINNING; thence on an azimuth of 053°05'37" a distance of 925.05 feet; thence on an azimuth of 053°09'57" a distance of 607.77 feet to the POINT OF ENDING. Said point lies on an azimuth of 154°08'01" a distance of 2911.27 feet from the northwest corner of said Section 16.

Covering in all 1532.82 feet (92.90 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH , NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in December, 2019 & June, 2021.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105-SW1/4
DRAWN BY: RFS	DATE: 02/12/2020	REVISED: 6/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE SW1/4 OF SEC. 16, T.144N, R.105W.
			SHEET 2 of 8

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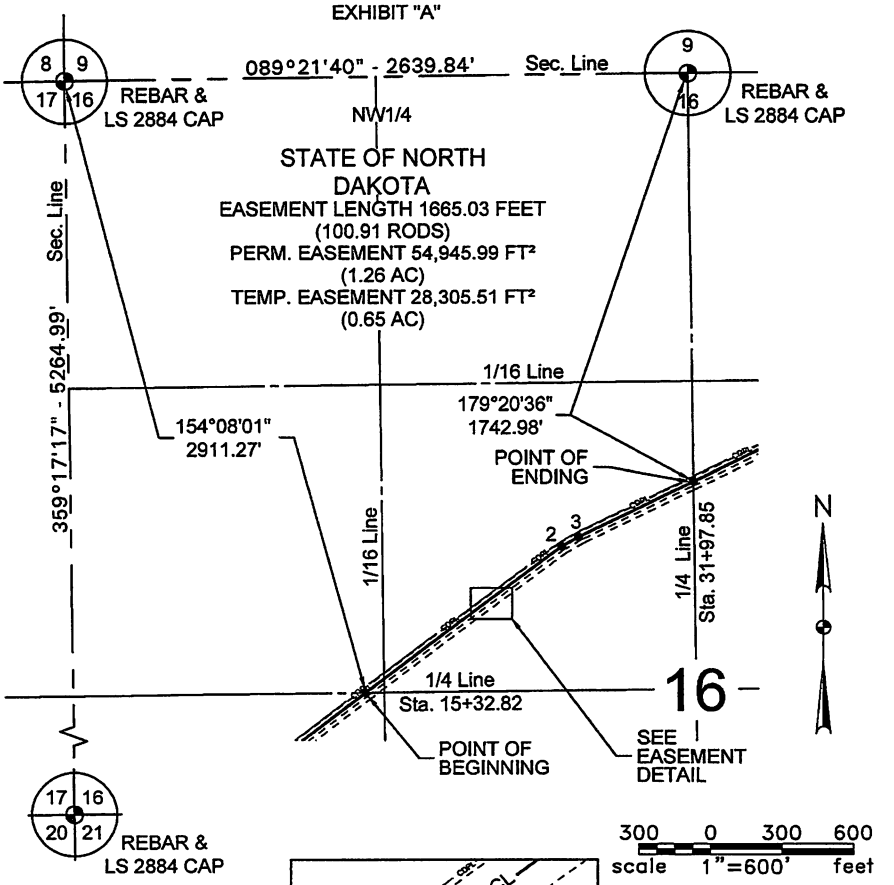
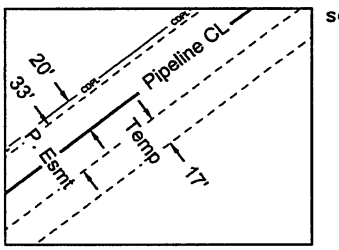
ROW #8613
Exhibit "A3"

SOUTH BEND PIPELINE

PROPOSED
NW1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"





EASEMENT DETAIL
INSET SCALE 1"=60'

PI #	STATIONING	LATITUDE	LONGITUDE
1/4 Line	15+32.82	47°17'26.08" N	103°59'54.90" W
2	25+76.86	47°17'32.15" N	103°59'42.66" W
3	26+57.72	47°17'32.55" N	103°59'41.64" W
1/4 Line	31+97.85	47°17'34.85" N	103°59'34.57" W

DIRECTION	DISTANCE
053°09'57"	1044.04'
059°25'11"	80.86'
063°43'16"	540.13'

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105-NW1/4
DRAWN BY: RFS	DATE: 02/12/2020 REVISED: 6/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE NW1/4 OF SEC. 16, T.144N, R.105W.	SHEET 3 of 8

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ROW #8613
Exhibit "A4"

SOUTH BEND PIPELINE

PROPOSED
NW1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Northwest Quarter of Section 16, Township 144 North, Range 105 West of the 5th Principal Meridian, Golden Valley County, State of North Dakota, being more particularly described as follows:

COMMENCING at the northwest corner of said Section 16, thence on an azimuth of 154°08'01" a distance of 2911.27 feet to the POINT OF BEGINNING; thence on an azimuth of 053°09'57" a distance of 1044.04 feet; thence on an azimuth of 059°25'11" a distance of 80.86 feet; thence on an azimuth of 063°43'16" a distance of 540.13 feet to the POINT OF ENDING. Said point lies on an azimuth of 179°20'36" a distance of 1742.98 feet from the northeast corner of said Northwest Quarter of Section 16.

Covering in all 1665.03 feet (100.91 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH , NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in December, 2019 & June, 2021.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105-NW1/4
DRAWN BY: RFS	DATE: 02/12/2020 / REVISED: 6/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE NW1/4 OF SEC. 16, T.144N, R.105W.	SHEET 4 of 8

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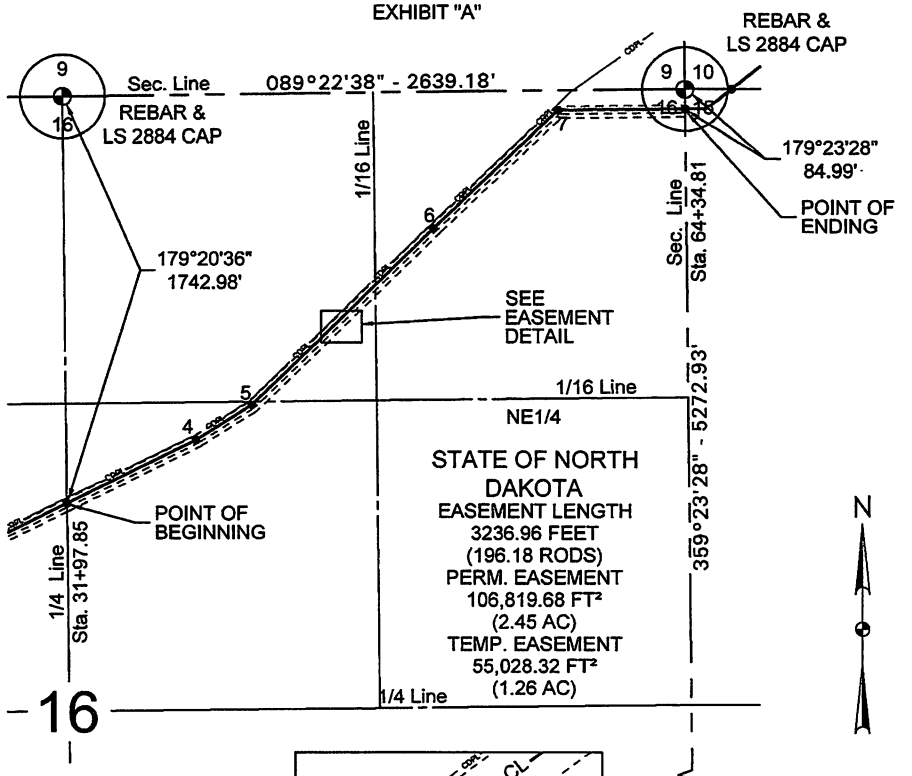
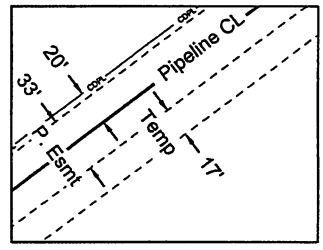
ROW #8613
Exhibit "A5"

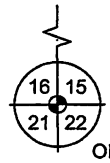
SOUTH BEND PIPELINE

PROPOSED
NE1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"





EASEMENT DETAIL
INSET SCALE 1"=80'



ORIG. STONE
REBAR &
LS 3214 CAP

300 0 300 600
scale 1"=600' feet

PI #	STATIONING	LATITUDE	LONGITUDE
1/4 Line	31+97.85	47°17'34.85" N	103°59'34.57" W
4	38+05.89	47°17'37.44" N	103°59'26.61" W
5	40+86.97	47°17'38.90" N	103°59'23.14" W
6	51+66.11	47°17'46.23" N	103°59'11.78" W
7	58+99.42	47°17'51.18" N	103°59'04.00" W
Sec. Line	64+34.81	47°17'51.17" N	103°58'56.23" W

DIRECTION	DISTANCE
063°43'16"	608.04'
057°30'00"	281.08'
045°45'41"	1079.14'
046°11'28"	733.31'
089°22'32"	535.39'

KLJ
Bridger Pipeline, LLC
455 N. Poplar
P.O. Drawer 2360
Casper, WY 82601

BRIDGER PIPELINE, LLC
STATE OF NORTH DAKOTA
PROPOSED EASEMENT ON AND ACROSS THE
NE1/4 OF SEC. 16, T.144N, R.105W.

JOB NO. 1907_00533
TRACT NUMBER ND-16-144-105-NE1/4
SHEET 5 of 8

DRAWN BY: RFS | DATE: 02/12/2020 | REVISED: 6/29/2021 BL

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ROW #8613
Exhibit "A6"

SOUTH BEND PIPELINE

PROPOSED
NE1/4 OF SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"

DESCRIPTION: CENTERLINE SURVEY

An easement located in the Northeast Quarter of Section 16, Township 144 North, Range 105 West of the 5th Principal Meridian, Golden Valley County, State of North Dakota, being more particularly described as follows:

COMMENCING at the northwest corner of said Northeast Quarter of Section 16, thence on an azimuth of 179°20'36" a distance of 1742.98 feet to the POINT OF BEGINNING; thence on an azimuth of 063°43'16" a distance of 608.04 feet; thence on an azimuth of 057°30'00" a distance of 281.08 feet; thence on an azimuth of 045°45'41" a distance of 1079.14 feet; thence on an azimuth of 046°11'28" a distance of 733.31 feet; thence on an azimuth of 089°22'32" a distance of 535.39 feet to the POINT OF ENDING. Said point lies on an azimuth of 179°23'28" a distance of 84.99 feet from the northeast corner of said Section 16.

Covering in all 3236.96 feet (196.18 rods).

NOTES:
1. Survey is based on UTM ZONE 13 NORTH , NAD83, U.S. Foot. Azimuths shown are grid azimuths, distances shown are grid distances.

2. Sketches of easements depicted herein are based on information obtained while conducting the survey for easement acquisition and on deeds supplied by the client, and DO NOT CONSTITUTE THE RESULTS OF A FULL BOUNDARY SURVEY.

I, Daniel Curtis Wagner, a Professional Land Surveyor, N.D. PLS No. 7193, do hereby certify that the survey plat shown hereon was made by me, or under my direction, from notes made in the field, and the same is true and correct to the best of my knowledge and belief. The field survey was performed by Kirk Jorgenson in December, 2019 & June, 2021.

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105-NE1/4
DRAWN BY: RFS	DATE: 02/12/2020 / REVISED: 6/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS THE NE1/4 OF SEC. 16, T.144N, R.105W.	SHEET 6 of 8

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ROW #8613
Exhibit "A7"

SOUTH BEND PIPELINE

PROPOSED
SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"

DISTANCE ACROSS PROPERTY (FEET): 6434.81
DISTANCE ACROSS PROPERTY (RODS): 389.99
AREA OF PERMANENT EASEMENT (AC): 4.87

ACREAGE TAKEN FROM EACH FORTY OR GOVERNMENT LOT OF STATE LAND

			Forwarded	3.71	acres
NE1/4NE1/4	1.22	acres	NE1/4SW1/4		"
NW1/4 "	0.54	"	NW1/4 "	1.16	"
SW1/4 "	0.69	"	SW1/4 "		"
SE1/4 "		"	SE1/4 "		"
NE1/4NW1/4		acres	NE1/4SE1/4		acres
NW1/4 "		"	NW1/4 "		"
SW1/4 "	0.08	"	SW1/4 "		"
SE1/4 "	1.18	"	SE1/4 "		"
Forward	3.71	"	Total	4.87	acres

Signature of Applicant (as the same is to appear in the deed) _____

By _____

Address _____

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that the description of the right of way as given in this application is accurate and correct in every particular and that the monument referenced herein described as follows:

_____

Dated at 12:02 pm, this 9th day of July, 2021.

Signed _____

Title LAND SURVEYOR

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS-7193
DATE 07/09/21
NORTH DAKOTA

STATE OF Montana)
)
County of Flathead)

On this 9th day of July, in the year 2021, before me Angela M. Clark, a Notary Public for the State of Montana, personally appeared Daniel Curtis Wagner known to me to be the person whose name subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

ANGELA G. CLARK
NOTARY PUBLIC FOR THE
STATE OF MONTANA
RESIDING AT KALISPELL, MONTANA
MY COMMISSION EXPIRES
MARCH 05, 2025

Angela M. Clark
Notary Public for the State of Montana

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA PROPOSED EASEMENT ON AND ACROSS SEC. 16, T.144N, R.105W.	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105 SHEET 7 of 8
DRAWN BY: BAL	DATE: 5/13/2020	REVISED: 6/29/2021 BL	

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ROW #8613
Exhibit "A8"

SOUTH BEND PIPELINE

PROPOSED
SEC. 16, T.144N, R.105W.
OF THE 5TH PRINCIPAL MERIDIAN, GOLDEN VALLEY COUNTY, NORTH DAKOTA
EXHIBIT "A"

GPS SURVEY-AFFIDAVIT

AFFIDAVIT

I, Daniel Curtis Wagner the person who prepared the attached exhibit for easement for which application is hereby made, do hereby certify that a Trimble R-8 Model 4 was used to perform this survey as given in this application and is accurate and correct to within 2-5 centimeters.

Dated at 12:02pm, this 9th day of July, 2021.

Signed

Title LAND SURVEYOR

Address KLJ
1830 3rd Avenue East Suite 202
Kalispell, MT 59901-5578

REGISTERED PROFESSIONAL LAND SURVEYOR
DANIEL WAGNER
LS-7193
DATE 07/09/21
NORTH DAKOTA

STATE OF Montana)
)
County of Flathead)

On this 9th day of July, in the year 2021 before me, Angela H. Clark, a Notary Public for the State of Montana personally appeared Daniel Curtis Wagner known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certification above written.

Angela H. Clark
Notary Public for the State of Montana

ANGELA G. CLARK
NOTARY PUBLIC FOR THE
STATE OF MONTANA
RESIDING AT KALISPELL, MONTANA
MY COMMISSION EXPIRES
MARCH 05, 2025

DISTANCE ACROSS PROPERTY (FEET): 6434.81
DISTANCE ACROSS PROPERTY (RODS): 389.99
AREA OF PERMANENT EASEMENT (AC): 4.87

KLJ	Bridger Pipeline, LLC 455 N. Poplar P.O. Drawer 2360 Casper, WY 82601	BRIDGER PIPELINE, LLC STATE OF NORTH DAKOTA	JOB NO. 1907_00533 TRACT NUMBER ND-16-144-105
DRAWN BY: BAL	DATE: 5/13/2020	REVISED: 6/29/2021 BL	PROPOSED EASEMENT ON AND ACROSS SEC. 16, T.144N, R.105W.	SHEET 8 of 8

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MTH

EASEMENT: Pipeline-Oil Transmission Pipeline

ROW #8613
Exhibit "B"

NORTH DAKOTA
BOARD OF UNIVERSITY & SCHOOL LANDS
(ND Department of Trust Lands)

Native Grass Seeding Specifications

Species	lbs. PLS*/acre
Western wheatgrass	8
Slender wheatgrass	5
Green needlegrass	4
Side-oats grama	2
	19

*PLS - Pure Live Seed (based on 50 PLS/sq. feet)

1. The seed bed should be firmly packed (footprints left in the soil should be less than 1/2 inch deep).

2. An early spring seeding (before May 24th) is preferred. A dormant fall seeding (after October 20th) is acceptable.

3. A cover crop of oats at 10 lbs. PLS/acre must be seeded on the disturbed area.

4. A drill designed specifically for native grass seeding will give the best seeding results. The seed should be planted at a depth of 1/2 to 1 inch. Precaution must be taken not to plant the seed too deeply in the soil or poor germination will result.

5. On areas where equipment cannot be used, broadcast seed and rake or drag to cover seed. Where seed is broadcast, double the seeding rate.

6. Use only North Dakota certified seed.

Caution: Be sure to clean out the drill before seeding to avoid any contamination with smooth brome grass or crested wheatgrass that may remain in the drill from previous use on private land. These are invasive grasses in native prairie and are not allowed on school trust lands. Contamination with or use of crested wheatgrass or smooth brome will result in the applicant being required to spray out the grass and reseed with the above native grass seed mixture. Sweet clover and alfalfa are also not allowed – only the above native grass seed mixture may be used for revegetation on school trust land.

MTH

Exhibit B.7
McKenzie County Planning Department

October 15, 2019

Curt Huus
McKenzie County Planning Department
1300 12th Street SE, Suite 214
Watford City, ND 58854

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

From: Curt Huus
To: jantognazzi@keitu.com
Subject: Bridger 16" Crude Oil Pipeline
Date: Tuesday, October 29, 2019 8:04:32 AM

Good Morning Jaimee,

We appreciate the heads up regarding the Bridger 16" Crude Oil Pipeline project.

This type of project will require, among other things, working with McKenzie County Planning and Zoning Department for land use evaluation and approvals. Our office will be happy to guide you through the Planning and Zoning process per the McKenzie County Zoning Ordinance. Following is a link to the Ordinance:

https://county.mckenziecounty.net/Department/PNZ/Planning_-_Zoning/Zoning-Maps-and-Ordinance

The planning and zoning office's primary considerations for this type of project are harmonizing land uses throughout McKenzie County and keeping an inventory of land uses as they are developed.

Please let me know if you have any questions or comments.

Thanks!

Curt Huus, PE/LS
Planning and Zoning Director
(701) 444-6494
McKenzie County, ND

Exhibit B.8
Golden County Planning Department

September 30, 2019

Harvey Gerving
Golden Valley Planning Department
150 1st Ave SE
PO Box 67
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Harvey Gerving
Golden Valley Planning Department
150 1st Ave SE
PO Box 67
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

From:	Henry Gerving
To:	zpeterson@keitu.com
Subject:	Bridger Pipeline
Date:	Monday, January 6, 2020 12:15:49 PM
Attachments:	image001.png GOLDEN_VALLEY_COUNTY_PIPELINE PERMIT.doc plan.pdf

---

Zach

Golden Valley County does require a pipeline permit which is attached for the project you are proposing.

The pipeline permit would be processed through the County zoning Board, please see the below dates.

APPLICATION DUE:	**MEETING DATE:**
January 10	January 27, 2020
February 7	February 24, 2020
March 13	March 30, 2020
April 10	April 27, 2020
May 1	May 18, 2020
June 12	June 29, 2020
July 10	July 27, 2020
August 14	August 31, 2020
September 11	September 28, 2020
October 9	October 26, 2020
November 13	November 30, 2020
December 4	December 21, 2020

Thanks

Henry J Gerving
Golden Valley County
Director Tax Equalization and Zoning
Veteran Service Officer and 911 & GIS Coordinator

phone (701) 872 - 4673
email: hgerving@nd.gov



Disclaimer: This e-mail, including attachments, is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510 et seq., may be confidential, or may contain confidential material. It is intended for use only by the person(s) to whom it is directed. If you are not the intended recipient and/or received it in error, you should (1) reply by e-mail to the sender; (2) delete this e-mail, including deletion of all associated text files from all storage locations including individual and network storage devices; and (3) refrain from disseminating or copying this communication. The media in which any

electronic data files are transmitted can deteriorate over time and under various conditions. Golden Valley County does not warrant the accuracy of any information contained in electronic data files transmitted by e-mail.

No: P-27

APPLICATION FOR PIPELINE PERMIT
Golden Valley County, North Dakota

(X)Pipeline Owner:

Name: Bridger Pipeline, LLC

Address: 455 North Poplar Street Casper, WY 82602

Phone: 307-237-9301

Local Agent:

Name: Keitu Engineers & Consultants, Inc

Address: PO Box 98

Phone: 701-667-1800

Senior Engineer:

Name:

Address:

Phone:

Indicate (X) which of the above should receive the completed permit.

Give the section, township and range of pipeline route:

Township/Range	Section	County	
T150N R96W	25,26,27,28,31,32,33	McKenzie	
T150N R97W	33,34,35,36	McKenzie	
T149N R97W	4,5,6,7	McKenzie	
T149N R98W	9,10,11,12,16,17,18	McKenzie	
T149N R99W	13,24,25,31,32,33,34,35,36	McKenzie	
T149N R100W	36	McKenzie	
T148N R100W	4,8,9,17,19,20	McKenzie	

T148N R101W	24,25,26,27,33,34,35	McKenzie	
T147N R101W	4,5,8,17,18,19	McKenzie	
T147N R102W	24,25,35,36	McKenzie	
T146N R102W	2,3,4,5,7,8,18	McKenzie	
T146N R103W	13,23,24,26,27,33,34	McKenzie	
T145N R103W	4,5,7,8,18,19	McKenzie	
T145N R104W	24,25,26,34,35	McKenzie	
T144N R104W	6	Golden Valley	
T144N R105W	1,2,10,11,15,16,17,19,20,30	Golden Valley	

Describe the general use of the pipeline:

The Project originates at EEOC's Johnsons Corner Terminal located near Johnson's Corner, North Dakota and runs 142 miles southwest to Bridger's Sandstone Station west of Baker, Montana. The pipeline would interconnect with Bridger's existing North Dakota facilities at Wilson Station and Bicentennial Station and their respective crude oil transmission network.

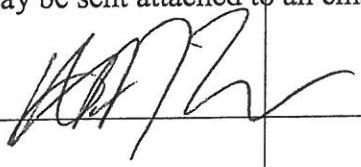
Surface facilities to be installed along the route will be limited to valves, pig launchers and receivers, pipeline markers, and rectifiers.

The proposed Project will result in a new crude oil transmission pipeline approximately 142 miles in length. The steel pipe utilized for construction of the Project will meet United States Department of Transportation ("US DOT") regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project will be constructed per 49 C.F.R. Subpart 195(D). The Project will be operated and maintained per 49 C.F.R. Subpart 195(F).

The following information must be included with this application before a permit will be approved and issued:

1. A map indicating the pipeline route, its origin and destination, any county road right-of-way you intend to use and compressor station sites, if any.
2. Name and address of the contractor, include his ND contractor's license number. TBD
3. Name of the contractor's bonding company and bond or insurance number.
4. Copies of all easements or letters of consent obtained for private landowners.
5. Proposed dates of commencement and completion: September 2020-March 2021
6. Size of line (diameter): 16 inches
7. Length of line: 142 miles total, 8.5 miles in Golden Valley County
8. Pressure: 1440 pisg
9. Burial depth range: Minimum 48 inches and 72 inches under unimproved section lines per ND PSC requirements.
10. Road crossing methods: HDD Bore
11. Product: Crude Oil
12. Procedures for erosion abatement: SWPPP will be developed, prior to construction, and submitted to the ND DEQ. A copy can be provided upon request.
13. A $1000.00 pipeline fee shall accompany this application.
14. Upon completion of construction, a copy of the as built survey of the pipeline will be forwarded to the Golden Valley Register of Deeds at the County Courthouse, PO Box 67, Beach, ND 58621.
15. Any GIS or GPS data in the form of a shapefile will be forwarded to the County Tax Director at PO Box 67, Beach, ND 58621 or may be sent attached to an email to hgerving@nd.gov

Authorized Signature _____



Title Member

Date 6·8·20

The attached Pipeline Regulations must be complied with and will be strictly enforced.

The Golden Valley County Board of Commissioners will review this application.

Golden Valley County has road restrictions and roads with various load limits. Please contact the County Road Foreman, Pete Wirtzfeld, at 872-4123 for current information.

The above application, being in compliance with all of the requirements therein, is hereby approved.

Date: Aug 3, 2020

Chairman, Golden Valley Co. Commission

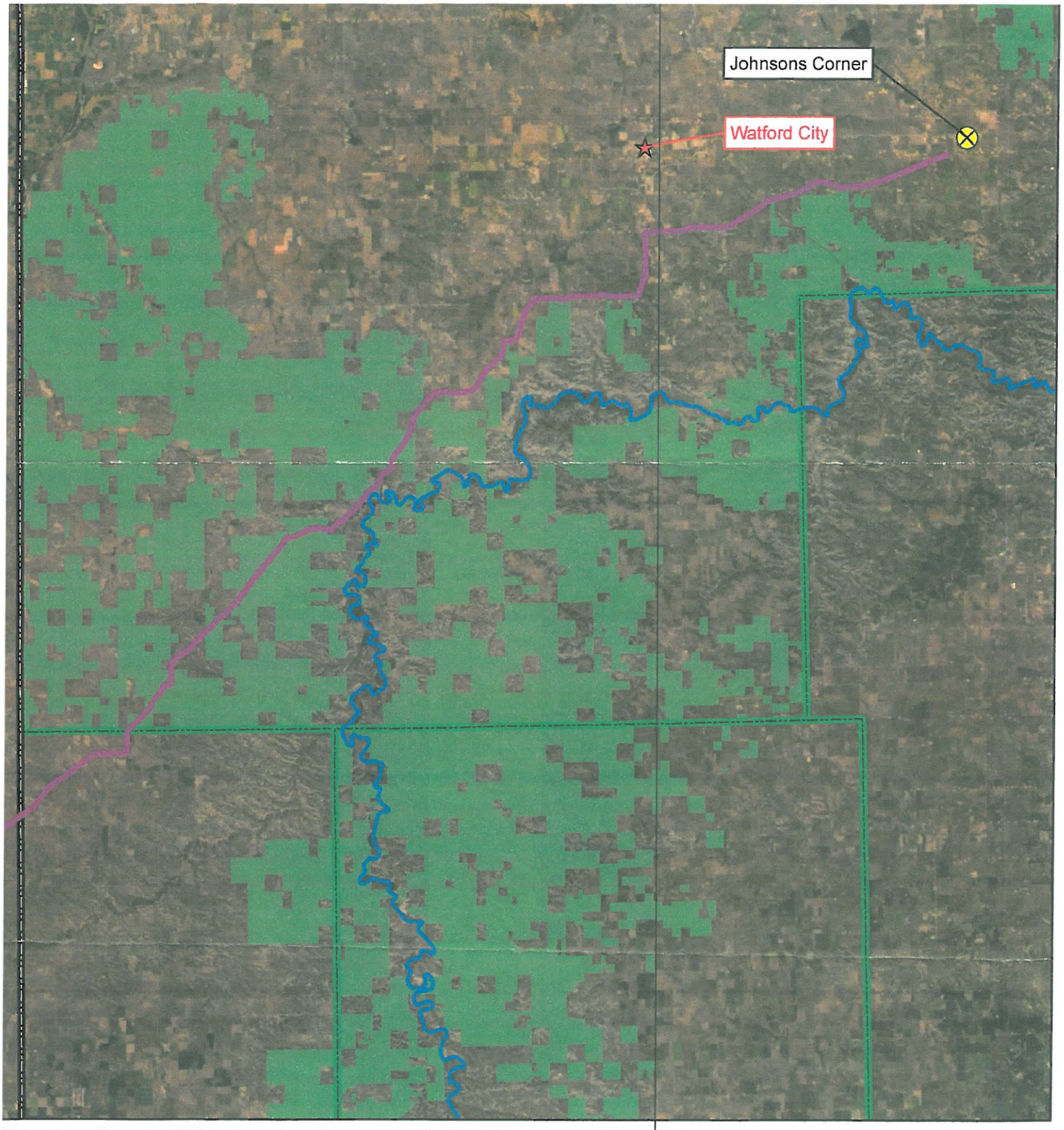
Based on the above approved application, the applicant therein is hereby issued a Pipeline Permit.

Date: Aug 3, 2020

County Zoning Director

The County Commissioner(s) responsible for the district(s) in which the pipeline resides shall inspect the pipeline to insure regulations are met. The commissioner(s) may appoint an agent to conduct the inspection.

Inspected by:_____ Date



South Bend Alignment

Cities

Alignment

Little Missouri River

State Border

County Boundary

Forest Service Lands

N

0 7.5 15 Kilometers

0 7.5 15 Miles

Exhibit B.9
US Army Corps of Engineers

October 4, 2019

Patricia McQueary
Regulatory Program Manager
US Army Corps of Engineers
3319 University Dr.
Bismarck, ND 58504

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Patricia McQueary
Regulatory Program Manager
US Army Corps of Engineers
3319 University Dr.
Bismarck, ND 58504

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504

January 8, 2020

NWO-2019-2254-BIS

Keitu Engineers & Consultants, Inc.
Attn: Zach Peterson
PO Box 98
Mandan, North Dakota 58554-0098

Dear Mr. Peterson:

This is in response to your solicitation letter dated December 16, 2019, requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments on the proposed Bridger Pipeline 16-inch crude oil pipeline project. The project is located within several Sections, Townships and Ranges in McKenzie and Golden Valley Counties, North Dakota.

Corps Regulatory Office administers Section 404 of the Clean Water Act. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

Enclosed for your information is the Fact Sheet for Nationwide Permit 12, Utility Line Activities. Utility lines are authorized by Nationwide Permit 12 provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities are in compliance with the Nationwide Permit General Conditions and the North Dakota Department of Health's' Section 401 Water Quality Certification requirements. On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work directly with Environmental Protection Agency (EPA) to obtain an individual water quality certification. Please note the pre-construction notification requirements on page 2 of the enclosed fact sheet. If a project meets any of the seven notification requirements, the project proponent must submit a DA application to this office. Additionally, a project must adhere to the Nationwide Permit Regional Conditions for North Dakota in the enclosed Fact Sheet.

Printed on Recycled Paper

In the event the proposed pipeline project requires approval from the Corps and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit would likely be required. A project that requires a Standard or Individual Permit would require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing based on the associated project impacts and comments received through the public notice may extend well beyond 120 days.

Additionally, information contained in your letter indicate the proposed project would include construction activities within the State of Montana. It is recommended that you contact the Corps Montana Regulatory Office regarding permitting requirements that they may have regarding the Montana portion of the proposed pipeline project. Their contact address is: Corps of Engineers, Corps Montana Regulatory Office, 490 North 31st Street, Suite 112, Billings, Montana 59103. This correspondence letter does not approve the proposed construction work or does not verify the proposed project complies with the Nationwide Permit(s) and reflects comments on the North Dakota portion of the project only.

If any of these projects require a Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 4345) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, Bismarck, North Dakota 58504 or to the email address below. If you are unsure if a permit is required, you may submit an application, include a project location map, description of work, and construction methodology.

If you have any questions regarding this letter or our program, please contact Mr. Jason Renschler of this office by letter or telephone at (701) 255-0015 ext. 2010 or email at Jason.J.Renschler@usace.army.mil and reference project number **NWO-2019-2254-BIS**.

Sincerely,

Jason Renschler
Regulatory Project Manager
North Dakota

Enclosures:
- Nationwide Permit Fact Sheet #12
- DA ENG Form 4345

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-0003
Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	**10. AGENTS PHONE NOs. w/AREA CODE**
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____
SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
	Address
15. LOCATION OF PROJECT	City - State- Zip-
Latitude: °N Longitude: °W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? ☐ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army Permit Application

Blocks 1 through 4. To be completed by Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 12. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

Block 13. Name of Waterbody. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15. Location of Proposed Project. Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known

Block 18. Nature of Activity. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

Block 19. Proposed Project Purpose. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Block 20. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Block 22. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

Block 24. Is Any Portion of the Work Already Complete? Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identity the authorization, if possible.

Block 25. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 26. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 27. Signature of Applicant or Agent. The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

FACT SHEET
NATIONWIDE PERMIT 12
(2017)

UTILITY LINE ACTIVITIES

Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.
Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A ''utility line'' is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication. The term ''utility line'' does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area. Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.
Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities. Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.
Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non- tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or

geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows. This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit. This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre- construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.
Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) The activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10- acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 32.) (Sections 10 and 404)

Note 1: Where the utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 6: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 7: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 8: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, ''District Engineer's Decision.'' The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/ or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements.

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects from Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills.

Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights.

No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will

directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which ''may affect'' a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre- construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity ''may affect'' or will have ''no effect'' to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non- Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have ''no effect'' on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species- specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the ''take'' of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with ''incidental take'' provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where ''take'' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word ''harm'' in the definition of ''take'' means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district

engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide Web pages at http://www.fws.gov/ or http:// www.fws.gov/ipac and http:// www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles.

The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether ''incidental take'' permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought

from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non- Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. <u>Discovery of Previously Unknown Remains and Artifacts.</u>

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid

construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters.

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation.

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:
(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre- construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre- construction notification, the district engineer may determine on a case-by- case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult- to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2- acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.
(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee- responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically for North Dakota, the North Dakota Department of Health has denied water quality certification for all projects proposed to affect Class 1 and 1A, II and Class III rivers and streams or classified lakes listed in Appendices I and II of the standards, individual certification must be obtained. For project proposed to affect any other waters, the North Dakota Department of Health has issued water quality certification provided the attached Construction and Environmental Disturbance Requirements are followed. The Standards may be found at*
http://www.legis.nd.gov/information/acdata/pdf/33-16-02.1.pdf?2016031115632
On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work with EPA to obtain individual water quality certification. Contact: USEPA, Region 8,

401 Certification Program – 8WP-AAP, 1595 Wynkoop Street, Denver, Colorado 80202-1129. (303-312-6909)

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

> When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.
>
> _____ (Transferee) _____ (Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a ''USACE project''), the prospective permittee must submit a pre- construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division

engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is ''no effect'' on listed species or ''no potential to cause effects'' on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation,

especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the ''study river'' (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13

activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre- construction notifications to expedite agency coordination.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2017 NATIONWIDE PERMITS
REGIONAL CONDITIONS
OMAHA DISTRICT
STATE OF NORTH DAKOTA

The following Nationwide Permit Regional Conditions will be used in the State of North Dakota. Regional conditions are placed on Nationwide Permits to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resource concerns.

1. **Wetlands Classified as Peatlands – Revoked for use**

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38 and 45, are revoked for use in peatlands. Peatlands are permanently or seasonally saturated and inundated wetlands where conditions inhibit organic matter decomposition and allow for the accumulation of peat. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay.

2. **Wetlands Classified as Peatlands – Preconstruction Notification Requirement**

For Nationwide Permits 3, 5, 20, 32, 38 and 45 permittees must notify the Corps in accordance with General Condition 32 (Pre-Construction Notification) prior to initiating any regulated activity impacting peatlands.

3. **Waters Adjacent to Natural Springs – Preconstruction Notification Requirement**

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) for regulated activities located within 100 feet of the water source in natural spring areas. For purposes of this condition, a spring source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

4. **Missouri River, including Lake Sakakawea and Lake Oahe – Pre-construction Notification Requirement**

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, any activity occurring in an off channel area (marinas, bays, etc.) of any of these waterbodies, a preconstruction notification is required.

5. **Spawning Areas**

Spawning restrictions and important fish habitat areas, if applicable, can be accessed on the North Dakota Game & Fish Department's website at:

http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf

No regulated activity within the Red River of the North shall occur between 15 April and 1 July. Spawning season restrictions do not apply to projects involving dredging or other discharges of less than 25 cubic yards of material in any jurisdictional water.

6. **Counter-Sinking Culverts and Associated Riprap – All Nationwide Permits**

In streams with intermittent or perennial flow and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural streambed according to the table below. This regional condition does not apply in instances where the lowering of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or result in lowering the elevation of the stream reach.

Riprap inlet and outlet protection shall be placed to match the height of the culvert invert.

Culvert Type	Drainage Area	Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line
All culvert types	≤ 100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	0.5 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter ≥ 8.0 ft	All drainage sizes	1.0 ft
Box culvert	All drainage sizes	1.0 ft

REGIONAL CONDITIONS APPLICABLE TO SPECIFIC NATIONWIDE PERMITS

Nationwide Permit 7 – Outfall Structures and Associated Intake Structures and Nationwide Permit 12 – Utility Line Activities.

Intake Structures – Intake screens with a maximum mesh opening of ¼-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed ½-foot per second.

Pumping plant sound levels will not exceed 75 dB at 50 feet.

Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

- The intakes shall be floating.
- At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.
- If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.

- If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to ¼ foot per second.

Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below Garrison Dam are subject to the following conditions:

- The intakes shall be submerged.
- At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.
- The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.
- If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼-foot per second with intake placed at the maximum practicable attainable depth.

Intakes and associated utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

Utility Lines

- Any temporary open trench associated with utility lines are to be closed within 30 days of excavation. This time limit may be extended by notifying the North Dakota Regulatory Office and receiving a written response that the extension is acceptable.

Nationwide Permit 11 – Temporary Recreational Structures – Boat Docks

To ensure that the work or structure shall not cause unreasonable obstruction to the free navigation of the navigable waters, the following conditions are required:

- No boat dock shall be located on a sandbar or barren sand feature. The farthest point riverward of a dock shall not exceed a total length of 30 feet from the ordinary high watermark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.
- Any boat dock shall be anchored to the top of the high bank.
- Any boat dock located within an excavated bay or marina that is off the main river channel may be anchored to the bay or marina bottom with spuds.

Section 10 Waters located in the State of North Dakota are:

Bois de Sioux River
James River
Missouri River
Red River of the North
Upper Des Lacs Lake
Yellowstone River

Nationwide Permit 13 – Bank Stabilization

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. The notification must also include photo evidence of erosion in the area. Prohibited materials found at

http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/487696/prohibited-restricted-materials.aspx cannot be used in waters of the United States.

Nationwide Permit 23 – Approved Categorical Exclusions

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. In addition to information required by General Condition 32 (Pre-Construction Notification), permittees must identify the approved categorical exclusion that applies and provide documentation that the project fits the categorical exclusion.

GENERAL CONDITIONS (REGIONAL ADDITIONS)

General Condition 32 Notification– Pre-construction Notification

Prospective permittees should be aware that a field aquatic resources delineation may be required for applications where notification is required in accordance with General Condition 32 (Pre-Construction Notification) and/or mitigation may be required. Specific guidelines outlining the aquatic resources delineation process in the State of North Dakota and the Corps 1987 Wetland Delineation Manual and applicable Regional supplements to the Manual can be accessed on the North Dakota Regulatory Office's website at:
http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx

NORTH DAKOTA
DEPARTMENT *of* HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

Exhibit B.10
ND Parks and Recreation

September 30, 2019

Kathy Duttenhefner, Coordinator
Natural Resources Division
North Dakota Parks and Recreation
PO Box 5594
Bismarck, ND 58506-6694

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

NORTH Dakota | Parks & Recreation
Be Legendary.™

November 8, 2019

Jaimee Antognazzi
Keitu Engineers and Consultants, Inc.
1403 27th Street NW, PO Box 98
Mandan, ND 58554-0098

Re: Bridger pipeline, LLC – Bridger 16" Crude Oil Pipeline

Dear Ms. Antognazzi,

The North Dakota Parks and Recreation Department has reviewed the above referenced proposed Bridger pipeline, LLC – Bridger 16" Crude Oil Pipeline Project located in McKenzie and Golden Valley Counties, North Dakota.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or affect Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has reviewed the project to determine if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, we have several plant and animal species of concern documented within or adjacent to project site. Please refer to the attached map and spreadsheet for details. Regarding animal species of concern we defer any additional comments to the US Fish and Wildlife Service and ND Game and Fish Department.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information, please contact me at (701-328-5370 or kgduttenhefner@nd.gov Thank you for the opportunity to comment on this proposed project.

Sincerely,

Kathy Duttenhefner

Kathy Duttenhefner
Coordinator/Biologist II, Natural Resources Division

1600 East Century Ave. Ste. 3 | Bismarck, ND 58503
PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

Exhibit B.11
ND Game and Fish Department

September 30, 2019

Mr. Greg Link, Chief
Conservation and Communication Division
North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

GOVERNOR, Doug Burgum
DIRECTOR, Terry Steinwand
DEPUTY, Scott A. Peterson

"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT
100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

October 28, 2019

Jaimee Antognazzi
Operations Manager
Keitu
PO Box 98
Mandan, ND 58554-0098

Dear Ms. Antognazzi:

RE: Bridger 16" Pipeline Project

Bridger Pipeline, LLC is proposing the construction of an approximately 160-mile crude oil supply pipeline, originating from a location near Johnson's Corner, North Dakota and terminating at the Baker/Sandstone Terminal located near Plevna, Montana. The project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

A primary concern with pipeline projects is the possible disturbance of native prairie and wooded draws associated with construction of the pipeline and access roads. Avoidance of native prairie areas reduces impacts to several grassland species including many of the species of conservation priority. We ask that work within these areas be avoided to the extent possible, every effort be made to prevent destruction of woody vegetation, and disturbed areas be reclaimed to pre-project conditions.

The pipeline route crosses Cherry Creek, a Classified fishery. We recommend that this stream be crossed by directional boring to protect the resource. If this method is not feasible, construction should not take place within the waterway between April 15 and June 1, and controls should be implemented to minimize erosion and sedimentation. The Department also recommends that additional precautions be implemented into the design of pipes crossing under the State's waterways. One means of minimizing a potentially large pipeline failure is to incorporate pressure sensing valves on both sides of the waterway. These valves should be placed as close to the waterway as possible while staying out of the floodplain to reduce potential damage from ice and other floating debris. A maintenance schedule should be developed to ensure the integrity of the pipe for the life of the project.

Aquatic nuisance species (ANS) are a major concern in North Dakota. State law requires that the contractor, including any and all subcontractors involved in this project, take appropriate

precautions to prevent the introduction or movement of ANS within the state. The contractor should provide the department a reasonable opportunity to inspect any equipment prior to these items being launched or placed into waters of the state. The Department's Aquatic Nuisance Species Coordinator, Ms. Jessica Howell, can be contacted at 701-368-8368 for equipment inspections or additional information regarding ANS prevention protocols.

The National Wetland Inventory indicates a variety of wetlands within the proposed project corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.

Aerial surveys should be conducted for raptor nests before construction begins. We recommend that a ½-mile construction buffer be implemented around active eagle nest sites (known occupied within the past 5 years). Ms. Sandra Johnson, Conservation Biologist, may be contacted at 701-328-6327 for additional information on golden eagle nest sites in the state.

We do not believe this project will have significant adverse effects on wildlife or wildlife habitat provided these recommendations are implemented where appropriate during project construction.

Sincerely,

Greg Link
Chief
Conservation & Communication Division

js

Exhibit B.12
Lake Ilo National Wildlife Refuge

September 30, 2019

Todd Gallion
Wildlife Refuge Specialist
Lake Ilo National Wildlife Refuge
489 102 Ave SW
Dunn Center, ND 58626

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

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As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Todd Gallion
Wildlife Refuge Specialist
Lake Ilo National Wildlife Refuge
489 102 Ave SW
Dunn Center, ND 58626

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.13
U.S. Fish and Wildlife Service

September 30, 2019

Scott Larson, Field Supervisor
North Dakota Field Office
U.S. Fish and Wildlife Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Scott Larson, Field Supervisor
North Dakota Field Office
U.S. Fish and Wildlife Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

United States Department of the Interior

FISH AND WILDLIFE SERVICE
North Dakota Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

IN REPLY REFER TO:
06E15000-2020-TA-0082
Bridger 16" Crude Oil
Pipeline

December 30, 2019

Mr. Zach Peterson
Environmental Specialist
Keitu Engineers and Consultants
1403 27th Street Northwest
Mandan, North Dakota 58554

Dear Mr. Peterson:

Thank you for your letter of December 16, 2019, requesting comments on the Bridger Pipeline, LLC project proposal in McKenzie and Golden Valley Counties, North Dakota. The 16 inch crude oil supply line originates near Johnson's Corner in North Dakota, extending 160 miles southwest, terminating at the Baker/Sandstone Terminal located near Plevna, Montana. The U.S. Fish and Wildlife Service (Service) has been in contact with several of the principals at Keitu Engineering and Consultants (Keitu) by telephone and email since being contacted on September 26, 2019.

The Service offers the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (16 U.S.C. 703 *et seq,* the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d, 54 Stat. 250.

Dakota skipper

The Dakota skipper is a small prairie butterfly listed as a threatened species under the ESA. Dakota skippers are obligate residents of high quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. In Northwestern North Dakota, Dakota skippers inhabit dry-mesic hill prairies with abundant purple coneflower (*Echinacea angustifolia*), but also use mesic to wet-mesic tallgrass prairie habitats characterized by wood lily (*Lilium philadelphicum*) and mountain death camas (smooth camas; *Zigadenus elegans*). Their dispersal ability is very limited due in part to their short adult life span and single annual flight. Extirpation from a site may be permanent unless it occurs within about 0.6 miles of an inhabited site that generates a sufficient number of emigrants. Avoidance of impacts to native prairie habitat is recommended to reduce the risk of adverse effects to this species. If such areas are unavoidable, surveys for Dakota skippers are advisable. Critical habitat has been designated for this species in North Dakota; for details and locations see the following website: https://www.fws.gov/Midwest/endangered/insects/dask/index.html.

The proposed crude oil pipeline includes areas of native prairie. The disturbance of these lands could further fragment and eliminate existing native prairie habitat. Recent surveys for the Dakota skipper (*Hesperia dacotae*) have identified this species in the vicinity of the proposed action. Dakota skippers occupy native prairie habitat, thus occupancy surveys for this species may be warranted prior to the grazing of these areas. In areas of suitable habitat or occupancy, construction may be delayed during the flight season (June 10-July 15).

Northern Long-Eared Bat

The northern long-eared bat is a medium-sized brown bat listed as threatened under the Endangered Species Act. The species is known to be present in North Dakota during the breeding and migration seasons. These bats primarily roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees in the summer. The pupping season occurs in June and July. Hibernacula have not been documented in North Dakota. Summer survey guidelines for the northern long-eared bat are identical for those established for the Indiana bat (*Myotis sodalis*) (available online at: www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html). White nose syndrome - a fungus affecting hibernating bats - is considered a significant threat to this species, but individuals may be harmed by other activities such as modifications to hibernacula, timber harvest, human disturbance, and collisions with wind turbines. A 4(d) rule has been published that exempts take of Northern long-eared bats in certain circumstances. For more information, see: www.fws.gov/midwest/endangered/mammals/nleb/index.html.

Eagles Guidance

Bald and Golden Eagles are federally protected under the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA prohibits anyone without a permit issued by the Secretary of the Interior from taking bald eagles (*Haliaeetus leucocephalus*) or golden eagles (*Aquila chrysaetos*), including their parts, nests, or eggs. The BGEPA provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. The BGEPA defines take as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagles return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

A number of bald eagle nests have been recorded along the Missouri River corridor. We recommend following the Service's May 2007, *National Bald Eagle Management Guidelines*, which contains detailed information on protecting bald eagles from disturbance due to human

activity. To avoid/minimize impacts to nesting bald eagles from construction activities, the Service recommends: (1) keeping a minimum 660-foot buffer between the activity and any bald eagle nest if no landscape buffer exists; (2) keeping a minimum 330-foot buffer and maintaining a landscape buffer or natural areas between the activity and around nest trees; and (3) avoiding activities during the bald eagle breeding season (February 1 – July 15). The buffer areas serve to minimize visual and auditory impacts associated with human activities near nest sites. Ideally, buffers would be large enough to protect existing nest sites and provide for alternative or replacement nest sites.

It is unlawful to take or disturb eagles without first obtaining a permit for non-purposeful take of eagles. However, no permit would be available unless an applicant has first taken all practicable steps to avoid take of eagles. The guidelines can be accessed on the Service's website at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf.

With the continued fragmentation and loss of native prairie habitat in North Dakota, the Service recommends Keitu Engineering and Bridger Pipeline work with willing developers to voluntarily offset any unavoidable loss of native prairie habitat that may compensate for impacts to endangered or migratory species that likely occupy the project area. We look forward to further engagement on this action.

The Service appreciates the opportunity to work with Keitu to ensure the conservation of federally-listed species as part of our joint responsibilities under ESA to conserve threatened and endangered species and their habitats. Should you have any questions regarding this letter, please have your staff contact Jerry Reinisch of my staff at (701) 333-0267, or contact me at (701) 355-8215.

Sincerely,

Drew Becker
ND Ecological Services Office Supervisor

cc: Greg Link, Division Chief, North Dakota Game and Fish Department

kfinken@keitu.com

From: Reinisch, Jerry <jerry_reinisch@fws.gov>
Sent: Tuesday, October 1, 2019 7:17 AM
To: Karine Finken
Cc: Kathleen Spilman; Derek Sondeland; Jaimee Antognazzi; Ken Dockweiler; Tyler Reece
Subject: Re: [EXTERNAL] Bridger South Bend 16-inch Crude Oil Pipeline Project - Dakota Skipper

Thank you!

Jerry D. Reinisch
Fish & Wildlife Biologist
Ecological Services
US Fish & Wildlife Service
3425 Miriam Drive
Bismarck, North Dakota 58501

(M) 701-250-4481 Ext 8267
(D) 701-333-0267
(C) 701-425-2133

On Mon, Sep 30, 2019 at 7:06 PM Karine Finken <kfinken@keitu.com> wrote:

> **Jerry,**
>
> **The attached kmz is what I have compiled so far to help Bridger with knowing where they should bore or narrow ROW. We will have more complete maps with shapefiles once the BE/EA is closer to being final and I can be sure to send them to you. The USFS biologists have not reviewed this yet so there may be some changes.**
>
> **Thanks,**
>
> **Karine**
>
> **From:** Kathleen Spilman [mailto:kspilman@keitu.com]
> **Sent:** Monday, September 30, 2019 3:50 PM
> **To:** 'Reinisch, Jerry' <jerry_reinisch@fws.gov>
> **Cc:** Derek Sondeland <dsondeland@keitu.com>; Karine Finken <kfinken@keitu.com>; Jaimee Antognazzi <jantognazzi@keitu.com>; Ken Dockweiler <Ken.Dockweiler@TrueCos.com>; Tyler Reece <tyler.reece@truecos.com>
> **Subject:** RE: [EXTERNAL] Bridger South Bend 16-inch Crude Oil Pipeline Project - Dakota Skipper

Jerry – client is also planning to go deeper than typical – 15 ft bgs – with the HDD to minimize frac outs. Thanks much for the help.

Derek – please compile the habitat boundaries for these areas as GIS shapefiles. You might as well include the areas that Bridger will need to narrow the construction ROW to avoid the other habitat found to pass along to Tyler. Run info by Karine before you release them since she was the one who led the field survey team.

Tyler – please note expected restriction to avoid construction in this area during the 6 week period June 10-July 15 – should include it in the project construction specs as well as prepositioned spill response equipment. If Bridger does not want to move one of their trailers down to the site – or if selected contractor does not have one - we can always bring Keitu's trailer down and have it in the area.

Kathye

From: Reinisch, Jerry <jerry_reinisch@fws.gov>
Sent: Monday, September 30, 2019 3:22 PM
To: Kathleen Spilman <kspilman@keitu.com>
Subject: Re: [EXTERNAL] Bridger South Bend 16-inch Crude Oil Pipeline Project - Dakota Skipper

Kathleen

These measures sound good to me. Be sure to have spill response equipment near these locations in the event of a blowout.

Dust suspension should be implemented at all times and we would prefer that no construction take place near areas of suitable habitat during the flight season; June 10-July 15. Would you have a shape file of these suitable habitat locations?

Thank you

Jerry

Jerry D. Reinisch

Fish & Wildlife Biologist

Ecological Services

US Fish & Wildlife Service

3425 Miriam Drive

Bismarck, North Dakota 58501

(M) 701-250-4481 Ext 8267

(D) 701-333-0267

(C) 701-425-2133

On Thu, Sep 26, 2019 at 11:44 AM Kathleen Spilman <kspilman@keitu.com> wrote:

> Jerry –
>
> Just to keep you in the loop, we completed the DASK habitat survey along the proposed South Bend route. We found several items. Most will be avoided by narrowing the construction zone in the vicinity. The others (4) will be bored to avoid any surface disturbance. We have already discussed this with our client. This plan is acceptable to them. They will incorporate that requirement into the project bid specs.
>
> We will incorporate into the mitigation plan that we will have a crew, including a biologist, go out and mark the boundary of the habitat with snow fence or flagged stakes before the start of construction.
>
> If this is not acceptable – please advise ASAP. We want to incorporate into the PSC permit application and the EA for the USFS provisions that are already acceptable to the US Fish & Wildlife Service.
>
> **Kathleen M. Spilman, P.E.**
>
> Managing Director
>
> **Keitu Engineers & Consultants, Inc.**

1403 27th St. NW; PO Box 98
Mandan, ND 58554

(701) 667-1808 x100

(701) 527-0277 iPhone

Exhibit B.14
U.S. Air Force

From:	Jaimee Antognazzi
To:	"cy.munos@us.af.mil"
Subject:	Bridger 16" Crude Oil Pipeline
Date:	Tuesday, October 8, 2019 2:31:48 PM
Attachments:	Full_Alignment_20191004.shx Full_Alignment_20191004.sbn Full_Alignment_20191004.sbx Full_Alignment_20191004.cpg Full_Alignment_20191004.dbf Full_Alignment_20191004.prj Full_Alignment_20191004.shp

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Mr. Cy Munos,

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

The purpose of this contact is to afford Cable Affairs the opportunity to assess the Project area for the presence of Intercontinental Ballistic Missile ("ICBM") related systems that could potentially be impacted, and to provide comments. We respectfully request that any specific concerns known in the area are brought to our attention to ensure we focus on those items. Attached are the GIS Shapefiles of the entire length of the proposed Project intended for the Minot Air Force Base Cable Affairs Office to review.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance.

Jaimee Antognazzi, CSP
Operations Manager
Keitu Engineers & Consultants
1403 27th Street NW
Mandan, ND 58554
(701) 667-1808 Ext# 105

From: MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK
To: Jaimee Antognazzi
Subject: RE: [Non-DoD Source] Bridger 16" Crude Oil Pipeline
Date: Wednesday, October 9, 2019 7:50:29 AM

Jaimee,

We have no assets in the project area. We appreciate the heads up. Have a good day.

Cy Munos
Chief, Cable Affairs
91 MMXS/MMXSFK
Minot AFB, ND
DSN: 453-6053
COMM.: 701-723-6053
CELL: 701-720-8274

-----Original Message-----
From: Jaimee Antognazzi <jantognazzi@keitu.com>
Sent: Tuesday, October 8, 2019 2:32 PM
To: MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK <cy.munos@us.af.mil>
Subject: [Non-DoD Source] Bridger 16" Crude Oil Pipeline

Mr. Cy Munos,

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Jaimee Antognazzi, CSP

Operations Manager

Keitu Engineers & Consultants

1403 27th Street NW

Mandan, ND 58554

(701) 667-1808 Ext# 105

Exhibit B.15
ND Department of Agriculture

September 30, 2019

ND Department of Agriculture
600 E. Boulevard Ave, Dept. 602
Bismarck, ND 58505-0020

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

ND Department of Agriculture
600 E. Boulevard Ave, Dept. 602
Bismarck, ND 58505-0020

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.16
ND Soil Conservation Committee

September 30, 2019

Scott Hochhalter, State Soil Specialist
NDSU Extension Service
2718 Gateway Ave., Suite 104
Bismarck, ND 58503

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Scott Hochhalter, State Soil Specialist
NDSU Extension Service
2718 Gateway Ave., Suite 104
Bismarck, ND 58503

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.17
McKenzie County Commission

September 30, 2019

McKenzie County Commission
20 5th St. NW, Ste 543
Watford City, ND 58554

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

McKenzie County Commission
20 5th St. NW, Ste 543
Watford City, ND 58554

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

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Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.18
Golden Valley County Commission

September 30, 2019

Golden Valley County Commission
PO Box 104
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Golden Valley County Commission
PO Box 104
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.19
USFS McKenzie Ranger District

September 30, 2019

McKenzie Ranger District
1905 S Main Street
Watford City, ND 58554

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

McKenzie Ranger District
1905 S Main Street
Watford City, ND 58554

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

From: Grotte, Kim -FS
To: Karine Finken
Cc: Riely, Debbie - FS
Subject: RE: South Bend EA
Date: Friday, September 06, 2019 8:15:35 AM
Attachments: image001.png

Karine,

It would have been a good step to look at the actual most complete route map a bit as to be able to advise you folks on the survey needs and known resource concerns for the linear and area around it.

I did visit with Debbie about getting you NEPA templates/examples for how our folks like to see these documents formatted and such. Debbie thought that she could provide you examples that were done recently for a similar sized project proposal. I will include here on this e-mail and she can fire them out to you when she can. We should try to get a kick off meeting when it is decided to proceed with the project as to give you folks the guidance on how to proceed and the steps in doing so for our NEPA EA process.

Kim Grotte
Cost Reimbursement Pipeline Specialist

Forest Service
Dakota Prairie Grassland, McKenzie Ranger District

p: 701-842-8509
f: 701-842-8544
Kim.Grotte@usda.gov

1905 S. Main St.
Watford City, ND 58854
www.fs.fed.us

From: Karine Finken [mailto:kfinken@keitu.com]
Sent: Wednesday, September 4, 2019 11:17 AM
To: Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Jaimee Antognazzi <jantognazzi@keitu.com>
Subject: South Bend EA

Kim,

We discussed the proposed South Bend project last month you mentioned you may be able to provide some examples or templates for the EA. I was just checking in to see if you were able to find anything available.

We're still working on Bridger getting the SF-299 submitted and still working on the field surveys for archaeology for this project.

Karine Finken
Project Manager



(701) 667-1800 www.keitu.com

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KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

September 16, 2019

Kim Grotte
USFS McKenzie Ranger District
1905 S. Main Street
Watford City, ND 58854

Bridger Pipeline, LLC – SF299 Application

Please find enclosed one (1) SF299 application for the Bridger 16 inch Pipeline.

Keitu appreciates the opportunity to work with you on this project and the assistance you have provided to date. If you have questions, please call Kathleen Spilman or myself to discuss them further. My phone number is (701) 667-1800.

Sincerely,

Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosures: 1 SF299 Application

STANDARD FORM 299 (05/09)
Prescribed by DOI/USDA/DOT
P.L. 96-487 and Federal
Register Notice 5-22-95

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS AND FACILITIES ON FEDERAL LANDS

FORM APPROVED
OMB NO. 0596-0082

FOR AGENCY USE ONLY

NOTE: Before completing and filing the application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the preapplication meeting.

Application Number

Date Filed

1. Name and address of applicant *(include zip code)*

Tom Litman – Land Supervisor
Bridger Pipeline LLC
PO Drawer 2360
Casper, Wyoming 82602

2. Name, title, and address of authorized agent if different from item 1 *(include zip code)*

Keitu Engineers & Consultants, Inc.
1403 27th St NW
PO Box 98
Mandan, ND 58554-0098

3. Telephone (area code)

Applicant
(580) 242-6040

Authorized Agent
(701) 667-1800

4. As applicant are you? *(check one)*
- a. ☐ Individual
- b. ☒ Corporation*
- c. ☐ Partnership/Association*
- d. ☐ State Government/State Agency
- e. ☐ Local Government
- f. ☐ Federal Agency

* *If checked, complete supplemental page*

5. Specify what application is for: *(check one)*
- a. ☒ New authorization
- b. ☐ Renewing existing authorization No.
- c. ☐ Amend existing authorization No.
- d. ☐ Assign existing authorization No.
- e. ☐ Existing use for which no authorization has been received *
- f. ☐ Other*

* *If checked, provide details under item 7*

6. If an individual, or partnership are you a citizen(s) of the United States? ☒ Yes ☐ No

7. Project description (describe in detail): (a) Type of system or facility, *(e.g., canal, pipeline, road);* (b) related structures and facilities; (c) physical specifications *(Length, width, grading, etc.)*; (d) term of years needed: (e) time of year of use or operation; (f) Volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for construction *(Attach additional sheets, if additional space is needed.)*

(a) Bridger Pipeline is proposing a 16-inch steel pipeline to transport crude oil from a station that will be located near Johnson's Corner in Section 25 T150N R95W and wil terminate at Bridger's Baker/Sandstone Station near Plevna, MT located in Section 4 T17N R58E. The proposed pipeline would transect USFS lands in the following sections: T148N R101W Sections 33 & 34; T148N R100W Section 17, T147N R102W Section 25; T147N R101W Sections 4, 8, 17-19; T146N R103W Sections 13, 23, 24, 36, 33, 34; T146N, R102W Sections 4, 5, 8, 7, 18; T145N R104W Sections 24-26, 34, 35; T145 R103W Sections 4, 18,19.

(b) The proposed pipeline will parallel existing access roads and existing utility corridors wherever possible. There will be at least one tank constructed at the Johnson's Corner origination point. Rectifiers,cathodic protection test stations and above ground block valves will also be located along the proposed route.

(c) The project is approximately 19 miles on USFS land and will be subsurface. The permanent ROW would be 50 feet and the temporary construction ROW would be 110 feet. The construction corridor would be re-graded and re-vegetated using native seed mix to pre-construction standards. The pipe will be 16 inch OD, .375-inch wall thickness wall x52 grade steel pipe with an FBE coating. The pipeline will be installed at a minimum depth of 60 inches.

(d) A 40 year minimum term is needed for this proposed project.

(e) This pipeline would be in use at all times after construction and testing of the pipe is complete.

(f) The pipeline would have an initial capacity of 144,000 barrel per day.

(g) Construction will begin after all necessary approvals and permits are received and the Project is approved by the ND Public Service Commission (NDPSC). The duration of the construction for the proposed project will be five to six months, however, construction is weather dependent.

(h) Temporary work spaces will be needed on USFS land, exact locations are unknown at this time but will be provided to USFS when locations are known.

(Continued on next page)

8. Attach a map covering area and show location of project proposal

9. State or Local government approval: ☐ Attached ☒ Applied for ☐ Not Required

10. Nonreturnable application fee: ☐ Attached ☒ Not required

11. Does project cross international boundary or affect international waterways? ☐ Yes ☒ No *(if "yes," indicate on map)*

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

Bridger is headquartered in Casper, Wyoming and operates approximately 1200 miles of crude oil gathering and mainline pipeline half of which is in North Dakota, and about 400,000 bbls of crude oil storage. Bridger is experienced in managing construction and operating pipeline systems that focus on meeting all regulations and operating with an emphasis on environmental protection and the safety of the public and its employees.

13a. Describe other reasonable alternative routes and modes considered.

Alternative 1: Oil trucks gather oil directly from Johnson's Corner, and because current pipelines are already full it would get trucked to the nearest rail yard.

Alternative 2: Preferred alternative of installing the proposed transportation pipeline for crude oil.

b. Why were these alternatives not selected?

More oil would be transported via railroad and this method is considerably less safe then pipeline. This alternative was determined to have more environmental impacts than the preferred route. The Alternative 2 is more economically feasible, causes less truck & rail traffic, and utilizes an energy resource compared to Alternative 1.

c. Give explanation as to why it is necessary to cross Federal Lands.

Putting part of the system on USFS land allows Bridger to significantly shorten the length of the project and avoid a major waterbody crossing thereby causing less environmental disturbance. On all USFS land, this new pipeline will be adjacent to an existing crude oil pipeline. On some USFS land, this new pipeline will be adjacent to gas pipelines and/or roads.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. *(Specify number, date, code, or name)*

ND PSC's approval of the Corridor and Route Application.

ND Department of Health construction stormwater NPDES permit will be obtained prior to construction.

Keitu Engineers & Consultants, Inc, will complete field studies and an environmental assesment. A local archeological constulting company will complete a Class I and Class III study of the Forest Service Area..

Submitted: SF-299 application

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

(a) The total estimated cost of construction is $96 million. The majority of the costs is in the construction phase. Yearly operational and maintenance costs are estimated at $21 million per year.

(b) Alternative 1 would have no cost to Bridger.

(c) The installation of the pipeline would cause the reduction of truck and rail traffic, provide a safer more efficient way to transport crude oil, and would utilize crude oil as an energy resource to the public.

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

(Continued on next page)

Construction of the proposed project will result in the hiring of pipeline contractors, equipment contractors, suppliers and regional testing firms with much of the labor force coming from the regional labor pool. During the anticipated months of construction and testing, these workers will have significant positive economic impact, including pay roll tax, local expenditures, sales tax. Short term, temporary effects include increased population via construction workers, putting an increased need for housing. Long term effects include reducing overall truck traffic; therefore, not hampering the rural lifestyle.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

(a) There will be negligible, short term, temporary impacts to air quality, by increasing localized dust during construction and increased emissions from the construction vehicles. Long term beneficial impacts include the reduction of road traffic thus increasing safety of rural roads in the area. No significant negative impact is expected for the proposed project.

(b) Short term, negligible visual impacts include an increase in construction equipment; however, this will be temporary. The only above ground items that will be installed are line markers. No aboveground facilities will be installed on Federal land.

(c) The proposed project is located within several different area types. Ephemeral drainages and swales will be avoided. Temporary, short term, negligible impacts include altering drainage of the surrounding land during construction (minor impact if there is substantial rainfall). Stormwater best management practice's will be applied when necessary. Natural drainage features will be restored to pre-construction contours after construction is complete. Project contractors will be expected to have a current stormwater pollution prevention plan (SWPPP) in place before the start of construction. No effects to ground water are expected.

(d) Unnamed seasonal creeks and their drainages are crossed by the proposed project although not on USFS lands. Streams and creeks will be bored and graded back to pre-construction standards, wetlands may be bored depending on the size of the area. Best management practices will be applied when necessary. Vegetative buffers will be used near waterbodies to prevent erosion and sediment from entering waterbodies.

(e) Existing noise levels include truck traffic on existing access roads. Short term, negligible impacts to noise is expected during construction, due to construction related noise. These increase in noise levels due to heavy equipment operation will be limited to the period of construction, typically during daylight hours. No long term noise impacts are expected during the normal operation of the pipeline.

(f) Short term, minor effects are expected to the surface of the land, including vegetation, soil and soil stability. However, with proper re-grading and re-vegetation, significant, long term effects are not expected. Trees will need to be removed in order to construct safely. Bridger will replant any trees that are removed according to a tree and shrub mitigation plan approved by the ND PSC. Short term, minor effects to soil include the loss of soil productivity due to erosion, soil mixing or soil compaction. No long term effects with proper re-grading and re-vegetation.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plantlife, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

(a) Construction of the proposed project will have a short-term, minor impact on domestic animals and wildlife. An aerial raptor survey will be conducted to ensure, no trees will be removed that has either an inactive or active nest. The clearing of vegetation will temporarily reduce cover, nesting and foraging habitat for some species. Small, slower moving species may be lost during construction. However, species will generally establish themselves into adjacent habitat, away from the disturbance area. These aggravated species tend to be less viable than those left in their natural state. Therefore, short term, minor impacts are expected because of displaced species due to construction of the pipeline and other oil-related activities occuring within the vicinity of the proposed pipeline. However, once the habitat is reclaimed, wildlife species are expected to return.

Impacts to threatened and endangered species are not expected occur. No effects are anticipated for the northern long-eared bat (*Myotis* septentrionalis), red knot (*Calidris canutus* rufa), piping plover (*Charadrius melodus*), least tern (*Sternula antillarum*), whooping crane (*Grus americana*), and pallid sturgeon (*Scaphirhynchus albus*). The Dakota skipper (*Herperia*

(Continued on next page)

dacotae) was identified along the pipeline right-of-way in previously conducted field studies. Any areas identified as potential Dakota Skipper habitat will be bored.

(b) There will be no impacts to marine mammals.

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCIA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

Only crude oil will be transported in this system as defined and exempted above. No hazardous materials will be permanently stored on USFS lands.

20. Name all the Department(s)/Agency(ies) where this application is being filed.

United States Forest Service – Dakota Prairie Grasslands – McKenzie Ranger District.

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant	Date
Katie McSmith P.E.	9/16/2019

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on next page)

GENERAL INFORMATION
ALASKA NATIONAL INTEREST LANDS

This application will be used when applying for a right-of-way, permit, license, lease, or certificate for the use of Federal lands which lie within conservation system units and National Recreation or Conservation Areas as defined in the Alaska National Interest lands Conservation Act. Conservation system units include the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation System, and National Forest Monuments.

Transportation and utility systems and facility uses for which the application may be used are:

1. Canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other systems for the transportation of water.

2. Pipelines and other systems for the transportation of liquids other than water, including oil, natural gas, synthetic liquid and gaseous fuels, and any refined product produced therefrom.

3. Pipelines, slurry and emulsion systems, and conveyor belts for transportation of solid materials.

4. Systems for the transmission and distribution of electric energy.

5. Systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communications.

6. Improved right-of-way for snow machines, air cushion vehicles, and all-terrain vehicles.

7. Roads, highways, railroads, tunnels, tramways, airports, landing strips, docks, and other systems of general transportation.

This application must be filed simultaneously with each Federal department or agency requiring authorization to establish and operate your proposal.

In Alaska, the following agencies will help the applicant file an application and identify the other agencies the applicant should contact and possibly file with:

Department of Agriculture
Regional Forester, Forest Service (USFS)
Federal Office Building,
P.O. Box 21628
Juneau, Alaska 99802-1628
Telephone: (907) 586-7847 *(or a local Forest Service Office)*

Department of the Interior
Bureau of Indian Affairs (BIA)
Juneau Area Office
Federal Building Annex
9109 Mendenhall Mall Road, Suite 5
Juneau, Alaska 99802
Telephone: (907) 586-7177

Department of the Interior
Bureau of Land Management
222 West 7th Avenue
P.O. Box 13
Anchorage, Alaska 99513-7599
Telephone: (907) 271-5477 (or a local BLM Office)

U.S. Fish & Wildlife Service (FWS)
Office of the Regional Director
1011 East Tudor Road
Anchorage, Alaska 99503
Telephone: (907) 786-3440

National Park Service (NPA)
Alaska Regional Office,
2225 Gambell St., Rm. 107
Anchorage, Alaska 99502-2892
Telephone: (907) 786-3440

Note - Filings with any Interior agency may be filed with any office noted above or with the Office of the Secretary of the Interior, Regional Environmental Office,r P.O. Box 120, 1675 C Street, Anchorage, Alaska 9513.

Department of Transportation
Federal Aviation Administration
Alaska Region AAL-4, 222 West 7th Ave., Box 14
Anchorage, Alaska 99513-7587
Telephone: (907) 271-5285

NOTE - The Department of Transportation has established the above central filing point for agencies within that Department. Affected agencies are: Federal Aviation Administration (FAA), Coast Guard (USCG), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA).

OTHER THAN ALASKA NATIONAL INTEREST LANDS

Use of this form is not limited to National Interest Conservation Lands of Alaska.

Individual department/agencies may authorize the use of this form by applicants for transportation and utility systems and facilities on other Federal lands outside those areas described above.

For proposals located outside of Alaska, applications will be filed at the local agency office or at a location specified by the responsible Federal agency.

SPECIFIC INSTRUCTIONS
(Items not listed are self-explanatory)

7 Attach preliminary site and facility construction plans. The responsible agency will provide instructions whenever specific plans are required.

8 Generally, the map must show the section(s), township(s), and range(s) within which the project is to be located. Show the proposed location of the project on the map as accurately as possible. Some agencies require detailed survey maps. The responsible agency will provide additional instructions.

9, 10, and 12 The responsible agency will provide additional instructions.

13 Providing information on alternate routes and modes in as much detail as possible, discussing why certain routes or modes were rejected and why it is necessary to cross Federal lands will assist the agency(ies) in processing your application and reaching a final decision. Include only reasonable alternate routes and modes as related to current technology and economics.

14 The responsible agency will provide instructions.

15 Generally, a simple statement of the purpose of the proposal will be sufficient. However, major proposals located in critical or sensitive areas may require a full analysis with additional specific information. The responsible agency will provide additional instructions.

16 through 19 Providing this information is as much detail as possible will assist the Federal agency(ies) in processing the application and reaching a decision. When completing these items, you should use a sound judgment in furnishing relevant information. Fore example, if the project is not near a stream or other body of water, do not address this subject. The responsible agency will provide additional instructions.

Application must be signed by the applicant or applicant's authorized representative.

EFFECT OF NOT PROVIDING INFORMATION: Disclosure of the information is voluntary. If all the information is not provided, the application may be rejected.

DATA COLLECTION STATEMENT

The Federal agencies collect this information from applicants requesting right-of-way, permit, license, lease, or certification for the use of Federal lands. The Federal agencies use this information to evaluate the applicant's proposal. The public is obligated to submit this form if they wish to obtain permission to use Federal lands.

(For supplemental, see page 6)

SUPPLEMENTAL		
NOTE: The responsible agency(ies) will provide instructions	CHECK APPROPRIATE BLOCK	
I - PRIVATE CORPORATIONS	ATTACHED	FILED*
a. Articles of Incorporation	☐	☒
b. Corporation Bylaws	☐	☒
c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State	☐	☒
d. Copy of resolution authorizing filing	☐	☒
e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate.	☐	☒
f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications.	☒	☐
g. If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal.	☒	☐
II - PUBLIC CORPORATIONS		
a. Copy of law forming corporation	☐	☐
b. Proof of organization	☐	☐
c. Copy of Bylaws	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. If application is for an oil or gas pipeline, provide information required by item "I-f" and "I-g" above.	☐	☐
III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY		
a. Articles of association, if any	☐	☐
b. If one partner is authorized to sign, resolution authorizing action is	☐	☐
c. Name and address of each participant, partner, association, or other	☐	☐
d. If application is for an oil or gas pipeline, provide information required by item "I-f" and "I-g" above.	☐	☐

* If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information *(e.g., number, date, code, name)*. If not on file or current, attach the requested information.

Originally filed with the US Bureau of Land Management January 10,2013 -- assigned Right of-way Serial Number NDM 105398
BLM Cost Recovery Project Number L51010000 EROOOO LVRWE13E0590

However, that application included a branch to connect oil production wells on US Corps of Engineering and potentially US Bureau of Indian Affair lands. Access to those wells was subsequently eliminated and that project terminated. The scope of the project is now limited to just USFS lands.

(Continued on page 7)

NOTICES

Note: This applies to the Department of Agriculture/Forest Service (FS)

This information is needed by the Forest Service to evaluate the requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act , Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations or the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

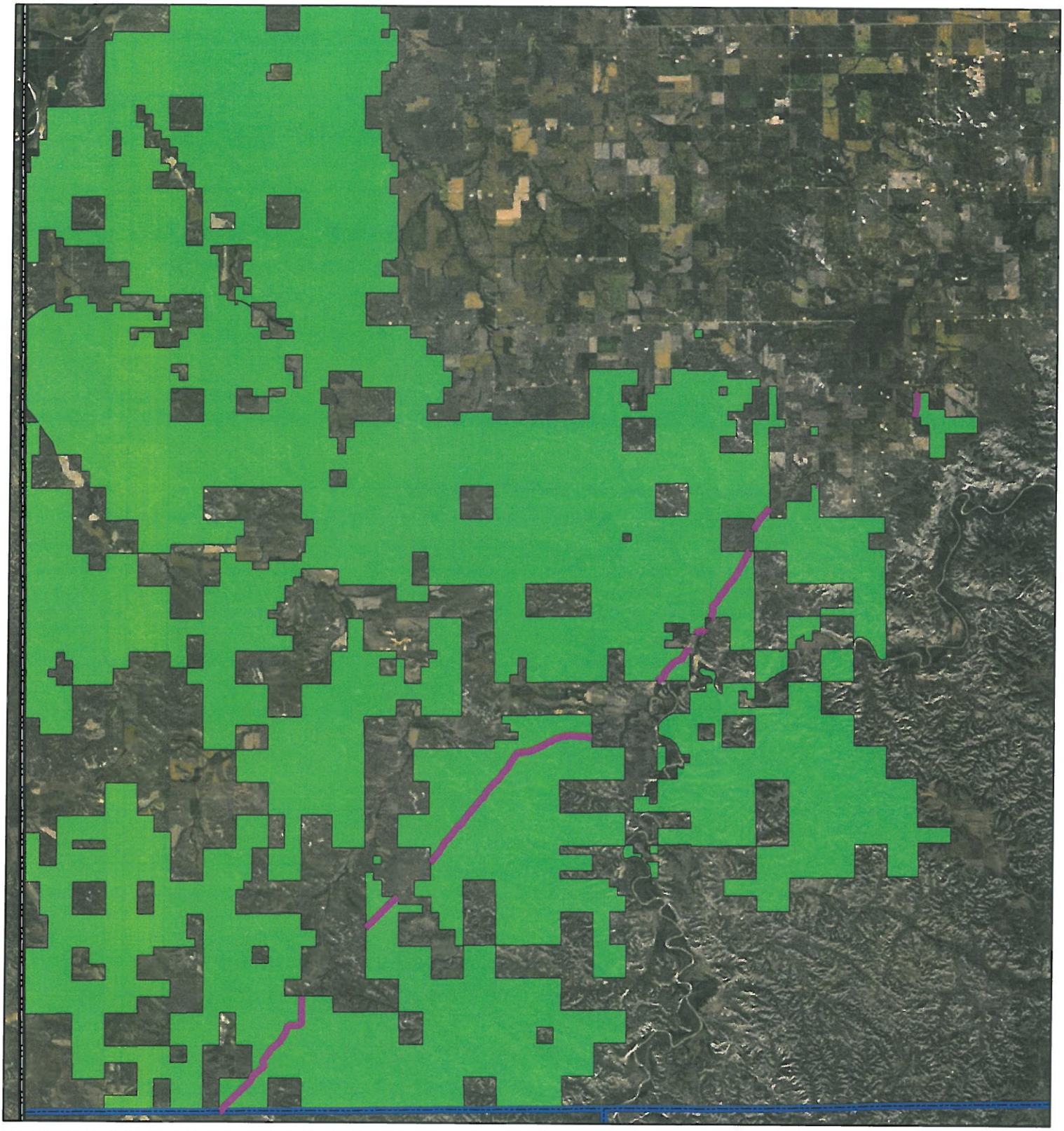
BURDEN AND NONDISCRIMINATION STATEMENTS

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 8 hours hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs. Persons with disabilities who require alternative means for communication of program information (Braille large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.



Bridger 16-Inch Crude Pipeline

Alignment On USFS Lands

North Dakota County Boundary

Forest Service Lands

State Boarder

McKenzie County
North Dakota

N

Kilometers
0 9 18

Miles
0 6 12

kfinken@keitu.com

From: Karine Finken <kfinken@keitu.com>
Sent: Tuesday, September 24, 2019 2:14 PM
To: 'Grotte, Kim -FS'
Cc: Jaimee Antognazzi
Subject: South Bend Alignment
Attachments: North_Dakota_Alignment.kmz

Kim,

Sorry it has been taking while to get you this centerline. I know you've asked for it a couple time to review. It should be close to the proposed route on USFS lands but on private lands survey crews are still out so tweaks to the line will happen.

Karine Finken
Project Manager

KEITU
ENGINEERS & CONSULTANTS, INC.

(701) 667-1800 www.keitu.com

MEETING MINUTES FROM SOUTH BEND KICK-OFF MEETING

DECEMBER 2, 2019 WATFORD CITY, NORTH DAKOTA

- Meeting begins
    - USFS personnel present Cale Bickerdyke, Debbie Riely, Kim Grotte, Laurie Gawin, Sarah Bickerdyke
    - Bridger personnel present Don Clark, Ken Dockweiler, Tommy Massengale
    - Keitu Engineers and Consultants personnel present Karine Finken

- After introductions Kim Grotte describes the proposed project, Bridger's existing infrastructure in the area that is also on USFS land and pipelines that are near and parallel the proposed project. Don Clark provides additional input on specifics of the existing infrastructure. Kim opens up the floor for further discussion.

- Kim Grotte and Debbie Riely approved Karine Finken working directly with Debbie as long as Kim Grotte was CC'ed and including in discussion.

- Sara Bickerdyke asks about what surveys have been completed.
    - Karine Finken provides overview of botany and wildlife surveys and cultural resources that have been completed. An aerial raptor survey is planned for the week of December 9th. All surveys have been completed on USFS lands to date. There was a couple reroutes that needed after September 15th botany. Kim Grotte asked Laurie Gawin if that was still okay. Laurie Gawin explained the late season frost made that allowable.

- Sara Bickerdyke mentions the Dakota Skipper may need occupancy surveys based on past projects and length of the proposed South Bend project on USFS lands. Provided input on guidance documents to follow such as USFWS Dakota skipper survey protocol, and occupancy surveys are conducted in July. She said approved occupancy surveyors can be provided upon request. Karine Finken stated Jerry Reinisch had provided that information but will reach out to the USFS if we need it again. Sara Bickerdyke stated surveys to date may not be adequate.
    - Karine mentioned discussion has been ongoing with Jerry Reinisch of the USFWS. Stated discussion began with Jerry Reinisch in an August or September of 2019 starting at an interagency meeting in Bismarck and has been ongoing during the planning and routing process. Jerry Reinisch has stated no occupancy surveys were required if Bridger avoids Type B habitats via bore.
    - Sara Bickerdyke stated she will need to work with Jerry Reinisch directly to concur on how Bridger can move forward with avoiding Dakota skipper impacts and whether occupancy surveys are required.
    - Karine Finken offered to provide Sara Bickerdyke emails of previous communication with Jerry Reinisch. Karine Finken will let Jerry Reinisch know he needs to work with Sara Bickerdyke and future communications will include USFS. When surveys need to be updated Karine Finken stated she will make sure the proper areas are surveyed after

guidance is given on USFS/USFWS path to move forward on avoiding the Dakota skipper impacts.
    - Sara Bickerdyke stated she will follow-up with Jerry Reinisch.
    - Kim Grotte offered to have Karine Finken send information directly to Sarah Bickerdyke as long as Kim was CC'ed and included in future discussion.

- Karine Finken asked if the occupancy surveys are only needed on USFS lands and not typically required on private lands. Sara Bickerdyke concurred.

- Karine Finken confirmed with USFS staff that a BA/BE will be required prior to the EA.

- Karine Finken asked if drafts can be sent prior to final surveys completed to help the review process move faster. Sarah Bickerdyke and Debbie Riely stated it depended on the type of information and how complete the documents were but Keitu could try.

- Debbie Riely and Kim Grotte discussed updated EA templates and guidance documents to help streamline the review process. Debbie Riely discussed the scoping procedure, combined scoping, document draft, and that is the next step in moving forward in the NEPA process.

- Cale Bickerdyke asked Bridger how far the line will parallel from existing lines and pipeline size
    - Don Clark replied that they will be within 15' and it is a 16" line.

- Karine Finken asked if a map showing the lines that the proposed South Bend line will parallel would help in the review and scoping process.
    - Sarah Bickerdyke replied it couldn't hurt.

- Cale Bickerdyke mentioned new staff changes with the Watford City USFS office including new District Ranger and Archaeologist. The proposed project will likely be working with the new archaeologist once they are hired. Cale Bickerdyke stated if occupancy surveys are required approval an approval estimate for project start is July 2021.
    - Laurie Gawin mentioned Liv may help with the archaeology on this project until they get new staff.

- Kim Grotte and Cale Bickerdyke mentioned an option of a"lift and lay" of the line on USFS if the line is constructed within an already approved easement of Bridger's.
    - Don Clark and Ken Dockweiler said it may be an idea to look into to see if possible.
    - Further discussion was had with USFS staff on the pull and connect method.
    - Debbie Riely stated that they will look into this method of installing the pipeline, have more internal USFS discussion and will get back to Bridger.

- Cale Bickerdyke asked for an update on the proposed route through a cultural resource area and SHPO.
    - Karine Finken will look into and update from Beaver Creek Archaeology and get back to Cale.

FOLLOW-UP AND ACTION ITEMS LIST

1. USFS will communicate with Jerry Reinisch of the USFWS on how to move forward with avoiding Dakota skipper impacts during construction.
2. USFS will look into the feasibility of a pull and connect method of installing the pipeline.
3. Karine Finken will let USFWS know they need to communicate and include USFS in discussions.
4. Karine Finken will send past communications with the USFWS to Sara Bickerdyke.
5. Karine Finken will work with Debbie Riely on scoping letter template and information to be sent out for scoping including a map with the help showing the lines the proposed project parallels on USFS lands.
6. Karine Finken will check with Wade Burns of Beaver Creek Archaeology on the cultural resource site routing progress.

kfinken@keitu.com

From: Warm, Arden A -FS <arden.warm@usda.gov>
Sent: Thursday, March 5, 2020 1:47 PM
To: kfinken@keitu.com
Subject: Sharp-tailed grouse info....
Attachments: svingen_stg_leksrvyprotocol_grandriverrd.doc

Karine;

I was forwarded your questions by Meghan….

I guess my first question is – is this for a specific project or in general?

When we release the ("annual"; coming out soon-ish) bio-letter that outlines our general requirements, typically, we have also made available the latest WL/Bot GIS layers which includes the grouse lek data. The FS, itself, has not updated the location data, sorry to say (the info is old, in general), so if you're looking for the "latest-greatest" GIS layer of lek info, it is not going to be different from last year's GIS info….in regards to leks, especially….

The only potential change of locational information could be the research of a Phd student in extreme western part of the McKenzie RD who collected some lek information. I can't say if the leks were already "known" (i.e. historical) or not, tho?

And lastly, we typically census some leks, annually, within identified '4 mile by 4 mile' lek blocks across the LMNG. We have 10 of them scattered across the two Districts of the LMNG…..

But that is all we have for sharp-tailed grouse….

Attached we have our basic protocol for doing sharpie lek survey's…tho this is for Grand River RD, we have adapted it for the LMNG as well….

If you have any more questions, please feel free to contact me!

Arden Warm
Supervisory Wildlife Biologist
Forest Service
Medora Ranger District, Dakota Prairie Grasslands
p: 701-227-7815
arden.warm@usda.gov
99 23rd Ave W., Suite B
Dickinson, ND 58601
www.fs.fed.us
Caring for the land and serving people

Hi again,

Sorry to bother you but is there a sharp-tailed grouse survey protocol that the USFS requires or certain document we should use as reference?

Thank you,

Karine Finken
Project Manager
KEITU
ENGINEERS & CONSULTANTS, INC.

Hi Meghan,

I was wondering if there is a recent sharp-tailed grouse lek shapefiles we could obtain?

Thank you,

Karine Finken
Project Manager
KEITU
ENGINEERS & CONSULTANTS, INC.

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kfinken@keitu.com

From: Grotte, Kim -FS <kim.grotte@usda.gov>
Sent: Wednesday, May 20, 2020 8:38 AM
To: Karine Finken
Cc: Warm, Arden A -FS; Sjursen, Phil -FS
Subject: RE: Follow-up on SB request for shapefiles

Karine,

We may need to remove some trees/shrubs in a few spots. This route goes through some areas with woody veg. Keep the bat roosting timing window in our plan thought too. We will HDD bore substantial drainages , creeks and such. Where we parallel other pipelines we may need to clear some woody veg on this pipe side of right-of-way. You should be able to get the other info from google earth or NAIP imagery for woody and such.

Kim

From: Karine Finken [mailto:kfinken@keitu.com]
Sent: Tuesday, May 19, 2020 3:54 PM
To: Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Warm, Arden A -FS <arden.warm@usda.gov>; Zach Peterson <zpeterson@keitu.com>
Subject: Follow-up on SB request for shapefiles

Hi Kim,

Sorry for the short call earlier, A/C is out in my car and I had the windows open ☹.

I was able to check my email I sent on the 7th and we were looking for the "Previous Dakota skipper Habitat and Occurrence Surveys", Broken Lands, and Tree/Shrub Layers, per page 8 of the Biological Survey Guidelines 2020 for the South Bend project,

Also, is it a requirement for pipelines to bore under trees on USFS lands? Trying to anticipate if Bridger will have to bore those areas.

Thank you,

Karine Finken
Project Manager
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kfinken@keitu.com

From: Grotte, Kim -FS <kim.grotte@usda.gov>
Sent: Tuesday, June 30, 2020 10:19 AM
To: kfinken keitu.com
Subject: RE: S Bend DASK surveys

Hopefully they will get your project proposal end of the district completed. Thanks

Kim

From: kfinken keitu.com [mailto:kfinken@keitu.com]
Sent: Tuesday, June 30, 2020 10:00 AM
To: Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: jantognazzi <jantognazzi@keitu.com>
Subject: S Bend DASK surveys

Hi Kim,

I was able to catch up with the butterfly guys yesterday. I wasn't sure if they gave you a heads up but we are out in the field this week and likely next week working on the absence/presence surveys. They did tell me they touched base with Sara prior to fieldwork.

They were on the s end of the line earlier this week working northeast on USFS lands.

I thought I'd keep you in the loop in case you weren't.

Sorry for any typos working from my cell this week.

-Karine

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kfinken@keitu.com

From: Riely, Debbie - FS <debbie.riely@usda.gov>
Sent: Monday, November 16, 2020 11:19 AM
To: Grotte, Kim -FS; Karine Finken
Cc: ken.dockweiler@truecos.com; kspilman@keitu.com; jantognazzi@keitu.com; Bickerdyke, Cale E -FS
Subject: RE: Draft scoping letter - South Bend

To answer Kim's question below, the FS will review the biological surveys completed on FS lands, and will take into account the intermingled private lands within the McKenzie Ranger District boundary in our cumulative effects analysis discussion. So the only route we need to see on our scoping map is the route within the boundary of the McKenzie Ranger District. I know that sounds like NEPA talk here, so if anyone has any questions on that, please feel free to contact me.

Also, I just wanted to give you a heads up that we will be mailing the scoping letter out from our office once we have the final letter, so you won't need to worry about mailing them. Thank you!

Debbie Riely
NEPA Planner
Forest Service
Dakota Prairie Grasslands, McKenzie Ranger District
p: 701-842-8522
f: 701-842-8544
debbie.riely@usda.gov
1905 Main Street South
Watford City, ND 58854
www.fs.fed.us
Caring for the land and serving people

EXEMPT FROM RELEASE UNDER FOIA: EXEMPTION #5…DELIBERATIVE PROCESS

From: Grotte, Kim -FS
Sent: Monday, November 16, 2020 7:51 AM
To: Karine Finken <kfinken@keitu.com>; Riely, Debbie - FS <debbie.riely@usda.gov>
Cc: ken.dockweiler@truecos.com; kspilman@keitu.com; jantognazzi@keitu.com; Bickerdyke, Cale E -FS <cale.bickerdyke@usda.gov>
Subject: RE: Draft scoping letter - South Bend

Hello folks,

Yeah, Will need to take a peek at the map before it goes out.

Debbie how much info needs to be included for the entire route on this map? Our analysis for DASK and other sensitive resource concerns on the entire route needs to be thought out as to how hard we will be involved with these on the private and the entire route as compared to our involvement on FS lands on the McKenzie District.

Kim Grotte
Area Minerals Manager

Forest Service
McKenzie Ranger District
Dakota Prairie Grassland,

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f: 701-842-8544
Kim.Grotte@usda.gov

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Watford City, ND 58854
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From: Karine Finken <kfinken@keitu.com>
Sent: Thursday, November 12, 2020 9:47 AM
To: Riely, Debbie - FS <debbie.riely@usda.gov>
Cc: ken.dockweiler@truecos.com; kspilman@keitu.com; jantognazzi@keitu.com; Bickerdyke, Cale E -FS <cale.bickerdyke@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: RE: Draft scoping letter - South Bend

Hi Debbie,

We'll get this updated with a map and I expect to have this back to you early next week.

Thank you,

Karine Finken
Project Manager

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ENGINEERS & CONSULTANTS, INC.

(701) 667-1800 www.keitu.com

From: Riely, Debbie - FS [mailto:debbie.riely@usda.gov]
Sent: Thursday, November 12, 2020 8:56 AM
To: kfinken@keitu.com
Cc: ken.dockweiler@truecos.com; kspilman@keitu.com; jantognazzi@keitu.com; Bickerdyke, Cale E -FS <cale.bickerdyke@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: Draft scoping letter - South Bend

Good morning Karine,

Attached are edits to the draft scoping letter. There are a just a couple of places where we left comments for you to fill in some information, please. And if you could also please work on a map to go along with the scoping letter. We are looking to show only the portion of the pipeline from its entry point into USFS lands to the exit point of USFS lands, with major roads, townships and ranges labeled, and showing major points of reference, such as towns. If you run into any problems with that, please just let us know and we can work on it in house as well. As always, if you run into any questions please feel free to reach out. Thank you, Debbie

Debbie Riely
NEPA Planner

Forest Service
Dakota Prairie Grasslands, McKenzie Ranger District

p: 701-842-8522
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kfinken@keitu.com

From: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Sent: Wednesday, December 2, 2020 4:58 PM
To: Karine Finken; Bickerdyke, Cale E -FS; Grotte, Kim -FS
Cc: Riely, Debbie - FS; 'Jaimee Antognazzi'; 'Ken Dockweiler'; 'Tom Litman'; Kruse, Andrea - FS; 'Raina Hanley'; 'Wade Burns'
Subject: RE: South Bend Onsite Discussion

Hi there,

Just want to follow up on this. The BA is all set & signed off with the present route – sounds like there may be some route changes in the works. Certainly wildlife resources may be affected differently, but this is something that can be discussed in more detail once we see the new proposed route.

In regards to the BE, though, there really shouldn't be any hold up on that for DASK language. Because a BA was completed for federally listed species and critical habitats, your BE should only be covering RFSS and raptor species (see page 10 of the 2020 Biological Survey and Reporting Guidelines). The two documents combined should provide adequate analyses and determinations to satisfy requirements both for FSM and ESA direction. We can discuss further next week if you have additional questions.

Best,

Sarah Bickerdyke
Wildlife Biologist
Forest Service
Dakota Prairie Grasslands, McKenzie Ranger District
p: 701-842-8524
sarah.bickerdyke@usda.gov
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From: Karine Finken <kfinken@keitu.com>
Sent: Tuesday, December 1, 2020 4:39 PM
To: Bickerdyke, Cale E -FS <cale.bickerdyke@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Riely, Debbie - FS <debbie.riely@usda.gov>; 'Jaimee Antognazzi' <jantognazzi@keitu.com>; 'Ken Dockweiler' <ken.dockweiler@truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; Kruse, Andrea - FS <Andrea.Kruse@usda.gov>; 'Raina Hanley' <RHanley@bcarch.org>; 'Wade Burns' <WBurns@bcarch.org>
Subject: RE: South Bend Onsite Discussion

Hi Cale,

I have the BE 99% done. Just was waiting to have the DASK language all agreed on before I submitted it. I can have it submitted pretty quickly here using the language from the BA that we finalized on the 20th.

-Karine

From: Bickerdyke, Cale E -FS [mailto:cale.bickerdyke@usda.gov]
Sent: Tuesday, December 01, 2020 4:13 PM
To: Karine Finken <kfinken@keitu.com>; Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Riely, Debbie - FS <debbie.riely@usda.gov>; Jaimee Antognazzi <jantognazzi@keitu.com>; Ken Dockweiler <ken.dockweiler@truecos.com>; Tom Litman <Tom.Litman@Truecos.com>; Kruse, Andrea - FS <Andrea.Kruse@usda.gov>; Raina Hanley <RHanley@bcarch.org>; Wade Burns <WBurns@bcarch.org>
Subject: RE: South Bend Onsite Discussion

Kim and I got together this morning and I think we have a plan to straighten things out along with avoiding some hiccups in the future. I think this can be covered with a TEAMS meeting or something similar. What we will need is the areas that need to have reroutes on a map. The map should include the following:

- The area that has been surveyed for wildlife botany archy ext.
- The cultural sites including required buffers
- The skipper habitat
- Any other resource concerns to avoid
- Any infrastructure you are trying to avoid
- Your proposed reroute with disturbance width.
- Anyone else can jump in if something else will help us find the best route.

We can then weigh the options for how to avoid and what resources have some give. We may have to tighten a buffer, bore an area, adjust our skipper habitat acreage or get closer to existing infastructure.
At this point if we still have concerns we can make a site visit. What we want to avoid is moving the pipeline out of the area that has been surveyed and used in the approved BA. We currently have the BA ready to be sent into the USFWS for consultation. We decided to hold off on sending that until we are sure the route isn't going to change and cause us to start our consultation over. We also are still waiting for the BE but any additional botanical surveys can not be done until spring. This is why we really want to keep these adjustments within the surveyed area.

Let me know if this helps or makes sense for you folks. Im really just trying to avoid waiting for more survey work that could drag out this process.

Cale

Cale Bickerdyke
Minerals and Lands Supervisor
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From: Karine Finken <kfinken@keitu.com>
Sent: Monday, November 30, 2020 4:53 PM
To: Bickerdyke, Cale E -FS <cale.bickerdyke@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Riely, Debbie - FS <debbie.riely@usda.gov>; Jaimee Antognazzi <jantognazzi@keitu.com>; Ken Dockweiler <ken.dockweiler@truecos.com>; Tom Litman <Tom.Litman@Truecos.com>
Subject: South Bend Onsite Discussion

Hi USFS Team,

We were hoping to move forward to the onsite review portion of this project, and review areas of avoidance near cultural resources. We're looking to submit the archaeology Class III report for concurrence to the ND State Historic Preservation office, which is also required for the ND Public Service Commission approval. This would help streamline the archaeology approval process. We'd include the archaeologist, civil surveyor, Keitu, and someone from Bridger to go over this with your archaeologist and staff.

Please let me know if we get this scheduled.

Thank you,

Karine Finken
Project Manager
KEITU
ENGINEERS & CONSULTANTS, INC.
(701) 667-1800 www.keitu.com

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kfinken@keitu.com

From: Karine Finken <kfinken@keitu.com>
Sent: Monday, January 4, 2021 11:13 AM
To: 'Grotte, Kim -FS'
Cc: 'Bickerdyke, Sarah - FS'
Subject: RE: BE

Sure thing. We will mail today. We are still waiting/working on getting two of those reroutes we discussed from our meeting "okayed" from the ND SHPO. As soon as we get that KLJ will have an updated line to reflect what we discussed at our meeting.

-Karine

From: Grotte, Kim -FS [mailto:kim.grotte@usda.gov]
Sent: Monday, January 04, 2021 7:36 AM
To: Karine Finken <kfinken@keitu.com>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Subject: BE

Karine,

Please send the BE to Jack Dahl on the Medora district for the Botany review, thanks.

Kim Grotte
Area Minerals Manager

Forest Service
McKenzie Ranger District
Dakota Prairie Grassland,

p: 701-842-8509
f: 701-842-8544
Kim.Grotte@usda.gov

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kfinken@keitu.com

From: Riely, Debbie - FS <debbie.riely@usda.gov>
Sent: Friday, February 5, 2021 10:39 AM
To: Karine Finken
Subject: RE: [CAUTION: Suspicious Link]RE: EA Template ?

Good morning Karine,

So somewhere in the document we should say something to the effect of, "all federal, state, and local laws and regulations will be met" and that the responsibility of Bridger to make sure all those are met. I'm sure you can find a more eloquent way of wording that!

Then, I would probably list some of those, however only ones that apply to Forest Service lands. So we could list the PSC permit in supporting documentation and provide the document to us, then we will attach it to the EA with a link. And same with 404s-only those on FS lands-list them under supporting documentation and provide the document to us (we will attach to the EA with a link). I know this is a bit confusing, so if we need to talk through it on the phone, please just let me know and I'll call you. Thank you!

Debbie Riely
NEPA Planner
Forest Service
Dakota Prairie Grasslands, McKenzie Ranger District
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From: Karine Finken [mailto:kfinken@keitu.com]
Sent: Thursday, February 4, 2021 8:09 PM
To: Riely, Debbie - FS <debbie.riely@usda.gov>
Subject: [CAUTION: Suspicious Link]RE: EA Template ?

PROCEED WITH CAUTION: This message triggered warnings of **potentially** malicious web content. Evaluate this email by considering whether you are expecting the message, along with inspection for suspicious links.

Questions or Suspicious email submissions: Spam.Abuse@usda.gov

Another question. ☺

Would the ND Public Service Commission Application be considered supporting documentation? It's a rather large permit so I'd think it would be preferred to not include it but thought I'd check. See link below for permit application:

https://www.psc.nd.gov/database/docket_file_list.php?s_dept=PU&s_company_name=Bridger+Pipeline+LLC&s_year_case=21&s_seq_num=48&s_doc=1

Please advise.

Thank you,

Karine Finken
Project Manager
KEITU ENGINEERS & CONSULTANTS, INC.
(701) 667-1800 www.keitu.com

From: Karine Finken [mailto:kfinken@keitu.com]
Sent: Thursday, February 04, 2021 4:26 PM
To: 'Riely, Debbie - FS' <debbie.riely@usda.gov>
Subject: EA Template ?

Hi Debbie,

On Pg. 7, Table 9 there is “Lands and special uses”

Can you explain to me what that is referring to? I feel like everything I’m thinking of addressing fits in either Table 11. Range or Table 12. Recreation.

Thank you,

Karine Finken
Project Manager
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kfinken@keitu.com

From: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Sent: Wednesday, April 21, 2021 10:50 AM
To: Karine Finken; Grotte, Kim -FS
Cc: Graf, Lucas - FS; Ken Dockweiler; Tom Litman; Jaimee Antognazzi
Subject: RE: Updated S Bend DASK Report

Those all sound correct. Please also ensure the document doesn't state that DASK survey protocols were completed and the DASK survey report is accurate.

Thanks,

Sarah Bickerdyke
Wildlife Biologist
Forest Service
Dakota Prairie Grasslands, McKenzie Ranger District
p: 701-842-8524
c: 701-202-9897
sarah.bickerdyke@usda.gov
1905 South Main Street
Watford City, ND 58854
www.fs.fed.us

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From: Karine Finken <kfinken@keitu.com>
Sent: Thursday, April 8, 2021 5:02 PM
To: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>
Cc: Graf, Lucas - FS <Lucas.Graf@usda.gov>; Ken Dockweiler <ken.dockweiler@truecos.com>; Tom Litman <Tom.Litman@Truecos.com>; Jaimee Antognazzi <jantognazzi@keitu.com>
Subject: RE: Updated S Bend DASK Report

Hi Sarah,

Now that Bridger has been able to confirm they can make it work to bore under suitable habitat. What else is needed to update the latest version of the BA? I imagine we will need mainly update in the Section **6.1.4.a Dakota Skipper Conservation Measures,** language that will Bridger will bore under suitable habitat and update appendices and to include emergency response plan in case of inadvertent release and flight timing stipulations for whole route as Lucas described below. Anything else I'm missing? Does this seem like the right steps to update this document to move forward?

Thank you,

Karine Finken
Project Manager

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(701) 667-1800 www.keitu.com

From: Graf, Lucas - FS <Lucas.Graf@usda.gov>
Sent: Thursday, April 08, 2021 1:29 PM
To: Karine Finken <kfinken@keitu.com>; Grotte, Kim -FS <kim.grotte@usda.gov>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Jaimee Antognazzi' <jantognazzi@keitu.com>; Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>; 'Tyler Reece' <Tyler.Reece@Truecos.com>
Subject: Re: Updated S Bend DASK Report

Hi Karine and Ken,

I visited with Kim and Sarah to discuss and what you laid out will work. Please proceed accordingly.

I apologize for not replying sooner.

Thanks for the follow up.

Best,

Get Outlook for iOS

From: Karine Finken <kfinken@keitu.com>
Sent: Wednesday, April 7, 2021 8:27:49 AM
To: Grotte, Kim -FS <kim.grotte@usda.gov>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; Graf, Lucas - FS <Lucas.Graf@usda.gov>; 'Jaimee Antognazzi' <jantognazzi@keitu.com>; Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>; 'Tyler Reece' <Tyler.Reece@Truecos.com>
Subject: RE: Updated S Bend DASK Report

Good morning,

I'm sure you've all been busy with the dry conditions and wildfire threats in that area. Just wanted to touch base to see if Ken's proposal below something that Bridger is able to incorporate into plan or is there more information needed from them?

Thank you,

Karine Finken
Project Manager
KEITU
ENGINEERS & CONSULTANTS, INC.

From: Grotte, Kim -FS <kim.grotte@usda.gov>
Sent: Thursday, March 18, 2021 2:32 PM
To: Ken Dockweiler <Ken.Dockweiler@Truecos.com>; Graf, Lucas - FS <Lucas.Graf@usda.gov>; Jaimee Antognazzi <jantognazzi@keitu.com>; 'Karine Finken' <kfinken@keitu.com>; Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Tom Litman <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>; Tyler Reece <Tyler.Reece@Truecos.com>
Subject: RE: Updated S Bend DASK Report

Hello all,

Just FYI, this one is sitting right in the very SW corner of the NWSW Section 4, T147N, R101W. This is very close to the road and is very close to Section 5 private land, more so just south of the point lat long you sent. This may aid in resource avoidance, planning, access and work space concerns and needs.

Kim

From: Ken Dockweiler <Ken.Dockweiler@Truecos.com>
Sent: Thursday, March 18, 2021 11:51 AM
To: Graf, Lucas - FS <Lucas.Graf@usda.gov>; Jaimee Antognazzi <jantognazzi@keitu.com>; Grotte, Kim -FS <kim.grotte@usda.gov>; 'Karine Finken' <kfinken@keitu.com>; Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; Tom Litman <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>; Tyler Reece <Tyler.Reece@Truecos.com>
Subject: RE: Updated S Bend DASK Report

Lucas, as per our phone conversation this morning we intend on going the direction of avoidance, option 2 below, largely using boring techniques. All locations look to have suitable access built-in to the studied corridor and with existing roads that the corridor crosses with one exception. That exception includes DASK habitat on either side that will not allow use of the corridor to access. However, it is near a road, and our existing pipeline ROW lies adjacent to the road and then enters the studied corridor. With your concurrence we believe we can access our existing ROW from the road and traverse that ROW to enter the studied corridor as shown in dotted yellow in the screen shot below. For clarity, the location where our existing line (green line) is closest to the road in the image below is at 47.578066, -103.565263 and the distance between the edge of the road and our existing pipeline is approximately 50’.

All other locations should be able to be avoided and all excavation and lay down for the required bores can be accomplished within the studied corridor while avoiding all other avoidance areas.

If a follow-up call to discuss what other data is needed in order for your team to move ahead I would ask that we plan to have that at the next opportunity, if not please advise what documentation you need in addition to this e-mail to move this project forward on your end.

Thanks again for your time and attention to this project,
Ken



From: Graf, Lucas - FS [mailto:Lucas.Graf@usda.gov]
Sent: Wednesday, March 10, 2021 9:35 AM
To: Ken Dockweiler; Jaimee Antognazzi; Grotte, Kim -FS; 'Karine Finken'; Bickerdyke, Sarah - FS; Tom Litman; 'jim reiser'
Subject: RE: Updated S Bend DASK Report

CAUTION: This email has originated from outside of the True companies. Please be cautious with Links and Attachments.

Hi Ken,

Replying to your email below in red. Please let me know if I missed any points or can provide further clarification.

Thanks.

Best,

Lucas, thanks for the follow-up, and wow thanks for burning the midnight oil and keeping all the things moving that you have on your plate. Just to be clear, you did have a chance to review the updated report sent yesterday and your e-mail last night reflected your review of that report, correct? If not, would you anticipate that a review of that report could

change your thoughts on the options, or will they likely be what they are? I did not have a chance to review the report but unless the survey protocol has been newly satisfied then the two options remain. We will review the report soon.

Assuming you made the review or that it wouldn't make a difference, we believe option 2 will be our choice, but we are currently evaluated what that looks like. To that end I wanted to clarify a couple of items and make sure we are on the same page.

1. By the word "Avoidance" and with your later mention of bores in that discussion we understand that you include the potential of boring under the habitat as acceptable mitigation. Is that correct? Correct. We understand that we would have to consider impact to other resources when looking at our ability to bore habitat.
2. In using the term "Suitable Habitat" we understand that to mean habitat identified as "suitable" during the survey performed by Mr. Reiser last year. Can you confirm that is consistent with your intention? Suitable habitat would include the habitat identified by Keitu's original survey in addition to any other habitat identified as suitable either based on vegetative characteristics or Mr. Reiser's field observations as previously submitted.
3. Finally, as to the timing stipulations, and the application of those throughout the "entire" project. Please clarify, does that mean within 1 KM of "suitable habitat", ALL of the USFS managed surfaces or does that include even the private surface areas? All USFS managed surfaces. Not sure that it matters, by my math I am pretty sure with the comment periods left to navigate and the remaining arch site to be evaluated, even with your collective attention and expediency, we won't be getting green-lighted in time to gear up and get to work during the timing stips anyway, just want to make sure we are all on the same page.

Thanks for you and your teams diligence working through this with us. I look forward to your clarifications.

Ken

From: Graf, Lucas - FS [mailto:Lucas.Graf@usda.gov]
Sent: Monday, March 8, 2021 6:56 PM
To: Jaimee Antognazzi; Grotte, Kim -FS; 'Karine Finken'; Bickerdyke, Sarah - FS; Ken Dockweiler; Tom Litman; 'jim reiser'
Subject: RE: Updated S Bend DASK Report

CAUTION: This email has originated from outside of the True companies. Please be cautious with Links and Attachments.

Good evening all,

Following up on last week's discussion, two options remain to satisfy our wildlife concerns associated with the project.

1. **Complete additional Dakota skipper surveys to meet the 2018 USFWS survey protocols**. Completed data would be utilized to apply appropriate avoidance/mitigation measures to habitat with a confirmed positive sighting or surrounding habitat areas, including outlined emergency response plans for any inadvertent releases from bores, timing limitations during the flight period, and avoidance of occupied habitat areas, at USFS discretion. Please note that this is not an exhaustive list of measures due to the current lack of data.

2. **Do not complete additional Dakota skipper surveys to meet the 2018 USFWS survey protocols**. Utilizing survey data currently available, we would apply broad mitigation measures. These measures would include: avoidance of all identified suitable habitat throughout the project route, outlined emergency response plans for any inadvertent releases from bores, and timing limitations applied throughout the entire project route from June 10-July 25 (DASK flight period).

A friendly reminder that amending the proposed route, boring, or other changes may create a need to revisit other resource areas such as archeology, botany, hydrology, etc.

Please let us know how you would like to proceed so that we can work to finalize our documentation and initiate consultation with USFWS accordingly.

Thanks.

Best,

Lucas Graf
District Ranger
Forest Service
Dakota Prairie Grasslands
McKenzie Ranger District
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c: 701-260-4082
Lucas.Graf@usda.gov
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EXEMPT FROM RELEASE UNDER FOIA: EXEMPTION #5…DELIBERATIVE PROCESS

From: Graf, Lucas - FS
Sent: Friday, February 26, 2021 4:46 PM
To: Jaimee Antognazzi <jantognazzi@keitu.com>; Grotte, Kim -FS <kim.grotte@usda.gov>; 'Karine Finken' <kfinken@keitu.com>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Subject: RE: Updated S Bend DASK Report

Jaimee,

Something has come up for me on Monday morning- is it possible we push back by 15 minutes to 10AM CT? I apologize to all for the inconvenience.

Thanks and hope you have a good weekend.

Best,

Lucas Graf
District Ranger
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McKenzie Ranger District
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EXEMPT FROM RELEASE UNDER FOIA: EXEMPTION #5…DELIBERATIVE PROCESS

From: Jaimee Antognazzi <jantognazzi@keitu.com>
Sent: Thursday, February 25, 2021 10:16 AM
To: Graf, Lucas - FS <Lucas.Graf@usda.gov>; Grotte, Kim -FS <kim.grotte@usda.gov>; 'Karine Finken' <kfinken@keitu.com>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Subject: RE: Updated S Bend DASK Report

Hi All-

Yes that will be fine for Keitu. I will set it up and send out the information today or tomorrow.

Thanks,

Jaimee Antognazzi
Keitu Engineers & Consultants, Inc.
PO Box 98
Mandan, ND 58554-0098
701-667-1808 Ext. 105

From: Graf, Lucas - FS [mailto:Lucas.Graf@usda.gov]
Sent: Thursday, February 25, 2021 9:52 AM
To: Grotte, Kim -FS <kim.grotte@usda.gov>; Karine Finken <kfinken@keitu.com>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com
Subject: RE: Updated S Bend DASK Report

Good morning everyone,

Would Monday at 945AM CT work? Kim, Sarah and I will join from our side.

Thanks.

Best,

Lucas Graf
District Ranger

Forest Service
Dakota Prairie Grasslands
McKenzie Ranger District

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c: 701-260-4082
Lucas.Graf@usda.gov

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From: Grotte, Kim -FS <kim.grotte@usda.gov>
Sent: Wednesday, February 24, 2021 4:13 PM
To: Karine Finken <kfinken@keitu.com>; Graf, Lucas - FS <Lucas.Graf@usda.gov>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com
Subject: RE: Updated S Bend DASK Report

Hello all,

It may be useful as for all wildlife resource related project folks to be on a call, as to clear up any questions that may be out there to make sure DASK issues are dealt with referenced properly as need be. Any avoidance measures can also be discussed in depth as to not create additional resource issues if route alterations are needed and such. I don't think it would hurt the process for this call to happen as to be able to move forward?

Kim

From: Karine Finken <kfinken@keitu.com>
Sent: Wednesday, February 24, 2021 3:48 PM
To: Graf, Lucas - FS <Lucas.Graf@usda.gov>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: RE: Updated S Bend DASK Report

I was just thinking of setting up a call including Jim Reiser, maybe just include Sara in respect of your time so Jim can get feedback on his report. Jim is the author of the report so if it's not adequately covering items he can get clarification or is there way we can show "surveyed area" on maps?

Jim Reiser has worked on DASK surveys before for pipelines in ND in years past working with other surveyors, he can speak for himself but this may be his first report to the USFS so we're all a little new to the complete process.

I'd like to see if we can find a solution moving forward with some input from Jim. I would like to have a call so Jim can provide an explanation and any helpful information to substantiate that the survey protocol was followed.

Thank you,

Karine Finken
Project Manager

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From: Graf, Lucas - FS <Lucas.Graf@usda.gov>
Sent: Wednesday, February 24, 2021 3:24 PM
To: Karine Finken <kfinken@keitu.com>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: RE: Updated S Bend DASK Report

Hi Karine,

I don't have any questions for Jim Reiser from my end. If you have outstanding questions about what is still needed, the survey protocol, or something otherwise then we'd be happy to set up a call.

Thanks.

Best,

Lucas Graf
District Ranger

Forest Service
Dakota Prairie Grasslands
McKenzie Ranger District

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From: Karine Finken <kfinken@keitu.com>
Sent: Wednesday, February 24, 2021 3:18 PM
To: Graf, Lucas - FS <Lucas.Graf@usda.gov>; 'Ken Dockweiler' <Ken.Dockweiler@Truecos.com>; 'Tom Litman' <Tom.Litman@Truecos.com>; 'jim reiser' <jimreiser@cox.net>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: RE: Updated S Bend DASK Report

Hi Luke,

Would scheduling a conference call with Jim Reiser to hopefully get some clarification maybe help?
If there is a time early next week that everyone is available I can set something up just let me know.

Thank you,

Karine Finken
Project Manager

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(701) 667-1800 www.keitu.com

From: Graf, Lucas - FS <Lucas.Graf@usda.gov>
Sent: Wednesday, February 24, 2021 2:59 PM
To: kfinken@keitu.com; Ken Dockweiler (Ken.Dockweiler@Truecos.com) <Ken.Dockweiler@Truecos.com>; Tom Litman (Tom.Litman@Truecos.com) <Tom.Litman@Truecos.com>
Cc: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>; jantognazzi@keitu.com; Grotte, Kim -FS <kim.grotte@usda.gov>
Subject: RE: Updated S Bend DASK Report

Hi Karine,

Sarah and I have talked about this BA several times over the last few months and I have some concerns about its contents. Specifically, I am looking for an explanation and corresponding data to substantiate that the survey protocol was indeed followed. If you can provide that then we can move forward accordingly. I understand that there may have been some issue with your GPS units, which is unfortunate. If you are unable to meet the survey protocol, you can either conduct additional surveys to meet the protocol or you may opt not to conduct additional surveys in which case we would place timing limitations for the duration of the flight period and require you to avoid all habitat.

Please let me know if you have any questions or concerns.

Thanks.

Best,

Lucas Graf
District Ranger

Forest Service
Dakota Prairie Grasslands
McKenzie Ranger District

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Lucas.Graf@usda.gov

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EXEMPT FROM RELEASE UNDER FOIA: EXEMPTION #5…DELIBERATIVE PROCESS

Karine Finken <kfinken@keitu.com>
Sent: Wednesday, February 24, 2021 1:35 PM
To: Bickerdyke, Sarah - FS <Sarah.Bickerdyke@usda.gov>
Cc: Grotte, Kim -FS <kim.grotte@usda.gov>; Jaimee Antognazzi <jantognazzi@keitu.com>
Subject: RE: Updated S Bend DASK Report

Hi Sarah,

I understand your office is probably super busy.

The report does say **Under Scope of Work**, "Survey efforts followed the U.S. Fish & Wildlife Service's "2018 Dakota Skipper (*Hesperia dacotae*) North Dakota Survey Protocol" and **Survey Methodology**, "The 2018 DASK Survey Protocol for North Dakota was referenced during our 2020 survey to determine if DASK was present along 27 miles of proposed pipeline that would pass through USFS land."

Would both of those sentences be more appropriate to say *followed and fulfilled*?

I understand we can't go back and fix everything on GIS so that is something that can't be changed to show the hard data on the maps.

Let me know if this is something that I can talk to Jim on.

I will be out of the office tomorrow and Friday but Jaimee will be available if there's any more questions/feedback.

Karine Finken
Project Manager
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United States Department of Agriculture | Forest Service | Dakota Prairie Grasslands | McKenzie Ranger District
1905 South Main Street
Watford City, ND 58854

File Code: 2670 **Date:** June 25, 2021

Subject: Botany Biological Evaluation Concurrence For Bridger Pipeline LLC South Bend Pipeline

To: Lucas Graf, McKenzie District Ranger

Introduction

Bridger Pipeline, LLC (Bridger) is proposing to install a crude oil transmission pipeline (Project) in McKenzie County, North Dakota. The pipeline would be 145 miles total in length with 80 miles in North Dakota and 66 miles in Montana. The proposed pipeline would traverse 19 miles across National Forest System lands on the McKenzie Ranger District of the Little Missouri National Grasslands (LMNG). The proposed route will utilizes an existing utility corridor to the greatest extent possible, reusing previously disturbed Right-of-Ways (ROW). The route of the proposed Project was primarily chosen to parallel Bridger's existing operating pipelines and infrastructure which parallels over 80% of the proposed Project route.

I have reviewed the Biological Evaluation (BE) from June 2021, by Keitu, for Bridger. Botany guidelines set forth in Forest Service Manual 2672.42 and 2672.43 have been met by Keitu's BE and this memo. These guidelines provide a process and standard to ensure that Threatened, Endangered, and Sensitive (TES) plant species receive consideration during the decision-making process.

A botanical field surveys were conducted by Keitu on the following dates: July 8 through 10, July 24, August 16, September 19 and September 30 of 2019 and May 26 and 27, and June 2 through 4 of 2020. Keitu used a 300-foot-wide corridor centered along the pipeline centerline for their botanical survey. The survey was to describe the existing plant community and potential plant community; search and identify any of the 13 sensitive species on the LMNG along with their habitat; determine the extent of invasive species within the proposed project area; and search for any of the 24 watch plant species on the LMNG.

Summary of Threatened, Endangered and Sensitive Plant Species

There are no federally listed Threatened, Endangered, or Proposed plant species or designated critical habitat on the LMNG at this time.

Keitu's BE indicated potential habitat for 9 of the 13 R1 LMNG Forest Service sensitive species: alkali sacaton (*Sporobolus airoides*), Torrey's cryptantha (*Cryptantha torreyana*), Dakota buckwheat (*Eriogonum visheri*), sand lily (*Leucocrinum montanum*), alyssum-leaved phlox (*Phlox alyssifolia*), nodding buckwheat (*Eriogonum cernuum*), lance-leaf cottonwood (*Populus x acuminata*), Easter daisy (*Townsendia exscapa*), and Hooker's Townsendia (*Townsendia hookeri*). I concur with Keitu's assessment and determination call of ***may impact*** individuals or habitat but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or species, for these 9 species. I also concur with Keitu's assessment and determination call of no impact on the remaining 9 sensitive species (Table 4.2 and Section 4.0 of Keitu's BE).

Table 1. Summary of Determinations for LMNG Forest Service-designated Sensitive Plant Species.

Sensitive Species	No Impact	May Impact[1]	Will Impact[2]	Beneficial Impact
Slimleaf goosefoot (*Chenopodium subglabrum*)	X			
Blue lips (*Collinsia parviflora*)	X			
Torrey's cryptantha (*Cryptantha torreyana*)		X		

Nodding buckwheat (*Eriogonum cernuum*)		X		
Dakota buckwheat (*Eriogonum visheri*)		X		
Sand lily (*Leucocrinum montanum*)		X		
Dwarf mentzelia (*Mentzelia pumila*)	X			
Alyssum-leaved phlox (*Phlox alyssifolia*)		X		
Limber pine (*Pinus flexillis*)	X			
Lance-leaf cottonwood (*Populus x acuminata*)		X		
Alkali sacaton (*Sporobolus airoides*)		X		
Easter daisy (*Townsendia exscapa*)		X		
Hooker's townsendia (*Townsendia hookeri*)		X		

[1]May impact individuals or habitat but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or species.
[2]Will impact individuals or habitat with a consequence that the action may contribute to a trend toward federal listing or cause a loss of viability to the population or species.

Project Effects on Forest Service-designated Sensitive Plant Species

The proposed project ***may impact*** individuals (undiscovered) or suitable habitat for nine R1 LMNG Forest Service sensitive species. This project will not likely contribute to a trend toward federal listing or cause a loss of viability to the populations of Forest Service sensitive species.

- Mitigation Measures
  - *Minimize soil and vegetation disturbance during construction to the extent possible.*

Invasive and Noxious Weeds

A total of sixteen noxious/non-native invasive species were identified during the field surveys for the proposed project. The state noxious weeds that were encountered during the field surveys included Canada thistle (*Cirsium arvense*) and absinthium wormwood (*Artemisia absinthium*) while county listed noxious weeds included common burdock (*Arctium minus*), and black henbane (*Hyoscyamus niger*). Invasive species included Kentucky bluegrass (*Poa pratensis*), Russian olive (*Elaeagnus angustifolia*), yellow sweet clover (*Melilotus officinalis*), alfalfa (*Medicago sativa*), black medick (*Medicago lupulina*), common dandelion (*Taraxacum officinale*), field bindweed (*Convolvulus arvensis*), intermediate wheatgrass (*Thinopyrum intermedium*), kochia (Bassia scoparia), crested wheatgrass (*Agropyron cristatum*), downy brome (*Bromus tectorum*) and smooth bromegrass (*Bromus inermis*). The location of the state and county noxious weed species are displayed in Appendix A. Project Route Maps.

There is the potential of spreading invasive plants that are prevalent along the road margins of the existing roads and invasive species that already exist within native plant communities. These effects would continue whether or not this project would be implemented. Direct and indirect impact of the proposed project is the likelihood of the existing invasive and noxious species being introduced into native plant communities that aren't invaded and potential for these species to be transferred to other areas of LMNG and surround counties. However, mitigation measures can reduce the potential spread of invasive and noxious weeds.

- Mitigation measure to minimize the spread of invasive and noxious weeds
  - *Clean vehicles and equipment used for construction prior to entering the LMNG to remove all seeds and plant propagules (seeds and vegetative parts that may sprout) in order to prevent the potential spread of noxious and invasive plant species.*
  - *Any North Dakota state-listed or McKenzie County-listed noxious weeds need to be controlled, if found on reclamation sites and in compliance of the 2007 DPG Weed EIS.*

Cumulative Effects

Within the Study Area there is 13 active oil wells. Cattle grazing is the most common agriculture practice in the region. There is 32.21 miles of USFS road in the Study Area, 7.19 miles of the total is considered are considered two-track roads. General uses include, livestock grazing, hunting, recreation, transportation and oil and gas development.

The project would result in temporary impacts to vegetation communities within temporary construction areas. Disturbance of vegetation in areas of noxious weed infestations may result in redistribution of invasive species to the project area. Thus, areas not currently dominated by such species would have a potential to become infested. The spread of noxious weeds can have an effect on multiple aspects of vegetation resources ranging from the suitability of sensitive plant habitat and maintenance of native biodiversity to forage production for livestock grazing.

Between 2003 and 2020, there have been over 24 documented occurrences of adverse effects to existing sensitive plant populations on the LMNG. The vast majority of these occurrences involved oil and gas developments, and direct disturbances to Missouri foxtail cactus (*Escobaria missouriensis*), Townsendia species, and Dakota buckwheat, the four most abundant of the sensitive species on the LMNG. In most cases, the degree of adverse effects was decreased through avoidance or slight adjustments of the proposed developments. As a result, adverse effects were only to a portion of the sensitive plant population, rather than the entire population. These cumulative effects have not contributed to a loss of viability for any of the four species, and the Missouri Foxtail cactus has been removed from the list of sensitive species, in May of 2019.

Other Mitigation

The following are other mitigations for the construction and reclamation of this project:

- *Keep disturbance to a minimum to reduce the impacts to the native vegetation and spreading of invasive species.*
- *Scenario #13 is recommended for any reclamation.*
- *Any discovery of sensitive or watch plants within the proposed project area shall be immediately reported to the Mckenzie Ranger District office. Sensitive plant populations discovered after project approval should be protected; therefore, last minute alterations of the project design or access route may be requested in order to avoid negative impacts to such populations.*

/s/ Jack D. Dahl

Jack D. Dahl
Botanist
Medora Ranger District

United States Department of Agriculture
Forest Service
Dakota Prairie Grasslands
McKenzie Ranger District
1905 South Main Street
Watford City, ND 58854

File Code: 2670 **Date: August 5, 2021**

Subject: Bridger South Bend Pipeline Biological Evaluation of Sensitive Species

To: District Ranger,

Bridger Pipeline LLC is proposing to install a crude oil transmission pipeline in McKenzie County, North Dakota. The pipeline would be 145 miles total in length with 80 miles in North Dakota and 66 miles in Montana. The proposed pipeline would traverse across 19 miles of United States Forest Service property land located within the McKenzie Ranger District of the Little Missouri National Grasslands. The proposed route utilizes an existing utility corridor to the greatest extent possible, reusing previously disturbed Right-of-Ways. The route of the proposed project was primarily chosen to parallel Bridger's existing operating pipelines and infrastructure which parallels over 80% of the proposed project route.

The project originates at Eighty Eight Oil Company's Johnsons Corner terminal located near Johnson's Corner, North Dakota and runs 142 miles southwest to Bridger's Sandstone station west of Baker, Montana. The pipeline would interconnect with Bridger's existing North Dakota facilities at Wilson station, Bicentennial station and their respective crude oil transmission network. The proposed Project will result in a new crude oil transmission pipeline and would encompass approximately 754 acres, of which, about 115 acres are National Forest System Land.

Keitu's Biological Evaluation (2021) speaks to a timing limitation on construction from April 1 through June 15 within 1 mile (line-of-sight) of the female home range. This timing limitation has been updated to read: "there will be no construction from April 1 through July 15 within 1 mile (line-of-sight) of LRMP MA 3.51 and 3.51a or within 1 mile (line-of-sight) of North Dakota Game and Fish designated critical lambing habitats". This update aligns the timing limitation more consistently with recommendations from NDGF that the USFS has been utilizing for multiple years.

I have reviewed Keitu's Biological Evaluation (2021) and found it sufficient to evaluate this project paired with the additional corrections provided in this letter. Also used to assess this proposal was Dakota Prairie Grasslands Management Plan and applicable district records. The guidelines set forth by FSM 2672.41, 2672.42, and 2672.43 have been met by the biological assessment and this report. This direction provides a process and standard by which to ensure that threatened, endangered, and sensitive species receive consideration in the decision-making process.

Table 1. Determinations for Forest Service Designated Sensitive Species & DPG LRMP Special Interest Species.

Species Common Name	No Impact	May Impact	Will Impact	Beneficial Impact
Region 1 Sensitive Species Occurring on LMNG				
Bald Eagle	X			
Sprague's Pipit		X		
Baird's Sparrow		X		
Burrowing Owl		X		
Loggerhead Shrike		X		
Long-Billed Curlew		X		
Bighorn Sheep	X			
Black-tailed Prairie Dog		X		
Ottoe Skipper		X		
Regal Fritillary		X		
Tawny Crescent		X		
Northern Red-bellied Dace	X			
Interior Least Tern		X		
DPG LRMP Special Interest Species				
Golden Eagle		X		
Ferruginous Hawk		X		
Merlin		X		
Sharp-tailed Grouse (MIS)		X		
Prairie Falcon		X		
American Peregrine Falcon		X		

Design Features

1. No construction will be allowed from March 1 to June 15 within 1 mile (line-of-sight) of active Sharp-tailed Grouse leks.
2. If project activities are scheduled to occur during February 1 to July 31, a raptor nest survey, with a focus on known Golden eagle and ferruginous hawk nests will be completed prior to construction to confirm that the nest is not active. If any nests are determined to be active, no activity will occur within ½ mile of the active nest(s) between February 1 to July 31.
3. There will be no construction from April 1 through July 15 within 1 mile (line-of-sight) of LRMP MA 3.51 and 3.51a or within 1 mile (line-of-sight) of North Dakota Game and Fish designated critical lambing habitats.

BE reviewed by:

Sarah Bickerdyke
Wildlife Biologist
McKenzie Ranger District
Little Missouri National Grassland

References and Citations

USDA Forest Service. 2001. Land and Resource Management Plan for the Dakota Prairie Grasslands (DPG LRMP). United States Department of Agriculture, Forest Service, Northern Region, Missoula, MT.

Keitu Engineers and Consultants. 2021. Biological Evaluation South Bend Pipeline, Bridger Pipeline, LLC. August 2021. Keitu Engineers and Consultants, Mandan, ND.

June 22, 2021

Ms. Andrea Kruse
Little Missouri National Grasslands
McKenzie Ranger District
1905 S Main St
Watford City, ND 58854

ND SHPO Ref.: 21-5470 "Evaluative Testing for Sites 32MZ59, 32MZ141, and 32MZ499 Letter Report" in portions of [T145N R104W Section 24] & [T146N R102W Section 4]

Dear Ms. Kruse,

We reviewed ND SHPO Ref.: 21-5470 "Evaluative Testing for Sites 32MZ59, 32MZ141, and 32MZ499 Letter Report" in portions of [T145N R104W Section 24] & [T146N R102W Section 4] and we concur with a determination of "No Historic Properties Affected" for this project provided it takes place in the location and in the manner described in the documentation and provided all borrow comes from an approved source.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in further correspondence for this specific project. If you have any questions please contact Lisa Steckler, Historic Preservation Specialist at (701) 328-3577 or lsteckler@nd.gov

Sincerely,

for William D. Peterson, PhD
State Historic Preservation Officer
(North Dakota)

21-5470

United States Department of Agriculture | Forest Service | Dakota Prairie Grasslands | McKenzie Ranger District
1905 South Main Street
Watford City, ND 58854

File Code: 2670 **Date: May 18, 2021**

Subject: Bridger South Bend Pipeline Biological Assessment of Threatened and Endangered Species

To: District Ranger,

Bridger Pipeline LLC is proposing to install a crude oil transmission pipeline in McKenzie County, North Dakota. The pipeline would be 145 miles total in length with 80 miles in North Dakota and 66 miles in Montana. The proposed pipeline would traverse across 19 miles of United States Forest Service property land located within the McKenzie Rnager District of the Little Missouri National Grasslands. The proposed route utilizes an existing utility corridor to the greatest extent possible, reusing previously disturbed Right-of-Ways. The route of the proposed project was primarily chosen to parallel Bridger's existing operating pipelines and infrastructure which parallels over 80% of the proposed project route.

The project originates at Eighty Eight Oil Company's Johnsons Corner terminal located near Johnsons's Corner, North Dakota and runs 142 miles southwest ot Bridger's Sandstone station west of Baker, Montana. The pipeline would interconnect with Bridger's existing North Dakota facilities at Wilson station, Bicentennial station and their respective crude oil transmission network. The proposed Project will result in a new crude oil transmission pipeline and would encompass approximately 754 acres, of which, about 115 acres are National Forest System Land.

I have reviewed Keitu's Biological Assessment and found it sufficient to evaluate this project. Also used to assess this proposal was Dakota Prairie Grasslands Management Plan and applicable district records. The guidelines set forth by FSM 2672.41, 2672.42, and 2672.43 have been met by the biological assessment and this report. This direction provides a process and standard by which to ensure that threatened, endangered, and sensitive species receive consideration in the decision making process.

Threatened and Endangered Species

See Table 1 for a summary of effects determinations for endangered and threatened species as well as designated critical habitats.

Table 1. Effects determinations for endangered and threatened species and designated critical habitat.

Species Common Name	No Effect	May Affect, Not Likely to Adversely Affect	May Affect, Likely to Adversely Affect	Beneficial Effect
Endangered Species				
Whooping Crane	X			
Pallid Sturgeon	X			
Interior Least Tern		X		

Species Common Name	No Effect	May Affect, Not Likely to Adversely Affect	May Affect, Likely to Adversely Affect	Beneficial Effect
Threatened Species				
Dakota Skipper		X		
Northern Long-Eared Bat		X		
Piping Plover		X		
Rufa Red Knot		X		
Designated Critical Habitat				
Dakota Skipper Designated Critical Habitat	X			
Piping Plover Designated Critical Habitat	X			

Design Features applicable to ESA-listed Species

1. If a whooping crane is sighted within one mile of the Project area while it is under construction, work shall cease within one mile of that part of the Project or within line-of-sight of the crane(s). The USFWS and USFS would be contacted immediately. In coordination with the USFWS, work may resume after the bird(s) leave the area.
2. All equipment maintenance, repairs, and refueling will be performed in upland locations at least 100-feet from all water bodies and wetlands. All equipment will be parked overnight at least 100-feet from a watercourse or wetland. Equipment will not be washed with water draining into wetlands or streams. Spills of fuel and other hazardous materials will be cleaned-up immediately and will be disposed of in accordance with applicable laws and regulations. Each construction and cleanup crew will have on site sufficient tools and materials to stop leaks including supplies of absorbent and barrier materials that would allow for rapid containment and recovery of spilled materials.
3. No trees 3 DBH or greater will be removed from April 1 through September 30.
4. Bridger will provide replacement trees on a two-to-one basis in an alternate location in the same region.
5. No construction will be allowed between June 10 and July 25 during the flight period of adult Dakota skipper. Construction is defined as any ground disturbing activities associated with the building of the pipeline, access roads or any other feature needed for the pipeline.
6. All identified Dakota skipper habitat will be temporarily fenced and flagged to avoid impacts to suitable habitat from construction.
7. Airborne dust would be reduced during Project construction on all construction locations, including any additional haul roads and access roads whenever needed and/or as determined by the USFS.
8. A qualified monitor will remain on-site during the life of construction to ensure compliant with all design features.
9. During reclamation activities, USFS-approved revegetation seed mixes would be used.

BA Reviewed by:

Sarah Bickerdyke
Supervisory Wildlife Biologist
McKenzie Ranger District
Little Missouri National Grassland

References and Citations

USDA Forest Service. 2001. Land and Resource Management Plan for the Dakota Prairie Grasslands. United States Department of Agriculture, Forest Service, Northern Region, Missoula, MT.

Keitu. 2021. Biological Assessment South Bend Pipeline. April 2021. Keitu Engineers & Consultants, Mandan, ND.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
North Dakota Ecological Services Field Office
3425 Miriam Avenue
Bismarck, North Dakota 58501
(701) 250-4481, ndfieldoffice@fws.gov

In Reply Refer To:
06E15000-2021-I-0677
USFS Bridger South Bend Pipeline

August 5, 2021

Mr. Lucus Graf
District Ranger
USFS McKenzie District
1905 South Main Street
Watford City, ND 58854

Dear Mr. Graf:

We respectively submit this letter in response to your May 18, 2021 letter requesting written concurrence of the USFS determination of effects regarding federally listed species in the Biological Assessment (BA) submitted by your office and Keitu Engineering for the Bridger South Bend crude oil pipeline. The proposed pipeline project is for a 145-mile pipeline starting near Johnson's Corner in McKenzie County, North Dakota and terminating west of Baker Montana in Fallon County. Approximately 19 miles of the pipeline are on Forest Service managed lands with the remainder on private, state and other lands. The biological assessment and concurrence is for that portion of the pipeline on Forest Service property.

In accordance with Section 7 consultation under the Act, USFS has requested Service concurrence with the Forest Service determinations the Project "may affect but is not likely to adversely affect" to the threatened Dakota skipper (*Hesperia dacotae),* Northern Long-Eared Bat (*Myotis septentrionalis)*, piping plover, (*Charadrius melodus*), and Rufa Red Knot (*Calidris cantutus rufa*). Bridger committed to undertake certain conservation measures for these species during construction of the project.

The Service recommends no construction activities take place along the pipeline ROW during the Dakota skipper flight period of June 10-July 25. As noted in the Biological Assessment Bridger has agreed to directionally drill all suitable DASK habitats identified and depicted on the maps associated with the biological assessment. The Service further recommends that suitable DASK habitats are delineated and marked on the ground and all DASK habitats will be avoided by vehicles, construction equipment or other habitat altering equipment traveling along the ROW. A construction monitor shall be onsite during the construction process to ensure no suitable DASK habitat is altered. Migrating dust shall be controlled via freshwater during all

phases of pipeline construction to avoid inundating any skipper habitat. Lastly, the Service recommends no pesticides or insecticides are sprayed or utilized within suitable DASK habitat areas.

The Northern Long Eared Bat is covered under the Service's January 5, 2016 Programmatic Biological Opinion. However, the Service recommends all trees larger than 3 dbh be removed between November 1 and March 31

We concur with your conclusion that the described project may affect, but not likely to adversely affect the listed species involved in this project and believe the effects to Dakota skipper, Northern Long-eared Bat, piping plover and Rufa Red Knot are discountable or insignificant based on the conservation measures in the BA. If changes are made in the project plans or operating criteria, or if additional information becomes available, we must be informed so that the above determination can be reconsidered.

USFS has also determined that there will be "no effect" determinations for the endangered whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*) and no adverse modification to designated Dakota skipper or piping plover critical habitat. There is no requirement under the implementing regulations of the Act (50 CFR Part 402) for action agencies to receive Service concurrence with "no effect" determinations, therefore the responsibility for "no effect" determinations remain with USFS. Accordingly, we recommend USFS retain the documentation for these listed resources in your decisional record for this federal action.

Pursuant to the implementing regulations of the Act (50 CFR 402.13), this letter concludes informal consultation. This consultation should be re-initiated if: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; (2) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; or (3) a new species is listed or critical habitat is designated that may be affected by this action.

We appreciate the opportunity to provide comments and your efforts to ensure the conservation of listed species and their habitat. If you have any questions on these comments, please contact Tim Zachmeier (Timothy_Zachmeier@fws.gov) of my staff at (701) 355-8504 or myself at (701) 355-8512.

Sincerely,

Drew Becker
North Dakota Field Office Supervisor

cc: Greg Link, North Dakota Game and Fish

Summary of Public Involvement

A list of Agencies, Organizations and Persons Consulted regarding this proposal is provided in the analysis. A list of the comments received and a response to comments is available in **Appendix B** of the EA.

Findings

The decision notice incorporates all previous information in the EA and Finding of No Significant Impact, as well as information included in the project record. Findings required by other laws, regulations, and policy applicable to the proposal can be found in the "Other Law, Regulation, and Policy Consistency" section of the EA.

I find no significant effects; therefore, an environmental impact statement would not be prepared.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The Finding of No Significant Impact documents the reasons why an action, not otherwise categorically excluded, would not have a significant effect on the human environment and for which an environmental impact statement therefore would not be prepared. The Finding of No Significant Impact discussion considers all information included in the environmental assessment, including the Potentially Affected Environment, as well as documentation in the project record. Pertinent specialists have reviewed the proposal and based on their input, the responsible official made the following determinations with regards to the potentially affected environment and degree of effects considered for a Finding of No Significant Impact.

Potentially Affected Environment

The proposed pipeline would be within a 50-foot-wide ROW traversing approximately 19 miles of NFS lands in McKenzie County, North Dakota. The project area and the surrounding areas are comprised of mixed grass prairie and varies from rolling to badlands terrain. The Project crosses the following watersheds: Achenbach Hills-Little Missouri River, Bennie Peer Creek, Lower Beaver Creek, and Smith Creek.

Table 6. Legal Descriptions of the Proposed Action on USFS Lands:

Township	Range	Section
148	100	17
148	101	33, 34
147	101	4, 8, 17, 18, 19
147	102	25
146	102	4, 5, 7, 8, 18
146	103	13, 23, 24, 26, 33, 34
145	104	24, 25, 26, 26, 34, 35
145	103	4, 18, 19

Degree of Effect

1. Both short- and long-term effects.

In the Environmental Impact section of the EA, resource technical reports and Biological Evaluations/Assessments determined that the selected alternative would not involve any highly uncertain or unknown risks.

2. Both beneficial and adverse effects.

Beneficial and adverse impacts of this decision are addressed in the Environmental Impact section of the EA. No significant impacts were identified. My finding of no significant environmental effects is not biased by the beneficial effects of the action. No adverse effects could be considered significant even if considered separately from beneficial effects. The impacts identified in the EA are within the range of those identified by the LRMP.

3. Effects on public health and safety.

The selected alternative would not have significant effects on public health and safety. The Special Use Permit and attached Exhibits are specifically designed to protect the public's health and safety during the construction of this project and operation of the pipeline once constructed. The regulatory framework of the project is described in the Purpose and Need section of the EA. There is nothing out of the ordinary concerning public safety and health in regard to this project.

4. Effects that would violate Federal, State, or local law protecting the environment.

The action would not violate Federal, State, or local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA (National Forest Management Act (NFMA) – Land Management Plan Consistency; Other Law, Regulation and Policy Consistency). The action is consistent with the DPG LRMP.

Implementation

Implementation of this decision may begin upon receipt of the approved Special Use Permit and following a pre-work meeting with the Forest Service.

Administrative Review and Objections

This decision is subject to the objection process pursuant to 36 CFR 218, subparts A and B which ended on January 27, 2022. No objections were received during that time and, therefore, this decision is not subject to additional administrative review

Responsible Official

Bennie H. South, 2000 Miriam Circle, Bismarck, ND, 58501; bennie.south@usda.gov; 701-842-8507.

LUCAS GRAF FOR

BENNIE H. SOUTH

Grasslands Supervisor

Exhibit B.20
McKenzie County Weed Board

September 30, 2019

Amber Higgens
Weed Board
512 14th St SW
PO Box 930
Watford City, ND 58854

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Amber Higgens
Weed Board
512 14th St SW
PO Box 930
Watford City, ND 58854

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

From:	Zachary Peterson
To:	"Karine R Finken"; "Jaimee Antognazzi"
Subject:	FW: Weed Managment Plan
Date:	Friday, December 27, 2019 10:53:21 AM
Attachments:	Weed Management Plan - Copy.doc

From: Amber Higgins [mailto:mcweed@restel.net]
Sent: Monday, December 23, 2019 11:48 AM
To: zpeterson@keitu.com
Subject: Weed Managment Plan

Zach-

Good afternoon, I received your letter regarding Bridger Pipeline,
All I need is the attached weed management plan filled out. After I receive it and review it as long as completely filled out I can get it approved for you. If you have any questions on the paper work please don't hesitate to contact me.

Amber Higgins
McKenzie County Weed Officer
Phone- 701-842-4131
Fax -701-8424731

Exhibit B.21
ND Geological Survey

September 30, 2019

Fred Anderson
ND Geological Survey
600 E Boulevard Ave, Dept 405
Bismarck, ND 58505-0840

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

NORTH Dakota | Mineral Resources
Be Legendary.℠

October 7, 2019

Jaimee Antognazzi
Keitu Engineers & Consultants, Inc.
1403 27th Street NW
PO Box 98
Mandan, ND 58554-0098

Re: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline – McKenzie Co.

The North Dakota Geological Survey (NDGS) appreciates the notification and opportunity to review and provide comment on this upcoming work. The September 30, 2019 comment solicitation letter sent to us was reviewed on October 7, 2019.

A comparison of recent aerial imagery (NAIP, 2017) and previous landslide area mapping along the proposed pipeline route, suggests that these areas are generally considered to be free of landslide areas. However, the route does pass through areas where the areal density of landslides is relatively high. As such, careful examination of the proposed route for any locations that could be problematic from a slope-stability perspective is recommended.

We have recently completed detailed LiDAR mapping work across the entire state which may be of interest to you in the evaluation of your proposed pipeline route. Additionally, landslide inventory mapping at the 1:24,000 scale has also been completed across western North Dakota and can be found on our website at:

https://www.dmr.nd.gov/ndgs/landslides/

Please feel free to contact me at (701) 328-8000 or via email at fjanderson@nd.gov at any time if there are any additional questions or comments.

Sincerely,

North Dakota Geological Survey:

Fred J. Anderson
Geologist

FJA\

Exhibit B.22
Golden Valley County Weed Control

September 30, 2019

Mark Golberg
Weed Control Officer
PO Box 605
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in November 2019. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

December 16, 2019

Mark Golberg
Weed Control Officer
PO Box 605
Beach, ND 58621

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline-2nd Attempt

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in the winter of 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at zpeterson@keitu.com.

Zach Peterson
Environmental Specialist

Enclosure: Proposed Pipeline Route

Exhibit B.23
Grail Township

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

March 5, 2020

Grail Township
Don Lovaas
2932 108th Ave NW
Keene, ND 58847

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

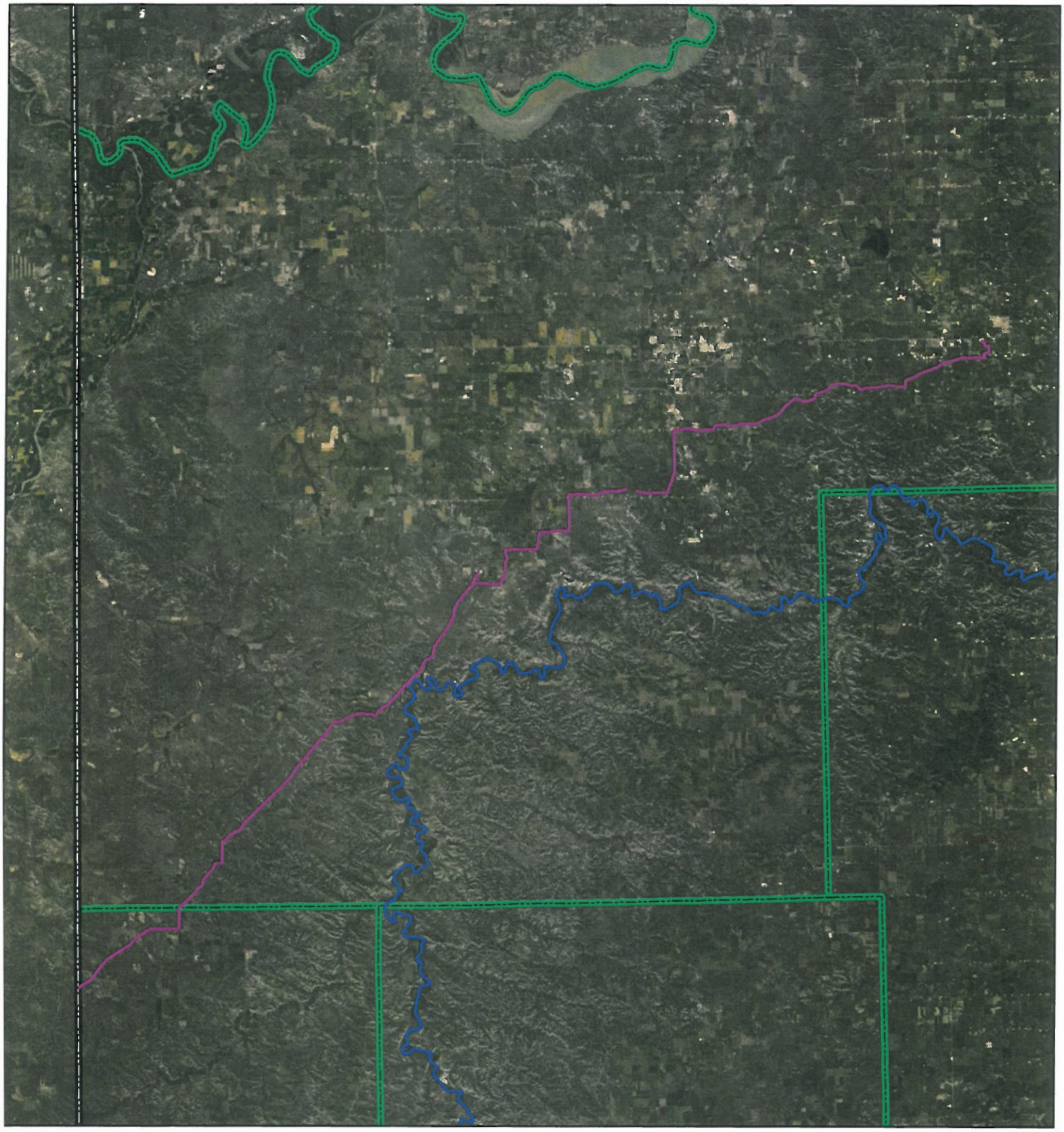
Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in August 2020. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route



South Bend Alignment

Proposed Alignment

Little Missouri River

State Border

County Boundary

N

0 8 16 Kilometers

0 8 16 Miles

Exhibit B.24
ND Labor Department

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Labor Department
600 E Blvd Ave, Department 406, Rm 107
Bismarck, ND 58505

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in late winter/early spring 2021. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.25
ND Indian Affairs Commission

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Indian Affairs Commission
600 E Blvd Ave #316
Bismarck, ND 58505

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.26
ND Governor

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Governor
600 E Blvd Ave
Bismarck, ND 58505-0001

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.27
ND Energy Development Impact Office

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Energy Development Impact Office
1707 N 9th St
Bismarck, ND 58501

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.28
ND Department of Human Services

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Department of Human Services
600 E Blvd Ave, Department 325
Bismarck, ND 58505

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.29
ND Department of Commerce

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Department of Commerce
1600 E Century Ave #2
Bismarck, ND 58503

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in late winter/early spring 2021. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

From:	Hochhalter, Don G.
To:	jantognazzi@keitu.com
Cc:	Heick, Tammy A.; Effertz Hanson, Maria
Subject:	Bridger Pipeline - 16" Crude Oil Pipeline
Date:	Tuesday, January 19, 2021 12:48:35 PM
Attachments:	image003.png image001.png

Good afternoon Jamiee,

Thanks for returning my call, below you will find a few question we discussed;

- What is the estimated pipeline capacity per day
- How many pump stations are expected to be on the proposed route, please indicate approximate locations
- Provide a breakdown of miles of pipeline in ND, on private/state/federal lands ect.
- Can you provide a Total Investment Cost (TIC) of the project
- What size easement are being requesting

Thank-you,

Don Hochhalter

Oil and Gas Business Development Manager

701.328.5300 • 701.388.9339 • dhochhalter@nd.gov • www.commerce.nd.gov

cid:image002.png@01D49FD2.1E3F7210

1600 E. Century Ave., Suite 2 PO Box 2057 • Bismarck, ND 58503

From: Heick, Tammy A. <theick@nd.gov>
Sent: Tuesday, January 12, 2021 3:33 PM
To: Hochhalter, Don G. <dhochhalter@nd.gov>
Subject: Bridger Pipeline Mail

Tammy Heick

Executive Assistant to the Commissioner

701.328.5305 • theick@nd.gov • www.commerce.nd.gov

Jaimee Antognazzi

From: Jaimee Antognazzi <jantognazzi@keitu.com>
Sent: Thursday, February 11, 2021 4:25 PM
To: 'Hochhalter, Don G.'
Subject: RE: Bridger Pipeline - 16" Crude Oil Pipeline

Hi Don-

Below are the answers to your questions about Bridger's 16" Line. Sorry it took so long to get back to you.

Have a great day,

Jaimee Antognazzi
Keitu Engineers & Consultants, Inc.
PO Box 98
Mandan, ND 58554-0098
701-667-1808 Ext. 105

From: Hochhalter, Don G. [mailto:dhochhalter@nd.gov]
Sent: Tuesday, January 19, 2021 12:48 PM
To: jantognazzi@keitu.com
Cc: Heick, Tammy A. <theick@nd.gov>; Effertz Hanson, Maria <mehanson@nd.gov>
Subject: Bridger Pipeline - 16" Crude Oil Pipeline

Good afternoon Jamiee,

Thanks for returning my call, below you will find a few question we discussed;

- What is the estimated pipeline capacity per day
  Initially planned for 105,000 BPD expandable to 250,000
- How many pump stations are expected to be on the proposed route, please indicate approximate locations
  2 initially at our current Johnsons Corner and our current Bicentennial Station, with 2 others proposed if necessary at a later date one of those in Montana and the other at our current Wilson station.
- Provide a breakdown of miles of pipeline in ND, on private/state/federal lands ect.
  Approximately 81 miles in ND, It is approximately 60 miles on private, 19 miles on federal, and 2.7 miles on Federal.
- Can you provide a Total Investment Cost (TIC) of the project
  $122 million
- What size easement are being requesting
  Varies, but typically 100' of working space and 50' of permanent easement

Thank-you,

Don Hochhalter
Oil and Gas Business Development Manager

701.328.5300 • 701.388.9339 • dhochhalter@nd.gov • www.commerce.nd.gov

1600 E. Century Ave., Suite 2 PO Box 2057 • Bismarck, ND 58503

From: Heick, Tammy A. <theick@nd.gov>
Sent: Tuesday, January 12, 2021 3:33 PM
To: Hochhalter, Don G. <dhochhalter@nd.gov>
Subject: Bridger Pipeline Mail

Tammy Heick
Executive Assistant to the Commissioner

701.328.5305 • theick@nd.gov • www.commerce.nd.gov

Exhibit B.30
ND Department of Career & Technical Education

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Department of Career & Technical Education
600 E Blvd Ave, Department 270
Bismarck, ND 58505

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Certificate of Corridor Compatibility and Route Application in late winter/early spring 2021. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.31
ND Attorney General

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Attorney General
600 E Blvd Ave, Department 125
Bismarck, ND 58505-0040

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.32
ND Aeronautic Commission

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

ND Aeronautic Commission
PO Box 5020
Bismarck, ND 58502

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.33
Job Service of ND

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

Job Service of ND
1000 E Divide Ave
Bismarck, ND 58506

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.34
Federal Aviation Administration

KEITU
ENGINEERS & CONSULTANTS, INC.

1403 27th STREET NW
PO BOX 98
MANDAN, ND 58554-0098
701-667-1800

January 4, 2021

Federal Aviation Administration
2301 University Dr #23A
Bismarck, ND 58504

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota.

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Jaimee Antognazzi

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.35
ND Transmission Authority

KEITU
ENGINEERS & CONSULTANTS, INC.

March 3, 2022

John Weeda
Transmission Authority
600 E. Boulevard Ave. Dept 405
Bismarck, ND 58505-0840

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Amended Certificate of Corridor Compatibility and Route Application in March 2022. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.36
ND Forest Service

KEITU
ENGINEERS & CONSULTANTS, INC.

March 3, 2022

North Dakota Forest Service
307 1st St E
Bottineau, ND 58318

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.37
20th Airforce 91st Missile Wing

KEITU
ENGINEERS & CONSULTANTS, INC.

March 3, 2022

Minot Airforce Base
Attn: Colonel Christopher E. Menuery
20th Airforce 91st Missile Wing
196 Missile Avenue
Minot AFB, ND 58705-5003

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

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Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.38
Grand Forks Airforce Base

KEITU
ENGINEERS & CONSULTANTS, INC.

March 3, 2022

Public Affairs Services
Grand Forks Airforce Base
757 Tuskegee Amn. Blvd.
Grand Forks, ND 58505

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

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Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.39
Federal Bureau of Land Management

KEITU
ENGINEERS & CONSULTANTS, INC.

March 3, 2022

Federal Bureau of Land Management
99 23rd Ave West, Suite A
Dickinson, ND 58601

RE: Bridger Pipeline, LLC – Bridger 16" Crude Oil Pipeline

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 145-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Sandstone Terminal located near Plevna, MT. The North Dakota portion of the Project is located entirely within McKenzie and Golden Valley Counties.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Bridger to submit the Amended Certificate of Corridor Compatibility and Route Application in March 2022. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at jantognazzi@keitu.com.

Jaimee Antognazzi
Operations Manager

Enclosure: Proposed Pipeline Route

Exhibit B.40
Military Aviation & Installation Assurance Siting Clearinghouse

Jaimee Antognazzi

From: Jaimee Antognazzi <jantognazzi@keitu.com>
Sent: Thursday, March 3, 2022 10:11 AM
To: 'osd.dod-siting-clearinghouse@mail.mil'
Subject: Pipeline Project Review
Attachments: ND_Alignment_20220222.cpg; ND_Alignment_20220222.dbf; ND_Alignment_20220222.prj; ND_Alignment_20220222.sbn; ND_Alignment_20220222.sbx; ND_Alignment_20220222.shp; ND_Alignment_20220222.shp.ELECTRONGOLD.3404.5152.sr.lock; ND_Alignment_20220222.shx

Bridger Pipeline, LLC ("Bridger") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the construction of an approximately 160-mile crude oil supply pipeline ("Project"). It originates from a location near Johnson's Corner, North Dakota and terminates at the Baker/Sandstone Terminal located near Plevna, MT. The Project is located entirely within McKenzie and Golden Valley Counties in North Dakota. The purpose of this contact is to assess the Project area for the presence of areas that could potentially be impacted, and to provide comments. We respectfully request that any specific concerns known in the area are brought to our attention to ensure we focus on those items. Attached are the GIS Shapefiles of the entire length of the proposed Project intended to review.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance.

Jaimee Antognazzi, CSP
Operations Manager
Keitu Engineers & Consultants
1403 27th Street NW
Mandan, ND 58554
(701) 667-1808 Ext# 105

Exhibit C
Shapefiles

Exhibit D
PSC Requested Files

Exhibit D.1
McKenzie County Weed Management Plan

McKenzie County
Weed Management Plan

Purpose: It is designed to assist in controlling noxious weeds by documenting areas at risk whether it be currently infested or could possibly become infested in the future. This weed management plan is also to assist in coordinating efforts between McKenzie County Weed Control and landowners/operators/developers to accomplish noxious weed control goals in McKenzie County. A copy of this weed management plan will be kept on file with McKenzie County Weed Control as well as with all parties involved in the ownership and/or management of the property.

Date _____ **Circle One:** **PRIVATE** **COMMERCIAL**

Name of Landowner: See Attachment 1

Name of Party Responsible for Weed Control if Different than Landowner

Bridger Pipeline LLC

Address of Responsible Party

PO Drawer 2360 Casper, WY 82602

Phone Number: (307) 266 0411

E-Mail: Bob.Dundas@Truecos.com

Approximate Size of Property: 67 miles in length 300ft corridor width

Legal Description of Property

T145N R103W Sections 4-5, 7-8, 15, 19
T146N R103W Sections 13, 23-24, 26-27, 33-34
T146N R102W Sections 2-5, 7-8, 18
T147N R101W Sections 4-5, 7-8, 18
T147N R102W Sections 25, 35
T148N R101W Sections 25-27, 33-35
T148N R100W Sections 4, 8-9, 17-, 19-20
T149N R99W Sections 13, 24-25, 31-36
T149N R98W Sections 9-12, 16-18
T149N R97W Sections 4-7
T150N R97W Sections 33-35
T150N R96W Sections 25-28, 31-33
T150N R95W Sections 19, 30

Purpose of Property: Crude Oil Pipeline

Surface Movement for Commercial Construction Purposes: Circle or highlight one

Scoria Manure Dirt Sand Gravel Construction Other_____

1.0 Management Goals: Management goals describe the purpose/use of the property and what you are trying to achieve. Having clear management goals is key to developing a weed management plan. (The minimum amount required by North Dakota and McKenzie County Weed Law is to mow noxious weeds to prevent them from going to seed. Another management goal may be to restore an area with native vegetation. Management goals might also include preventing contamination and/or spread of noxious weeds due to mining or storage of construction materials by a yearly or bi-yearly application of herbicide.)

Please list your management goals as they apply to this property:

Noxious weed control measures will be implemented in accordance with existing regulations. Treatment methods will be based on species-specific and area-specific conditions (e.g., proximity to water and/or agricultural area) and time of year. Most noxious weeds identified within the site will be managed by herbicide application. Mechanical methods of weed control including mowing, disc-ing, and hand pulling of small, localized and/or isolated infestations of noxious weeds. Mechanical methods may be selected in lieu of herbicide treatment for select populations. Bridger will continue to detect and mitigate weeds as general O&M practices.

2.0 Weed Control Objectives:

Knowing which weed species occur on your property and where they are located is very important in developing control priorities. Weed species vary considerably in the threat that they pose to the resource values of the property. In addition, weed species vary greatly in their susceptibility to control measures. Thus, weed species that pose the greatest threat to achieving the management goals for the property and which can be most easily controlled are the highest priority for management. To create weed control objectives for your weed management plan, first search your property for weeds (if you have not already done so).

Each parcel along the route will be assessed and managed on a case by case basis as the type of weeds encountered will vary. During construction and post construction phases Bridger will inspect and monitor any weeds encountered and implement preventative measures to mitigate the spread of noxious weeds.

NOXIOUS WEEDS IN MCKENZIE COUNTY	
1. Absinth Wormwood	2. Canada Thistle
3. Dalmation Toadflax	4. Diffuse Knapweed
5. Halogeton	6. Leafy Spurge
7. Musk Thistle	8. Purple Loosestrife
9. Russian Knapweed	10. Saltcedar
11. Burdock	12. Black Henbane
13. Yellow Toadflax	14. Houndstongue
15. Spotted Knapweed	16. Baby's Breath
17. Palmer Amaranth	

3.0 Weed Control Objectives – 3-year plan

1st Year Weed Control Objective:
Install, inspect, and maintain CMRP best management practices (BMPs), including re-establishing vegetative cover on disturbed areas that will not be impacted by future site operations, using weed-free native grass mixtures, erosion control blankets, and other means as required in areas disturbed by maintenance activities.

During maintenance activities, Bridger or the assigned contractor will clean the tracks, tires, and blades of equipment by hand (track shovel) or compressed air to remove excess soil prior to movement of equipment out of weed or soil-borne pest infested areas or utilize cleaning stations to remove vegetative materials using water under high pressure.

Bridger or the assigned contractor shall use mulch and straw or hay bales that are Certified Weed Free in the State of North Dakota for temporary erosion and sediment control.

Bridger or the assigned contractor shall implement weed treatments such as mowing prior to seed development or herbicide application to areas of noxious weed infestation prior to soil disturbing work for maintenance.

Bridger or the assigned contractor will implement mitigation or protection measures for conducting vegetation control where necessary. Typical agricultural herbicides, developed in consultation with county or state regulatory agencies, will be used. Herbicide types will be determined based on the weed species requiring control. Bridger or the assigned contractor shall apply herbicides, where required, within one week of the weed cluster identification, or as deemed necessary for optimum mortality success, prior to disturbing the area by clearing, grading, trenching, or other soil disturbing work. Herbicides shall be applied by applicators appropriately certified. All herbicides applied shall be non-residual or shall have a significant residual effect no longer than 30 days. Bridger will implement mitigation or protection measures in the use of pesticides and herbicides along the pipeline corridor to reduce potential impacts to avian and wildlife species.

Bridger or the assigned contractor shall not use herbicides in or within 100 feet of a wetland or waterbody.

2nd Year Weed Control Objective:
Bridger or the assigned contractor will perform regular inspection to assess site conditions and develop corrective actions as necessary to address deficiencies. The whole site will be inspected to ensure early detection of noxious weeds that may transfer to the site from nearby lands and equipment.

3rd Year Weed Control Objective:
Periodically inspect the property to ensure successful site re-vegetation and to monitor for potential incursions of noxious weeds. Bridger shall provide weed control if necessary, to limit the potential for the spread of weeds onto adjacent lands. Any weed control spraying performed by Bridger or the assigned contractor shall be done by a state-licensed pesticide applicator.

4.0 Evaluating Weed Control:

After weed control objectives have been created and control of priority weed species has begun, results of the control methods should be evaluated for effectiveness. This requires follow-up visits to the areas where weeds were controlled and a re-assessment of the size and density of an infestation. (For example, compare the size of the infestation after a growing season has elapsed to the size before control actions were initiated.) In most cases, the elimination of an infestation will take several years with multiple treatments per year to kill the plants and eliminate the bank of weed seeds in the soil.

ND Law 4.1-47-02. Control of noxious weeds.

Each Person shall do all things necessary and proper to control the spread of noxious weeds.

In signing this document, I understand that I will be responsible for noxious weed control on the property listed above.

Responsible Party_____ Date 3-17-2020
Tommy Massengale

McKenzie County
Weed Board Chairperson: _____ Date_____

Please allow 48 hours for review of this plan prior to receiving confirmation of approval.

Exhibit D.2
10 Year Spill History

Date of Spill	Spill Name	Quantity Oil Released (barrels)
5/14/2012	33-153-90	100
5/15/2012	Fryburg Station	150
10/15/2013	EOG Liberty 8-01	15
11/30/2013	Ehlert Station	125
1/13/2014	Whiting Tarpon Fed 21-4	25
6/6/2014	EOG Wayzetta 155-26-36H	700
8/22/2014	Wayzetta 1-13H	100
11/25/2014	EOG 40-1509 pump	50
6/25/2016	Conoco Elizabeth-Celia Stroh44-4 Quad Pad	6.0
6/2/2017	Conoco-Big Bend 41-2	140
12/21/2018	Denali Station	6.0
7/3/2019	COP Big Bend 41-2TFH	200
12/2/2019	EOG Liberty 11	10
5/31/2020	Hwy 23-Strainer O-Ring	7
2/2/2021	Brandvik Piping	260
11/23/2021	EOG Liberty LR 107-1109H	10

*Data represents Bridger Pipeline LLC's 10-year spill history current as of 12/31/21 for spills greater than five barrels

Exhibit F
Tetra Tech Report

Report of Geohazard Evaluation South Bend Pipeline Segment West Central North Dakota

Tetra Tech Project No. 117-0533085

August 28, 2020

PRESENTED TO

Belle Fourche Pipeline, LLC
Attn: Mr. Kevin Pena
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TABLE OF CONTENTS

1 INTRODUCTION 1
1.1 PURPOSE AND SCOPE OF FIELD EVALUATIONS 1
2 SLOPE SELECTION AND DATA COLLECTION 1
2.1 SLOPE SELECTION 1
2.2 DATA COLLECTION 2
2.2.1 Public Sources and Types 2
2.2.2 Private Sources and Types 2
3 GEOHAZARD IDENTIFICATION 2
3.1 GEOLOGIC SETTING 2
3.2 GEOHAZARD RANKING CRITERIA 3
4 FIELD EVALUATION 4
4.1 FIELD EVALUATION SUMMARY 4
4.2 FINDINGS AND CONCLUSIONS 4
4.3 ADDITIONAL ANALYSIS 5
5 GEOHAZARD SUMMARIES, MITIGATION ALTERNATIVES, AND RECOMMENDATIONS 5
5.1 GEOHAZARD SUMMARIES 5
5.1.1 Potential Slope 1, Golden Valley County, North Dakota 5
5.1.2 Potential Slope 2, Golden Valley County, North Dakota 6
5.1.3 Potential Slope 4, McKenzie County, North Dakota 6
5.1.4 Potential Slope 5, McKenzie County, North Dakota 6
5.1.5 Potential Slope 6, McKenzie County, North Dakota 7
5.1.6 Potential Slope 7, McKenzie County, North Dakota 7
5.2 MITIGATION ALTERNATIVES SUMMARY 8
5.3 GENERAL RECOMMENDATIONS 10
6 LIMITATIONS 11

LIST OF TABLES

Table 4-1: Slope Geohazard Ranking Criteria

LIST OF FIGURES

Figure 1: 2020 South Bend Project Segment – Overview and Slope Crossings Map
Figure 2: Slope 1, Golden Valley County, North Dakota
Figure 3: Slope 2, Golden Valley County, North Dakota
Figure 4: Slope 4, McKenzie County, North Dakota Photo Map
Figure 5: Slope 5, McKenzie County, North Dakota Photo Map
Figure 6: Slope 6, McKenzie County, North Dakota Photo Map
Figure 7: Slope 7, McKenzie County, North Dakota Photo Map

APPENDIX

Appendix A: Field Forms

ACRONYMS / ABBREVIATIONS

Acronyms/Abbreviations	Definition
BMP	Best Management Practice
ESRI	Environmental Systems Research Institute
GIS	Geographic Information Systems
RTK GPS	Real-Time Kinematic Global Positioning System
USGS	United States Geological Survey

1 INTRODUCTION

At the request of Belle Fourche Pipeline, LLC (Belle Fourche Pipeline), a field geologic hazard evaluation has been completed at six (6) sites of concern identified by Belle Fourche Pipeline along the proposed South Bend segment in the Little Missouri Badlands area of west central North Dakota. Six (6) field evaluation sites were located along the corridor for the proposed South Bend pipeline segment. The field evaluation locations along the proposed and existing pipeline routes are included in Figure 1. This report describes the preliminary field evaluation results of slope geohazards in the evaluation area.

The proposed South Bend pipeline segment will include installation of a 16-inch diameter pipeline across 137 miles to collect and transport petroleum products from various well pads to tankage. The pipeline segment will begin east of Watford City at the Johnson's Corner Station and will then intersect the Wilson Station south of Watford City. The pipeline will then continue to the Bowline Station located southwest of Arnegard, then to the Bicentennial Station near Trotters. After leaving the Bicentennial Station, the South Bend pipeline will terminate near Baker, Montana at the Sandstone Station. Portions of the proposed pipeline alignment will share its corridor with existing pipelines.

1.1 PURPOSE AND SCOPE OF FIELD EVALUATIONS

A field evaluation was completed for slope geologic hazards at six (6) locations of concern selected by Belle Fourche Pipeline along the proposed South Bend pipeline segment within McKenzie and Golden Valley Counties, North Dakota. The purpose of the evaluations was to observe and document site conditions and assign slope failure potential rankings to each selected slope geohazard location along the proposed and existing pipeline routes.

The field evaluations and rankings included in this report are intended to be used by Belle Fourche Pipeline as a pipeline management tool to monitor potential geologic hazard areas and reduce the potential risk presented by the identified hazards. Understanding the geologic hazard behavior presented in this report will allow contingency plans relative to pipeline operations to be formulated and implemented by Belle Fourche Pipeline to manage pipeline performance and minimize potential pipeline failures.

This report presents the results of the geologic hazard field evaluations, summaries of findings, conclusions of risk, and next steps in the geohazard evaluation process.

2 SLOPE SELECTION AND DATA COLLECTION

2.1 SLOPE SELECTION

The list of potential slope crossings evaluated in the field by Tetra Tech for the proposed South Bend project was developed by Belle Fourche Pipeline, derived from potential areas of concern to the proposed and existing pipeline segments. Six (6) potential slopes were selected by Belle Fourche Pipeline and were provided to Tetra Tech for evaluation. Each site was subsequently visited and evaluated for potential geohazards. Summaries of the completed field evaluations and slope failure potential rankings, based on field evaluations and background data, are discussed in Section 5.

2.2 DATA COLLECTION

Multiple public and private data sources were reviewed and utilized as part of the field evaluations and subsequent evaluation of the six (6) sites identified by Belle Fourche Pipeline, listed in the following sub-sections.

2.2.1 PUBLIC SOURCES AND TYPES

- Environmental Systems Research Institute (ESRI)
  - Aerial imagery
  - Topographic maps
- North Dakota GIS Hub Data Portal
  - LiDAR elevation dataset
- United States Geological Survey (USGS)
  - The National Map
  - National Geologic Map Database
  - Topographic maps
  - Mineral Resources Data System, which provides surficial and bedrock geology information

2.2.2 PRIVATE SOURCES AND TYPES

Belle Fourche Pipeline provided GIS data related to the existing pipelines and proposed South Bend pipeline in the assigned geographic area. Data included:

- Pipeline polylines
- Pump stations
- Valves

3 GEOHAZARD IDENTIFICATION

3.1 GEOLOGIC SETTING

A basic understanding of the geology of a region or locale is important for evaluating geohazard concerns. Following is a brief description of the regional geology.

The project is located within the semi-arid climate of the northern Great Plains, on the southwestern side of the Williston Basin. The proposed and existing pipeline segments cross McKenzie and Golden Valley Counties in west central North Dakota. The project area is located in the Little Missouri Badlands area of the unglaciated Missouri Plateau. Topography is characterized by gently rolling uplands interrupted by buttes and ridges capped by resistant rock types and steep badlands created by the network of small tributaries draining to the Little Missouri River.

The regional geology can be summarized as predominately weathered sandstone, siltstone, and shale (claystone) locally overlain by unconsolidated soil deposits. Unconsolidated deposits at the surface consist of clay, silt, sand, and gravel of irregular thickness within the valleys and typically thin deposits in upland areas. Most of the bedrock exposed at the surface and encountered below the surficial soils consists of relatively flat-lying sedimentary formations. The vast majority of the exposed bedrock consists of the Sentinel Butte and Bullion Creek Formations (Paleocene), which consists of alternating layers of weathered

claystone, siltstone, sandstone, and lignite. The Sentinel Butte Formation is described as fine- to medium-grained, gray to tan and yellowish gray, clay, silt, sand, and lignite. The Bullion Creek Formation is described as fine- to medium-grained, yellow-brown, silt, sand, clay, and lignite.

The Bullion Creek Formation typically forms more rounded, vegetated slopes than the overlying Sentinel Butte Formation. Deposits of bentonitic claystone/shale and their derivative clay soils from the Sentinel Butte Formation are historically susceptible to landslide deformations when slopes approach 25 percent or greater, especially when moisture content increases seasonally due to snowmelt and spring rains. Bentonite typically forms a desiccated “popcorn” structure when dry at the surface.

The project area has the potential for localized subsidence related to collapse of burned out lignite layers, which can be indicated by the presence of clinker beds or chimneys, although available mapping does not indicate any such features in the project area. Karst subsidence is not noted in the area due the small percentage of limestone deposits, although surface runoff can develop localized “pseudo-karst” piping features including small tunnels and caves that are sometimes observed in badland topography. Localized features such as burned out lignite layers and piping features are not mapped and can only be evaluated after identification in the field.

Geologic hazards can be caused by man-made impacts such as road construction, regrading, fill placement, and altering natural drainage patterns. Such activities can contribute to existing areas of slope instability and initiate new landslides.

3.2 GEOHAZARD RANKING CRITERIA

Tetra Tech assigned a ranking to each of the six (6) potential slope crossing geohazard locations ranging from very low to very high potential of instability. The geohazard ranking criteria is summarized below in Table 4-1: Slope Geohazard Ranking Criteria.

Table 4-1. Slope Geohazard Ranking Criteria

Rank	Ranking Criteria Description
Very Low	Very low potential of slope movement. Typically, gentle (<12 degrees) slopes. Slope has a very low potential for mass movement. Well vegetated (>80%), stable soil type. No obvious erosion or movement features - slope less than 12 degrees.
Low	Low potential of slope movement. Typically, gentle to moderate (12 to 20 degrees) slopes. Low potential for mass movement. Possible minor rills, erosion, and creep. Well vegetated (>80%), stable soil type.
Medium	Moderate potential of slope movement. Typically, moderate (20 to 30 degrees) slopes. Moderate potential for mass movement. Slope has evidence of creep, erosion, minor slumping, or seepage. Sparse vegetation (<50%). Stratigraphy and soil type are favorable for slope movement.
High	High potential of slope movement. Typically, moderate to steep (20 to >45 degrees) slopes. Evidence of slope movement, major erosion, slumping, seepage, etc. Proximal to other areas of mass movement. Stratigraphy and soil type are favorable for slope movement. Area should be evaluated within the next 6-12 months.
Very High[1]	Very high potential of slope movement. Typically, moderate to steep (20 to >45 degrees) slopes. Material is unstable. Visible evidence of recent mass movement. Recommend site specific evaluation. Area may need immediate attention and should be evaluated within 1-2 months.

Note: [1]Slope stability features assigned a hazard rating of high or very high based on specific criteria should be further evaluated by direct field observation. Some rankings were modified based on engineering judgement, with comments provided in the geohazard table.

A geohazard intersect map (Figure 1) is included in the Appendix. Specific slope geohazard points are consecutively numbered by county, generally from west to east then north to south along the proposed pipeline alignment.

4 FIELD EVALUATION

4.1 FIELD EVALUATION SUMMARY

A field evaluation consisting of observation and data gathering was conducted by Tetra Tech for six (6) potential geohazard locations identified and selected by Belle Fourche Pipeline for the proposed South Bend pipeline segment and existing Wilson to Bowline pipeline segment.

Prior to the field work, Tetra Tech prepared an Incident Prevention Plan. The document included anticipated safety issues that the Tetra Tech field team might encounter while performing the field work within the pipeline right-of-way. All project access to the pipeline right-of-way and requisite landowner notifications were performed by Belle Fourche Pipeline personnel or their designated land agents for all locations prior to the field work beginning. A one (1) person Tetra Tech field crew performed the requested field evaluations on July 6th and 7th, 2020, with mobilization and de-mobilization occurring on July 5th and July 8th, respectively. The field crew was accompanied by two (2) Belle Fourche Pipeline representatives throughout the duration of the program.

The field evaluations were conducted to determine if remedial measures are necessary to reduce the slope failure potential. Tetra Tech collected site specific information for each potential geohazard location to establish a baseline of current conditions. Site specific information included; geohazard identification, distance of the geohazard from the proposed or existing pipeline, geohazard location (latitude/longitude), location description, soil and/or rock lithology, slope type, slope inclination and dimensions, slope aspect relative to the proposed pipeline direction, erosion potential, surface water (if applicable), vegetation cover, existing pipeline depth of cover (if available), location photos, and comments on the specific geohazard. Field equipment included: Real-Time Kinematic Global Positioning System (RTK GPS), mobile tablet, utility line locator (for depth of cover measurements), and laser rangefinder/inclinometer.

4.2 FINDINGS AND CONCLUSIONS

Slope instability (landsliding) is the most common and frequent type of geologic hazard along the proposed and existing pipeline segments. Landsliding and the other identified hazards have the potential to damage or rupture the existing or proposed pipelines within the evaluated areas. The relationships of geologic unit, slope angle, slope length, and slope aspect are important relative factors for understanding previous landsliding, existing landsliding, and future landsliding potential.

The field geohazard evaluation of the various sites indicates steep slopes with poor vegetation and fine-grained surficial soils are susceptible to slope movement and erosion. Specifically, areas of unconsolidated soils overlying highly weathered sandstone and claystone bedrock of the Bullion Creek and Sentinel Butte Formations are more susceptible to slope instability. Slopes with poorly established vegetation are susceptible to surficial raveling, rilling, gully erosion, and surficial slump failures. Slope failures above the pipeline can continue to load slide mass and debris on to the pipeline alignment adding weight and increasing the potential for slope failure below the pipeline. Slope movements may also start lower on the slope and

propagate head-ward upslope to intersect the pipeline alignment. Historic slope movements may provide information and insight on hazards most likely to affect the pipeline in the future.

Many of the areas which have moved in the past may be temporarily stable but have the potential to reactivate. A previous slide will often remain stable unless a present condition changes. Direct condition changes generally involve construction on or adjacent to a landslide or adjacent slopes. Indirect condition changes generally involve the behavior of surface water, infiltration and groundwater on or near a landslide or slopes prone to landsliding. Recent development near the pipeline, or on-going construction activities can present a potential impact to the pipeline corridor both immediate and ancillary. For these investigations a corridor width of 200 feet total, 100 feet either side of centerline, was considered.

4.3 ADDITIONAL ANALYSIS

Based on the findings of this initial geohazard field data collection, Tetra Tech recommends additional geohazard studies be performed on other portions of the proposed South Bend pipeline segment and other portions of the existing pipelines traversing areas of steep topography or water crossings.

5 GEOHAZARD SUMMARIES, MITIGATION ALTERNATIVES, AND RECOMMENDATIONS

5.1 GEOHAZARD SUMMARIES

Six (6) potential geohazard locations were evaluated in the field on July 6th and 7th, 2020 and are discussed and described briefly below with the information tabulated in summary tables. Conceptual mitigation alternatives are also summarized should Belle Fourche Pipeline determine it necessary. The slope crossing field forms include detailed data, descriptions, and photos of each evaluated geohazard location and are included in the Appendix.

5.1.1 POTENTIAL SLOPE 1, GOLDEN VALLEY COUNTY, NORTH DAKOTA

The slope is the upper portion of the western side of a local drainage tributary. The slope extends downward to the east for approximately 175 feet at 8 degrees. The slope was well vegetated with grasses and several small sections of sagebrush, with a livestock trail extending along much of the slope. The slope was ranked as a low potential for slope movement due to the relatively shallow slope angle, lack of erosional or slumping features along the slope, no proximal source of water, and its well-vegetated character. The risk for potential impacts to the proposed South Bend pipeline are also low.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 1, Golden Valley County	Low	8	175	100	E	CL-ML	Bullion Creek Formation

5.1.2 POTENTIAL SLOPE 2, GOLDEN VALLEY COUNTY, NORTH DAKOTA

The slope is the lower portion of the western side of a local drainage tributary. The slope is relatively short at approximately 35 feet in length, extending downward to the east at approximately 22 degrees. An approximately 20-foot long gully was observed along a livestock path found on the southern portion of the slope, increasing in dimensions downslope to roughly 6 feet wide and 3 feet deep. Another partially revegetated gully was observed on the north portion of the slope, extending the entire length of the slope. The maximum width of the gully was approximately 15 feet near the toe of the slope and was near 10 feet deep. Additional minor erosion along historic wheel paths and throughout the slope were also observed. This slope was ranked as a medium potential for slope movement due to the moderately steep drainage bank slope and evidence of continued erosion and material loss within the proposed pipeline corridor. In its current state, the risk for potential impacts to the proposed South Bend pipeline is low to moderate. Potential mitigation may include partial regrading in gully and erosion areas and installation of erosion control measures during pipeline construction activities.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 2, Golden Valley County	Medium	22 – 31	35	40	E	CL-ML	Bullion Creek Formation

5.1.3 POTENTIAL SLOPE 4, MCKENZIE COUNTY, NORTH DAKOTA

The proposed South Bend pipeline extends east to west approximately 75 feet beyond the toe of the north facing slope for approximately 400 feet, then continues to the west as the slope toe turns toward the southwest. The slope is a north and northwest facing ridge that extends approximately 165 feet down steep sides averaging 30 degrees. There were multiple smaller landslides and numerous slumps observed along the slope, with most of the movement associated with the north-facing slope. A larger landslide measuring approximately 75 feet across, 15 to 20 feet long, and 3 to 4 feet deep at the head scarp was also observed. Evidence of historic standing water near the toe of the slope was also recorded. Along the north-facing portion of the slope, an approximate 2-foot deep and 1- to 2-foot wide gully extending up to 30 feet down the slope was observed. This slope was ranked as a high potential for slope movement due to general steepness of the slope, the existing slide masses and slumping observed, gullying, as well as indications of previous standing water at the toe of the slope. The risk for potential impacts to the proposed South Bend pipeline is low, however, given that the proximal distance from the proposed pipeline to the toe of the slope is 60 feet or greater.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 4, McKenzie County	High	30 – 47	165	75	N, NE	CL	Sentinel Butte Formation

5.1.4 POTENTIAL SLOPE 5, MCKENZIE COUNTY, NORTH DAKOTA

A drainage with an intermittent stream intersects the proposed South Bend pipeline alignment at the toe of the slope. At the time of assessment, minimal water was observed in the stream. The existing Bicentennial

to Baker pipeline (10-inch) exists approximately 55 feet to the northwest of the proposed South Bend segment at this location. The slope extends down to the northeast at 30 degrees for approximately 40 feet, then flattens to approximate 10 degrees for 65 feet where the intermittent stream defines the toe. The upper, steeper portion of the slope is defined by a knob which extends outward beyond the surrounding slope facies and intersects the proposed pipeline alignment. There was slumping observed approximately one-third of the way up the slope, with approximate dimensions of 20 feet wide, 5 feet long, and extended about 2 feet above the surrounding soil. Multiple small livestock trails merging at one main trail near the top of the slope to the west of the proposed pipeline location extended down the length of the slope. The main trail exhibited minor gullying less than 6 inches deep. Additional surficial erosion was observed at various locations throughout the slope. This slope was ranked as a medium potential for slope movement due to its moderately steep to steep slope and observed slumping, gullying, and erosion features throughout the slope. Due to the proximity of the proposed and existing pipelines to the observed slope features, the risk for potential impacts to the pipeline is moderate.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 5, McKenzie County	Medium	10 – 30	105	20	NE	CL	Bullion Creek Formation

5.1.5 POTENTIAL SLOPE 6, MCKENZIE COUNTY, NORTH DAKOTA

A drainage with an intermittent stream intersects the proposed South Bend pipeline alignment at the toe of the slope. At the time of assessment, there was approximately 3 to 4 inches of water observed in the stream. The existing Bicentennial to Baker pipeline (10-inch) exists approximately 55 feet to the northwest of the proposed South Bend segment at this location. The slope is mostly well vegetated and is part of the southern side of a steep drainage, extending down to the northeast at an average of 37 degrees. The upper 15 feet of the slope is slightly less steep at 30 degrees, while the remaining distance slopes at near 46 degrees. There was gullying observed along the western edge of the corridor with approximate cross-sectional dimensions of 1-foot wide by 1-foot deep. The gullies extended down the slope approximately 40 feet. A deeper gully, or possibly a tension crack, was observed near the top of the slope, extending 25 to 30 feet transversely along the slope, gradually transitioning into the more defined and eroded gullies downslope. The slope was ranked as a high potential for slope movement due to its steepness, observed gullies, and possible tension crack near the crest of the slope. The risk for potential impacts to the proposed South Bend pipeline at this location is also high due to the steepness of the slope and proximity to the observed slope features.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 6, McKenzie County	High	30 – 46	55	10	NE	CL	Bullion Creek Formation

5.1.6 POTENTIAL SLOPE 7, MCKENZIE COUNTY, NORTH DAKOTA

A drainage with an intermittent stream intersects the proposed South Bend pipeline alignment at the toe of the slope. The slope extends down to the northeast for approximately 145 feet at an average angle of 20 degrees. The slope has a convex shape, with the upper 100 feet sloping at 13 degrees and the bottom 45 feet within the drainage channel sloping at 28 degrees. There was minor historic slumping observed near

the toe of the slope and within the drainage channel, and some head cutting of the streambed was observed upstream of the slope location. The observed slumping did not appear to be active at the time of assessment, however. The slope was well vegetated throughout with no apparent erosion observed. This slope was ranked as a medium potential for slope movement due to its moderately steep slope and observed historic slumping near the toe of the slope. Due to the nature of the observed slumping and proximity to other observed features near the slope, the risk for potential impacts to the proposed South Bend pipeline is moderate.

Location	Geohazard Rating	Slope (deg)	Down-slope Length (ft)	Distance from Pipeline to Geohazard (ft)	Slope Aspect	USCS Soil Class	Geology
Potential Slope 7, McKenzie County	Medium	13 – 28	145	15	NE	CL	Sentinel Butte Formation

5.2 MITIGATION ALTERNATIVES SUMMARY

Should erosion and slope movement continue to occur at the locations above and Belle Fourche Pipeline determines that mitigation is necessary, potential mitigation alternatives are presented and discussed in more detail below for further consideration. All slope stabilization methods include one or more of the following goals; reduce driving forces, increase resisting forces, or avoid the failure area.

Typically, mitigation alternatives fall into three primary categories: avoidance, slope modification (reduce the driving forces/increase the resisting forces), and slope reinforcement (increase the resisting forces).

Avoidance consists of avoiding areas of potential or existing hazards. Avoidance can be accomplished by re-routing around the hazard area, trenching or horizontal directional drilling to a depth sufficiently below the hazard, or spanning over the hazard area.

Slope Modification includes; slope re-grading (slope flattening, benching, toe berm/buttress), removal and replacement of unstable material (may include shear key trench or light-weight fill material), surficial reinforcement (re-vegetation, erosion control fabric, geocell, rip rap), and surface water controls (interception ditches, BMP berms). Slope flattening is often the simplest method for improving the stability.

Drainage Improvements includes; surface water diversion, interception, and collection ditches or berms, subsurface drainage galleries, horizontal drains, and dewatering wells.

Slope Reinforcement can include a wide variety of reinforcement types or combinations of different types. Ground anchors, tieback walls, micropiles, soil nails, retaining walls, soldier piles, sheet piles, and reinforced soil slopes are examples of the types of reinforcement techniques typically used to repair unstable slopes.

Slope modification and structural reinforcement are often combined to some degree to optimize the slope mitigation method. Slope modification and structural slope reinforcement techniques typically include measures to address surface and ground water drainage, such as underdrains, cut-off drains, horizontal drains, diversion and interception ditches, de-watering wells, and impermeable membranes. A more complete and detailed list of possible mitigation alternatives are summarized in the following table.

Mitigation Alternative	Effectiveness	Cost	Brief Description
Earthworks			
Slope Re-grading	High	Low to High	Improves stability by flattening or benching slope to uniform and stable geometry. Often includes cutting material from top of slope and placing it as fill at toe of slope.
Toe Buttress	High	Low to High	Construction of soil berm at toe of slope to resist driving forces of slide mass. Typically benched into the slope and keyed into the toe area.
Shear Key Trench	High	Low to High	Excavation or large trench or series of trenches into slope to intercept the failure plane. Replace native materials with compacted higher strength, free-draining, granular material. Typically included in conjunction with re-grading or buttressing.
Rip Rap Armoring	Moderate	Low	Placing large cobbles and boulders or engineered hard armor products along stream bank or across slope to provide erosion and provide surface protection.
Lightweight Fill	Medium	High	Replacement of native soils with light-weight material to reduce weight of slide mass and reduce driving forces in slide area. Lightweight material can consist of geofoam, polystyrene blocks, wood fiber, shredded rubber tires, or other materials.
Ground Improvement (stone columns, jet grouting, etc.)	High	High	Replacing or strengthening existing soil within the slide area or across the slide plane by drilling and replacement or mixing soil with cement to increase shear strength.
Surface Protection			
Geocell	High	Low to Moderate	Shallow cellular confinement system used to prevent erosion on slopes up to 45 degrees. Permeable and allows water to flow between cells, improving drainage and promoting vegetation growth for erosion control.
Erosion Control Fabric	Moderate	Low	Prevent erosion by protecting surface and promoting vegetation.
Drainage Improvement			
French Drains	Moderate	Low	Excavated trenches perpendicular to slope and filled with gravel wrapped in filter fabric. Improves stability by draining near surface soils and reducing pore pressures.
Horizontal Drains	Moderate	Moderate	Drilling into slope at low angle and installation of drain pipe. Improves stability by lowering groundwater levels and decreasing pore pressure. Can be susceptible to freezing or clogging, which may require periodic maintenance. Can be damaged by slide movement and become inoperative.
Dewatering Wells	High	Moderate	Drilling vertical wells and pumping to lower groundwater levels and decrease pore pressures. Requires electricity to run pumps and outfall system.
BMP ditches and Interception ditches	Low to Moderate	Low	Construction of berms and/or ditches to collect and divert surface water flow away from failure area. Controls surface water flow to reduce infiltration and erosion.
Structural Reinforcement			
MSE Wall	Low to Moderate	Moderate	Construction of reinforced retaining wall on slope below pipeline. Welded wire mesh, gabions, and geogrid wrapped faces are typical applications.
Soil Nails	High	High	Installation of steel bars grouted into place with a steel mesh and shotcrete slope facing. Provides additional shearing resistance along failure plane and surface protection.
Ground Anchors	High	High	Installation of anchor strands or bars grouted into place and pre-tensioned against a reaction block at the slope face. Provides additional shearing resistance and normal force across the failure plan.

Mitigation Alternative	Effectiveness	Cost	Brief Description
Micropiles	High	High	Installation of small diameter steel and grout piles through slide mass to provide additional shearing resistance across failure plane. Often installed in 'A-frame" type pattern with a concrete pile cap.

Geohazard locations with a 'high' or 'very high' potential for slope movement with potential to affect the pipeline can be monitored and instrumented to provide observation and characterization of factors that may contribute to slope instability (precipitation, groundwater elevation, stream flow), and slope movement (magnitude and direction of movement, and depth of shear zone). This information can be useful as an 'early-warning' system indicating impending pipeline damage and for design of a long-term mitigation design. The simplest method of monitoring consists of periodic field inspection and documentation of basic site conditions.

Additional monitoring techniques include topographic survey, fixed survey points, rain gauges, stream gages, crack monitoring, piezometers, extensometers, inclinometers, and aerial and terrestrial photography. These techniques can be utilized at specific locations on a case by case basis.

A significant factor to consider for improving slope stability is subsurface water, surface run-off, and infiltration control. Saturated soil conditions can reduce soil strengths and contribute to slope instability. To minimize these conditions, surface water runoff must be controlled both during construction and after construction of any mitigation system. Mitigation methods will perform more effectively with a drainage system installed to intercept and control surface water flow.

The mitigation alternatives summarized above are general "tried and true" methods for slowing or arresting slope movement within slide areas and have proven effective on similar projects. However, given the relatively unknown subsurface conditions, the overall lifespan and the effectiveness to arrest movement through mitigation is not completely predictable without additional geotechnical investigation, slope monitoring, and analysis. New or existing slides can be reactivated due to many factors beyond the geotechnical engineer's control such as seismic activity and vibration, relaxation of the mitigation system, or increased infiltration due to 'above normal' precipitation. Other factors include variations in subsurface soil or rock properties and groundwater elevations not encountered during the limited field investigation.

5.3 GENERAL RECOMMENDATIONS

The following recommendations are based on information obtained from the data review, geohazard mapping, and geohazard description. The recommendations below are for general consideration at high instability, erosion potential, and/or active geohazard locations along the proposed pipeline corridor.

The intent of a monitoring program is to identify slope movements before the pipeline is affected. The monitoring program should consist of both visual monitoring, and movement monitoring if deemed necessary. Four (4) of the six (6) potential geohazard locations in Golden Valley and McKenzie Counties of North Dakota evaluated during the July 2020 field evaluations were observed to have slope movement or erosional features with potential to encroach toward and pose risk to the proposed or existing pipeline. At a minimum, geohazard locations ranked as 'high' or 'very high' with potential to affect the pipeline should be monitored to observe, document, and characterize factors that may contribute to slope instability and movement. Monitoring should include measuring the physical dimensions of the failure areas to determine movement over time. Consideration should be given to adjusting the proposed pipeline alignment around these geohazard locations or providing regrading and erosion control to decrease the potential for future slope instability.

Movement monitoring could be performed by in-situ instruments or surveyed movement monitoring. Systematic visual monitoring could be performed by Tetra Tech's geotechnical staff. The program would monitor active and pre-existing landslides and slopes with high potential for instability that would affect the pipeline, if deemed necessary by Belle Fourche Pipeline. The program would be structured similar to the initial field inspections completed as part of this evaluation. Each visual monitoring event would be recorded and evaluated so monitoring events can be compared through time. In-situ movement and movement surveys would also be recorded and evaluated. This monitoring information will also be useful for design of a long-term mitigation design. If subsequent monitoring indicates the slope failure is active and encroaching on the pipeline, a geotechnical investigation is recommended to provide full mitigation recommendations.

The slope movements and movement susceptible slopes along the project segment are most directly affected by water. Future monitoring should focus on recording water features on or near the slopes, as well as any loading, erosion, or moving at susceptible slopes.

In unstable slopes and landslides, it is critical to understand the failure mechanism before making recommendations for mitigation and stabilization. Otherwise, construction activities can often be ineffective or further instigate additional instability. Survey monitoring points can be installed within slope movement areas to monitor and document magnitude, rate, and direction of future movement. In areas where seepage or groundwater appears to affect stability, temporary piezometers can be installed in boreholes and monitored to document groundwater levels and identify the shear plane depth in the event of future movement. Geotechnical evaluation/investigation may be necessary for geohazard locations where ongoing active slope movement occurs with the potential to damage the pipeline. Geotechnical evaluation/investigation may include a combination of the following elements; field inspection, field monitoring, geophysical exploration, subsurface exploration (boreholes and/or test pits/trenches), laboratory testing, slope stability analysis, and slope mitigation design alternatives.

Stabilization measures can be extensive and repairs costly depending on the mechanism of failure, combinations of slope geometry, slide size, access, and location of the failure plane. Therefore, it is important to recognize that based on actual slope and subsurface conditions, recommendations for slope stabilization measures may be too extensive or cost prohibitive to implement. In such a case, other less-conservative alternatives can be considered that would be less costly, but also less certain to provide long-term stabilization.

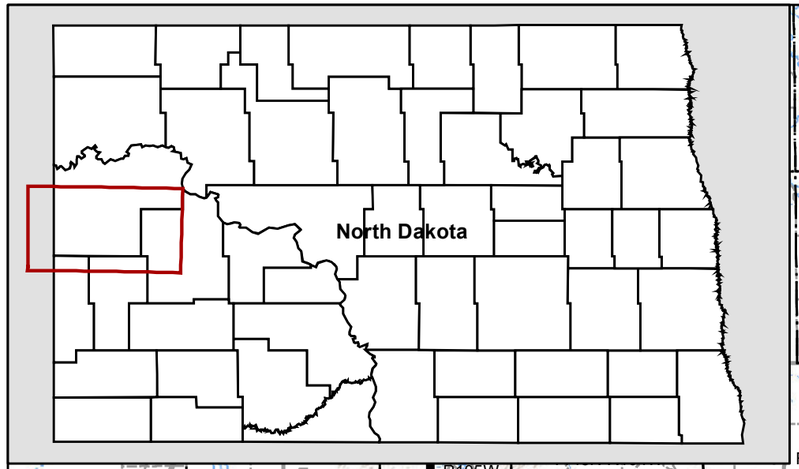
6 LIMITATIONS

This assessment has been conducted in accordance with generally accepted geotechnical engineering practices in the region where the work was conducted; however, no guarantees or warranties are provided or implied. The conclusions and preliminary recommendations submitted in this report are based upon project information provided to Tetra Tech, and data obtained from the desktop assessment.

This report has been prepared exclusively for our client. This report and the data included herein shall not be used by any third party without the express written consent of both the client and Tetra Tech. Tetra Tech is not responsible for technical interpretations by others. As the project evolves, Tetra Tech should provide continued consultation and field services to review and monitor the implementation of our recommendations and verify that our recommendations have been appropriately interpreted.

APPENDIX A

South Bend - Overview and Slope Crossing Map (Figure 1) & Field Forms



T150N R102W
T150N R101W
T150N R100W
T150N R99W
T150N R98W
T150N R97W
T150N R96W
JOHNSON'S CORNER
T150N R95W
T150N R94W
Potential Slope 4, McKenzie County, North Dakota
T149N R102W
T149N R101W
T149N R100W
T149N R99W
T149N R98W
Potential Slope 7, McKenzie County, North Dakota
T149N R97W
T149N R96W
T149N R95W
T149N R94W
WILSON
T148N R102W
T148N R101W
T148N R100W
T148N R99W
T148N R98W
T148N R97W
T148N R96W
T148N R95W
T148N R94W
R103W
R105W
Richland
McKenzie
BOWLINE
T021N R058E
T021N R059E
T021N R060E
T147N R105W
T147N R104W
T147N R103W
T147N R102W
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T147N R100W
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T147N R98W
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T147N R95W
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T146N R100W
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T146N R97W
Dunn
T146N R96W
T146N R95W
T146N R94W
T019N R058E
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T019N R060E
T145N R101W
BICENTENNIAL STATION
T145N R105W
T145N R104W
Potential Slope 5, McKenzie County, North Dakota
T145N R103W
T145N R102W
T145N R100W
T145N R99W
T145N R98W
T145N R97W
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T145N R95W
T145N R94W
T018N R058E
T018N R059E
T018N R060E
Potential Slope 2, Golden Valley County, North Dakota
Wibaux
Potential Slope 6, McKenzie County, North Dakota
T144N R105W
T144N R104W
T144N R103W
T144N R102W
T144N R101W
T144N R100W
T144N R99W
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T144N R97W
T144N R96W
T144N R95W
Golden Valley
Billings
Potential Slope 1, Golden Valley County, North Dakota
T017N R058E
T017N R059E
T017N R060E
T143N R105W
T143N R104W
T143N R103W
T143N R102W
T143N R101W
T143N R100W
T143N R99W
T143N R98W
T143N R97W
T143N R96W
T143N R95W

Source Layer Credits: USGS The National Map: National Hydrography Dataset, Extracted/Processed by: 2020

E:\Bridger Pipeline\South Bend Project 2020 Overview Map.mxd Date: 9/28/2020

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South Bend Project Potential Slopes
Mass Failure Potential
- Very High
- High
- Medium
- Low

- Station
- South Bend Project (Proposed)
- Other Active Line
- Other Inactive Line
- State or Federal Road
- County Road
- State Boundary
- County Boundary
- PLSS Township

2020 South Bend Project Slope Inspection Locations

Belle Fourche - South Bend Project

FIGURE 1

2020 Belle Fourche Slope Crossing Field Form

Potential Slope 1, Golden Valley County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
Low

Narrative Summary:
The slope is shallow and well vegetated. This slope is the upper portion of "Potential Slope 2, Golden Valley County, North Dakota". A livestock trail exists along the slope and extends down most of the slope. No apparent indications of instabilities or erosion were noted along the slope.

Action Items

Suggested Action Items:
None

Location, Date, and Time

Target Crossing Coordinates: 47.269246, -104.02882

Region:	Belle Fourche	**Inspection Date:**	Jul 7, 2020
State:	North Dakota	**Time Arrived:**	12:04
County:	Golden Valley	**Time Departed:**	12:13

Access and Parking

Access Coordinates:	47.26066, -104.02812
Parking Coordinates:	47.26066, -104.02812

Access and Parking Comments: Parked at abandoned house north of the main gravel road (Cs Creek Road) and walked north to proposed pipeline corridor location.

Field Crew:

Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)
Kevin Peña (Belle Fourche)

Access Method: Walk

Access Difficulty: Moderate

Assessment Area

Start Coordinates: 47.26875, -104.02934
End Coordinates: 47.26903, -104.02901

Evidence of Mass Failure

None

Bedrock Geology

Exposed Bedrock: No

Soil Conditions

USCS Soil Category: CL (lean clay) with Silt
Soil Condition Comments: Lean clay with silt and sand to silty clay with sand.

Water Conditions

No proximate water source with potential to affect the slope.

Site Topography/Landforms

Landform Type: Valley
Slope Profile: Linear
General Slope Aspect: East
Crossing Angle: Diagonal
Crossing Angle Description: Proposed pipeline will be diagonal to slope.

Average Slope Angle: 8 degrees
Maximum Slope Angle: 8 degrees

Length of Entire Slope: 175 ft (53.3 m)
Length of Slope at Maximum Slope Angle: 175 ft (53.3 m)

Topography Landform Comments: The slope is the upper portion of "Potential Slope 2, Golden Valley County, North Dakota".

Vegetation Cover

5% shrubs
90% forbs/groundcover
5% bare

Tree Fall Evidence: No

Potential Slope 1, Golden Valley County, North Dakota Photo Log



Photo Type: Looking downslope | **Photo Bearing**: 55 degrees

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Photo #1



Photo Type: Looking across slope | **Photo Bearing**: 98 degrees

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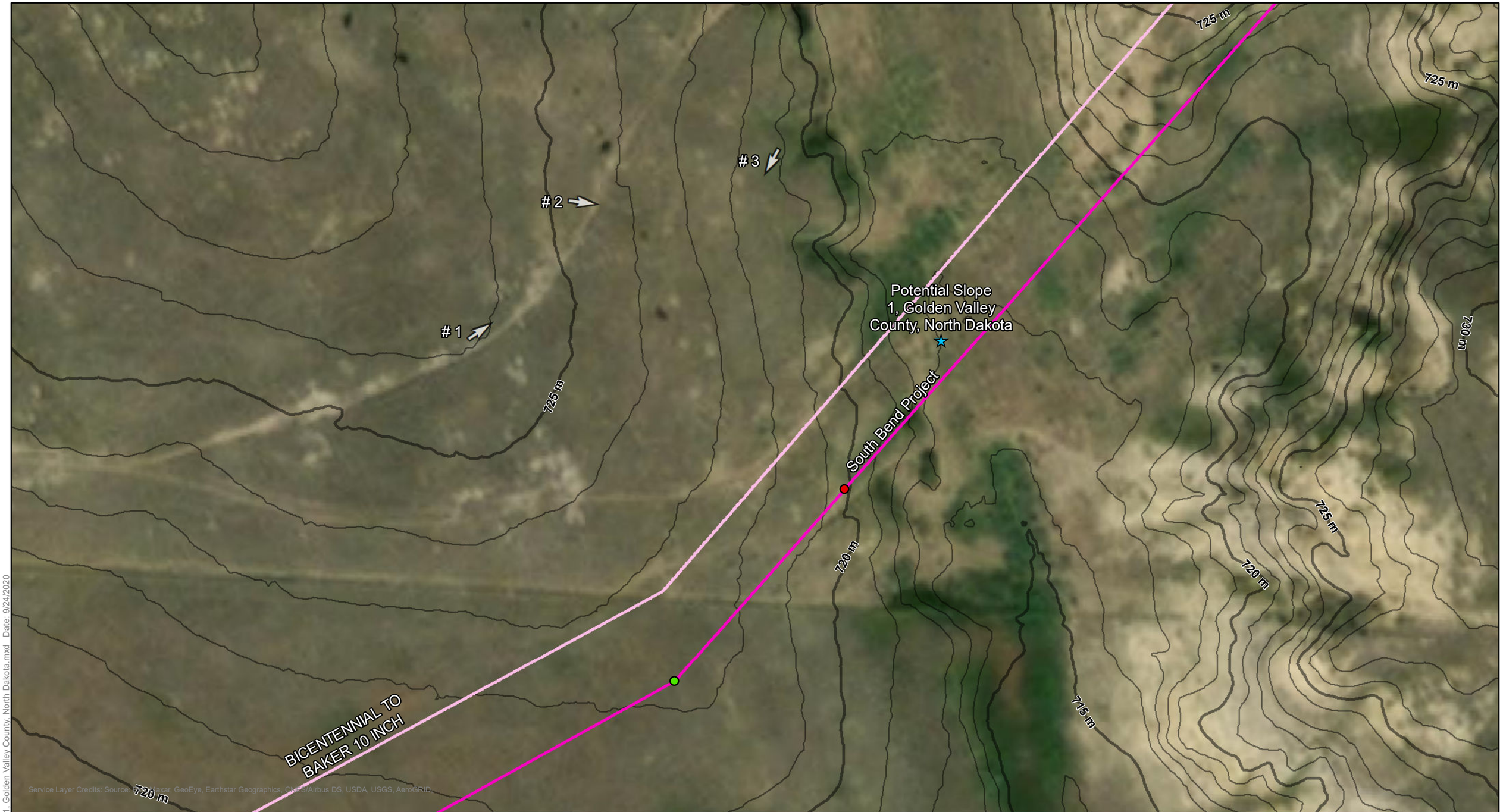
Photo #2



Photo Type: Looking upslope | **Photo Bearing**: 209 degrees

Photo #3



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- DOC Measurement Location
- Slope Start Point
- Slope End Point
- Slope Crossing Coordinates Provided
- Photo Location and Direction
- South Bend Project (Proposed)
- Other Active Line
- Other Inactive Line
- 5m Contour
- 1m Contour

2020 South Bend Project
Potential Slope 1, Golden Valley County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

E:\Bridger Pipeline\Potential Slope 1, Golden Valley County, North Dakota.mxd Date: 9/24/2020

2020 Belle Fourche Slope Crossing Field Form

Potential Slope 2, Golden Valley County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
Medium

Narrative Summary:
The slope is moderate in steepness and relatively short in length. The slope is well vegetated but did exhibit some erosion and gullying at two main locations along the slope within the proposed pipeline corridor. There is also a well-defined drainage area at the toe of the slope. The slope appeared stable with no apparent signs of recent erosion at the time of assessment.

Action Items

Suggested Action Items:
Other (see comments)

Action Item Comments:
During future site visits, observe erosional features and gully areas for signs of change.

Location, Date, and Time

Target Crossing Coordinates: 47.269229, -104.029326

Region:	Belle Fourche	**Inspection Date:**	Jul 7, 2020
State:	North Dakota	**Time Arrived:**	11:41
County:	Golden Valley	**Time Departed:**	12:02

Access and Parking

Access Coordinates:	47.26067, -104.02812
Parking Coordinates:	47.26067, -104.02812

Access and Parking Comments: Parked near abandoned house located north of the main gravel road (Cs Creek Road) and walked north to the potential slope location.

Field Crew:

Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)
Kevin Peña (Belle Fourche)

Access Method: Walk

Access Difficulty: Moderate

Assessment Area

Start Coordinates: 47.26903, -104.02901
End Coordinates: 47.26917, -104.02884

Evidence of Mass Failure

Gullying

Description: A gully was observed within a livestock path on southern end of the slope, extending approximately 20 feet down the slope, and was approximately 6 feet wide at its widest point and approximately 3 feet deep. Another larger gully with associated erosion was observed on the north edge of slope extending down the length of the slope. The maximum width of this gully was approximately 15 feet wide near the toe of the slope, with an approximate maximum depth near 10 feet.

Bedrock Geology

Exposed Bedrock: No

Soil Conditions

USCS Soil Category: CL (lean clay) with Silt
Soil Condition Comments: Lean clay with silt to silty clay

Water Conditions

No proximate water source with potential to affect the slope.

Site Topography/Landforms

Landform Type: Valley
Slope Profile: Linear
General Slope Aspect: East
Crossing Angle: Diagonal
Crossing Angle Description: The proposed pipeline will be diagonal to the slope face.

Average Slope Angle: 22 degrees
Maximum Slope Angle: 31 degrees

Length of Entire Slope: 35 ft (10.7 m)
Length of Slope at Maximum Slope Angle: 15 ft (4.6 m)

Topography Landform Comments: The maximum slope angle and length is in the area of the gully on north side of slope.

Vegetation Cover

10% shrubs
85% forbs/groundcover
5% bare

Tree Fall Evidence: No

Potential Slope 2, Golden Valley County, North Dakota Photo Log



Photo Type: Looking upslope | **Photo Bearing**: 253 degrees

Photo #1



Photo Type: Looking across slope | **Photo Bearing**: 149 degrees

---

Photo #2



Photo Type: Slope documentation | **Photo Bearing**: 227 degrees
Photo Description: Looking upslope at historic vehicle wheel paths and minor associated erosion and gullying.

Photo #3



Photo Type: Looking across slope | **Photo Bearing**: 319 degrees

---

Photo #4



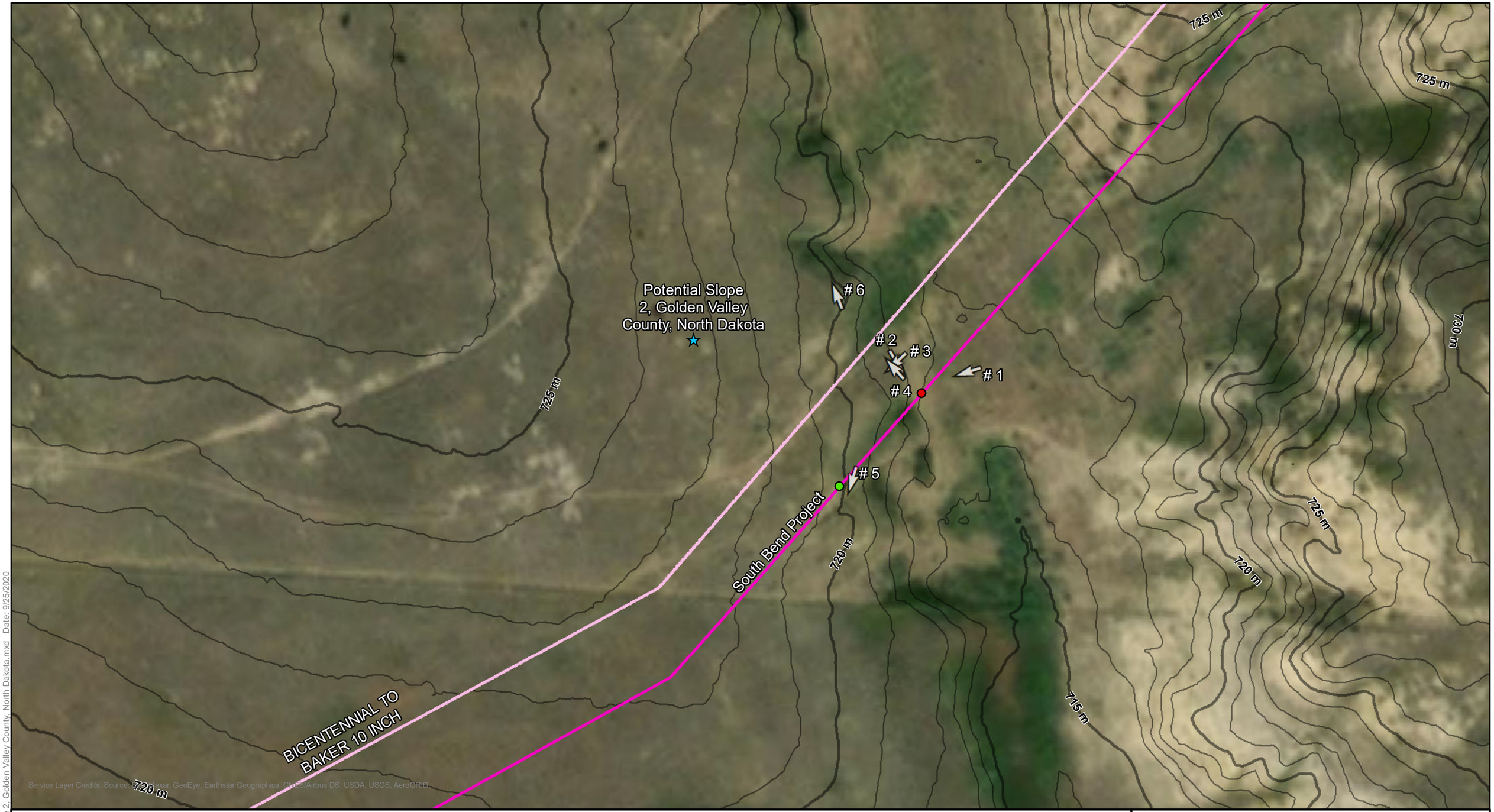
Photo Type: Slope documentation | **Photo Bearing**: 197 degrees
Photo Description: Looking up slope at livestock trail and minor gullying within, and nearby surficial erosion.

Photo #5



Photo Type: Slope documentation | **Photo Bearing**: 339 degrees
Photo Description: Erosion and gullying on north edge of slope.

Photo #6



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- DOC Measurement Location
- Slope Start Point
- Slope End Point
- Slope Crossing Coordinates Provided
- Photo Location and Direction
- South Bend Project (Proposed)
- Other Active Line
- Other Inactive Line
- 5m Contour
- 1m Contour

2020 South Bend Project
Potential Slope 2, Golden Valley County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

E:\Bridger Pipeline\Potential Slope 2, Golden Valley County, North Dakota.mxd Date: 9/25/2020

2020 Belle Fourche Slope Crossing Field Form

Potential Slope 4, McKenzie County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
High

Narrative Summary:
The slope is moderately steep to very steep and well vegetated throughout. Multiple historic slides were observed throughout the slope, mostly on the north facing portion of the slope. The largest slide observed was approximately 75 feet across, 15 to 20 feet in height, and 3 to 4 feet deep at the head scarp. Rooting depths of roughly similar depths (3 to 4 feet) were observed at the head scarp. Numerous slumps were observed, mostly near the toe of the slope. Evidence of historic standing water was observed near toe of slope. No active slope movement was observed. The proposed South Bend pipeline will be located a minimum of 60 feet beyond the toe of the slope.

Action Items

Suggested Action Items:
Regrade, Install Erosion Control Measures

Action Item Comments:
Regrade the slope to remove multiple slide masses and slumps with proper site drainage and re vegetate the area. Additionally, regular monitoring and assessments of the slope should be conducted to assess for changing slope conditions.

Location, Date, and Time

Target Crossing Coordinates: 47.785839, -102.906472

Region:	Belle Fourche	**Inspection Date:**	Jul 6, 2020
State:	North Dakota	**Time Arrived:**	11:14
County:	McKenzie	**Time Departed:**	12:17

Access and Parking

Access Coordinates:	47.78794, -102.90505
Parking Coordinates:	47.78843, -102.90363

Access and Parking Comments: Walked across access road and to corridor from parking area.
Field Crew:

Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)
Kevin Peña (Belle Fourche)

Access Method: Walk

Access Difficulty: Easy

Pipeline Corridor Comments: The proposed South Bend pipeline will be located a minimum of 60 feet beyond the toe of the slope.

Assessment Area

Start Coordinates: 47.78647, -102.90756

End Coordinates: 47.78666, -102.90528

Evidence of Mass Failure

Slides

Description: Multiple slides along the slope were observed, with the largest slide located on the north-facing portion of the slope. Dimensions of that slide were approximately 75 feet across, 15 to 20 feet in height, and roughly 3 to 4 ft deep at the head scarp.

Slumping

Description: Numerous slumps were observed throughout the slope, many of which were located on the north-facing portion of the slope. Many of the slumps observed appear to be associated with larger slide masses as secondary movement.

Gullying

Description: A gully was observed on the north facing portion of slope and was approximately 2 feet deep and 1 to 2 feet across, extending roughly 20 to 30 feet in length near the bottom of the slope.

Other Mass Failure Comments: The observed slides and slumps did not appear to be actively moving at the time of assessment.

Bedrock Geology

Exposed Bedrock: No

Soil Conditions

USCS Soil Category: CL (lean clay) with Silt

Soil Condition Comments: Lean clay with silt and gravel. Numerous boulders found at top of the slope and at the bottom of the slope.

Water Conditions

No proximate water source with potential to affect the slope.

Site Topography/Landforms

Landform Type: Ridge
Slope Profile: Linear
General Slope Aspect: North, Northwest
Crossing Angle: Perpendicular
Crossing Angle Description: The proposed pipeline will generally be perpendicular to the slope.

Average Slope Angle: 30 degrees
Maximum Slope Angle: 47 degrees

Length of Entire Slope: 165 ft (50.3 m)
Length of Slope at Maximum Slope Angle: 15 ft (4.6 m)

Topography Landform Comments: There are generally two slope aspects: north and northwest, with a gentle curved transition between the two slope aspects. The slope is generally linear, but there are multiple oversteepened sections along the slope from historic slide activity. The northwest slope aspect was measured at an average angle of 23 degrees and 180 ft in length. The north facing slope aspect was generally steeper with a closer proximity to the proposed pipeline. Measured lengths and angles of the north facing slope aspect are detailed above.

Vegetation Cover

40% trees
20% shrubs
30% forbs/groundcover
10% bare

Tree Fall Evidence: No

Vegetation Cover Comments: No apparent indications of gravitropism, however, rooting depths of up to approximately 3 to 4 feet were observed at historic scarp locations along the north facing slope.

Potential Slope 4, McKenzie County, North Dakota Photo Log



Photo Type: Looking upslope | **Photo Bearing**: 150 degrees
Photo Description: Looking up slope at the north-facing slope from near the proposed pipeline corridor.

Photo #1



Photo Type: Slope movement evidence | **Photo Bearing**: 160 degrees
Photo Description: Historic slide/slumping mass at toe of the north-facing slope.

Photo #2



Photo Type: Slope documentation | **Photo Bearing**: 195 degrees
Photo Description: Area of historic standing water just above the toe of the north-facing slope.-

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Photo #3



Photo Type: Slope documentation | **Photo Bearing**: 141 degrees
Photo Description: Oversteepened section of the north-facing slope at historic slide head scarp.

Photo #4



Photo Type: Slope documentation | **Photo Bearing**: 265 degrees
Photo Description: Oversteepened section of the north-facing slope at historic slide head scarp.

Photo #5



Photo Type: Looking downslope | **Photo Bearing**: 304 degrees
Photo Description: Looking downslope toward proposed pipeline corridor from the crest of the north-facing slope.

Photo #6



Photo Type: Looking downslope | **Photo Bearing**: 351 degrees
Photo Description: Looking downslope toward proposed pipeline corridor from the crest of the northwest-facing slope.

Photo #7



Photo Type: Looking upslope | **Photo Bearing**: 114 degrees
Photo Description: Looking upslope toward the northwest-facing slope.

Photo #8



Photo Type: Looking across slope | **Photo Bearing**: 53 degrees
Photo Description: Looking across the toe of the northwest-facing slope.

Photo #9



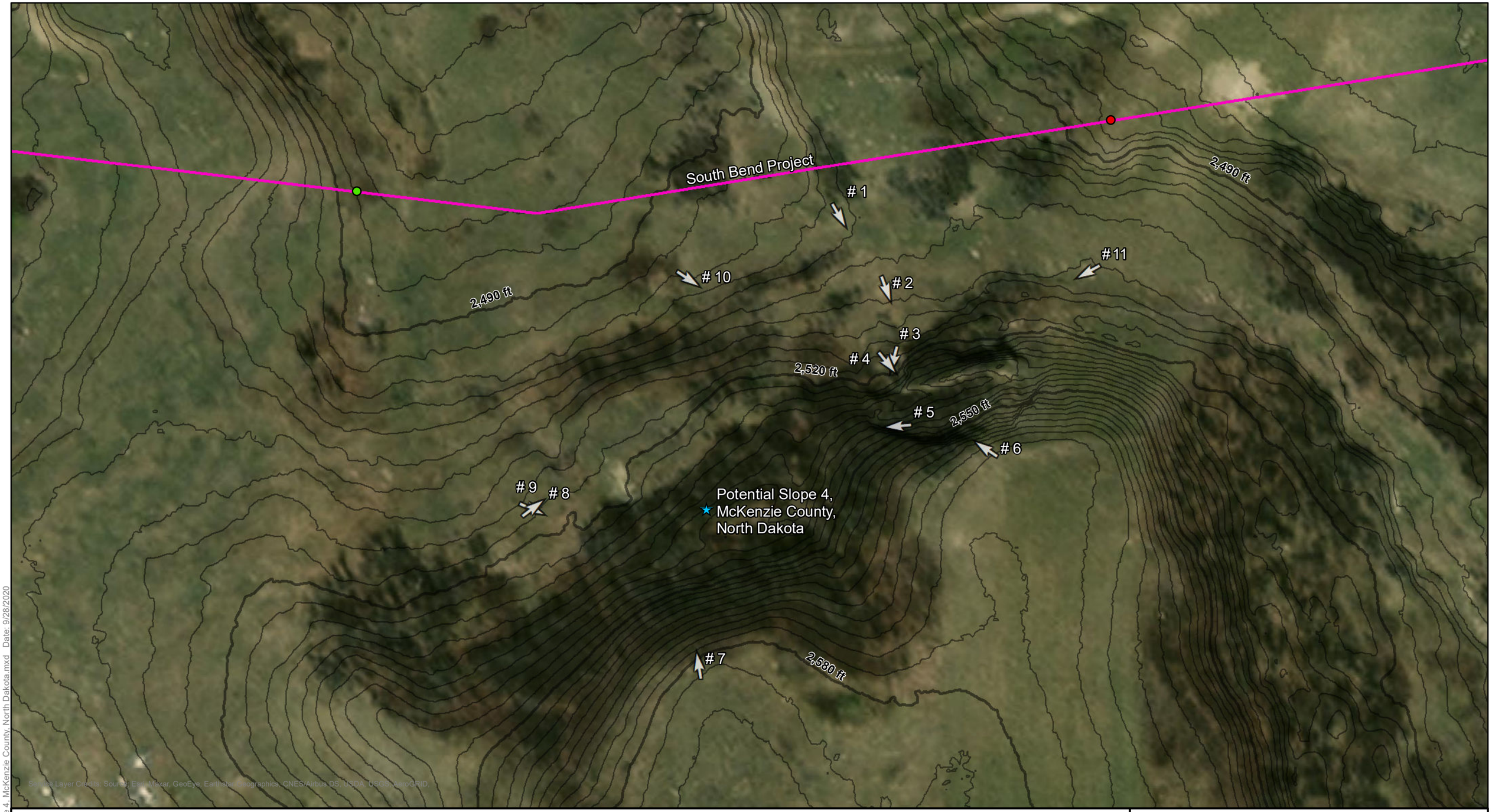
Photo Type: Looking upslope | **Photo Bearing**: 124 degrees
Photo Description: Looking upslope near the convergence of the north-facing and northwest-facing slopes.

Photo #10



Photo Type: Slope documentation | **Photo Bearing**: 241 degrees
Photo Description: Looking at historic scarp on the east edge of the north-facing slope.

Photo #11



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DOC Measurement Location
Slope Start Point
Slope End Point
Slope Crossing Coordinates Provided

Photo Location and Direction

South Bend Project (Proposed)
Other Inactive Line

15 ft Contour
3 ft Contour

2020 South Bend Project
Potential Slope 4, McKenzie County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

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2020 Belle Fourche Slope Crossing Field Form

Potential Slope 5, McKenzie County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
Medium

Narrative Summary:
The slope is moderate in steepness and generally well vegetated. The slope is more thickly vegetated along the lower portion of the slope and the upper portion. There is an intermittent stream located at the toe of the slope. Minor slumping was observed approximately one-third up the slope with no apparent recent movement activity. A livestock path was observed along the western edge of the slope and exhibited minor gullying from precipitation events. Minor surficial erosion was observed throughout the slope. The slope appeared to be stable at the time of assessment.

Action Items

Suggested Action Items:
None

Location, Date, and Time

Target Crossing Coordinates: 47.339739, -103.901176

Region:	Belle Fourche	**Inspection Date:**	Jul 7, 2020
State:	North Dakota	**Time Arrived:**	08:24
County:	McKenzie	**Time Departed:**	09:06

Access and Parking

Access Coordinates:	47.34423, -103.90612
Parking Coordinates:	47.34423, -103.90612

Access and Parking Comments: Parked just off the edge of Prairie Dog Road and walked south to corridor across drainage.

Field Crew:

Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)
Kevin Peña (Belle Fourche)

Access Method: Walk

Access Difficulty: Moderate

Assessment Area

Start Coordinates: 47.33958, -103.90135
End Coordinates: 47.33974, -103.90111

Evidence of Mass Failure

Slumping

Description: Minor slumping was observed approximately one-third up the slope below the oversteepened section of the slope. The observed slump mass was approximately 20 feet wide and 5 feet long with a height of roughly 2 feet above adjacent ground. No apparent recent movement was observed.

Gullying

Description: A livestock trail exhibiting signs of minor gullying less than 6 inches deep was observed on westernmost edge of topographical knob.

Other Mass Failure Comments: Minor surficial erosion and bare areas were observed throughout the slope.

Bedrock Geology

Exposed Bedrock: No

Soil Conditions

USCS Soil Category: CL (lean clay) with Sand
Soil Condition Comments: Lean clay with sand and silt, occasional gravel.

Water Conditions

Proximate water source(s) with potential to affect the slope:
Intermittent Waterways
Description: Drainage with an intermittent stream is located at the toe of the slope. Minimal water in the stream channel was observed at the time of assessment.

Site Topography/Landforms

Landform Type: Valley
Slope Profile: Concave
General Slope Aspect: Northeast
Crossing Angle: Parallel
Crossing Angle Description: Proposed pipeline will be parallel to slope.

Average Slope Angle: 20 degrees
Maximum Slope Angle: 30 degrees
Upper Slope Angle: 30 degrees
Lower Slope Angle: 10 degrees

Length of Entire Slope: 105 ft (32 m)
Length of Slope at Maximum Slope Angle: 40 ft (12.2 m)
Length of Upper Slope: 40 ft (12.2 m)
Length of Lower Slope: 65 ft (19.8 m)

Topography Landform Comments: The proposed pipeline crossing location intersects a small knob along the drainage channel valley representing the maximum slope and length.

Vegetation Cover

10% trees
15% shrubs
60% forbs/groundcover
15% bare

Tree Fall Evidence: No

Vegetation Cover Comments: Substantially more trees to the east of the proposed pipeline corridor.

Potential Slope 5, McKenzie County, North Dakota Photo Log



Photo Type: Looking upslope | **Photo Bearing**: 204 degrees
Photo Description: Looking at slope from opposite drainage bank.

Photo #1



Photo Type: Looking upslope | **Photo Bearing**: 227 degrees

Photo #2



Photo Type: Slope documentation | **Photo Bearing**: 119 degrees
Photo Description: Looking at small slump and cattle trail.

Photo #3



Photo Type: Looking downslope | **Photo Bearing**: 22 degrees

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Photo #4



Photo Type: Slope documentation | **Photo Bearing**: 20 degrees
Photo Description: Minor gullying and livestock trail.

Photo #5



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DOC Measurement Location
Slope Start Point
Slope End Point
Slope Crossing Coordinates Provided

Photo Location and Direction

South Bend Project (Proposed)
Other Active Line
Other Inactive Line

15 ft Contour
3 ft Contour

2020 South Bend Project
Potential Slope 5, McKenzie County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

E:\Bridger Pipeline\Potential Slope 5, McKenzie County, North Dakota.mxd Date: 9/28/2020

2020 Belle Fourche Slope Crossing Field Form

Potential Slope 6, McKenzie County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
High

Narrative Summary:
The slope is very steep and well vegetated with thick brush throughout much of the slope, mixed with grasses. The slope forms part of the southern bank of a long drainage with an intermittent stream at the toe. There was approximately 3 inches of water at the time of assessment. Gullying was observed on the western edge of the corridor and was approximately 1 foot deep and 1 foot wide, extending approximately 40 feet along the slope. A deeper gully or possible tension crack was observed near the top of the slope, extending roughly 25 to 30 feet transversely along the slope. The deeper gully or possible tension crack was approximately 2 feet deep and 2 feet wide and transitioned into the more defined and eroded gullies downslope. No apparent recent movement was observed on the slope at the time of assessment.

Action Items

Suggested Action Items:
Clear Corridor, Regrade

Action Item Comments:
Regrade the slope to improve the oversteepened and vulnerable slope and remove the thick brush along the slope to better view potential instabilities. Revegetate the slope with low lying forbs and grasses for erosion protection.

Location, Date, and Time

Target Crossing Coordinates: 47.336974, -103.905431

Region:	Belle Fourche	**Inspection Date:**	Jul 7, 2020
State:	North Dakota	**Time Arrived:**	09:08
County:	McKenzie	**Time Departed:**	09:43

Access and Parking

Access Coordinates:	47.34414, -103.90614
Parking Coordinates:	47.34414, -103.90614

Access and Parking Comments: Parked just off Prairie Dog Road and accessed the proposed pipeline corridor from the same location as for Potential Slope 5, McKenzie County.

Field Crew:

Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)
Kevin Peña (Belle Fourche)

Access Method: Walk

Access Difficulty: Moderate

Assessment Area

Start Coordinates: 47.33698, -103.90549

End Coordinates: 47.33706, -103.90536

Evidence of Mass Failure

Surface Tension Cracks

Description: A possible tension crack was observed near the top of the eastern side of the slope and was approximately 2 feet wide and 2 feet deep. The possible tension crack extended approximately 25 to 30 feet transversely along slope and then transitioned into more defined gully areas downslope. There was also minimal erosion observed in vicinity of the possible tension crack.

Gullying

Description: Gullying was observed on eastern edge of corridor with dimensions of approximately 1 foot deep by 1 foot wide, extending approximately 40 feet along the slope. Several gully channels along the slope face were observed.

Bedrock Geology

Exposed Bedrock: No

Soil Conditions

USCS Soil Category: CL (lean clay) with Sand

Soil Condition Comments: Lean clay with sand and silt, occasional gravel.

Water Conditions

Proximate water source(s) with potential to affect the slope:

Intermittent Waterways

Description: Long drainage with an intermittent stream is located at the toe of the slope. Roughly 3 inches of water were observed in the intermittent stream channel at the time of assessment.

Site Topography/Landforms

Landform Type: Valley
Slope Profile: Linear
General Slope Aspect: Northeast
Crossing Angle: Parallel
Crossing Angle Description: The proposed pipeline will be parallel to the slope.

Average Slope Angle: 37 degrees
Maximum Slope Angle: 46 degrees

Length of Entire Slope: 55 ft (16.8 m)
Length of Slope at Maximum Slope Angle: 40 ft (12.2 m)

Topography Landform Comments: Small slope break located at the top of the slope. Area is roughly 15 feet long and 30 degrees. There is also an area approximately 5 feet long of slightly lower gradient than the maximum slope angle near toe of slope.

Vegetation Cover

5% trees
50% shrubs
35% forbs/groundcover
10% bare

Tree Fall Evidence: No

Potential Slope 6, McKenzie County, North Dakota Photo Log



Photo Type: Looking upslope | **Photo Bearing**: 212 degrees
Photo Description: Looking at the slope face from opposite drainage bank.

Photo #1



Photo Type: Looking upslope | **Photo Bearing**: 208 degrees

Photo #2



Photo Type: Slope documentation | **Photo Bearing**: 229 degrees
Photo Description: Looking at gullying on eastern portion of the slope.

Photo #3



Photo Type: Looking across slope | **Photo Bearing**: 133 degrees

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Photo #4



Photo Type: Looking downslope | **Photo Bearing**: 46 degrees

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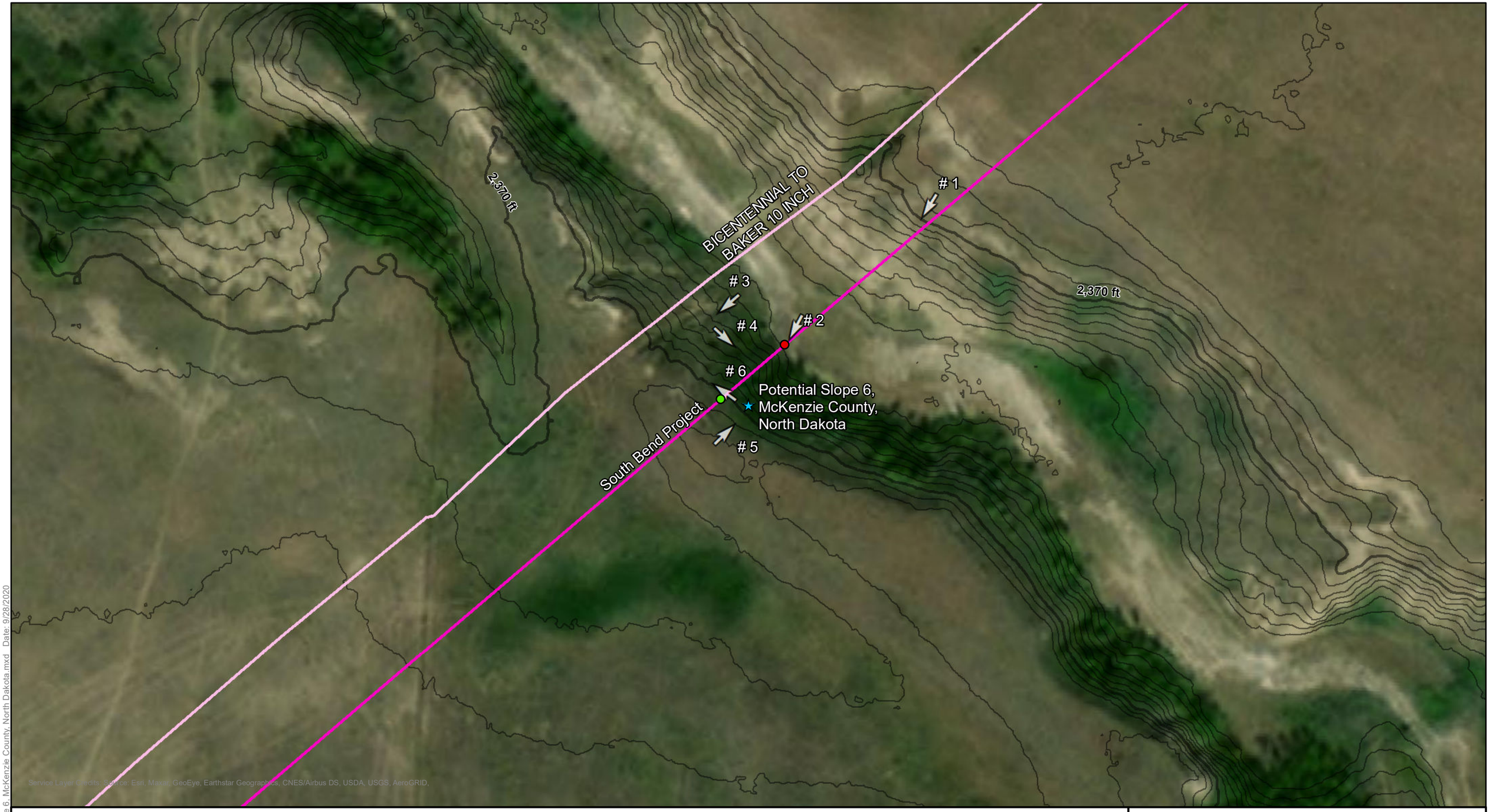
Photo #5



Photo Type: Slope movement evidence | **Photo Bearing**: 306 degrees
Photo Description: Looking at a possible tension crack near top of slope.

Photo #6



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DOC Measurement Location
Slope Start Point
Slope End Point
Slope Crossing Coordinates Provided

Photo Location and Direction

South Bend Project (Proposed)
Other Active Line
Other Inactive Line

15 ft Contour
3 ft Contour

2020 South Bend Project
Potential Slope 6, McKenzie County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

E:\Bridger Pipeline\Potential Slope 6, McKenzie County, North Dakota.mxd Date: 9/28/2020

2020 Belle Fourche Slope Crossing Field Form

Potential Slope 7, McKenzie County, North Dakota

Crossing Summary

Proposed Pipeline at Crossing: South Bend Project

Mass Failure Potential:
Medium

Narrative Summary:
The slope is moderate to steep and well vegetated. There is a small drainage with an intermittent stream located at the toe of the slope which has caused some historical erosion; however, the area has revegetated and appears to have stabilized at the time of assessment. Several small slumps were also observed near the toe of the slope within the drainage channel. No recent movement was apparent at the time of assessment. Overall, the slope appeared to be stable at the time of assessment with no signs of active movement or instability.

Action Items

Suggested Action Items:
Other (see comments)

Action Item Comments:
Periodically assess the slope for indications of slope movement associated with historic slumping and erosion near the toe of the slope.

Location, Date, and Time

Target Crossing Coordinates: 47.733506, -103.199639

Region:	Belle Fourche	**Inspection Date:**	Jul 6, 2020
State:	North Dakota	**Time Arrived:**	13:06
County:	McKenzie	**Time Departed:**	13:48

Access and Parking

Access Coordinates:	47.73307, -103.19769
Parking Coordinates:	47.73307, -103.19769

Access and Parking Comments: Parked on the side of 122nd Ave NW and walked to the proposed pipeline corridor.

Field Crew:
Andrew Warren (team lead, Tetra Tech)
Kyle Koppinger (Belle Fourche)

Kevin Peña (Belle Fourche)
Access Method: Walk
Access Difficulty: Easy

Assessment Area

Start Coordinates: 47.73410, -103.20131
End Coordinates: 47.73421, -103.20083

Evidence of Mass Failure

Slumping
Description: Minor historic slumping observed near the toe of the slope within the drainage channel. Additional slumping and minor sliding were observed along the opposite drainage bank.

Bedrock Geology

Exposed Bedrock: No

Other Bedrock/Surficial Geology Comments: Exposed boulder-sized sandstone blocks observed along opposite drainage bank.

Soil Conditions

USCS Soil Category: CL (lean clay) with Sand
Soil Condition Comments: Sandy lean clay with silt and occasional gravel.

Water Conditions

Proximate water source(s) with potential to affect the slope:
Intermittent Waterways
Description: Local drainage with an intermittent stream located at the toe of the slope. Stream bed is approximately 1 to 2 feet wide and 1 foot deep. Some headcutting of the stream bed was observed upstream of the slope.

Site Topography/Landforms

Landform Type: Valley
Slope Profile: Convex
General Slope Aspect: Northeast
Crossing Angle: Parallel
Crossing Angle Description: The proposed pipeline will be parallel to slope.

Average Slope Angle: 20 degrees

Maximum Slope Angle: 28 degrees
Upper Slope Angle: 13 degrees
Lower Slope Angle: 28 degrees

Length of Entire Slope: 145 ft (44.2 m)
Length of Slope at Maximum Slope Angle: 45 ft (13.7 m)
Length of Upper Slope: 100 ft (30.5 m)
Length of Lower Slope: 45 ft (13.7 m)

Topography Landform Comments: Site is a drainage valley.

Vegetation Cover

25% trees
20% shrubs
50% forbs/groundcover
5% bare

Tree Fall Evidence: Yes

Rooting Depth: 2.0 ft (0.6 m)

Vegetation Cover Comments: A fallen mature cottonwood tree was observed with exposed roots at the toe of the slope. The tree appears to have fallen many years ago and has continued to grow since falling.

Potential Slope 7, McKenzie County, North Dakota Photo Log



Photo Type: Looking downslope | **Photo Bearing**: 20 degrees

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Photo #1



Photo Type: Looking across slope | **Photo Bearing**: 335 degrees

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Photo #2



Photo Type: Looking upslope | **Photo Bearing**: 207 degrees

Photo #3



Photo Type: Looking upslope | **Photo Bearing**: 239 degrees

Photo #4



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- DOC Measurement Location
- Slope Start Point
- Slope End Point
- Slope Crossing Coordinates Provided
- Photo Location and Direction
- South Bend Project (Proposed)
- Other Inactive Line
- 15 ft Contour
- 3 ft Contour

2020 South Bend Project
Potential Slope 7, McKenzie County, North Dakota
Belle Fourche - South Bend Project
FIGURE 1

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